



Office of Energy Projects Energy Infrastructure Update *For October 2017*

Natural Gas Highlights

- Transco received authorization to place into service its New York Bay Expansion Project which will provide 115 MMcf/d of firm capacity to National Grid NY.
- National Fuel received authorization to place into service its Line T2KNY, Line TNY, and Line KNY facilities in Erie County, NY. The project will provide an additional 2.6 MMcf/d of capacity.
- Algonquin received authorization to place into service certain facilities for its Atlantic Bridge Project, including compressor and meter stations and other appurtenances. The approved facilities provide 40 MMcf/d of the 133 MMcf/d total capacity of the project, which increases capacity from receipt points in Bergen County, NJ and Ramapo, NY to markets in the Northeast.
- Tennessee Gas received authorization to place into service its Triad Expansion Project which will provide 180 MMcf/d of west-to-east capacity on its existing Line 300 system to serve an electric generating plant in Lackawanna County, PA.
- Cheniere placed in service Liquefaction Train 4 at its Sabine LNG terminal in Cameron Parish, LA. This brings the total LNG export deliverability at the plant to 2.8 Bcf/d.
- Southwest Gas Storage received authorization to modify, replace, and abandon certain natural gas storage facilities and convert certain injection/withdrawal wells to observation status within its existing Howell Storage Field in Livingston County, MI. The project will not affect the field's capacity or deliverability.
- Eastern Shore requests authorization to construct and operate its 2017 Expansion Project which would provide 61.2 MMcf/d of capacity on its system in PA, MD and DE, to meet market demand and provide enhanced flexibility.
- Gulf South Pipeline received authorization to construct and operate its St. Charles Parish Expansion Project, to provide 133 MMcf/d of capacity to Entergy Louisiana's proposed 980 megawatt electric generation facility near Montz, LA.
- Texas Gas received authorization to abandon certain natural gas pipeline assets, ancillary auxiliary facilities and appurtenances, located in Terrebonne Parish, Louisiana and Louisiana State waters.
- Columbia Gas Transmission received authorization to abandon its Line H-107, along with the associated appurtenances and exposures, located in Hocking County, OH. This will not impact service to its customers.
- Texas Gas received authorization to abandon in place the 9,100 horsepower Morgan City Compressor Station in St. Mary Parish, LA, and the 9,100 horsepower compressor at the Lafayette (also known as Youngsville) Compressor Station in Lafayette Parish, Louisiana, along with associated buildings and appurtenances, and to relinquish the firm design capacity associated with these facilities.
- Mountain Valley Pipeline received authorization to construct and operate its Mountain Valley Pipeline Project which would provide 2 Bcf/d of capacity from northwest WV to southern VA.
- Equitrans received authorization to construct and operate its Equitrans Expansion Project which would provide 600 MMcf/d of north-south capacity on its system in PA and WV to supply markets in the Northeast, Mid-Atlantic and Southeast regions.
- Atlantic Coast Pipeline received authorization to construct and operate its Atlantic Coast Pipeline Project which would provide 1.5 Bcf/d of capacity through a new pipeline system extending from WV to markets in VA and NC.
- Dominion received authorization to construct and operate its Supply Header Project which would provide 1.5 Bcf/d of capacity from supply areas in PA and WV to the proposed Atlantic Coast Pipeline.
- DCP withdrew its request for authorization to build 8.4 miles of 20-inch pipeline in Weld County, CO.
- Valley Crossing Pipeline received authorization to site, construct, operate and maintain an import/export border crossing located in the Gulf of Mexico, from TX State waters to the International Boundary between the US and Mexico. The import/export border crossing would provide a capacity of 2.6 Bcf/d.
- Florida Gas received authorization to abandon the approximately 6.7 mile, 8-inch Rinker Lateral and related infrastructure and facilities that supply the Rinker Portland Cement in Miami-Dade County, FL. The pipeline has not been used for over two years.
- Gulf South received authorization to abandon by sale to Sundown Energy, LP approximately 8.1 miles of 16-inch diameter pipeline in Perry County, MS.
- Columbia Gas received authorization to abandon the Lucas 10697 and 10722 injection/withdrawal wells at its Lucas Storage Field in Ashland County, OH. This will have no impact on existing customers or operations.
- Texas Gas requests authorization to abandon in place or by removal approximately 18.6 miles of pipeline and related facilities in Terrebonne Parish, LA. These facilities have been inactive since 2005.



Office of Energy Projects Energy Infrastructure Update *For October 2017*

- Gulf South Pipeline requests authorization to abandon by sale to Shongaloo Midstream, LLC, gathering and transmission pipelines, meter and regulator stations, and other facilities and appurtenances located in Clairborne and Webster Parishes, LA. These facilities have been inactive since summer 2011.
- RH energytrans requests authorization to construct its Riesberg Project, which will transport 55 MMcf/d of natural gas from Erie County, PA to Ashtabula County, OH. The project consists of 28 miles of 12-inch pipeline.
- Port Arthur Pipeline requests authorization to construct its Louisiana Connector Project, which consists of 131 miles of pipeline that would transport 2 Bcf/d of natural gas from St. Landry Parish, LA to the proposed Port Arthur LNG export facility in Jefferson County, TX.
- Enable Gas requests authorization to construct, its Cana STACK Expansion Project, which includes 10,000 HP of new compression, a new interconnect, and related facilities in Grady and McClain Counties, OK. The project would provide an additional 100 MMcf/d of takeaway capacity from the Cana and STACK plays in the Anadarko Basin.
- Texas Eastern requests authorization to construct its Texas Industrial Market Expansion and Louisiana Market Expansion Projects, which would provide an additional 82.5 MMcf/d of firm transportation into Texas Eastern's Zone WLA in Evangeline Parish, LA, and an additional 75 MMcf/d of firm transportation into Zone WLA in Beauregard Parish, LA.
- NGPL requests authorization to abandon its Herscher Northwest Storage Field in Kankakee County, IL. The company states the field, with an 18.5 Bcf capacity and 65 MMcf/d deliverability, has underperformed for years.
- East Cheyenne requests authorization to designate the West Peetz D Sands and Lewis Creek D Sands storage fields as a single, integrated reservoir, and to decrease the combined cushion capacity and increase the working gas capacity of the project by 3.6 Bcf. These fields are in Logan County, CO.

Natural Gas Activities in October 2017

Status	No. of Projects	Storage Capacity (Bcf)	Deliverability (MMcf/d)	Capacity (MMcf/d)	Miles of Pipeline	Compression (HP)
Pipeline						
Placed in Service	4			536.6	21.8	42,140
Certificated	7			8,405.8	950.4	399,725
Proposed	4			2,312.5	159.3	99,900
Storage						
Placed in Service	0	0.0	0.0			0
Certificated	0	0.0	0.0			0
Proposed	1	3,600.0	0.0			0
LNG (Import & Export)						
Placed in Service (Export)	1	0.0	700.0			0
Certificated (Import/Export)	0	0.0	0.0			0
Proposed (Import/Export)	0	0.0	0.0			0

Source: Staff Database



Office of Energy Projects Energy Infrastructure Update For October 2017

Natural Gas Activities through October 31, 2017 January through October 31, 2016

Status	No. of Projects	Storage Capacity (BCF)	Deliverability (MMcf/d)	Capacity (MMcf/d)	Miles of Pipeline	Compression (HP)
Pipeline						
Placed in Service	22			8,132.5	507.0	418,569
through October 31, 2016	32			5,852.3	321.5	241,412
Certificated	35			23,518.9	2,507.2	1,439,392
through October 31, 2016	47			14,444.5	1,137.0	1,258,795
Storage						
Placed in Service	1	7.5	600.0			9,500
through October 31, 2016	0	0.0	0.0			0
Certificated	1	0.0	10.0			0
through October 31, 2016	0	0.0	0.0			0
LNG (Import & Export)						
Placed in Service (Export)	3	0.0	1,493.0			0
through October 31, 2016	1	0.0	1,400.0			0
Certificated (Import/Export)	1	0.0	93.0			0
through October 31, 2016	4	10.2	3,181.0			0

Source: Staff Database

Hydropower Highlights (nonfederal)

- The Southern Southeast Regional Aquaculture Association was issued an order raising the capacity of its Burnett River Hatchery Project No. 10773 from 0.080 MW to 0.220 MW. The project is located on the Burnett River near Wrangell, AK.
- Nevada Hydro, Inc. filed an application for an original license for the 500.0 MW Lake Elsinore Advanced Pumped Storage Project No. 14227. The project would be located on Lake Elsinore and San Juan Creek near the town of Lake Elsinore in Riverside and San Diego counties, CA.
- Turlock Irrigation District and Modesto Irrigation District filed an application for an original license for its existing 4.9 MW La Grange Hydroelectric Project No. 14581. The project would be located on the Tuolumne River in Stanislaus and Tuolumne Counties, CA.

Hydropower Project Activities in October 2017

Status	Conventional		Pumped Storage		Hydrokinetic		Total No. of Projects	Total Capacity (MW)
	No.	Capacity (MW)	No.	Capacity (MW)	No.	Capacity (MW)		
Filed								
License	2	504.900	0	0	0	0	2	504.900
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
Issued								
License	0	0	0	0	0	0	0	0
10-MW Exemption	0	0	0	0	0	0	0	0
Capacity Amendment	1	0.140	0	0	0	0	1	0.140
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



Office of Energy Projects Energy Infrastructure Update For October 2017

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

Status	Conventional		Pumped Storage		Hydrokinetic		Total No. of Projects	Total Capacity (MW)
	No.	Capacity (MW)	No.	Capacity (MW)	No.	Capacity (MW)		
Filed								
License	3	506.400	0	0	0	0	3	506.400
10-MW Exemption	1	0.009	0	0	0	0	1	0.009
Capacity Amendment	3	1.770	0	0	0	0	3	1.770
Conduit Exemption	0	0	0	0	0	0	0	0
Issued								
License	14	258.900	0	0	0	0	14	258.900
10-MW Exemption	1	0.360	0	0	0	0	1	0.360
Capacity Amendment	4	5.260	0	0	0	0	4	5.260
Conduit Exemption	0	0	0	0	0	0	0	0
Placed in Service								
License	2	79.000	0	0	0	0	2	79.000
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

Electric Generation Highlights

- Chamon Power LLC's 100 MW Chamon Natural Gas Project in Harris County, TX is online.
- Playa Solar 1 LLC's 200 MW Playa Solar Project in Clark County, NV is online.
- Innovative Solar 42 LLC's 75 MW Innovative Solar 42 Project in Cumberland County, NC is online. The power generated is sold to Duke Energy Carolinas under long-term contract.
- Avangrid Renewables LLC's 56 MW Gala Solar Power Plant in Crook County, OR is online. The power generated is sold to Apple Inc. under long-term contract.
- OCI Solar TRE LLC's 50 MW OCI Alamo Solar 6 Project in Pecos County, TX is online.
- Virginia Electric & Power Co.'s 20 MW Remington Solar Project in Fauquier County, VA is online. The power generated is sold to the Commonwealth of Virginia under long-term contract.
- DTE Energy Co.'s 19.6 MW Lapeer Solar Project II in Lapeer County, MI is online.
- Providence Solar Center LLC's 16 MW Providence Solar Center in Madison County, TN is online.
- PGC Plano I LLC's 8.8 MW Toyota Headquarters Solar Project in Collin County, TX is online.
- Wolf Energy and Brightfields Development LLCs' 5.2 MW Elizabeth Mine Solar I Project in Orange County, VT is online. The power generated is sold to Green Mountain Power Corp. under long-term contract.
- Clipperton Holdings LLC's 5 MW Clipperton Holdings Solar Project in Sampson County, NC is online. The power generated is sold to Duke Energy Progress under long-term contract.
- Mill Pond Solar Farm LLC's 5 MW Mill Pond Solar Project in Columbus County, NC is online. The power generated is sold to Duke Energy Progress under long-term contract.
- Rocksprings Val Verde Wind LLC's 149.3 MW Rocksprings Wind Farm Project in Val Verde County, TX is online. The power generated is sold to Walmart under long-term contract.
- Dermott Wind LLC's 253 MW Demott Wind Project in Scurry County, TX is online. The power generated is sold to Amazon under long-term contract.
- Creston Ridge II LLC's 6.9 MW Creston Ridge Wind Farm in Platte County, NE is online. The power generated is sold to Loup River Public Power District under long-term contract.



Office of Energy Projects Energy Infrastructure Update For October 2017

New Generation In-Service (New Build and Expansion)

Primary Fuel Type	October 2017		January – October 2017 Cumulative		January – October 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	3	45
Natural Gas	2	100	66	10,719	106	8,335
Nuclear	0	0	1	102	3	1,290
Oil	1	1	10	40	18	39
Water	1	2	11	214	36	445
Wind	3	409	53	5,015	46	3,084
Biomass	0	0	25	265	50	104
Geothermal Steam	0	0	1	18	0	0
Solar	36	497	422	3,853	405	5,746
Waste Heat	0	0	1	220	2	23
Other *	0	0	20	1	14	21
Total	43	1,009	610	20,447	683	19,132

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

Total Available Installed Generating Capacity

	Installed Capacity (GW)	% of Total Capacity
Coal	283.69	23.83%
Natural Gas	516.27	43.36%
Nuclear	108.18	9.09%
Oil	43.46	3.65%
Water	100.84	8.47%
Wind	86.76	7.29%
Biomass	16.75	1.41%
Geothermal Steam	3.80	0.32%
Solar	28.76	2.42%
Waste Heat	1.26	0.11%
Other*	0.81	0.07%
Total	1,190.58	100.00%

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.



Office of Energy Projects Energy Infrastructure Update For October 2017

Proposed Generation Additions and Retirements by November 2020

Primary Fuel Type	Additions		Retirements	
	No. of Units	Installed Capacity (MW)	No. of Units	Installed Capacity (MW)
Coal	4	1,927	61	16,056
Natural Gas	387	92,489	116	10,678
Nuclear	4	3,243	6	5,585
Oil	38	762	36	571
Water	274	12,732	25	706
Wind	465	72,526	2	68
Biomass	74	945	10	46
Geothermal Steam	32	1,610	0	0
Solar	1,913	43,528	5	2
Waste Heat	9	236	0	0
Other *	50	680	0	0
Total	3,250	230,678	261	33,712

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.

Electric Transmission Highlights

- American Transmission Co. issued its 2017 10-Year Transmission System Assessment which included \$2.8 billion in system improvements.

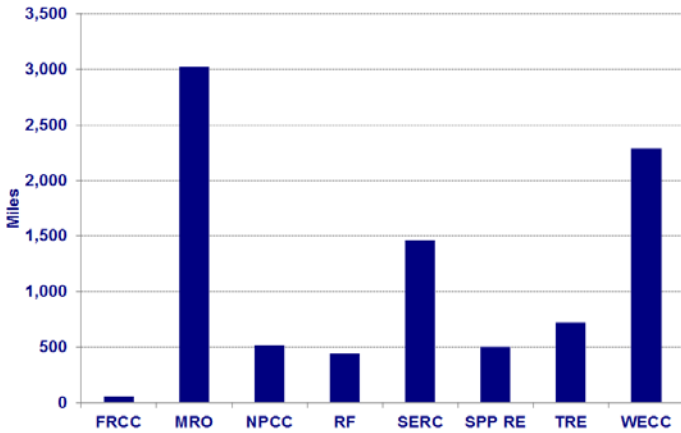
Voltage (kV)	Transmission Projects Completed				Proposed Transmission Projects In-Service by October 2019	
	October 2017	October 2016	January – October 2017 Cumulative	January – December 2016 Cumulative	High Probability of Completion	All
	Line Length (miles)					
≤230	0.0	25.0	141.6	757.8	1,890.6	3,758.7
345	0.0	46.6	122.0	965.9	2,491.5	4,177.4
500	0.0	0.0	0.0	85.0	421.4	1,102.4
Total U.S.	0.0	71.6	263.6	1,808.7	4,803.5	9,038.5

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

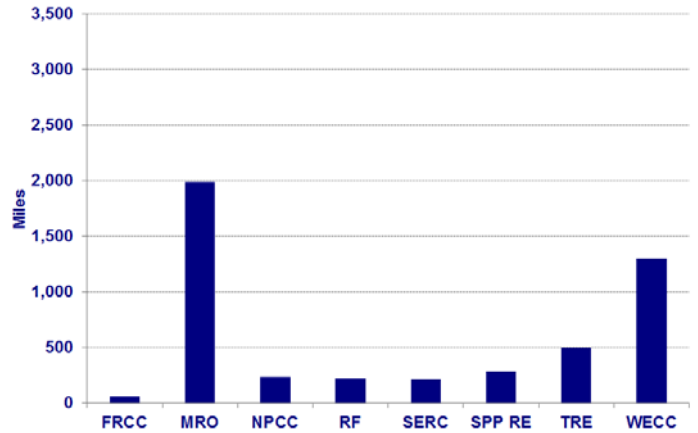


Office of Energy Projects Energy Infrastructure Update For October 2017

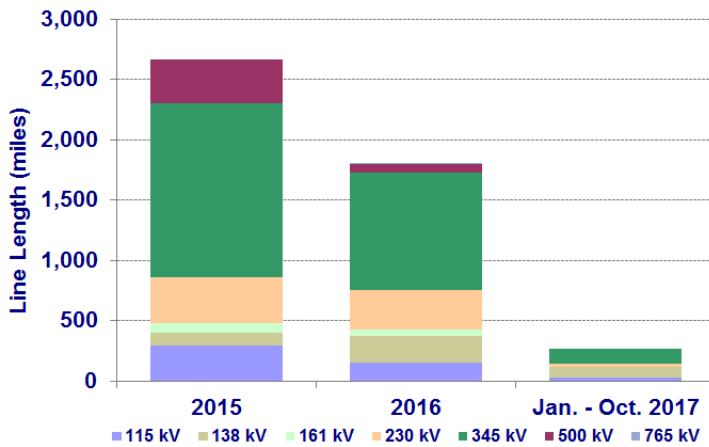
All Transmission Projects with a Proposed In-Service Date by October 2019



Transmission Projects with a High Probability of being completed by October 2019



New Transmission Projects by Voltage



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

Disclaimer: This Report contains analyses, presentations, and conclusions that may be based on or derived from the data sources cited, but do not necessarily reflect the positions or recommendations of the data providers.