



Federal Energy Regulatory Commission
 Office of Energy Projects
 Washington, DC 20426

Rio Grande LNG Project
Final Environmental Impact Statement
Volume III, Part 7



Rio Grande LNG, LLC and Rio Bravo Pipeline Company, LLC

April 2019
Docket Nos. CP16-454-000, CP16-455-000
FERC/EIS-0287F

Cooperating Agencies:



U.S. Environmental Protection Agency



U.S. Department of Transportation



U.S. Coast Guard



U.S. Department of Energy



U.S. Army Corps of Engineers



U.S. Fish and Wildlife Service



Federal Aviation Administration



National Park Service



National Oceanic Atmospheric Administration -
 National Marine Fisheries Service

Individuals (IND)

IND111 - Carlos Galvan

Carlos Galvan
Port Isabel, TX 78578

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street NE Room 1A
Washington, DC 20426

I support our Board Members of Laguna Madre Water District in Port Isabel, Texas. A resolution to from Laguna Madre Water District, Town of Laguna Vista, City of Port Isabel and City of South Padre Island have been against all LNG Projects.

IND111-1

I oppose the proposed LNG projects for the Port of Brownsville, Rio Grande LNG docket CP16-454-000, Rio Bravo Pipeline docket CP16-455-000, and Texas LNG docket CP16-116-000, hereinafter referred to as the Applicants. These projects, as indicated in the DEISs, would have adverse impacts, thus permits should be denied. The following comments are those specific to the DEISs and apply to the dockets aforementioned.

IND111-2

DEIS and FERC Procedures Are Compromising Public Input

Not all requests and consultations are finished, and some have not even been started. How is the public supposed to comment on information that isn't there? Commenting periods should be extended until all such requests and consultations are finished.

The FERC comment deadline should be extended for reasons that each project has 45 days for public commenting, however FERC combined two projects into one public hearing and an overlapping commenting deadline. This resulted in cutting the time in half for review of the DEIS and commenting.

The FERC DEIS is not available in Spanish, the predominant language spoken in the Rio Grande Valley. The DEIS should be translated and commenting period extended for the Spanish speaking community to adequately review and comment.

Socioeconomics

The need for the projects have not been demonstrated in the DEIS. For a project with so many negative impacts, an unequivocal need for the product must be shown.

The socioeconomic analysis detailed in the DEISs are narrow in view and incomplete.

IND111-1 The resolutions regarding opposition to the Project are noted.

IND111-2 See Comment Response IND96 (Mary Volz).

Individuals (IND)

IND111 - Carlos Galvan

The analysis does not include costs to the taxpayer at every level of government (e.g. police, fire, infrastructure, coast guard, etc.) to support LNG costs in response to micro and macro consequences (e.g. accidents, climate change, social costs to carbon, etc.) of LNG development that negate claimed benefits.

There is no analysis of the impacts to both the bait shrimping industry (which relies on the BSC) nor on the off-shore shrimping industry, which relies ready access to the BSC to get to & from the Gulf.

The economic analysis did not include the nine recreational use areas identified in Texas LNG DEIS that are within the project site, increased ship traffic adversely affect recreational boaters and eco tours on the water such as dolphin watching, and the significant impact on visual resources. These are dollars that would be negated from claimed benefits.

The DEIS for Rio Grande says "neither construction nor operation would be expected to significantly impact tourism..." There is no data to support this statement. Port Isabel, South Padre Island and Laguna Atascosa NWR are all very nature tourist-dependent. Interview-type studies need to be done with out-of-area tourists to meaningfully assess this impact.

Air Pollution

Cumulative emissions of greenhouse gases would be massive (10.7 million tons per year), with Rio Grande being by far the largest contributor (8.5 million tpy). And this would continue for 20-30 years or longer, when we need to reduce carbon emissions drastically much sooner. Rio Grande LNG and Texas LNG, if approved & built, would move us in the opposite direction. The fact that contribution to cumulative impacts on climate change cannot be precisely measured is no reason for FERC to wash its hands of it. FERC should require carbon capture or deny the permit.

Wetlands, Habitat, and Wildlife

Identified species by the Applicants that are federally listed as threatened or endangered will be affected. The DEISs states that the Applicants will likely adversely affect the endangered Northern aplomado falcon, the threatened piping plover and its critical habitat, and the endangered ocelot. Many other rare and important species will be impacted as well. Section 7 of the Endangered Species Act, as amended, states that any project authorized, funded, or conducted by any federal agencies should not

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Individuals (IND)

IND111 - Carlos Galvan

"...jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined...to be critical...". The permit should be denied according to Section 7 of the ESA.

The conservation and preservation efforts of the public has resulted in the Lower Rio Grande Valley NWR, the Laguna Atascosa NWR, Loma Ecological Preserve, Wildlife Corridor, Bahia Grande Restoration Project, the Federal Ocelot Recovery Plan, and recent conservation of 3,200 acres on South Padre Island and several hundred acres along Bahia Grande near Port Isabel. Conservation efforts demonstrates strong social and cultural values. Permitting LNG projects that continue the trend of impacting (indirectly or directly) or destroying the last remaining ecosystems conflicts with regional social and cultural values. As such, permits should be denied.

Reliability and Safety

Valley Crossing Pipeline already goes under the RG terminal site. We do not think it safe to build a LNG liquefaction terminal over a large buried high-pressure natural gas pipeline, even if the risk of rupture is low. Effects to pile driving, construction, operations, etc. on the Valley Crossing pipeline is not adequately addressed in the DEIS.

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Cumulative Impacts

The DEIS says "the greatest cumulative impacts" would be on soils, surface water quality, vegetation, wildlife, aquatic resources, threatened and endangered species, visual resources, land & water-based transportation, air quality, and noise. These are more than sufficient reasons to deny LNG permits.

The DEIS states "We conclude that cumulative impacts of the 3 LNG terminals on visual resources would be potentially significant." We agree and urge denial of LNG permits.

The DEIS concludes that the 3 LNG projects cumulatively "would contribute significantly to air quality impacts, potentially exceed the NAAQS in local areas, and result in cumulatively greater air quality impacts." This is not acceptable and is grounds for

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Individuals (IND)

IND111 - Carlos Galvan

denial of LNG permits.

The DEIS says that Rio Grande “combined with the other projects in the geographic scope, including the Texas LNG and Annova LNG projects, would result in “significant cumulative impacts...” Therefore if FERC chooses to permit any one of the LNG projects, it should deny permits to all others. By FERC’s own analysis the cumulative impacts would be too great (e.g. significant).

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Individuals (IND)

IND112 - Norma Ramos

Norma Ramos
Brownsville, TX 78526-3860

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street NE Room 1A
Washington, DC 20426

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IND112-1

See Comment Response IND96 (Mary Volz).

IND112-1

Individuals (IND)

IND112 - Norma Ramos

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IND112 - Norma Ramos

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IND112 - Norma Ramos

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IND112-1

Individuals (IND)

IND113 - Lauren Bendiksen

Lauren Bendiksen
Allen, TX 75013

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street NE Room 1A
Washington, DC 20426

As a lifelong Texan, it is senseless to ignore the impacts this development will have upon wildlife and the environment that cannot be reversed.

IND113-1

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IND113-1 Section 4.6.1 of the EIS addresses Project impacts on wildlife.

IND113-2 See Comment Response IND96 (Mary Volz).

Individuals (IND)

IND113 - Lauren Bendiksen

police, fire, infrastructure, coast guard, etc.) to support LNG costs in response to micro and macro consequences (e.g. accidents, climate change, social costs to carbon, etc.) of LNG development that negate claimed benefits.

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IND113-2

Individuals (IND)

IND114 - Mario Garza Jr.

Mario Garza Jr.
Donna, TX 78537

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street NE Room 1A
Washington, DC 20426

I am opposed to this proposed development. This is a short term benefit for the area, but it will be a tragedy to lose this ecosystem and its rare species for future generations.

IND114-1

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IND114-1

Comment noted. Impacts on wildlife are discussed in section 4.6.

IND114-2

See Comment Response IND96 (Mary Volz).

Individuals (IND)

IND114 - Mario Garza Jr.

The analysis does not include costs to the taxpayer at every level of government (e.g. police, fire, infrastructure, coast guard, etc.) to support LNG costs in response to micro and macro consequences (e.g. accidents, climate change, social costs to carbon, etc.) of LNG development that negate claimed benefits.

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Wetlands, Habitat, and Wildlife

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Individuals (IND)

IND115 - Bruce Hix

Bruce Hix
South Padre Island, TX 78597

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street NE Room 1A
Washington, DC 20426

As a resident of The Rio Grande Valley, I am strongly opposed to the proposed development of LNG projects near my home. South Padre Island is a pristine coastal environment that supports marine life, migratory birds, and provides an ideal, clean and safe location for vacationing families. The local economy is built on the shrimp fleet, sport fishing, and tourism. The nearby Atascosa Wildlife Refuge is an invaluable resource for sustaining the natural habitat so important for the natural inhabitants of the Valley.

The development of LNG here will threaten the existing balance between industry and nature. There are other less environmentally sensitive locations in the U.S. where LNG would have less impact and are more appropriate for industrial development. In light of the many and obvious risks to the local environment, please reconsider the development of LNG at the Port of Brownsville.

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IND115-1

IND115-2

IND115-1

Impacts on wildlife and aquatic resources are discussed in section 4.6 (including the Laguna Atascosa NWR) and impacts on tourism are discussed in section 4.9.3. Comment noted. Sections 3.2 and 3.3 of the EIS evaluated alternative locations along the Texas Gulf Coast that included more industrial development and less industrial development compared to the Port of Brownsville. None of the alternative sites were determined to provide an environmental advantage over the proposed Project.

IND115-2

See Comment Response IND96 (Mary Volz).

Individuals (IND)

IND115 - Bruce Hix

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IND115 - Bruce Hix

quality, vegetation, wildlife, aquatic resources, threatened and endangered species, visual resources, land & water-based transportation, air quality, and noise. These are more than sufficient reasons to deny LNG permits.

The DEIS states "We conclude that cumulative impacts of the 3 LNG terminals on visual resources would be potentially significant." We agree and urge denial of LNG permits.

The DEIS concludes that the 3 LNG projects cumulatively "would contribute significantly to air quality impacts, potentially exceed the NAAQS in local areas, and result in cumulatively greater air quality impacts." This is not acceptable and is grounds for denial of LNG permits.

The DEIS says that Rio Grande "combined with the other projects in the geographic scope, including the Texas LNG and Annova LNG projects, would result in "significant cumulative impacts..." Therefore if FERC chooses to permit any one of the LNG projects, it should deny permits to all others. By FERC's own analysis the cumulative impacts would be too great (e.g. significant).

Thanks for allowing this comment.

IND115-2

Individuals (IND)

IND116 - Catherine Faver

Catherine Faver
McAllen, TX 78504

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street NE Room 1A
Washington, DC 20426

I oppose the proposed LNG projects (the Applicants) for all the reasons detailed in this message. Among these reasons, the threats to wetlands, habitat and wildlife are my primary concern. These precious resources are obviously irreplaceable and should be protected at all costs. In compliance with Section 7 of the Endangered Species Act, permits should be denied.

IND116-1

I oppose the proposed LNG projects for the Port of Brownsville, Rio Grande LNG docket CP16-454-000, Rio Bravo Pipeline docket CP16-455-000, and Texas LNG docket CP16-116-000, hereinafter referred to as the Applicants. These projects, as indicated in the DEISs, would have adverse impacts, thus permits should be denied. The following comments are those specific to the DEISs and apply to the dockets aforementioned.

DEIS and FERC Procedures Are Compromising Public Input

Not all requests and consultations are finished, and some have not even been started. How is the public supposed to comment on information that isn't there? Commenting periods should be extended until all such requests and consultations are finished.

IND116-2

The FERC comment deadline should be extended for reasons that each project has 45 days for public commenting, however FERC combined two projects into one public hearing and an overlapping commenting deadline. This resulted in cutting the time in half for review of the DEIS and commenting.

The FERC DEIS is not available in Spanish, the predominant language spoken in the Rio Grande Valley. The DEIS should be translated and commenting period extended for the Spanish speaking community to adequately review and comment.

Socioeconomics

The need for the projects have not been demonstrated in the DEIS. For a project with so many negative impacts, an unequivocal need for the product must be shown.

IND116-1

Comment noted. The BA provided in section 4.7 of the EIS has been revised in accordance with FWS correspondence and concludes that the Project is not likely to adversely affect the northern aplomado falcon and piping plover and would not result in the adverse modification of critical habitat. Our determination of effect for the ocelot remains, and our current determination for the jaguarundi, is "likely to adversely affect." Nevertheless, a "likely to adversely affect" determination is not reason to deny a permit under Section 7 of the ESA. Rather, the ESA requires that, if a project is likely to adversely affect a threatened or endangered species, the federal action agency (in this case, FERC) must conduct formal consultations with the FWS. This process requires the FWS to prepare a Biological Opinion for the Project.

IND116-2

See Comment Response IND96 (Mary Volz).

Individuals (IND)

IND116 - Catherine Faver

The socioeconomic analysis detailed in the DEISs are narrow in view and incomplete. The analysis does not include costs to the taxpayer at every level of government (e.g. police, fire, infrastructure, coast guard, etc.) to support LNG costs in response to micro and macro consequences (e.g. accidents, climate change, social costs to carbon, etc.) of LNG development that negate claimed benefits.

There is no analysis of the impacts to both the bait shrimping industry (which relies on the BSC) nor on the off-shore shrimping industry, which relies ready access to the BSC to get to & from the Gulf.

The economic analysis did not include the nine recreational use areas identified in Texas LNG DEIS that are within the project site, increased ship traffic adversely affect recreational boaters and eco tours on the water such as dolphin watching, and the significant impact on visual resources. These are dollars that would be negated from claimed benefits.

The DEIS for Rio Grande says "neither construction nor operation would be expected to significantly impact tourism..." There is no data to support this statement. Port Isabel, South Padre Island and Laguna Atascosa NWR are all very nature tourist-dependent. Interview-type studies need to be done with out-of-area tourists to meaningfully assess this impact.

Air Pollution

Cumulative emissions of greenhouse gases would be massive (10.7 million tons per year), with Rio Grande being by far the largest contributor (8.5 million tpy). And this would continue for 20-30 years or longer, when we need to reduce carbon emissions drastically much sooner. Rio Grande LNG and Texas LNG, if approved & built, would move us in the opposite direction. The fact that contribution to cumulative impacts on climate change cannot be precisely measured is no reason for FERC to wash its hands of it. FERC should require carbon capture or deny the permit.

Wetlands, Habitat, and Wildlife

Identified species by the Applicants that are federally listed as threatened or endangered will be affected. The DEISs states that the Applicants will likely adversely affect the endangered Northern aplomado falcon, the threatened piping plover and its critical habitat, and the endangered ocelot. Many other rare and important species will

IND116-2

Individuals (IND)

IND116 - Catherine Faver

be impacted as well. Section 7 of the Endangered Species Act, as amended, states that any project authorized, funded, or conducted by any federal agencies should not "...jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined...to be critical...". The permit should be denied according to Section 7 of the ESA.

The conservation and preservation efforts of the public has resulted in the Lower Rio Grande Valley NWR, the Laguna Atascosa NWR, Loma Ecological Preserve, Wildlife Corridor, Bahia Grande Restoration Project, the Federal Ocelot Recovery Plan, and recent conservation of 3,200 acres on South Padre Island and several hundred acres along Bahia Grande near Port Isabel. Conservation efforts demonstrates strong social and cultural values. Permitting LNG projects that continue the trend of impacting (indirectly or directly) or destroying the last remaining ecosystems conflicts with regional social and cultural values. As such, permits should be denied.

Reliability and Safety

Valley Crossing Pipeline already goes under the RG terminal site. We do not think it safe to build a LNG liquefaction terminal over a large buried high-pressure natural gas pipeline, even if the risk of rupture is low. Effects to pile driving, construction, operations, etc. on the Valley Crossing pipeline is not adequately addressed in the DEIS.

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Cumulative Impacts

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Individuals (IND)

IND116 - Catherine Faver

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IND116-2

Individuals (IND)

IND117 - Margo MacKinnon

Margo MacKinnon
Pickering, Ontario L1V2P9

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street NE Room 1A
Washington, DC 20426

Your parkland is too valuable now and in the future to let this development take place. Our planet needs all the help it can get to support our ecosystem.

IND117-1

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IND117-1

See Comment Response IND96 (Mary Volz).

Individuals (IND)

IND117 - Margo MacKinnon

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Air Pollution

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Wetlands, Habitat, and Wildlife

Identified species by the Applicants that are federally listed as threatened or endangered will be affected. The DEISs states that the Applicants will likely adversely affect the endangered Northern aplomado falcon, the threatened piping plover and its critical habitat, and the endangered ocelot. Many other rare and important species will be impacted as well. Section 7 of the Endangered Species Act, as amended, states that any project authorized, funded, or conducted by any federal agencies should not

IND117-1

Individuals (IND)

IND117 - Margo MacKinnon

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Reliability and Safety

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Individuals (IND)

IND117 - Margo MacKinnon

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IND117-1

Individuals (IND)

IND118 - Martha Saavedra

Martha Saavedra
Brownsville, TX 78520

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street NE Room 1A
Washington, DC 20426

I don't want it to pollute the waters and kill the fish.

IND118-1

I oppose the proposed LNG projects for the Port of Brownsville, Rio Grande LNG docket CP16-454-000, Rio Bravo Pipeline docket CP16-455-000, and Texas LNG docket CP16-116-000, hereinafter referred to as the Applicants. These projects, as indicated in the DEISs, would have adverse impacts, thus permits should be denied. The following comments are those specific to the DEISs and apply to the dockets aforementioned.

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IND118-2

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IND118-1 Impacts on aquatic resources associated with the Project are discussed in section 4.6.2.2 of the final EIS.

IND118-2 See Comment Response IND96 (Mary Volz).

Individuals (IND)

IND118 - Martha Saavedra

and macro consequences (e.g. accidents, climate change, social costs to carbon, etc.) of LNG development that negate claimed benefits.

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Individuals (IND)

IND118 - Martha Saavedra

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Individuals (IND)

IND118 - Martha Saavedra

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Individuals (IND)

IND119 - Laura Baguio

Laura Baguio
Laguna Vista, TX 78578

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street NE Room 1A
Washington, DC 20426

We do not need these pollutants in our community. Any questionable benefits are far outweighed by the far reaching detrimental consequences to the environment! Do not sacrifice the last good coastline in Texas for the greed of a few. The people of the Laguna Madre do not want this!

IND119-1

I oppose the proposed LNG projects for the Port of Brownsville, Rio Grande LNG docket CP16-454-000, Rio Bravo Pipeline docket CP16-455-000, and Texas LNG docket CP16-116-000, hereinafter referred to as the Applicants. These projects, as indicated in the DEISs, would have adverse impacts, thus permits should be denied. The following comments are those specific to the DEISs and apply to the dockets aforementioned.

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IND119-1 Comment noted.

IND119-2 See Comment Response IND96 (Mary Volz).

Individuals (IND)

IND119 - Laura Baguio

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IND119-2

Individuals (IND)

IND119 - Laura Baguio

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Individuals (IND)

IND119 - Laura Baguio

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Individuals (IND)

IND120 - Crystal Wilson

Crystal Wilson
Englewood, CO 80110

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street NE Room 1A
Washington, DC 20426

I care very much about the wildlife of this area, and have traveled here especially to see it and enjoy the beauty of this area. These projects would have an awful effect on the few remaining wild spaces here, and the wildlife that depends on it.

IND120-1

I oppose the proposed LNG projects for the Port of Brownsville, Rio Grande LNG docket CP16-454-000, Rio Bravo Pipeline docket CP16-455-000, and Texas LNG docket CP16-116-000, hereinafter referred to as the Applicants. These projects, as indicated in the DEISs, would have adverse impacts, thus permits should be denied. The following comments are those specific to the DEISs and apply to the dockets aforementioned.

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Socioeconomics

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The socioeconomic analysis detailed in the DEISs are narrow in view and incomplete.

IND120-1 Section 4.6.1 of the EIS addresses Project impacts on wildlife.

IND120-2 See Comment Response IND96 (Mary Volz).

Individuals (IND)

IND120 - Crystal Wilson

The analysis does not include costs to the taxpayer at every level of government (e.g. police, fire, infrastructure, coast guard, etc.) to support LNG costs in response to micro and macro consequences (e.g. accidents, climate change, social costs to carbon, etc.) of LNG development that negate claimed benefits.

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Individuals (IND)

IND120 - Crystal Wilson

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Reliability and Safety

Valley Crossing Pipeline already goes under the RG terminal site. We do not think it safe to build a LNG liquefaction terminal over a large buried high-pressure natural gas pipeline, even if the risk of rupture is low. Effects to pile driving, construction, operations, etc. on the Valley Crossing pipeline is not adequately addressed in the DEIS.

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Cumulative Impacts

The DEIS says "the greatest cumulative impacts" would be on soils, surface water quality, vegetation, wildlife, aquatic resources, threatened and endangered species, visual resources, land & water-based transportation, air quality, and noise. These are more than sufficient reasons to deny LNG permits.

The DEIS states "We conclude that cumulative impacts of the 3 LNG terminals on visual resources would be potentially significant." We agree and urge denial of LNG permits.

The DEIS concludes that the 3 LNG projects cumulatively "would contribute significantly to air quality impacts, potentially exceed the NAAQS in local areas, and result in cumulatively greater air quality impacts." This is not acceptable and is grounds for

IND120-2

Individuals (IND)

IND120 - Crystal Wilson

denial of LNG permits.

The DEIS says that Rio Grande “combined with the other projects in the geographic scope, including the Texas LNG and Annova LNG projects, would result in “significant cumulative impacts...” Therefore if FERC chooses to permit any one of the LNG projects, it should deny permits to all others. By FERC’s own analysis the cumulative impacts would be too great (e.g. significant).

IND120-2

Individuals (IND)

IND121 - John D'Angelo

John D'Angelo
Port Isabel, TX 78578

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street NE Room 1A
Washington, DC 20426

The Bahia Grande has only partially been restored and the impact on the fish and bird life has shown great promise. The construction of the LNG project is not a step in a positive direction and may actually have negative impacts on the restorative progress achieved to date.

IND121-1

In addition, I have seen first hand the impact of the Cheniere LNG project in the Sabine Pass area. It is located in the highly industrial Beaumont-Port Arthur area. I kept a boat in the area for several years. Shortly after the LNG facility began operation, I left the area and relocated my boat to Port Isabel. I no longer felt a part of nature when fishing in Sabine Pass. In fact, I felt as though I were fishing in Cheniere's backyard. I do not believe the people of the Lower Rio Grande Valley want the same for themselves.

IND121-2

I oppose the proposed LNG projects for the Port of Brownsville, Rio Grande LNG docket CP16-454-000, Rio Bravo Pipeline docket CP16-455-000, and Texas LNG docket CP16-116-000, hereinafter referred to as the Applicants. These projects, as indicated in the DEISs, would have adverse impacts, thus permits should be denied. The following comments are those specific to the DEISs and apply to the dockets aforementioned.

IND121-3

DEIS and FERC Procedures Are Compromising Public Input

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The FERC comment deadline should be extended for reasons that each project has 45 days for public commenting, however FERC combined two projects into one public hearing and an overlapping commenting deadline. This resulted in cutting the time in half for review of the DEIS and commenting.

The FERC DEIS is not available in Spanish, the predominant language spoken in the Rio

- IND121-1 Impacts on the Bahia Grande are addressed in section 4.3.2 of the EIS; wildlife and aquatic resources are addressed in sections 4.6.1 and 4.6.2, respectively.
- IND121-2 Potential impacts on recreational fishing, including within the BSC, are addressed in section 4.9.3.
- IND121-3 See Comment Response IND96 (Mary Volz).

Individuals (IND)

IND121 - John D'Angelo

Grande Valley. The DEIS should be translated and commenting period extended for the Spanish speaking community to adequately review and comment.

Socioeconomics

The need for the projects have not been demonstrated in the DEIS. For a project with so many negative impacts, an unequivocal need for the product must be shown.

The socioeconomic analysis detailed in the DEISs are narrow in view and incomplete. The analysis does not include costs to the taxpayer at every level of government (e.g. police, fire, infrastructure, coast guard, etc.) to support LNG costs in response to micro and macro consequences (e.g. accidents, climate change, social costs to carbon, etc.) of LNG development that negate claimed benefits.

There is no analysis of the impacts to both the bait shrimping industry (which relies on the BSC) nor on the off-shore shrimping industry, which relies ready access to the BSC to get to & from the Gulf.

The economic analysis did not include the nine recreational use areas identified in Texas LNG DEIS that are within the project site, increased ship traffic adversely affect recreational boaters and eco tours on the water such as dolphin watching, and the significant impact on visual resources. These are dollars that would be negated from claimed benefits.

The DEIS for Rio Grande says "neither construction nor operation would be expected to significantly impact tourism..." There is no data to support this statement. Port Isabel, South Padre Island and Laguna Atascosa NWR are all very nature tourist-dependent. Interview-type studies need to be done with out-of-area tourists to meaningfully assess this impact.

Air Pollution

Cumulative emissions of greenhouse gases would be massive (10.7 million tons per year), with Rio Grande being by far the largest contributor (8.5 million tpy). And this would continue for 20-30 years or longer, when we need to reduce carbon emissions drastically much sooner. Rio Grande LNG and Texas LNG, if approved & built, would move us in the opposite direction. The fact that contribution to cumulative impacts on climate change cannot be precisely measured is no reason for FERC to wash its hands of it. FERC should require carbon capture or deny the permit.

IND121-3

Individuals (IND)

IND121 - John D'Angelo

Wetlands, Habitat, and Wildlife

Identified species by the Applicants that are federally listed as threatened or endangered will be affected. The DEISs states that the Applicants will likely adversely affect the endangered Northern aplomado falcon, the threatened piping plover and its critical habitat, and the endangered ocelot. Many other rare and important species will be impacted as well. Section 7 of the Endangered Species Act, as amended, states that any project authorized, funded, or conducted by any federal agencies should not "...jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined...to be critical...". The permit should be denied according to Section 7 of the ESA.

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Cumulative Impacts

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IND121-3

Individuals (IND)

IND121 - John D'Angelo

visual resources, land & water-based transportation, air quality, and noise. These are more than sufficient reasons to deny LNG permits.

The DEIS states "We conclude that cumulative impacts of the 3 LNG terminals on visual resources would be potentially significant." We agree and urge denial of LNG permits.

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IND121-3

Individuals (IND)

IND122 - Letty Roerig

Letty Roerig
Brownsville, TX 78520

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street NE Room 1A
Washington, DC 20426

Among the more troubling approaches employed in the draft report to support expansion of LNG export capacity are:

- A lack of due consideration of shifts in state anti-fossil fuel energy policies, as have transpired in place like New York and Maryland, that will impact US supplies. | IND122-1
- A failure to properly evaluate and consider renewed state and non-state efforts in the US to more rapidly build out renewable energy systems and increase energy efficiency. | IND122-2
- An unsupported reliance on projected diminishing Rest of World gas supplies. | IND122-3
- A failure to properly factor into the economic equation the considerable economic costs of continuing climate change impacts, including storm damage, loss of essential resources, mass migration and increased social and military conflicts. | IND122-4
- A failure to account for the negative impacts of the increase in gas production and related infrastructure, including pipelines, storage hubs and LNG terminals. | IND122-5
- A dismissal of growing international efforts to address climate change that will impact global demand for gas. | IND122-6
- A failure to acknowledge the ongoing and rapidly accelerating transition to renewable energy and storage that threatens the market for gas irrespective of climate change policy progress.

I oppose the proposed LNG projects for the Port of Brownsville, Rio Grande LNG docket CP16-454-000, Rio Bravo Pipeline docket CP16-455-000, and Texas LNG docket CP16-116-000, hereinafter referred to as the Applicants. These projects, as indicated in the DEISs, would have adverse impacts, thus permits should be denied. The following comments are those specific to the DEISs and apply to the dockets aforementioned. | IND122-7

DEIS and FERC Procedures Are Compromising Public Input

- IND122-1 Under Section 3 of the NGA, oversight for LNG export is divided between the Commission and the DOE. FERC is responsible for approving the safe and sound siting and operation of LNG facilities, given that DOE has approved the export of the commodity. It is the DOE, not the Commission, which retains the exclusive authority over the export of the natural gas as a commodity, including the responsibility to consider whether the exportation of that gas is consistent with the public interest. As described in section 1.1 of the EIS, the DOE granted an authorization to RG LNG for export to countries having a FTA with the United States that includes national treatment for trade in natural gas. In accordance with the NGA and Energy Policy Act of 1992, export to a country with which there is an FTA requiring national treatment for trade in natural gas, is deemed consistent with the public interest. Further, RB Pipeline executed a precedent agreement for the total capacity of the Rio Bravo Pipeline for the 20-year life of the Project, which establishes a basis for a finding by the Commission that the pipeline will be in the public convenience and necessity under Section 7.
- IND122-2 As described in section 3.1 of the EIS, the use of alternative sources of energy would not meet the stated objective of the Project, and evaluating alternative sources of energy is beyond the scope of this EIS.
- IND122-3 See Comment Response IND122-1.
- IND122-4 Section 4.13.2.9 of the final EIS was revised to assess the appropriateness of the SCC analysis to determine the significance of Project GHG emissions. We recognize the availability of the SCC tool, but conclude that it is not appropriate for use in project analyses. In addition, see response CO8-1 for additional information.
- IND122-5 As described in section 1.3.1 of the EIS, production and gathering activities, and the pipelines and facilities used for these activities, are not regulated by FERC, but are overseen by the affected region's state and local agencies with jurisdiction over the management and extraction of the shale gas resource. Determining the well and gathering line locations and their environmental impact is not feasible because the market and gas availability at any given time would determine the source of the natural gas. While past, present, and reasonably foreseeable future oil and gas infrastructure within the geographic scope of the cumulative impacts assessment are addressed in section 4.13, the specific locations for infrastructure associated with induced production are not reasonably foreseeable.
- IND122-6 See Comment Response IND122-1.
- IND122-7 See Comment Response IND96 (Mary Volz).

Individuals (IND)

IND122 - Letty Roerig

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Socioeconomics

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The socioeconomic analysis detailed in the DEISs are narrow in view and incomplete. The analysis does not include costs to the taxpayer at every level of government (e.g. police, fire, infrastructure, coast guard, etc.) to support LNG costs in response to micro and macro consequences (e.g. accidents, climate change, social costs to carbon, etc.) of LNG development that negate claimed benefits.

There is no analysis of the impacts to both the bait shrimping industry (which relies on the BSC) nor on the off-shore shrimping industry, which relies ready access to the BSC to get to & from the Gulf.

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IND122-8

Air Pollution

Cumulative emissions of greenhouse gases would be massive (10.7 million tons per year), with Rio Grande being by far the largest contributor (8.5 million tpy). And this would continue for 20-30 years or longer, when we need to reduce carbon emissions drastically much sooner. Rio Grande LNG and Texas LNG, if approved & built, would move us in the opposite direction. The fact that contribution to cumulative impacts on climate change cannot be precisely measured is no reason for FERC to wash its hands of it. FERC should require carbon capture or deny the permit.

Wetlands, Habitat, and Wildlife

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Reliability and Safety

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IND122-8

Individuals (IND)

IND122 - Letty Roerig

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IND122-8

Individuals (IND)

IND123 - Danielle Swopes

Danielle Swopes
Houston, TX 77004

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street NE Room 1A
Washington, DC 20426

Please don't support projects that make survival even harder for our threatened wildlife and wild places.

IND123-1

I oppose the proposed LNG projects for the Port of Brownsville, Rio Grande LNG docket CP16-454-000, Rio Bravo Pipeline docket CP16-455-000, and Texas LNG docket CP16-116-000, hereinafter referred to as the Applicants. These projects, as indicated in the DEISs, would have adverse impacts, thus permits should be denied. The following comments are those specific to the DEISs and apply to the dockets aforementioned.

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IND123-2

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Socioeconomics

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The socioeconomic analysis detailed in the DEISs are narrow in view and incomplete.

IND123-1

Comment noted.

IND123-2

See Comment Response IND96 (Mary Volz).

Individuals (IND)

IND123 - Danielle Swopes

The analysis does not include costs to the taxpayer at every level of government (e.g. police, fire, infrastructure, coast guard, etc.) to support LNG costs in response to micro and macro consequences (e.g. accidents, climate change, social costs to carbon, etc.) of LNG development that negate claimed benefits.

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IND123-2

Individuals (IND)

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Individuals (IND)

IND123 - Danielle Swopes

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IND123-2

Individuals (IND)

IND124 - Michele Gardner

Michele Gardner
Bayview, TX 78566

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street NE Room 1A
Washington, DC 20426

I oppose the proposed LNG projects for the Port of Brownsville, Rio Grande LNG docket CP16-454-000, Rio Bravo Pipeline docket CP16-455-000, and Texas LNG docket CP16-116-000, hereinafter referred to as the Applicants. These projects, as indicated in the DEISs, would have adverse impacts, thus permits should be denied. The following comments are those specific to the DEISs and apply to the dockets aforementioned.

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IND124-1

See Comment Response IND96 (Mary Volz).

IND124-1

Individuals (IND)

IND124 - Michele Gardner

of LNG development that negate claimed benefits.

There is no analysis of the impacts to both the bait shrimping industry (which relies on the BSC) nor on the off-shore shrimping industry, which relies ready access to the BSC to get to & from the Gulf.

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IND124-1

Individuals (IND)

IND124 - Michele Gardner

ESA.

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IND124-1

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Individuals (IND)

IND124 - Michele Gardner

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IND124-1

Individuals (IND)

IND125 - Amy Cummins

Amy Cummins
Edinburg, TX 78539

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street NE Room 1A
Washington, DC 20426

The air pollution and environmental threats of the proposed LNG projects would devastate our way of life. I oppose the projects and urge you to deny the permits for LNG projects in all south Texas. Our quality of life is important. We do not want a few companies to make profits when the sacrifice is the living environment of many people as well as animals. Why should we have to get sick and have nowhere safe to live because LNG companies wants to profit off of us? The track record is very poor in terms of community impact. As a permanent resident here, I cannot flee for safer grounds after this devastating ruination of our environment, air, and water. Nor is there any escape for the other millions of people in this diverse yet often mistreated region. Nor would the animals, wildlife, seafood habitats, or residents of all species have anywhere safe to go. The conservation efforts in south Texas have been very hard-won after a lot of effort and investment.

I oppose the proposed LNG projects for the Port of Brownsville, Rio Grande LNG docket CP16-454-000, Rio Bravo Pipeline docket CP16-455-000, and Texas LNG docket CP16-116-000, hereinafter referred to as the Applicants. These projects, as indicated in the DEISs, would have adverse impacts, thus permits should be denied. The following comments are those specific to the DEISs and apply to the dockets aforementioned.

DEIS and FERC Procedures Are Compromising Public Input

Not all requests and consultations are finished, and some have not even been started. How is the public supposed to comment on information that isn't there? Commenting periods should be extended until all such requests and consultations are finished.

The FERC comment deadline should be extended for reasons that each project has 45 days for public commenting, however FERC combined two projects into one public hearing and an overlapping commenting deadline. This resulted in cutting the time in half for review of the DEIS and commenting.

IND125-1

As described in section 4.11.1 of the EIS, the State of Texas requires a State Health Effects air quality analysis. The results of RG LNG's State Health Effects modeling evaluation indicate that the Project emissions are below applicable effects screening levels, and therefore adverse health effects are not expected. The TCEQ is the agency responsible for the review of the State Health Effects analysis, and on December 17, 2018, the TCEQ issued an order granting air quality permits to RG LNG. Further, pollution emissions from the LNG Terminal site, when considered with background concentrations, would be below the NAAQS, which are designated to protect public health including sensitive populations such as children, the elderly, and asthmatics. The secondary NAAQS are designated to be protective of animals.

IND125-2

Section 4.12.1 of the EIS addresses LNG Terminal safety. Section 4.12.1.6 describes the operating history of the U.S. LNG industry as well as lessons learned from LNG incidents. In addition, Section 4.12.1.6 also discusses the ERP that would provide additional details of offsite public evacuation.

IND125-3

See Comment Response to IND96 (Mary Volz).

IND125-1

IND125-2

IND125-3

Individuals (IND)

IND125 - Amy Cummins

The FERC DEIS is not available in Spanish, the predominant language spoken in the Rio Grande Valley. The DEIS should be translated and commenting period extended for the Spanish speaking community to adequately review and comment.

Socioeconomics

The need for the projects have not been demonstrated in the DEIS. For a project with so many negative impacts, an unequivocal need for the product must be shown.

The socioeconomic analysis detailed in the DEISs are narrow in view and incomplete. The analysis does not include costs to the taxpayer at every level of government (e.g. police, fire, infrastructure, coast guard, etc.) to support LNG costs in response to micro and macro consequences (e.g. accidents, climate change, social costs to carbon, etc.) of LNG development that negate claimed benefits.

There is no analysis of the impacts to both the bait shrimping industry (which relies on the BSC) nor on the off-shore shrimping industry, which relies ready access to the BSC to get to & from the Gulf.

The economic analysis did not include the nine recreational use areas identified in Texas LNG DEIS that are within the project site, increased ship traffic adversely affect recreational boaters and eco tours on the water such as dolphin watching, and the significant impact on visual resources. These are dollars that would be negated from claimed benefits.

The DEIS for Rio Grande says "neither construction nor operation would be expected to significantly impact tourism..." There is no data to support this statement. Port Isabel, South Padre Island and Laguna Atascosa NWR are all very nature tourist-dependent. Interview-type studies need to be done with out-of-area tourists to meaningfully assess this impact.

Air Pollution

Cumulative emissions of greenhouse gases would be massive (10.7 million tons per year), with Rio Grande being by far the largest contributor (8.5 million tpy). And this would continue for 20-30 years or longer, when we need to reduce carbon emissions drastically much sooner. Rio Grande LNG and Texas LNG, if approved & built, would move us in the opposite direction. The fact that contribution to cumulative impacts on climate change cannot be precisely measured is no reason for FERC to wash its hands

IND125-3

Individuals (IND)

IND125 - Amy Cummins

of it. FERC should require carbon capture or deny the permit.

Wetlands, Habitat, and Wildlife

Identified species by the Applicants that are federally listed as threatened or endangered will be affected. The DEISs states that the Applicants will likely adversely affect the endangered Northern aplomado falcon, the threatened piping plover and its critical habitat, and the endangered ocelot. Many other rare and important species will be impacted as well. Section 7 of the Endangered Species Act, as amended, states that any project authorized, funded, or conducted by any federal agencies should not "...jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined...to be critical...". The permit should be denied according to Section 7 of the ESA.

The conservation and preservation efforts of the public has resulted in the Lower Rio Grande Valley NWR, the Laguna Atascosa NWR, Loma Ecological Preserve, Wildlife Corridor, Bahia Grande Restoration Project, the Federal Ocelot Recovery Plan, and recent conservation of 3,200 acres on South Padre Island and several hundred acres along Bahia Grande near Port Isabel. Conservation efforts demonstrates strong social and cultural values. Permitting LNG projects that continue the trend of impacting (indirectly or directly) or destroying the last remaining ecosystems conflicts with regional social and cultural values. As such, permits should be denied.

Reliability and Safety

Valley Crossing Pipeline already goes under the RG terminal site. We do not think it safe to build a LNG liquefaction terminal over a large buried high-pressure natural gas pipeline, even if the risk of rupture is low. Effects to pile driving, construction, operations, etc. on the Valley Crossing pipeline is not adequately addressed in the DEIS.

The SpaceX launch site are near the terminal sites for the Applicants. Where is the launch failure analysis? Did that analysis include the SpaceX BFR, which will be larger than any existing rocket, and which SpaceX says it intends to launch from the Boca Chica site?

Cumulative Impacts

The DEIS says "the greatest cumulative impacts" would be on soils, surface water

IND125-3

Individuals (IND)

IND125 - Amy Cummins

quality, vegetation, wildlife, aquatic resources, threatened and endangered species, visual resources, land & water-based transportation, air quality, and noise. These are more than sufficient reasons to deny LNG permits.

The DEIS states "We conclude that cumulative impacts of the 3 LNG terminals on visual resources would be potentially significant." We agree and urge denial of LNG permits.

The DEIS concludes that the 3 LNG projects cumulatively "would contribute significantly to air quality impacts, potentially exceed the NAAQS in local areas, and result in cumulatively greater air quality impacts." This is not acceptable and is grounds for denial of LNG permits.

The DEIS says that Rio Grande "combined with the other projects in the geographic scope, including the Texas LNG and Annova LNG projects, would result in "significant cumulative impacts..." Therefore if FERC chooses to permit any one of the LNG projects, it should deny permits to all others. By FERC's own analysis the cumulative impacts would be too great (e.g. significant).

Please do not destroy this area. Thank you for your time.

IND125-3

Individuals (IND)

IND126 - Bradley Willis

Bradley Willis
South Padre Island, TX 78597

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street NE Room 1A
Washington, DC 20426

I live and play downwind of this proposed disaster of a project. I have seen how destructive and damaging these projects are elsewhere. The list below only begins to outline the problems that will impact my quality of life if they are allowed to move forward. The quality of my air and water will be negatively impacted because of what LNG is trying to do. Please don't let that happen.

IND126-1

I oppose the proposed LNG projects for the Port of Brownsville, Rio Grande LNG docket CP16-454-000, Rio Bravo Pipeline docket CP16-455-000, and Texas LNG docket CP16-116-000, hereinafter referred to as the Applicants. These projects, as indicated in the DEISs, would have adverse impacts, thus permits should be denied. The following comments are those specific to the DEISs and apply to the dockets aforementioned.

IND126-2

DEIS and FERC Procedures Are Compromising Public Input

Not all requests and consultations are finished, and some have not even been started. How is the public supposed to comment on information that isn't there? Commenting periods should be extended until all such requests and consultations are finished.

The FERC comment deadline should be extended for reasons that each project has 45 days for public commenting, however FERC combined two projects into one public hearing and an overlapping commenting deadline. This resulted in cutting the time in half for review of the DEIS and commenting.

The FERC DEIS is not available in Spanish, the predominant language spoken in the Rio Grande Valley. The DEIS should be translated and commenting period extended for the Spanish speaking community to adequately review and comment.

Socioeconomics

The need for the projects have not been demonstrated in the DEIS. For a project with so many negative impacts, an unequivocal need for the product must be shown.

IND126-1 Air quality is addressed in section 4.11.1 of the EIS. Impacts on water resources are discussed in section 4.3.

IND126-2 See Comment Response IND96 (Mary Volz).

Individuals (IND)

IND126 - Bradley Willis

The socioeconomic analysis detailed in the DEISs are narrow in view and incomplete. The analysis does not include costs to the taxpayer at every level of government (e.g. police, fire, infrastructure, coast guard, etc.) to support LNG costs in response to micro and macro consequences (e.g. accidents, climate change, social costs to carbon, etc.) of LNG development that negate claimed benefits.

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The economic analysis did not include the nine recreational use areas identified in Texas LNG DEIS that are within the project site, increased ship traffic adversely affect recreational boaters and eco tours on the water such as dolphin watching, and the significant impact on visual resources. These are dollars that would be negated from claimed benefits.

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IND126-2

Individuals (IND)

IND126 - Bradley Willis

be impacted as well. Section 7 of the Endangered Species Act, as amended, states that any project authorized, funded, or conducted by any federal agencies should not "...jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined...to be critical...". The permit should be denied according to Section 7 of the ESA.

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Cumulative Impacts

The DEIS says "the greatest cumulative impacts" would be on soils, surface water quality, vegetation, wildlife, aquatic resources, threatened and endangered species, visual resources, land & water-based transportation, air quality, and noise. These are more than sufficient reasons to deny LNG permits.

The DEIS states "We conclude that cumulative impacts of the 3 LNG terminals on visual resources would be potentially significant." We agree and urge denial of LNG permits.

The DEIS concludes that the 3 LNG projects cumulatively "would contribute significantly

IND126-2

Individuals (IND)

IND126 - Bradley Willis

to air quality impacts, potentially exceed the NAAQS in local areas, and result in cumulatively greater air quality impacts." This is not acceptable and is grounds for denial of LNG permits.

The DEIS says that Rio Grande "combined with the other projects in the geographic scope, including the Texas LNG and Annova LNG projects, would result in "significant cumulative impacts..." Therefore if FERC chooses to permit any one of the LNG projects, it should deny permits to all others. By FERC's own analysis the cumulative impacts would be too great (e.g. significant).

IND126-2

Individuals (IND)

IND127 - John Lingenfelder

20181203-5173 FERC PDF (Unofficial) 12/3/2018 1:54:46 PM

John Lingenfelder, Plano, TX.

I grew up in this area of Texas. After reviewing the proposed LNG plant and pipeline, I must protest any consideration for its construction. Texas has very few wild areas remaining that are as diverse as this. Any construction will forever mar this landscape and environment.

IND127-1

I realize that there are definite economic benefits to constructing these, but why is economic benefit always the primary consideration? Why not make the environmental benefit to the local community and to the people of Texas be the primary consideration.

IND127-2

Construction of this plant and of the pipeline will turn a diverse ecological environment into an environmental wasteland.

Please do not approve this construction. Texas needs this place as it is.

IND127-1

Comment noted.

IND127-2

As identified in section 1.0, FERC considers the public interest and/or the public convenience and necessity of a project prior to making its decision on whether or not to approve it. The EIS is developed as part of the proposed Project's consideration to identify the environmental impacts that would occur if the Project were to be approved, and to identify mitigation measures that would minimize those impacts on the environment. Assessment of the proposed Project has included coordination with multiple federal and state agencies and requires permits or authorizations from additional entities (see section 1.5).

Individuals (IND)

IND128 - Joanna Ward

20181203-5186 FERC PDF (Unofficial) 12/3/2018 2:05:48 PM

Joanna Ward, Laguna Vista, TX.
Reasons for Rio Grand Pipeline Denial:

Please know that Mellissa Case living in Houston works for Bechtel Oil, Gas, and Chemicals. The positive statements about an Australian fishing village with LNG exports made by her on 11/20/2018 for Rio Grande LNG Export business should not be taken as true facts. I know for a fact that residents in Australia strongly opposed the unhealthy polluting done to their land, water, and populations with fracking as do the residents in Texas. I doubt that the residents in the Australian fishing village have all of the LNG jobs that Ms. Case states based on my experience in search of the truth regarding the jobs promised for the LRGV nor do I believe that the people are happy about breathing the carcinogenic air produced by the dirty fracked methane being piped to their polluting export facility while it is being frozen for export and its toxins are released into the community which, if the same as in the LRGV, include tons of nitrogen oxides, carbon monoxide, volatile organic compounds, particulate matter, and sulfur dioxide. It should be of concern that these pollutants that are known to mostly affect the unborn, young, and retired elderly residents with asthma, harm pregnant women and fetuses causing anomalies, and increases cancer rates will also affect the water and the fish that are ingested by the villagers and by those to whom their fish are sold. The same would be the case with the fish becoming contaminated in the "best fishing in Texas at Laguna Madre" where five species of seagrass in the area account for 80% of remaining seagrass in Texas according to Texas.gov should FERC grant such permission! Our Laguna Madre is the only hyper saline bay in the United States, and one of only six on our planet! Our saltwater estuaries are one of the most valuable types of landforms that exist on the planet. Our Laguna Madre in the Lower Rio Grande Valley now offers popular sport fishing opportunities for sea trout, redfish, flounder, as well as, snook, gray snapper, Florida pomp, and barracuda. Furthermore, these LNG Export companies taking our natural resources while harming and destroying our natural lands, even without a plan for mitigation which had not yet been made as required for all the public to see in order to be informed and able to make their comments known, while threatening local businesses, our health, and wildlife including the endangered species here will also cause our gas prices to rise as they have in Australia due to supply! There are more than enough LNG export facilities along our Eastern shores that have already been approved and not yet built to accommodate the needs of the "clean LNG" other countries will receive from abroad to burn at the cost of the health and well being of the American residents for one group living near the chemical fracking fields, ugly polluting export facilities and gas pipelines that are known to have exploded harming and killing people and damaging properties. The people are the ones who report pipeline issues, not the companies who built them! What's more, we already have safety concerns along the souther tip of Texas living at sea level which continues to rise as do the tides. We recently learned through the required Federal report about man's carbon pollution and know that methane, an extremely powerful climate disrupting gas more than 20 times more potent than carbon dioxide, is causing the drastic climate changes we already have started to see. Texas is the third most

IND128-1

IND128-1

The comment is a duplicate of comment IND194.

Individuals (IND)

IND128 - Joanna Ward

20181203-5186 FERC PDF (Unofficial) 12/3/2018 2:05:48 PM

industrial polluted state in the country next to Louisiana as the second greatest polluter of its citizens. I'd get their cancer rates, if FERC allowed me a decent amount of time to research and submit my comments!!! The fracking with undisclosed chemicals and freezing the dirty methane significantly contributes to the climate change that we have already witnessed. The problem with the now known methane leaks that do occur also questions how clean LNG truly is and there is so much of it, while all other countries in the world are looking for cleaner fuels for their energy and China is going to win in that business if we stay on this poorly thought through dirty business in the USA! We have already seen the extreme changes in temperatures, sea level and tides rising, the most catastrophic fires, and more catastrophic and deadly hurricanes and storms which are part of several important factors within the safety concerns of our communities that must be addressed. Leaks from storage tanks have also occurred carrying odorless gas that could be ignited as the strong winds here carry it through our communities. Do you have updated standards for allowing such a business since they now have bigger ships and storage tanks this close, just two miles, to our communities and businesses with international customers? We also live in a salty air environment that is highly corrosive. Pipeline problems and explosions have been found by the public and not the companies who should be held responsible for monitoring and maintaining their pipes to avoid these accidents. TCEQ won't monitor companies in Texas according to their history! I feel sorry for those children in communities during Eagle Ford Shale's fracking where the children went to school with burning noses and many citizens could not go outdoors without their asthma inhalers while the TCEQ did nothing to protect them. When I made my public comments to TCEQ in Brownsville, I made it known that they do not even monitor the air as it would blow in from this enormous Rio Grande export facility which would pollute us with their toxins from their methane while shrinking it for export and our strong southerly winds would be taking these toxins into Port Isabel High School and the SPI Golf Course Community in Laguna Vista, the Gate Way to the Laguna Madre, where our multimillion dollar eco tourism building is in the planning stages to educate and attract our international eco tourism visitors. I do believe that building will not reach any where near it's full potential with our growing Texas, country, and international visitors supporting our businesses that we already have here. If you approve any LNG export company to destroy the last and cleanest Gulf Coast shoreline in our state and country, I will immediately sell my property at the SPI Golf Course, that has tripled in size since I bought the property in 2003 along the now Laguna Atascosa National Wildlife Refuge and find a healthier place and maybe country to retire, unlike too many of the people here who have lived for generations and may not have the same means as I do. It will be a sad day for our country and our planet should this permit be granted. This area can not be mitigated or recovered once FERC permits its destruction for once and for all.

Regarding jobs in the LRGV, I tried to get the facts from Jesus Canas, a business economist from the Federal Reserve Bank of Dallas who spoke about the large numbers of jobs that would be created by LNG exporters in the LRGV at the Binational Innovation Conference at South Texas College September 24, 2014. When I asked him for the facts to support that promise, he stated that he did not have that information with him but,

IND128-1

Individuals (IND)

IND128 - Joanna Ward

20181203-5186 FERC PDF (Unofficial) 12/3/2018 2:05:48 PM

would send it to me. He gave me his contact information after his presentation and never responded back to dozens of phone calls, messages, and emails. Yet some people in the LRGV Brownsville area believe what they are told without evidence. My guess is that there would be one experienced LNG engineer hired from out of state and other menial local maintenance jobs after the construction that in itself would be a polluting process. This business would take away from our near 7,000 eco tourism jobs reported in 2011 besides making people sick where health care is already not well enough provided!

I do know for a fact that our informed surrounding towns of Laguna Vista, Port Isabel, South Padre Island, and Long Island Village who would most be affected by the enormous Rio Grande LNG project just 2.2 miles from the tourist beach town of Port Isabel all strongly oppose it and have intervened to stop it. Our way of life in this last pristine most beautiful and inviting TX Gulf Coast area where our populations continue to grow and triple during the winters and spring and fall birding migrations would be forever changed for the worse and destroyed. Our eco tourism businesses have continued to grow here bringing seven years ago almost half a billion dollars to the area in one season with national and international eco tourism and beach visitors. Those near 7,000 jobs as reported in 2011 would be negatively affected by the Rio Grande LNG project. There is a multimillion dollar building project already in the planning stages in Laguna Vista, the gateway to our unique hypersaline Laguna Madre bay, to promote our ecotourism business with the Bahia Grande, the largest restoration project in North America! Over five hundred bird species have been migrating between our two continents through these areas on our planet for thousands of years here with our rare hyper saline estuaries/wetlands and Laguna Madre bay. Our families of dolphins live and play and entertain our nature tourists in our Laguna Madre. Our Isla Blanca public beach ends at the ship channel. We don't want the impact that the Rio Grande LNG Export business would bring on this remaining untouched paradise on the tip of South Texas with its endangered turtles, ocelots, birds, along with its important wild Gulf Shrimping businesses here and where the elegant shorebirds are a heavenly site now at sunset in the Bahia Grande along Highway 48 to the Brownsville Airport! This land now attracts nature photographers and birders from all over the world. We look forward to kayaking and paddle boarding in the Bahia Grande riding our bikes on trails there from the new Ecotourism building coming to Laguna Vista! We don't want the take over of so much of our land and environment here with bright lights 24/7 surrounding a chained fence protecting storage tanks as tall as our Historic Light House in Port Isabel seen from our Causeway to our South Padre Island beaches and businesses or around our Bahia Grande with flares unable to burn away the toxins with our strong winds before they escape into the air all living creatures inhale as the dirty natural methane freezes and shrinks all of their carcinogenic toxins into our environment and schoolyards that our coalition of pediatricians from Brownsville have stated would cause fetal anomalies and increased asthma. We know the unborn, young, and old living and choosing to retire here would be most harmed by these proposed toxins being put into our environment. Regarding the unique territory, how can our hypersaline wetlands possibly be successfully mitigated????!!!! Furthermore, the Safety Standards have not yet been updated for the larger storage tanks

IND128-1

Individuals (IND)

IND128 - Joanna Ward

20181203-5186 FERC PDF (Unofficial) 12/3/2018 2:05:48 PM

and ships to protect our affected communities, as well as, with the federally reported severe weather changes and more catastrophic, deadly storms with climate change! This unacceptable permit for another pipeline must be denied in the Lower Rio Grande Valley!

Cheniere LNG recognized the value of our unique pristine nature preserves here and went to an already polluted area in Louisiana and left this last clean coastal area in our state and country still preserved for all the people on this planet and birds migrating between our two continents. We the people here demand our pristine land remain preserved for all who live here, visit from around the planet, and all the children and future grandchildren who will need a place like this forever as well as all of our endangered species who live here with us. On turtle patrols visitors from Corpus Christi and San Antonio have told me they were appalled that LNG exports could take away their last clean beaches in their state where they could escape the pollution from the fossil fuel industry already damaging their areas where they live in this state! I for one with the means will not stay to breathe the toxins directly coming into my backyard should you make an unchangeable major mistake for posterity and grant such a permit.

Thanking you in advance for respecting our lives and the facts and denying this permit that would forever harm the populations with such a pipeline using Eminent Domain to take away people's property which is for corporate profits and is not in the interest of the Public Good, the South tip of Texas, our endangered species in this unique area, and eco tourism businesses while it helps to double our carbon footprint in Cameron County.

Most sincerely,
Joanna Ward, MSN, BSN, PNP, RN

IND128-1

Individuals (IND)

IND129 - Alma Gloria Leal

20181203-5187 FERC PDF (Unofficial) 12/3/2018 2:08:48 PM

Alma Gloria Leal, Rancho Viejo, TX.

I am writing to request that FERC deny Rio Grande LNG's application for a permit to build an LNG facility at the Port of Brownsville based on many factors and particularly on the DEIS document that clearly shows why the permit should be denied.

I am a resident of Rancho Viejo, TX and am greatly concerned about the disastrous impact an LNG facility will have on the Rio Grande Valley, especially when combined with the cumulative impact of additional LNG facilities that are also requesting permits. The DEIS is lacking in that it has not fully investigated all the hazards on our environment and endangered species. Regardless of the mitigation plans submitted by Rio Grande LNG, natural habitats of endangered species can never be preserved to their original state. A temporary loss will actually be a permanent loss. Many conservation groups and individuals have worked so hard to develop and enhance wildlife refuges in South Texas, only to have a company destroy them for their own economic benefit that may never come to fruition because of waning or lack of demand for LNG. I am also deeply concerned about the quality of life of residents who will be exposed to emissions that will have short and long term effects on the elderly, children and future generations. The DEIS itself says that there will be great cumulative impacts on soil, surface water quality, vegetation, wildlife, aquatic resources, endangered species, air quality and other areas. Common sense dictates that these impacts are too great a risk to give Rio Grande LNG a permit. We are lucky that we have not been impacted by raging fires, destructive hurricanes, tornadoes and earthquakes that are causing immense damage and loss of life in other parts of the U. S. We do not want to invite disaster and destruction of our environment and quality of life, nor adverse impacts on our economy that depends on healthy ecosystems. Based on your statements regarding cumulative impacts to our air quality, wildlife and vegetation, please deny Rio Grande LNG a permit to destroy our way of life and our precious resources.

IND129-1

IND129-2

IND129-3

IND129-4

IND129-1

As identified in table 4.8.1-1, certain areas of construction would be permanently encumbered by Project facilities and maintained rights-of-way; however, we disagree that a temporary impact on habitat equates to a permanent loss of habitat; wildlife habitat effects are discussed in section 4.6.1.2. Further, the proposed Project would not directly affect conservation lands as proposed. Certain parcels or Project components were identified as encroaching, or potentially encroaching, on conservation parcels in the draft EIS; however, RG Developers, in response to our recommendations, have modified the Project to avoid these parcels (see sections 4.6.1.2 and 4.8.1.5).

IND129-2

As described in section 4.11.1 of the EIS, the State of Texas requires a State Health Effects air quality analysis. The results of RG LNG's State Health Effects modeling evaluation indicate that the Project emissions are below applicable effects screening levels, and therefore adverse health effects are not expected. The TCEQ is the agency responsible for the review of the State Health Effects analysis, and on December 17, 2018, the TCEQ issued an order granting air quality permits to RG LNG. Further, pollution emissions from the LNG Terminal site, when considered with background concentrations, would be below the NAAQS, which are designated to protect public health including sensitive populations such as children, the elderly, and asthmatics.

IND129-3

Comment noted.

IND129-4

Comment noted.

Individuals (IND)

IND130 - Herbert Montalvo

Herbert Montalvo
McAllen, TX 78504

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street NE Room 1A
Washington, DC 20426

I oppose the proposed LNG projects for the Port of Brownsville, Rio Grande LNG docket CP16-454-000, Rio Bravo Pipeline docket CP16-455-000, and Texas LNG docket CP16-116-000, hereinafter referred to as the Applicants. These projects, as indicated in the DEISs, would have adverse impacts, thus permits should be denied. The following comments are those specific to the DEISs and apply to the dockets aforementioned.

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The socioeconomic analysis detailed in the DEISs are narrow in view and incomplete. The analysis does not include costs to the taxpayer at every level of government (e.g. police, fire, infrastructure, coast guard, etc.) to support LNG costs in response to micro and macro consequences (e.g. accidents, climate change, social costs to carbon, etc.) of LNG development that negate claimed benefits.

IND130-1

See Comment Response IND96 (Mary Volz).

IND130-1

Individuals (IND)

IND130 - Herbert Montalvo

There is no analysis of the impacts to both the bait shrimping industry (which relies on the BSC) nor on the off-shore shrimping industry, which relies ready access to the BSC to get to & from the Gulf.

The economic analysis did not include the nine recreational use areas identified in Texas LNG DEIS that are within the project site, increased ship traffic adversely affect recreational boaters and eco tours on the water such as dolphin watching, and the significant impact on visual resources. These are dollars that would be negated from claimed benefits.

The DEIS for Rio Grande says "neither construction nor operation would be expected to significantly impact tourism..." There is no data to support this statement. Port Isabel, South Padre Island and Laguna Atascosa NWR are all very nature tourist-dependent. Interview-type studies need to be done with out-of-area tourists to meaningfully assess this impact.

Air Pollution

Cumulative emissions of greenhouse gases would be massive (10.7 million tons per year), with Rio Grande being by far the largest contributor (8.5 million tpy). And this would continue for 20-30 years or longer, when we need to reduce carbon emissions drastically much sooner. Rio Grande LNG and Texas LNG, if approved & built, would move us in the opposite direction. The fact that contribution to cumulative impacts on climate change cannot be precisely measured is no reason for FERC to wash its hands of it. FERC should require carbon capture or deny the permit.

Wetlands, Habitat, and Wildlife

Identified species by the Applicants that are federally listed as threatened or endangered will be affected. The DEISs states that the Applicants will likely adversely affect the endangered Northern aplomado falcon, the threatened piping plover and its critical habitat, and the endangered ocelot. Many other rare and important species will be impacted as well. Section 7 of the Endangered Species Act, as amended, states that any project authorized, funded, or conducted by any federal agencies should not "...jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined...to be critical...". The permit should be denied according to Section 7 of the ESA.

IND130-1

Individuals (IND)

IND130 - Herbert Montalvo

The conservation and preservation efforts of the public has resulted in the Lower Rio Grande Valley NWR, the Laguna Atascosa NWR, Loma Ecological Preserve, Wildlife Corridor, Bahia Grande Restoration Project, the Federal Ocelot Recovery Plan, and recent conservation of 3,200 acres on South Padre Island and several hundred acres along Bahia Grande near Port Isabel. Conservation efforts demonstrates strong social and cultural values. Permitting LNG projects that continue the trend of impacting (indirectly or directly) or destroying the last remaining ecosystems conflicts with regional social and cultural values. As such, permits should be denied.

Reliability and Safety

IND130-1

Valley Crossing Pipeline already goes under the RG terminal site. We do not think it safe to build a LNG liquefaction terminal over a large buried high-pressure natural gas pipeline, even if the risk of rupture is low. Effects to pile driving, construction, operations, etc. on the Valley Crossing pipeline is not adequately addressed in the DEIS.

The SpaceX launch site are near the terminal sites for the Applicants. Where is the launch failure analysis? Did that analysis include the SpaceX BFR, which will be larger than any existing rocket, and which SpaceX says it intends to launch from the Boca Chica site?

Cumulative Impacts

The DEIS says "the greatest cumulative impacts" would be on soils, surface water quality, vegetation, wildlife, aquatic resources, threatened and endangered species, visual resources, land & water-based transportation, air quality, and noise. These are more than sufficient reasons to deny LNG permits.

The DEIS states "We conclude that cumulative impacts of the 3 LNG terminals on visual resources would be potentially significant." We agree and urge denial of LNG permits.

The DEIS concludes that the 3 LNG projects cumulatively "would contribute significantly to air quality impacts, potentially exceed the NAAQS in local areas, and result in cumulatively greater air quality impacts." This is not acceptable and is grounds for denial of LNG permits.

The DEIS says that Rio Grande "combined with the other projects in the geographic scope, including the Texas LNG and Annova LNG projects, would result in "significant

Individuals (IND)

IND130 - Herbert Montalvo

cumulative impacts...” Therefore if FERC chooses to permit any one of the LNG projects, it should deny permits to all others. By FERC’s own analysis the cumulative impacts would be too great (e.g. significant).

IND130-1

Individuals (IND)

IND131 - Rebecca Wittenburg

Rebecca Wittenburg
Charlestown, MA 02129-3621

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street NE Room 1A
Washington, DC 20426

As a winter Texas and former native of the Rio Grande Valley, I'd like to register my opposition to the proposed LNG project for the Port of Brownsville for the following reasons:

These projects, as indicated in the DEISs, would have adverse impacts for so many reasons.

DEIS and FERC Procedures Are Compromising Public Input

Not all requests and consultations are finished, and some have not even been started. How is the public supposed to comment on information that isn't there? Commenting periods should be extended until all such requests and consultations are finished.

The FERC comment deadline should be extended for reasons that each project has 45 days for public commenting, however FERC combined two projects into one public hearing and an overlapping commenting deadline. This resulted in cutting the time in half for review of the DEIS and commenting.

The FERC DEIS is not available in Spanish, the predominant language spoken in the Rio Grande Valley. The DEIS should be translated and commenting period extended for the Spanish speaking community to adequately review and comment.

Socioeconomics

The need for the projects have not been demonstrated in the DEIS. For a project with so many negative impacts, an unequivocal need for the product must be shown.

The socioeconomic analysis detailed in the DEISs are narrow in view and incomplete. The analysis does not include costs to the taxpayer at every level of government (e.g. police, fire, infrastructure, coast guard, etc.) to support LNG costs in response to micro

IND131-1

See Comment Response IND96 (Mary Volz).

IND131-1

Individuals (IND)

IND131 - Rebecca Wittenburg

and macro consequences (e.g. accidents, climate change, social costs to carbon, etc.) of LNG development that negate claimed benefits.

There is no analysis of the impacts to both the bait shrimping industry (which relies on the BSC) nor on the off-shore shrimping industry, which relies ready access to the BSC to get to & from the Gulf.

The economic analysis did not include the nine recreational use areas identified in Texas LNG DEIS that are within the project site, increased ship traffic adversely affect recreational boaters and eco tours on the water such as dolphin watching, and the significant impact on visual resources. These are dollars that would be negated from claimed benefits.

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Air Pollution

Cumulative emissions of greenhouse gases would be massive (10.7 million tons per year), with Rio Grande being by far the largest contributor (8.5 million tpy). And this would continue for 20-30 years or longer, when we need to reduce carbon emissions drastically much sooner. Rio Grande LNG and Texas LNG, if approved & built, would move us in the opposite direction. The fact that contribution to cumulative impacts on climate change cannot be precisely measured is no reason for FERC to wash its hands of it. FERC should require carbon capture or deny the permit.

Wetlands, Habitat, and Wildlife

Identified species by the Applicants that are federally listed as threatened or endangered will be affected. The DEISs states that the Applicants will likely adversely affect the endangered Northern aplomado falcon, the threatened piping plover and its critical habitat, and the endangered ocelot. Many other rare and important species will be impacted as well. Section 7 of the Endangered Species Act, as amended, states that any project authorized, funded, or conducted by any federal agencies should not "...jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is

IND131-1

Individuals (IND)

IND131 - Rebecca Wittenburg

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The conservation and preservation efforts of the public has resulted in the Lower Rio Grande Valley NWR, the Laguna Atascosa NWR, Loma Ecological Preserve, Wildlife Corridor, Bahia Grande Restoration Project, the Federal Ocelot Recovery Plan, and recent conservation of 3,200 acres on South Padre Island and several hundred acres along Bahia Grande near Port Isabel. Conservation efforts demonstrates strong social and cultural values. Permitting LNG projects that continue the trend of impacting (indirectly or directly) or destroying the last remaining ecosystems conflicts with regional social and cultural values. As such, permits should be denied.

IND1311-1

Reliability and Safety

Valley Crossing Pipeline already goes under the RG terminal site. We do not think it safe to build a LNG liquefaction terminal over a large buried high-pressure natural gas pipeline, even if the risk of rupture is low. Effects to pile driving, construction, operations, etc. on the Valley Crossing pipeline is not adequately addressed in the DEIS.

The SpaceX launch site are near the terminal sites for the Applicants. Where is the launch failure analysis? Did that analysis include the SpaceX BFR, which will be larger than any existing rocket, and which SpaceX says it intends to launch from the Boca Chica site?

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The DEIS says "the greatest cumulative impacts" would be on soils, surface water quality, vegetation, wildlife, aquatic resources, threatened and endangered species, visual resources, land & water-based transportation, air quality, and noise. These are more than sufficient reasons to deny LNG permits.

The DEIS states "We conclude that cumulative impacts of the 3 LNG terminals on visual resources would be potentially significant." We agree and urge denial of LNG permits.

The DEIS concludes that the 3 LNG projects cumulatively "would contribute significantly to air quality impacts, potentially exceed the NAAQS in local areas, and result in cumulatively greater air quality impacts." This is not acceptable and is grounds for denial of LNG permits.

Individuals (IND)

IND131 - Rebecca Wittenburg

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IND131-1

Individuals (IND)

IND132 - Kent Wittenburg

Kent Wittenburg
Charlestown, MA 02120

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street NE Room 1A
Washington, DC 20426

My family as well as my wife's family have been a part of the Rio Grande Valley for four generations. My wife and I spend part of every winter in Brownsville TX and South Padre Island with our family there. We deeply appreciate the natural environment in the area. We birdwatch, windsurf, swim, and fish. Our view is that the proposed LNG projects would be clearly harmful to the natural environment of the area and it would adversely affect tourism. We are strongly opposed to the project.

IND132-1

I oppose the proposed LNG projects for the Port of Brownsville, Rio Grande LNG docket CP16-454-000, Rio Bravo Pipeline docket CP16-455-000, and Texas LNG docket CP16-116-000, hereinafter referred to as the Applicants. These projects, as indicated in the DEISs, would have adverse impacts, thus permits should be denied. The following comments are those specific to the DEISs and apply to the dockets aforementioned.

IND132-2

DEIS and FERC Procedures Are Compromising Public Input

Not all requests and consultations are finished, and some have not even been started. How is the public supposed to comment on information that isn't there? Commenting periods should be extended until all such requests and consultations are finished.

The FERC comment deadline should be extended for reasons that each project has 45 days for public commenting, however FERC combined two projects into one public hearing and an overlapping commenting deadline. This resulted in cutting the time in half for review of the DEIS and commenting.

IND132-1

Comment noted. Impacts on wildlife and aquatic resources are discussed in section .6. Impacts on tourism are addressed in section 4.9.3.

IND132-2

See Comment Response IND96 (Mary Volz).

Individuals (IND)

IND132 - Kent Wittenburg

The FERC DEIS is not available in Spanish, the predominant language spoken in the Rio Grande Valley. The DEIS should be translated and commenting period extended for the Spanish speaking community to adequately review and comment.

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The need for the projects have not been demonstrated in the DEIS. For a project with so many negative impacts, an unequivocal need for the product must be shown.

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IND132-2

Individuals (IND)

IND132 - Kent Wittenburg

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IND132-2

Individuals (IND)

IND132 - Kent Wittenburg

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IND132-2

Individuals (IND)

IND132 - Kent Wittenburg

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IND132-2

Submitted 12/2/18, 4:12 PM

Individuals (IND)

IND133 - Glenn Boward

Glen Boward
Welsaco, TX 78596

2 December 2018

Kimberly D. Bose
Secretary, Federal Energy Regulatory Commission
888 First Street NE, Room 1A
Washington, D.C. 20426

Comments on
Draft Environmental Impact Statement FERC/EIS-0287D
Rio Grande LNG CP16-454-000
Rio Bravo Pipeline CP16-455-000

Dear Secretary Bose,

I ask the Federal Energy Regulatory Commission (FERC) to DENY Rio Grande LNG's (RGLNG) request for authorization to construct and operate liquefied natural gas (LNG) export facilities in Cameron County, Texas, and RB Pipeline request to construct, operate, and maintain a new pipeline system in Jim Wells, Kleberg, Kenedy, Willacy, and Cameron Counties, Texas.

FERC's opening letter of the DEIS to RGLNG clearly justifies reasons to DENY RGLNG's request for authorization:

"The FERC staff concludes that construction and operation of the Rio Grande LNG Project would result in some adverse environmental impacts" and combined with other projects within the geographic scope Rio Grande LNG Project "would result in certain significant cumulative impacts."

From the DEIS's opening letter it appears that FERC has enough information to outright DENY Rio Grande LNG's request for authorization, but I offer the following additional reasons:

1. The DEIS is simply incomplete. FERC reviewed and found unacceptable RGLNG's request for additional alternative measures from FERC Procedures. FERC recommends RGLNG file an updated Project justification for their proposed use of certain wetlands

IND133-1

IND133-1

The EIS was prepared in accordance with NEPA, CEQ guidelines, and the Commission's regulations and policy. The EIS is consistent with FERC style, formatting, and policy regarding NEPA evaluation of alternatives and different impact types. The EIS is comprehensive and thorough in its identification and evaluation of feasible mitigation measures to reduce those effects whenever possible. While some information was still pending at the time of issuance of the draft EIS, the lack of this final information does not deprive the public of a meaningful opportunity to comment on a substantial adverse environmental effect of the Project or a feasible way to mitigate or avoid such effect. The draft EIS included sufficient detail to enable the reader to understand and consider the issues raised by the proposed Project and addresses a reasonable range of alternatives. The FERC continued to accept comments on the draft EIS and other related materials placed into the record well past the end date of the comment period up, to the extent possible, until the point of publication of the final EIS. The final EIS includes additional information provided by RG Developers, cooperating agencies, and new or revised information based on substantive comments on the draft EIS.

Individuals (IND)

IND133 - Glenn Boward

<p>as “workspaces” PRIOR to the end of the DEIS comment period. FERC should DENY the permit if RGLNG does not comply with their request. How can FERC justify a deadline for public comments when important information is excluded? Until RGLNG complies with FERC’s request and such important information is made public, I recommend that the deadline for public comments be extended a minimum of two weeks after RGLNG compliance to FERC’s request is made public.</p>	IND133-1
<p>2. RGLNG has proposed a flagrantly insufficient mitigation plan. RGLNG proposed to “preserve” an area that is already under U.S. Fish & Wildlife Service (USFWS) protection and management. As proposed by RGLNG, the mitigation plan violates the “No Net Loss” federal policy. The DEIS states that 74 acres of wildlife habitat will be permanently destroyed at the terminal site. There is NO stated plan on how this loss will be replaced or mitigated. A “moderate permanent impact” on local wildlife is unacceptable. How can FERC ignore such a flagrantly insufficient mitigation plan?</p>	IND133-2
<p>3. The DEIS notes that 3655 acres would be “disturbed” during construction and 1507 acres “would return to pre-construction conditions and uses”, including wetlands. This seems highly improbable, especially in the proposed Terminal area. To compensate for this loss, FERC should require uplands mitigation. Using wetlands for “workspace” and roads is unacceptable. Returning “workspace” wetlands to “pre-construction conditions and uses” after several years of heavy construction is highly unlikely.</p>	IND133-3
<p>4. There is a need to study the impact that the proposed dredging would have on existing sea grass and oyster beds in the Bahia Grande and South Bay. Such areas are highly vulnerable to even a small degree of dredge spoil deposition. FERC should request such a study.</p>	IND133-4
<p>5. The DEIS states that the RGLNG Project “has the potential to result in significant impacts on ocelot and ocelot recovery.” Given the ocelot population and habitat has greatly been reduced in this area, this is another reason for FERC to DENY the permit.</p>	IND133-5
<p>6. The DEIS states that there would be “moderate impacts on the Zapata Boat Launch area.” The existing Restoration Channel would be located near to the RGLNG site. The impacts to recreational fishing in this immediate area need to be addressed.</p>	IND133-6
<p>7. The DEIS states, “...neither construction nor operation would be expected to significantly impact tourism...” Where is the data to support this statement? The Port Isabel, South Padre Island, and Laguna Atascosa NWR are all dependent on eco-tourism. Industries, like RGLNG, are NOT positive towards eco-tourism.</p>	IND133-7
<p>8. RGLNG is required to complete its cultural resources survey and complete necessary consultation BEFORE the EIS is finalized, NOT “prior to construction.” The public needs to have an opportunity to review and comment on this survey BEFORE the EIS is finalized.</p>	IND133-8
<p>9. The DEIS states “the greatest cumulative impacts” would be on soils, surface</p>	IND133-9

IND133-2	<p>As described in section 4.4.2 of the EIS, wetland mitigation plans are part of the permitting process associated with Section 404 of the CWA. RG LNG’s final wetland mitigation plans would be developed and submitted to the COE, and would be implemented in addition to the construction mitigation measures outlined in RG LNG’s Procedures and the measures described in the EIS. Construction of the LNG Terminal would not be authorized to commence prior to finalization of the wetland mitigation plans and issuance of the COE’s CWA Section 404/Section 10 permit.</p>
IND133-3	<p>Section 4.4.2.2 of the EIS acknowledges that, due to the longer disturbance of wetlands within the same corridor due to proposed sequential installation of Pipelines 1 and 2, and the potential for conversion of wetland cover types within the permanent right-of-way, compensatory mitigation could be required as part of the CWA Section 404 permit for the Pipeline System. Issuance of the CWA Section 404 permit is not under FERC’s jurisdiction. Regarding the restoration of wetlands disturbed during construction, section 6.3 of RG Developers’ Procedures describes wetland restoration requirements, which includes, but is not limited to, consultation with appropriate federal or state agencies to develop a Project-specific wetland restoration plan, and ensuring that all disturbed areas successfully revegetate with wetland herbaceous and/or woody plant species and that the company control the invasion and spread of invasive species and noxious weeds. Section 6.4.5 of RG Developers’ Procedures describes the criteria for determining successful wetland restorations. The COE may require additional monitoring parameters during its permitting process.</p>
IND133-4	<p>Section 4.3.2.2 of the EIS describes dredging impacts on water quality, including the potential for sediment to reach the Bahia Grande. Section 4.6.2 of the EIS states that South Bay connects to the BSC more than 2.5 miles from the LNG Terminal site; therefore, impacts of dredging and dredged materials on seagrass beds and oyster beds within South Bay are not anticipated.</p>
IND133-5	<p>The BA provided in section 4.7 of the final EIS has been revised in accordance with FWS correspondence and concludes that the Project is not likely to adversely affect the northern aplomado falcon and piping plover and would not result in the adverse modification of critical habitat. Our determination of effect for the ocelot remains, and our current determination for the jaguarundi, is “likely to adversely affect.” Nevertheless, a “likely to adversely affect” determination is not reason to deny a permit under Section 7 of the ESA. Rather, the ESA requires that, if a project is likely to adversely affect a threatened or endangered species, the federal action agency (in this case, FERC) must conduct formal consultations with the FWS. This process requires the FWS to prepare a Biological Opinion for the Project.</p>
IND133-6	<p>Impacts on the Zapata boat launch and associated facilities are addressed in section 4.8.1.5, and impacts on recreation fishing, including fishing trips that launch from the Zapata boat launch, are addressed in section 4.9.3.</p>

Individuals (IND)

IND133 - Glenn Boward

IND133-7 The EIS recognizes the Project’s impacts on eco-tourism in section 4.9.3, including an increase in noise, changes in the visual landscape, and heavier traffic along SH-48. Recreation and special use areas, including birding trails, that are in proximity to the Project are addressed in section 4.8.1.5, while impacts on visual receptors at recreation and special use areas are addressed in section 4.8.2. We find that impacts on tourism, including nature-based and eco-tourism, would generally be greatest during construction of the Project. Following construction, the LNG Terminal would be the primary source of permanent impacts on tourism, as the pipelines would be buried and the associated aboveground facilities would be in remote areas, offering limited visibility and mitigating noise impacts. To mitigate impacts on visual receptors and operational noise from the LNG Terminal, RG LNG would use ground flares, grey tank coloring, horticultural plantings, and the construction of a levee that would obstruct most construction activities and low-to- ground operational facilities from view. We find that no visual or noise impacts on South Padre Island beaches and associated tourism would occur, given that the beaches face the ocean and are 5 miles away. However, we do recognize impacts on recreational fishing boats for trips that begin from Port Isabel or South Padre Island, in the form of delays at Brazos Santiago Pass if they arrive during LNG carrier transit. As further described in section 4.9.3.1, most current nature tourism facilities at the Laguna Atascosa NWR, including Boca Chica Beach, are far enough away from the LNG Terminal site that they would not be impacted by construction.

IND133-8 See Comment Response IND133-1. The Section 106 process to identify, evaluate, assess, and mitigate adverse effects to historic properties is ongoing, and would be complete prior to construction of the Project, if authorized. Completion of the Section 106 process would include completion of field surveys, which may not be possible prior to issuance of a FERC Certificate due to restricted access to construction workspaces.

IND133-9 Comment noted.

Individuals (IND)

IND133 - Glenn Boward

<p>water quality, vegetation, wildlife, aquatic resources, threatened and endangered species, visual resources, land & water-based transportation, air quality, and noise. FERC should DENY this permit.</p>	<p>IND133-9</p>
<p>10. All endangered species consultation with USFWS and NMFS (National Marine Fisheries Service) should be completed BEFORE the FERC Record of Decision, NOT "before construction."</p>	<p>IND133-10</p>
<p>11. Only if FERC permits RGLNG to proceed with construction, will AEP (American Electric Power) build a 138kV overhead powerline along SH48. This high-voltage overhead powerline would potentially have significant wildlife impacts, particularly birds, including protected and endangered species. These impacts need to be evaluated and included in the DEIS.</p>	<p>IND133-11</p>
<p>12. The DEIS does not address the impacts to both the bait shrimping industry (which relies on the Brownsville Ship Channel) and the off-shore shrimping industry. The latter relies on ready access to the BSC for getting to and from the Gulf. The DEIS needs to provide an analysis of impacts on these economically important industries.</p>	<p>IND133-12</p>
<p>13. If RGLNG is built it would be the largest single stationary source of nitrogen oxides, carbon monoxides, Volatile Organic Compounds, sulfur dioxides, particulate matter, and greenhouse gases in the Rio Grande Valley (RGV), The DEIS states "...Project emissions are below applicable screening levels, and therefore adverse health effects are not expected." I disagree. The higher the air pollutant levels the more adverse health effects there are, especially to vulnerable populations. In April & May there are days when the RGV has some of the highest particulate levels in the state. This project would worsen those levels. There is no safe level for Volatile Organic Compounds (VOC). FERC should DENY this permit.</p>	<p>IND133-13</p>
<p>14. The DEIS does not include the FERC recommended Rio Bravo Pipeline (RBP) noise mitigation plan. The DEIS notes that RBP's horizontal directional drilling "would exceed FERC's noise criterion" at seven sites. This FERC recommendation should be part of the DEIS in order for public to read and comment.</p>	<p>IND133-14</p>
<p>15. The DEIS states that RGLNG construction and operation of the LNG Terminal would result in "permanent impacts" on 174.8 acres of open water and that RGLNG "would be required to mitigate for the permanent loss of open water resources and proposed to preserve open water within an off-site wetland mitigation area about one mile south of the Project." RGLNG needs to be more specific as to this "proposed off-site mitigation area." FERC needs to exclude existing areas already under U.S. Fish & Wildlife Service (USFWS) protection and management.</p>	<p>IND133-15</p>
<p>16. Once constructed, each LNG carrier serving the LNG Terminal is expected to "discharge about 10 million gallons of ballast water and withdraw/discharge up to 12 million gallons of water for engine-cooling and hoteling." Multiply this by 6 for the estimated number of RGLNG carriers per week. The DEIS states "Ballast water</p>	<p>IND133-16</p>

<p>IND133-10</p>	<p>The EIS was prepared in accordance with NEPA, CEQ guidelines and other applicable requirements. In addition to conducting its own independent analysis of the Project, FERC also relies on the expertise of federal, state, and local agencies who have regulatory authority and oversight of the laws, rules, and regulations described in the EIS. The outreach and agency engagement conducted for the Project is described in section 1 of the EIS. An applicant must also demonstrate that it has conducted surveys in accordance with a regulatory agency's protocols and/or the law, and consulted with the appropriate agency personnel and applied for applicable permits. If the Project is authorized, the FERC Order will include conditions that must be met in advance of any construction. If the applicable conditions cannot be met, construction could not move forward, even if the Project was authorized. One such condition includes finalization of ESA consultation with the FWS and NMFS, which will identify any additional mitigation that must be met. If either agency issues a jeopardy determination, FERC could adopt a reasonable or prudent alternative, refuse to authorize the commencement of construction, or request an exemption from the Endangered Species Committee. Given these regulatory mechanisms, FERC finds that recommending these consultations to be finalized prior to construction is adequate.</p>
<p>IND133-11</p>	<p>Cumulative impacts of the electric transmission line are addressed in section 4.13.2, including the potential for impacts on migratory birds, threatened and endangered species, and visual resources.</p>
<p>IND133-12</p>	<p>Sections 4.9.4 and 4.9.8.2 have been revised to more explicitly address impacts on the bait shrimping industry.</p>
<p>IND133-13</p>	<p>Comment noted. As described in section 4.11.1 of the EIS, the State of Texas requires a State Health Effects air quality analysis. The results of RG LNG's State Health Effects modeling evaluation indicate that the Project emissions are below applicable effects screening levels, and therefore adverse health effects are not expected. The final EIS was revised to identify the pollutants assessed, which include benzene (a VOC). The TCEQ is the agency responsible for the review of the State Health Effects analysis, and on December 17, 2018, the TCEQ issued an order granting air quality permits to RG LNG. Further, pollution emissions from the LNG Terminal site, when considered with background concentrations, would be below the NAAQS, which include standards for PM, and, which are designated to protect public health including sensitive populations such as children, the elderly, and asthmatics.</p>
<p>IND133-14</p>	<p>See Comment Response IND133-1.</p>
<p>IND133-15</p>	<p>As described in section 4.4.2 of the EIS, RG LNG is consulting with the COE, EPA, and FWS regarding wetland and open water mitigation plans as part of the permitting process associated with Section 404 of the CWA. RG LNG's final mitigation plans would be developed and submitted to the COE, and would be implemented in addition to the construction mitigation measures outlined in RG LNG's Procedures and the measures described in the EIS. Construction of the LNG Terminal would not be authorized to commence prior to finalization of the mitigation plans and issuance of the COE's CWA Section 404/Section 10 permit.</p>

Individuals (IND)

IND133 - Glenn Boward

discharges at the LNG Terminal could impact water quality by changing the salinity, temperature, pH, and dissolved oxygen level of water with the BSC." The BSC serves as a conduit for ecologically sensitive areas such as South Bay and Bahia Grande. The DEIS concludes that "impacts on surface water quality resulting from ballast and cooling water would be minor." I disagree that these impacts would be "minor." What data is this based on? FERC should require additional studies into the impact from ballast water discharging.

IND133-16

17. The DEIS states that construction of the RGLNG Terminal would result in the permanent loss of 182.4 acres of wetlands and special aquatic sites. After construction, RGLNG proposes restoring wetlands to "pre-construction conditions" and would be "allowed to revegetate naturally." RGLNG is also "developing a plan" called its "Conceptual Mitigation Plan" which identifies the "potential to acquire and preserve a portion of the Loma Ecological Preserve in perpetuity." It seems like RGLNG plan is to "preserve" existing unperturbed natural areas and their concept of mitigation is to let disturbed areas revegetate on its own over time. FERC needs to require more details from RGLNG's "Conceptual Mitigation Plan" and make this plan public with time for public comments. Otherwise, FERC should DENY this permit.

IND133-17

18. The DEIS states that construction-related noise could "affect animal behavior, foraging or breeding patterns, and cause wildlife species to relocate to avoid disturbance." Construction over a period of seven years is expected to result in noise levels of 61 dB at nearby "critical habitat for the piping plover." The DEIS notes that RGLNG proposed efforts to reduce operational noise would not result in significant changes in the estimated noise attenuation. RGLNG proposes to construct and operated 6 liquefaction trains located along a four mile stretch of HW48 Based on the DEIS Figure 4.13.2-2 Sound Contours, for each of the 6 liquefaction trains there will be a constant 80 to 90 decibels noise immediately along HW48. This would be the equivalent of 6 garbage disposals or food blenders running continuously 24-7. For the southern portion of Port Isabel a constant noise level of 45 to 50 decibels is expected. This would be comparable to the level of a normal conversation running 24-7. This increase in continual ambient noise in ecological sensitive areas should be cause for FERC to DENY the permit.

IND133-18

19. The operation of the proposed RBLNG would result in a massive increase in expected traffic though the BSC and Brazos Santiago Pass. During construction it is estimated that 880 barges and support vessels would be needed to deliver construction materials and equipment to the material offloading facility (MOF) and Port of Brownsville (POB). After construction, an expected 112 LNG carriers would call on the RGLNG Terminal per year (about 6 LNG carriers per week). The impact on shoreline erosion is expected to increase. Upgrades to compensate for shoreline and channel erosion will ultimately be a burden for taxpayers. The impact of this traffic will have a

IND133-19

IND133-16

As stated in the EIS, the discharge of ballast water and uptake and discharge of engine cooling and hoteling water for each LNG carrier would each represent a negligible quantity compared with the estimated 25-billion-gallon volume of the BSC. If the water discharge and use of six LNG vessels were considered together, that volume would still represent less than 1 percent of the volume of water in the BSC. However, six vessels would not call on the LNG Terminal simultaneously and we anticipate that any changes in water temperature would diminish shortly after discharge. Therefore, we conclude in the EIS that the impacts of ballast and cooling water discharge would be minor. Our conclusion regarding the impacts of ballast water discharge on surface water at the LNG Terminal are based on the assessment of salinity, pH, and temperature described in section 4.3.2.2 of the EIS.

IND133-17

Section 6.3 of RG Developers' Procedures describes wetland restoration requirements, which includes, but is not limited to, consultation with appropriate federal or state agencies to develop a Project-specific wetland restoration plan, and ensuring that all disturbed areas successfully revegetate with wetland herbaceous and/or woody plant species and that the company control the invasion and spread of invasive species and noxious weeds. Section 6.4.5 of RG Developers' Procedures describes the criteria for determining successful wetland restorations. The COE may require additional monitoring parameters during its permitting process. As described in section 4.4.2 of the EIS, wetland mitigation plans are part of the permitting process associated with Section 404 of the CWA. RG LNG's final wetland mitigation plans would be developed and submitted to the COE, and would be implemented in addition to the construction mitigation measures outlined in RG LNG's Procedures and the measures described in the EIS. Construction of the LNG Terminal would not be authorized to commence prior to finalization of the wetland mitigation plans and issuance of the COE's CWA Section 404/Section 10 permit.

IND133-18

Section 4.11.2 assesses the noise impacts from routine construction and operation of the LNG Terminal. The results of the noise impact analysis indicate that the noise attributable to construction and operation of the LNG Terminal would be lower than the FERC noise level requirement at the nearest NSAs. Section 4.6.1 addresses Project impacts, including noise, on wildlife including birds, and acknowledges the loss of habitat at the LNG Terminal site. The BA provided in section 4.7 of the final EIS has been revised in accordance with FWS correspondence and concludes that the Project is not likely to adversely affect the piping plover and would not result in the adverse modification of critical habitat.

IND133-19

Shoreline erosion is addressed in section 4.3.2.2 of the EIS. RG LNG would stabilize the shoreline at the LNG Terminal using rip-rap. Operation of the LNG Terminal is consistent with the industrial use of the BSC. Impacts on recreational and commercial fishing are addressed in section 4.9.2 and 4.9.3, respectively, while impacts associated with increase vessel traffic are addressed in sections 4.9.8.2 and 4.12.

Individuals (IND)

IND133 - Glenn Boward

direct effect on the existing fishing and shrimping industries. Due to this excessive economic burden, FERC should DENY the permit.

IND133-19

Glenn Boward
Weslaco, Texas (41-year resident of South Texas)

Individuals (IND)

IND134 - Jean Mendoza

Jean Mendoza
Urbana, IL 61801

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street NE Room 1A
Washington, DC 20426

My husband and I are winter Texans who stay in Alamo. We spent most of today at Laguna Atascosa NWR -- the refuge is one of the reasons we purchased a home here. Why on this good earth would anyone consider destroying that amazing place with a LNG project is beyond us. Also, please listen to the people who will have to live near the three projects. No one has an inherent right to pollute their air and endanger the water and soil -- which is what LNG will do. Please stop these projects now.

IND134-1

I oppose the proposed LNG projects for the Port of Brownsville, Rio Grande LNG docket CP16-454-000, Rio Bravo Pipeline docket CP16-455-000, and Texas LNG docket CP16-116-000, hereinafter referred to as the Applicants. These projects, as indicated in the DEISs, would have adverse impacts, thus permits should be denied. The following comments are those specific to the DEISs and apply to the dockets aforementioned.

DEIS and FERC Procedures Are Compromising Public Input

IND134-2

Not all requests and consultations are finished, and some have not even been started. How is the public supposed to comment on information that isn't there? Commenting periods should be extended until all such requests and consultations are finished.

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The FERC DEIS is not available in Spanish, the predominant language spoken in the Rio Grande Valley. The DEIS should be translated and commenting period extended for the Spanish speaking community to adequately review and comment.

Socioeconomics

The need for the projects have not been demonstrated in the DEIS. For a project with so

IND134-1 Comment noted. Impacts on air quality, water resources, and soils are discussed in sections 4.11, 4.3, and 4.2, respectively.

IND134-2 See Comment Response IND96 (Mary Volz).

Individuals (IND)

IND134 - Jean Mendoza

many negative impacts, an unequivocal need for the product must be shown.

The socioeconomic analysis detailed in the DEISs are narrow in view and incomplete. The analysis does not include costs to the taxpayer at every level of government (e.g. police, fire, infrastructure, coast guard, etc.) to support LNG costs in response to micro and macro consequences (e.g. accidents, climate change, social costs to carbon, etc.) of LNG development that negate claimed benefits.

There is no analysis of the impacts to both the bait shrimping industry (which relies on the BSC) nor on the off-shore shrimping industry, which relies ready access to the BSC to get to & from the Gulf.

The economic analysis did not include the nine recreational use areas identified in Texas LNG DEIS that are within the project site, increased ship traffic adversely affect recreational boaters and eco tours on the water such as dolphin watching, and the significant impact on visual resources. These are dollars that would be negated from claimed benefits.

The DEIS for Rio Grande says "neither construction nor operation would be expected to significantly impact tourism..." There is no data to support this statement. Port Isabel, South Padre Island and Laguna Atascosa NWR are all very nature tourist-dependent. Interview-type studies need to be done with out-of-area tourists to meaningfully assess this impact.

Air Pollution

Cumulative emissions of greenhouse gases would be massive (10.7 million tons per year), with Rio Grande being by far the largest contributor (8.5 million tpy). And this would continue for 20-30 years or longer, when we need to reduce carbon emissions drastically much sooner. Rio Grande LNG and Texas LNG, if approved & built, would move us in the opposite direction. The fact that contribution to cumulative impacts on climate change cannot be precisely measured is no reason for FERC to wash its hands of it. FERC should require carbon capture or deny the permit.

Wetlands, Habitat, and Wildlife

Identified species by the Applicants that are federally listed as threatened or endangered will be affected. The DEISs states that the Applicants will likely adversely affect the endangered Northern aplomado falcon, the threatened piping plover and its

IND134-2

Individuals (IND)

IND134 - Jean Mendoza

critical habitat, and the endangered ocelot. Many other rare and important species will be impacted as well. Section 7 of the Endangered Species Act, as amended, states that any project authorized, funded, or conducted by any federal agencies should not "...jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined...to be critical...". The permit should be denied according to Section 7 of the ESA.

The conservation and preservation efforts of the public has resulted in the Lower Rio Grande Valley NWR, the Laguna Atascosa NWR, Loma Ecological Preserve, Wildlife Corridor, Bahia Grande Restoration Project, the Federal Ocelot Recovery Plan, and recent conservation of 3,200 acres on South Padre Island and several hundred acres along Bahia Grande near Port Isabel. Conservation efforts demonstrates strong social and cultural values. Permitting LNG projects that continue the trend of impacting (indirectly or directly) or destroying the last remaining ecosystems conflicts with regional social and cultural values. As such, permits should be denied.

Reliability and Safety

Valley Crossing Pipeline already goes under the RG terminal site. We do not think it safe to build a LNG liquefaction terminal over a large buried high-pressure natural gas pipeline, even if the risk of rupture is low. Effects to pile driving, construction, operations, etc. on the Valley Crossing pipeline is not adequately addressed in the DEIS.

IND134-2

The SpaceX launch site are near the terminal sites for the Applicants. Where is the launch failure analysis? Did that analysis include the SpaceX BFR, which will be larger than any existing rocket, and which SpaceX says it intends to launch from the Boca Chica site?

Cumulative Impacts

The DEIS says "the greatest cumulative impacts" would be on soils, surface water quality, vegetation, wildlife, aquatic resources, threatened and endangered species, visual resources, land & water-based transportation, air quality, and noise. These are more than sufficient reasons to deny LNG permits.

The DEIS states "We conclude that cumulative impacts of the 3 LNG terminals on visual resources would be potentially significant." We agree and urge denial of LNG permits.

Individuals (IND)

IND134 - Jean Mendoza

The DEIS concludes that the 3 LNG projects cumulatively “would contribute significantly to air quality impacts, potentially exceed the NAAQS in local areas, and result in cumulatively greater air quality impacts.” This is not acceptable and is grounds for denial of LNG permits.

The DEIS says that Rio Grande “combined with the other projects in the geographic scope, including the Texas LNG and Annova LNG projects, would result in “significant cumulative impacts...” Therefore if FERC chooses to permit any one of the LNG projects, it should deny permits to all others. By FERC’s own analysis the cumulative impacts would be too great (e.g. significant).

IND134-2

Individuals (IND)

IND135 - Sandra Stark

Sandra Stark
Madison, WI 53711

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street NE Room 1A
Washington, DC 20426

One of my favorite areas to visit in Texas is the amazing Laguna Atascosa Refuge along the Texas coast. It sustains so many species of birds and mammals, and is in a vital area for marshes, ponds, and migratory birds, that I travel from WI to TX to support it. In a world of diminishing species and coastal changes, it deserves protection from unwise and shortterm profit projects that threaten it. The last thing we need is yet another pipeline that Benefits energy companies at the expense of the fragile environment.

IND135-1

I oppose the proposed LNG projects for the Port of Brownsville, Rio Grande LNG docket CP16-454-000, Rio Bravo Pipeline docket CP16-455-000, and Texas LNG docket CP16-116-000, hereinafter referred to as the Applicants. These projects, as indicated in the DEISs, would have adverse impacts, thus permits should be denied. The following comments are those specific to the DEISs and apply to the dockets aforementioned.

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Socioeconomics

IND135-1 Comment noted. Impacts on the recreational use of the Laguna Atascosa NWR 4.9.3 of the EIS.

IND135-2 See Comment Response IND96 (Mary Volz).

Individuals (IND)

IND135 - Sandra Stark

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Air Pollution

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Wetlands, Habitat, and Wildlife

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IND135-2

Individuals (IND)

IND135 - Sandra Stark

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IND135-2

Individuals (IND)

IND135 - Sandra Stark

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IND135-2

Individuals (IND)

IND136 - Mia Trevino

Mia Trevino
McAllen, TX 78504

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street NE Room 1A
Washington, DC 20426

I oppose the proposed LNG projects for the Port of Brownsville, Rio Grande LNG docket CP16-454-000, Rio Bravo Pipeline docket CP16-455-000, and Texas LNG docket CP16-116-000, hereinafter referred to as the Applicants. These projects, as indicated in the DEISs, would have adverse impacts, thus permits should be denied. The following comments are those specific to the DEISs and apply to the dockets aforementioned.

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IND136-1

See Comment Response IND96 (Mary Volz).

IND136-1

Individuals (IND)

IND136 - Mia Trevino

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IND136-1

Individuals (IND)

IND136 - Mia Trevino

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IND136-1

Individuals (IND)

IND136 - Mia Trevino

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IND136-1

Individuals (IND)

IND137 - Carmen Grammer

Carmen Grammer
Harlingen, TX 78550

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street NE Room 1A
Washington, DC 20426

This is a vital ecosystem, please reconsider!

IND137-1

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IND137-1 Comment noted.

IND137-2 See Comment Response IND96 (Mary Volz).

Individuals (IND)

IND137 - Carmen Grammer

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IND137-2

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The SpaceX launch site are near the terminal sites for the Applicants. Where is the launch failure analysis? Did that analysis include the SpaceX BFR, which will be larger than any existing rocket, and which SpaceX says it intends to launch from the Boca Chica site?

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IND137-2

Individuals (IND)

IND137 - Carmen Grammer

The DEIS says that Rio Grande "combined with the other projects in the geographic scope, including the Texas LNG and Annova LNG projects, would result in "significant cumulative impacts..." Therefore if FERC chooses to permit any one of the LNG projects, it should deny permits to all others. By FERC's own analysis the cumulative impacts would be too great (e.g. significant).

IND137-2

Individuals (IND)

IND138 - Maria M. Galasso

20181203-5218 FERC PDF (Unofficial) 12/3/2018 3:04:40 PM

Maria M Galasso, Laguna Vista, TX.

1. FERC issued the Draft Environmental Impact Statement (DEIS) on Oct. 12, 2018 and set a comment deadline of Dec. 3, 2018, along with a public meeting scheduled for Nov. 15, 2018. The DEIS is comprised of two volumes with a total of 1,120 pages. Similarly, the Texas LNG DEIS was issued on Oct. 26, 2018 with a comment deadline of Dec. 17, 2018. The FERC determined that the public meeting would be held along with the one scheduled for Rio Grande LNG. The Texas LNG DEIS is comprised of two volumes with a total of 789 pages. Because both proposed LNG projects will be located within a few miles of each other on the Brownsville ship channel, both projects seek comments from the same group of residents. Expecting that the public review the volumes of information that has been gathered for each project, and provide meaningful comments by the established date for the public meeting is unrealistic, creates undue hardship and casts doubt about the agency goal for the public meeting. The combined public meeting for the projects should have been extended once the Texas LNG DEIS was added to the agenda. Alternatively, the Texas LNG public meeting should have been scheduled on its own, at a later date.

IND138-1

2. The Rio Grande LNG Appendix A is a list titled "Distribution for Notice of Availability". It includes a list of more than twenty-five hundred contact names. The Texas LNG Appendix A is titled "Distribution List" and only includes 106 individuals. My name is included in the Texas LNG list but is not included in the Rio Grande LNG list, although I have been actively involved and have commented often with all three projects proposed for the Brownsville Ship Channel (BSC). It was our understanding that because of the siting proximity of the projects, the comments on any of the three dockets would be filed with the other two. The differing distribution lists suggests that this did not happen.

IND138-2

3. The wetlands mitigation plan as proposed for both projects will violate the "No Net Loss" federal policy.

IND138-3

4. The need for these projects has not been demonstrated. There are no buyers for the LNG in the form of "binding contracts." For projects with so many negative impacts, an unequivocal need for the product must be shown, especially in light of the unequivocal and official opposition to the projects demonstrated by Resolutions passed by all the governing bodies of the nearby communities who will most directly experience the, in particular, negative impacts. Further, South Padre Island, Port Isabel, Long Island Village and Laguna Vista are not within the Brownsville Navigation District and therefore had no voice or representation in the decision made by the Port of Brownsville, to lease Navigation District property on the Brownsville Ship Channel to the LNG companies. Our representative voices concerning these projects lay with the elected town council and city council officials.

IND138-4

5. There is no analysis of the impacts to both the bait shrimping industry (which relies on the BSC) nor on the off-shore shrimping industry, which relies on ready access to the BSC to get to & from the

IND138-5

IND138-1 The FERC continued to accept comments on the draft EIS and other related materials placed into the record well past the end date of the comment period up, to the extent possible, until the point of publication of the final EIS. The intent of the combined public meeting was to provide interested parties the opportunity to discuss, and provide comments for, both projects in one venue. FERC staff was available at the public meeting to answer questions about our environmental review process and the content of the EIS.

IND138-2 The intent of the combined public meeting was to provide interested parties the opportunity to discuss, and provide comments for, both projects in one venue. We note that multiple comments were received and considered from the commentor on the Rio Grande LNG Project; however, no address was provided to include in the Project distribution list.

IND138-3 As described in section 4.4.2 of the EIS, wetland mitigation plans are part of the permitting process associated with Section 404 of the CWA. RG LNG's final wetland mitigation plans would be developed and submitted to the COE, and would be implemented in addition to the construction mitigation measures outlined in RG LNG's Procedures and the measures described in the EIS. Construction of the LNG Terminal would not be authorized prior to finalization of the wetland mitigation plans and issuance of the COE's CWA Section 404/Section 10 permit.

IND138-4 Under Section 3 of the NGA, oversight for LNG export is divided between the Commission and the DOE. FERC is responsible for approving the safe and sound siting and operation of LNG facilities, given that DOE has approved the export of the commodity. It is the DOE, not the Commission, which retains the exclusive authority over the export of the natural gas as a commodity, including the responsibility to consider whether the exportation of that gas is consistent with the public interest. As described in section 1.1 of the EIS, the DOE granted an authorization to RG LNG for export to countries having a FTA with the United States that includes national treatment for trade in natural gas. In accordance with the NGA and Energy Policy Act of 1992, export to a country with which there is an FTA requiring national treatment for trade in natural gas, is deemed consistent with the public interest. Further, RB Pipeline executed a precedent agreement for the total capacity of the Rio Bravo Pipeline for the 20-year life of the Project, which establishes a basis for a finding by the Commission that the pipeline will be in the public convenience and necessity under Section 7.

The resolutions opposed to the Project are noted. The location of communities outside the BND is outside the scope of the EIS.

IND138-5 Sections 4.9.4 and 4.9.8.2 have been revised to more explicitly address impacts on the bait shrimping industry.

Individuals (IND)

IND138 - Maria M. Galasso

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Gulf. Even less than significant impact could cause these industries to fail locally.

IND138-5

6. The DEIS states that the Project "has the potential to result in significant impacts on ocelot and ocelot recovery." For an area that has so few ocelots and so little ocelot habitat, this is reason to deny the permit.

IND138-6

7. The DEIS states that Rio Grande LNG will pay \$92.9 million in property taxes over 22 years which "would result in a moderate, permanent and positive economic impact." Not sure how FERC is calculating this number or if FERC is considering that the company received a tax abatement from Cameron County and agreed to pay only \$37M in Payments in lieu of taxes and \$10M in community benefit agreements for the first 16 years of operation. Also, is FERC considering that after the first 16 years, the facility will have a much lower depreciated value?

IND138-7

8. The DEIS says "neither construction nor operation would be expected to significantly impact tourism..." There is no data to support this statement. Port Isabel, South Padre Island and Laguna Atascosa NWR are all very nature tourist-dependent. Petrochemical industrialization drives away nature tourism and tourism in general is the economic lifeblood of the surrounding communities. Interview-type studies need to be done with out-of-area tourists to meaningfully and accurately assess this impact. Even less than significant impact could cause the area's essential tourism industry to suffer irreparable harm or fail.

IND138-8

9. Valley Crossing Pipeline already goes under the RG terminal site. Considering the fact that Port Isabel is currently one of the top ten cities in the US with nuisance flooding and the long-term 30 year forecast for sea level rise, the dredging or filling-in of hundreds of acres of wetlands and the millions of gallons of LNG in storage tanks that will be nearby, we do not think it safe to build a LNG liquefaction terminal over a large buried high-pressure natural gas pipeline, even if the risk of rupture is low.

IND138-9

10. The SpaceX launch site at Boca Chica Beach is 5 miles from the Rio Grande LNG terminal site and even closer to the Annova LNG site. Where is the FERC completed SpaceX launch failure analysis? Did that analysis include the SpaceX BFR, which will be larger than the Falcon or the Falcon Heavy rockets, and which SpaceX now says it intends to launch from their Boca Chica site? Because a larger rocket brings with it a larger debris radius, a launch failure analysis for the SpaceX BFR is required before FERC approval and it should be made very clear in the analysis the insurance requirements/responsibilities for all public/private involved entities.

IND138-10

11. The DEIS says that Rio Grande "combined with the other projects in the geographic scope, including the Texas LNG and Annova LNG projects, would result in "significant cumulative impacts..." Therefore if FERC chooses to permit the Rio Grande project (which we strongly oppose), it should deny Texas LNG and Annova LNG. By FERC's own analysis the cumulative impacts would be too great (e.g. significant).

IND133-11

IND138-6

As identified in section 4.7.1.4, our determination of effect for the ocelot and jaguarundi is "likely to adversely affect." A "likely to adversely affect" determination is not reason to deny a permit under Section 7 of the ESA. Rather, the ESA requires that, if a project would be likely to adversely affect a threatened or endangered species, the federal action agency (FERC) must conduct formal consultations with the FWS. This process requires the FWS to prepare a Biological Opinion for the Project.

IND138-7

As discussed further in section 4.9.5, the estimated tax benefits presented within assume the Project would receive tax abatements comparable to those recently granted for other LNG and major refining and petrochemical facilities along the Texas Gulf Coast. Further, RG LNG has committed to annual payments of \$2.7 million during the first ten years of operation to offset a portion of the forgone taxes associated with the abatement.

IND138-8

The EIS recognizes the Project's impacts on eco-tourism in section 4.9.3, including an increase in noise, changes in the visual landscape, and heavier traffic along SH-48. Recreation and special use areas, including birding trails, that are in proximity to the Project are also addressed in section 4.8.1.5, while impacts on visual receptors at recreation and special use areas are addressed in section 4.8.2. We find that impacts on tourism, including nature-based and eco-tourism, would generally be greatest during construction of the Project. Following construction, the LNG Terminal would be the primary source of permanent impacts on tourism, as the pipelines would be buried and the associated aboveground facilities would be in remote areas, offering limited visibility and mitigating noise impacts. To mitigate impacts on visual receptors and operational noise from the LNG Terminal, RG LNG would use ground flares, grey tank coloring, horticultural plantings, and the construction of a levee that would obstruct most construction activities and low-to-ground operational facilities from view. We find that no visual or noise impacts on South Padre Island beaches and associated tourism would occur, given that the beaches face the ocean and are 5 miles away. However, we do recognize impacts on recreational fishing boats for trips that begin from Port Isabel or South Padre Island, in the form of delays at Brazos Santiago Pass if they arrive during LNG carrier transit. As further described in section 4.9.3.1, most current nature tourism facilities at the Laguna Atascosa NWR, including Boca Chica Beach, are far enough away from the LNG Terminal site that they would not be impacted by construction.

IND138-9

Section 4.12.1 of the EIS addresses the potential impact on the Project from external events, including the VCP.

IND138-10

See Comment Response IND138-9.

IND138-11

See Comment Response IND138-4. Each project has been planned in accordance with a specific business plan developed by the respective applicants. The projects are therefore each being proposed to meet the demands of different schedules and end points.

Individuals (IND)

IND139 - Mary E. Hollmann

Mary Elizabeth Hollmann
Brownsville, TX 78520

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street NE Room 1A
Washington, DC 20426

I oppose the proposed LNG projects for the Port of Brownsville, Rio Grande LNG docket CP16-454-000, Rio Bravo Pipeline docket CP16-455-000, and Texas LNG docket CP16-116-000, hereinafter referred to as the Applicants. These projects, as indicated in the DEISs, would have adverse impacts, thus permits should be denied. The following comments are those specific to the DEISs and apply to the dockets aforementioned.

DEIS and FERC Procedures Are Compromising Public Input

Not all requests and consultations are finished, and some have not even been started. How is the public supposed to comment on information that isn't there? Commenting periods should be extended until all such requests and consultations are finished.

The FERC comment deadline should be extended for reasons that each project has 45 days for public commenting, however FERC combined two projects into one public hearing and an overlapping commenting deadline. This resulted in cutting the time in half for review of the DEIS and commenting.

The FERC DEIS is not available in Spanish, the predominant language spoken in the Rio Grande Valley. The DEIS should be translated and commenting period extended for the Spanish speaking community to adequately review and comment.

Socioeconomics

The need for the projects have not been demonstrated in the DEIS. For a project with so many negative impacts, an unequivocal need for the product must be shown.

The socioeconomic analysis detailed in the DEISs are narrow in view and incomplete. The analysis does not include costs to the taxpayer at every level of government (e.g. police, fire, infrastructure, coast guard, etc.) to support LNG costs in response to micro and macro consequences (e.g. accidents, climate change, social costs to carbon, etc.) of LNG development that negate claimed benefits.

IND139-1

See Comment Response IND96 (Mary Volz).

IND139-1

Individuals (IND)

IND139 - Mary E. Hollmann

There is no analysis of the impacts to both the bait shrimping industry (which relies on the BSC) nor on the off-shore shrimping industry, which relies ready access to the BSC to get to & from the Gulf.

The economic analysis did not include the nine recreational use areas identified in Texas LNG DEIS that are within the project site, increased ship traffic adversely affect recreational boaters and eco tours on the water such as dolphin watching, and the significant impact on visual resources. These are dollars that would be negated from claimed benefits.

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Air Pollution

Cumulative emissions of greenhouse gases would be massive (10.7 million tons per year), with Rio Grande being by far the largest contributor (8.5 million tpy). And this would continue for 20-30 years or longer, when we need to reduce carbon emissions drastically much sooner. Rio Grande LNG and Texas LNG, if approved & built, would move us in the opposite direction. The fact that contribution to cumulative impacts on climate change cannot be precisely measured is no reason for FERC to wash its hands of it. FERC should require carbon capture or deny the permit.

Wetlands, Habitat, and Wildlife

Identified species by the Applicants that are federally listed as threatened or endangered will be affected. The DEISs states that the Applicants will likely adversely affect the endangered Northern aplomado falcon, the threatened piping plover and its critical habitat, and the endangered ocelot. Many other rare and important species will be impacted as well. Section 7 of the Endangered Species Act, as amended, states that any project authorized, funded, or conducted by any federal agencies should not "...jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined...to be critical...". The permit should be denied according to Section 7 of the ESA.

IND139-1

Individuals (IND)

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Reliability and Safety

Valley Crossing Pipeline already goes under the RG terminal site. We do not think it safe to build a LNG liquefaction terminal over a large buried high-pressure natural gas pipeline, even if the risk of rupture is low. Effects to pile driving, construction, operations, etc. on the Valley Crossing pipeline is not adequately addressed in the DEIS.

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Individuals (IND)

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IND139-1

Individuals (IND)

IND140 - Larry Hollmann

Larry Hollmann
Brownsville, TX 78520

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street NE Room 1A
Washington, DC 20426

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IND140-1

See Comment Response IND96 (Mary Volz).

IND140-1

Individuals (IND)

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IND140-1

Individuals (IND)

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Reliability and Safety

IND140-1

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Individuals (IND)

IND140 - Larry Hollmann

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IND140-1

Individuals (IND)

IND141 - Rebelah Gomez

Rebelah Gomez
Los Fresnos, TX 78566

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street NE Room 1A
Washington, DC 20426

LNG causes cancer!

I oppose the proposed LNG projects for the Port of Brownsville, Rio Grande LNG docket CP16-454-000, Rio Bravo Pipeline docket CP16-455-000, and Texas LNG docket CP16-116-000, hereinafter referred to as the Applicants. These projects, as indicated in the DEISs, would have adverse impacts, thus permits should be denied. The following comments are those specific to the DEISs and apply to the dockets aforementioned.

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IND141-1

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Individuals (IND)

IND141 - Rebelah Gomez

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Individuals (IND)

IND141 - Rebelah Gomez

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Individuals (IND)

IND141 - Rebelah Gomez

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IND141-1

Individuals (IND)

IND142 - Karen Boward

Karen Boward
Weslaco, TX 78596

December 3, 2018

Kimberly D. Bose
Secretary, Federal Energy Regulatory Commission
888 First Street NE, Room 1A
Washington, D. C. 20426

Comments on Draft Environmental Impact Statement
Rio Grande LNG CP16-454-000
Rio Bravo Pipeline CP16-455-000

Dear Secretary Bose,

Frontera Audubon is a 501c(3) conservation organization dedicated to preserving the native habitat of the Rio Grande Valley. The property includes a 16 acre wildlife preserve and the Skaggs House, a Texas historic home. Frontera is a known birding hotspot with a mile of trails through the thicket with ponds and native vegetation in the heart of the City of Weslaco in the Rio Grande Valley of South Texas.

We ask the Federal Energy Regulatory Commission (FERC) to DENY Rio Grande LNG's (RGLNG) request for authorization to construct and operate liquefied natural gas (LNG) export facilities in Cameron County, Texas, and RB Pipeline request to construct, operate, and maintain a new pipeline system in Jim Wells, Kleberg, Kenedy, Willacy, and Cameron Counties, Texas.

FERC's opening letter of the DEIS to RGLNG clearly justifies reasons to DENY RGLNG's request for authorization:

"The FERC staff concludes that construction and operation of the Rio Grande LNG Project would result in some adverse environmental impacts" and combined with other projects within the geographic scope Rio Grande LNG Project "would result in certain significant cumulative impacts."

From the DEIS's opening letter it appears that FERC has enough information to outright DENY Rio Grande LNG's request for authorization, but I offer the following additional reasons:

Individuals (IND)

IND142 - Karen Boward

IND142-1

See Comment Response IND133 (Glenn Boward)

1. The DEIS is incomplete. FERC reviewed and found unacceptable RGLNG's request for additional alternative measures from FERC Procedures. FERC recommends RGLNG file an updated Project justification for their proposed use of certain wetlands as "workspaces" PRIOR to the end of the DEIS comment period. FERC should DENY the permit if RGLNG does not comply with their request. How can FERC justify a deadline for public comments when important information is excluded? Until RGLNG complies with FERC's request and such important information is made public, we recommend that the deadline for public comments be extended a minimum of two weeks after RGLNG compliance to FERC's request is made public.

2. RGLNG has proposed a flagrantly insufficient mitigation plan. RGLNG proposed to "preserve" an area that is already under U.S. Fish & Wildlife Service (USFWS) protection and management. As proposed by RGLNG, the mitigation plan violates the "No Net Loss" federal policy. The DEIS states that 74 acres of wildlife habitat will be permanently destroyed at the terminal site. There is NO stated plan on how this loss will be replaced or mitigated. A "moderate permanent impact" on local wildlife is unacceptable. How can FERC ignore such a flagrantly insufficient mitigation plan?

3. The DEIS notes that 3655 acres would be "disturbed" during construction and 1507 acres "would return to pre-construction conditions and uses", including wetlands. This seems highly improbable, especially in the proposed Terminal area. To compensate for this loss, FERC should require uplands mitigation. Using wetlands for "workspace" and roads is unacceptable. Returning "workspace" wetlands to "pre-construction conditions and uses" after several years of heavy construction is highly unlikely.

4. There is a need to establish baseline data to study the impact that the proposed dredging would have on existing sea grass and oyster beds in the Bahia Grande and South Bay. Such areas are highly vulnerable to even a small degree of dredge spoil deposition. FERC should request such a study for baseline data.

5. The DEIS states that the RGLNG Project "has the potential to result in significant impacts on ocelot and ocelot recovery." Given the ocelot population and habitat has greatly been reduced in this area, this is another reason for FERC to DENY the permit.

6. The DEIS states that there would be "moderate impacts on the Zapata Boat Launch area." The existing Restoration Channel would be located near the RGLNG site. The impacts to recreational fishing and birding in this immediate area need to be

IND142-1

Individuals (IND)

IND142 - Karen Boward

addressed.

7. The DEIS states, "...neither construction nor operation would be expected to significantly impact tourism..." Where is the data to support this statement? The Port Isabel, South Padre Island, and Laguna Atascosa NWR are all dependent on eco-tourism. Industries, like RGLNG, are NOT positive towards eco-tourism.

8. RGLNG is required to complete its cultural resources survey and complete necessary consultation BEFORE the EIS is finalized, NOT "prior to construction." The public needs to have an opportunity to review and comment on this survey BEFORE the EIS is finalized.

9. The DEIS states "the greatest cumulative impacts" would be on soils, surface water quality, vegetation, wildlife, aquatic resources, threatened and endangered species, visual resources, land & water-based transportation, air quality, and noise. FERC should DENY this permit.

10. All endangered species consultation with USFWS and NMFS (National Marine Fisheries Service) should be completed BEFORE the FERC Record of Decision, NOT "before construction."

11. Only if FERC permits RGLNG to proceed with construction, will AEP (American Electric Power) build a 138kV overhead powerline along SH48. This high-voltage overhead powerline would potentially have significant wildlife impacts, particularly birds, including protected and endangered species. These impacts need to be evaluated and included in the DEIS.

12. If RGLNG is built it would be the largest single stationary source of nitrogen oxides, carbon monoxides, Volatile Organic Compounds, sulfur dioxides, particulate matter, and greenhouse gases in the Rio Grande Valley (RGV), The DEIS states "...Project emissions are below applicable screening levels, and therefore adverse health effects are not expected." We disagree. The higher the air pollutant levels the more adverse health effects there are, especially to vulnerable populations. In April & May there are days when the RGV has some of the highest particulate levels in the state. This project would worsen those levels. There is no safe level for Volatile Organic Compounds (VOC). Impact from air and water pollution is not limited to people, but includes wildlife also. FERC should DENY this permit.

13. The DEIS does not include the FERC recommended Rio Bravo Pipeline (RBP)

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IND142 - Karen Boward

noise mitigation plan. The DEIS notes that RBP's horizontal directional drilling "would exceed FERC's noise criterion" at seven sites. This FERC recommendation should be part of the DEIS in order for public to read and comment.

14. The DEIS states that RGLNG construction and operation of the LNG Terminal would result in "permanent impacts" on 174.8 acres of open water and that RGLNG "would be required to mitigate for the permanent loss of open water resources and proposed to preserve open water within an off-site wetland mitigation area about one mile south of the Project." RGLNG needs to be more specific as to this "proposed off-site mitigation area." FERC needs to exclude existing areas already under U.S. Fish & Wildlife Service (USFWS) protection and management.

15. Once constructed, each LNG carrier serving the LNG Terminal is expected to "discharge about 10 million gallons of ballast water and withdraw/discharge up to 12 million gallons of water for engine-cooling and hoteling." Multiply this by 6 for the estimated number of RGLNG carriers per week. The DEIS states "Ballast water discharges at the LNG Terminal could impact water quality by changing the salinity, temperature, pH, and dissolved oxygen level of water with the BSC." The BSC serves as a conduit for ecologically sensitive areas such as South Bay and Bahia Grande. The DEIS concludes that "impacts on surface water quality resulting from ballast and cooling water would be minor." We disagree that these impacts would be "minor." What data is this based on? FERC should require additional studies into the impact from ballast water discharging.

16. The DEIS states that construction of the RGLNG Terminal would result in the permanent loss of 182.4 acres of wetlands and special aquatic sites. After construction, RGLNG proposes restoring wetlands to "pre-construction conditions" and would be "allowed to revegetate naturally." RGLNG is also "developing a plan" called its "Conceptual Mitigation Plan" which identifies the "potential to acquire and preserve a portion of the Loma Ecological Preserve in perpetuity." It seems like RGLNG plan is to "preserve" existing unperturbed natural areas and their concept of mitigation is to let disturbed areas revegetate on its own over time. FERC needs to require more details from RGLNG's "Conceptual Mitigation Plan" and make this plan public with time for public comments. Otherwise, FERC should DENY this permit.

17. The DEIS states that construction-related noise could "affect animal behavior, foraging or breeding patterns, and cause wildlife species to relocate to avoid disturbance." Construction over a period of seven years is expected to result in noise levels of 61 dB at nearby "critical habitat for the piping plover." The DEIS notes that

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Individuals (IND)

IND142 - Karen Boward

IND142-2

See Comment Response IND96 (Mary Volz).

RGLNG proposed efforts to reduce operational noise would not result in significant changes in the estimated noise attenuation. RGLNG proposes to construct and operated 6 liquefaction trains located along a four mile stretch of HW48. Based on the DEIS Figure 4.13.2-2 Sound Contours, for each of the 6 liquefaction trains there will be a constant 80 to 90 decibels noise immediately along HW48. This would be the equivalent of 6 garbage disposals or food blenders running continuously 24-7. For the southern portion of Port Isabel a constant noise level of 45 to 50 decibels is expected. This would be comparable to the level of a normal conversation running 24-7. This increase in continual ambient noise in ecological sensitive areas should be cause for FERC to DENY the permit.

IND142-1

18. The operation of the proposed RGLNG would result in a massive increase in expected traffic though the BSC and Brazos Santiago Pass. During construction it is estimated that 880 barges and support vessels would be needed to deliver construction materials and equipment to the material offloading facility (MOF) and Port of Brownsville (POB). After construction, an expected 112 LNG carriers would call on the RGLNG Terminal per year (about 6 LNG carriers per week). The impact on shoreline erosion is expected to increase. Upgrades to compensate for shoreline and channel erosion will ultimately be a burden for taxpayers. The impact of this traffic will have a direct effect on the existing fishing and shrimping industries. Due to this excessive economic burden, FERC should DENY the permit.

I oppose the proposed LNG projects for the Port of Brownsville, Rio Grande LNG docket CP16-454-000, Rio Bravo Pipeline docket CP16-455-000, and Texas LNG docket CP16-116-000, hereinafter referred to as the Applicants. These projects, as indicated in the DEISs, would have adverse impacts, thus permits should be denied. The following comments are those specific to the DEISs and apply to the dockets aforementioned.

IND142-2

DEIS and FERC Procedures Are Compromising Public Input

Not all requests and consultations are finished, and some have not even been started. How is the public supposed to comment on information that isn't there? Commenting periods should be extended until all such requests and consultations are finished.

The FERC comment deadline should be extended for reasons that each project has 45 days for public commenting, however FERC combined two projects into one public hearing and an overlapping commenting deadline. This resulted in cutting the time in half for review of the DEIS and commenting.

Individuals (IND)

IND142 - Karen Boward

The FERC DEIS is not available in Spanish, the predominant language spoken in the Rio Grande Valley. The DEIS should be translated and commenting period extended for the Spanish speaking community to adequately review and comment.

Socioeconomics

The need for the projects have not been demonstrated in the DEIS. For a project with so many negative impacts, an unequivocal need for the product must be shown.

The socioeconomic analysis detailed in the DEISs are narrow in view and incomplete. The analysis does not include costs to the taxpayer at every level of government (e.g. police, fire, infrastructure, coast guard, etc.) to support LNG costs in response to micro and macro consequences (e.g. accidents, climate change, social costs to carbon, etc.) of LNG development that negate claimed benefits.

IND142-2

There is no analysis of the impacts to both the bait shrimping industry (which relies on the BSC) nor on the off-shore shrimping industry, which relies ready access to the BSC to get to & from the Gulf.

The economic analysis did not include the nine recreational use areas identified in Texas LNG DEIS that are within the project site, increased ship traffic adversely affect recreational boaters and eco tours on the water such as dolphin watching, and the significant impact on visual resources. These are dollars that would be negated from claimed benefits.

The DEIS for Rio Grande says "neither construction nor operation would be expected to significantly impact tourism..." There is no data to support this statement. Port Isabel, South Padre Island and Laguna Atascosa NWR are all very nature tourist-dependent. Interview-type studies need to be done with out-of-area tourists to meaningfully assess this impact.

Air Pollution

Cumulative emissions of greenhouse gases would be massive (10.7 million tons per year), with Rio Grande being by far the largest contributor (8.5 million tpy). And this would continue for 20-30 years or longer, when we need to reduce carbon emissions drastically much sooner. Rio Grande LNG and Texas LNG, if approved & built, would move us in the opposite direction. The fact that contribution to cumulative impacts on climate change cannot be precisely measured is no reason for FERC to wash its hands

of it. FERC should require carbon capture or deny the permit.

Wetlands, Habitat, and Wildlife

Identified species by the Applicants that are federally listed as threatened or endangered will be affected. The DEISs states that the Applicants will likely adversely affect the endangered Northern aplomado falcon, the threatened piping plover and its critical habitat, and the endangered ocelot. Many other rare and important species will be impacted as well. Section 7 of the Endangered Species Act, as amended, states that any project authorized, funded, or conducted by any federal agencies should not "...jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined...to be critical...". The permit should be denied according to Section 7 of the ESA.

The conservation and preservation efforts of the public has resulted in the Lower Rio Grande Valley NWR, the Laguna Atascosa NWR, Loma Ecological Preserve, Wildlife Corridor, Bahia Grande Restoration Project, the Federal Ocelot Recovery Plan, and recent conservation of 3,200 acres on South Padre Island and several hundred acres along Bahia Grande near Port Isabel. Conservation efforts demonstrates strong social and cultural values. Permitting LNG projects that continue the trend of impacting (indirectly or directly) or destroying the last remaining ecosystems conflicts with regional social and cultural values. As such, permits should be denied.

Reliability and Safety

Valley Crossing Pipeline already goes under the RG terminal site. We do not think it safe to build a LNG liquefaction terminal over a large buried high-pressure natural gas pipeline, even if the risk of rupture is low. Effects to pile driving, construction, operations, etc. on the Valley Crossing pipeline is not adequately addressed in the DEIS.

The SpaceX launch site are near the terminal sites for the Applicants. Where is the launch failure analysis? Did that analysis include the SpaceX BFR, which will be larger than any existing rocket, and which SpaceX says it intends to launch from the Boca Chica site?

Cumulative Impacts

The DEIS says "the greatest cumulative impacts" would be on soils, surface water

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Individuals (IND)

IND142 - Karen Boward

quality, vegetation, wildlife, aquatic resources, threatened and endangered species, visual resources, land & water-based transportation, air quality, and noise. These are more than sufficient reasons to deny LNG permits.

The DEIS states "We conclude that cumulative impacts of the 3 LNG terminals on visual resources would be potentially significant." We agree and urge denial of LNG permits.

The DEIS concludes that the 3 LNG projects cumulatively "would contribute significantly to air quality impacts, potentially exceed the NAAQS in local areas, and result in cumulatively greater air quality impacts." This is not acceptable and is grounds for denial of LNG permits.

The DEIS says that Rio Grande "combined with the other projects in the geographic scope, including the Texas LNG and Annova LNG projects, would result in "significant cumulative impacts..." Therefore if FERC chooses to permit any one of the LNG projects, it should deny permits to all others. By FERC's own analysis the cumulative impacts would be too great (e.g. significant).

Karen Boward
Frontera Audubon Board Member
Weslaco, TX

IND142-2

Individuals (IND)

IND142 - Karen Boward

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Karen Boward
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Weslaco, TX

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Individuals (IND)

IND143 - LaNell Gerlach

LaNell Gerlach
Brownsville, TX 78520

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street NE Room 1A
Washington, DC 20426

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IND143-1

See Comment Response IND96 (Mary Volz).

IND143-1

Individuals (IND)

IND143 - LaNell Gerlach

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Individuals (IND)

IND143 - LaNell Gerlach

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Individuals (IND)

IND143 - LaNell Gerlach

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Individuals (IND)

IND144 - Mary Angela Branch

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Mary Angela Branch, Austin, TX.
 The three cities and one community in Cameron County most affected by this, Laguna Vista, Port Isabel, and South Padre Island and Long Island Village, have all passed resolutions prohibiting the approval of this application. As I see it FERC is "rubber stamping" these applications. There is currently no plan for us to review that shows how to educate and prepare a community, health care workers, EMS, Schools, Port of Brownsville workers, construction workers and more, for a hazardous chemical disaster. Every page of the DEIS where it clearly states that there WILL be mild to moderate impact on wildlife, habitat, marine life and the citizens due to the degradation of the land and sea floor, is followed with " ...and we see no significant impact and ask that these companies 'consult' with FSW to abate impact. " FERC further says that this will be a SEVEN YEAR construction plan for three terminals and their three separate pipelines. They go on to say that their findings conclude that the "area and wildlife will recover." Even I, only a college educated woman, see the holes, lies and illegal aspect of this DEIS. I know this commission is appointed by the President. He has appointed a commission to be aligned with the LNG business.
 In Brownsville, the proposed LNG facilities would dump millions of gallons of heated effluent each day into one of the healthiest shallow-water bays in the world. The South Bay is one of the most critical hyper-saline habitats and spawning grounds for numerous aquatic species such as shrimp, redfish, among other species. The proposed plants' 500-foot flaring towers—which release mercury, hydrogen sulfide, helium, carbon dioxide, hydrocarbons and other impurities from the natural gas—would burn a couple of miles downwind from the state's most popular beach. Local environmental groups estimate that air pollution will quadruple in the Brownsville-South Padre Island area, a 10-mile stretch of coastline, residential neighborhoods and small businesses that may soon sit under the brown-cloud haze of pollution already familiar to residents of industrialized regions like Corpus Christi, Galveston and Houston. The noise levels from the pile driving, according to the FERC DEIS, show an increase in some areas of up to 10.5 decibels, well beyond acceptable levels and severely impacting marine life. The purification and refrigeration process for LNG is so energy-intensive that the amount of greenhouse gas emissions for this region would be staggering. millions of gallons per day of treated water pulled from our resacas, that will be dumped near the saltwater inlets for the Bahia Grande—27,000 acres of land and 10,000 acres of estuary. It's the largest estuary restoration project in North America, home to over 100,000 shorebirds on their migrations to and from Canada and Mexico. The lower Rio Grande Valley is one of the top 10 birding destinations in the U.S., according to numerous rankings. Our fishing and shrimping industries will be ruined as will our tourism. The noise, lights, vessel traffic, flaring, hydro static testing, construction traffic, increased populations of laborers, will all impact cetaceans, our sea grass which is essential to the proliferation of our marine life. It will further endanger our Ridley Kemp SeaTurtles and Loggerhead Turtles, This will also degrade the sensitive ecosystem and habitat of the Ocelot, the Alpomado Falcon, the Jaguarundi, Osprey, Chachalacas, over 130 butterflies and moths, including

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IND144-1 The resolutions regarding opposition to the Project are noted.
 IND144-2 We disagree. As identified in section 1.0, FERC considers the public interest and/or the public convenience and necessity of a Project prior to making its decision on whether or not to approve it. Assessment of the proposed Project began with RG Developers' entry into the FERC pre-filing process on March 20, 2015, and has included coordination with multiple federal and state agencies and requires permits or authorizations from additional entities (see section 1.5).
 IND144-3 As described in section 4.12.1.6 of the EIS, RG LNG would need to prepare an ERP that would include provisions for evacuation of the public, including cost sharing plans and coordination with appropriate state and local agencies. If authorized, the ERP and cost sharing plan would need to be submitted for review and approval prior to any construction at the site.
 IND144-4 Comment noted. The EIS is not a decision document; rather, it is a tool to ensure that the potential environmental impacts that would occur as a result of a federal action are fully analyzed and presented, in compliance with NEPA. Under NEPA, the determination that an impact is significant necessitates the preparation of an EIS (as opposed to an EA). In accordance with NEPA, we have prepared this EIS to present the environmental impacts that would occur as a result of the Project. The decision of whether to authorize the Project is determined by the FERC Commissioners.
 IND144-5 The comment is outside the scope of this EIS.
 IND144-6 Impacts on aquatic resources associated with cooling water discharge as a result of the Project are discussed in section 4.6.2.2. Cumulative impacts resulting from cooling water discharge associated with all three LNG projects are discussed in section 4.13.2.4 of the final EIS.
 IND144-7 As described in section 2.1.1.6 of the EIS, the Rio Grande LNG Terminal would have both an elevated (100-foot) vent stack and three ground flare units to safely and reliably protect plant systems from overpressure during start-up, shutdown, plant upsets, and emergency conditions. Air quality impacts are addressed in section 4.11.1 of the EIS.
 IND144-8 The increase of up to 10.5 decibels identified by the commentor appears to be relevant for airborne noise levels, rather than underwater noise, which is also assessed in the EIS. As recommended in sections 4.7.1 and 4.7.3 of the EIS, if the Project were approved, RG Developers would not be authorized to begin construction until FERC's consultation with the NMFS is complete. Such consultation may result in mitigation measures regarding the underwater noise impacts from pile-driving. In section 4.6.2, the EIS concludes that noise from pile-driving would result in temporary and minor impacts on fish.
 IND144-9 Comment noted. GHG emissions from the LNG Terminal are quantified in section 4.11.1.3 of the EIS.

Individuals (IND)

IND144 - Mary Angela Branch

- IND144-10 As described in section 4.3.2.2 of the EIS, water for hydrostatic testing of the LNG storage tanks would be obtained from the BSC and returned from the BSC; however, we are recommending that the final LNG Tank Hydrostatic Test Plan be provided for review prior to construction. RG LNG is consulting with NMFS and TPWD regarding this water withdrawal to identify any requirements for the protection of resources in the BSC. Water for hydrotesting of the pipeline system would be obtained from municipal sources or withdrawn from surface water in accordance with applicable federal and state permits, which would include measures to protect sensitive resources.
- IND144-11 Impacts on tourism, including birding and fishing, and commercial fishing are addressed in sections 4.9.3 and 4.9.4, respectively.
- IND144-12 Section 4.6.2 states that impacts of dredging and dredged materials on seagrass beds and oyster beds within these waterbodies are not anticipated. Vessels transiting to the Project area would not be expected to transit areas with seagrass beds, and hydrostatic test water discharges would not be released directly to the Laguna Madre or South Bay where seagrasses occur. Impacts on marine mammals are discussed in section 4.7.
- IND144-13 Impacts on federally and state-listed species are discussed in section 4.7. Impacts on pollinator species are discussed in section 4.6.1.4. Impacts on birds in general (e.g., chachalacas) are discussed in section 4.6.1; impacts specific to migratory birds (e.g., ospreys) are discussed in section 4.6.1.3.

Individuals (IND)

IND144 - Mary Angela Branch

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The economic analysis did not include the nine recreational areas identified in Texas LNG DEIS that are within the project site, increased ship traffic adversely affect recreational boaters and eco tours on the water such as dolphin watching, and the significant impact on visual resources.

The DEIS for Rio Grande says "neither construction nor operation would be expected to significantly impact tourism." There is no data to support this statement. Port Isabel, South Padre Island and Laguna Atascosa NWR are all very nature tourist-dependent. Interview-type studies need to be done with out-of-area tourists to meaningfully assess this impact.Cumulative emissions of greenhouse gases would be massive (10.7 million tons per year), with Rio Grande being by far the largest contributor (8.5 million tpy). And this would continue for 20-30 years or longer, when we need to reduce carbon emissions drastically much sooner. Contribution to cumulative impacts on climate change cannot be precisely measured therefore,FERC should require carbon capture or deny the permit.

Identified species that are federally listed as threatened or endangered will be affected. The DEISs states that the Applicants will likely adversely affect the endangered Northern aplomado falcon, the threatened piping plover and its critical habitat, and the endangered ocelot. Many other rare and important species will be impacted as well. Section 7 of the Endangered 7 of the Endangered Species Act, as amended, states that any project authorized, funded, or conducted by a by any federal agencies should not "...jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined...to be critical...". Deny the permits.

IND144-13

IND144-14

IND144-15

IND144-16

IND144-17

IND144-18

IND144-19

IND144-20

IND144-14

We received two comments during the scoping period requesting that Project materials be translated into Spanish. Executive Order No. 12898, which informs the federal government's approach to issues of environmental justice, is not binding on the Commission.

However, it is current Commission practice to address environmental justice in its NEPA documents when raised as an issue or otherwise warranted. Therefore, we have included this discussion in the final EIS in section 4.9.10. Further, in an effort to include Spanish language speakers in the NEPA process, Spanish language Project materials were made available to the public during the scoping meeting and public comment meeting held in Port Isabel as described in section 1.3.1 of the final EIS. In addition, a translator was available to assist Spanish language speakers. During the public scoping meeting, very few of the Spanish language materials that were made available were utilized by attendees. As such, we determined that translation of the draft EIS into Spanish was not necessary.

IND144-15

Under Section 3 of the NGA, oversight for LNG export is divided between the Commission and the DOE. FERC is responsible for the siting of LNG facilities, but does not determine the need for a project. It is the DOE, not the Commission, which retains the exclusive authority over the export of the natural gas as a commodity, including the responsibility to consider whether the exportation of that gas is in the public interest. As discussed in section 1, the DOE issued an order granting authorization to RG LNG to export LNG to countries having an FTA with the United States that includes national treatment for trade in natural gas. In accordance with the NGA and Energy Policy Act of 1992, export to a country with which there is an FTA requiring national treatment for trade in natural gas, is deemed consistent with the public interest.

IND144-16

Sections 4.9.4 and 4.9.8.2 have been revised in the final EIS to more explicitly address impacts on the bait shrimping industry.

IND144-17

The referenced nine recreational areas identified in the Texas LNG draft EIS were selected based on proximity to that proposed LNG terminal, specifically within 5 miles. The corresponding analysis in section 4.8.1.5 of this EIS, is based on recreation and special use areas identified to be within a 0.25 mile of the Rio Grande Project. However, in section 4.8.2, we address potential impacts on visual resources for key observation points from various areas, including as far as 12 miles from the LNG Terminal site. Thus, in total, five of the nine sites identified in the Texas LNG draft EIS are evaluated in this EIS.

Individuals (IND)

IND144 - Mary Angela Branch

- IND144-18 The EIS recognizes the Project’s impacts on eco-tourism in section 4.9.3, including an increase in noise, changes in the visual landscape, and heavier traffic along SH-48. Recreation and special use areas, including birding trails, that are in proximity to the Project are addressed in section 4.8.1.5, while impacts on visual receptors at recreation and special use areas are addressed in section 4.8.2. We find that impacts on tourism, including nature-based and eco-tourism, would generally be greatest during construction of the Project. Following construction, the LNG Terminal would be the primary source of permanent impacts on tourism, as the pipelines would be buried and the associated aboveground facilities would be in remote areas, offering limited visibility and mitigating noise impacts. To mitigate impacts on visual receptors and operational noise from the LNG Terminal, RG LNG would use ground flares, grey tank coloring, horticultural plantings, and the construction of a levee that would obstruct most construction activities and low-to- ground operational facilities from view. We find that no visual or noise impacts on South Padre Island beaches and associated tourism would occur, given that the beaches face the ocean and are 5 miles away. However, we do recognize impacts on recreational fishing boats for trips that begin from Port Isabel or South Padre Island, in the form of delays at Brazos Santiago Pass if they arrive during LNG carrier transit.
- As further described in section 4.9.3.1, most current nature tourism facilities at the Laguna Atascosa NWR, including Boca Chica Beach, are far enough away from the LNG Terminal site that they would not be impacted by construction.
- IND144-19 Section 4.13.2.9 of the final EIS was revised to acknowledge that the Project GHG emissions would incrementally contribute to climate change. Mitigation and emission reductions are more appropriately handled by the federal and state agencies, in this case the EPA and TCEQ, with the authority to impose such reductions to meet federal and state air quality goals. RG Developers have committed to complying with the GHG BACT requirements included in their PSD permit for the LNG Terminal and Compressor Station (see section 4.11.1.3 of the EIS).
- IND144-20 The BA provided in section 4.7 of the final EIS has been revised in accordance with FWS correspondence and concludes that the Project is “not likely to adversely affect” the northern aplomado falcon and piping plover and would not result in the adverse modification of critical habitat. Our determination of effect for the ocelot remains, and our current determination for the jaguarundi, is “likely to adversely affect.” Nevertheless, a “likely to adversely affect” determination is not reason to deny a permit under Section 7 of the ESA. Rather, the ESA requires that, if a project is likely to adversely affect a threatened or endangered species, the federal action agency (in this case, FERC) must conduct formal consultations with the FWS. This process requires the FWS to prepare a Biological Opinion for the Project.

Individuals (IND)

IND145 - Mary Angela Branch

20181203-5232 FERC PDF (Unofficial) 12/3/2018 3:21:36 PM

Mary Angela Branch, Austin, TX.
The three cities and one community in Cameron County most affected by this, Laguna Vista, Port Isabel, and South Padre Island and Long Island Village, have all passed resolutions prohibiting the approval of this application. As I see it FERC is "rubber stamping" these applications. There is currently no plan for us to review that shows how to educate and prepare a community, health care workers, EMS, Schools, Port of Brownsville workers, construction workers and more, for a hazardous chemical disaster. Every page of the DEIS where it clearly states that there WILL be mild to moderate impact on wildlife, habitat, marine life and the citizens due to the degradation of the land and sea floor, is followed with " ...and we see no significant impact and ask that these companies 'consult' with FSW to abate impact. "
FERC further says that this will be a SEVEN YEAR construction plan for three terminals and their three separate pipelines. They go on to say that their findings conclude that the "area and wildlife will recover." Even I, only a college educated woman, see the holes, lies and illegal aspect of this DEIS. I know this commission is appointed by the President. He has appointed a commission to be aligned with the LNG business.

In Brownsville, the proposed LNG facilities would dump millions of gallons of heated effluent each day into one of the healthiest shallow-water bays in the world. The South Bay is one of the most critical hyper-saline habitats and spawning grounds for numerous aquatic species such as shrimp, redfish, among other species. The proposed plants' 500-foot flaring towers-which release mercury, hydrogen sulfide, helium, carbon dioxide, hydrocarbons and other impurities from the natural gas-would burn a couple of miles downwind from the state's most popular beach. Local environmental groups estimate that air pollution will quadruple in the Brownsville-South Padre Island area, a 10-mile stretch of coastline, residential neighborhoods and small businesses that may soon sit under the brown-cloud haze of pollution already familiar to residents of industrialized regions like Corpus Christi, Galveston and Houston. The noise levels from the pile driving, according to the FERC DEIS, show an increase in some areas of up to 10.5 decibels, well beyond acceptable levels and severely impacting marine life. The purification and refrigeration process for LNG is so energy-intensive that the amount of greenhouse gas emissions for this region would be staggering. millions of gallons per day of treated water pulled from our resacas, that will be dumped near the saltwater inlets for the Bahia Grande-27,000 acres of land and 10,000 acres of estuary. It's the largest estuary restoration project in North America, home to over 100,000 shorebirds on their migrations to and from Canada and Mexico. The lower Rio Grande Valley is one of the top 10 birding destinations in the U.S., according to numerous rankings. Our fishing and shrimping industries will be ruined as will our tourism. The noise, lights, vessel traffic, flaring, hydro static testing, construction traffic, increased populations of laborers, will all impact cetaceans,our sea grass which is essential to the proliferation of our marine life. It will further endanger our Ridley Kemp SeaTurtles and Loggerhead Turtles, This will also degrade the sensitive ecosystem and habitat of the Ocelot, the Alpomado Falcon,the Jaguarundi, Osprey, Chachalacas, over 130 butterflies and moths, including

IND145-1

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The comment is a duplicate of comment IND144.

Individuals (IND)

IND145 - Mary Angela Branch

20181203-5232 FERC PDF (Unofficial) 12/3/2018 3:21:36 PM

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IND145-1

Individuals (IND)

IND146 - Danny Wilson

20181203-5240 FERC PDF (Unofficial) 12/3/2018 3:34:47 PM

Danny Wilson, Austin, TX.

The three cities and one community in Cameron County most affected by this, Laguna Vista, Port Isabel, and South Padre Island and Long Island Village, have all passed resolutions prohibiting the approval of this application. As I see it FERC is "rubber stamping" these applications. There is currently no plan for us to review that shows how to educate and prepare a community, health care workers, EMS, Schools, Port of Brownsville workers, construction workers and more, for a hazardous chemical disaster. Every page of the DEIS where it clearly states that there WILL be mild to moderate impact on wildlife, habitat, marine life and the citizens due to the degradation of the land and sea floor, is followed with " ...and we see no significant impact and ask that these companies 'consult' with FSW to abate impact. "

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In Brownsville, the proposed LNG facilities would dump millions of gallons of heated effluent each day into one of the healthiest shallow-water bays in the world. The South Bay is one of the most critical hypersaline habitats and spawning grounds for numerous aquatic species such as shrimp, redfish, among other species. The proposed plants' 500-foot flaring towers—which release mercury, hydrogen sulfide, helium, carbon dioxide, hydrocarbons and other impurities from the natural gas—would burn a couple of miles downwind from the state's most popular beach. Local environmental groups estimate that air pollution will quadruple in the Brownsville-South Padre Island area, a 10-mile stretch of coastline, residential neighborhoods and small businesses that may soon sit under the brown-cloud haze of pollution already familiar to residents of industrialized regions like Corpus Christi, Galveston and Houston. The noise levels from the pile driving, according to the FERC DEIS, show an increase in some areas of up to 10.5 decibels, well beyond acceptable levels and severely impacting marine life. The purification and refrigeration process for LNG is so energy-intensive that the amount of greenhouse gas emissions for this region would be staggering. millions of gallons per day of treated water pulled from our resacas, that will be dumped near the saltwater inlets for the Bahia Grande—27,000 acres of land and 10,000 acres of estuary. It's the largest estuary restoration project in North America, home to over 100,000 shorebirds on their migrations to and from Canada and Mexico. The lower Rio Grande Valley is one of the top 10 birding destinations in the U.S., according to numerous rankings. Our fishing and shrimping industries will be ruined as will our tourism. The noise, lights, vessel traffic, flaring, hydro static testing, construction traffic, increased populations of laborers, will all impact cetaceans, our sea grass which is essential to the proliferation of our marine life. It will further endanger our Ridley Kemp SeaTurtles and Loggerhead Turtles, This will also degrade the sensitive ecosystem and habitat of the Ocelot, the Alpomado Falcon, the Jaguarundi, Osprey, Chachalacas, over 130 butterflies and moths, including and the threatened Monarch Butterfly. They area will not recover and many

IND146-1

IND146-1

See Comment Response IND144 (Mary Angela Branch).

Individuals (IND)

IND146 - Danny Wilson

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IND146-1

Individuals (IND)

IND147 - Danny Wilson

20181203-5241 FERC PDF (Unofficial) 12/3/2018 3:37:19 PM

Danny Wilson, Austin, TX.

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IND147 - Danny Wilson

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IND147-1

Individuals (IND)

IND148 - Diane Teter

20181203-5246 FERC PDF (Unofficial) 12/3/2018 3:59:13 PM

Diane Teter, Edinburg, TX.

The three cities and one community in Cameron County most affected by this, Laguna Vista, Port Isabel, and South Padre Island and Long Island Village, have all passed resolutions prohibiting the approval of this application. There is currently no plan for local communities to prepare a community, health care workers, EMS, Schools, Port of Brownsville workers, construction workers and more, for a hazardous chemical disaster. Every page of the DEIS where it clearly states that there WILL be mild to moderate impact on wildlife, habitat, marine life and the citizens due to the degradation of the land and sea floor, is followed with " ...and we see no significant impact and ask that these companies 'consult' with FSW to abate impact. "

FERC further says that this will be a SEVEN YEAR construction plan for three terminals and their three separate pipelines. They go on to say that their findings conclude that the "area and wildlife will recover." As a marine ecologist which studied in this area and have lived in the area, this is grossly incorrect.

In Brownsville, the proposed LNG facilities would dump millions of gallons of heated effluent each day into one of the healthiest shallow-water bays in the world. The South Bay is one of the most critical hyper-saline habitats and spawning grounds for numerous aquatic species such as shrimp, redfish, among other species. The proposed plants' 500-foot flaring towers-which release mercury, hydrogen sulfide, helium, carbon dioxide, hydrocarbons and other impurities from the natural gas-would burn a couple of miles downwind from the state's most popular beach. Local environmental groups estimate that air pollution will quadruple in the Brownsville-South Padre Island area, a 10-mile stretch of coastline, residential neighborhoods and small businesses that may soon sit under the brown-cloud haze of pollution already familiar to residents of industrialized regions like Corpus Christi, Galveston and Houston. The noise levels from the pile driving, according to the FERC DEIS, show an increase in some areas of up to 10.5 decibels, well beyond acceptable levels and severely impacting marine life. The purification and refrigeration process for LNG is so energy-intensive that the amount of greenhouse gas emissions for this region would be staggering. millions of gallons per day of treated water pulled from our resacas, that will be dumped near the saltwater inlets for the Bahia Grande-27,000 acres of land and 10,000 acres of estuary. It's the largest estuary restoration project in North America, home to over 100,000 shorebirds on their migrations to and from Canada and Mexico.

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IND148-1

IND148-1

See Comment Response IND144 (Mary Angela Branch).

Individuals (IND)

IND148 - Diane Teter

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Deny the permits for the numerous reasons stated above.

IND148-1

IND148-2

IND148-2

Comment noted.

Individuals (IND)

IND149 - Robert Severson

20181203-5247 FERC PDF (Unofficial) 12/3/2018 4:02:11 PM

Robert Severson, Laguna Vista, TX.
I strongly agree with the comments of the Friends of Laguna Atascosa National Wildlife Refuge, Save RGV from LNG and a host of other organizations and individuals regarding the DIES relative to local and global environmental impacts and considerations. I believe that Rio Grande LNG's permit application should be denied.

IND149-1

The perspective I am presenting is related to the impact that LNG and other entities in the fossil fuel supply change have on the global environment by contributing to greenhouse gas emissions.

"One of the penalties of an ecological education is that one lives alone in a world of wounds. Much of the damage inflicted on land [the Earth] is quite invisible to laymen. An ecologist must either harden his shell and make believe that the consequences of science are none of his business, or he must be the doctor who sees the marks of death in a community [the Earth] that believes itself well and does not want to be told otherwise." Aldo Leopold, A Sand County Almanac, 1949

The undeniable scientific realities of man made climate change and the devastating impending effects on humankind and all life on Earth are indeed the "marks of death in a community [the Earth] where uninformed or selfish short term economically interested persons, political figures or corporations do not want to be told otherwise."

Climate scientists from around the world agree on the "marks of death" and are no longer content to "live alone in a world of wounds." But scientists are not the ultimate decision makers.

This puts you, Chairman Neil Chatterjee, Commissioners Cheryl A. LaFleur, Richard Glick and Kevin J. McIntyre of the Federal Energy Regulatory Commission in a position to heed the virtually unanimous scientific research regarding the effects of man made greenhouse gases on climate change and initiate an immediate transition away from further fossil fuel use by denying any further permits for proposed Rio Grande LNG and Rio Bravo Pipeline Dockets CP16-454-000 and CP16-455-000, and to all future LNG projects in the United States. The rest of the world is waiting for the most powerful nation in the world to join the nearly 200 other nations who are committed to this global effort.

IND149-2

Seldom in life does an individual or a small number of people have the opportunity and leadership responsibility to make a courageous decision that can change the world in a positive way. This is your opportunity.

The human species, in the blink of a geological eye, has expanded its population and altered the global environment in unprecedented ways on scientific discoveries and subsequent technological applications. The men and women of science have given us our current understanding of how the natural world and universe works. Scientific discoveries in biology, physics, chemistry, and advances in math and computer science have accelerated agricultural production, medical practice, medicine, energy

IND149-1

Comment noted.

IND149-2

Under Section 3 of the NGA, oversight for LNG export is divided between the Commission and the DOE. FERC is responsible for approving the safe and sound siting and operation of LNG facilities, given that DOE has approved the export of the commodity. It is the DOE, not the Commission, which retains the exclusive authority over the export of the natural gas as a commodity, including the responsibility to consider whether the exportation of that gas is consistent with the public interest. As described in section 1.1 of the EIS, the DOE granted an authorization to RG LNG for export to countries having a FTA with the United States that includes national treatment for trade in natural gas. In accordance with the NGA and Energy Policy Act of 1992, export to a country with which there is an FTA requiring national treatment for trade in natural gas, is deemed consistent with the public interest. Further, RB Pipeline executed a precedent agreement for the total capacity of the Rio Bravo Pipeline for the 20-year life of the Project, which establishes a basis for a finding by the Commission that the pipeline will be in the public convenience and necessity under Section 7. Section 4.13.2.9 of the final EIS was revised to address regional climate change impacts, and section 4.11.1 of the EIS quantifies Project-related GHG emissions.

Individuals (IND)

IND149 - Robert Severson

20181203-5247 FERC PDF (Unofficial) 12/3/2018 4:02:11 PM

production and transportation. We are the beneficiaries of those advances.

However, the same rigorous scientific methodology that has brought humankind to this level of understanding, bounty and health are now warning us that the accelerating effects of man made climate changes is negatively and undeniably impacting life forms globally in unprecedented ways. All humans, regardless of geographic location, class, economic status, political ideologies or religious beliefs will be effected if immediate global efforts to reduce greenhouse gas emissions are not undertaken.

In the absence of political agendas, in the pursuit of verifiable truths and out of deep concern for all life, scores of independent climate research scientists from around the world are in virtually unanimous agreement that there is overwhelming evidence of man made climate change resulting in rapidly accelerating devastating impacts for humankind and countless other life forms on Earth.

You all have professional backgrounds in energy policy that have immersed you in issues regarding fossil fuels and clean energy technologies. You are familiar with the scientific evidence, political perspectives, long and short term economic and environmental consequences and quality of life concerns.

Now, as FERC commissioners, your responsibility is to ensure FERC's Mission to Provide Economically Efficient, Safe, Reliable, and Secure Energy for Consumers. The continued burning of fossil fuels is no longer safe, reliable, secure or economically efficient when the immediate and long term effects of man made greenhouse gas emissions on the global climate is so evident and taken into consideration.

You all understand the profound gravity of the situation, especially in light of the recent report from the United Nations' scientific panel on climate change issued by the Intergovernmental Panel on Climate Change that warns of far worse consequences of climate change than previously thought. Therefore, a global paradigm shift must be taken immediately at an unprecedented speed and scale. And that shift means a rapid transition away from fossil fuels, including LNG, to clean renewable energy. Rio Grande LNG's permit application should be denied now and always.

My final questions to you regarding the future of LNG in the RGV are simple:

In the long view, will the RGV and the world be a better place or a worse place because of your decision?

What message will you be sending to the world and the lower RGV with your decision?

Does your decision put the best interests of the local and global environment and population ahead of the economic self-interest of the fossil fuel industry?

IND149-3

IND149-3

See Comment Response IND149-2.

Individuals (IND)

IND149 - Robert Severson

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Will you be able to look your children and grandchildren in their eyes
and be able to say you were aware of the likely consequences of your
decision and the made the correct one?

Individuals (IND)

IND150 - Diane Teter

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Diane Teter, Edinburg, TX.

The Rio Bravo Pipeline will carry natural gas to the Rio Grande LNG export terminals to be processed for overseas sale. Take into consideration, the additional LNG export terminals and proposed pipelines for Annova LNG and Texas LNG, and you have a cumulative impact by 3 LNG export terminals as well as their pipelines!

This over-industrialization of the Brownsville Ship Channel is neither needed nor warranted for an area that is built on ecotourism and beach tourism.

There is a concerted effort by the oil and gas industry to destroy the natural resources such as our parks, refuges, and seashores to enslave and sicken the local population (air, water, land pollution) with this outdated energy economy of fossil fuels.

Current pipeline construction in the area is already causing damage to local roads and areas through settling of the dirt work after construction.

No more natural gas pipelines are needed with our increasing green economy that is built on natural resources.

IND150-1

IND150-2

IND150-3

IND150-4

IND150-5

IND150-1 Cumulative impacts of the Rio Grande LNG, Texas LNG, and Annova LNG Terminals are addressed in section 4.13.2 of the EIS.

IND150-2 Impacts on recreation and tourism, including nature tourism, are addressed in section 4.9.3.

IND150-3 Comment noted; however, we note that the mission statement of the Port of Brownsville/BND, which owns and leases the lands along the BSC, is “to increase growth development, and establish the port as a world class port.”

IND150-4 FERC’s Plan requires that applicants remove any soil and gravel spilled or tracked onto roadways daily or more frequent as necessary to maintain safe road conditions and repair any damages to roadway surfaces, shoulders, and ditches caused by construction. The applicants of the three LNG projects would be required to obtain applicable permits from TxDOT, who is the entity responsible for maintenance of roadways in the Project area.

IND150-5 The No Action Alternative for the Project is discussed in section 3.1.

Individuals (IND)

IND151 - Martha Pena

Marta Pena
Pharr, TX 78577

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street NE Room 1A
Washington, DC 20426

LNG development is not in the public interest:

- 1) Port Isabel, Laguna Vista, South Padre Island, Long Island Village, and the Laguna Madre Water District have passed resolution opposing LNG development
- 2) Dozens of Community organizations and NGOs regionally have opposed LNG development
- 3) Thousands as demonstrated in FERC filing oppose LNG development
- 4) Recent reports by the IPCC and the Fourth National Climate Assessment demonstrate that not only is development of projects like LNG is not in the public interest and actually poses health, safety, and economic risks both regionally and internationally from climate impacts

I oppose the proposed LNG projects for the Port of Brownsville, Rio Grande LNG docket CP16-454-000, Rio Bravo Pipeline docket CP16-455-000, and Texas LNG docket CP16-116-000, hereinafter referred to as the Applicants. These projects, as indicated in the DEISs, would have adverse impacts, thus permits should be denied. The following comments are those specific to the DEISs and apply to the dockets aforementioned.

DEIS and FERC Procedures Are Compromising Public Input

Not all requests and consultations are finished, and some have not even been started. How is the public supposed to comment on information that isn't there? Commenting periods should be extended until all such requests and consultations are finished.

The FERC comment deadline should be extended for reasons that each project has 45 days for public commenting, however FERC combined two projects into one public hearing and an overlapping commenting deadline. This resulted in cutting the time in half for review of the DEIS and commenting.

The FERC DEIS is not available in Spanish, the predominant language spoken in the Rio Grande Valley. The DEIS should be translated and commenting period extended for the Spanish speaking community to adequately review and comment.

IND151-1

Comment noted. The EIS is not a decision document; rather, it is a tool to ensure that the potential environmental impacts that would occur as a result of a federal action are fully analyzed and presented, in compliance with NEPA. Under NEPA, the determination that an impact is significant necessitates the preparation of an EIS (as opposed to an EA). In accordance with NEPA, we have prepared this EIS to present the environmental impacts that would occur as a result of the Project. The decision of whether to authorize the Project is determined by the FERC Commissioners.

IND151-2

As identified in section 1.0, the Commission considers the public interest and/or the public convenience and necessity of a project prior to making its decision on whether or not to approve it. Assessment of the proposed Project has included coordination with multiple federal and state agencies and requires permits or authorizations from additional entities (see section 1.5). Comment noted. Section 4.13.2.9 of the final EIS was revised to include a detailed analysis of the anticipated climate change impacts on the Project region, based on the Fourth National Climate Assessment released by the USGCRP Research Program and referenced in the comment.

IND151-3

See Comment Response IND96 (Mary Volz).

IND151-1

IND151-2

IND151-3

Individuals (IND)

IND151 - Martha Pena

Socioeconomics

The need for the projects have not been demonstrated in the DEIS. For a project with so many negative impacts, an unequivocal need for the product must be shown.

The socioeconomic analysis detailed in the DEISs are narrow in view and incomplete. The analysis does not include costs to the taxpayer at every level of government (e.g. police, fire, infrastructure, coast guard, etc.) to support LNG costs in response to micro and macro consequences (e.g. accidents, climate change, social costs to carbon, etc.) of LNG development that negate claimed benefits.

There is no analysis of the impacts to both the bait shrimping industry (which relies on the BSC) nor on the off-shore shrimping industry, which relies ready access to the BSC to get to & from the Gulf.

The economic analysis did not include the nine recreational use areas identified in Texas LNG DEIS that are within the project site, increased ship traffic adversely affect recreational boaters and eco tours on the water such as dolphin watching, and the significant impact on visual resources. These are dollars that would be negated from claimed benefits.

The DEIS for Rio Grande says "neither construction nor operation would be expected to significantly impact tourism..." There is no data to support this statement. Port Isabel, South Padre Island and Laguna Atascosa NWR are all very nature tourist-dependent. Interview-type studies need to be done with out-of-area tourists to meaningfully assess this impact.

Air Pollution

Cumulative emissions of greenhouse gases would be massive (10.7 million tons per year), with Rio Grande being by far the largest contributor (8.5 million tpy). And this would continue for 20-30 years or longer, when we need to reduce carbon emissions drastically much sooner. Rio Grande LNG and Texas LNG, if approved & built, would move us in the opposite direction. The fact that contribution to cumulative impacts on climate change cannot be precisely measured is no reason for FERC to wash its hands of it. FERC should require carbon capture or deny the permit.

Wetlands, Habitat, and Wildlife

IND151-3

Individuals (IND)

IND151 - Martha Pena

Identified species by the Applicants that are federally listed as threatened or endangered will be affected. The DEISs states that the Applicants will likely adversely affect the endangered Northern aplomado falcon, the threatened piping plover and its critical habitat, and the endangered ocelot. Many other rare and important species will be impacted as well. Section 7 of the Endangered Species Act, as amended, states that any project authorized, funded, or conducted by any federal agencies should not "...jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined...to be critical...". The permit should be denied according to Section 7 of the ESA.

The conservation and preservation efforts of the public has resulted in the Lower Rio Grande Valley NWR, the Laguna Atascosa NWR, Loma Ecological Preserve, Wildlife Corridor, Bahia Grande Restoration Project, the Federal Ocelot Recovery Plan, and recent conservation of 3,200 acres on South Padre Island and several hundred acres along Bahia Grande near Port Isabel. Conservation efforts demonstrates strong social and cultural values. Permitting LNG projects that continue the trend of impacting (indirectly or directly) or destroying the last remaining ecosystems conflicts with regional social and cultural values. As such, permits should be denied.

Reliability and Safety

Valley Crossing Pipeline already goes under the RG terminal site. We do not think it safe to build a LNG liquefaction terminal over a large buried high-pressure natural gas pipeline, even if the risk of rupture is low. Effects to pile driving, construction, operations, etc. on the Valley Crossing pipeline is not adequately addressed in the DEIS.

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Cumulative Impacts

The DEIS says "the greatest cumulative impacts" would be on soils, surface water quality, vegetation, wildlife, aquatic resources, threatened and endangered species, visual resources, land & water-based transportation, air quality, and noise. These are more than sufficient reasons to deny LNG permits.

IND151-3

Individuals (IND)

IND151 - Martha Pena

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The DEIS says that Rio Grande "combined with the other projects in the geographic scope, including the Texas LNG and Annova LNG projects, would result in "significant cumulative impacts..." Therefore if FERC chooses to permit any one of the LNG projects, it should deny permits to all others. By FERC's own analysis the cumulative impacts would be too great (e.g. significant).

IND151-3

Individuals (IND)

IND152 - Edna Goette

Edna Goette
Port Isabel, TX 78578

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street NE Room 1A
Washington, DC 20426

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IND152-1

See Comment Response IND96 (Mary Volz).

IND152-1

Individuals (IND)

IND152 - Edna Goette

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Individuals (IND)

IND152 - Edna Goette

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IND152-1

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Individuals (IND)

IND152 - Edna Goette

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IND152-1

Individuals (IND)

IND153 - Henry Goette

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IND153-1

See Comment Response IND96 (Mary Volz).

IND153-1

Individuals (IND)

IND153 - Henry Goette

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IND153-1

Individuals (IND)

IND153 - Henry Goette

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IND153-1

Individuals (IND)

IND153 - Henry Goette

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IND153-1

Individuals (IND)

IND154 - Dr. Sarah Stueber Bishop Merrill

Comments re: Draft Environmental Impact Statement:
Rio Grande LNG Project & Rio Bravo Pipeline Project
(CP16-454-000, CP16-455-000), Issued October 12, 2018
drsarahbishopmerrill@iCloud.com

Oral Testimony, originally on Weds., November 14, 2018, Raymondville, TX
Dr. Sarah Bishop Merrill, Harlingen, TX, 2214 E. Pendleton, Hgn, TX 78550. 956 230 1263.
To be filed prior to December 3, 2018, at 4 PM CST.
<https://www.ferc.gov/docs-filing/ecomment.asp?csrt=8484923582566134285>

Introduction: First Some Basic Logic:

*With respect for the effective and responsive FERC Staff, I am grateful for the opportunity to comment on the two projects named above. I describe very specific concerns below, with citations and further questions needing responses. The Draft EIS for the Rio Grande LNG, LLC (RG LNG) and Rio Bravo Pipeline Co., LLC (RB Pipeline) Projects, prepared by FERC staff, shows clearly that these projects are unacceptable, unsafe and environmentally unsatisfactory. Any persons or body of public decision-makers of sound mind would decide against these proposed projects. If they rule otherwise, they commit several basic flaws in basic logic and methods of data assembly. **Science, law, responsible decision-making for the future, and protection of the public and common good are all based upon logic: the truth of facts contained in premises properly related. Here is the faulty reasoning about the above-named LNG proposal as described in the FERC DEIS:***

a) Begging the Question and Assuming a False Premise, viz., re: Mitigation

*Its methodology **begs the question**, or reasons in a vicious circle: it pre-judges the LNG project as a given, to be followed by two more proposed LNG projects, and as subject to appropriate mitigation for significant unacceptable and illegal impacts, when no such mitigation is shown to be nearly adequate to the huge and irreversible scope of damage expected; and, in another slip of logic for the sake of public relations and profit, (so, "too broad"); indeed, their assumption laughable proposal that **mitigation** consist of merely "preserving" (past the lease renewal in a few years?) a small portion of wetlands **already** under Fish and Wildlife management and protection shows that they will act in disregard of the facts about highly significant harm to vulnerable wetland which they themselves acknowledge elsewhere. Only a completed and widened **Wildlife Corridor** could help mitigate these massive risks, but it is a monumental task. Costs could be reduced using our networks of Master Naturalists and the Rio Reforestation Project replanting efforts recruiting thousands several times a year here. Many thousands of school children have helped plant wildlife habitats in the Valley. We in the Sierra Club and other Valley groups have long been working on the Wildlife Corridor to being to help defend our many threatened and endangered species*

IND154-1

Comment noted. As identified in section 1.0, FERC considers the public interest and/or the public convenience and necessity of a Project prior to making its decision on whether or not to approve it. Assessment of the proposed Project has included coordination with multiple federal and state agencies and requires permits or authorizations from additional entities (see section 1.5).

IND154-2

As described in section 4.4.2 of the EIS, RG LNG is consulting with the COE, EPA, and FWS regarding wetland mitigation plans as part of the permitting process associated with Section 404 of the CWA. RG LNG's final wetland mitigation plans would be developed and submitted to the COE, and would be implemented in addition to the construction mitigation measures outlined in RG LNG's Procedures and the measures described in the EIS. Any mitigation required for habitat disruption of federally listed species would be determined by FWS during the ESA consultation process.

IND154-1

IND154-2

Individuals (IND)

IND154 - Dr. Sarah Stueber Bishop Merrill

here in the Lower Rio Grande Valley. The LNG developers would have to purchase at least 200 more acres of wetlands, and the remaining land with willing sellers between the Bahia Grande and the Laguna Atascosa National Wildlife Refuge. Mitigation cannot, as suggested in the DEIS, ever consist simply of continuing to preserve land already under the protection of another party.

IND154-2

b) **Major Explosive Methane Risks Are Completely Overlooked:** The methodology and “findings” about security relative to the LNG facilities’ proximity to the SpaceX launch site at Boca China (well within the illegal ten mile radius), are so narrowly focused as to constitute serious fallacies in thinking: “Flashlight Fallacy” and “Begging the Question or Circular Reasoning, by assuming the project can be built legally; Complete Non-Sequiturs occur here: e.g. (premise:) “There are significant impacts, so (bad conclusion:) it’s OK to build anyhow. The fallacy of misplaced precision (“Flashlight Fallacy”) occurs in the studies cited of VCEs.

IND154-3

There are three key reasons why the FERC should refuse to permit the dangerous, unnecessary, and obsolete Texas LNG project, and the Rio Bravo Pipeline feeding it. These are organized under the headings:

I. Public Safety, Noise, & VCEs; II: Unsatisfactory Mitigation in DEIS; III. LNG is Obsolete; Not Economically Feasible (Trade War, China Taxes US imports); Worsens Climate Change

I. Public Safety, Security and Noise Impacts Significant, False Assertion: “Construction & operation of the pipeline facilities would not contribute to significant cumulative noise impacts...”

IND154-4

This clearly false claim must resubmitted for further environmental analysis using comparable LNG sites. The purported quantifications listed in this DEIS should be questioned by those qualified to do so, at other LNG sites, -not a question-begging fallacy which posits deliberately false, fudged data. As Prof. Berg (UT) pointed out at early hearings several years ago, the compressor noise alone would drive all wildlife away, for miles around, permanently. The security issues have already been discussed above, relative to the known pooling of Methane, which unlike LNG, is flammable in its gaseous form if fires occur. No system of transport and transfer from pipeline into the LNG facility, and in the loading process into tankers, is perfectly flawless. Operators are never as careful or “perfect” as design engineers. As a professor at Purdue University and Kansas State, I taught Engineering Ethics, as well as Environmental Ethics units and Ethics Across the Curriculum for more than 20 years. I know that engineers receive little training in the ecological and health systems they impact, but that they pledge first of all, in their codes of ethics, to protect, first of all, (before profits) “the safety and health of the public,” in their work. Indeed, they were often highly ethical, principled Kantian thinkers, who solved problems for the common good with their professional skill sets. They know they are governed by regulations which their professional societies, e.g., the American Society of Civil Engineers, helped to write, and aid in implementation and enforcement. Professional engineers are problem-solvers, not corporate public relations people or advertisers. The lose their licenses if they lie or mislead the public,

IND154-3

See section 4.12.1.6 of the EIS and responses to Comment Letter 67 regarding SpaceX. DOT PHMSA's LOD issued on March 26, 2019 evaluated the overpressure or blast wave effects due to an explosion of flammable vapor. Specifically, section 9.5 of the LOD analysis showed the overpressure hazards would remain within the Project's property line and could extend into the BSC. In addition, section 4.12.1.6 discusses FERC staff's review of RG LNG’s preliminary engineering design. This analysis contained various design reviews with a focus on the layers of protection or safeguards to reduce the risk of a potentially hazardous scenario from developing into an event that could impact the offsite public. If operational control of the facilities were lost and operational controls and ESD systems failed to maintain the Project within the design limits of the piping, containers, and safety relief valves, a release could potentially occur. To mitigate this scenario, RG LNG’s design would include mitigation, such as spill containment and spacing, hazard detection, ESD and depressurization systems, hazard control, firewater coverage, structural protection, and emergency response. FERC staff has recommended further final design details be provided in section 4.12.1.7 to ensure adequate mitigation is in the final design of the proposed facility.

IND154-4

We disagree. Each LNG terminal is unique in design and in resource impacts. The analysis presented in section 4.13.2.9 is based on Project-specific noise analyses provided for each LNG Terminal, which includes the noise-generating equipment that would be operated on-site, and the noise modeling conducted for the compressor and booster stations proposed along the Rio Bravo Pipeline.

Section 4.12.1.2 of the EIS states that the DOT PHMSA issued its LOD based on its evaluation of process releases that could result in vapor dispersion, fires, and overpressures from explosions. Also, section 4.12.1.3 of the EIS details the Zones of Concern distances from LNG marine vessel operations. In addition, section 4.12.1.6 discusses FERC staff's review of RG LNG’s preliminary engineering design. This analysis contained various design reviews with a focus on the layers of protection or safeguards to reduce the risk of a potentially hazardous scenario from developing into an event that could impact the offsite public. If operational control of the facilities were lost and operational controls and ESD systems failed to maintain the Project within the design limits of the piping, containers, and safety relief valves, a release could potentially occur. To mitigate this scenario, RG LNG’s design would include mitigation, such as spill containment and spacing, hazard detection, ESD and depressurization systems, hazard control, firewater coverage, structural protection, and emergency response. FERC staff has recommended further final design details be provided in section 4.12.1.7 to ensure adequate mitigation is in the final design of the proposed facility. We also note that LNG's primarily constituent is methane and potential hazards associated with a release of LNG and other hazardous fluids, as applicable, were evaluated as part of DOT PHMSA’s LOD process, Coast Guard’s LOR process, and FERC’s preliminary engineering analysis of the various layers of protection.

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and their professional support truth-telling, —even whistle-blowing by engineers who document the facts. Even one major explosion at this site would lead to serious legal penalties and costs to all involved in approving/permitting the LNG projects given what we know.

But instead of seriously studying this serious risk to the public safety, the DEIS shows that the reasoning and testing methodology of the LNG and Pipeline project proposers commits the serious illogic of the “Flashlight Fallacy.” In short, they did not look at the major risk of the Vapor Cloud Explosion (VCE’s) of the pooled Methane above the LNG site, being blown around the whole region by prevailing winds, if and when a fire elsewhere erupts.

In fact, Vapor Cloud Explosions (VCEs), as well as destruction and undermining the facility by storm surges and rising coastal water levels, will occur. It is highly likely that, contrary to FERC’s own requirements, the storm surges and rising Gulf water levels will disastrously damage “**cryogenic transfer piping; marine/cargo unloading platforms; primary and emergency electrical power;...(FERC Guidance Manual)**” No one who has survived a massive hurricane making landing expects the power to remain on. Locating this LNG facility here on the Gulf Shore near Bahia Grande, Port Isabel, and Brownsville, TX, within blast range of schools, popular fishing, and commercial shrimping areas, is sheer folly, and a direct contradiction of FERC’s own policy.

A. Serious Risk of Catastrophic and Widespread Fire Storms:

FERC has required, since at least 2005, that applications for liquefied natural gas (LNG) import terminals include fire protection. FERC adopted the National Fire Safety Standards, which were revised in 2003, based upon the 2001 edition of National Fire Protection Association (NFPA) Standard 59A. (These have also been U.S. Department of Transportation requirements for at least 15 years.)

But as the LNG project approval process has “progressed,” our local uniformed services, especially firefighters, have come to us to report that they have had no training or equipment to deal with the massive sort of fire storm which an LNG explosion brings. No funding or equipment can be provided for this eventuality. A VCE in this region is not unlikely, given the live rocket fuel which SpaceX launches will involve, within ten miles of the proposed LNG plant.

FERC’s Guidance Manual requires applicants (under 18CFR, 380.12, 49 CFR Part 193, and ASCE 7) “to demonstrate that the potential hazard to the public from failures of facility components resulting from natural catastrophes is addressed, and that there would not be a significant impact on public safety from seismicity and other, natural hazards at LNG facilities.” (quoting from Background section of Guidance Manual). The scope of natural catastrophes in coastal areas given the new normal of extremes due to climate change is so vast today that the LNG proposers can neither demonstrate nor address such potential hazards, —now much more likely to occur.

In the case of the Chinese port explosion in August 2015, cars were thrown more than a kilometer away from their original location under the 3 massive explosions at a port location where some journalists reported they suspected LNG was being imported and reprocessed for use, near where stored toxic chemicals were ignited, and the “whole sky” appeared to explode

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IND154-5

DOT PHMSA's LOD issued on March 26, 2019 evaluated the overpressure or blast wave effects due to an explosion of flammable vapor. Specifically, section 9.5 of the LOD analysis showed the overpressure hazards would remain within the Project's property line and could extend into the BSC. In addition, section 4.12.1.6 of the EIS discusses RG LNG's design to protect against storm surges and would be designed to withstand a Category 4 hurricane. Furthermore, section 4.12.1.6 discusses FERC staff's review of RG LNG's preliminary engineering design. This analysis contained various design reviews with a focus on the layers of protection or safeguards to reduce the risk of a potentially hazardous scenario from developing into an event that could impact the offsite public. If operational control of the facilities were lost and operational controls and ESD systems failed to maintain the Project within the design limits of the piping, containers, and safety relief valves, a release could potentially occur. To mitigate this scenario, RG LNG’s design would include mitigation, such as spill containment and spacing, hazard detection, ESD and depressurization systems, hazard control, firewater coverage, structural protection, and emergency response. FERC staff has recommended further final design details be provided in section 4.12.1.7 to ensure adequate mitigation is in the final design of the proposed facility.

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Section 4.12.1.6 of the EIS discusses the emergency response and cost sharing plans. If the Project is authorized, both plans would need to be submitted for review and approval prior to construction of the Project. The cost sharing plan would specify direct cost reimbursements to any state and local agencies and would include capital costs for equipment and for any required specialized training. Section 4.12.1.6 also discusses impacts to and from the SpaceX rocket launch facility.

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Section 4.12.1.6 of the EIS discusses how the Project would be resilient against natural hazards such as geological, meteorological, and hydrological events. Specifically, the facility has been designed to withstand natural hazards (such as earthquakes, hurricanes, and winds) based on mean return intervals in accordance with federal regulations and best practices.

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very high above skyscrapers. in general, it is well known that LNG has a relatively high cost of production and needs to be stored in expensive cryogenic tanks; though it explodes only when trapped in a certain space, its by-products after liquefaction with a source of ignition, its vapors in a pool in the sky above the facility, or blown downwind, may burn more readily when other fires or, say, live rocket fuel, are present.

We, the environmental advocates and citizen scientists (individual Certified Texas Master Naturalists, and others who have studied these issues “on our own nickel” and not representing any body but that of scientific truth) are concerned about a possible problem not mentioned so far, that CEII, the “Critical Energy Infrastructure Information” not be abused to hide actual risks, under bogus “security” and “Trade Secrets” cover stories. There are such serious risks to public safety in the LNG project that failure to disclose and consider them would not be excused, when a disastrous explosion occurs, by an industry-pressured move to force FERC to approve an inherently unsafe and polluting project. Accidents do happen. The “Titanic Effect” of allowing those selling the project to claim it is flawless and “cannot go down” (as with the tragic Titanic sinking, in fact) appears to be in effect with regard to FERC vulnerability to the people “selling” us the whole LNG process, somehow without reason or logic, eliminating the significant impacts and risks by saying it, as if a magic wand were waved. And as if the withholding of crucial information about VCEs were not enough, there is the recently-reported news of the catastrophic impacts expected from Climate Change, including, in short, **major crop failure** here in Texas due to alternating floods and droughts.

The Fourth Annual U.S. Report on Climate Change, released on the Friday of Thanksgiving week-end, 2018 (days ago as of this writing), presents the Rio Grande Valley of Texas as a major Case Study, which I present in full prior to discussing storm surges:

“FOURTH NATIONAL CLIMATE ASSESSMENT Volume II: Impacts, Risks, and Adaptation in the United States,” U.S. Global Change Research Program, released 11-23-2018, https://nca2018.globalchange.gov/?fbclid=IwAR2b68JTOso-RrO9fZgKN9FdBJoK4vb3GFbvi_pCG16vKHr2XRv25w134U. The following is from Chapter 23 that covers the Southern Great Plains (Kansas, Oklahoma, and Texas) at <https://nca2018.globalchange.gov/chapter/23/>

(Citations of relevant research documenting claims is numbered below, but edited out. See link.)

Case Study: Rio Grande Valley and Transboundary Issues

In the U.S.–Mexico transboundary region of the Southern Great Plains, no hydrologic resource is more critical than the Rio Grande and its attendant tributaries. Partnered, binational management of the basin’s water supply is essential to supporting the agricultural, industrial, and community infrastructure in place along the Rio Grande valley. Proactive and collaborative water management strategies allow for effective flood control, mitigation of drought impacts, and maximization of water quality, among other benefits.⁴²

The Rio Grande is highly sensitive to variations and changes in the climate of the Southern Great Plains, where changes can have marked impacts on the valley’s extensive agricultural productivity.^{43, 44} Increasing regional temperatures,⁴⁵ consistent with global trends, will enhance the severity of drought impacts via the acceleration of surface water loss driven by evaporation, particularly in large Rio Grande reservoirs such as Lake Amistad. Changes in regional precipitation patterns, including observed increases in extreme rainfall events as part of a regional “dipole” dry-wet-dry-again pattern,¹⁰ will affect both drought and flood occurrence and intensity along the Rio Grande channel. Other climate-driven impacts, such as changes in wildfire frequency⁴⁶ and increased vulnerability to heat events,⁴⁰ will further challenge the preparedness and resilience of communities on both sides of the border. (End quote from 4th Annual US Climate Change Report. See links provided above for details and report summary.)

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CEII information includes specific engineering, vulnerability, or detailed design information about proposed critical infrastructure that is not disclosed to the public since the information could be useful to a person planning an attack on critical infrastructure, or gives strategic information beyond the location of the critical infrastructure. The FERC has a responsibility to protect the confidentiality of all CEII information while balancing the need for public involvement in decision-making processes such as this EIS. To that end, the FERC has established a procedure whereby interested parties can request CEII information. This process involves signing a non-disclosure statement regarding the use of all CEII.

While some information is not publicly available, the lack of this final information does not deprive the public of a meaningful opportunity to comment on a substantial adverse environmental and safety effect of the Project or a feasible way to mitigate or avoid such effect. The EIS includes sufficient detail to enable the reader to understand and consider the issues raised by the proposed projects and addresses a reasonable range of alternatives.

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Section 4.13.2.9 of the final EIS was revised to include a detailed analysis of the anticipated climate change impacts on the Project region, based on the 2018 report released by the USGCRP Research Program and referenced in the comment.

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The import of this report is its helpfulness in preventing catastrophic suffering, famines, and uninhabitability of major parts of the region, including the Brownsville Ship Channel's "lands" on which the LNG is to "stand," —which will likely be entirely swept away by storm surges of the future. Climatologists' predictions are highly accurate: Klaus Jakob predicted exactly how long the subways and infrastructure in New York and New Jersey would be inoperable five years before SuperStorm Sandy caused the damage Jakob predicted. It also gives us a view of the future in which wildfires could ignite our power facilities, or be ignited by power lines or other utility infrastructure, as happened in California this month, November '18. Imagine what will happen to the LNG facilities and pipelines and the VCE when a wildfire roars through the dry coastal dune vegetation, from the upland lomas, after another multi-year drought.

IND154-9

IND154-10

B. New Storm Data After Hurricanes Harvey, Irma, Florence, etc:

In APPENDIX 13.1.3 ff. of the DEIS, I see no persuasive, clear commitment to, or even a reasonable possibility to meet FERC requirements (cited below), given new storm surge facts from Hurricanes Harvey in Texas, Florence, and rising coastal water levels with climate change extremes, esp. more water in each storm event due to evaporation from warming oceans, more rainfall (65-70 inches in Harvey, https://www.nhc.noaa.gov/data/tcr/AL092017_Harvey.pdf). Harvey was a thousand year storm, formerly thought less probable than .01%. And **dozens of 500 year storms have occurred within the last 10 years alone:** "The U.S. has experienced at least 24 of what we thought were "500-year" rain events since 2010, including Hurricane Matthew in 2016... Previously "rare" events will become the norm as we continue to warm the atmosphere, since warmer air contains more moisture.

IND154-11

The LNG Project will release the considerable heat generated by cooling the natural gas down to minus 260 degrees: according to specifications we have seen, into the air, since releases into the waters of the recently restored Bahia Grande area will kill most fragile, healthy organisms. But even releases into the air above the LNG facility proposed would eventually warm the Gulf waters and those of the fragile Bahia Grande within a month or so, given the fact that warmer air holds moisture, which will then fall back down as rain.

IND154-12

Please See Reports From These Newer Sources, Links for which are provided BELOW: <https://www.pauldouglasweather.com/atmospheric-afterthought-here-houston-was-25th-500-year-flood-across-usa-since-2010/> and <https://pubs.usgs.gov/of/2018/1172/ofr20181172.pdf>

For a very clear map showing the areas to be impacted, see the green (vs. yellow) areas in: <http://www.saveryfromlng.com/where>.

Though there are several, including the Army Corps of Engineers, —indeed many— agencies cooperating to review these projects, FERC's *Guidance Manual* states the basic duties and principles of applicants:

IND154-10

As stated in section 4.7.1 of the EIS, prescribed burning, although not allowed on the LNG Terminal site itself, would not be precluded in the adjacent areas. In addition, the northern edge of the project site would be bounded by a 4 lane state highway (SH-48) as well as a 17-foot storm levee. Furthermore, onsite process equipment would be installed at a distance of over 500 feet from SH-48. This would provide sufficient separation distances between any prescribed wild fires and onsite process equipment. We also note that hot embers from wildfires or prescribed burns could reach onsite equipment and piping, however metal components and paving around these components would not be considered a fuel source and would not be susceptible to catching fire. If hot embers did ignite onsite components, RG LNG's proposed hazard and fire mitigation measures described in Section 4.12.1.6 of the EIS would be activated as needed.

IND154-11

The equivalent return period for a storm event is determined by comparing the attributes of a storm at a specific location against that location's historical records; that is, the return period is specific to the spot or area where the storm hit and should not be compared to the total number of 500-year events that occur across the country. Hurricane Harvey caused 1000-year precipitation and flooding in various areas of Texas; however, it made landfall 170 miles north of Brownsville. The other recent hurricanes mentioned, such as Hurricanes Florence, Irma, and Maria, impacted the eastern coast of the United States.

Furthermore, the 65 to 70 inches of rainfall from Hurricane Harvey which caused 1000-year floods in some places was the maximum observed rainfall in an isolated area where the eye of the storm had hit (with the most intense rainfall). The total rainfalls associated with Hurricane Harvey dropped significantly approximately 25 miles outside of where the eye made landfall and the vast majority of coastal Texas affected by Harvey experienced between 1 and 25 inches of rain.

IND154-12

Historically, LNG facilities have not been shown to emit heat at levels within or around the facility site substantially enough to affect the function of on-site equipment or affect personnel working on-site. Further, data within the air modeling analysis presented in section 4.11.1 demonstrates the dispersion of pollutants in the air surrounding the Rio Grande LNG Terminal, and weather/wind patterns in the Project area circulate air such that any heat emitted from the LNG Terminal would be dispersed from the site. Therefore, localized climate impacts due to any heat released by the LNG Terminal are not expected to occur.

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Inserted from Guidance Manual): (Extended Quote)
Applicants to FERC for LNG projects must (but have not):
... Describe the design storm surge elevations for the project site and their basis for both still water and with wind/wave effects conditions considering site-specific studies. Include all project elevations for dikes, storm surge walls, piers, docks, unloading and loading arms and other pier and dock facilities, and other elevated features of the project, their design basis, and demonstrate how they will conform to industry and Federal standards and protect critical equipment or ensure minimal consequences. Include the historical or scientific basis for wind and storm surge conditions used as design criteria. Compare with 100- and 500-, 1,000-, and 10,000-year return period elevations and NOAA storm surge elevations for hurricane prone areas at the site for Category 1, 2, 3, 4 and 5 hurricanes. Include in these elevations the effects of sea level rise and regional subsidence considering the design life of the facilities for time dependent severe natural hazards.
13.I.3.1 Wind and storm surge design basis and criteria
13.I.3.2 Identification of design wind speeds (sustained and 3-second gusts) and corresponding return periods, wind importance factors, and storm surge design elevations for all structures, systems, and components
13.I.3.3 Comparison of design wind speeds (sustained and 3-second gusts) and storm surge (still water, wind/wave run-up effects, crest elevations) with hurricane and other meteorological event wind speeds corresponding to:
13.I.3.3.1 10,000 year return period
13.I.3.3.2 1,000 year return period
13.I.3.3.3 500-year return period
13.I.3.3.4 100-year return period

(End of citation from FERC Guidance Handbook)

Note that these time periods for return events are clearly now out of date since Hurricanes Harvey, Irma, Maria and Florence, and since the global data on storms within the past decade includes a much higher probability of 500-year storms. Higher storms surges are now so much more probable that insurance companies and local governments are changing what is acceptable in construction for the future, —not even allowing some to rebuild in such areas. Storms are longer and bring more water due to hotter oceans and air.

So this Environmental Review should at least have included a revisiting of the specific site elevations given the new post-2017 storm surge data (NOAA). **Failure to include this data is unacceptable and renders the project proposals ineligible for a FERC permit according to FERC’s own guidelines quoted above.**

Summary: The public safety and security risks presented by LNG facilities and pressurized pipelines, compressors, etc. include dangers from VCEs, from wildfires in drought years, as well as power outages from increasingly intense storms, storm surges, and temperature extremes. These involve major explosions covering several miles in diameter of blast ranges. The facilities proposed remain within the ten mile radius of live rocket fuel launches and their projected paths. Studies are flawed as they looked only at the predicted near-SpaceX blast range, not the likely far wider blast range of the pooled Methane above LNG sites.

IND154-13

See Comment Response IND154-11. As stated in section 1 of the FERC Guidance Manual for Environmental Report Preparation, the Guidance Manual is not a mandatory document. Furthermore, the return period does not correspond to the number of storms across the U.S or a region, but to a focused and refined area.

IND154-14

See comment response to IND154-3. Section 4.12.1.6 of the EIS and response to Comment Letter IND-67, which addresses launch failures from the SpaceX launch site.

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II. Unsatisfactory Plan in DEIS to Mitigate Irreversible Environmental Harms to our Listed Species: Noise Levels and Incomplete Wildlife Corridor Threaten These Species

Hundreds of pages of the DEIS are wasted on numerous mentions of “threatened” and “Endangered Species” and “critical habitat,” but **no actual actions are proposed** to mitigate effects on our state and federally listed species; assuming falsely exactly the thing that needs proving, -e.g. “no critical habitat has been established;” and that someone else will be able to mitigate the significant cumulative impacts environmentally, both of which are demonstrably false. Indeed, effects are so great they would cost more to mitigate than the project will be worth in profits, if built, though the completed Wildlife Corridor would help many species.

Wetlands and lomas are highly fragile zones, not evenly distributed around the country. Ours are unique, highly valued, and necessary for clearing up the waters and air crucial to the lives and health of humans, too. This is why the Bahia Grande at this site was restored (and this largest restoration project in the Northern Hemisphere was completed just in 2003), at great cost, to remove hazards like “dead fish dust” for the health of Brownsville residents as well as the health of the millions of organisms in these wetlands which purify the water, balance the system, cool the area, and provide food for many species. All living creatures are sensitive to loud sounds. Even what seem to be small impacts can harm such fragile balance irreversibly, also damaging eco-tourism and shrimping. But oyster beds and shrimp breeding grounds cannot just be moved elsewhere. In spite of the need to deal with this last problem, one form of mitigation remains a possible key to permitting even just one of the 3 proposed LNG facilities: a Mega Mitigation Wildlife Corridor (\$100 million worth.)

Given the magnitude of the significant and irreversible environmental harms to the wetlands and upland lomas of the proposed LNG sites, the only possibly meaningful mitigation if even one major project, like RG LNG and RB Pipeline is approved and built, would be the completion of the Wildlife Corridor throughout the Rio Grande Valley, a project already begun but still needing extensive funding and support of organizations like the Army Corps to be effective. Friends of the Wildlife Corridor have long worked to make it a reality so that road kills and other human threats have less impact on our endangered and threatened species. Wildlife Corridor expansion, construction and enforcement would have to remove the many substantial and ecologically damaging sections of the Border Fence/Wall to protect habitats or create new ones where the useless Wall was, to offset such large scale losses of wetlands which the LNG construction would surely cause. A more effective “wall” indeed than those proposed by the Trump Administration would be a wall of native shrubs and plants, which, as one can see in Santa Ana NWR and other Valley habitats even along Rte. 100, have large painful pricklers and thorns, cactus spines, and provide very human-proof cover for ocelot and other small mammals and birds who make this impenetrable native landscape their safe homes. Underbrush is far better a defense for ocelot and against androgenic harms than concrete and cleared territory of the planned “enforcement zones” of 150 feet on either side of the proposed new Wall segments, and a Wildlife Corridor would also cost far less than the appallingly costly Border Wall as most recently proposed. The segments of barbed wire recently installed by the military forces costing us 100 million dollars near the border would also have to be removed, in favor of thorny, prickly, spiny native cacti and brush such as

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Critical habitat is the term for habitat that is officially designated and protected by NMFS and FWS; important or significant habitats are still in the vicinity of the proposed Project and impacts on these habitats are discussed where applicable. Section 4.7 has been revised in the final EIS to include the results of recent discussions between the applicant and the FWS, which has recommended that habitat mitigation for certain species include expansion of existing conservation lands; final mitigation plans would be determined through completion of the ESA consultation process. Appropriate mitigation would effectively offset or minimize impacts associated with the proposed Project such that the Project’s contribution to cumulative impacts on a given species would be adequately minimized.

IND154-16

Impacts on recreation and tourism, including nature tourism, and commercial fishing are addressed in sections 4.9.3 and 4.9.4, respectively. As indicated in section 4.6.3.3, the BSC (a man-made channel that is regularly maintained) does not provide conditions needed for the growth oyster reefs; therefore, construction and operational noise would not affect oysters. Potential impacts on shrimp breeding grounds is discussed in section 4.6.3 and appendix M.

IND154-17

As described in section 4.4.2 of the EIS, RG LNG is consulting with the COE, EPA, and FWS regarding wetland mitigation plans as part of the permitting process associated with Section 404 of the CWA. Section 4.7 has been revised in the final EIS to include recent coordination between FWS and RG Developers, which includes FWS’ recommendation that RG Developers’ mitigation for the loss of species-specific habitat through conservation of lands adjacent to those lands already conserved as part of the Coastal Corridor Project. Any mitigation required for habitat disruption of federally listed species would be determined by FWS during the ESA consultation process.

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could be planted during another set of Rio Reforestations. The Army Corps of Engineers has in its ranks now several leaders who have obtained certification in our Texas Master Naturalist Program (through TX A&M Agrilife Extension services and staff) and who would be qualified to work with the environmental inspectors and auditors to enlist volunteer labor to assist with the reforestation with native barriers at the border, providing not only the barrier to illegal immigration, but also the completed Wildlife Corridor which would mitigate the extensive and irreparable harms to habitats from LNG and pipeline sites. Mitigation requires new wetlands to be purchased or restored.

The DEIS recommended “additional mitigation related to nest identification, monitoring, and implementation of best management practices for the Northern Aplomado Falcon.” These habitats are not a zoo, where animals can just be “managed.” This vague recommendation is unsatisfactory, insufficient, and would be fruitless without an expanded Wildlife Corridor including new sections for wildlife to expand into. And another factor is glossed over and understated: the **noise levels** noted in the DEIS have no adequate mitigation proposed. re: Endangered Kemps Ridley Sea Turtles, it is simply false that “No critical habitat has been designated for this species,…” as those of us who have served on Turtle Patrol on S. Padre Island beaches, and who have visited the Padre Island National Seashore nesting sites know. The LNG and Pipeline will “adversely affect the Northern Aplomado Falcon, the Piping Plover (and its critical habitat), and the Ocelot,” as the DEIS states, but no mitigation plan in the DEIS is adequate, or even a reasonable attempt, since there is none of adequate scale possible given the nature of these LNG projects. Best practice here is **not to build** at all.

Wildlife refuges and wetlands are not zoos, or packages we can just “relocate.” This is their habitat. We humans can go elsewhere, or even change our minds about how we generate power. Only a Wildlife Corridor would help. But this Mitigation Wildlife Corridor would not be just any old partial or fragmented, non-continuous Wildlife Corridor: it must be enhanced, parts restored, widened, and most importantly, completed, so that the listed species of wildlife can survive moving around in their habitats without the instant death and looming extinction that comes from roadkills.

Perhaps RG Developers plan to redefine what a “wetlands” is by falsely maintaining that they do not count unless they are never “dry”. This false premise that an area is only a wetlands and thus protected if the area is wet 365 days a year, (which is never the case with actual wetlands) was tried by the first Bush Administration, resulting in much ecological damage and human suffering, when the wetlands which were built upon flooded badly later on. As climate extremes bring more water in rain in each major storm event, alternating with years on end of drought, much soil and biomass is being lost when wetlands are disturbed, like those near New Orleans, unlike our vast lagunas in the Laguna Atascosa WR, which are dry for long periods, and only for that reason can handle major influxes of storm water.

The INGAA Foundation’s Construction Safety Consensus Guidelines (3.3.1) remind us that managing projects like LNG liquefaction requires: Management and any supervisory bodies (being) responsible for empowering: “...all personnel with the authority to “Stop Work whenever hazardous conditions or potentially hazardous conditions are identified.” In a supervisory and evaluative role, FERC is also responsible to avoid costly, often fatal impacts of such projects, if not with “Stop Work” orders (always likely to impact contractor

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As described in section 4.4.2 of the EIS, RG LNG is consulting with the COE, EPA, and FWS regarding wetland mitigation plans as part of the permitting process associated with Section 404 of the CWA. RG LNG’s final wetland mitigation plans would be developed and submitted to the COE, and would be implemented in addition to the construction mitigation measures outlined in RG LNG’s Procedures and the measures described in the EIS.

IND154-19

Section 4.7.1.3 has been updated to reflect current correspondence between the applicant and the FWS regarding appropriate mitigation for the loss of foraging habitat at the LNG Terminal site.

IND154-20

Critical habitat has a specific definition under the ESA and habitat designated as such is protected by federal law. The BA provided in section 4.7 of the final EIS has been revised in accordance with FWS correspondence and concludes that the Project is “not likely to adversely affect” the northern aplomado falcon and piping plover and would not result in the adverse modification of critical habitat. Our determination of effect for the ocelot remains, and our current determination for the jaguarundi, is “likely to adversely affect.” Nevertheless, a “likely to adversely affect” determination is not reason to deny a permit under Section 7 of the ESA. Rather, the ESA requires that, if a project is likely to adversely affect a threatened or endangered species, the federal action agency (in this case, FERC) must conduct formal consultations with the FWS. This process requires the FWS to prepare a Biological Opinion for the Project.

IND154-21

As described in section 4.4 of the EIS, wetlands were delineated by RG Developers in accordance with n accordance with COE-approved methods, and RG Developers submitted the results of wetland delineations conducted to-date to the COE for approval.

IND154-22

As identified in section 1.0, FERC considers the public interest and/or the public convenience and necessity of a Project prior to making its decision on whether or not to approve it. Assessment of the proposed Project has included coordination with multiple federal and state agencies and requires permits or authorizations from additional entities (see section 1.5). During construction, FERC exercises “stop work” authority in the event of a non-compliance with the conditions in the Certificate Order or approved construction procedures.

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scheduling and thus increase costs by delaying construction deadlines), then with a duty to “Stop the Project” as a whole, or to exercise its power to deny a permit to the LNG Projects before incurring unmanageable costs and liabilities. In the May 2013 version of the FERC Wetlands and Water Body Construction and Mitigation Procedures, we find the following example of a crucial preventive measure, which seems impossible in our specific site for this LNG liquefaction facility: **“Install sediment barriers; and Relocate hydrostatic test manifolds outside wetlands to the maximum extent practicable.”** It follows that if the coastal wetlands site is as extensive as this project requires, such mitigation as locating the hydrostatic test manifolds outside the wetlands is impossible. Even so we need the Corridor.

The construction and purchase of remaining lands in the existing Corridor, of an extended Wildlife Corridor throughout the Lower Rio Grande Valley, would be the only meaningful mitigation possible to protect the more than 24 threatened and endangered species at risk here. This region has for more than 15 years had “Rio Reforestation” events where hundreds of school buses and vans bring volunteers to replant the region with native trees, plants, and shrubs, to host our many rare birds, butterflies, insects, dragonflies, damselflies, reptiles and mammals. We have already constructed some parts of the Wildlife Corridor, though many road kills of those few remaining ocelot still occur, to the point that even Laguna Atascosa National Wildlife Refuge and Santa Ana NWR have closed their bicycle and van tour roads formerly open to the public, to prevent ocelot kills, in recent years the major cause of death of this seriously endangered species. The Corridor would also need to pass over, overcome, bridge, or tunnel under (as is already being constructed) (preferably **over**) numerous roads, like Rtes. 100 & 48, Port Isabel to So. Padre Island, Los Fresnos and San Benito, in part of this large, unique and rare wetlands and upland loma habitat set. The Border Fence (Wall) sections of land also served as crucial habitat, and the 150 foot “enforcement zones” of cleared former habitat, if more wall segments are built, would need to be converted into wildlife corridor, and portions of the wall through sensitive habitats **removed** in favor of drones, scrub, cacti, and other tools of the Border Patrol in effectively patrolling the Border.

A major given premise here is the well-documented presence of numerous federally and state-listed species of highest concern in these fragile marine and coastal habitats, already recognized: The Ocelot, Aplomado Falcon, Kemps-Ridley Sea Turtle, and plant species like Walker’s Manioc, (NEPA site) and the fragile breeding grounds in the small remaining areas of Black Mangrove swamps along Route 48 at the LNG construction sites, for shrimp and Brown Pelican. The latter were saved once already from near extinction by the public outcry generated by Rachel Carson’s Silent Spring and widespread scientific reporting 50 years ago, based on scientific studies of effects of DDT on bird egg formation. Now, coral reefs and all sea animals with shells are threatened by the massive increase in Carbonic Acid in the oceans/ Gulf, from our CO₂.) Even the Wildlife Corridor won’t help ocean pollution.

NEPA listing currently includes our species named above. There is no possible mitigation except a huge completed (continuous, even under or over the many roads and railroads in the whole Lower Rio Grande Valley) Wildlife Corridor. Preventing irreparable harm is FERC’s role. The Commissioners are liable, if they knowingly put us all at risk.

Summary: Unsatisfactory/Irreversible Environmental Harms to our Listed Species; Mitigation Would Be Either Impossible or Far Too Costly, Outside of a Mega-Corridor.

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In accordance with section 7.3.4 of its Procedures, RG Developers would be required to locate hydrostatic test manifolds outside wetlands and riparian areas to the extent practicable along the Pipeline System. The northern extent of the Pipeline System is predominately uplands and RB Pipeline would implement the measures in its Procedures and applicable state and federal permits to minimize the impacts of hydrostatic testing. At the LNG Terminal site, hydrostatic test water would be transferred to onsite stormwater ponds and tested for contamination prior to release to minimize water quality impacts on the BSC (see section 4.3.2.2).

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See Comment Response IND154-17. Further, Walker’s manioc is not noted in the FWS’ Information for Planning and Consultation System for the Project counties and was not identified as being present during the FWS during development of the EIS. As stated in section 4.6.3.2, the black mangroves that would be impacted at the LNG Terminal site are likely isolated and experience limited tidal exchange, which indicates that they no longer act as breeding grounds for shrimp.

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III. Process Inadequate and Outdated for Assessing Risks and Cost-Benefit Ratio:

Rio Grande Valley has a long term Green Infrastructure Plan Already; The Trade Tariff War makes the LNG product too expensive for the Chinese to import, and for domestic sale; Obsolescence of fracked gas fed LNG Production; Market forces now favor renewables and leaving oil in ground. For work already underway toward a greener, more cost-effective future for the Valley, see: https://nca2018.globalchange.gov/downloads/NCA4_Report-in-Brief.pdf

Summary: The Carbon Footprint of these projects is immense, and unnecessary: it includes the pollution from fracked gas, and transport,—all contributors to the carbon and water footprints in the whole life cycle of LNG production & delivery. Increases in GHGs threaten the survival of our species as well as the threatened and endangered species listed. As recent reports of new research about energy show, LNG rates very low in its cost-effectiveness, below industrial scale wind and solar. LNG is no longer a competitive “transitional fuel,” as industrial wind and solar are many times less costly.

Each of the proposed LNG projects with their high carbon and water footprints, not to mention their construction, will increase androgenic warming significantly. This will produce more extreme weather. As for the claim that burning the “transitional fuel” Natural Gas has less impact than oil, or “burns clean,” it is *false*: the fracking of the source gas, the whole transport process in tankers and pipeline, and releases of methane into the atmosphere make its atmospheric effect far worse! **Methane** traps heat 33 times worse than CO₂. We are already nearly past the tipping point of irreversible and catastrophic feedback loops of planetary warming. Even if this were “denied,” LNG is also no longer profitable. Even Nancy Pelosi was *misinformed* when claiming that LNG produces “50% less CO₂ than fossil fuels.” In the form of these LNG projects, the LNG produces more warming in its whole “life cycle.”

Given that LNG production costs are high even in the fossil fuel industry, and that most of us have energy stocks in our retirement mutual fund investments, FERC has a duty to prevent dangerously bad risks to investments. More viable, less problematic energy alternatives exist even right here in Texas, already a world leader in wind energy, with great potential in distributed load using solar arrays and other renewables. The 3 proposed LNG projects to be located in this extremely fragile marine area and coastal bioregion all are surely completely unacceptable in terms of highly significant, lasting, irreparable environmental damage and public safety risks of unimaginable scope. For this latter reason, the uniformed services (police and firefighters) joined our early efforts to stop these projects. Surely the scrapping of one of the original four projects proposed, and the pull-out of the French banks formerly funding LNG here in Texas, testifies to this complete failure of the LNG projects and pipeline to meet even the most basic FERC requirements, without even considering the next key issue covered in the Guidance Manual viz., Vapor Cloud Explosions (VCE), which would completely shut down and destroy not only the LNG Facilities, but also the eco-tourism industry, plus major shrimping and other fishing and marine breeding capacity of the whole Lower Rio Grande Valley’s coastal region. Recent explosions in the whole sky above a Chinese port city where LNG had been offloaded from tanker ships show how significant the

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As described in section 1.3.1 of the EIS, the environmental and economic consequences of any induced natural gas production and impacts of end-use in importing markets are outside the scope of this EIS. Section 4.13.2.9 of the final EIS was revised to include a detailed analysis of the anticipated climate change impacts on the Project region, including wildlife impacts.

IND154-26

Comment noted.

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Section 4.13.2.9 of the final EIS was revised to acknowledge that the Project GHG emissions would incrementally contribute to climate change. As described in section 1.3.1 of the EIS, the environmental and economic consequences of any induced natural gas production are outside the scope of this EIS.

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Comment noted.

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As described in section 3.1 of the EIS, the use of alternative sources of energy would not meet the stated objective of the Project, and evaluating alternative sources of energy is beyond the scope of this EIS. Additionally, sections 3.2 and 3.3 of the EIS evaluated alternative locations along the Texas Gulf Coast that included more industrial development and less industrial development compared to the Port of Brownsville. None of the alternative sites were determined to provide an environmental advantage over the proposed Project.

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pooling of Methane and VCEs are. They justify the continuing withdrawal of investor support for LNG projects, as we see for example in the lower stock price of NextDecade, a parent LNG corporation, down to one third of its original value as of this writing.

Further, the very fracking that generates the natural gas to be cooled to minus 260 degrees F. in our already overheated region, and its transport in pressurized pipelines, is likely to generate more earthquakes, and thus may generate highly unpredictable tsunamis which will inundate and undermine energy facilities on our Gulf Coast. The costs of LNG production make it a poor risk financially, and a long-lasting eyesore and species destroyer in a fragile location. The feasibility of this obsolete form of fossil fuel energy is highly limited. Not only stockholders, but bankers worldwide are refocusing on renewables over LNG: banks are now required to include energy, society, and governance concerns. French bank Societe Generale already pulled out its support of LNG here, and since the tariff war has started, U.S. exports are now being taxed by other nations, e.g. China, and Mexico, countries which our Administration has offended. Russia and China already have other gas suppliers.

We entrust our energy agencies to create and enforce policies which protect the public safety, and balance projected energy needs against mere profiteering at public expense, and short term private gain which ineluctably leaves unusable hulks littering the seascape, increased asthma in young and old, and irreversible pollution of our natural resources. Seeing California burning from prolonged drought and documented rises in temperatures, we now understand that the extremes of Climate Change are upon us already. As the nation's trustees for energy policy and public safety, you as Commissioners, to be credible and authentic as a body, must sometimes cancel and refuse to permit projects of great risk and such significant harm. The net Carbon Footprint of the LNG project in its whole life cycle is far larger than that of the alternatives: energy conservation, wind, solar, and other renewable energy projects underway. Since the expensive LNG will be sold abroad, rather than raising the prices of natural gas here in the US, LNG producers intend to transport the LNG to assumed Chinese markets in super-tankers. Dangers are possible leaks underway, and the simple scientific fact that Methane is lighter than other components of air: thus, it traps in heat from above them, at factors 33 times worse than even CO₂ traps heat. FERC's very existence depends on its efficacy in doing its duty to the common good. I strongly urge you, Commissioners, to deny the permit for these LNG projects, and to encourage the far less costly and less damaging, safe alternatives in renewable energy here in Texas. Permit at most one tiny LNG project if you must, and construct a continuous, complete Wildlife Corridor of massive proportions.

In this new era of climate change extremes, efficiency and cost-effectiveness are all the more necessary. Industrial scale wind and solar energy are even now already definitively shown to be more efficient by far than LNG and other fossil fuel energy types, as Dan Gearino has concisely shown in his reporting of studies in the *Clean Economy Weekly*, <https://insideclimatenews.org/campaign-archive/clean-economy-weekly>.

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As described in section 1.3.1 of the EIS, the environmental and economic consequences of any induced natural gas production are outside the scope of this EIS. Production and gathering activities, and the pipelines and facilities used for these activities, are not regulated by FERC, but are overseen by the affected region's state and local agencies with jurisdiction over the management and extraction of the shale gas resource. Determining the well and gathering line locations and their environmental impact is not feasible because the market and gas availability at any given time would determine the source of the natural gas. While past, present, and reasonably foreseeable future oil and gas infrastructure within the geographic scope of the cumulative impacts assessment are addressed in section 4.13, the specific locations for infrastructure associated with induced production are not reasonably foreseeable.

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Comment noted. As described in section 3.1 of the EIS, the use of alternative sources of energy would not meet the stated objective of the Project, and evaluating alternative sources of energy is beyond the scope of this EIS.

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An analysis of LNG Terminal safety, including LNG carrier safety, is included in section 4.12.1 of the EIS. The GWP factor for methane is addressed in section 4.11.1.2 of the EIS, and is used to quantify CO₂ equivalents in the EIS.

IND154-33

Comment noted. As described in section 3.1 of the EIS, the use of alternative sources of energy would not meet the stated objective of the Project, and evaluating alternative sources of energy is beyond the scope of this EIS.

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Pro-LNG hand-written notes, all submitted in a single 1.5 hour period, were clearly written without any reference to any specific issues, like which species are threatened, and what their habitat requirements are. They are clearly the result of the activities, perhaps a dinner meeting gathering those who would parrot their vague support of LNG, organized by STEER, a clearly partisan, biased, pro-oil group set up to “steer” the ignorant into supporting LNG projects. See <https://www.bizjournals.com/sanantonio/news/2018/05/31/oil-and-gas-industry-funded-group-to-expand-in-the.html>, and note the timing of the advent of STEER to the Rio Grande Valley. Other statements of support are shallow, not based on actual facts about the environmental and security risks, and misleading regarding the number of jobs to be “created.” Full time permanent jobs will total under 100 people, according to our estimates, and the records of other LNG facilities we have studied. So after irreversible damage to our ecological infrastructure, —roads over wetlands, wildlife habitat permanently disrupted, noise levels continuing to drive living things away and ruin the hearing of humans in the area, — we will be left with useless hulks of concrete, steel, and toxic substances, for generations. More jobs in cancer treatment, asthma management, and economic hardship due to the collapse of the eco-tourism movement likely to result from the large explosion risks, may well result from the LNG projects. But “thousands of jobs?!” Not at all likely, and indeed, when the media explore the misguided economic “incentives” given to the oil and gas industry by local elected officials, many careers and livelihoods at the public expense may end. Indeed, several local school districts, towns, and cities near the proposed LNG sites have refused to participate in these economic incentives and tax abatements to “lure” oil and gas industry proposals by those already awash in extra cash. Oil and gas industry profits are at an all time high, while most of us, viz., middle class Americans, struggle to pay taxes and other bills. The Port of Brownsville obviously supports LNG because their letter shows no mention or consideration at all of environmental and eco-tourism’s healthy and needed benefit to our region economically: thousands of eco-tourism jobs and \$430 million in annual income to the Valley from eco-tourists. The shrimp and fishing industries are crucial economic drivers for the Port. But these are also not mentioned, nor the devastating effects the LNG tankers will have on the shrimping, plus the removal of the Black Mangrove swamps needed for breeding.

I would be happy to answer any questions about empirical premises used in the above reasoning and arguments against the permitting of the above-named LNG projects. Please carefully weigh my comments and my quotations from FERC’s own documents and *raison d’être*. The very existence of the FERC and our energy industries depends on rational decision-making, using good logic and good facts which are scientifically documented. Thank you for your time and attention to good logic, which must support your choices for the common good and the benefit of the whole eco-system, not of a few interested parties.

Respectfully submitted,

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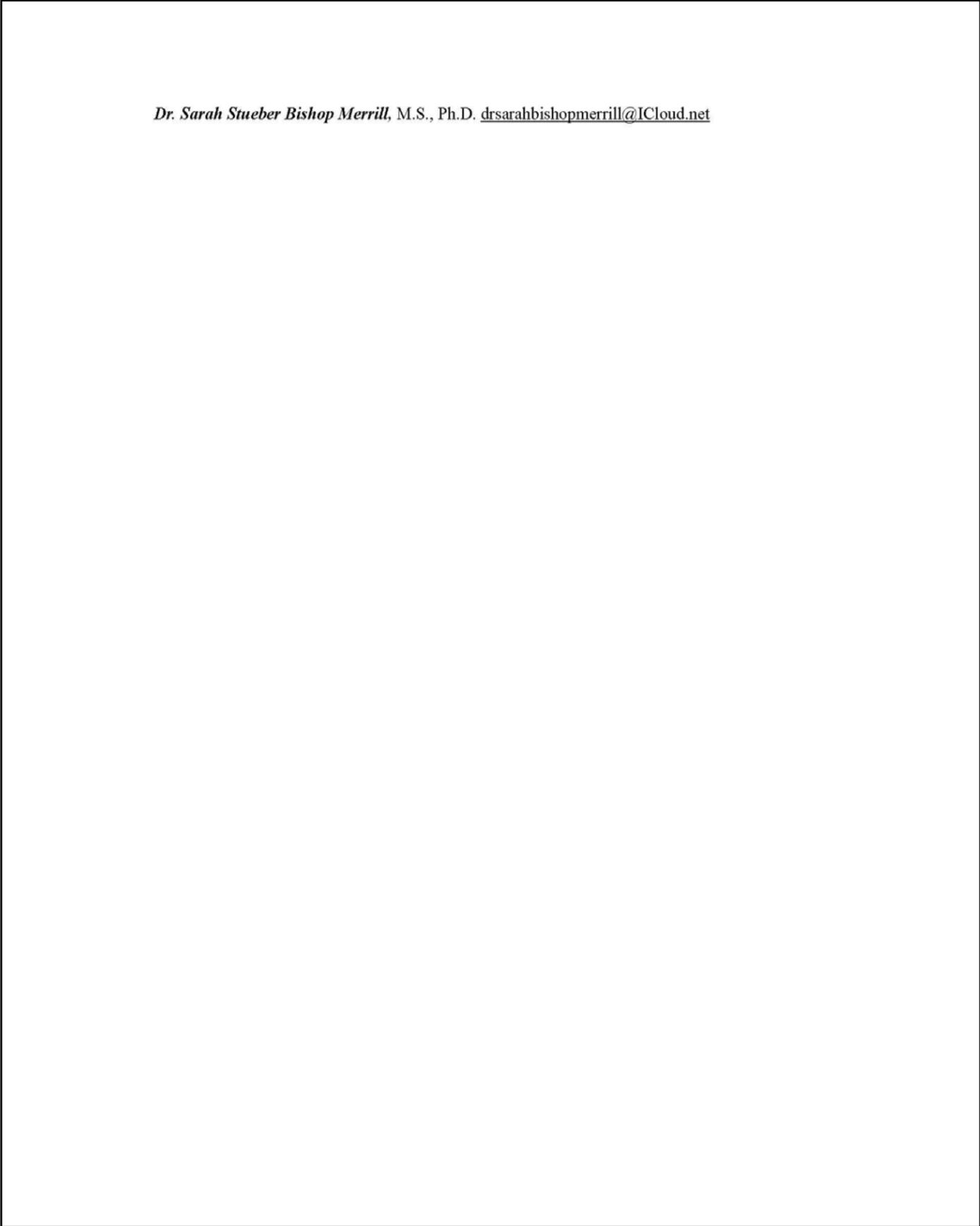
As discussed in section 4.9.2, a total of 290 staff would be required to operate the Project. RG Developers have been coordinating with local training organizations and school districts to provide seminars and career talks to discuss future career opportunities for the Project and anticipate hiring a number of unskilled or semi-skilled workers that would be trained on the job through the National Center for Construction Education and Research System. Impacts on recreation and tourism, including nature tourism, are addressed in section 4.9.3.

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Impacts on recreation and tourism, including nature-based or eco-tourism, and commercial fishing are addressed in sections 4.9.3 and 4.9.4, respectively. Impacts on potential EFH, including mangrove wetlands at the LNG Terminal site and shrimp habitat (including soft-bottom habitat and estuarine emergent marsh) are discussed in section 4.6.3.

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Dr. Sarah Stueber Bishop Merrill, M.S., Ph.D. drsarahbishopmerrill@icloud.net

Individuals (IND)

IND155 - John Young

Re: Docket No CP16-454 Rio Grande LNG
Docket No CP16-455 Rio Bravo Pipeline

NextDecade is too weak financially and organizationally to be entrusted with proposed projects like Rio Grande LNG, Rio Grande Pipeline, and Galveston Bay LNG.

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It has not proven itself to be up front and honest with investors or with the residents and other stakeholders in the areas where it wants to build the projects. FERC should not betray the public trust by permitting any of NextDecade's projects. FERC should especially not trust NextDecade to responsibly tie up any loose ends after the fact (such as mitigation and emergency response plans).

In fact, FERC should put the Rio Grande LNG / Rio Bravo Pipeline regulatory process on hold at least until NextDecade acquires a EPC partner, fills its Chief Operating Officer position, solidifies its proposed mitigations, and gets its organizational team integrated and up to speed. So that at least its yet to be chosen EPC partner can get up to speed on the Draft EIS and and agree to or adjust at needed the front-end engineering and design (FEED) finalized by by McDermott in late 2017 and/or by CB&I in early 2018 (depending on which of two seemingly contradictory NextDecade FEC documents you favor). Then the Draft EIS should be reissued and and the public comment period reopened.

NextDecade is a business disaster stem to stern. In terms of organization. In terms of finances. In terms of Public Relations and its self representations. And in terms of the shifting energy marketplace. Which is probably why it has fallen farther and farther behind in it project rollouts from 2015 to the present and why it's stock is languishing on the Nasdaq stock exchange.

Project Rollout Delays, Delays, Delays:

Back in March 2015, Rio Grande LNG said it expected FERC approval in February 2017, expected to start construction in June 2017, and expected to be operational by the 4th Quarter of 2020.

Then in December 2016, it said it expected FERC approval within the 3rd Quarter of 2017.

On 11-27-2017, NextDecade announced that it expected to receive a FERC "notice of schedule . . . in the near future" and final FERC authorization to start construction "in the second half of 2018." How accurate was this encouraging good-news announcement that included contact information for investors and media? Not very.

A 12-14-2017 FERC conference call note summery stated that:

The RG Developers requested an approximate timeframe for issuance of the Notice of Schedule for the Environmental Review of the Rio Grande LNG Project. FERC staff noted that its environmental review is ongoing on the RG Developers' latest filings and the information related to the debris analysis associated with the nearby SpaceX facility. FERC staff also noted that it would

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The comment does not address environmental concerns and is outside the scope of this EIS.

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issue a Notice of Schedule for the Environmental Review of the Rio Grande LNG Project once staff has determined that it has all information necessary to issue an Environmental Impact Statement for the project.

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And point of fact, FERC didn't actually issue the Notice Of Schedule until 08-31-2018 -- about 9 months after NextDecade said it expected the Notice "in the near future."

In addition, the FERC Notice Of Schedule gives its Federal Authorization Deadline Decision date as 07-25-2019 (dependent on the timeliness of NextDecade and nine Cooperating Agencies in providing FERC with the complete information needed for the decision). More than a year later than NextDecade's predicted "second half of 2018." And even that date depends on the timely completion of tasks by NextDecade and nine Cooperating Agencies.

One of the nine Agencies, the Fish And Wildlife Service, has submitted a 11-19-2018 letter to FERC that includes a list of 14 missing or incomplete documents or plans and concerns about the permitting process in general. On 11-29-2018, NextDecade filed a rebuttal to the Fish And Wildlife letter. The deadline for Public Comments on the Rio Grande LNG Draft EIS is 12-03-2018 even though much remains up in the air in terms of the Draft EIS.

In its 09-04-2018 Form 8-K, NextDecade said that it had planned to sign a lump-sum turnkey ("LSTK") EPC contract for the construction of its Rio Grande LNG project by the end of the 2nd Quarter 2018 but that the company and its EPC partner McDermott International had decided that McDermott would have to secure a joint venture partner to successfully execute and financially guarantee a project this size.

In its 11-09-2018 3rd Quarterly Report, NextDecade said it expects to finalize its construction contract within the 3rd Quarter of 2019 and could have its Rio Grande LNG and Rio Bravo Pipelines operational as early as 2023. I'll say more about NextDecade's critical EPC problem in my discussion of its organizational problem, but it's hard to see how NextDecade will secure a EPC partner and get it up to speed and integrated enough into the NextDecade team in time to finalize the construction contract within the 3rd Quarter of 2019.

Taking longer to start smaller: Note that, probably reflecting its financial problems, NextDecade's plans to make an initial Financial Investment Decision on only two (or hopefully three) LNG liquefaction production trains and possibly on only one of the two natural gas pipelines that are to comprise its Rio Bravo Pipeline project. The Texas Economic Development Act Chapter 312 tax abatement package it negotiated with Cameron County allows it to start with only two trains, then add a 3rd, then add two more, and then finally the 6th of the 6 planned.

So its target FERC authorization date has slipped from February 2017 to July 2019. Its target construction start date has slipped from June 2017 to around the 3rd Quarter of 2019. Its target operational startup has slipped from the 4th Quarter of 2020 to "as early as 2023." And it's to start with two or three trains instead of six and possibly with only one line of its planned two line Rio Bravo Pipeline. Bravo! Bravissimo! [Side note: The Rio Grande River is called the Rio Bravo in Mexico.]

of its planned six LNG liquefaction production trains.

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NextDecade's Serious Organizational Problems:

NextDecade's organizational lineup has shifted and changed so much over the last year that it's hard to imagine that the company's capable of the kind of teamwork that's required to 1) successfully shepherd its proposed Rio Grande LNG and Rio Bravo Pipeline projects through the FERC permitting process, 2) adequately tie up the loose ends FERC specifies such as those towards the end of the 10-12-2018 DEIS at <https://www.ferc.gov/industries/gas/enviro/eis/2018/10-12-18-DEIS.asp>. For example:

RG Developers would implement their Project-specific Upland Erosion Control, Revegetation, and Maintenance Plan (Plan) and Wetland and Waterbody Construction and Mitigation Procedures to minimize construction impacts on soils, wetlands, and waterbodies, which is based on FERC's Plan and Procedures, with acceptable deviations.

All appropriate consultations with the U.S. Fish and Wildlife Service and National Marine Fisheries Service regarding federally listed threatened and endangered species would be completed before construction is allowed to start in any given area.

All appropriate National Historic Preservation Act consultations with the Texas State Historic Preservation Office and the Advisory Council on Historic Preservation would be completed before construction is allowed to start in any given area.

NextDecade has had a lot of time to work all this out but much of it remains incomplete. Possibilities have been proposed, even detailed. But some critically binding agreements have not been finalized. NextDecade is big on vision, not so big on achievement. But building sand castles in the sky higher and higher (adding Galveston Bay LNG to Rio Grande LNG and Rio Bravo Pipeline, for example, doesn't make them stronger and more enduring.

2018 Changes To Date In NextDecade's Team Lineup:

As of Dec. 31, the company had 23 full-time employees and 12 independent contractors. Just look at some of the changes in NextDecade's in its team lineup over the last year:

In January 2018, the Founder and CEO of NextDecade was replaced as CEO and a new Vice President of Human Resources was appointed.

In March, NextDecade changed law firms and added ABB Ltd to the team (a Swedish international corporation, to bring new automation and electrical solutions to the mix).

In April, NextDecade added a Senior VP in charge of marketing in Asia (opening offices in Singapore and Beijing).

In May, NextDecade's EPC partner CB&I was eaten by McDermott which maintained the EPC contract with NextDecade.

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In June, it hired another highly qualified marketing person to its Beijing office.

In August, NextDecade outsourced the Communication Manager's job duties (he'd been with NextDecade 4 years 11 months and with CB&I before that) and changed Accounting Firms. Then it added the South Korean oil and gas company NEXT INV LLC to the mix by adding a 12th director seat to its Board representing NEXT INV LLC (as part of a stock deal in which NEXT INV LLC purchased \$35 million dollars worth of NextDecade's Series A Convertible Preferred Stock) and gave BlackRock permission to "observe" NextDecade's board meetings (in exchange for selling \$50 million dollars of stock to funds managed by BlackRock).

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In September, the Chief Operating Officer announced his retirement (the position remains vacant), NextDecade parted ways from its EPC partner McDermott International (the search for a replacement remains ongoing), a Manager for the Rio Grande LNG project was hired, there was a downgrading of the company's Internet site managers, and NextDecade moved from its 4th floor offices in The Woodlands to the 39th floor of a Houston building.

In October, NextDecade added a Chief Commercial Officer to its team – but has yet to announce a single, firm, long-term take-or-pay / Sales and Purchase Agreement (SPA) contract (projecting such agreements into 2019).

NextDecade's Serious EPC Problems:

Kathleen Eisbrenner, NextDecade's Founder, first CEO, and Board Chair, cited a previous positive working relationship with CB&I in choosing it for NextDecade's EPC partner. NextDecade even spoke of how CB&I could rotate workers from the Gulf of Mexico as their jobs played out there to apply their experience there to the Rio Grande LNG project as it ramped up.

There's an odd conflict between NextDecade's 09-04-2018 Form 8-K Current Report EX-99.1 which says "the existing RGLNG FEED, which was completed in late 2017 by McDermott" and NextDecade's 03-08-2018 Form 10-K Annual Report for the year ending 12-31-2018 which says "In early 2018, we completed the FEED update package with CB&I [emphasis added] for the Terminal." The 03-08-2018 Form 10-K Annual Report goes on to state: "NextDecade and CB&I are finalizing an Open Book Estimate to incorporate the FEED update improvements and plan to execute a binding Lump-Sum Turnkey EPC agreement in the second quarter of 2018."

At any rate, CB&I fell on hard times and was eaten by McDermott in May 2018. Then McDermott fell on hard times and its EPC agreement with NextDecade fell apart – taking the binding Lump-Sum Turnkey EPC agreement anticipated the 2nd Quarter of 2018 with it. Then in its 11-09-2018 3rd Quarterly Report, NextDecade said "we expect to execute a final EPC contract in the third quarter of 2019" and "We estimate that we will receive all regulatory approvals and begin construction to support the commencement of commercial operations as early as 2023." Really? By which Quarter of 2023?

Interestingly, on 10-29-2018 McDermott announced it had joined with the Italian oil and gas company Saipem S.p.A in a bid to regain its place at NextDecade's table. To date, NextDecade has made no comment on McDermott's announcement. Instead, NextDecade's 3rd Quarterly Report says:

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As of September 30, 2018, we have incurred approximately \$4.4 million of Invitation to bid contract costs. Future potential payments for Invitation to bid contract costs are up to \$2.1 million in 2018 and up to \$14.9 million in 2019.

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Why is it budgeting \$14.9 million to continue its search for a suitable EPC partner when McDermott would at least be somewhat up to speed on the FEED update package it or CB&I completed in late 2017 or early 2018?

Note below that Bank of America lowered its 1 yr target price for NextDecade's stock from \$10 down to \$6 partly because NextDecade will be conducting a competitive EPC bid process and the analyst is less comfortable given the uncertainty created by the delay, higher costs, and lack of clarity on the contractor."

NextDecade's Serious Financial Problems:

NextDecade's financial problems are visible for all to see at <https://www.nasdaq.com/symbol/next>, at least if you look at how it's done since it got on the Nasdaq exchange 07-25-2018. It started out at \$10.80 a share with Cowen & Co. giving it an 11-17-2017 1 yr target of \$12.

The stock market isn't my area of expertise, so the 1 yr targets I've found for NextDecade's stock shouldn't be taken as complete. But here – high, low, and in between – is what I've found to date:

1) Nasdaq:

Note the two month drop in the 1 year target for NextDecade's NEXT shares from \$9.50 down to \$6.00 between 08-10 and 09-27-2018.

Also, as of 10-09-2018, the 52 week high has been lowered from \$10.80 down to \$10.29, the low remaining at \$3.95.

On 08-10-2018, Nasdaq lowered the 1 year target from \$9.50 down to \$9.00
On 08-16-2018, down to \$8.50
On 09-12-2018, down to \$7.00
On 09-27-2018, down to \$6.00
The reason? Nasdaq hasn't said.

But don't forget that NextDecade almost lost its Nasdaq NEXT common stock listing for a time (09-07-2017 to 02-20-2018) and did lose its NEXTW warrants listing for a time due to breaking some of Nasdaq's rules. Last time I looked, the warrants were again being listed by Nasdaq. You may want to ask NextDecade when and why their warrants have been shifted to the Over The Counter Pink market now and then.

For more information on this, check out NextDecade's 09-07-2017 FEC Form 8-K, Item 3.01, "Notice of Delisting or Failure to Satisfy a Continued Listing Rule or Standard," at

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https://www.sec.gov/Archives/edgar/data/1612720/000121390017009530/f8k090717c_nextdecade.htm.

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Also check out the company's 11-18-2017 FEC Form 10-Q, "Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations," "Recent Developments,"
<https://www.sec.gov/Archives/edgar/data/1612720/000155837017008579/next-20170930x10q.htm>.

To see where NextDecade was notified 02-20-2018 that it's common stock but not its warrants would continue to be listed on the Nasdaq exchange, see the company's 02-20-2018 Form 8-K Current Report, Item 8.0, Other Events, at <https://www.sec.gov/Archives/edgar/data/1612720/000161272018000017/next-20180220x8k.htm>

2) Bank of America/Merrill Lynch:

On 09-07-2018, Bank of America lowed it from \$10.00 (04-17-18) down to \$6.00 (09-07-2018)

The Reason? "NextDecade downgraded to Neutral from Buy at BofA/Merrill - BofA/Merrill analyst Julian Dumoulin-Smith downgraded NextDecade (NEXT) to Neutral and cut its price target to \$6 from \$10 following news it would no longer mover forward with the EPC contract it signed with McDermott (MDR) in Q2 2018. NextDecade will be conducting a competitive EPC bid process and the analyst is less comfortable given the uncertainty created by the delay, higher costs, and lack of clarity on the contractor." (<https://thefly.com/landingPageNews.php?id=2787167&headline=NEXT-NextDecade-rating-change-at-BofAMerrill>)

3) Cowen & Co LLC:

On 11-17-2017, Cowen originally gave NextDecade a one year target of \$12.

On 09-26-2018, Cowen lowered it to \$4.00

Why \$12 on 11-17-2017? "Cowen analyst Sam Margolin started NextDecade with an Outperform rating and \$12 price target. The analyst views the company as a "ground floor" Liquefied Natural Gas opportunity and sees the FERC decision as a likely positive catalyst."

Why \$4 on 09-26-2018? "NextDecade downgraded to Market Perform from Outperform at Cowen - Cowen analyst Jason Gabelman downgraded NextDecade to Market Perform from Outperform as he sees lower probability of greenfield U.S. LNG projects taking final investment decisions in the near-term. He sees most FID's coming to integrated oil company projects and Qatar. Gabelman maintained his \$4 price target on NextDecade shares" (<https://thefly.com/landingPageNews.php?id=2643649>).

4) Credit Suisse:

On 10-10-2018, "Credit Suisse analyst Spiro Dounis initiated NextDecade with a Neutral rating and a price target of \$6." (<https://thefly.com/landingPageNews.php?>

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[id=2802634&headline=NEXT-NextDecade-initiated-with-a-Neutral-at-Credit-Suisse](#))

Note on Credit Suisse: Back on 04-26-2018, NextDecade issued \$35 million in "Series A Convertible Preferred Stock and associated warrants and common stock issuable upon conversion thereof." Credit Suisse was offered a 3 percent commission for selling the stock (<https://disclosurequest.com/form/nextdecade-corp/0001612720-18-000030>).

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5) Wolfe Research:

On 11-13-2018, "Wolfe Research initiated NextDecade with an Underperform and \$5.50 price target" (as reported by TheFly 11-14-2018 at <https://thefly.com/landingPageNews.php?id=2822967>).

Also note that NextDecade is using the French bank Société Générale to help it finance its projects and that BlackRock has acquired \$50 million in NextDecade's stock to market in funds it manages.

Take a quick peak behind the curtains at the ongoing efforts by Friends of the Earth France, SAVE RGV from LNG and other groups to get Société Générale to break with LNG projects in general and with Rio Grande LNG in specific:

"NOTE TO SOCIETE GENERALE FINANCIAL RISKS OF SUPPORTING FRACKED GAS EXPORT INFRASTRUCTURES," Friends of the Earth France, 07-23-2018, 4 pages, https://www.banktrack.org/download/note_to_societe_generale_on_financial_risks_of_supporting_fracked_gas_export_infrastructures/notefinancialrisks23jul18.pdf

"Call to withdraw from Rio Grande LNG and risks from supporting LNG terminals," submitted to Société Générale on 07-23-2018 by Les Amis de la Terre France, Action Non-Violente COP21, Beyond Dirty Fuels Campaign/Sierra Club, Rainforest Action Network, BankTrack, SAVE RGV from LNG, and the Carrizo/Comecrudo Tribal Nation of Texas, 3 pages, https://www.banktrack.org/download/second_letter_from_ngos_to_societe_generale_on_rio_grande_lng/lettersocietegeneraleriograndelng23jul18_1.pdf

And a campaign has also been started to get BlackRock to back away from dirty fossil fuel investments. For example, see "Global Campaign Exposes BlackRock for Devastating Climate Impacts of Investments," 05-24-2018, <https://foe.org/news/global-campaign-exposes-blackrock-devastating-climate-impacts-investments/>

In Summary:

This is not your usual comment opposing Rio Grande LNG and Rio Bravo Pipeline type projects.

My primary point is that NextDecade's Draft Environmental Impact Statement should be put on ice until after the company secures a EPC partner and after that new partner has a chance to evaluate the FEED update package approved by CB&I and/or by McDermott for any needed changes for everything to mesh together as planned. If revisions to the DEIS are

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needed, the public comment period should be reopened.

My secondary point is that FERC shouldn't hand the keys to the Rio Grande Magic Valley on it's say so that it will tie up any remaining loose threads (such as wetlands mitigation and ship channel water way use agreements). Organizationally and financially, it's not in any condition to exercise due diligence and prudence and has not shown itself to be a good and honest partner with our local RGV communities and stakeholders.

Submitted 12-03-2018 around 4:30 EST by
John Young, MS (Psychology), MSW (Social Work), Retired
Member of SAVE RGV from LNG since May 2014
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ForJohnAndBarbara@gmail.com

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Re: Rio Grande LNG: CP16-454-000, Rio Bravo pipeline: CP16-455-000

South Texas LNG export growth is the culmination of a history of selective deference to capital interests, grown apart from the public interest served by Green New Deal level climate urgency

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2. Trump energy policy embodies broad commitment to regulate according to fossil energy interests

- 2.1 Lining coal executive pockets with the Clean Power Plan replacement*
- 2.2 An underlying shamelessness and cruelty*
- 2.3 CPP replacement: an opportunity to cut EPA out of U.S. climate policy*
- 2.4. Hubris and denial have shaped U.S. energy and climate policy*
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3. Deference to FERC, deregulatory dominance, and the public interest

- 3.1 Summary*
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- 3.4. U.S. energy dominance a.k.a. drain America first*

4.1 Financial dynamics of carbon lock in: Lessons from DAPL

- 4.1 Standing Rock*
- 4.2 DAPL finance story emerges*
- 4.3. Gauging authenticity: Money talks, banks are talking*
 - 4.3.1. Rolling loans gather no loss*
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5. Conclusion

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1. Introduction

Like everything emanating from the Trump Administration, the draft Affordable Clean Energy (ACE) rule is, at best, a monument to short-sightedness and bluster. It's Trump's proposed replacement for the Clean Power Plan (CPP), and it's neither affordable nor clean. Rather, in classic Trump fashion, the plan is pure distraction, all smoke and gilded mirrors.

The estimated CPP compliance cost savings of "\$6.4 billion" has coal industry executives smiling about ACE. Investor-owned utilities, many of which own natural gas Electricity Generating Units (EGUs) too, see through the deal as operating on the margins.

Just as CPP was designed to be a backstop on coal, to prevent its growth, the ACE rule is proposed to serve as a backstop against any efforts to address systemic climate pollution from EGUs by EPA. Hence it is up to FERC and market forces to address it.

The Department of Energy is acting to shape this current position on energy and climate policy, with the belief that maximizing oil and gas production, and sinking capital into half-century old coal plants, provides energy and grid security, and is therefore in the public interest. For over a half-century, the issue of climate change has forced questions about the short-sightedness of this approach. This analysis revisits those questions.

ACE is the trace of a dark energy and climate policy crisis at the federal level. To shine light on this crisis at the local level, people are organizing in communities for transitions to 100% renewable power in the next two decades. This is consistent with the net-zero emissions timeframe for holding global warming to 1.5° C. This is not consistent with expectations from the financial industry, which over the past decade has facilitated at least \$800 billion in debt creation for the oil and gas industry alone.

The environmental, economic, and health impacts of the Rio Bravo projects, and the on-going LNG export buildout, cannot be separated from the larger short-sighted dynamic that equates energy and economic security with maximal oil and gas throughput and consumption, contrary to climate constraints.

These comments explore the genesis and evolution of federal regulatory policies today, proposed to become manifest as Rio Bravo LNG and other fossil energy expansion projects.

2. Trump energy policy embodies broad commitment to regulate according to fossil energy interests

- 2.1 Lining coal executive pockets with the Clean Power Plan replacement*
- 2.2 An underlying shamelessness and cruelty*
- 2.3 CPP replacement: an opportunity to cut EPA out of U.S. climate policy*
- 2.4. Hubris and denial have shaped U.S. energy and climate policy*
- 2.5. Cumulative climate pollution has changed the energy security equation*
 - 2.5.1. IPCC Special Report highlights the conservative consensus on the climate threat*
 - 2.5.2. Changing security equation*

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2. Trump energy policy embodies broad commitment to regulate according to the coal executive's desires

2.1 Lining coal executive pockets with the Clean Power Plan replacement

The (neither) Affordable (nor) Clean Energy plan is celebrated by Trump as a great cutting of the red tape.¹ Replace CPP with ACE and end the War on Coal, goes the thinking, as if the CPP was a draconian violation of consumer freedom.

The bottom line talking point for the Administration is the savings Trump gets to dangle in front of large investor utilities: "In some scenarios, avoided compliances costs total \$6.4 billion compared to the CPP," according to a White House press release.²

EPA's RIA of the proposed rule makes clear that this estimated coal industry windfall is the "present value" to industry excess of the avoided compliance costs, being spread out over 15 years. The annual numbers come from a coarse-grained analysis of the impacts on electric power generation from dropping CPP and adding 4.5% fuel efficiency improvements at all coal plants. The \$6.4 billion figure comes from assuming this happens under a high technology/low cost "scenario."³

For perspective on the total value of \$6.4 billion placed on 15 years of avoided CPP compliance costs, investor-owned U.S. utility net operating income was \$43.5 billion in 2016 alone.⁴

The \$6.4 billion figure is a weighted sum of annual "avoided compliance costs" over a 15 year timespan, from 2023 through 2038. It includes coal power companies reaping the fuel savings at the upgraded, increasingly utilized coal plants — the outcome expected to go along with the marginal fuel efficiency improvements imposed under the favored scenario.⁵

Examples of technologies include "intelligent soot blowers" and "air heater and duct leakage control" and other system improvements that coal power companies should make on a moral basis, without government hand-outs.

2.2 An underlying shamelessness and cruelty

¹ White House. "2018 Regulatory Reform Report: Cutting the red tape: Unleashing economic freedom." October 2018. [Available at: <https://www.whitehouse.gov/wp-content/uploads/2018/10/2018-Unified-Agenda-Cutting-the-Red-Tape.pdf>]

² White House. [News release]. "President Donald J. Trump is Following Through on His Promise to Cut Burdensome Red Tape and Unleash the American Economy." October 17, 2018. [Available at: <https://www.whitehouse.gov/briefings-statements/president-donald-j-trump-following-promise-cut-burdensome-red-tape-unleash-american-economy/>]

³ U.S. EPA. "Regulatory Impact Analysis (RIA) for the Proposed Emission Guidelines for Greenhouse Gas Emissions from Existing Electric Utility Generating Units; Revisions to Emission Guideline Implementing Regulations; Revisions to New Source Review Program." [EPA-452/R-18-006.] August 2018 at 3-8 and 6-11.

⁴ U.S. EPA. "Regulatory Impact Analysis (RIA) for the Proposed Emission Guidelines for Greenhouse Gas Emissions from Existing Electric Utility Generating Units; Revisions to Emission Guideline Implementing Regulations; Revisions to New Source Review Program." [EPA-452/R-18-006.] August 2018 at 2-30.

⁵ U.S. EPA. "Regulatory Impact Analysis (RIA) for the Proposed Emission Guidelines for Greenhouse Gas Emissions from Existing Electric Utility Generating Units; Revisions to Emission Guideline Implementing Regulations; Revisions to New Source Review Program." [EPA-452/R-18-006.] August 2018 at 3-19.

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That “present value” of \$6.4 billion in coal utility savings to be delivered, in total, over 15 years, will come with a tradeoff, as is typical of cost-benefit analyses.

The Trump EPA RIA finds the \$6.4 billion corresponds to increases in “coal production for power sector use” of 5.8% in 2025, 8.6% in 2030, and 9.6% in 2035, all relative to CPP (the base case) projections.⁶

That increased coal power use (again, according to the Trump EPA RIA) is expected to come with about one thousand otherwise avoided premature deaths *every year*, hundreds of “non-fatal heart attacks” *every year*, and tens of thousands of missed work days and school days *every year*.⁷

The above morbid statistics just account for expected particulate and ozone pollution in the ACE scenarios projected. The negative health impacts, so quantified, do not include more negative impacts from mercury, much less climate pollution in carbon dioxide and methane.

People living in West Virginia and the broader Ohio River Valley will put faces to these morbid statistics in disproportionate numbers.⁸

The blinding subtext of this \$6.4 billion compliance cost trade-off — explicated in the Trump EPA’s RIA — is the orders-of-magnitude larger number of otherwise avoidable premature deaths owing to the current status quo of continued oil, gas, and coal dominance of electric power generation, under both ACE and CPP.

A classic U.S. Supreme Court case — used by FERC to equate “orderly development” of fossil energy with the public interest⁹ — pertained to energy development in West Virginia. In reference to the Natural Gas Act of 1938 the Court wrote:

If the Commission is to be compelled to let the stockholders of natural gas companies have a feast so that the producing states may receive crumbs from that table, the present Act must be redesigned. Such a project raises questions of policy which go beyond our province.¹⁰

Fast-forward to today and the fundamental question persists of whether energy policy serves the public interest.

The Trump EPA RIA acknowledges:

Many regulations are promulgated to correct market failures, which otherwise lead to a suboptimal allocation of resources within the free market. Air quality and pollution control regulations address “negative externalities” whereby the market does not internalize the full opportunity cost of production borne by society as public goods such as air quality are unpriced.

⁶ U.S. EPA. “Regulatory Impact Analysis (RIA) for the Proposed Emission Guidelines for Greenhouse Gas Emissions from Existing Electric Utility Generating Units; Revisions to Emission Guideline Implementing Regulations; Revisions to New Source Review Program.” [EPA-452/R-18-006.] August 2018 at ES-20.

⁷ U.S. EPA. “Regulatory Impact Analysis (RIA) for the Proposed Emission Guidelines for Greenhouse Gas Emissions from Existing Electric Utility Generating Units; Revisions to Emission Guideline Implementing Regulations; Revisions to New Source Review Program.” [EPA-452/R-18-006.] August 2018 at 4-31 to 4-34.

⁸ U.S. EPA. “Regulatory Impact Analysis (RIA) for the Proposed Emission Guidelines for Greenhouse Gas Emissions from Existing Electric Utility Generating Units; Revisions to Emission Guideline Implementing Regulations; Revisions to New Source Review Program.” [EPA-452/R-18-006.] August 2018 at 4-39.

⁹ 83 Fed. Reg. 18020. April 25, 2018; NAACP v. FPC, 425 U.S. 662 (1976).

<https://supreme.justia.com/cases/federal/us/425/662/case.html>

¹⁰ FPC v. Hope Natural Gas, January 3, 1944 at page 615.

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While recognizing that optimal social level of pollution may not be zero, GHG emissions impose costs on society, such as negative health and welfare impacts, that are not reflected in the market price of the goods produced through the polluting process. For this regulatory action the good produced is electricity. If a fossil fuel-fired electricity producer pollutes the atmosphere when it generates electricity, this cost will be borne not by the polluting firm but by society as a whole, thus the producer is imposing a negative externality, or a social cost of emissions. The equilibrium market price of electricity may fail to incorporate the full opportunity cost to society of generating electricity. Consequently, absent a regulation on emissions, the EGUs will not internalize the social cost of emissions and social costs will be higher as a result. This regulation will work [sic] towards addressing this market failure by causing affected EGUs to begin to internalize the negative externality associated with CO₂ emissions.¹¹

The Trump EPA RIA then shows not just that the Trump plan heads in the wrong direction, but also how little the Obama Clean Power Plan would do to “begin to internalize the negative externality associated with CO₂ emissions.” The Trump EPA RIA states the CPP base case scenario is expected to drive down CO₂ emissions from 1.780 Gt to 1.728 Gt over the course of 2025 to 2035.¹²

That’s compared to an expected decline of 1.829 Gt CO₂ to 1.794 Gt CO₂ over that timespan if the Clean Power Plan was scrapped without replacement, and an expected decline of 1.812 Gt CO₂ to 1.787 Gt CO₂ over that decade if the CPP replacement is the favored Trump scenario — the latter being the one presented as potentially worth \$6.4 billion to the coal power industry.¹³

That difference between the favored Trump scenario in 2035, at 1.787 Gt, versus the CPP level then, at 1.728 Gt CO₂, is just 60 million tonnes of CO₂ — or, 3.5% more expected CO₂ (and other coal) emissions than with the CPP in place, in 2035.

That’s not insignificant — indeed, it’s estimated to cause an additional ~1000 premature deaths per year — but put in other terms, CO₂ emissions under CPP are projected in the Trump EPA RIA to fall just 3% in the power sector from 2020 to 2030. Under the favored Trump scenario, emissions are projected to fall a paltry 1.4% over that decade.¹⁴ This amounts to denial of the urgency of climate change.

[Note that Tables 3-5 and 3-6 in the draft ACE rule have inconsistent labeling of the years. Consequently, whether the above decades were 2025 to 2035 or 2020 to 2030 can’t actually be determined from the RIA. Either way, the projected trajectories fail to match the urgent need for emissions reductions in the next decade to avoid more than 1.5 C of global warming since the mid-to-late 1800’s.]

Because the CPP was more of a backstop on coal than a means of pushing emissions reductions in the electric power sector, the Trump plan comes out looking comparable. What’s happened is that sustained

¹¹ U.S. EPA. “Regulatory Impact Analysis (RIA) for the Proposed Emission Guidelines for Greenhouse Gas Emissions from Existing Electric Utility Generating Units; Revisions to Emission Guideline Implementing Regulations; Revisions to New Source Review Program.” [EPA-452/R-18-006.] August 2018 at 1-3.

¹² U.S. EPA. “Regulatory Impact Analysis (RIA) for the Proposed Emission Guidelines for Greenhouse Gas Emissions from Existing Electric Utility Generating Units; Revisions to Emission Guideline Implementing Regulations; Revisions to New Source Review Program.” [EPA-452/R-18-006.] August 2018 at ES-8 and 3-15.

¹³ U.S. EPA. “Regulatory Impact Analysis (RIA) for the Proposed Emission Guidelines for Greenhouse Gas Emissions from Existing Electric Utility Generating Units; Revisions to Emission Guideline Implementing Regulations; Revisions to New Source Review Program.” [EPA-452/R-18-006.] August 2018 at ES-8 and 3-15.

¹⁴ U.S. EPA. “Regulatory Impact Analysis (RIA) for the Proposed Emission Guidelines for Greenhouse Gas Emissions from Existing Electric Utility Generating Units; Revisions to Emission Guideline Implementing Regulations; Revisions to New Source Review Program.” [EPA-452/R-18-006.] August 2018 at ES-8 and 3-15.

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low prices of natural gas, as well as next to no growth in electric demand and explosive growth in solar and wind, have served to displace coal. The Clean Power Plan was rendered somewhat moot, in terms of CO₂ emissions, by these forces. As the Trump EPA RIA explains: “the projected compliance costs of achieving the emissions levels required under CPP is now projected to be significantly lower than the estimates presented in the final CPP RIA.”¹⁵

Now, as the mirage of Clean Power Plant compliance costs has dissipated, the urgency of climate science has grown. Both ACE and CPP are clearly insufficient to act on that urgency. Prevalent methane (CH₄) emissions along links of the supply chain make the potential CO₂ equivalent emissions reductions attributable to switching from coal to gas in the power sector even less (depending on the timeframe over which the two greenhouse gases are compared).

2.3 CPP replacement: an opportunity to cut EPA out of U.S. climate policy

Rather than dispute the endangerment finding — on which initiated Clean Air Act regulation of climate pollution is premised — the Trump Administration is using the CPP replacement as an opportunity to upgrade coal plants, sinking cash into infrastructure that will marginally increase both coal profits and coal’s share of electricity generation.

The EPA RIA states:

overall employment impacts are expected to be relatively small. The pattern of how these impacts may be distributed, across projected changes in electricity generation, by fuel type, indicates that coal-fired power sector employment and coal mining employment may be unaffected or positively impacted by this rule, whereas natural gas generation and fuels, nuclear, and renewable generation employment may be unaffected or negatively impacted by the rule.¹⁶

Of course ACE is just one leg in the Trump Administration’s stool to prop up coal, without displacing much in the way of natural gas used to generate electricity.

The second leg is the contentious plan rejected this year by FERC to subsidize coal and nuclear directly for electric grid “reliability” services — FERC found no need then, but plans are in place to make a version of the leg using a “wartime statute and a national security rationale.”¹⁷ Rolling back mercury emissions rules would be a third leg.

This is consistent with fossil energy dominance of U.S. energy policy. When asked, DOE Assistant Secretary Bruce Walker about the failed attempt at getting the coal and nuclear bailout policy through FERC, Walker put the agency’s position in terms of national security:

it gets back to the core function of the Department of Energy. The grid exists and it is looked at fundamentally in three different ways. FERC, NERC, and the Department of Energy each have a

¹⁵ U.S. EPA. “Regulatory Impact Analysis (RIA) for the Proposed Emission Guidelines for Greenhouse Gas Emissions from Existing Electric Utility Generating Units; Revisions to Emission Guideline Implementing Regulations; Revisions to New Source Review Program.” [EPA-452/R-18-006.] August 2018 at 3-8.

¹⁶ U.S. EPA. “Regulatory Impact Analysis (RIA) for the Proposed Emission Guidelines for Greenhouse Gas Emissions from Existing Electric Utility Generating Units; Revisions to Emission Guideline Implementing Regulations; Revisions to New Source Review Program.” [EPA-452/R-18-006.] August 2018 at 5-11.

¹⁷ Mintz, Sam and Peter Behr. “Top staffer plunges FERC into Trump’s coal, nuclear fight.” *E&E News: Energywire*. August 9, 2018. [Available at <https://www.eenews.net/stories/1060093711>.]

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role in that. FERC controls and has jurisdiction over the markets. NERC looks at the reliability of the grid. And the DOE's role is a national security role. There are 16 critical infrastructures as defined by the Department of Homeland Security. Energy is one of them. But I think everyone would recognize the other 15 sectors rely upon electricity to perform their functions, and so when you look across those 16 sectors and you recognize the risks that we face today, the risk vectors, particularly cyber and physical security, you recognize that our grid is vulnerable. We look at strategies that at the end of the day if we have to stand the grid up that we have the tools that are necessary. Generation is a fundamental component of that and when you look at generation one of the things that's of interest is on-site fuel storage.¹⁸

In response to criticism that the Trump plan for some sort of compensation to coal and nuclear under the Federal Power Act or Defense Production Act "would distort the market, would disrupt the wholesale markets, the power markets generally," Bruce Walker darkly replied:

Our Department's focus is on National Security and where we understand the vulnerabilities based on our position within the intelligence community, we will act. We will not stand back and not act.¹⁹

At this response, the interviewer — Columbia Energy Institute's Bill Loveless — audibly chuckled at the suggestion of such dark determinations of the public interest with respect to energy policymaking.

It is not a coincidence that the Trump EPA, in its CPP replacement plan, writes itself out of regulatory authority with respect to systemic pollution associated with fossil EGUs, limiting its role to "within the fence." To justify this, the Notice of Proposed Rulemaking states:

EPA's area of expertise is control of emissions at the source. EPA is not the expert agency with regard to electricity management. FERC is the expert at the federal level and public utility commissions are the experts at the state and local level.²⁰

Hence ACE is a small piece to a larger trend toward using unspecified security concerns to make public interest determinations on energy policy. ACE is the trace of a dark energy and climate policy crisis at the federal level, more deeply explored in Section 3.

To shine light on this crisis at the local level, people are organizing in communities for transitions to 100% renewable power in the next two decades. This is consistent with the net-zero emissions timeframe for holding global warming to 1.5° C.

2.4. Hubris and denial have shaped U.S. energy and climate policy

¹⁸ Walker, Bruce. Assistant secretary of the Office of Electricity, U.S. Department of Energy. [Interviewed by Daniel Yergin.] "Bolstering U.S. grid resilience." June 18, 2018 at 6:50. [Available at: <http://columbiaenergyexchange.libsyn.com/podcast/bruce-walker-bolstering-us-grid-resilience-the-view-from-the-dept-of-energy>]

¹⁹ Walker, Bruce. Assistant secretary of the Office of Electricity, U.S. Department of Energy. [Interviewed by Daniel Yergin.] "Bolstering U.S. grid resilience." June 18, 2018 at 14:30. [Available at: <http://columbiaenergyexchange.libsyn.com/podcast/bruce-walker-bolstering-us-grid-resilience-the-view-from-the-dept-of-energy>]

²⁰ Fed. Reg. Vol. 83, No. 170. August 31, 2018 at 44753 to 44754.

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Hubris and denial have characterized an alternative U.S. response to the looming crisis, and shaped energy and climate policy to date. ACE reflects one of the Trump Administration's national security mantras: "embrace energy dominance."²¹ Fossil energy is implied.

In 1965 — as global warming first rose to become a national issue — one of the leading recommendations from President Johnson's Science Advisory Committee panel was that:

The possibilities of deliberately bringing about countervailing climatic changes therefore need to be thoroughly explored.²²

Continued fossil industry dominance of U.S. energy markets was presumed. Similarly, fifty years later, the 2015 Quadrennial Technology Review from the Department of Energy — under the leadership of Prof. Ernest Moniz — spoke of the prospect of technological "mastery" of the subsurface.²³

The ambition for such dominion includes not just maximizing U.S. oil and gas production but also utilizing oil and gas industry expertise for injecting CO₂ and other fossil power plant emissions into depleted oil and gas fields, which would become re-pressurized.²⁴

Counting on such negative emissions isn't prudent. The scale of CO₂ injection required is on the order of the oil and gas industry. There is a strong parallel in the Aliso Canyon storage facility — site of a 3-month long blowout — where natural gas is otherwise pumped into depleted oil and gas fields for later use. Moniz has testified that all that's needed is a price signal (beyond existing subsidy and tax credit) to really spur carbon capture and sequestration.²⁵

President Johnson's Science Advisory Committee report on environmental pollution warned, half a century ago:

Through his worldwide industrial civilization, Man is unwittingly conducting a vast geophysical experiment. Within a few generations he is burning the fossil fuels that slowly accumulated in the earth over the past 500 million years. The CO₂ produced by this combustion is being injected into the atmosphere; about half of it remains there. ... The climatic changes that may be produced by the increased CO₂ content could be deleterious from the point of view of human beings.²⁶

²¹ White House. "National Security Strategy of the United States of America." December 2017 at 22.

²² White House. [Report of the Environmental Pollution Panel, President's Science Advisory Committee.] "Restoring the quality of our environment." November 1965 at 126. [Available at: https://babel.hathitrust.org/cgi/pt?id=uc1_b4116127;view=1up;seq=7]

²³ DOE. "Quadrennial Technology Review." September 10, 2015 at 133.

<http://energy.gov/under-secretary-science-and-energy/quadrennial-technology-review-2015>

²⁴ The technology is akin to what is done at Aliso Canyon, where injecting natural gas for storage in depleted oil and gas wells in 2016 resulted in a three-months-long blowout of pressurized (in the case of Aliso Canyon also flammable) fluids.

²⁵ C-SPAN. "Energy Security." September 15, 2015. At 1:34:00.

<https://www.c-span.org/video/?415305-1/secretary-ernest-moniz-testifies-energy-security>

²⁶ White House. "Restoring the quality of our environment." Report of the Environmental Pollution Panel, President's Science Advisory Committee, November 1965 at 126. [Available at:

https://babel.hathitrust.org/cgi/pt?id=uc1_b4116127;view=1up;seq=7]

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By 1970, the National Petroleum Council wrote of a need to balance economic and environmental concerns, so as "to prevent a severe deterioration of our life-sustaining environment that could indeed be self-defeating."²⁷ The NPC acknowledged

Waste loads must not be imposed on the environment that are so great as to endanger essential ecological systems or human health or to interfere unreasonably with other beneficial uses of the environment by society.²⁸

ACE is a turn away from such federal acknowledgement — making America "great" again, to before 1965, coincidentally the year of the Civil Rights Act.

In the face of climate understanding, Trump's ACE rule is a cruel joke. ACE stands as a resignation to ecological and societal collapse that, when coupled to white male chauvinist politics, makes corporate investment in the vision rather damning.

In 1971, the NPC made its first mention of climate change in its research reports, with advisory council to the Department of Energy Secretary kicking the can down the road 30 years, to the "turn of the century":

Carbon dioxide from the combustion of fossil fuels is not normally considered an air pollutant and therefore has not been discussed as such in this report. The hypothesis has been advanced that increases in global levels of carbon dioxide, by increasing the greenhouse effect, could cause increases in the earth's temperature. However, responsible investigators believe it will be the turn of the century before trends in the earth's temperature can be established. It should be noted that others hypothesize that the shielding effect of today's levels of particulates will cause a cooling trend in the earth's atmosphere.²⁹

Of course the "particulates" — here suggested darkly as furnishing potential "shielding effect" to arrest global warming — include the same air pollutant species killing West Virginians in disproportionate numbers, as according to Trump EPA RIA.

Ten years later, by 1981, the National Petroleum Council saw writing on the wall:

If fossil fuel combustion is the major cause of increasing atmospheric CO₂, if the increasing CO₂ content will result in large or possibly catastrophic climate changes, and if natural constraints are either inadequate or too slow to keep the situation stable, then action must be initiated fairly soon to reduce the discharge of CO₂ into the atmosphere.³⁰

The advisory council to the Department of Energy added:

²⁷ National Petroleum Council. "Current key issues relating to environmental conservation [and] the oil and gas industries." June 22, 1970 at 3. [Available at: <https://www.npc.org/reports/1970-Current-Key-Issues-Relating-to-Environmental-Conservation-Oil-n-Gas-Industries-Interim.pdf>]

²⁸ National Petroleum Council. "Current key issues relating to environmental conservation [and] the oil and gas industries." June 22, 1970 at 7. [Available at: <https://www.npc.org/reports/1970-Current-Key-Issues-Relating-to-Environmental-Conservation-Oil-n-Gas-Industries-Interim.pdf>]

²⁹ National Petroleum Council. "Environmental conservation: The oil and gas industries: Volume One." 1971 at 31. [Available at: <https://www.npc.org/reports/1971-Environmental-Conservation-Oil-and-Gas-Industries-Vol-1.pdf>]

³⁰ National Petroleum Council. "Environmental conservation: The oil and gas industries: An overview." 1981. [Available at 76: <https://www.npc.org/reports/1981-Environmental-Conservation-Oil-and-Gas-Industries-Overview.pdf>]

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This action could take the form of restrictions on the use of fossil fuels. The burning of all of the "recoverable resources" of oil (2 trillion barrels) and of gas (9,000 trillion cubic feet) only (not coal) could not raise the global CO₂ level (assuming an airborne fraction of 0.53) to 500 ppmv, which is considered acceptable. The fossil fuels having much greater abundance, particularly coal, are present in sufficient quantity to cause unacceptable CO₂ (and temperature) levels.³¹

Here one can see the origin of CPP's design, as a backstop for limiting coal emissions.

The favored Trump scenario — to just adopt heat rate efficiency requirements while exempting New Source Review — comes out looking comparable as a consequence of that design. The difference in hypothetical emissions trajectories, for CPP and the favored Trump scenario, is just three percent. The hypothetical emissions trajectories are at a level in 2030 that amounts to 7-10% emissions reductions in the next 15 years.³²

By contrast, ACE should be seen a backstop against any regulation by EPA to reduce climate pollution in the electricity sector, ensuring any systemic climate solution runs through FERC.

2.5. Cumulative climate pollution has changed the energy security equation

2.5.1. IPCC Special Report highlights the conservative consensus on the climate threat

The IPCC's special report in October 2018 laid out what can be said about the spectrum of climate change impacts we are seeing today, and that are in store given "economic and institutional lock-in into carbon-intensive infrastructure" with each new fossil infrastructure investment.³³

³¹ National Petroleum Council. "Environmental conservation: The oil and gas industries: An overview." 1981. [Available at 77: https://www.npc.org/reports/1981-Environmental_Conservation-Oil_and_Gas_Industries-Overview.pdf]; Note that in 1980, the NCP had determined the "recoverable resources" of unconventional (Devonian shale) gas in the Appalachian basin accounted for 1,861 Tcf of that estimated 9,000 Tcf. [See National Petroleum Council. "Devonian shale: Unconventional gas sources." June 1980 at Table D-2.]; EIA's current estimate of technically recoverable resources (without regard to economic costs) in the Appalachian basin is under 700 Tcf. [See East region: EIA. "Oil and gas supply module: United States." April 2018 at Table 2 at 3. [Available at: <https://www.eia.gov/analysis/studies/worldshalegas/>]].

³² U.S. EPA. "Regulatory Impact Analysis (RIA) for the Proposed Emission Guidelines for Greenhouse Gas Emissions from Existing Electric Utility Generating Units; Revisions to Emission Guideline Implementing Regulations; Revisions to New Source Review Program." [EPA-452/R-18-006.] August 2018 at 3-15; For current estimates of CO₂ emissions from the power sector, see EIA. "Month energy review." Table 12.6. [Available at: <https://www.eia.gov/tools/faqs/faq.php?id=77&t=11>]

³³ Intergovernmental Panel on Climate Change. [Approved draft, subject to copyedit]. "Global warming of 1.5° C: An IPCC special report on the impacts of global warming of 1.5° C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development and efforts to eradicate poverty." October 8, 2018 at Chapter 3 re impacts and at 2-47 re "lock-in".

Less CO₂ emission reductions in the near term imply steeper and deeper reductions afterwards. This is a direct consequence of the quasi-linear relationship between the total cumulative amount of CO₂ emitted into the atmosphere and global mean temperature rise. Besides this clear geophysical trade-off over time, delaying GHG emissions reductions over the coming years also leads to economic and institutional lock-in into carbon-intensive infrastructure, that is, the continued investment in and use of carbon-intensive technologies that are difficult or costly to phase-out once deployed.

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The spectrum of impacts covers threats associated with the current global warming estimate, since the late 1800's, of ~1.0° C, and how these threats will increase as average global temperature grows to 1.5° C in the next decade and beyond to 2.0° C of warming.³⁴ These numbers result from averaging temperature over the surface of the globe, and across seasons, and so the warming seems slight. The averaging of global temperature, while perhaps a convenient metric, disguises the radical consequences for melting in the Arctic and Antarctic, obscures the expected disruptions to water and food security, and obscures ocean acidification.³⁵

In an early public U.S. government document warning of climate change, the Science Advisory Committee to then-President Johnson wrote in 1965 about the need for prudence in the face of environmental pollution:

We now know that the full effects of environmental changes produced by pollution cannot be foreseen before judgments must be made. The responsible judgment, therefore, must be the conservative one.³⁶

Now, half-a-century later, the IPCC special report summarizes that:

Climate-related risks to health, livelihoods, food security, water supply, human security, and economic growth are projected to increase with global warming of 1.5°C and increase further with 2°C.

The consensus and thus conservative IPCC Special Report this month read:

For global warming from 1.5°C to 2°C, risks across energy, food, and water sectors could overlap spatially and temporally, creating new and exacerbating current hazards, exposures, and vulnerabilities that could affect increasing numbers of people and regions.³⁷

³⁴ Intergovernmental Panel on Climate Change. [Approved draft, subject to copyedit]. "Global warming of 1.5° C: An IPCC special report on the impacts of global warming of 1.5° C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development and efforts to eradicate poverty." October 8, 2018 at Chapter 3.

³⁵ Intergovernmental Panel on Climate Change. [Approved draft, subject to copyedit]. "Global warming of 1.5° C: An IPCC special report on the impacts of global warming of 1.5° C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development and efforts to eradicate poverty." October 8, 2018 at Chapter 3; More broadly, for U.S. regional climate impacts see: Melillo, Jerry M., et al. U.S. Global Change Research Program. "2014: Climate Change Impacts in the United States: The Third National Climate Assessment." [Available at: <https://nea2014.globalchange.gov/report>]; U.S. Global Change Research Program. "2017: Climate Science Special Report: Fourth National Climate Assessment, Volume 1." [Available at: <https://science2017.globalchange.gov>]; U.S. Department of Defense. "National security implications of climate-related risks and a changing climate." July 23, 2015 at 4. [Available at: <https://archive.defense.gov/pubs/150724-congressional-report-on-national-implications-of-climate-change-pdf?source=govdelivery>].

³⁶ White House. "Restoring the quality of our environment." Report of the Environmental Pollution Panel, President's Science Advisory Committee. November 1965 at 14. [Available at: https://babel.hathitrust.org/cgi/pt?id=uc1_b4116127&view=1up&seq=7]

³⁷ Intergovernmental Panel on Climate Change. [Approved draft, subject to copyedit]. "Global warming of 1.5° C: An IPCC special report on the impacts of global warming of 1.5° C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development and efforts to eradicate poverty." October 8, 2018 at SPM-11.

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The IPCC further warned that overshooting 1.5 °C would “run a greater risk of passing through “tipping points’ ” and went on to explain that “these are thresholds beyond which certain impacts can no longer be avoided, even if temperatures are brought back down later on.”³⁸

To try to clarify the urgency, the IPCC concludes that leveling out global warming with another 0.5° C — stabilizing at about 1.5 decades from now — corresponds to reaching “net-zero” greenhouse gas emissions by 2017+25 (+/- 15-20) years; so, that’s by 2042 (+/- 15-20), or between 2022 and 2062 years.³⁹ This is using the remaining “budget” of 550 Gt CO₂; assuming a less conservative 750 Gt CO₂ shifts that time frame 10 years.

This absurd-seeming range of time — net-zero by 2022 to 2062 — suggests the variance among the scenarios being conjured and modeled.

In essence, the logic goes, having more “negative CO₂ emissions” technology “deployment” over time — and generally being permissive of exceeding 1.5° C of warming before a period of cooling (due to such deployment) — would buy more time. It would extend out the horizon corresponding to exhaustion of a carbon budget, and the timeframe within which net-zero emissions would be required to not blow that budget. Presuming relative ease of mitigation, including little political resistance to the urgency of climate action, also buys more time.

The uncertainty now being quantified, surrounding a prudent timeframe for reaching net-zero emissions, is the bottom line result of a global scientific exercise in scenario building, using computational models as potential tools for understanding climate change and its impacts. It’s taken decades. Now, the bottom-line urgent message coming out of the global consensus science is that communities need to work to get off fossil fuels as soon as possible.

Of course the bottom-line global consensus to end fossil energy dependence has long been foreseen. Communities can insulate themselves by getting efficient and smart: redefine energy needs around avoiding waste and minimizing demand, and meet energy needs off fossil fuels.

2.5.2. Changing security equation

National economic and energy security has long been equated with maximal domestic oil, gas and coal throughput and combustion. The fossil industry has dawdled for half a century on climate change, and cumulative climate pollution has changed the equation.

In 2015, the U.S. Department of Defense identified several “areas of climate-related security risks,” highlighting that:

³⁸ Intergovernmental Panel on Climate Change. [Approved draft, subject to copyedit]. “Global warming of 1.5° C: An IPCC special report on the impacts of global warming of 1.5° C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development and efforts to eradicate poverty.” October 8, 2018 at Chapter 3.

³⁹ Intergovernmental Panel on Climate Change. [Approved draft, subject to copyedit]. “Global warming of 1.5° C: An IPCC special report on the impacts of global warming of 1.5° C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development and efforts to eradicate poverty.” October 8, 2018 at 2-21. [“a remaining carbon budget of 750 GtCO₂ (550 GtCO₂) suggests meeting net zero global CO₂ emissions in about 35 years (25 years) following a linear decline starting from 2018 (rounded to the nearest five years), with a variation of ±15–20 years due to the above mentioned geophysical uncertainties (high confidence).”

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Persistently recurring conditions such as flooding, drought, and higher temperatures increase the strain on fragile states and vulnerable populations by dampening economic activity and burdening public health through loss of agriculture and electricity production, the change in known infectious disease patterns and the rise of new ones, and increases in respiratory and cardiovascular diseases.⁴⁰

There is no security without climate security. Economic and energy security can only stem locally from remaking energy systems off fossil fuels, with regions finding genuine energy and economic security in reaching 100% renewable power.

In cutting the EPA out of any systematic approach to reducing climate pollution from the electricity sector, FERC is foisted onto center stage, with the Department of Energy left holding the strings.

To see the consequences of deferring any climate policy to FERC requires an analysis of FERC's own, public-facing process of making public interest determinations.

3. Deference to FERC, deregulatory dominance, and the public interest

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3. Deference to FERC, deregulatory dominance, and the public interest

3.1 Summary

Defining what's "affordable" and "clean" energy — indeed defining "energy security" — has always been a core issue for the fossil energy industry. How are public interest determinations being made? How are the benefits of determinations distributed? Deference to markets has taken people out of the equation.

In May 2008, speaking to the National Petroleum Council, then-Secretary of Energy Samuel Bodman set the stage for the Obama Administration's ultimate compromise with the dogma that energy security requires maximizing oil and gas production, not just propping up coal. Secretary Bodman stressed:

⁴⁰ U.S. Department of Defense. "National security implications of climate-related risks and a changing climate." July 23, 2015 at 4. [Available at: <https://archive.defense.gov/pubs/150724-congressional-report-on-national-implications-of-climate-change.pdf?source=govdelivery>]

distinct energy challenges and unique constraints are creating a new global energy reality. Our response to this new reality is based on the fundamental premise that energy insecurity poses an unacceptable risk to the United State's national security and our economy.⁴¹

Months later the National Petroleum Council — an advisory council to the Secretary of Energy, composed of industry executives, financiers, and a few civil society groups — wrote:

Constraints on CO₂ emissions are emerging, with profound implications for energy supply and demand. Worldwide CO₂ emissions from energy use are generally predicted to grow. Rising concerns about climate change may lead to further limits on these emissions. It is a hard truth that policies aimed at curbing carbon emissions will alter the energy mix, increase energy-related costs, and require reductions in demand growth.⁴²

But by 2008, climate change had been an issue already for 50 years. Since half that long ago, since the Energy Policy Act of 1992, deference to market competition for climate solutions had formed bipartisan bond. As the first of the IPCC climate assessment report was being finalized, Ken Lay, of Enron's energy market trading infamy, wrote to President Bush in June 1992, stating:

I am convinced natural gas is the "bridge" fuel that will deliver us from the oil era to a renewable energy based economy.⁴³

Ken Lay's protégé at the time, Jim Rogers, is now former CEO of Duke Energy. Rogers is currently enjoying a 10-year position as Vice Chair with The Nature Conservancy's Global Board⁴⁴, and is a "partner" managing utilities holdings for Stonepeak Infrastructure Partners⁴⁵, a "private equity" firm privileged with making investments — such as in Dominion Energy⁴⁶ — by drawing pools of money from private ultra-rich investors. Jim Rogers is managing utilities investments for Stonepeak Infrastructure Partners while leading a \$6 billion fundraising campaign for The Nature Conservancy.⁴⁷

In 1992, deference to market competition became a bipartisan bond struck on the importance of building up natural gas as a bridge fuel to the future. The vision was a New World Order. Among the results is almost \$1 trillion in debt, to be paid by maximizing rates of oil and gas throughput. The Trump Administration's replacement to the Obama Administration's Clean Power Plan — the (neither) Affordable (nor) Clean Energy rule — turns back the time to before this bipartisan ideal.

Climate insecurity makes reckless the already foolish approach of the current administration, which echoes the "draining America first" strategy of maximal oil and gas production, including for export.⁴⁸ Oil | IND156-1

⁴¹ Bodman, Samuel. Secretary of Energy. [Hearing, House Select Energy Independence and Global Warming Committee.] "U.S. Energy Policy. May 22, 2008 at [Available at: <https://www.c-span.org/video/?205582-1/us-energy-policy>]

⁴² National Petroleum Council. "Hard truths: Facing the hard truths about energy." July 2008 at 13.

⁴³ Letter from Ken Lay to President Bush, June 23, 1992, in Enron Documents. 1992 at 46, available at <https://www.energy.gov/management/downloads/foia-enron-documents>

⁴⁴ <https://www.nature.org/en-us/about-us/who-we-are/our-people/james-rogers/>

⁴⁵ <https://stonepeakpartners.com/team/>

⁴⁶ U.S. Securities and Exchange Commission (SEC). Form SC 13G. October 12, 2018

[Available at: <https://www.sec.gov/Archives/edgar/data/1603286/000114036118040535/0001140361-18-040535-index.htm>]

⁴⁷ Downey, John. "Jim Rogers talks about H2B, racial unrest and the future of the power industry." *Charlotte Business Journal*. October 7, 2016. [Available at: <https://www.bizjournals.com/charlotte/news/2016/10/07/jim-rogers-talks-about-h2b-racial-unrest-and-the.html>]

⁴⁸ C-SPAN. DOE hearing. "National Energy Strategy – P.M. session." December 13, 1989 at 29:45: "draining America first".

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and gas associated pollution is harming health, destabilizing the climate, compromising the provision of food and water, and acidifying our oceans. There is no economic or energy security with such increasing disorder. With climate change, there is an increasing divergence of industry interests and public interests. Owing to its role in climate pollution, the oil and gas industry is, in a new way, "affected with a public interest."

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The 1991 National Energy Strategy effort had culminated in the Energy Policy Act of 1992. The events of those years mark when federal regulatory control of energy systems was relinquished to an ideal of free market competition, and to the practice of oil and gas market expansion for U.S. producers ever since — and continuing now.

The National Energy Strategy was to be a "living document."⁴⁹

Since 1992, telephony, television and radio have been transformed by the internet. Information and operation technology, built around renewable power and efficiency technologies and concepts, is transforming the provision of electric power, meeting energy needs off fossil fuels for increasingly long periods of time, for increasingly many people.

For whom? That remains to be seen.

3.2. Through deregulation, the public benefit has become codified as global market demand

Trump's Affordable Clean Energy rule signals deference to FERC, and to the Department of Energy, on climate policy matters. The proposed rule is part of a larger trend toward using unspecified security concerns to justify public interest determinations on energy policy, without consideration of consensus climate science and the need to drive climate pollution to zero.

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The power FERC holds on natural gas pipelines — the power to grant "a certificate that the present or future public convenience and necessity require or will require such new construction or operation of any such facilities or extensions thereof"⁵⁰ — sets up a central question in the energy transition off fossil fuels.

How will FERC, as the public interface between government and business, make public interest determinations with respect to ambitious climate change targets and the managed decline of the oil and natural gas industry?

FERC is the public interface between government and electricity and natural gas businesses. Ambitious climate change targets and the managed decline of the oil and natural gas industry are a matter of long-

<https://www.c-span.org/video/?110300-1/national-energy-strategy-pm-session>

⁴⁹ President George H.W. Bush, C-SPAN. "Natural gas decontrol bill signing ceremony, July 26, 1989 at 8:00: <https://www.c-span.org/video/?8500-1/natural-gas-decontrol-bill-signing-ceremony> "Our task is to build the national consensus to support this strategy, and to make this strategy a living and dynamic document responsive to new knowledge and new ideas, and to global, environmental and international changes."

⁵⁰ Natural Gas Act, June 21, 1938, Public Law, No. 688] <https://www.lcc.gov/law/help/statutes-at-large/75th-congress/session-3/c75s3ch556.pdf>; 15 U.S. Code § 717f [<https://www.law.cornell.edu/uscode/text/15/717f>] <https://legcounsel.house.gov/Comps/Natural%20Gas%20Act.pdf>

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Comment noted. Under Section 3 of the NGA, oversight for LNG export is divided between the Commission and the DOE. FERC is responsible for approving the safe and sound siting and operation of LNG facilities, given that DOE has approved the export of the commodity. It is the DOE, not the Commission, which retains the exclusive authority over the export of the natural gas as a commodity, including the responsibility to consider whether the exportation of that gas is consistent with the public interest. As described in section 1.1 of the EIS, the DOE granted an authorization to RG LNG for export to countries having a FTA with the United States that includes national treatment for trade in natural gas. In accordance with the NGA and Energy Policy Act of 1992, export to a country with which there is an FTA requiring national treatment for trade in natural gas, is deemed consistent with the public interest. Further, RB Pipeline executed a precedent agreement for the total capacity of the Rio Bravo Pipeline for the 20-year life of the Project, which establishes a basis for a finding by the Commission that the pipeline will be in the public convenience and necessity under Section 7.

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term energy and economic security, and thus the public interest. In this way, the oil, gas and coal industries may be said to be “affected with a public interest” in a new way.

Since the genesis of DOE and FERC, people who make up the public have been taken out of the equation, replaced as consumers. Broadly, federal regulation of the energy business has oriented itself to producers’ desires.⁵¹ This orientation is cultivated by industry through “professional” relationships with regulators, expert collaboration, and revolving doors of employment.⁵²

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Given that the Trump EPA is arguing for deference to FERC (the crux of its Clean Power plan replacement effort), consider how FERC presents its understanding of its obligations.

In calling for public comments on natural gas project certification policy — FERC cites NAACP v. FPC (a 1976 decision quoting FPC v. Hope Gas from 1944):

“The Supreme Court has stated that: ‘in order to give content and meaning to the words ‘public interest’ as used in the [Federal] Power and [Natural] Gas Acts, it is necessary to look to the purposes for which the Acts were adopted.’ In the case of the Power and Gas Acts it is clear that the principal purpose of those Acts was to encourage the orderly development of plentiful supplies of electricity and natural gas at reasonable prices.’⁵³

Climate change puts a constraint on the concept of “orderly development” of fossil energy. The separate mandates of the New Deal era acts⁵⁴ granting FERC authority over electric power and natural gas markets are like two ropes the agency has followed, more or less along the same course, for over 80 years. Now, with the energy transition off fossil fuels, the paths of those ropes are diverging and FERC only has two hands.

Over time, Congress and FERC would strip away New Deal style price and entry controls in favor of a market ideal: competition, open access, would automatically serve the public interest by serving consumer interests, defined as reliable access to affordable energy. Since then, huge increases in natural gas power capacity from the early 1990’s built up natural gas as a bridge fuel to today.⁵⁵

In 1989, when President Bush had initiated his comprehensive National Energy Strategy, his intent was that it become a “living and dynamic document responsive to new knowledge and new ideas, and to global, environmental and international changes.”⁵⁶

3.3. *The genesis and evolution of FERC’s authority holds lessons*

⁵¹ Horwitz, Robert B. “The Irony of Regulatory Reform.” Oxford Press. 1989 at 70-80.

⁵² Re complicity of “professional”, see Dr. M. Graham starting at 41:00: <https://www.c-span.org/video/?298413-1/ten-years-enron-scandal> (Margaret Graham, government historian, McGill) relationships evolve; Slayton, Rebecca and Aaron Clark- Ginsberg. “Beyond regulatory capture co-producing expertise for critical infrastructure protection.” Regulation and Governance. Vol. 12. 2018 at 115 and 126.

<https://onlinelibrary.wiley.com/doi/pdf/10.1111/rego.12168> (<https://photos.app.goo.gl/Pq8tCVUkCzyJwwU7>)

⁵³ 83 Fed. Reg. 18020. April 25, 2018; NAACP v. FPC, 425 U.S. 662 (1976).

<https://supreme.justia.com/cases/federal/us/425/662/case.html>

⁵⁴ Natural Gas Act of 1938; Federal Power Act.

⁵⁵ NREL. “Competitive Electricity Market Regulation in the United States: A Primer.” December 2016 at 7.

⁵⁶ President George H.W. Bush. C-SPAN. “Natural gas decontrol bill signing ceremony, July 26, 1989 at 8:00: <https://www.c-span.org/video/?8500-1/natural-gas-decontrol-bill-signing-ceremony> “Our task is to build the national consensus to support this strategy, and to make this strategy a living and dynamic document responsive to new knowledge and new ideas, and to global, environmental and international changes.”

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3.3.1. *New Deal and Progressive Era origins*

FERC's current authority on natural gas infrastructure lies in determining whether or not a proposed pipeline or other gas market expansion project "is or will be required by the present or future public convenience and necessity."⁵⁷

Just as treaties with tribal nations amount to the "political recognition of tribal interests,"⁵⁸ the Federal Power Act of 1935 and the Natural Gas Act of 1938 established political recognition of a general public interest in the federal regulation of electric and natural gas commerce. The face of that public interest was of course white.

The 1944 Supreme Court decision, *FPC v. Hope Gas*, states: "The primary aim of [the Natural Gas Act] was to protect consumers against exploitation at the hands of natural gas companies."⁵⁹ Yet, in energy and other industries regulated by New Deal agencies, companies have generally advocated for and won rules and regulations that suited themselves.

The New Deal agencies were established to regulate businesses that were building out and operating telephone networks, radio frequencies, financial exchanges, the air transportation system, and energy systems. In each case the aim was always the "orderly development" of these infrastructures for commerce, to promote economic growth.⁶⁰

Once deemed "affected with a public interest," federal regulation was justified under the commerce clause of the Constitution — and due process came in the form of public interest determinations, such as the public convenience and necessity standard FERC has employed.

Reflecting on the phrase "affected with a public interest," a Yale law professor noted in 1930⁶¹:

The knack of putting up new wine in old bottles is one of the most valuable tricks of the judicial trade. It may keep law backward by crowding stuff of a newer world into an outworn term which was never intended to hold it; it may serve a living law by permitting a graceful accommodation of a vocabulary that endures to the shifting exigencies of a developing society. Its use is neither good nor bad in itself; it depends upon the crudeness or the skill, the blindness or the awareness, with which the feat is accomplished. The practice of the judicial art could hardly go on without it. The survival of the term "affected with a public interest" is in large measure due to the ease with which it is adapted to a changing common sense and judicial opinion.

In "The Public Control of Business," that same Professor's students, Keezer and May, wrote in 1930 that⁶²:

The list of industries which have been declared, either by federal or on or more state jurisdictions, to be "affected with a public interest," is an extensive one. It now includes steam railways, urban and interurban electric railways, carriers by water, wharf and dock companies, terminal

⁵⁷ 15 U.S. Code § 717f. (e)

⁵⁸ Gyasi Ross. "Breakdances with wolves." June 25, 2018. Available at <https://soundcloud.com/breakdanceswithwolves/treaties-bobs-bs-and-winning-wo-celebrating>

⁵⁹ *FPC v. Hope Gas Co.* U. S. 610 at 320. <https://supreme.justia.com/cases/federal/us/320/591/case.html>

⁶⁰ Horwitz, Robert B. "The Irony of Regulatory Reform." Oxford Press. 1989 at 70-77, 212.

⁶¹ Hamilton, Walton H. "Affectation with Public Interest." Yale Law Journal. June 1930 at 1092.

⁶² Keezer, Dexter M. and Stacy May. "The public control of business: A study of antitrust law enforcement, public interest regulation, and government participation in business." Harper & Brothers: New York and London. 1930 at 7

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companies, express companies, bus and taxicab companies, telephone, telegraph and wireless companies, insurance companies, messenger services, market ticker services, Boars of Trade, gas companies, electric light and power companies, heating companies, water companies, sewage disposal companies, canals, irrigation companies, booming and rafting companies, stock yards, commission merchants, creameries, hotels, toll bridges, ferries, tunneling companies, grain elevators, grist mills, ice companies, cotton gins and laundries.

Notably, decades later, urban and interurban electric railways in major cities of the United States would be dismantled, an episode in which the affectation of public interest yielded to conflicting corporate interests, sealing the fate for public transportation for the decades since.

Broadly speaking, the Federal Power Commission was set up to protect consumers and producers from disorderly markets, and to protect against corporate abuse of market power, with broad policy-making discretion.

To this day, in the form of FERC, the agency continues to suit fossil EGU needs, increasingly to the detriment of the transition off fossil fuels necessary of electric power systems urged by understanding of the climate and of climate pollution.

In 1935, the Federal Power Act would be passed to "assur[e] an abundant supply of electric energy throughout the United States with the greatest possible economy."⁶³ The Public Utility Holding Company Act, also of 1935, reigned in monopolistic holding companies, which had earned public ire for market power abuses.

Soon after, the Natural Gas Act of 1938 read: "It is hereby declared that the business of transporting and selling natural gas for ultimate distribution to the public is affected with a public interest, and that Federal regulation in matters relating to the transportation of natural gas and the sale thereof in interstate and foreign commerce is necessary in the public interest."

Author Robert Horwitz says of the political setting at the time:

"Whereas some industries fought against regulatory legislation during the Progressive Era, regulation was nearly always welcomed, indeed advocated by, the affected Industries during the New Deal. ...The agencies created during this period generally received broad, yet vague mandates from Congress, along with inability to exercise wide discretion in policy-making. The politics of regulatory creation in the New Deal period, though not uniform, for the most part etched a discernible pattern: depression-wracked, destabilized industries looked to the federal government to help them get out from under, and ultimately, to rationalize."⁶⁴

The electricity and natural gas industries found that help in the Federal Power Act of 1935 and the Natural Gas Act of 1938. Incumbent firms in the newly regulated industries were keen to have federal watchdogs in this role, protecting them against unfair competition from firms that irresponsibly depress prices.

Horwitz writes that "in industry after industry in the 1930s, the principal business players advocated the use of state authority to effectuate cartelization, price stability, and production controls."⁶⁵

⁶³ 16 U.S.C. § 824a(a)

⁶⁴ Horwitz 1989 at 70.

⁶⁵ Horwitz 1989 at 70.

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The effect in many industries “affected with a public interest” was the establishment of cartels, or “structures of mutual benefit ... among the major interests (often including organized labor) in the industries placed under regulatory oversight. Industries and markets were saved precisely by not permitting Marketplace controls to function freely.”⁶⁶

Horwitz summarizes⁶⁷:

The regulatory stabilization of these industries thus embodied a familiar quid pro quo: expansion of service by the imposition of common carrier type obligations. This fact highlights the overriding commerce function of much of New Deal regulation. Regulation was to stabilize an industry and foster its development at least partly by requiring that suppliers fulfill expanded service obligations.

Federal regulatory authority was meant to protect both consumers and producers from abuse of electricity and natural gas monopoly power. Another intent was to stabilize industries and facilitate electricity and natural gas market expansion. The plight of workers was another factor in New Deal era pursuit of “orderly development” of minerals such as coal, oil and natural gas.

In 1925, Hamilton and Wright reflected on the disorder of the coal industry at the time, with a mind toward instituting some order⁶⁸:

Although national well-being depends upon goods produced by mechanical power, we have consciously formulated no scheme to insure its continuous flow. Although industries demand an uninterrupted stream of coal, the business men who control them have taken no concerted action to avoid a coal famine. Strangely enough, and naturally, they have depended upon profit-making to induce those who own the resources to mine enough coal and to get it to market; upon the need for wages to keep miners regularly at work; and upon competition to beat the price down to what consumers should pay. The results have been an irregular production of coal, a vacillation in price, a failure in supply three times within a period of ten years, and enough disorder among the establishments which make up the industry to make business judgments a gamble. The clash between what the community expects from an orderly industry and the actual performance of the world of bituminous is the source of the modern mystery of much ado about coal.

Now almost 100 years later, it is useful to consider not just coal but U.S. shale gas and tight oil industry in the context of these words.

Consider the new knowledge science has gained since. Consider the wasted work potential — the high inefficiency — inherent to relying on combustion to provide “mechanical power,” relative to providing that power through electric drive.

3.3.2. *Great Society into the 1980s*

Each New Deal agency was specific to the select industries it regulated. So, it is no surprise — in the realm of fossil energy and petrochemicals — that additional agencies have been established to make up for the failures of free market ideal.

⁶⁶ Horwitz 1989 at 73.

⁶⁷ Horwitz 1989 at 74.

⁶⁸ Hamilton, Walton H. and Helen R. Wright. “The case of bituminous coal.” MacMillan: New York. 1926. At 6 to 7.

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As described in section 3.1 of the EIS, the use of alternative energy sources would not meet the stated objective of the Project, and evaluating alternative sources of energy is beyond the scope of this EIS.

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Climate change driven by the burning fossil fuels has complicated matters for FERC. Petrochemicals have now diffused across earth and can be found in the flesh of most living things. The EPA has authority under Clean Air Act, the Clean Water Act, NEPA, the Safe Drinking Water Act, Superfund Act etc. to mitigate in some respects.

Horwitz explains⁶⁹:

Great Society regulatory activism and a corresponding transformation in the judicial concept of the public interest undermined the balance between formalism and bargaining. Health and safety regulations imposed considerable costs on businesses, and regulatory activism generally cause businesses unacceptable foreclosure of economic predictability. Regulatory agencies, opened up to more democratic participation, became less able to bargain and more bound to procedural norms. Administrative rationality and economic rationality diverged, and by the mid-1970s business engaged in a wholesale revolt against regulation.

Consider the evolution of the National Petroleum Council's language on environmental and ecological concerns, and climate change.

With the Department of Energy Organization Act of 1977, Congress reorganized the Department of Energy and created FERC, an independent executive agency that would inherit authority under the Federal Power and Natural Gas Acts, as amended.

The Oil Crisis of the time shaped the Carter Administration's energy agenda. The Public Utilities Regulatory Policies Act of 1978 (PURPA) was designed to promote solar and wind generation, and to reward power plants to waste less heat from coal and gas combustion, harnessing it instead for additional electric generation (i.e., "cogeneration"). The Natural Gas Act of 1978 promoted domestic natural gas production.

U.S. oil and gas industry doldrums in the 1980s were reasons given for the Natural Gas Wellhead Price Decontrol Act, which President Bush signed July 26, 1989, stating:

Today's legislation represents the bipartisan attainment of the Administration's first major energy initiative. The elimination of an entire system of artificial price controls for one of America's cleanest energy resources. And this measure reflects a strong, bi-partisan belief, that eliminating price controls will help this nation take full advantage of our plentiful domestic resources. Even at today's prices, it's estimated that the United States has natural gas reserves that will take us to the year 2025 and beyond. And industry — and I'm glad to see so many members of the industry here today, people that have been in the forefront of the battle for decontrol for many, many years. Industry and the Department of Energy are responding to this opportunity with imagination, seeking to tap new sources of clean-burning natural gas, and then developing new uses, such as powering cars and buses. With prices set by market forces, and improvements in gas exploration and production technologies, natural gas can help power this nation well into the next century.⁷⁰

President Bush added:

This is not just economical legislation, this is environmental legislation. Natural gas burns much more cleanly than other fossil fuels, and produces little air or water pollution, and it can play a

⁶⁹ Horwitz 1989 at 89.

⁷⁰ C-SPAN. "Natural gas decontrol bill signing ceremony. July 26, 1989 at 4:10:
<https://www.c-span.org/video/?8500-1/natural-gas-decontrol-bill-signing-ceremony>

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larger role in our efforts to clean up our air and our water. The environmental opportunities can be global. When a free market for this fuel exists, we can foresee America and the world using more of it. America and her allies must work together, now, to expand the infrastructure for this fuel. And on this continent, across the Atlantic, across the Pacific, these are opportunities for cooperation that would be helped by a freer market. Where we can add diversity, flexibility, economy, and security to the world's energy picture, we ought to do it. Natural gas is an important element.⁷¹

"Domestically, natural gas can now reach its full potential as an economic, clean and convenient energy source," President Bush concluded.⁷²

At the signing ceremony, and with his vision of a "New World Order," he tasked Admiral Watkins with composing, over the next 18 months, a strategy for minimizing U.S. energy insecurity with respect, in particular, to oil vulnerability.

3.3.3. *Composing a National Energy Strategy*

The stage was set for natural gas to be the "bridge fuel." Admiral Watkins assured the public that he had "mobilized the considerable talent available in our national laboratories to assist in laying a solid, analytical foundation for the strategy."⁷³

He added⁷⁴:

It will have an environmental section that will be critical. As we get into the world of for carbon reduction and removal. As we get into the world of global warming and understand its scientific complexities, as we get into the area of toxics, the clean air bill — in fact it's beneficial to have a clean air bill passed, now we can begin to insert it as a module in our national energy strategy. All of these things will be in there, it will be costed out, in a cost-benefit analysis, so that when we look at these various options we can be realistic in our objective. And we'll have an economic projection associated with immediate and long-term as far as the things we contain in here.

Eighteen months later, February 21, 1991, Watkins presented the findings of the Department's report, flanked by lead authors and DOE officials Lynda Stuntz and Henson Moore.⁷⁵

Questioned by Senator Wellstone why the Department had "assigned a zero value to environmental protection" in its cost-benefit analyses, Stuntz countered:

I didn't say we assigned a zero value I said it's not reflected in our analysis because despite a lot of work we couldn't, with EPA and others, determine how to do that in all places, for all... we

⁷¹ C-SPAN. "Natural gas decontrol bill signing ceremony. July 26, 1989 at 5:10:
<https://www.c-span.org/video/?8500-1/natural-gas-decontrol-bill-signing-ceremony>

⁷² C-SPAN. "Natural gas decontrol bill signing ceremony. July 26, 1989 at 9:45:
<https://www.c-span.org/video/?8500-1/natural-gas-decontrol-bill-signing-ceremony>

⁷³ C-SPAN. "Natural gas decontrol bill signing ceremony. July 26, 1989 at 15:40:
<https://www.c-span.org/video/?8500-1/natural-gas-decontrol-bill-signing-ceremony>

⁷⁴ C-SPAN. "Natural gas decontrol bill signing ceremony. July 26, 1989 at 18:23:
<https://www.c-span.org/video/?8500-1/natural-gas-decontrol-bill-signing-ceremony>

⁷⁵ Senate Energy and Natural Resources Committee hearing. "National Energy Policy." February 21, 1991.
<https://www.c-span.org/video/?16641-1/national-energy-policy>

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couldn't even define what necessarily is external... what is not for example in the aftermath of the Clean Air Act included in the market price of electricity... same thing happened on energy security. We went through very difficult and I think important exercise to try to determine whether there is an energy security premium attached to oil that's not reflected in the price. There's just no way for us to say, yeah this is the number, and it's not reflected in the market price.⁷⁶

Hence Admiral Watkins' promise to leverage the "considerable talent" in science and technology toward informing the cost-benefit analysis had born nothing, with respect to coping with "the world of global warming," other than to lead to more natural gas.

Echoing the notion of the strategy being a living document, Admiral Watkins emphasized that "[t]he updating process is critical to the strategy's continuing credibility, and will need to be responsive to changes in the marketplace, to advances in technology, domestic and international, geopolitical and environmental developments."⁷⁷

It's now been almost thirty years of the natural gas as a "bridge fuel."⁷⁸ As Congress was set to debate comprehensive energy legislation in 1992, Representative Wolpe of Michigan explained what had shaped the ultimate products of Admiral David Watkins', Lynda Stuntz's and Henson Moore's efforts in crafting the DOE's National Energy Strategy: opposition from business interests concerning the prevailing DOE interim finding that emphasized conservation/avoidance of demand, and local clean alternatives to oil dependence.⁷⁹ Of course a primary "alternative" embraced was domestic natural gas.

⁷⁶ Senate Energy and Natural Resources Committee hearing. "National Energy Policy." February 21, 1991 at 2:40: <https://www.c-span.org/video/?16641-1/national-energy-policy>

⁷⁷ C-SPAN. "Natural gas decontrol bill signing ceremony. July 26, 1989 at 15:15:

<https://www.c-span.org/video/?8500-1/natural-gas-decontrol-bill-signing-ceremony>

⁷⁸ Letter from Ken Lay to President Bush, June 23, 1992. Department of Energy, Enron Documents. 1992 at 46, available at <https://www.energy.gov/management/downloads/foia-enron-documents>; Stavins, 1989.

⁷⁹ Congressional Record, House. May 19, 1992 at 11823 to 11824. See: <http://web.archive.loc.gov/congressional-record/20160303182251/http://thomas.loc.gov/cgi-bin/query/D?r102:42::/temp/~r102vPbnXE::> [double colons at end are prone to getting lost]; also see: pdf ... Wolpe states:

When the Department issued its interim report in April 1990, it did not contain a draft strategy. The American people were never given a draft strategy for public comment as originally envisioned by Secretary Watkins. The interim report was simply a compilation of public comments gathered after conducting 15 public hearings that received testimony from 375 witnesses from 43 States. However, the interim report contained one conclusion from the public hearings that should be noted. The loudest single message was to increase energy efficiency in every sector of energy use. Energy efficiency was seen as a way to reduce pollution, reduce dependence on imports, and reduce the cost of energy. At some point prior to the planned issuance of the draft strategy, the troika apparently caught wind of the direction that the NES might take if DOE continued to place a premium on public participation in the process. The troika is a term used within the administration to refer to the Office of Management and Budget, the Department of the Treasury, and the Council of Economic Advisers. The differences between the troika and DOE on the direction of national energy policy is a case study in bureaucratic infighting between ideologues and pragmatists. By launching the development of the national energy strategy, President Bush indicated a break with the Reagan administration's do-nothing energy policy. The President saw the need for a more active Federal Government role in addressing the Nation's energy needs. But the troika represented a viewpoint within the administration that saw no need to stray from the do-nothing approach of the Reagan administration. The troika was heavily involved in the development of the NES through the Economic Policy Council-or EPC. The EPC is an interagency group that coordinates administration policy on economic issues. At the time of the development of the NES, the EPC was chaired by the Secretary of the Treasury. Some members of the EPC were ideologically opposed to the approach to policy inherent in

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3.3.4. Energy Policy Act of 1992

The Energy Policy Act of 1992 looms large on the question of FERC's future public interest determinations with respect to natural gas expansion projects to grow U.S. natural gas expansion and exports. The legislation spurred decades of U.S. gas market growth, especially into the electricity sector. The legislation also pre-empted any conservation or protection of domestic natural gas consumers from increasingly global natural gas markets.

3.3.4.1 Origins of U.S. LNG policy

The Energy Policy Act of 1992 amended the Natural Gas Act with respect to certification of natural gas exports, adding language declaring:

exportation of natural gas to a nation with which there is in effect a free trade agreement requiring national treatment for trade in natural gas, shall be deemed to be consistent with the public interest, and applications for such importation or exportation shall be granted without modification or delay.⁸⁰

This language was a late addition in Conference, and does not appear in any previous version of the legislation.⁸¹

some of the policy options proposed by DOE. This internal split within the administration is readily apparent in an internal DOE document dated July 12, 1990: *** DOE's view of some issues and the view of other members of the EPC were 180 degrees apart. For example, DOE's view is that petroleum imports represent a risk to national security and economic growth; however, other EPC members see imports as normal market operations. In the narrow view of the troika, the primary goal in establishing any public policy is limiting the role of the Government in the marketplace. Concerns about the national security implications of imported oil are entirely beside the point. DOE, on the other hand, viewed oil imports as a serious problem that should be addressed by the activities of the Federal Government. The troika clearly held the upper hand in this internal disagreement over the proper role of Government in the energy marketplace. As the protectors of ideological purity, the troika determined the political correctness of energy policy options under consideration within the administration during the development of the NES. The commitment of the troika to the Reagan administration's approach to energy policy is readily apparent in a memo from a staffer at the Treasury Department to a staffer at DOE. This memo states: *** I want to put on paper some of my concerns about the NES process *** The documents we're seeing continue to emphasize intervention in the energy markets, suggesting a return to the control-by-bureaucracy of the 1970s. The options handed out yesterday in almost every case suggest that current energy policy is wrong, and needs to be fixed, preferably by the Government *** The NES process continues to rely excessively on Secretary Watkins' public hearing process *** I suggest that we abandon the current plan and not base the analysis solely on the options presented in the public hearings *** I understand that you have your orders from the Secretary. But he should know that Treasury will very likely oppose any energy strategy that looks like the current list of options, whether they came from public hearings or not.

Wolpe continues:

As a result of the ideological litmus test imposed on the troika, the administration was left without a consistent vision of what a national energy strategy was supposed to accomplish. What remained was a warmed-over version of the status quo entirely lacking in innovative policy proposals. Despite the fact that the Iraqi invasion of Kuwait had once again demonstrated our vulnerability to oil supply disruptions, such concerns were not the focus of the NES policy options. The only overriding theme or clear policy direction that could be discerned from the policy options under discussion was keeping the government out of the energy marketplace.

⁸⁰ P.L. 102-486 Sec. 201 <https://www.ferc.gov/legal/maj-ord-reg/epa.pdf>

⁸¹ See final enrolled bill compared to other 7 versions recorded: <https://www.congress.gov/bills/102/nd-congress/house-bill/776>

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The Legislative History of the Energy Policy Act of 1992 notes this late addition and, conveys dismay that additional provisions were dropped despite “basic agreement” between the House and the Senate “to expedite the authorization to construct new natural gas pipelines and to streamline procedures at the Federal Energy Regulatory Commission.”⁸²

The LNG export language appears to stem from a handful of natural gas export applications to the Department of Energy from companies in Texas aiming to capitalize on increased natural gas demand in Mexico, after the North American Free Trade Agreement and the country’s 1988 debt crisis.

November 18, 1991, DOE issued a blanket order approving an “uncontested” application from three months prior from TranAm to export a combined total of 2 billion cubic feet (Bcf) of natural gas to Mexico over a two year period.⁸³

Several months later another application asked for certification of much more, and was granted blanket permission to export up to 30 Bcf two years.⁸⁴ In its approval of a third blanket authorization — for up to 200 Bcf again over a two-year period — the Department of Energy explained:

Unigas's uncontested export proposal, as set forth in the application, is consistent with section 3 of the NGA and DOE's international gas trade policy. The current supplies of domestic gas, coupled with the short-term, market responsive nature of the contracts into which Unigas proposes to enter, indicate that it is unlikely that the proposed export volumes will be needed domestically during the term of the authorization. In addition, Unigas' proposal, like other blanket export proposals that have been approved by DOE, will further the Secretary's policy goals of reducing trade barriers by encouraging market forces to achieve a more competitive distribution of goods between the U.S. and Mexico, Canada, and other countries.⁸⁵

Just days before the EPAct of 1992 was passed, the Conference report for the bill emphasized that language allowing for natural gas exports centered on trade with Canada, and soon Mexico.⁸⁶

⁸² Legislative History of the Energy Policy Act of 1992, at 4897.

<https://archive.org/stream/legislativehist00conggooq/page/n716/mode/2up/search/exports>

⁸³ U.S. Department of Energy. Order granting blanket authorization to import and export natural gas.” November 18, 1991.

https://fossil.energy.gov/ng_regulation/sites/default/files/programs/gasregulation/authorizations/1991/orders/ord548.pdf

⁸⁴ U.S. Department of Energy. Order granting blanket authorization to export natural gas, including liquefied natural gas, to Canada, Mexico, and other countries. DOE/FE Opion and Order No. 606. April 17, 1992

https://fossil.energy.gov/ng_regulation/sites/default/files/programs/gasregulation/authorizations/1992/orders/ord604.pdf

⁸⁵ U.S. Department of Energy. Order granting blanket authorization to export natural gas, including liquefied natural gas, to Canada, Mexico, and other countries. DOE/FE Opion and Order No. 606. April 23, 1992.

https://fossil.energy.gov/ng_regulation/sites/default/files/programs/gasregulation/authorizations/1992/orders/ord606.pdf

⁸⁶ Congressional Record. October 5, 1992 House. Article 26. <https://www.congress.gov/congressional-record/browse-by-date>; Specifically:

The Energy Policy Act of 1992 contains important provisions that remove regulatory barriers which hinder the importation of natural gas from countries with which the United States has entered into a free trade agreement requiring national treatment for trade in natural gas. Currently, this means Canadian gas must be treated the same as domestic gas. Once the North American Free Trade Agreement is ratified, this will also apply to Mexican gas.

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Subsequent negotiation and passage of NAFTA would include Mexico in stamping natural gas exports as a priori in the public interest, to be approved without delay.

According to an Argonne National Laboratory report in September 1993, "The program of converting oil-fired generating stations to natural gas created a demand for natural gas that has been a major factor in the increase of exports to Mexico from the United States."⁸⁷

Fast forward to 2018. In the first four months of 2018, U.S. exports to Mexico totaled 521.6 Bcf.⁸⁸ LNG exports from Cheniere's Sabine Pass facility alone totaled 311 Bcf. Another 12 Bcf was exported from Dominion's Cove Point LNG as of the end of April, soon after it opened.⁸⁹

3.3.4.2 PURPA

Section 201 of this act, is vital to assuring that U.S. regulators do not interfere with the importation of natural gas to customers in the United States. Its provisions provide critical protection to the citizens of my home State, New York, who receive supplemental volumes of natural gas from Canada. The purpose of these provisions is not to give imported natural gas an advantage, but to ensure a level playing field for imported gas. Importantly, access to multiple natural gas supply sources will increase competition and lower consumer prices. Specifically, section 201 adds three new provisions to section 3 of the Natural Gas Act concerning imported natural gas. Section 201(a)(1) deems that imported natural gas be treated as a first sale within the meaning of the Natural Gas Policy Act of 1978. Now, imported gas, like domestic decontrolled gas, need not be licensed. Section 201(a)(2) bars FERC from discriminating against, or giving a preference to, any natural gas on the basis of where it was produced. Imported gas cannot be treated differently than domestic gas.

Section 201(b) deems the importation to the United States, and exportation from the United States, of natural gas consistent with the public interest. By making this determination, applications for import of Canadian natural gas are granted automatic approval. The result is, imported natural gas is not subjected to burdensome import licensing proceedings that place it at a disadvantage relative to domestically produced gas. I believe it is sound energy policy to prevent unfair discrimination against imports of natural gas from Canada. Greater access to natural gas will help reduce our dangerous dependence on unreliable sources of imported oil. Moreover natural gas has a positive environmental impact. It is the cleanest burning fossil fuel and all U.S. citizens benefit from its use. These gas import provisions are also good trade policy. Regulatory discrimination against Canadian gas would violate the United States-Canada free trade agreement. Finally, these provisions are good competitive policy. U.S. producers supply over 92 percent of the natural gas needs in this country. Fair treatment of imports helps maintain healthy competition in the United States without posing any threat to U.S. producers. Greater access to a variety of natural gas sources will help create a more stable natural gas market so that more U.S. consumers will benefit from this economic and environmentally sound source of energy.

These important new provisions could not have been enacted without the able leadership of Chairman **Dingell**, Subcommittee Chairman **Sharp**, the ranking Republican member on the Energy and Power Subcommittee, Mr. **Moorhead**, and Mr. **Markey** and Mr. **Towns**. I thank each of them for joining me in working for this important result.

⁸⁷ Kanter, M.A. and P.H. Kier. [Argonne National Laboratory]. "Mexican Demand for U.S. Natural Gas." September 1993 at 5.

⁸⁸ EIA. "U.S. natural gas exports and re-exports by country." Accessed July 1, 2018 https://www.eia.gov/dnav/ng/ng_move_expc_sl_m.htm [136698+125684+130270+129012]

⁸⁹ DOE. "LNG monthly." April 2018 https://www.energy.gov/sites/prod/files/2018/06/152/LNG%20Monthly%202018_0.pdf

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Amending PURPA to open up markets for independent gas power producers is the second legacy of the Energy Policy Act of 1992 that explains the current and shortsighted surges in natural gas consumption. In “Networks, deregulation, risk: the politics of critical infrastructure protection,” Ellis recounts that after its passage in 1978:

PURPA discredited the notion that electricity was in all aspects a natural monopoly, the traditional justification for regulation. Importantly, the growth of independent power producers created a new interest group—QFs [qualifying facilities]—that would advocate for the relaxation of regulations and the move toward wholesale and retail electricity markets by the early 1990s. Further, the disparity between prices offered by regulated utilities and QFs tempted large customers with the promise—or at least the possibility—that deregulation would lead to lower prices and induced them to join independent producers in lobbying for deregulation. It was this ad-hoc coalition of independent power producers and large industrial consumers that would be instrumental in pushing for deregulation.⁹⁰

Ellis defined deregulation as “the selective and incomplete restructuring of infrastructure regulation in deference to the market.” Deference to the market would continue through the next decade as wholesale and retail electricity markets were opened up to the likes of Enron.

In one of a series of hearings on energy regulatory issues in January 1990, the Chairman and CEO of Dominion, William Berry made his position’s company clear⁹¹: “State authorities must adjust their regulation of both buying utilities and non-QF independent producers to recognize the role of competition in protecting and advancing customers interest.”

He continued that “[c]ompetitive capacity market gives Virginia Power a valuable option in meeting our large capacity needs. As capacity needs spread throughout the country in the 1990s every utility will want and need to take advantage of competitive capacity markets.”⁹²

The non-QF independent producers wanted in on providing power to utilities, like PURPA had offered to QF, such as renewable energy facilities.

When Admiral Watkins testified before the Senate on the National Energy Strategy report, he argued that the changes to PURPA would lift a “limitation on renewables.”⁹³ This was in response to Senator Domenici’s reflections on the success of PURPA in fostering solar power.

Ellis adds:

As states implemented the law with FERC guidance, the total non-utility electricity delivered to utilities increased dramatically from 6.034 billion KWh in 1979 to 23.03 billion in 1985 and

⁹⁰ Ryan Ellis. [Dissertation, University of San Diego, Communication and Media Studies.] “Networks, deregulation, and risk: the politics of critical infrastructure protection.” 2011 at 179.

⁹¹ CSPAN. “Energy regulatory issues: Part 4.” January 23, 1990 at 4:15:
<https://www.c-span.org/video/?12041-1/energy-regulatory-issues-part-4>

⁹² CSPAN. “Energy regulatory issues: Part 4.” January 23, 1990 at 6:00:
<https://www.c-span.org/video/?12041-1/energy-regulatory-issues-part-4>

⁹³ Senate Energy and Natural Resources Committee hearing. “National Energy Policy.” February 21, 1991 at 2:52:
<https://www.c-span.org/video/?16641-1/national-energy-policy>

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116.538 billion in 1990, moving from 3.5% of installed capacity to 5.5% in 1990. By 1990, 7% of all electricity generated in the U.S. came from nonutilities, up from 2.9% in 1979.⁹⁴

3.3.5 Energy market deregulation

W. Henson Moore, former Congressman from Louisiana and an undersecretary at the Department of Energy during the first Bush Administration, was deeply involved in crafting the 1992 legislation, along with Linda Stuntz, a lawyer and House Energy and Commerce staffer who, like Moore, had left Congress in 1987 and joined DOE.⁹⁵

Moore went on C-SPAN to take questions on the strategy March 11, 1991. In response to one question, he predicted advances in drilling and well stimulation, such as fracking. He emphasized natural gas reliance being a pillar of the strategy:

we would like to see more Americans use natural gas. Americans would like to use natural gas. It's an environmentally clean fuel, a better fuel. The problem of it is generally you can't get it. And one of the reasons why you can't get it is we have a tremendous backlog in the building of pipelines. There are all kinds of government regulations that are holding that up. And so one of the important parts of this legislative package we sent to the Hill is a dramatic deregulation of the building of the pipelines. Not own safety — we still maintain those important safety standards — and not on the environmental impacts, we still do that, but there's an awful lot of other things like the federal government has to decide do we think you need to build that pipeline. We simply say if there's somebody that wants to build it, and there are people that want to supply gas and buyers at the other end of the pipeline. Why should we get involved in that? Why not deregulate it. And we think that would really help those parts of the country who produce natural gas such as Louisiana. Also it would help the consumers in this country, and the ecology of this country.⁹⁶

At a 1997 hearing on open up market competition for electricity, and establishing the current system of Independent System Operators (ISOs), Kathleen Magruder of Enron pleaded for further deregulation of energy markets⁹⁷:

I and Enron belong to the Nike school with respect to competition in electricity: 'Just do it!' ... We believe that in order for consumers to receive the benefits of a competitive market for electric energy the reliability and security of supply must be guaranteed... that is the proper function for the ISO... to guarantee reliability and security of supply over the transmission facilities. We believe there must be commercial markets for trading both in forward and spot markets, as well as mechanisms for clearing energy imbalances...⁹⁸

⁹⁴ Ryan Ellis. [Dissertation, University of San Diego, Communication and Media Studies.] "Networks, deregulation, and risk: the politics of critical infrastructure protection." 2011 at 179.

⁹⁵ C-SPAN. "Natural gas decontrol bill signing ceremony, July 26, 1989 at 27:00: <https://www.c-span.org/video/?8500-1/natural-gas-decontrol-bill-signing-ceremony>; C-SPAN. U.S. National Energy Plan. March 11, 1991. <https://www.c-span.org/video/?16937-1/us-national-energy-plan>.

⁹⁶ C-SPAN. U.S. National Energy Plan. March 11, 1991 at 33:00. <https://www.c-span.org/video/?16937-1/us-national-energy-plan>

⁹⁷ DOE hearing. "Competitive Electric Industry." November 18, 1997 at 4 and 7:30: <https://www.c-span.org/video/?95449-1/competitive-electric-industry>

⁹⁸ DOE hearing. "Competitive Electric Industry." November 18, 1997 at 4 and 7:30: <https://www.c-span.org/video/?95449-1/competitive-electric-industry>

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Peggy Walsh, representing National Association of Regulatory Utility Commissioners, cautioned, however, that market competition, and the set-up of Independent System Operators (ISO's) being contemplated, would look past matters of the public interest. She testified⁹⁹:

ISO's will not respond to consumer complaints of poor service. ISO's will not address the recovery of embedded costs. ISO's will not look to providing services for low income and rural customers, to maintaining vibrant research and development, to ensuring renewable technologies are able to compete, that energy efficiency and other public goods are considered. In each of these cases we expect the regulatory involvement of states commissions and Attorneys General to be necessary whether or not ISO's or other market power remedies are adopted¹⁰⁰.

Slayton and Clark-Ginsburg later wrote¹⁰¹:

Many engineers warned that electricity was a unique kind of commodity because it was used at almost precisely the instant it was produced, and that turning the grid into a free market could create reliability problems. Nonetheless, when the 1991 Gulf War renewed concerns about energy security, wholesale competition finally moved from the stage of regional experimentation to national policy. The 1992 Energy Policy Act authorized the FERC to require that utilities make their transmission lines available to electricity generators that wanted to sell wholesale power to distributors.¹⁰²

Beyond the market manipulation by Enron that ensued, deregulation spurred the elimination of inefficiencies that actually served the resilience of electric power systems.

Ellis summarizes that¹⁰³:

Under regulation, control was located at the level of the individual utility. Utilities relied on internal, intra-firm, control and communication networks to maintain real-time monitoring, balance, and dispatch over integrated networks (combining generation, transmission, and distribution). Under deregulation, however, ISO/RTOs now take over responsibility for these functions by replacing intra-firm controls with centralized, inter-firm, control located at the regional, ISO/RTO-level. Whereas under the utility model control was distributed widely and nested within in each separate utility, ISO/RTOs aggregate control over many formerly distinct and relatively independent systems. Within the restructured network topology, ISO/RTOs stand out as dense hubs central to the operation of vast regional interdependent power systems. Breakdowns in ISO/RTO control—due to operator error, intentional attack or sabotage, technological failure, or other cause—jeopardize the large interdependent electric power networks which they manage. The balkanized structure of electric power under regulation militated against

⁹⁹ DOE hearing, "Competitive Electric Industry," November 18, 1997 at 32:00:

<https://www.c-span.org/video/?95449-1/competitive-electric-industry>

¹⁰⁰ DOE hearing, "Competitive Electric Industry," November 18, 1997 at 32:00:

<https://www.c-span.org/video/?95449-1/competitive-electric-industry>

¹⁰¹ Slayton, Rebecca and Aaron Clark- Ginsberg, "Beyond regulatory capture co-producing expertise for critical infrastructure protection." *Regulation and Governance*. Vol. 12. 2018 at 118

<https://onlinelibrary.wiley.com/doi/pdf/10.1111/rego.12168>

¹⁰² Slayton, Rebecca and Aaron Clark- Ginsberg, "Beyond regulatory capture co-producing expertise for critical infrastructure protection." *Regulation and Governance*. Vol. 12. 2018 at 118

<https://onlinelibrary.wiley.com/doi/pdf/10.1111/rego.12168>

¹⁰³ Ryan Ellis. [Dissertation, University of San Diego, *Communication and Media Studies*.] "Networks, deregulation, and risk: the politics of critical infrastructure protection." 2011.

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these possibilities by underwriting diverse loci of control. The enlargement of systems under single authority—that is moving from distributed to central control—erases these benefits.¹⁰⁴

As could have been expected the “Just do it!” mantra of unfettered competition in electricity markets has proved shortsighted in certain respects.

Writing later, Ellis states “... households and businesses put pressure on infrastructure owners and operators to provide low-cost, reliable services with expectations that are ultimately inconsistent with adequate resilience planning for extreme events.”¹⁰⁵

Rather, deregulation of the natural gas and electric power industries, in deference to markets, has served the cartels surfing boom and bust cycles of shale production, and driving the climate emergency. Meanwhile, security and reliability of the electric grid is compromised by the decentralized, delocalized control, which would be less vulnerable spreading of events disruptive to the grid.

In a rich twist, the Interstate Natural Gas Association of America (INGAA) is using increased reliance on natural gas within the electricity sector to argue against efforts to deal with methane emissions from natural gas infrastructure — namely the 200,000 miles of pipelines, and the over 6,000 natural-gas fired internal combustion engines (ICE) and 1,000 natural gas fired turbines at compressor stations used to pump natural gas through that pipe network by INGAA’s members.¹⁰⁶

This echoes the sentiments of a Minnesota PUC commissioner in reference to recent approval of Enbridge’s Line 3 pipeline: “It feels like it’s a gun to our head.”¹⁰⁷

When FERC’s Commissioners went before the U.S. Senate in June 2018, Senator Daines suggested that we look to Australia on questions of energy policy, and the energy transition¹⁰⁸:

I know the devil’s in the details. I don’t think you can argue, however, about that baseload generation is to grid resilience and national security. Just look at Australia, Taiwan, and look at Germany as case studies. They’ve gone before us. They shifted their baseline generation like coal and nuclear too quickly and have experience blackouts.

In April 2018 Australia’s largest generator, a 750 MW coal plant, tripped and ceased operating. Power balances were reestablished by other generators, but the frequency control (provided by the spinning of the turbine) went away. So, the frequency of that alternating current delivering the power went below 49.85 cycles per second (i.e., Hertz), the minimum threshold below which appliances such as refrigerators

¹⁰⁴ Ryan Ellis. [Dissertation, University of San Diego, Communication and Media Studies.] “Networks, deregulation, and risk: the politics of critical infrastructure protection.” 2011.

¹⁰⁵ Domady, Noah and Ryan Ellis. “Energy - transportation sector interdependence in extreme events: the case of a hurricane event in Boston.” *Current Sustainable / Renewable Energy Reports*. Vol. 5. 2018 at 11 <https://photos.app.goo.gl/VK6w4B2Ny62RFfR27>

¹⁰⁶ INGAA. (Letter to U.S. EPA). Re: Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources: Stay of Certain Requirements. December 8, 2017 <https://www.regulations.gov/document?D=EPA-HQ-OAR-2010-0505-12447>

¹⁰⁷ Dunbar, Elizabeth Dunbar and Dan Kraker. “PUC backs Enbridge Line 3 oil pipeline, sets route.” *Minnesota Public Radio*. June 28, 2018.

¹⁰⁸ U.S. Senate, Energy and Natural Resources Committee. June 12, 2018 at 2:09:00. [Available at: <https://www.c-span.org/video/?446921-1/federal-energy-regulatory-commission-officials-testify-overight-hearing&start=1815>]

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can be damaged. Distributed renewables and battery storage provided immediate frequency control, and grid stability, to avoid such damage.¹⁰⁹

In 1999, National Petroleum Council issued a report pushing fracking for gas held in shale and other tight formations — the source rock of the conventional oil and gas in decline. The council's committee on natural gas was dominated by oil and gas industry executives. It included at the time Ken Lay of Enron and Fred Krupp of the Environmental Defense Fund.¹¹⁰

The NPC natural gas report states: “Deeper wells, deeper water, and nonconventional sources will be key to future supply. . . . Future needs include new pipelines to reach supplies in the frontier regions, expansion of existing pipeline systems, new laterals to serve electricity plants.”

The council called for government-wide dedication to promote natural gas, saying, “[t]he principles should be used by the appropriate land management and regulatory agencies to establish policies that promote domestic production of natural gas in order to meet national goals.”

These developments set the stage for FERC’s 1999 policy statement on certifying new natural gas construction projects, codifying project approval as a matter of public interest.¹¹¹

These arguments from industry are as familiar today as the cycles of boom and bust. Narrowing what constitutes public need to the existence of a contract with shippers is weathered approach from a strain of deregulation purists. It consists of the argument, paraphrased by Chairman McIntyre, that “if there’s a pipeline project that’s built but not needed then someone’s going to lose a lot of money.”

The 1999 Policy statement included record of industry’s input on the question:

On the issue of overbuilding, Millennium, Enron, PGC, Columbia, and Wisconsin PSC disagree with the presumption that overbuilding must be avoided. Millennium asserts that all competitive markets have excess capacity. Enron urges the Commission to be receptive to overbuilding in areas of rapid growth, difficult construction, and environmental sensitivity. PGC agrees that some capacity in excess of initial demand may make environmental and economic sense in that it will reduce the need for future construction, but argues that the pipelines be at risk for those facilities. Columbia alleges that the concern about overbuilding is misguided.¹¹²

What matters is who is going to lose that money. Oil and gas companies and their investors or quite adept at side-stepping debt defaults, rearranging asset ownership, and the leaders of failed companies surfing the chaos of deregulated markets do fine for themselves, as do along with industry’s professionals in legal, accounting, and regulatory institutions.

On the question of making regulations specific to projects involving affiliates within a larger corporate structure, the 1999 policy statement continues:

¹⁰⁹ “Households can hold grid together when big coal units fail.” Leonard, Mike. April 24, 2018 <https://reneweconomy.com.au/households-can-hold-grid-together-when-big-coal-units-fail-69737/>; Australian Energy Market Operator. “Initial operation of the Hornsdale Power Reserve Battery Energy Storage System.” April 2018 at https://www.aemo.com.au/-/media/Tiles/Media_Centre/2018/Initial-operation-of-the-Hornsdale-Power-Reserve.pdf

¹¹⁰ <http://www.npc.org/reports/rby.html>

¹¹¹ FERC. [Policy Statement.] PL99-3-000. September 15, 1999 <https://www.ferc.gov/legal/maj-ord-reg/PL99-3-000.pdf>

¹¹² <https://www.ferc.gov/legal/maj-ord-reg/PL99-3-000.pdf>

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"The development in recent years of certificate applicants' use of contracts with affiliates to demonstrate market support for projects has generated opposition from affected landowners and competitor pipelines who question whether the contracts represent real market demand. ConEd, Ohio PUC, and Enron believe that a different standard should be applied to affiliates. ConEd argues that the at risk condition is inadequate when a pipeline serves a market served by an affiliate; risk is shifted. Ohio PUC states that pipelines should shoulder the increased risk and that the Commission should look behind contracts with affiliates. Enron would require more market data for affiliate-backed projects and would require that all projects be supported by precedent agreements at least 25% of which are with non-affiliates."

In 1992, Ken Lay of Enron had argued:

I'll say at the outset, and this is our company's position not necessarily INGAA's position, we don't believe there is any economic rationale to regulate the natural gas merchant or marketing activity, any of it, so long as a pipeline truly provides open-access, nondiscriminatory transportation.¹¹³

Core issue is integrated electric and gas utility corporations engaging in monopolistic behavior in electric markets. DTE Energy in Michigan serves as an example. DTE is trying to build new peaker plants despite cheaper, renewable plus storage options. One of DTE's daughter companies owns the pipeline through which the gas would be shipped and tolled.

As DTE explains, "DTE Energy has significant investments in non-utility businesses. DTE Energy employs disciplined investment criteria when assessing growth opportunities that leverage its assets, skills, and expertise, and provides diversity in earnings and geography. Specifically, DTE Energy invests in targeted energy markets with attractive competitive dynamics where meaningful scale is in alignment with its risk profile. DTE Energy expects growth opportunities in the Gas Storage and Pipelines and Power and Industrial Projects segments."¹¹⁴

In Michigan, the PSC has granted DTE the guaranteed 10% return on its investments, including the \$1 billion, 1.1 GW gas plant, to which its affiliate would ship gas, which the PSC voted to approve in early June 2018.¹¹⁵ On that decision, MI PSC staff raised some eye-opening questions. Announcing his office's interest in MI PSC records of correspondence pertaining to the proposed DTE gas plant, a GOP State Representative's press release explained¹¹⁶:

Prior to the MPSC's decision, the commission's staff ruled that DTE's "sloppy math justifying the gas plant could mean that the company's proposed project is not the most reasonable and prudent choice," Rep. Glenn said. Staff members also testified that DTE had not modeled options that are achievable and cost-effective, specifically cost efficiency approaches to save ratepayers money, he added.

¹¹³ C-SPAN. [DOE hearing]. "Energy Regulatory Issues, Part 3". January 22, 1990 at 4:26. <https://www.c-span.org/video/?12040-1/energy-regulatory-issues-part-3>

¹¹⁴ DTE Energy. SEC filing, form 10-Q, April 25, 2018. <https://www.sec.gov/Archives/edgar/data/28385/000093634018000127/dteenergy2018033110q.htm#sEB08564D64B770D91061C751EFE0589F>

¹¹⁵ <https://www.michigancapitolconfidential.com/michigan-electricity-rates-since-2003-15-increases-1-cut/>

¹¹⁶ Representative Glenn. [Press release]. [Available at: <http://gophouse.org/rep-glenn-issues-foia-request-mpsc-dte-gas-plant-info/>]

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It would be better to do low-risk, incremental renewables plus storage than higher-risk gas plant, with higher upfront capital cost, and higher risk of cost overrun, and this is being recognized in Michigan.¹¹⁷

A forgotten 2005 report from DOE's Lawrence Berkeley National Lab began:

Renewable energy (RE) and energy efficiency (EE) have historically been supported because of their perceived economic, environmental, economic-development, and national-security benefits.¹¹⁸

Renewables and fuel-less on-site storage ought to have an energy security premium. The conflict beneath the 3-2 vote in FERC's rejection of PJM's tariff on grounds, reflects that the agency has one foot on the dock and one foot on the boat, as the boat is heading off to the water.

In rejecting PJM's tariff, McIntyre, Chatterjee and Powelson wrote:

States may continue to support their preferred types of resources in pursuit of state policy goals. At the same time, we have exclusive jurisdiction over the wholesale rates of both subsidized and unsubsidized resources, and a statutory obligation to ensure they are just and reasonable.¹¹⁹ Expanding the MOPR to apply to state-subsidized resources will help ensure that the rates for the unsubsidized resources in the capacity market are the result of competitive market forces, and therefore are just and reasonable.¹¹⁹

Chairman Glick dissented:

If the Commission really wants to protect what it calls the "integrity" of the capacity market, it would need to mitigate each and every federal, state, and local subsidy that allows a resource to lower its capacity market offer as well as the offers of vertically integrated utilities with guaranteed cost recovery. I suspect that we would soon find that there are few, if any, resources that would qualify to participate in PJM's capacity market without being subject to an offer floor. Although that may not be an appealing option, that is no reason to isolate a few disfavored state policies for mitigation and claim, without any support, that they are the only subsidies that threaten the integrity of the market. Some may argue that the Commission "has to draw a line somewhere." But that line cannot be arbitrary and capricious. It is hard to conceive of a more arbitrary and capricious approach than to inhibit state efforts to price the externalities of electricity generation, but permit other federal, state, and local policies that interfere with the functioning of the markets.¹²⁰

¹¹⁷ Balaskovitz, Andy. "Michigan utility plans major shift from coal to solar in coming decades." *Midwest Energy News*, June 13, 2018. [Available at: <https://energynews.us/2018/06/13/midwest/michigan-utility-plans-major-shift-from-coal-to-solar-in-coming-decades/>]

¹¹⁸ Wiser, Ryan, Bolinger, Mark, and St. Clair, Matt. [Lawrence Berkeley National Laboratory, LBNL-56756] Easing the natural gas crisis: Reducing natural gas prices through increased deployment of renewable energy and energy efficiency. January 2005 <http://www2.lbl.gov/Science-Articles/Archive/sabl/2005/February/assets/Natural-Gas.pdf>

¹¹⁹ 163 FERC ¶ 61,236 June 29, 2018 at 69 (P 158) <https://www.ferc.gov/media/statements-speeches/glick/2018/06-29-18-glick.asp#W0e4O2ZP> Q at 69. <https://www.ferc.gov/CalendarFiles/20180629212349-EL16-49-000.pdf>

¹²⁰ Richard Glick, FERC Commissioner. "Dissent re PJM Interconnection Capacity Market Proposals." June 29, 2018.

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In Aspen in 2001, at a conference reflected on what was needed to keep building up natural gas as a bridge fuel.¹²¹

Notable attendees included: Red Cavaney, American Petroleum Institute; Ralph Cavanagh, NRDC; Ken Lay, Enron; and Ernest Moniz, then at MIT's Energy Institute. The conference report states:

During the 1990s, a variety of factors, including low prices, technological improvements, and environmental concerns coincided to make natural gas the fuel of choice for new electric power production in the U.S. Yet, as natural gas demand began to surge, low prices discouraged the industry from making the upstream investments needed to ensure that supplies would remain abundant in the future. Consequently, natural gas prices and supplies in the U.S. have proven more volatile than many industry analysts thought just a few years ago.

In 2006, energy policy professionals published "Energy & Security: Toward a New Foreign Policy Strategy." In it, Melanie Kinderdine and Ernest Moniz wrote¹²²:

Increasing the use of natural gas in lieu of coal or oil would also provide substantial midterm benefits for reducing greenhouse gas emissions. As has been noted [by the National Petroleum Council], however, gas consumption sufficient to have an impact on greenhouse gas emission targets must be accompanied by an aggressive program to develop stranded and unconventional gas reserves.

3.4. U.S. energy dominance a.k.a. draining America first

Shales and other tight formations are the source rocks of conventional, pooled resources of oil and gas. There is no source rock that lies beneath the shale gas and tight oil.

Since 2006, production in shale gas and tight oil has more than compensated for declining conventional production. Those "midterm benefits" have been more a mirage given methane, and a nightmare for impacted communities. Nonetheless the mid-term has quickly passed.

CEO of ConocoPhillips, a Dakota Access part-owner and shipper, is aware of this fact. In a June 2018 interview, he couched the business this way¹²³

We are a declining resource. It's a natural decline we will always have to invest money to grow our production, grow our cash flows.¹²⁴

¹²¹ Aspen Institute, Summer Energy Conference, 2001. <http://www.aspeninstitute.org/policy-work/energy-environment/our-program/events#2014>

¹²² Kinderdine, Melanie and Ernest Moniz. "Technology development and energy security." In *Energy & Security: Toward a New Foreign Policy Strategy*. Edited by David L. Goldwyn and Jan H. Kalicki. Woodrow Wilson Center Press with Johns Hopkins University Press, 2005. See <https://www.wilsoncenter.org/book/energy-and-security-toward-new-foreign-policy-strategy>

¹²³ Ryan Lance, CEO of Conoco Phillips. [Interview: Columbia Energy Exchange. "Opportunities & Challenges in the Oil & Gas Industry." Recorded June 11, 2018 at ~13:00 <http://columbiaenergyexchange.libsyn.com/podcast/ryan-lance-opportunities-challenges-in-the-oil-gas-industry>

¹²⁴ Ryan Lance, CEO of Conoco Phillips. [Interview: Columbia Energy Exchange. "Opportunities & Challenges in the Oil & Gas Industry." Recorded June 11, 2018 at ~13:00. [Available at: <http://columbiaenergyexchange.libsyn.com/podcast/ryan-lance-opportunities-challenges-in-the-oil-gas-industry>]

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In an interview recorded April 30, 2018, Pioneer's CEO Scott Sheffield summed up the U.S. tight oil outlook:

the Eagle Ford has probably already peaked. The Bakken is probably climbing back up a little bit, may get up to 1.5, but it's close to peaking too. So we're really left with the Permian Basin in the U.S.¹²⁵

In 2017, Range Resources' CEO Jeff Venture referred to this dynamic more generally as "sweet spot exhaustion," already happening everywhere but in the Permian and the Marcellus.¹²⁶

The notion of rapidly declining access to the sweet spots of shale gas in the Appalachian basin, including in the Marcellus and Utica formations, led BTU Analytics to ask what "sweet spot exhaustion" will look like over the next ten years if the regional expansion of takeaway capacity is completed, such as including NEXUS/Rover, PennEast, Atlantic Sunrise, Mountain Valley, Atlantic Coast, Sabal Trail, and connecting pipelines to LNG facilities seeking gas export authority. BTU Analytics concluded that "After ten years of drilling, much of Washington County has been consumed and large swaths of Eastern Ohio have also been drilled."¹²⁷

In 1980, the NCP had determined the "recoverable resources" of unconventional (Devonian shale) gas in the Appalachian basin was 1,861 Tcf.¹²⁸ EIA's current estimate of technically recoverable resources (without regard to economic costs) in the Appalachian basin is under 700 Tcf.¹²⁹

The November 2018 FERC nominee, Bernard McNamee, formerly led the Texas Public Policy Institute's "Life:Powered" campaign, which asks¹³⁰ "myth or fact, the U.S. cannot meet its long-term energy needs with domestic fossil fuel resources?"

The group answers:

The latest estimates show that the U.S. has at least 310 billion barrels of recoverable oil, enough for almost 80 years of production at current rates. North America has over 2 quadrillion cubic feet of recoverable natural gas, enough for more than 60 years at current production rates.

First this wrongly equates "long-term energy needs" with "current production rates" — current production amounts to 53% of 2017 oil throughput (i.e., refinery input plus exports).¹³¹ Second, it presumes high oil and gas prices. Third it includes drilling and fracking everywhere onshore and off to

¹²⁵ Scott Sheffield, CEO of Pioneer Resources. [Interview: Columbia Energy Exchange. "Oil boom in the Permian." Recorded April 30, 2018 at -13:00

<http://columbiaenergyexchange.libsyn.com/podcast>

¹²⁶ Jones, Valerie. "Oil and gas CEOs optimistic about future of EP in North America." *Rigzone*. March 10, 2017.

https://www.rigzone.com/news/oil_gas/a/148812/oil_gas_ceos_optimistic_about_future_of_ep_in_north_america/?a1l-hg?

¹²⁷ Miller, Kathryn. BTU Analytics. "New pipes to accelerate sweet spot exhaustion in Marcellus/Utica." March 5th, 2018. [<https://btuanalytics.com/new-pipes-accelerate-sweet-spot-exhaustion-marcellus-utica/>

<https://photos.app.goo.gl/FHzyrxcSGuaCTH128>]

¹²⁸ National Petroleum Council. "Devonian shale: Unconventional gas sources." June 1980 at Table D-2. [Available at: <https://drive.google.com/file/d/1tOD59ARGrAxmCJclqazRy1stdeSuoaQ/view?usp=sharing>]

¹²⁹ EIA. "Oil and gas supply module: United States." April 2018 at Table 2 at 3. [Available at:

<https://www.eia.gov/analysis/studies/worldshalegas/>

¹³⁰ Texas Public Policy Institute. "Myth or Fact" [Available at: <https://lifepowered.org>]

¹³¹ EIA. Petroleum and other liquids. "Supply and disposition." [Available at:

https://www.eia.gov/dnav/pet/pet_sum_snd_d_nus_mbb1_a_cur.htm]

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maximize surface area of fractures in unconventional oil and gas wells (under a presumption of North American energy integration). That's how the estimate of technically (mostly not economically) recoverable resources of 700 Tcf in the Appalachian basin to three times that in McNamee's outfit's estimate.

By late November, the Department of Energy and the Energy Information Administration announced increases in oil and natural gas proved reserves, respectively, to 39.2 billion barrels and 464.2 Tcf respective.¹³²

The CEO of Plains All American Pipeline — and current Chair of the National Petroleum Council! — explains that a “high-decline, short-cycle production profile requires high reinvestment.” In a remarkable admission he adds that drilling and fracking for shale gas and tight oil is “like climbing up a ‘down-escalator’ at ever increasing speeds.”¹³³

This is a recipe for energy systems disorder, to the extent communities are not off fossil fuels. It puts the lie to the promise of energy security, much less energy dominance, through “orderly development” designed to maximize fossil fuel throughput and combustion.

It further sheds light on investments in future energy infrastructure. Neighborhoods outside Boston face a decision point, for example, aging gas pipeline infrastructure is blamed for a pressure pulse of gas in neighborhoods that led to catastrophic explosions, and widespread displacement of families from their homes. American Gas Association described as “game changing.”¹³⁴ But will the changed game mean creating debt to sink capital into new gas infrastructure, or will avoiding combustion be the first principle in the local energy transition?

Cities are leading ambitious efforts to decarbonize. During a FERC Technical Workshop on the integration of distributed energy resources, David Crews of East Kentucky Power Corporation has noted that increased penetration of renewable and batteries, left to market forces, will be limited to “specific areas where the socioeconomic class can afford to purchase and participate in [distributed energy resources] DER and batteries.”¹³⁵

4.1 Financial dynamics of carbon lock in: Lessons from DAPL

4.1 Standing Rock

4.2 DAPL finance story emerges

4.3 Gauging divestment authenticity

4.4 Scrutiny moving forward

4.5. Public disassociation from private capital

¹³² EIA. “U.S. crude oil and natural gas proved reserves set new records in 2017.” November 29, 2018. [Available at: <https://www.eia.gov/todayinenergy/detail.php?id=37632>]

¹³³ Greg L. Armstrong, Chair, National Petroleum Council Chairman and CEO, Plains All American Pipeline Plains All American. Keynote remarks at EIA annual energy conference. Available at: https://www.eia.gov/conference/2018/pdf/presentations/greg_armstrong.pdf at slide 14.

¹³⁴ Korte, Gregory and Nick Wooten. “Pipeline peril: Natural gas explosions reveal silent danger lurking in old cast-iron pipes.” USA Today. November 1, 2018.

¹³⁵ FERC. [Transcript]. Technical Conference: Distributed Energy Resources-Technical Considerations for the Bulk Power System. April 11, 2018 at 334 to 335 (4:33:30 in audio) <https://www.ferc.gov/CalendarFiles/20180502152522-Transcript%20-%20DER%20-%20041118.pdf>

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4.1 Standing Rock

Organizing against the Dakota Access/Bakken Pipeline (DAPL/Bakken) at Standing Rock in North Dakota began in 2014, when the project to transport oil across the continent to the Texas and Louisiana petroleum trading hubs was first proposed.¹³⁶ DAPL is the northern section of the larger Bakken pipeline system, now owned collectively, as a joint venture, by four North American corporations: Energy Transfer, Phillips 66, Enbridge and Marathon.¹³⁷

The U.S. Army Corps of Engineers, in administering federal permitting of water crossings, “considered but eliminated” a route north of Bismarck, North Dakota, citing a need “to protect areas that contribute water to municipal water supply wells,” a limiting “buffer requirement” by local utility company, and other factors.¹³⁸

The selected route would run instead through lands and waters of the Oceti Sakowin, or Seven Council Fires, also known as the Great Sioux Nation, in a continuation of North American settler colonial injustice.¹³⁹

By 2018, DAPL/Bakken oil throughput was ~500,000 barrels per day, passing beneath the confluence of the Cannonball and Missouri rivers, downstream of Bismarck, just north of Standing Rock, across lands federally designated as “unceded Indian territory.”¹⁴⁰ In Article VI of the U.S. Constitution it is written that treaties are fully integrated within “the supreme law of the land.” It follows that to violate treaties is unconstitutional. Treaties of Fort Laramie of 1851 and 1868 established, under federal law, the lands of

¹³⁶ Estes, Nick. “The Supreme Law of the Land”: Standing Rock and the Dakota Access Pipeline.” *Indian Country Today*. January 16, 2017. [Available at: <https://newsmaven.io/indiancountrytoday/archive/the-supreme-law-of-the-land-standing-rock-and-the-dakota-access-pipeline-25phRkIJB0GmipEDL.vPL.Pw/>]; Energy Transfer Partners. [News release]. “Energy Transfer announces crude oil pipeline project connecting Bakken supplies to Patoka, Illinois and to Gulf Coast markets.” June 25, 2014. [Available at: <http://ir.energytransfer.com/phoenix.zhtml?c=106094&p=irol-newsArticle&ID=1942689>];

¹³⁷ For an illustration of the DAPL/Bakken/Bayou Bridge expansion project, see: Energy Transfer Partners. [JP Morgan Presentation]. June 19, 2018 at 16. [Available at: <http://ir.energytransfer.com/phoenix.zhtml?c=106094&p=irol-presentations>]; Phillips 66. [Credit Suisse Conference]. February 13, 2018 at 7. [Available at: <http://investor.phillips66.com/events-and-presentations/event-details/2018/Phillips-66-presents-at-Credit-Suisse-23rd-Annual-Energy-Summit/default.aspx>]; Energy Transfer Partners. SEC Form 10-K. February 23, 2018 at 15.

¹³⁸ U.S. Army Corps of Engineers. Mitigated finding of no significant impact. Environmental Assessment, Dakota Access Pipeline project, Williams, Morton, and Emmons Counties, North Dakota. July 25, 2016 at 8. [Available at: <https://usace.contentdm.oclc.org/digital/collection/p16021coll7/id/2427/>]

¹³⁹ Whyte, Kyle Powys. “The Dakota Access Pipeline, Environmental Injustice, and U.S. Colonialism.” *Red Ink*. Issue 19.1. Spring 2017. [Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2925513]; Estes, Nick. “Fighting for Our Lives: #NoDAPL in Historical Context.” *The Red Nation* September 18, 2016. [Available at: <https://therednation.org/2016/09/18/fighting-for-our-lives-nodapl-in-context/>].

¹⁴⁰ Estes, Nick. “The Supreme Law of the Land”: Standing Rock and the Dakota Access Pipeline.” *Indian Country Today*. January 16, 2017. [Available at: <https://newsmaven.io/indiancountrytoday/archive/the-supreme-law-of-the-land-standing-rock-and-the-dakota-access-pipeline-25phRkIJB0GmipEDL.vPL.Pw/>]

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the waters of the Oceti Sakowin.¹⁴¹ These treaties were violated by Congress in 1877 and 1889, when new laws confined Sioux lands to “nine much smaller Sioux reservations,” including Standing Rock.¹⁴²

In late March, 2016, Standing Rock tribal members and “ally Lakota, Nakota, & Dakota citizens” established Inyan Wakhāṅgapi Othi (or Sacred Stone), a Spirit Camp:

“along the proposed route of the bakken oil pipeline, DAPL. ... The Spirit Camp is dedicated to stopping and raising awareness of the Dakota Access pipeline, the dangers associated with pipeline spills and the necessity to protect the water resources of the Missouri river. We ask that everyone stands with us against this threat to our health, our culture, and our sovereignty.”¹⁴³

In late April 2016, Standing Rock youth ran a 500-mile relay to a U.S. Army Corps of Engineers office in Nebraska to deliver a petition urging that U.S. Army Corps of Engineers not grant the DAPL companies permits to cross the Missouri River.¹⁴⁴

Along the length of DAPL/Bakken through North and South Dakota, Iowa, and Illinois, construction was contracted out by Energy Transfer et al. and permitted in a piecemeal fashion, according to the federal, state or more local jurisdiction. On segments without federal jurisdiction, construction began in May 2016 in North and South Dakota¹⁴⁵ and began the next month in Iowa.¹⁴⁶ There in Iowa, Energy Transfer struck a compromise with the state: the company and its co-venturers would drill horizontally, deep beneath an Indigenous burial ground, to traverse the area, rather than just trench right through the sacred grounds.¹⁴⁷

In late July 2016, the Army Corp issued the findings of “no significant impact,” granting the federal permits for Energy Transfer et al. to also tunnel beneath the Missouri River at Standing Rock and emplace what would become DAPL/Bakken.¹⁴⁸ In August, David Archambault II, the Standing Rock Sioux Tribe (SRST) Council Chairman at the time, pleaded:

¹⁴¹ Estes, Nick. “The Supreme Law of the Land”: Standing Rock and the Dakota Access Pipeline.” *Indian Country Today*. January 16, 2017. [Available at: <https://newsmaven.io/indiancountrytoday/archive/the-supreme-law-of-the-land-standing-rock-and-the-dakota-access-pipeline-25phRkJJB0GmipEDLvPLPw/>]

¹⁴² Standing Rock Sioux Tribe v. U.S. Army Corp of Engineers. {Complaint for declaratory and injunctive relief}. July 27, 2018 [Available at: <https://earthjustice.org/sites/default/files/files/3154%201%20Complaint.pdf>]; Estes, Nick. “The Supreme Law of the Land”: Standing Rock and the Dakota Access Pipeline.” *Indian Country Today*. January 16, 2017. [Available at: <https://newsmaven.io/indiancountrytoday/archive/the-supreme-law-of-the-land-standing-rock-and-the-dakota-access-pipeline-25phRkJJB0GmipEDLvPLPw/>]

¹⁴³ Indigenous Rising. “Tribal Citizens Rise Up Against Bakken Oil Pipeline.” March 29, 2016. [See: <http://indigenusrising.org/tribal-citizens-rise-up-against-bakken-oil-pipeline/>]

¹⁴⁴ Indigenous Rising. “Lakota Youth Running 500 Miles In Opposition of Dakota Access Pipeline.” April 27, 2018 [See: <http://indigenusrising.org/lakota-youth-running-500-miles-in-opposition-of-dakota-access-pipeline/>]

¹⁴⁵ Holdman, Jessica. “Construction underway on Dakota Access Pipeline.” *Bismarck Tribune*. May 24, 2016. [Available at: https://bismarcktribune.com/bakken/construction-underway-on-dakota-access-pipeline/article_44fd2453-74ac-5cda-9ac4-e9ecbe9a31a8.html]

¹⁴⁶ KCCI-CBS (Des Moines, Iowa). [Television news]. “Bakken pipeline construction approved in Iowa: Construction can now start in Iowa on a pipeline fought for years by protesters.” June 6, 2016. [Available at: <https://www.kcci.com/article/bakken-pipeline-construction-approved-in-iowa/6494479>]

¹⁴⁷ “Bakken Pipeline To Go Under Native Burial Ground In Lyon County.” *KIWA Radio* (Sheldon, Iowa). June 21, 2016. [Available at: <http://kiwaradio.com/local-news/bakken-pipeline-to-go-under-native-burial-ground-in-lyon-county/>].

¹⁴⁸ Standing Rock Sioux Tribe v. U.S. Army Corp of Engineers. {Complaint for declaratory and injunctive relief}. July 27, 2018 at 29. [Available at: <https://earthjustice.org/sites/default/files/files/3154%201%20Complaint.pdf>]; U.S. Army Corps of Engineers. Mitigated finding of no significant impact. Environmental Assessment, Dakota Access Pipeline project, Williams, Morton, and Emmons Counties, North Dakota, July 25, 2016. [Available at: <https://usace.contentdm.oclc.org/digital/collection/p16021coll7/id/2427/>]

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To all Native American Tribes in the U.S. and to all Indigenous Peoples of the world: Please stand with Standing Rock by issuing proclamations, resolutions, and/or letters of support.¹⁴⁹

Through hundreds of letters, resolutions, and statements of support, Tribes and First Nations and other organizations expressed their solidarity with the Standing Rock Sioux Tribe.¹⁵⁰

Consultation consisted of external reviews lacking in internal, Indigenous information. The Standing Rock Sioux Tribe did not give consent after this sparse and thin consultation.¹⁵¹ As a consequence, direct and indirect financiers of DAPL/Bakken companies did not meet self-imposed benchmarks for Free, Prior, and Informed Consent (FPIC) surrounding projects being financed, as set as a standard in the industry's "Equator Principles".¹⁵²

4.2 DAPL finance story emerges

During DAPL/Bakken construction, Energy Transfer Equity¹⁵³ (ETE, the parent company) and its two daughter companies, Energy Transfer Partners¹⁵⁴ and Sunoco Logistics¹⁵⁵ had each publicly disclosed their lenders in filings with the U.S. Securities & Exchange Commission (SEC), the federal regulatory body overseeing publicly traded corporations.¹⁵⁶ In mid-August, more than four months after the Sacred Stone Spirit Camp was established, the names of Energy Transfer's lenders, and their respective lending commitments, were published at LittleSis.org, based on information in the credit facility agreements in SEC filings of corporate documents.¹⁵⁷

¹⁴⁹ "Native Nations Rally in Support of Standing Rock Sioux." *Indian Country Today*, August 23, 2016. [Available at: <https://newsmaven.io/indiancountrytoday/archive/native-nations-rally-in-support-of-standing-rock-sioux-mlt8Ck6mgUajgGp9x1OqvA>]

¹⁵⁰ Stand with Standing Rock. "Supporters timeline." Available at: <http://standwithstandingrock.net/supporters/>; "Native Nations Rally in Support of Standing Rock Sioux." *Indian Country Today*, August 23, 2016. [Available at: <https://newsmaven.io/indiancountrytoday/archive/native-nations-rally-in-support-of-standing-rock-sioux-mlt8Ck6mgUajgGp9x1OqvA>]

¹⁵¹ Standing Rock Sioux Tribe v. U.S. Army Corp of Engineers. {Complaint for declaratory and injunctive relief}. July 27, 2018 at 17 and 24 [Available at: <https://earthjustice.org/sites/default/files/files/3154%201%20Complaint.pdf>]; *Indigenous Resistance to the Dakota Access Pipeline: Criminalization of Dissent and Suppression of Protest*, Indigenous Peoples Law and Policy Program, University of Arizona, March 16, 2018. [Available at: <https://law.arizona.edu/sites/default/files/Indigenous%20Resistance%20to%20the%20Dakota%20Access%20Pipeline%20Criminalization%20of%20Dissent%20and%20Suppression%20of%20Protest.pdf>]

¹⁵² The Equator Principles. June 2013. [Available at: http://equator-principles.com/wp-content/uploads/2017/03/equator_principles_III.pdf]; The Equator Principles, IFC Performance Standard 7, "Indigenous peoples." 2012. [Available at: https://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/sustainability-at-ifc/policies-standards/performance-standards/ps7].

¹⁵³ Energy Transfer Equity. SEC Form 8-K. February 10, 2015. [<https://www.sec.gov/Archives/edgar/data/1276187/000127618715000007/ete101commitmentagreement.htm>]

¹⁵⁴ Energy Transfer Partners. SEC Form 8-K. February 10, 2015. [<https://www.sec.gov/Archives/edgar/data/1012569/000101256915000015/0001012569-15-000015-index.htm>]

¹⁵⁵ Sunoco Logistics Partners. SEC Form 8-K. March 20, 2015. [<https://www.sec.gov/Archives/edgar/data/1161154/000116115415000024/a25billionamendedandrestat.htm>]

¹⁵⁶ Credit facility agreements appear on SEC EDGAR, an on-line database, as Exhibit 10's accompanying filings of forms of type 8-K, 10-K or 10-Q. Not all Exhibit 10's are credit facility agreements, but 8-K forms that include credit facility agreements typically carry identifying 8-K section codes, including "1.0".

¹⁵⁷ LittleSis. "Who's Banking on the Dakota Access Pipeline." August 17, 2016. [Available at: <https://littlesis.org/maps/1634-who-s-banking-on-the-dakota-access-pipeline>]

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Credit facility agreements show the liquidity banks provide for capital spending (specifically, short-term debt creation) for general corporate purposes, including, as Energy Transfer characterizes, “growth projects.”¹⁵⁸ Rainforest Action Network — a public interest organization which maintains subscription access to Bloomberg Terminal (a financial transaction database) and which questions banks about shortsighted lending — gained new information on additional lending commitments from 17 banks, totaling \$2.5 billion to finish the \$4.8 billion DAPL/Bakken project.¹⁵⁹

Food & Water Watch took the combined information and published a Sankey plot to better illustrate the flows of capital at Energy Transfer’s disposal.¹⁶⁰ The graphic art was published two days after a group of Water Protectors at Standing Rock were attacked by dogs and pepper-sprayed by private security contractors, as documented by Democracy Now!¹⁶¹ — consistent with settler colonial history.¹⁶²

Algebra, from Arabic, translates to the “art of revealing what is hidden.” The Food & Water Watch graphic showed only a static and narrow glimpse of the otherwise hidden and dynamic role of global financial institutions that, in the case of DAPL/Bakken, were together making a \$4.8 billion gamble on maximizing DAPL/Bakken oil throughput, including for Gulf Coast exports.¹⁶³

4.3. Pressure on DAPL financiers grows

The divestment arm of the #NoDAPL movement continues on multiple levels, with pressure on financiers as well as stock shareholders.¹⁶⁴ On October 2, 2016, the Standing Rock Sioux Tribal council passed a resolution stating the tribe would:

¹⁵⁸ Energy Transfer Equity. SEC Form 10-K. February 29, 2016 at 89.

¹⁵⁹ Note that the project-level lending agreement, itself, was not filed with the SEC as an exhibit. See: Sunoco Logistic Partners. SEC Form 8-K. August 2, 2016 [Available at: <https://www.sec.gov/Archives/edgar/data/1161154/000119312516675095/d215460d8k.htm>]; For total DAPL/Bakken cost see: Energy Transfer Partners. [JPM Morgan Presentation]. June 19, 2018 at 16. [Available at: <http://ir.energytransfer.com/phoenix.zhtml?c=3D106094%26p%3DiroI-presentations>]

¹⁶⁰ “Who’s Banking on the Dakota Access Pipeline.” Food & Water Watch. September 6, 2016. [Available at: <https://www.foodandwaterwatch.org/news/who%27s-banking-dakota-access-pipeline>]

¹⁶¹ Democracy Now! “Dakota Access Pipeline Company Attacks Native American Protesters with Dogs and Pepper Spray.” [Web Exclusive.] September 04, 2016.

¹⁶² Estes, Nick “Fighting for Our Lives: #NoDAPL in Historical Context.” *The Red Nation* September 18, 2016. [Available at: <https://therednation.org/2016/09/18/fighting-for-our-lives-nodapl-in-context/>]

¹⁶³ DAPL, stretching from gathering lines in North Dakota down to Patoka, Illinois, is just the northern portion of the Bakken pipeline.

Re exports, Phillips 66 recently upped its export capacity at Beaumont terminal at end of 2017: Phillips 66. [News release]. “Phillips 66 reports 4th quarter earnings of \$3.2 billion or \$6.25 per share.” February 2, 2018 [Available at: <http://investor.phillips66.com/financial-information/news-releases/news-release-details/2018/Phillips-66-Reports-Fourth-Quarter-Earnings-of-3.2-Billion-or-6.25-Per-Share/default.aspx>];

ETP touts ~400,000 barrels of oil per day capacity at Nederland terminal. Energy Transfer Equity. [Presentation MLP & Energy Infrastructure Conference. May 23, 2018 at 8. [Available at: <http://ir.energytransfer.com/phoenix.zhtml?c=3D106094%26p%3DiroI-presentations>]

¹⁶⁴ Simon, Morgan. [Interview with Rebecca Abramson, J. “We’re not done with DAPL: How investors can still support Indigenous rights.” *Forbes*. November 1, 2018. [Available at: <https://www.forbes.com/sites/morgansimon/2018/11/01/were-not-done-with-dapl-how-investors-can-still-support-indigenous-rights/>]

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"end its financial relationships with banks, mutual funds, security companies or other financial entities that invest in, or otherwise financially support any aspect of the Dakota Access Pipeline."¹⁶⁵

The militarized response to prayerful and peaceful actions of Water Protectors continued through October 2016, with hundreds of Water Protectors arrested.¹⁶⁶ Energy Transfer hired private firms to handle Water Protector surveillance and information warfare to shape larger media narratives,¹⁶⁷ reflecting a "fusing [of] the corporate energy sector and the national security apparatus in both the U.S. and Canada."¹⁶⁸

For example, on October 28, 2016, the morning after over 100 arrests, a widely distributed, insider energy and environmental news service titled its report "Guns, fire and 100+ arrests at protest site," described the events as an "armed standoff," and noted "at least two incidences involving firearms."¹⁶⁹ One of the two instances of "guns" (possessed by people not in law enforcement uniforms) occurred when a Dakota Access LLC employee inexplicably entered the camp, brandished a rifle, and was talked down.¹⁷⁰ In December 2017, it would be learned that the second gun was owned by an FBI informant who, after infiltrating movement, had struck up a romantic relationship with Red Fawn Fallis, the woman being brought into custody as the gun went off (without injury).¹⁷¹

Divestment pressure targeting DAPL banks became material as consumers withdrew deposits in larger numbers from the identified banks.¹⁷² Several water Protectors created DeFundDAPL.org, in an effort to facilitate and track self-reporting of such withdrawals.

In early November, working with the Norwegian Sami Association, the Red Owl Legal Collective¹⁷³ at Standing Rock urged the Norwegian bank DNB to end its financing of DAPL/Bakken, citing: "numerous corroborated first-hand reports of human and civil rights violations of water protectors, including women, youth, and elders, by police, National Guard, and hired paramilitary personnel."¹⁷⁴ The Chairman of the

¹⁶⁵ LastRealIndians.com "Standing Rock Sioux Tribe Ends Relationships with Financial Institutions that Support Dakota Access Pipeline." October 4, 2016.

¹⁶⁶ Bradley, Sharon Goens et al. "We are our own medicine: An AFSC special report from the Standing Rock Sioux Tribe's land and unceded territory." November 4, 2016 at 0; Camp of the Sacred Stone timeline. Available at: <http://sacredstonecamp.org/dapl-timeline> ; Water Protector Legal Collective. [Letter to DNB Bank] Nov. 8, 2016. [Available at: <https://martinezlaw.net/wp-content/uploads/2016/11/20161108-DNB-Bank-Divestment-Letter-ROLC.pdf>]

¹⁶⁷ Brown, Alleen, Parrish, Will and Alice Speri. "Standing Rock documents expose inner workings of 'surveillance-industrial complex.'" *The Intercept*. June 3, 2017. [Available at: <https://theintercept.com/2017/06/03/standing-rock-documents-expose-inner-workings-of-surveillance-industrial-complex/>]

¹⁶⁸ Parrish, Will. "An activist stands accused of firing a gun at Standing Rock. It belonged to her lover — an FBI informant." *The Intercept*. December 11 2017. [Available at: <https://theintercept.com/2017/12/11/standing-rock-dakota-access-pipeline-fbi-informant-red-fawn-fallis>]

¹⁶⁹ Gilmer, Ellen M. "Guns, fire and 100+ arrests at protest site." *E&E News Energywire*. October 28, 2016. [Available at: <https://www.eenews.net/stories/1060044964>]

¹⁷⁰ Enzina, Wes. "I Watched An Armed Dakota Access Pipeline Employee Get Arrested After Entering Protesters' Camp." *Mother Jones*. October 28, 2016. [Available at: <http://www.motherjones.com/politics/2016/10/armed-man-dakota-access-pipeline-protest-dapl/>]

¹⁷¹ Parrish, Will. "An activist stands accused of firing a gun at Standing Rock. It belonged to her lover — an FBI informant." *The Intercept*. December 11 2017. [Available at: <https://theintercept.com/2017/12/11/standing-rock-dakota-access-pipeline-fbi-informant-red-fawn-fallis>]

¹⁷² Hale, Thomas. "An environmental run on the bank." *Financial Times*. July 20, 2018.

¹⁷³ The Red Owl Legal Collective would change its name to the Water Protector Legal Collective.

¹⁷⁴ Water Protector Legal Collective. [Letter to DNB Bank]. Nov. 8, 2016. [Available at: <https://martinezlaw.net/wp-content/uploads/2016/11/20161108-DNB-Bank-Divestment-Letter-ROLC.pdf>]

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Norwegian Sami Association met in person with DNB officials and presented a report documenting these violations. He later explained:

It is natural that we would try to help Standing Rock. It is easy for Indigenous people around the world to recognize the struggle. We see what they are going through and we feel it. There is no them, only us.¹⁷⁵

At the same time, BankTrack and numerous other non-Indigenous organizations wrote to the Chair of the "Equator Principles Association," noting that 21 banks were financing DAPL/Bakken despite commitments to Indigenous rights made in agreeing to the Equator Principles.¹⁷⁶

Soon after these letters, and less than a week after the election of President Donald Trump, Energy Transfer's Chief Executive Officer, Kelcy Warren, referred to direct social pressure on his company's financiers as "terrorism" saying "that's all that nonsense is. It's just terrorism."¹⁷⁷

In late November, a letter signed by "500+ civil society organizations" was sent to only the 17 banks on the \$2.5 billion project-level loan, asking that payouts on that credit facility cease.¹⁷⁸ As winter was taking grip at Standing Rock, the Obama Administration issued an ultimatum. In response, Camp of the Sacred Stones, International Indigenous Youth Council, Indigenous Environmental Network and Honor the Earth wrote:

We call on all people of conscience, from all Nations, to join the encampments and stand with us as we put our bodies on the line. The eviction notice came in a letter from the US Army Corps of Engineers to the Standing Rock Sioux Tribe, informing the tribe that on Dec. 5th, it will "close" all lands north of the Cannonball River, where the Oceti Sakowin encampment is located. It is no coincidence that the Army Corps of Engineers has chosen Dec 5th, General George Armstrong Custer's birthday, as the date it plans to evict people from the Oceti Sakowin Camp. Custer broke the treaty to dig for gold, the Army Corps is breaking the treaty over oil.¹⁷⁹

¹⁷⁵ Bonogofsky, Alex. "How Indigenous activists in Norway got the first bank to pull out of the Dakota Access Pipeline." *Truthout*. November 28, 2016. [Available at: <http://www.truth-out.org/news/item/38499-how-indigenous-activists-in-norway-got-the-first-bank-to-pull-out-of-the-dakota-access-pipeline>]

¹⁷⁶ BankTrack et al. [Letter to Chair of Equator Principles Association]. November 7, 2017.

[Available at: https://www.banktrack.org/download/open_letter_civil_society_groups_to_equator_principles_association/161107_letter_ep_banks_on_dapl_and_climate_change_final_1.pdf]

¹⁷⁷ Weiss, Jeffrey. "Dallas' Kelcy Warren says Dakota Access protesters need the facts, threats to financiers are 'terrorism'." *Dallas News*. November 11, 2011. [Available at: <https://www.dallasnews.com/business/energy/2016/11/11/dallas-kelcy-warren-says-dakota-access-pipeline-protests-ignore-facts>]

¹⁷⁸ BankTrack et al. [Letter to 17 banks financing DAPL/Bakken at the project level.] November 30, 2018.

[Available at: https://www.banktrack.org/download/letter_from_500_organisations_to_17_banks_on_financing_dapl/161130_final_letter_all_dapl_banks_2.pdf]

¹⁷⁹ Camp of the Sacred Stones, International Indigenous Youth Council, Indigenous Environmental Network and Honor the Earth. [Joint statement]. "The U.S. Army cannot evict us from Treaty Lands." November 27, 2016. [Available at: <http://sacredstonecamp.org/blog/2016/11/27/the-us-army-cannot-evict-us-from-treaty-lands>]

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Indigenous organizers sought and received shows of solidarity in the form of peaceful gatherings in front of identified banks, in the United States and abroad.¹⁸⁰ Ultimately, over 700,000 people would sign petitions urging that the 17 banks involved in the project-level loan exit the agreement.¹⁸¹

By February 2017, President Trump reversed the halt on DAPL construction that was put in place when the Obama Administration did not carry out its ultimatum to Water Protectors.¹⁸² That same month, three banks, ING, DNB and BNP Paribas, stated they would sell off their DAPL/Bakken project-level debt, and ABN Amro stated it would no longer finance the parent, ETE.¹⁸³

Also, at the end of March 2017, ING, ABN Amro, Intesa SanPaolo, ING, and DNB had all exited the \$1.5 billion credit facility agreement with Energy Transfer Equity.¹⁸⁴ Four banks — Fifth Third, Canadian Imperial Bank of Commerce, Bank of Nova Scotia and Toronto Dominion — were added on as lenders to ETE.¹⁸⁵

In December 2017, ETP remade its \$3.75 billion facility and the Sunoco Logistics facility of \$2.5 billion into a single \$4 billion, 5-year facility and a \$1 billion 1-year facility.¹⁸⁶ DNB, ING, BNP Paribas, UBS, Comerica and Citizen did not recommit to lend.

4.3. Gauging divestment authenticity

These divestment moves away from DAPL and other fossil fuel firms are testimony to effective pressure on Energy Transfer's financiers, which has served to sort the visions of British, European, North American and Asian banks.

The Women's Earth & Climate Action Network (WECAN) helped to coordinate that pressure on European banks, in efforts led by Indigenous women. Multiple delegations of Indigenous women traveled to ask European institutions that either financed DAPL/Bakken and Canadian tar sands expansion projects

¹⁸⁰ Knight, Nika. "Activists around the world take #NoDAPL fight to the banks." *Common Dreams*. December 1, 2016. [Available at: <https://www.commondreams.org/news/2016/12/01/activists-around-world-take-nodapl-fight-banks>]

¹⁸¹ BankTrack. "Over 700,000 people demand banks stop financing the Dakota Access Pipeline." February 2017. [Available at: https://www.banktrack.org/article/global_coalition_stages_protests_and_bank_closures_across_the_globe_to_defund_dakota_access_pipeline]

¹⁸² White House. [News release.] "President Trump Takes Action to Expedite Priority Energy and Infrastructure Projects." January 24, 2017. [Available at: <https://www.whitehouse.gov/briefings-statements/president-trump-takes-action-expedite-priority-energy-infrastructure-projects/>]

¹⁸³ BankTrack. "Six banks step away from Dakota Access Pipeline and backers." [Available at: https://www.banktrack.org/article/three_banks_step_away_from_dakota_access_pipeline_backers_v]

¹⁸⁴ Energy Transfer Equity. SEC Form 8-K. March 30, 2017 [Available at: <https://www.sec.gov/Archives/edgar/data/1276187/000127618717000034/ex101revolvingcreditagreement.htm>]; compared to: Energy Transfer Equity. SEC Form 8-K. February 17, 2015. [Available at <https://www.sec.gov/Archives/edgar/data/1276187/000127618715000007/0001276187-15-000007-index.htm>].:

¹⁸⁵ Energy Transfer Equity. SEC Form 8-K. March 30, 2017 [Available at: <https://www.sec.gov/Archives/edgar/data/1276187/000127618717000034/ex101revolvingcreditagreement.htm>]; Energy Transfer Equity. SEC Form 8-K. February 17, 2015. [Available at <https://www.sec.gov/Archives/edgar/data/1276187/000127618715000007/0001276187-15-000007-index.htm>].:

¹⁸⁶ Energy Transfer Partners. SEC Form 8-K. December 1, 2017. [Available at: <https://www.sec.gov/Archives/edgar/data/1161154/000116115417000085/0001161154-17-000085-index.htm>] Two credit facilities, together totaling \$5 billion in liquidity replace the entity's \$3.75 billion ETP facility and the \$2.5 billion SXL facility. Bank specific commitments are no longer disclosed.

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directly, or held investments in or insured the corporations involved, to divest from the companies involved.¹⁸⁷ After one these trips in October 2017, WECAN wrote:

For the past two weeks, an Indigenous Women's Divestment Delegation to Europe has traveled through Norway, Switzerland and Germany to engage with political leaders, representatives of financial and insurance institutions, civil society groups, and members of the media to share personal accounts and calls to action for immediate divestment from fossil fuel companies that endanger rights and neglect Indigenous People's right to Free, Prior, and Informed Consent (FPIC) as outlined in the United Nations Declaration on the Rights of Indigenous Peoples.

During meetings with Norwegian Parliamentarians, DNB, the Council on Ethics to the Norwegian Oil Fund, UBS, Credit Suisse, Zurich Insurance, Swiss Re, Bayern LB, Allianz, Deutsche Bank and others, Delegates brought to the forefront demands for Indigenous and human rights as outlined in international law, and calls for divestment through corporate level and/or project level finance to stop unwanted fossil fuel development in their territories.¹⁸⁸

These delegations, with allied pressure from existing groups in Europe, led BNP Paribas to publicly disavow "oil and gas from shale and/or oil from tar sands"¹⁸⁹ and drove DNB to disassociate from Energy Transfer.¹⁹⁰

Political divestment — a variation on boycotts — is a necessary resort in cases of government failure on a moral issue. Globalization has tended to shift social responsibility to the corporate realm, and that, coupled with transparency and digital connectivity, have enhanced scrutiny of business ethics.¹⁹¹

In early September 2016, the Palestinian BDS [Boycott, Divestment, Sanctions] National Committee wrote to the Standing Rock Sioux Tribe:

"The people of Palestine support you and all those standing with you right now in North Dakota to protect your tribal lands and resist the desecration and destruction of your sacred burial sites at the hands of the Energy Transfer Partners corporation and the Dakota Access Pipeline they are building."¹⁹²

Decades ago, divestment was used to fight South African Apartheid, countered by arguments that:

(i) it is not the place of private corporations to judge the internal affairs of another nation;

¹⁸⁷ WECAN. [News release]. Indigenous Women's Delegation Pursues Fossil Fuel Divestment Across Europe, Amidst Growing Global Movement." October 17, 2017. [Available at: <https://www.commondreams.org/newswire/2017/10/17/indigenous-womens-delegation-pursues-fossil-fuel-divestment-across-europe-amidst>]

¹⁸⁸ WECAN. [News release]. Indigenous Women's Delegation Pursues Fossil Fuel Divestment Across Europe, Amidst Growing Global Movement." October 17, 2017. [Available at: <https://www.commondreams.org/newswire/2017/10/17/indigenous-womens-delegation-pursues-fossil-fuel-divestment-across-europe-amidst>]

¹⁸⁹ BNP Paribas. "BNP Paribas takes further measures to accelerate its support of the energy transition." October 11, 2017. [Available at: <https://group.bnpparibas/en/press-release/bnp-paribas-takes-measures-accelerate-support-energy-transition>]

¹⁹⁰ Larsson, Carl-Goran. "DNB said they sold out of 'The Black Snake' - still have 7 billion in loans for oil pipeline companies." *NRK*. November 8, 2017. [Available at: <https://www.nrk.no/sapmi/dnb-sa-de-solgte-seg-ut-av-the-black-snake--har-likevel-7-milliarder-i-lan-til-firmaene-bak-1.13749257>]

¹⁹¹ Puschunder, J.M. "The role of political divestiture for sustainable development." *Journal of Management and Sustainability*. Vol. 6, No. 1. 2016.

¹⁹² Kadi, Andrew. "Palestinians back Standing Rock Sioux in 'struggle for all humanity.'" *Electronic Intifada*. September 10, 2016. [Available at: <https://electronicintifada.net/blogs/andrew-kadi/palestinians-back-standing-rock-sioux-struggle-all-humanity>]

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- (ii) the purpose of a business entity is to make profits for its owners, not moral judgments;
- (iii) there are many other competitors available to trade with South Africa; and
- (iv) if anyone would be adversely affected by foreign withdrawal, it would be the black population of South Africa.¹⁹³

Divestment has more recently galvanized a youth climate movement.¹⁹⁴

Yet authentic divestment is elusive. Divestment pressure requires transparency and visibility of financial deals to ensure the authenticity of responses. The distinction between project-level and corporate-level financing — and petitioning only the 17 banks on the project-level DAPL/Bakken loan — serves as an example of this challenge.

The distinction gave a measure of plausible deniability to those banks only involved at the corporate-level with the Energy Transfer family of companies, and not financing “at the project level.”¹⁹⁵ Energy Transfer Partners has specifically referred to its now-expired \$3.75 billion credit facility as providing “temporary financing for its growth projects.”¹⁹⁶ With the project-specific loan of \$2.5 billion, it follows that ~\$2.3 billion of the \$4.8 billion DAPL/Bakken cost was financed, at least temporarily, by ETP (and Phillips 66) using the corporate-level, general purpose credit facility.¹⁹⁷

As another example, early DAPL finance info presented only a narrow and static glimpse of the larger, financing dynamics of money flowing to pay for the DAPL/Bakken. Information being acted on included \$7.75 billion in general purpose lending commitments (i.e., essentially a credit card limit) to the Energy Transfer family, and it included the \$2.5 billion project loan to Energy Transfer Partners and Phillips 66 Partners, but it did not include general purpose funds to Phillips 66 Partners, Phillips 66, Enbridge Energy Partners, Enbridge Inc. and Marathon Petroleum, the first and last of which are lead shippers on the pipeline.¹⁹⁸

Full accounting of such connectivity, of the web between financial institutions and these entities, is necessary to see divestment authenticity. Consider that DNB, BNP Paribas and ING are credited with having “divested from DAPL.”¹⁹⁹ However, recent DNB commitments to Enbridge totaled ~U.S. \$280

¹⁹³ Lansing, Paul. “The Divestment of United States Companies in South Africa and Apartheid, 60 Nebraska Law Review 1981. [Available at: <https://digitalcommons.unl.edu/nlr/vol60/iss2/4>]

¹⁹⁴ Grady-Benson, J. and Brinda Sarathy. “Fossil fuel divestment in US higher education: student-led organising for climate justice.” *Local Environment: The International Journal of Justice and Sustainability*. Vol. 21, Iss. 6, 2016.

¹⁹⁵ U.S. Bank. “U.S. Bank sustainability fact sheet.” [Available at: <https://www.usbank.com/pdf/community/US-Bank-Sustainability-Factsheet.pdf>]; Credit Suisse. “Dakota Access Pipeline (DAPL).” [Available at: <https://www.credit-suisse.com/corporate/en/responsibility/current-topics/dakota-access-pipeline.html>];

¹⁹⁶ Energy Transfer Equity. SEC Form 10-K. February 29, 2016 at 89.

¹⁹⁷ This excludes the cost of ETP’s and Phillips 66’s extension of the DAPL/Bakken into Louisiana, known as the Bayou Bridge pipeline.

¹⁹⁸ Kunkel, Cathy and Clark Williams-Derry. [IEEFA and Sightline Institute, respectively]. “The high-risk financing behind the Dakota Access pipeline.” November 2016 at 3. [Available at: <http://ieefa.org/wp-content/uploads/2016/11/The-High-Risk-Financing-Behind-the-Dakota-Access-Pipeline-NOV-2016.pdf>]

¹⁹⁹ Simon, Morgan. [Interview with Rebecca Abramson, I]. “We’re not done with DAPL: How investors can still support Indigenous rights.” *Forbes*, November 1, 2018. [Available at: <https://www.forbes.com/sites/morgansimon/2018/11/01/were-not-done-with-dapl-how-investors-can-still-support-indigenous-rights/>]

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million (specifically, \$50 million²⁰⁰ + \$100 million²⁰¹ + CAN \$150 million²⁰²), and DNB's commitment to Phillips 66 totaled \$240 million.²⁰³ BNP Paribas commitments totaled ~U.S. \$ 280 million (specifically, \$50 million²⁰⁴ + CAN \$25 million²⁰⁵ + CAN \$275 million²⁰⁶) to Enbridge and another \$162.5 million (specifically, \$116 million²⁰⁷ + \$46.5 million²⁰⁸) to Marathon. ING, meanwhile, is financing Continental Resources, a leading Bakken producer and beneficiary of DAPL/Bakken,²⁰⁹ as well as Oasis Petroleum, which ships its Bakken oil through DAPL daily.²¹⁰ Hence visibility is necessary if divestment progress is to be gauged. Of course numerous other DAPL banks have extensive financing ties to Enbridge, Marathon, and/or Phillips 66.²¹¹

Finally, credit facility lending commitments provide just a slice of the full dynamic of debt creation. Initial DAPL finance information did not include banks underwriting longer-term debt, in the form of new issuances of bonds, a regular practice to pay off the balance on credit facilities for the joint-venturers.²¹² In other words, the dynamic of debt creation in which rolling loans gather no loss, and the banks dine on the fees, is hidden.²¹³ Encompassing the entire U.S. oil and gas sector, the total value of new issued debt

²⁰⁰ Enbridge, Inc. SEC Form F-4, Exhibit 10.1. September 23, 2016. [Available at: <https://www.sec.gov/Archives/edgar/data/895728/000119312516718317/0001193125-16-718317-index.htm>]

²⁰¹ Enbridge, Inc. SEC Form F-4, Exhibit 10.4. September 23, 2016. [Available at: <https://www.sec.gov/Archives/edgar/data/895728/000119312516718317/0001193125-16-718317-index.htm>]

²⁰² Enbridge, Inc. SEC Form F-4, Exhibit 10.10. September 23, 2016. [Available at: <https://www.sec.gov/Archives/edgar/data/895728/000119312516718317/d407725dex1010.htm>]

²⁰³ Phillips 66. SEC Form 10-K, Exhibit 10.4. February 17, 2017. [Available at: <https://www.sec.gov/Archives/edgar/data/1534701/000153470117000051/0001534701-17-000051-index.htm>]

²⁰⁴ Enbridge, Inc. SEC Form F-4, Exhibit 10.1. September 23, 2016. [Available at: <https://www.sec.gov/Archives/edgar/data/895728/000119312516718317/0001193125-16-718317-index.htm>]

²⁰⁵ Enbridge, Inc. SEC Form F-4, Exhibit 10.12. September 23, 2016. [Available at: <https://www.sec.gov/Archives/edgar/data/895728/000119312516718317/d407725dex1012.htm>]

²⁰⁶ Enbridge, Inc. SEC Form F-4, Exhibit 10.10. September 23, 2016. [Available at: <https://www.sec.gov/Archives/edgar/data/895728/000119312516718317/d407725dex1010.htm>]

²⁰⁷ Marathon Petroleum Co. SEC Form 8-K, Exhibit 10.1. July 26, 2016. [Available at: <https://www.sec.gov/Archives/edgar/data/1510295/000151029516000111/0001510295-16-000111-index.htm>]

²⁰⁸ Marathon Petroleum Co. SEC Form 8-K, Exhibit 10.2. July 26, 2016. [Available at: <https://www.sec.gov/Archives/edgar/data/1510295/000151029516000111/0001510295-16-000111-index.htm>]

²⁰⁹ Continental Resources. SEC Form 8-K, Exhibit 10.1. April 12, 2018. [Available at: <https://www.sec.gov/Archives/edgar/data/732834/000119312518115589/0001193125-18-115589-index.htm>]; Continental Resources. "Investor update." October 2018. [Available at: <http://phx.corporate-ir.net/phoenix.zhtml?c=197380&p=irol-presentations>]

²¹⁰ Oasis Petroleum. SEC Form 8-K, October 19, 2018. [Available at: <https://www.sec.gov/Archives/edgar/data/1486159/000148615918000039/0001486159-18-000039-index.htm>]; Choudhury, Nilanjan. "Oil Boom drives North Dakota production to record levels." October 19, 2018. NASDAQ. October 19, 2018. [Available at: <https://www.nasdaq.com/article/oil-boom-drives-north-dakota-production-to-record-levels-cm1039563>]

²¹¹ See BanksTalking.org.

²¹² Energy Transfer Partners. SEC Form 424B5. [Prospectus]. January 11, 2017. See "use of proceeds": https://www.sec.gov/Archives/edgar/data/1012569/000119312517008974/d298922d424b5.htm#supptoc298922_4 Phillips 66 Partners. SEC Form 424B5. [Prospectus]. May 5, 2017. See "use of proceeds": <https://www.sec.gov/Archives/edgar/data/1572910/000157104917008210/t1702755-424b5.htm#bUOP>

²¹³ PLS Inc. Capitalize. "Oil & Gas industry raised \$186 billion through U.S. public offerings in 2016." February 13, 2017 [Available at: <http://www.marketwire.com/press-release/oil-gas-industry-raised-186-billion-through-us-public-offerings-in-2016-2195495.htm>]

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was \$211 billion in 2014, \$196 billion in 2015, and \$186 billion in 2016; collectively, a handful of banks collected billions in fees each year for the privilege of facilitating this debt creation.²¹⁴

This dynamic of debt formation delays GHG reductions, and thus “leads to economic and institutional lock-in into carbon-intensive infrastructure.”²¹⁵

4.4. Scrutiny moving forward

Mazaskatalks.org was created in 2017 by an alliance of Indigenous groups to help expand focus and bank pressure from Standing Rock to include tar sands expansion in Canada, impacting also Minnesota and the Salish Sea, which connects Vancouver and Seattle.²¹⁶ The site published an expanded Sankey plot which included financing (in the form of both credit facility commitments and new issues of bonds) to the Energy Transfer companies as well as the companies pushing three tar sands expansion projects: the Kinder Morgan’s Trans Mountain pipeline (since acquired by the Canadian government), TransCanada’s Keystone XL, and Enbridge’s Line 3.

One aim was to encourage people to get their tribe or municipal government to no longer conduct business with financial institutions banking on these companies, and thus also banking on a vision of maximizing North American oil throughput without regard for Tribal and First Nation sovereignty.²¹⁷

This attests to the “persistence of the problem of Natives’ exteriority to settler sovereignty” that Patrick Wolfe writes about in *Traces of History*, explaining:

This persistence accounts for the structural dimension of invasion, which has to suppress — or, at least, contain — the Native alternative across time. As observed, the structures are not inert. They are constituted through events, through practices that colonizers repeatedly strive to maintain, in various shifting adaptations to Natives’ stubborn exteriority. As Elizabeth Strakosch and Aliss Macoun have observed, “the flipside of invasion being a structure not an event is that [settler] sovereignty is a constant performance claiming to be an essence.”²¹⁸

Beyond calling on individual customers to discipline banks by withdrawing deposits,²¹⁹ MazaSkaTalks.org also urged people in their own communities to figure out whether their tribe or municipal government was doing its banking with DAPL/Bakken banks or tar sands pipeline banks, and, if so, push officials to end those relationships.

²¹⁴ PLS Inc. Capitalize. “Oil & Gas industry raised \$186 billion through U.S. public offerings in 2016.” February 13, 2017 [Available at: <http://www.marketwire.com/press-release/oil-gas-industry-raised-186-billion-through-us-public-offerings-in-2016-2195495.htm>]

²¹⁵ Intergovernmental Panel on Climate Change. [Approved draft, subject to copyedit]. “Global warming of 1.5° C: An IPCC special report on the impacts of global warming of 1.5° C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development and efforts to eradicate poverty.” October 8, 2018 at at 2-47 re “lock-in”:

Less CO2 emission reductions in the near term imply steeper and deeper reductions afterwards. This is a direct consequence of the quasi-linear relationship between the total cumulative amount of CO2 emitted into the atmosphere and global mean temperature rise. Besides this clear geophysical trade-off over time, delaying GHG emissions reductions over the coming years also leads to economic and institutional lock-in into carbon-intensive infrastructure, that is, the continued investment in and use of carbon-intensive technologies that are difficult or costly to phase-out once deployed.

²¹⁶ See MazaSkaTalks.org/banks and MazaSkaTalks.org/pipelines.

²¹⁷ MazaSkaTalks.org.

²¹⁸ Wolfe, Patrick. “Traces of history: Elementary structures of race.” Verso: London. 2016 at 36.

²¹⁹ Hale, Thomas. “An environmental run on the bank.” Financial Times. July 20, 2018.

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Hence there is potential for cities — not just individual consumers — to “discipline banks”²²⁰ on a greater scale. New municipal banks would overlap with municipal authority aimed at remaking localized energy systems to meet sustainability goals, putting people first.

Intersectional divestment entails complicating dimensions. BNP Paribas, having disavowed tar sands financing, remains as the lead financier GEO Group, a global private prison corporation capitalizing on U.S. demand for immigrant (and largely Indigenous) family detention and deportation services, including family separation.²²¹

4.5 Public disassociation from private capital

Standing Rock crystallized solidarity over a new set of possibilities, and policies. In “A Call for Climate Justice and Immediate Action,” Women for Climate Justice, facilitated by the Women’s Earth and Climate Action Network, issued a plea to all attendees of the Global Climate Action Summit in San Francisco in September, 2018:

We must transition from an extractivist, colonial paradigm of “exploit and extract” to a sustainable, globally-conscious one of “respect, restore and replenish.” We must rapidly halt the extraction and burning of coal, oil and gas, while simultaneously building a new economy predicated on community-led solutions and women’s rights, Indigenous rights, the rights of nature and the rights of future generations.

This starts with policies to promote energy democracy, in which women, Indigenous people, communities of color, low-income communities, municipalities and small businesses are empowered to own and manage our energy resources. We must recognize the inalienable rights and invaluable traditional knowledge of Indigenous Peoples, and follow their environmental justice leadership in climate solutions. Such a plan must also prioritize and advance women’s leadership, as women are disproportionately harmed by climate change while possessing unique knowledge and skills to drive innovative solutions. Finally, we must protect biodiversity, seed sovereignty, and food security, and respect the rights of nature for the forests, oceans, rivers and lands upon which all life depends.

Crucially, we must do everything we can to ensure justice is respected in the transition to 100% renewable energy. Any solution that does not safeguard the dignity and flourishing of people and the planet must be rejected. False solutions, such as dangerous nuclear power plants; increased natural gas extraction; mega-dams that cause irreversible damage to biodiversity, food sovereignty and livelihoods; geo-engineering; bioenergy; carbon trading schemes; and carbon capture and storage have no place in the Just Transition.

²²⁰ Hale, Thomas. “An environmental run on the bank.” Financial Times. July 20, 2018; Homanen, Mikael. “Depositors disciplining banks: The impact of scandals.” Working Paper. 2018.

²²¹ GEO Group. SEC Form 8-K. March 23, 2017. [Available at: <https://www.sec.gov/Archives/edgar/data/923796/000119312517101954/0001193125-17-101954-index.htm>]; GEO Group. SEC Form 8-K. Ex. 99.2. August 8, 2018. [Available at: <https://www.sec.gov/Archives/edgar/data/923796/000119312518242807/0001193125-18-242807-index.htm>]

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Finally, we call on all governments to respect the right to freedom of expression and peaceful protest, and to immediately halt the criminalization of land defenders, whose efforts are central to a climate-just world.²²²

Bank of America and Wells Fargo — lead backers of the summit, and set to potentially lose city banking contracts in San Francisco and Seattle, respectively — sponsored the “Global Climate Action Summit.”²²³

Both continue to finance Energy Transfer.²²⁴ Both have enormous stakes in export LNG. Both are locking in future greenhouse gas pollution. This is done through systemic deference to markets in favor of capital efficiency, with privilege to carbon lock-in.

Financing Indian wars and resource colonialism has always been an expensive pursuit.²²⁵ Banks and financial institutions are fundamental and indispensable to the pursuit of empire building²²⁶ and the oppression of colonized territories and peoples.

²²² Women for Climate Justice. “A call for climate justice and immediate action: A Message from Women for Climate Justice to the Global Climate Action Summit Steering Committee, Government Representatives and Participants.” San Francisco, California September 11, 2018. [Available at: <https://wecaninternational.org/pages/call-to-action-2018>]

²²³ See: <https://www.globalclimateactionsummit.org/sponsors/>

²²⁴ Energy Transfer Partners. SEC Form 8-K, Exhibits 10.1 and 10.2. December 6, 2017. [Available at: <https://www.sec.gov/Archives/edgar/data/1161154/000116115417000085/000116115417000085-index.htm>]

²²⁵ From George Washington to James Duane, 7 September 1783, “Founders Online, National Archives, last modified June 13, 2018, <http://founders.archives.gov/documents/Washington/99-01-02-11798>. [This is an Early Access document from The Papers of George Washington.] (“At first view, it may seem a little extraneous, when I am called upon to give an opinion upon the terms of a Peace proper to be made with the Indians, that I should go into the formation of New States; but the Settlement of the Western Country and making a Peace with the Indians are so analogous that there can be no definition of the one without involving considerations of the other, for I repeat it, again, and I am clear in my opinion, that policy and economy point very strongly to the expediency of being upon good terms with the Indians, and the propriety of purchasing their Lands in preference to attempting to drive them by force of arms out of their Country; which as we have already experienced is like driving the Wild Beasts of the Forest which will return us soon as the pursuit is at an end and fall perhaps on those that are left there; when the gradual extension of our Settlements will as certainly cause the Savage as the Wolf to retire; both being beasts of prey tho’ they differ in shape. In a word there is nothing to be obtained by an Indian War but the Soil they live on and this can be had by purchase at less expense, and without that bloodshed, and those distresses which helpless Women and Children are made partakers of in all kinds of disputes with them.”); See also: Robert A. Williams Jr., “Like a Loaded Weapon: The Rehnquist Court, Indian Rights, and the Legal History of Racism in America,” University of Minnesota Press, 2005.

²²⁶ Peter James Hudson, Bankers and Empire, How Wall Street Colonized the Caribbean, The University of Chicago Press, 5 (2017) (“The early history of imperial banking and the internationalization of Wall Street began alongside the project of US colonial expansion at the turn of the nineteenth century and ended amid the financial and economic crisis of the 1930s.”)

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Financing militarized police at Standing Rock was also expensive, with \$15 million in costs sent to North Dakota authorities after the fact²²⁷ from Energy Transfer and, indirectly, its investors.²²⁸ As criminalization against indigenous peoples has increased and become more militarized and normalized²²⁹, divestment remains a critical intersectional strategy for the protection of worlds indigenous peoples and their cultural survival.

Advocates of public banks aim to establish alternative, municipal banks with charters that exclude the practice of financing growth in "fossil fuels, prisons, assault weapons, and weapons of war."²³⁰ Intersectional grassroots campaigns in Los Angeles²³¹, New York City²³², Seattle²³³, San Francisco²³⁴ are setting the course for cities to disassociate from the financial institutions providing for extractive, destructive and short-sighted debt creation.

5. Conclusion

Investors get paid through maximal throughput of fossil fuels, for combustion and plastic

Communities are aiming to transition to 100% renewable power within two decades.²³⁵ This timeframe is consistent with the conservative end of the net-zero emission timeframe for holding global warming to about 1.5° C since the late 1800's.

²²⁷ Attorney General of North Dakota. [News release]. "North Dakota demands federal reimbursement for costs related to pipeline protests." July 20, 2018. [Available at: <https://attorneygeneral.nd.gov/news/north-dakota-demands-federal-reimbursement-costs-related-pipeline-protests/>] ("As a result of the Corps' failure to enforce the law and maintain public order on land under its control, North Dakota was forced to provide a sustained, large-scale public safety response to prevent deaths and protect public safety, health, and property, including that of the protesters. The State response involved thousands of days of law enforcement and first responder time, and the use of considerable amounts of equipment. Stenehjem said "this cost North Dakota \$38 million, which the State maintains the federal government should reimburse because the Corps' failures directly caused the state to incur these costs.")

²²⁸ Macpherson, James. "Dakota Access Developer Gives \$15M Toward Security Costs," *Associated Press*. September 28, 2017. [Available at: <https://www.usnews.com/news/us/articles/2017-09-28/apnewsbreak-pipeline-firm-gives-15m-toward-security-costs/>] ("The builder of the Dakota Access pipeline sent North Dakota \$15 million on Thursday to help pay law enforcement bills related to months of sometimes violent protests over the project's construction. Texas-based Energy Transfer Partners has wired the money, said Mike Nowatzki, a spokesman for Gov. Doug Burgum. Company investors also contributed, he said.")

²²⁹ Indigenous Peoples Law and Policy Program, University of Arizona. "Indigenous resistance to the Dakota Access Pipeline: Criminalization of dissent and suppression of protest." March 16, 2018. [Available at: <https://law.arizona.edu/sites/default/files/Indigenous%20Resistance%20to%20the%20Dakota%20Access%20Pipeline%20Criminalization%20of%20Dissent%20and%20Suppression%20of%20Protest.pdf>]; Taylor, Rory. "The current border crisis feels all too familiar for Indigenous peoples in the United States." *Teen Vogue*. July 12, 2018. [Available at: <https://www.teenvogue.com/story/border-crisis-family-separation-native-indigenous-people/>]

²³⁰ Fielder, Jackie. "Questions remain as Treasurer's Public Bank Task Force comes to a close." *San Francisco Examiner*. September 23, 2018. [Available at: <http://www.sfxaminer.com/questions-remain-treasurers-public-bank-task-force-comes-close/>]

²³¹ See: <https://www.facebook.com/publicbankla/>

²³² See: <https://www.publicbanknyc.org>

²³³ See: <http://www.seattlepublicbanking.org>

²³⁴ See: <https://www.sfpublicbank.org/>

²³⁵ City of San Diego. "Climate Action Plan." December 2015. [Available at: https://www.sandiego.gov/sites/default/files/final_july_2016_eap.pdf]

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Every decimal degree C is destructive and reverberates — each year CO₂ and CH₄ pollution adds another blanket to those already layered into the earth's atmosphere. Two decades of mobilization and employment, centered and focused on getting communities off fossil fuels, is what we require, and the first decade is the most important.

Municipalities face a mosaic of overlapping challenges, on top of transitioning energy, food and water systems off fossil fuels, so as to maximize environmental and health sustainability, not maximize air and water pollution from wastes. Extreme and growing inequality of wealth within the United States is also affected with a public interest, and requires intervention.

Cities require privately held billions to be deployed into public infrastructure, with sustainable and stable energy services. Public banks — subject to public accountability and progress — can facilitate executing the energy and economic transition.

These municipal bank charters may underpin economic and energy transitions in recognition of what Toni Morrison terms the “human project — which is to remain human and block the dehumanization and estrangement of others.”²³⁶

The disguise put on future energy system disfunction and disorder, running up against climate constraints, is American innovation, and the prospect of technological “mastery” of the subsurface²³⁷ in furtherance of American energy dominance.²³⁸

Subsurface “mastery” includes not just maximizing oil and gas production but also utilizing oil and gas industry expertise for injecting CO₂ and other fossil power plant emissions into depleted oil and gas fields. Moniz has testified that all that’s needed is a price signal (whether subsidy, tax credit, or carbon tax) to really spur “carbon capture and sequestration.”²³⁹

Thirty years on from building natural gas up as a bridge fuel, the reality is that methane emissions from the oil and natural gas sector have largely offset CO₂ reductions associated with switching from other fossil fuels to natural gas.²⁴⁰

In 2018, Chevron is advertising the benefits of natural gas on the New York Times.²⁴¹ EDF and ExxonMobil are teaming up for voluntary methane reductions from natural gas operations, deploying fleets of drones.²⁴² Goldman Sachs’s vision of natural gas as the dominant fossil investment has come true for Wall Street, which is raking in interest on the \$833 billion in existing oil and gas debt.²⁴³ Shell touts

²³⁶ Morrison, Toni. “The Origin of Others.” 2017 at 37.

²³⁷ DOE. “Quadrennial Technology Review.” September 10, 2015.

<http://energy.gov/under-secretary-science-and-energy/quadrennial-technology-review-2015>

²³⁸ DOE. Fossil Fuels and American Energy Dominance. 2018. [Available at:

https://www.energy.gov/sites/prod/files/2018/10/f56/American%20Energy%20Dominance_10.18.18.pdf]

²³⁹ C-SPAN. “Energy Security.” September 15, 2015. At 1:34:00:

<https://www.c-span.org/video/?415305-1/secretary-ernest-moniz-testifies-energy-security>

²⁴⁰ PBS Newshour. “The U.S. natural gas industry is leaking way more methane than thought.” July 4, 2018.

<https://www.pbs.org/newshour/science/the-u-s-natural-gas-industry-is-leaking-way-more-methane-than-previously-thought>

²⁴¹ <https://paidpost.nytimes.com/chevron/how-abundant-energy-is-fueling-us-growth.html?section=innovation&subsection=1>

²⁴² <https://www.axios.com/environmental-group-teams-up-with-exxon-on-climate-change-1529944179-e6fb8f6c-8d41-4cc1-8945-5b3399a4e045.html>

²⁴³ <https://www.edf.org/blog/2014/07/09/goldman-sachs-supports-methane-policy-and-why-it-matters>

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its clean energy of natural gas in commercials leading up to interviews of scientists explaining the urgency of climate science to humanity.

Thus far, the rolling loans, offered by syndicates of banks to oil and gas industry players, have gathered no loss. The bankers backing the whole fracking program are dining well on the transaction and trusteeship fees. How will the cloud of at least \$800 billion in debt shape what the public interest requires?

Under the Obama Administration, the Department of Energy released an environmental review of the implications of widespread drilling and fracking for natural gas in support of burgeoning growth in LNG export capacity. The results would be mired in uncertainties and scientific complexities.²⁴⁴

The same had been the case in the 1992, when the first comprehensive U.S. national energy strategy, led by Adm. David Watkins, built up natural gas as a bridge fuel to today.²⁴⁵

Ostensibly the DOE's environmental review was intended to serve as guidance in the DOE's public interest determination of LNG exports to non-Free-Trade-Agreement countries — and export applications were approved on the basis that the economic benefits outweighed environmental and consumer concerns. But of course neither the economic benefits nor the environmental impacts would be equally distributed.

Speaking at the InfraGard 2006 National Conference, the executive of Shell put things bluntly, though at the time the concept was liquefied natural gas imports, not exports: "Those who would be near the liquefied gas terminals, for reasons we can appreciate, are resistant. But we do need the liquefied natural gas."²⁴⁶

In a report commissioned by the Department of Energy, a consultancy admits the imbalance in distribution of the economic benefits from exporting LNG²⁴⁷:

"Different socioeconomic groups depend on different sources of income, though through retirement savings an increasingly large number of workers share in the benefits of higher income to natural resource companies whose shares they own. Nevertheless, impacts will not be positive for all groups in the economy ... households with income solely from wages or government transfers, in particular, might not participate in these benefits."

In other words, the benefits accrue to investors, and of course the largest of those investors are the banks and bondholders, holding, as assets, \$833 billion in oil and gas industry debt obligations. This admission of imbalanced benefits — a side note in 2012 — would become unspoken in subsequent reports touting the economic benefits of LNG exports, measured in terms of increased drilling and fracking.

With respect to LNG exports, the public interest was replaced by the interest of the oil and gas industry.

²⁴⁴ U.S. Department of Energy. "Addendum to environmental review documents concerning exports of natural gas from the United States." August 2014 at 19, 32 and 44.

<https://www.energy.gov/sites/prod/files/2014/08/f18/Addendum.pdf>

²⁴⁵ C-SPAN. "Natural gas decontrol bill signing ceremony. July 26, 1989 at 15:40: <https://www.c-span.org/video/?8500-1/natural-gas-decontrol-bill-signing-ceremony>.

²⁴⁶ C-SPAN. "Energy Supply Security." August 22, 2006 at 8 to 9

<https://www.c-span.org/video/?193960-1/energy-supply-security>

²⁴⁷ 77 Fed. Reg. 73629. December 11, 2012.

https://www.energy.gov/sites/prod/files/2013/04/ff/fr_notice_two_part_study.pdf

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Industry's interest, of course, is maximizing production while riding cycles of building out supply that stimulates periods of growth in demand that in turn encourages building out more supply. About global LNG market trends, CEO Ryan Lance of Conoco Phillips states²⁴⁸:

"It's an oversupplied market today. So it's a buyer's market. So the buyers are being able to demand lots of terms and conditions from the suppliers because a lot of projects were built over the last decade set of now come on but the demand he's growing primarily on the Asian side China in particular India growing as well so we see that demand catching up with the oversupply and eliminating that differential sometime in the next decade probably 2022, 2023, 2024 so there will be more investment needed in Greenfield LNG projects both here in the United States and around the world in order to meet that growing demand overtime but the projects do take quite a bit of time to execute so the cycles in the LNG business are still quite wide so we go through valleys and Peaks and troughs probably six seven eight years in terms of time frame will you be over supply for a period, then no new projects will get built, demand will catch up, there's a price has to rise in order to incentivize those projects to be built and we see that cycle coming again probably early in the next decade."

The Supreme Court's 1944 decision in FPC v. Hope Gas added: "When it comes to cases of abandonment or of extensions of facilities or service, we may assume that, apart from the express exemptions [Footnote 21] contained in § 7, considerations of conservation are material to the issuance of certificates of public convenience and necessity."²⁴⁹

At issue in the case, as West Virginians saw it in the case, was that federal action by the FPC was causing production at lower prices to Ohio and Pennsylvania, and at a faster throughput, than in the long term interest of West Virginia. Fast forward to today, and the United States natural gas industry is aiming to challenge Qatar and Australia in liquefied natural gas export capacity. This will see the Appalachian basin and the Permian also peak in production, and hasten inexorable decline down the "down-escalator at increasing speeds."

From July 2012 to July 2018, tight oil and shale gas production doubled, from roughly 10 MMBoe/day to 20 MMBoe/day.²⁵⁰ Yet, there are 20 percent fewer jobs in the oil and gas industry today than in July 2012. The number of oil and gas industry jobs has dropped 25 percent since peaking in late 2014 at 200,000 jobs.²⁵¹

Slowing losses in oil and gas industry employment requires increasing pipeline and LNG export capacity, and thus also throughput. Never mind "sweet spot exhaustion" and the chair of the National Petroleum

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²⁴⁸ Ryan Lance, CEO of Conoco Phillips. [Interview: Columbia Energy Exchange. "Opportunities & Challenges in the Oil & Gas Industry." Recorded June 11, 2018 at 17:00 to 18:00.

²⁴⁹ FPC v. Hope Gas. January 3, 1944.

²⁵⁰ EIA. "Drilling Productivity Report." June 18, 2018. [Available at: <https://www.eia.gov/petroleum/drilling/pdf/dpr-full.pdf>]

²⁵¹ U.S. Bureau of Labor and Statistics. All employees, oil and gas extraction, seasonally adjusted. Accessed July 1, 2018, available at

https://data.bls.gov/timeseries/CES1021100001?amp%253bdata_tool=XGtable&output_view=data&include_graphs=true

F&WW fiddling:

<https://docs.google.com/spreadsheets/d/1e0dNVRfdJKwlvSfSmJ-Lc1KxTR6uQ56unBLkavpOcaE/edit?usp=sharing>

https://docs.google.com/spreadsheets/d/g/2PACX:1vQDU4zskXS0MWA9FahlpWWSzj3k25Uw928CU3kBkF1ERebPvOut1_njOs0KrMjtjRAVirj3PDaTYGB/pubchrt?oid=385524787&format=interactive Evidently Starbucks had 238,000 employees in 2016.

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The Project would not involve gas extraction activities. Section 1.3 of the final EIS addresses comments that we received recommending that environmental impacts associated with natural gas production, including the practice of hydraulic fracturing ("fracking"), be evaluated in our review.

Individuals (IND)

IND156 - Bank S. Talking

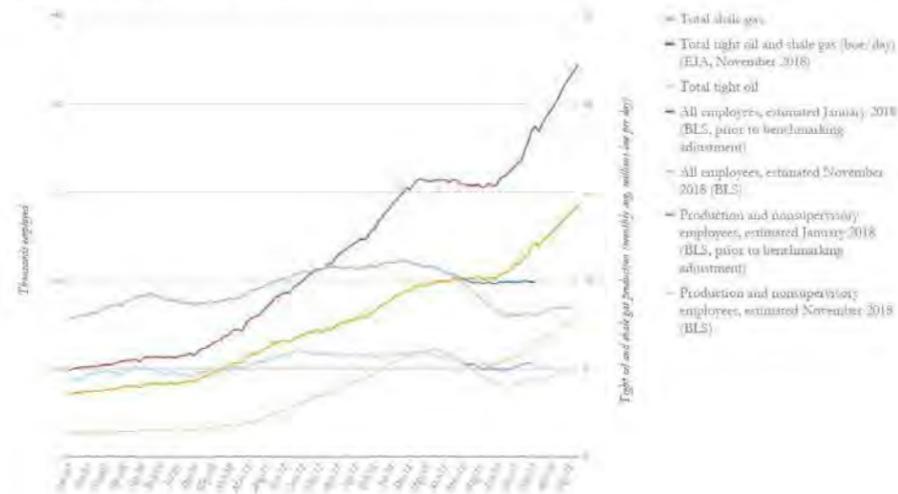
Council likening shale production to “climbing up a down-escalator at increasing speed”. With respect to climate change, and the necessity of reducing oil and gas combustion, this is a recipe for economic disorder, and it illustrates the need for a just transition off fossil fuels.

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For a durable, climate safe, U.S. energy system, the public convenience and necessity of transitioning off fossil fuels — through a Green New Deal — must guide FERC as it faces discrete questions of certifying increases in natural gas system throughput, and thus consumption, or certifying abandonment of natural gas infrastructure. Greenhouse gas pollution from fossil energy dependence is affected with a public interest in a new way, with respect to humanly necessary carbon pollution constrains.

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Tight oil, shale gas, and U.S. oil & gas sector employment from 2007 to present



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This comment is outside the scope of the EIS. Climate change is addressed in section 4.13.2 of the EIS.