



## Office of Energy Projects Energy Infrastructure Update *For March 2017*

### Natural Gas Highlights

- Eastern Shore received authorization to place into service its White Oak Mainline Expansion Project which will provide 45 MMcf/d of capacity to Calpine Energy to serve its proposed 309 MW Garrison Energy Center in Dover, DE.
- Transco received authorization to place into service partial path of its Dalton Expansion Project. The Project will provide 448 MMcf/d of capacity from Transco's Station 210 in Mercer County, NJ through the proposed Dalton Lateral to delivery points in Murray County, GA. Transco received authorization to commence partial path interim service from the 210 station Zone 6 Pooling Point to the Holmesville interconnect in Pike County, MS.
- American Midstream requests authorization to place into service its Natchez Pipeline which will provide 48.3 MMcf/d of capacity in portions of LA and MS.
- Trans-Pecos Pipeline received authorization to place into service its Presidio Crossing Project on the International Boundary between the U.S. and Mexico near the City of Presidio, in Presidio County, TX. The border crossing will provide 1,300 MMcf/d of export/import capacity between the U.S. and Mexico.
- Sabine Pass Liquefaction received authorization to place into service Train 3 at its export facility in Cameron Parish, LA. Train 3 will provide an export deliverability of approximately 570 MMcf/d.
- National Fuel received authorization to abandon its Heath Compressor Station and to refunctionalize its Line FM-92 from transmission to gathering.
- National Fuel requests authorization to (i) install 14.4 miles of pipeline (Line KL), (ii) replace 5.8 miles and idle 12.5 miles of Line FM120, and (iii) abandon in place 7.7 miles of Line YM28 all in Cameron, Elk, and McKeam Counties, PA. The Line YM28 and Line FM120 Modernization Project is designed to enhance service to National Fuel's existing customers.
- Northern requests authorization to install and operate its Lake Mills Compressor Station Project, a new 15,900 horsepower compressor station and abandon short segments of pipeline, all in Worth County, IA. The project will allow Northern to provide 53MMcf/d of firm transportation service to Minnesota Energy Resources Corporation.
- Transco requests authorization to construct and operate its Northeast Supply Enhancement Project in Lancaster and Chester Counties, PA, Middlesex and Somerest Counties, NJ, and NY State waters. The project consists of 13.5 miles of onshore looping, 23.49 miles of offshore looping, and 53,902 HP of compression. The project will allow Transco to provide 400 MMcf/d of firm transportation service from its Compressor Station 195 in York County, PA to its offshore Rockaway Transfer Point in NY State waters.
- Northern requests authorization to (i) construct and operate two mainline pipeline extension segments totaling approximately 2.25 miles to its existing pipelines, and (ii) abandon short segments of pipeline, all located in Dacota County, MN and Worth County, IA.
- Driftwood requests authorization to construct, own, and operate a new pipeline system to serve Driftwood's proposed LNG Terminal in Calcasieu Parish, LA. Pipeline system will consist of 96 miles of pipeline, three compressor stations totaling 269,500 horsepower, and related facilities. The pipeline system will provide 4,000 MMcf/d to the LNG Terminal.
- Driftwood LNG requests authority to site, construct, and operate liquefied natural gas (LNG) export facilities, including five LNG plants, three LNG storage tanks, marine facilities and associated infrastructure and support facilities, on the west bank of the Calcasieu River near Carlyss, Calcasieu Parish, LA. The LNG export terminal will have deliverability of 4,000 MMcf/d.
- ANR Storage requests authorization to abandon one injection/withdrawal well at its Cold Springs 12 Storage Field in Kalkasla County, MI.



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### Natural Gas Activities in March 2017

Status	No. of Projects	Storage Capacity (Bcf)	Deliverability (MMcf/d)	Capacity (MMcf/d)	Miles of Pipeline	Compression (HP)
<b>Pipeline</b>						
Placed in Service	4			1,393.3	58.1	3,550
Certificated	1			0	0	0
Proposed	5			4,453	149.7	339,302
<b>Storage</b>						
Placed in Service	0	0.0	0.0			0
Certificated	0	0.0	0.0			0
Proposed	0	0.0	0.0			0
<b>LNG (Import &amp; Export)</b>						
Placed in Service	0	0	570			0
Certificated (Import/Export)	0	0	0			0
Proposed (Export)	1	15.2	4,000			0

Source: Staff Database

### Natural Gas Activities through March 31, 2017 January through March 31, 2016

Status	No. of Projects	Storage Capacity (Bcf)	Deliverability (MMcf/d)	Capacity (MMcf/d)	Miles of Pipeline	Compression (HP)
<b>Pipeline</b>						
Placed in Service through March 31, 2016	8 6			4,569.3 1,134.0	65.3 51.7	199,850 46,800
Certificated through March 31, 2016	14 16			9,627.9 4,965.9	1,253.2 789.4	618,584 523,622
<b>Storage</b>						
Placed in Service through March 31, 2016	0 0	0 0	0 0			0 0
Certificated through March 31, 2016	0 0	0 0	0 0			0 0
<b>LNG (Import &amp; Export)</b>						
Placed in Service through March 31, 2016	0 0	0 0	570 0			0 0
Certificated (Import/Export) through March 31, 2016	0 0	0 0	0 0			0 0

Source: Staff Database



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### Hydropower Highlights (nonfederal)

- FFP Missouri 12, LLC was issued an original license for the 17.0 MW Allegheny Lock and Dam 2 Hydroelectric Project No. 13755. The project will be located at the U.S. Army Corps of Engineers' Allegheny Lock and Dam 2 on the Allegheny River, near the Borough of Sharpsville, Allegheny County, PA.
- BOST5 Hydroelectric, LLC was issued an original license for the 28.1 MW Red River Lock and Dam No. 5 Hydroelectric Project No. 12758. The project will be located at the U.S. Army Corps of Engineers' Lock and Dam No. 5 on the Red River, near the Town of Ninock, Bossier Parish, LA.
- Clark Canyon Hydro, LLC was issued an original license for the 4.7 MW Clark Canyon Dam Hydroelectric Project No. 14677. The project will be located at the U.S. Bureau of Reclamation's Clark Canyon Dam on the Beaverhead River, near the Town of Dillon, Beaverhead County, MT.
- Water Street Land, LLC was issued a small hydropower exemption from licensing for the 0.360 MW Natick Pond Dam Hydroelectric Project No. 14680. The project will be located on the Pawtuxet River, in the Towns of Warwick and West Warwick, Kent County, RI.
- North Western Corporation was issued an order amending license to raise the capacity of its Missouri-Madison Project No. 2188 from 334.29 MW to 337.29 MW. The project is located on the Madison and Missouri Rivers in Gallatin, Madison, Lewis and Clark, and Cascade Counties, MT.

#### Hydropower Project Activities in March 2017

Status	Conventional		Pumped Storage		Hydrokinetic		Total No. of Projects	Total Capacity (MW)
	No.	Capacity (MW)	No.	Capacity (MW)	No.	Capacity (MW)		
<b>Filed</b>								
License	0	0	0	0	0	0	0	0
10-MW Exemption	0	0	0	0	0	0	0	0
Capacity Amendment	0	0	0	0	0	0	0	0
Conduit Exemption	0	0	0	0	0	0	0	0
<b>Issued</b>								
License	3	49.800	0	0	0	0	3	49.800
10-MW Exemption	1	0.360	0	0	0	0	1	0.360
Capacity Amendment	1	3.000	0	0	0	0	1	3.000
Conduit Exemption	0	0	0	0	0	0	0	0
<b>Placed in Service</b>								
License	0	0	0	0	0	0	0	0
10-MW Exemption	0	0	0	0	0	0	0	0
Capacity Amendment	0	0	0	0	0	0	0	0
Conduit Exemption	0	0	0	0	0	0	0	0

Source: Staff Database

#### Hydropower Project Activities Year to Date (through March 31, 2017)

Status	Conventional		Pumped Storage		Hydrokinetic		Total No. of Projects	Total Capacity (MW)
	No.	Capacity (MW)	No.	Capacity (MW)	No.	Capacity (MW)		
<b>Filed</b>								
License	1	1.500	0	0	0	0	1	1.500
10-MW Exemption	0	0	0	0	0	0	0	0
Capacity Amendment	0	0	0	0	0	0	0	0
Conduit Exemption	0	0	0	0	0	0	0	0



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Status	Conventional		Pumped Storage		Hydrokinetic		Total No. of Projects	Total Capacity (MW)
	No.	Capacity (MW)	No.	Capacity (MW)	No.	Capacity (MW)		
<b>Issued</b>								
License	4	77.900	0	0	0	0	4	77.900
10-MW Exemption	1	0.360	0	0	0	0	1	0.360
Capacity Amendment	1	3.000	0	0	0	0	1	3.000
Conduit Exemption	0	0	0	0	0	0	0	0
<b>Placed in Service</b>								
License	0	0	0	0	0	0	0	0
10-MW Exemption	0	0	0	0	0	0	0	0
Capacity Amendment	0	0	0	0	0	0	0	0
Conduit Exemption	0	0	0	0	0	0	0	0

Source: Staff Database

### Electric Generation Highlights

- CPV Maryland LLC's 746 MW natural gas-fired CPV St Charles Energy Center Project in Charles County, MD is online.
- Minnesota Municipal Power Agency's 46 MW natural gas-fired Shakopee Energy Park Project in Scott County, MN is online.
- Western Plains Wind Project LLC's 280 MW Western Plains Wind Project in Ford County, KS is online.
- Mariah Del Norte LLC's 230 MW Mariah Del Norte Wind Project in Parmer County, TX is online. The power generated is sold to ERCOT North Load under long-term contract.
- Cimarron Bend Wind Project II LLC's 200 MW Cimarron Bend Wind II Project in Clark County, KS is online.
- Broadview Energy JN LLC's 182 MW Broadview Energy JN Wind Project in Curry County, NM is online. The power generated is sold to Southern California Edison Co. under long-term contract.
- Broadview Energy KW LLC's 143 MW Broadview Energy KW Wind Project in Curry County, NM is online. The power generated is sold to Southern California Edison Co. under long-term contract.
- Wilson Solar Farm 1 & 3 LLCs, Mount Olive I LLC, and GCL New Energy Inc.'s combined 62 MW Wilson Solar Farms 1 through 6 Projects in Wilson County, NC are online.
- Duke Energy Carolinas' 59 MW Monroe Solar Facility (Duke) Project in Union County, NC is online.
- Thunderhill Solar Power LLC's 38 MW Thunderhill Solar Project in Glenn County, CA is online.
- TPE Alta Luna LLC's 28 MW Alta Luna Solar Project in Luna County, NM is online. The power generated is sold to Tri State Generation & Transmission Association Inc. under long-term contract.
- Simcoe Solar LLC's 20 MW Simcoe Solar Project in Elmore County, ID is online. The power generated is sold to Idaho Power Company under long-term contract.
- Orchard Ranch Solar LLC's 20 MW Orchard Ranch Solar Project in Ada County, ID is online. The power generated is sold to Idaho Power Company under long-term contract.
- Mountain Home Solar LLC's 20 MW Mt. Home Solar Project in Elmore County, ID is online. The power generated is sold to Idaho Power Company under long-term contract.
- American Falls Solar II LLC's 20 MW American Falls Solar II Project in Power County, ID is online. The power generated is sold to Idaho Power Company under long-term contract.
- American Falls Solar LLC's 20 MW American Falls Solar Project in Power County, ID is online. The power generated is sold to Idaho Power Company under long-term contract.
- SolarCity Corp.'s 15 MW Kauai Island Utility Cooperative Solar Project in Kauai County, HI is online.
- Solean LLC's 8 MW Solean Solar Project in Cattaraugus County, NY is online.
- Aurora Distributed Solar LLC's 8 MW Chisago County Solar Project in Chisago County, MN is online.
- Hemlock Solar LLC's 7 MW Hemlock Solar Project in Northampton, NC is online. The power generated is sold to Dominion Energy Inc. under long-term contract.
- Dom Solar Lessor I LP's 6 MW Intel Corp Folsom Carport Phase 2 Project in Sacramento County, CA is online. The power generated is sold to Sacramento Municipal Utility District under long-term contract.



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- Hector Farm LLC's 5 MW Hector Farm Solar Project in Montgomery County, NC is online. The power generated is sold to Duke Energy Progress under long-term contract.
- Franklinton Solar LLC's 5 MW Franklinton Solar Project in Franklin County, NC is online. The power generated is sold to Duke Energy Progress under long-term contract.
- Western Farmers Electric Cooperative's 5 MW Cyril Solar Project in Caddo County, OK is online.
- Bearford Farm LLC's 5 MW Bearford Farm Solar Project in Pender County, NC is online. The power generated is sold to Duke Energy Carolinas under long-term contract.
- Aloha Solar Energy Fund I LLC's 5 MW Aloha Solar Energy Fund 1 Project in Honolulu County, HI is online.

### New Generation In-Service (New Build and Expansion)

Primary Fuel Type	March 2017		January – March 2017 Cumulative		January – March 2016 Cumulative	
	No. of Units	Installed Capacity (MW)	No. of Units	Installed Capacity (MW)	No. of Units	Installed Capacity (MW)
Coal	0	0	0	0	0	0
Natural Gas	2	792	22	2,241	17	96
Nuclear	0	0	1	102	0	0
Oil	0	0	0	0	1	2
Water	0	0	0	0	5	160
Wind	6	1,036	21	2,788	14	975
Biomass	1	3	1	3	9	33
Geothermal Steam	0	0	0	0	0	0
Solar	34	375	95	1,179	91	1,073
Waste Heat	0	0	0	0	0	0
Other *	2	0	7	1	2	0
<b>Total</b>	<b>45</b>	<b>2,206</b>	<b>147</b>	<b>6,314</b>	<b>139</b>	<b>2,339</b>

Sources: Data derived from Velocity Suite, ABB Inc. and The C Three Group LLC which include plants with nameplate capacity of 1 MW or greater. The data may be subject to update.

### Total Available Installed Generating Capacity

	Installed Capacity (GW)	% of Total Capacity
Coal	285.17	24.08%
Natural Gas	512.27	43.26%
Nuclear	108.16	9.13%
Oil	44.32	3.74%
Water	100.72	8.51%
Wind	84.79	7.16%
Biomass	16.78	1.42%
Geothermal Steam	3.90	0.33%
Solar	26.17	2.22%
Waste Heat	1.04	0.09%
Other*	0.76	0.06%
<b>Total</b>	<b>1,184.08</b>	<b>100.00%</b>

Sources: Data derived from Velocity Suite, ABB Inc. and The C Three Group LLC which include plants with nameplate capacity of 1 MW or greater. The data may be subject to update.

\* "Other" includes purchased steam, tires, and miscellaneous technology such as batteries, fuel cells, energy storage, and fly wheel.



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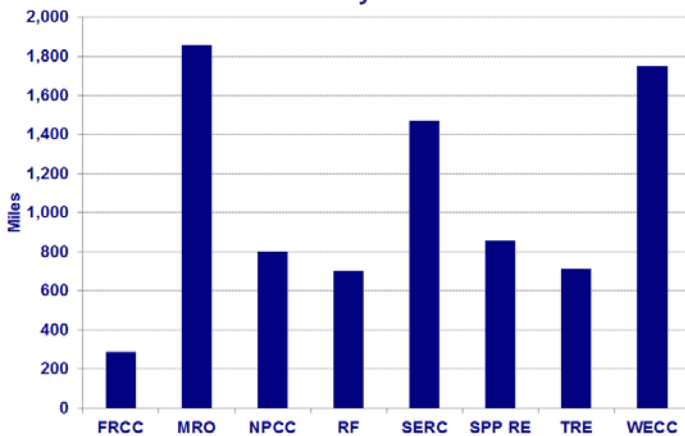
## Electric Transmission Highlights

- The SunZia Southwest Transmission Project is expected to start construction in 2018. The 515 mile, 500 kV Transmission Project will connect AZ and NM. The project is expected to be completed by 2020.

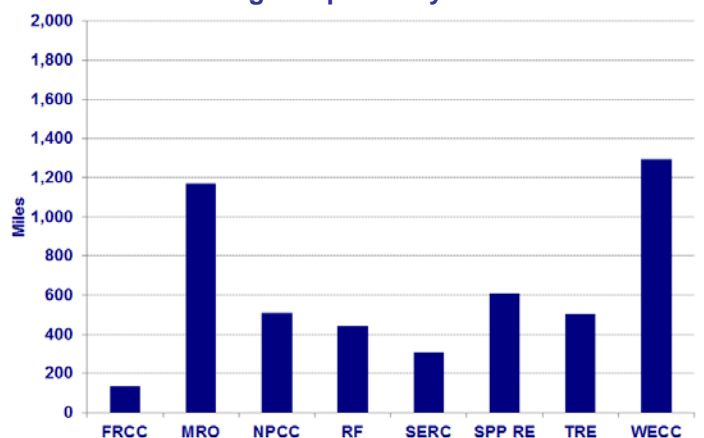
Voltage (kV)	Transmission Projects Completed				Proposed Transmission Projects In-Service by March 2019	
	March 2017	March 2016	January – March 2017 Cumulative	January – December 2016 Cumulative	High Probability of Completion	All
	Line Length (miles)					
≤230	0.0	15.0	6.0	446.5	2,367.6	4,024.9
345	0.0	0.0	0.0	508.9	2,331.9	3,603.2
500	0.0	0.0	0.0	43.0	273.4	810.4
<b>Total U.S.</b>	<b>0.0</b>	<b>15.0</b>	<b>6.0</b>	<b>998.4</b>	<b>4,972.9</b>	<b>8,438.5</b>

Sources: Data derived from Staff Database and U.S. Electric Transmission Projects ©2017 The C Three Group, LLC.

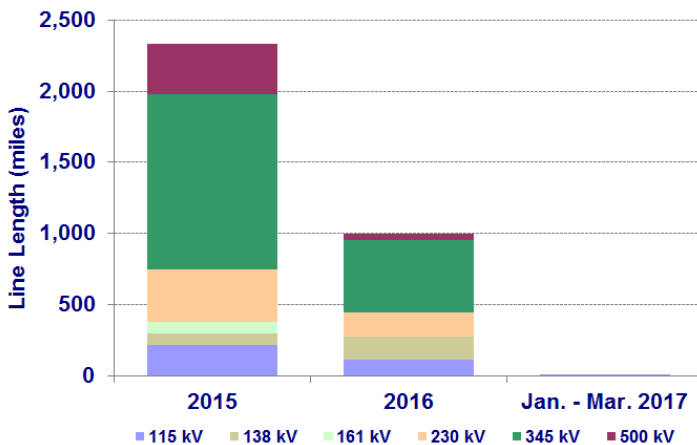
**All Transmission Projects with a Proposed In-Service Date by March 2019**



**Transmission Projects with a High Probability of being completed by March 2019**



**New Transmission Projects by Voltage**



Sources: Data derived from Staff Database and U.S. Electric Transmission Projects ©2017 The C Three Group, LLC.

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