



Office of Energy Projects Energy Infrastructure Update *For April 2018*

Natural Gas Highlights

- Columbia Gas received authorization to place into service its B System Project, which includes 22 miles of pipeline in Fairfield and Franklin Counties, OH.
- Florida Gas received authorization to construct and operate its East-West Project, which would provide 275 MMcf/d of capacity on its pipeline system in LA and TX to serve markets in the Texas Gulf Coast area.
- Texas Eastern and Brazoria Interconnector Gas Pipeline received authorization to construct the Stratton Ridge Expansion Project, which would provide 322 MMcf/d of firm transportation capacity from multiple receipt points on Texas Eastern to a delivery point on Brazoria's pipeline system in Brazoria County, TX.
- CIG received authorization to abandon by sale to EPNG three interconnected pipeline segments that total approximately 40 miles, as well as certain metering and appurtenant facilities located at the interconnection of the CIG and EPNG pipeline systems in Moore and Potter Counties, TX.
- Northern received authorization to construct and operate its Marquette Branch Line Expansion Project, which would add 3,180 HP of new compression and 24.6 MMcf/d of additional firm capacity to supply two proposed electric generation plants in Upper Michigan.
- FGT received authorization to abandon 1.3 miles of 18-inch pipeline and appurtenances, which previously supplied the no-longer existing FPL's Cutler delivery point facilities in Miami-Dade County, FL.
- Transco requests an amendment to its authorization to abandon by sale to Tana Exploration 21 miles of gathering pipeline located in offshore Texas. Transco seeks to abandon these assets in place, as Tana is no longer producing gas in that area and no longer needs these assets.
- Panther received authorization to abandon approximately 56 miles of gathering and transmission pipeline located offshore, and onshore in Jefferson County, TX.
- East Cheyenne received authorization to designate the West Peetz D Sands and Lewis Creek D Sands storage fields in Logan County, CO as a single, integrated reservoir, and to decrease the combined cushion capacity and increase the working gas capacity by 3.6 Bcf.
- Columbia Gas received authorization to construct and operate horizontal storage wells 12601 and 12602 and related pipelines and appurtenances at its Pavonia Storage Field. The new wells would be located in Ashland County, OH, and increase deliverability by 18 MMcf/d.
- National Fuel received authorization to abandon well lines CW-1407 and CW-1408 and convert two storage wells to observation wells at its Holland Storage Field in Erie County, NY.
- WBI Energy received authorization to abandon its Billy Creek Storage Field in Johnson County, WY.
- Transco requests authorization to construct its Southeastern Trail Project, which would provide an additional 296 MMcf/d of firm capacity from Virginia to Louisiana. The project includes 7.72 miles of pipeline loop in Fauquier and Prince William Counties, VA, 60,720 HP of new compression, abandonment of some existing compression, and other modifications in GA, SC, and LA.
- PNGTS requests authorization for its Portland X-Press Project, which would increase the certificated capacity on its system by 39.8 MMcf/d from Pittsburgh, NH to Westbrook, ME; and by 1.6 MMcf/d from Westbrook to Dracut, ME. In addition, it requests Section 3 authorization to increase its import/export capacity from 210 to 274 MMcf/d.
- Transco requests authorization to abandon its North Padre Island Block 956 "B" Platform, and its offshore lateral extending 3.5 miles from North Padre Island Block 956 in Offshore Texas.
- El Paso requests authorization to construct its EPNG South Mainline Project, which consists of 17 miles of looping pipeline and new compression in Arizona, New Mexico, and Texas, that would deliver 321 MMcf/d of additional capacity to two customers in the Southwest.
- Southern Star requests authorization to construct 14.2 miles of non-contiguous segments of pipeline and abandon the equivalent segments in Oklahoma and Logan Counties, OK.
- Columbia Gas requests authorization to construct and operate Weaver Well 12622 and related pipeline and appurtenances at its Weaver Storage Field located in Ashland, Holmes, Knox, and Richland Counties, OH.
- Dominion Energy Questar requests to amend its certificate in order to eliminate Operating Parameter 3, which would enable its customers to inject gas earlier than November 1 of each heating season at its Chalk Creek Aquifer Storage in Summit County, UT.



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Natural Gas Activities in April 2018

Status	No. of Projects	Storage Capacity (Bcf)	Deliverability (MMcf/d)	Capacity (MMcf/d)	Miles of Pipeline	Compression (HP)
Pipeline						
Placed in Service	1			0	22	0
Certificated	3			622	25	15,680
Proposed	3			657	25	87,140
Storage						
Placed in Service	0	0.0	0.0			0.0
Certificated	2	3,600.0	18.0			0.0
Proposed	0	0.0	0.0			0.0
LNG (Import & Export)						
Placed in Service (Export)	0	0.0	0.0			0.0
Certificated (Import/Export)	0	0.0	0.0			0
Proposed (Import/Export)	0	0.0	0.0			0

Source: Staff Database

Natural Gas Activities through April 30, 2018 January through April 30, 2017

Status	No. of Projects	Storage Capacity (BCF)	Deliverability (MMcf/d)	Capacity (MMcf/d)	Miles of Pipeline	Compression (HP)
Pipeline						
Placed in Service	3			980.0	56.3	62,760
through April 30, 2017	7			2269.3	58.1	135,850
Certificated	19			3873.1	267.6	136,695
through April 30, 2017	12			9627.9	1253.2	618,584
Storage						
Placed in Service	0	0.0	0.0			0
through April 30, 2017	0	0.0	0.0			0
Certificated	3	3,600.3	143.0			0
through April 30, 2017	0	0.0	0.0			0
LNG (Import & Export)						
Placed in Service (Export)	1	0.0	825.0			0
through April 30, 2017	1	0.0	700.0			0
Certificated (Import/Export)	0	0.0	0.0			0
through April 30, 2017	0	0.0	0.0			0

Source: Staff Database



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Hydropower Highlights (nonfederal)

- Duke Energy Carolinas, LLC filed an application to raise the capacity of its Bad Creek Pumped Storage Project No. 2740 from 1,065.000 MW to 1,400.000 MW. The project is located on the Whitewater River and Bad Creek in Oconee County, SC.
- Northwestern Corporation filed an application to raise the capacity of its Missouri-Madison Project No. 2188 from 303.500 MW to 305.240 MW. The project is located on the Missouri and Madison Rivers in Cascade, Gallatin, Lewis and Clark, and Madison Counties, MT.

Hydropower Project Activities in April 2018

Status	Conventional		Pumped Storage		Hydrokinetic		Total No. of Projects	Total Capacity (MW)
	No.	Capacity (MW)	No.	Capacity (MW)	No.	Capacity (MW)		
Filed								
License	0	0	0	0	0	0	0	0
10-MW Exemption	0	0	0	0	0	0	0	0
Capacity Amendment	1	1.740	1	335.000	0	0	2	336.740
Conduit Exemption	0	0	0	0	0	0	0	0
Issued								
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
Placed in Service								
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 April 30, 2018)

Status	Conventional		Pumped Storage		Hydrokinetic		Total No. of Projects	Total Capacity (MW)
	No.	Capacity (MW)	No.	Capacity (MW)	No.	Capacity (MW)		
Filed								
License	0	0	0	0	0	0	0	0
10-MW Exemption	0	0	0	0	0	0	0	0
Capacity Amendment	1	1.740	1	335.000	0	0	2	336.740
Conduit Exemption	0	0	0	0	0	0	0	0
Issued								
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
Placed in Service								
License	2	12.000	0	0	0	0	2	12.000
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



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Electric Generation Highlights

- Tennessee Valley Authority's 1,170.9 MW natural gas-fired Allen Steam Plant in Shelby County, TN is online.
- Old Dominion Electric Coop's 1,000.0 MW natural gas-fired Wildcat Point Generation Facility in Cecil County, MD is online.
- Duke Energy Carolinas and North Carolina Electric Membership Corp's 750.0 MW W S Lee Natural Gas Project in Anderson County, SC is online.
- Indianapolis Power & Light's 644.0 MW natural gas-fired Eagle Valley (H T Pritchard) Project in Morgan County, IN is online.
- NRG Texas LLC's 270.0 MW natural gas-fired Cedar Bayou Plant in Chambers County, TX is online.
- Northern States Power Co. (MN) 215.0 MW natural gas-fired Black Dog Project in Dakota County, MN is online.
- Doswell II LLC's 187.0 MW natural gas-fired Doswell Combined Cycle Facility in Hanover County, VA is online.
- Great Valley Solar 1 LLC's 100.0 MW Great Valley Solar Project in Tulare County, CA is online. The power generated is sold to Marin Clean Energy, Pacific Gas & Electric Co and Sacramento Municipal Utility District under long-term contracts.
- WGL Energy Systems Inc's 10.9 MW DC DGS Solar Project in the District of Columbia is online.
- PNMR Development & Management Co.'s 10.0 MW Facebook Solar Energy Center in Bernalillo County, NM is online.
- DG Minnesota CSG LLC's 5.0 MW DG Minnesota CSG Solar Project in Scott County, MN is online. The power generated is sold to the Public Service Co of Colorado under long-term contract.
- Lang Solar Farm LLC's 5.0 MW Lang Solar Farm in Wayne County, NC is online. The power generated is sold to Duke Energy Progress under long-term contract.
- ETCAP NES CS MN 03 LLC's 5.0 MW Novel CSG of Marmas Solar Project in Sherburne County, MN is online.
- SunE St Cloud 1 LLC's 5.0 MW St Cloud Solar Project in Stearns County, MN is online.
- Sierra Pacific Industries Inc's 7.5 MW biomass Sonora Project in Tuolumne County, CA is online. The power generated is sold to Sierra Pacific Industries under long-term contract.
- Tennessee Valley Authority's 5.0 MW biomass Allen Steam Plant in Shelby County, TN is online.

New Generation In-Service (New Build and Expansion)

Primary Fuel Type	April 2018		January – April 2018 Cumulative		January – April 2017 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	10	3,969	23	4,747	42	5,166
Nuclear	0	0	1	4	1	102
Oil	2	1	7	11	5	9
Water	1	1	6	19	3	12
Wind	0	0	18	1,956	37	3,281
Biomass	2	13	5	16	12	110
Geothermal Steam	0	0	1	19	1	18
Solar	29	162	168	1,612	183	1,814
Waste Heat	0	0	2	80	1	220
Other *	0	0	7	5	15	1
Total	44	4,146	238	8,469	300	10,733

Sources: Data derived from Velocity Suite, ABB Inc. and The C Three Group LLC. 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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Total Available Installed Generating Capacity

	Installed Capacity (GW)	% of Total Capacity
Coal	268.58	22.73%
Natural Gas	516.55	43.72%
Nuclear	108.18	9.16%
Oil	41.37	3.50%
Water	100.26	8.49%
Wind	90.93	7.70%
Biomass	16.45	1.39%
Geothermal Steam	3.85	0.33%
Solar	33.14	2.80%
Waste Heat	1.34	0.11%
Other*	0.79	0.07%
Total	1,181.43	100.00%

Sources: Data derived from Velocity Suite, ABB Inc. and The C Three Group LLC. The data may be subject to update.

Proposed Generation Additions and Retirements by May 2021

Primary Fuel Type	Additions		Retirements	
	No. of Units	Installed Capacity (MW)	No. of Units	Installed Capacity (MW)
Coal	1	17	57	12,608
Natural Gas	326	80,211	130	13,810
Nuclear	6	6,363	6	5,607
Oil	18	730	29	396
Water	250	12,255	18	538
Wind	490	88,936	2	68
Biomass	59	685	15	46
Geothermal Steam	21	1,015	0	0
Solar	1837	54,160	5	2
Waste Heat	6	96	0	0
Other *	76	688	1	0
Total	3,090	245,156	263	33,075

Sources: Data derived from Velocity Suite, ABB Inc. and The C Three Group LLC. 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.



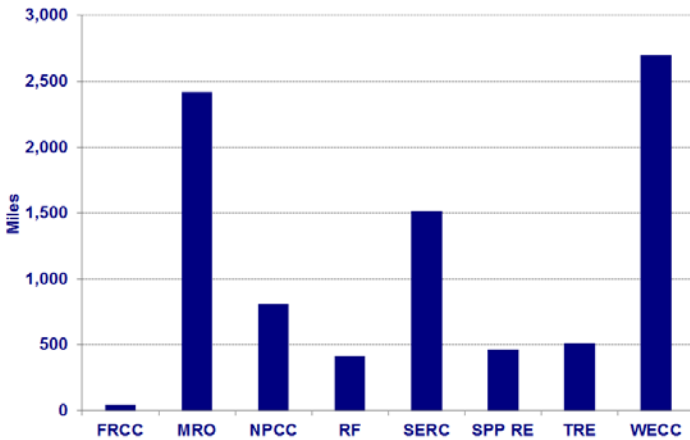
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Electric Transmission Highlights

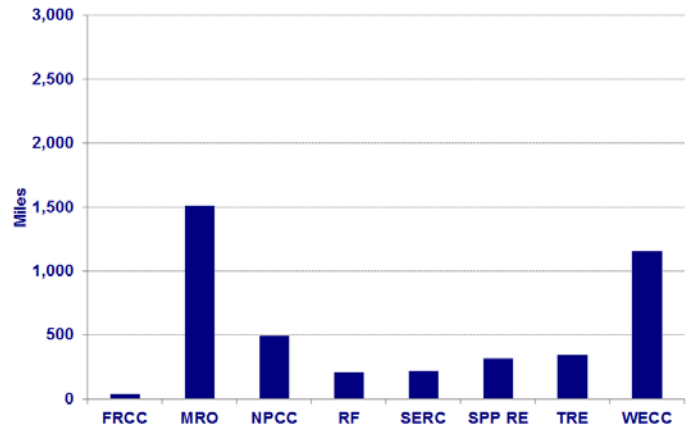
- Cross Texas Transmission has completed the 68.0 mile, 345 kV Limestone - Gibbons Creek Transmission Project in TX.
- Xcel Energy has completed the 8.0 mile, 115 kV Northeast Hereford - La Plata Transmission Project in TX.

Voltage (kV)	Transmission Projects Completed				Proposed Transmission Projects In-Service by May 2020	
	April 2018	April 2017	January – April 2018 Cumulative	January – December 2017 Cumulative	High Probability of Completion	All
	Line Length (miles)					
≤230	8.0	0.0	85.0	301.9	1,429.2	3,095.6
345	68.0	0.0	68.0	218.5	2,314.5	3,959.2
500	0.0	0.0	0.0	0.0	533.4	1,818.4
Total U.S.	76.0	0.0	153.0	520.4	4,277.1	8,873.2

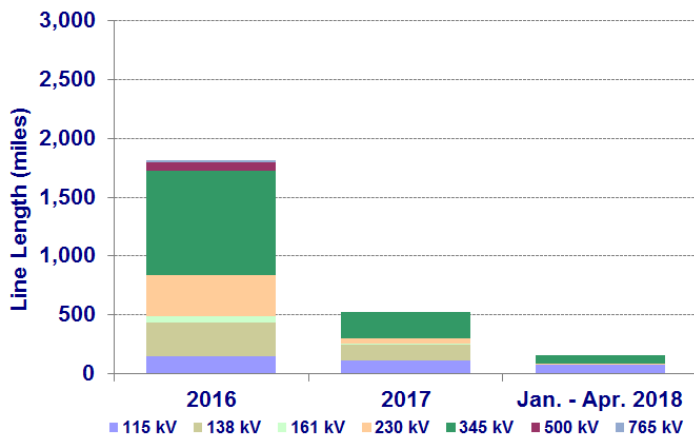
All Transmission Projects with a Proposed In-Service Date by May 2020



Transmission Projects with a High Probability of being completed by May 2020



New Transmission Projects by Voltage



Sources: Data derived from Staff Database and U.S. Electric Transmission Projects ©2018 The C Three Group, LLC.

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