



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

### Natural Gas Highlights

- Impulsora received authorization to place into service its border-crossing facilities in Webb County, TX, which have the capacity to export up to 1,120 MMcf/d of natural gas from the U.S. to Mexico.
- Eastern Shore received authorization to place into service its 2017 Expansion Project, which will provide 61.2 MMcf/d of capacity on its system in PA, MD and DE.
- Texas Eastern received authorization to place into service its Bayway Lateral Project, which will provide 300 MMcf/d of capacity to the Phillips 66 Bayway Refinery and Cogen Technologies' Linden Venture plant in Linden, NJ.
- Columbia Gas received authorization to place into service its Leach Xpress Project, which will provide 1,530 MMcf/d of capacity to portions of Columbia Gas's system in WV and OH.
- Texas Eastern received authorization to offset and replace a 1,250 foot section of 20-inch pipeline beneath the Rahway River in Linden and Woodbridge, NJ.
- 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.
- Tennessee received authorization to construct and operate its Lone Star Project, which would provide 300 MMcf/d of capacity to Corpus Christi Liquefaction, from a Tennessee interconnect in Jasper County, MS to an interconnect with the Corpus Christi Pipeline in San Patricio County, Texas.
- The Town of Walnut, Mississippi received authorization to designate a service area within which it may expand its operations without further Commission authorization, to be considered an LDC, and to receive a waiver of accounting and regulatory requirements ordinarily applicable under the NGA and NGPA.
- Columbia Gas received authorization to construct and operate its Mountaineer XPress Project, which would provide 2,700 MMcf/d of capacity from points in WV into the Columbia system and to Columbia Gulf at Leach, KY.
- Columbia Gulf received authorization to construct and operate its Gulf Xpress Project which would provide 860 MMcf/d of capacity from its interconnection with Columbia Gas at Leach, KY to delivery points in MS and LA.
- Enable received authorization to construct and operate its Cana STACK Expansion Project in Grady and McClain Counties, OK, which would provide an additional 100 MMcf/d of takeaway capacity from the Anadarko Basin.
- Perryville Gas Storage received partial authorization to implement a proposed Well and Cavern Integrity Monitoring Program at its storage facilities in Franklin and Richland Parishes, LA.
- Columbia requests authorization to replace two segments of its existing Line O-731 totaling 7.64 miles, and to perform other related appurtenant activities in Coshocton and Muskingum Counties, OH.
- Algonquin requests authorization to abandon in place compressor units No. 1 and 2, and remove related appurtenances at its Burrilville Compressor Station in Providence County, RI.
- Texas Eastern requests authorization to construct its Lambertville East Expansion Project, including replacing two natural gas-fired turbine compressor units with two new units and installing related facilities. The project would provide 60 MMcf/d of new capacity to supply two LDCs in NJ.
- Steel Reef requests Section 3 authorization to construct approximately 250 feet of pipeline border crossing facilities to export natural gas from Portal, ND to Saskatchewan, Canada.
- High Point Gas requests authorization to lease 150 MMcf/d of capacity to transport offshore gas production to an interconnection with the Destin Pipeline offshore MS.
- Columbia Gas requests authorization to perform installations and activities to enable pigging of approximately 53.6 miles of its 20-inch diameter Line D-600 in Allen, Paulding, and Putnam Counties, OH.
- FGT requests authorization to abandon 1.3 miles of 18-inch pipeline and appurtenances in Miami-Dade County. This line previously supplied the no-longer existing FPL's Cuttler delivery point facilities.
- Tennessee requests to amend its Section 3 authorization and Presidential Permit to reflect the actual capacity of its border crossing in Hidalgo County, TX, increasing the authorized capacity from 185 to 468 MMcf/d.
- Sierrita requests Section 7 and Section 3 authorization to build a 15,900 hp compressor station in Pima County, AZ, and to increase the capacity at its border crossing from 201 to 627 MMcf/d, which would allow it to increase firm transportation into Mexico by 323 MMcf/d.
- Questar Southern Trails requests authorization to abandon its 488-mile pipeline system, including four compressor stations, all receipt and delivery points, and all related facilities. This includes abandoning in place 220 miles of pipeline, and abandoning by sale to the Navajo Tribal Utility Authority 268 miles of pipeline.
- The Navajo Tribal Utility Authority requests a service area determination within which it may, without further Commission authorization, enlarge or expand its natural gas distribution facilities.
- Columbia requests authorization to retire segments of five existing pipelines in Allegheny and Washington Counties, PA and to construct 3.25 miles of new line to accommodate a highway relocation project.



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- Columbia requests authorization to construct and operate one new storage well and related pipeline and appurtenances at its Donegal Storage Field in Washington County, PA.
- Dominion Energy Questar requests authorization for its Clay Basin Delivery Project, which would allow it to convert a portion of the Clay Basin storage facility in Daggett County, UT, from interruptible to firm capacity.
- Equitrans requests authorization to add a new horizontal well at its Mobley Storage Field in Wetzel County, WV. The new well would add 348 MMcf of new capacity and increase deliverability by 125 MMcf/d.
- Tallgrass requests authorization to decrease by 1.6 Bcf the maximum certificated capacity for the Cheyenne Market Service Center at its Huntsman Storage in Cheyenne County, NE to and convert that capacity to no-notice service.



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### Natural Gas Activities in December 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			3,011.2	202.0	147,550
Certificated	4			3,960.0	170.1	539,615
Proposed	5			2,774.0	3.6	15,900
<b>Storage</b>						
Placed in Service	0	0.0	0.0			0
Certificated	0	0.0	0.0			0
Proposed	1	0.3	125.0			0
<b>LNG (Import &amp; Export)</b>						
Placed in Service (Export)	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 December 31, 2017 January through December 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	32			11,971.8	773.0	622,619
through December 31, 2016	37			7,072.3	391.7	420,869
Certificated	49			30,835.8	2,739.3	2,314,120
through December 31, 2016	52			18,168.7	1,174.9	1,415,820
<b>Storage</b>						
Placed in Service	1	7.5	600.0			9,500
through December 31, 2016	0	0.0	0.0			0
Certificated	2	0.0	10.0			980
through December 31, 2016	1	0.0	15.0			0
<b>LNG (Import &amp; Export)</b>						
Placed in Service (Export)	3	0.0	1,493.0			0
through December 31, 2016	1	0.0	1,400.0			0
Certificated (Import/Export)	1	0.0	93.0			0
through December 31, 2016	5	10.2	5,281.0			0

Source: Staff Database



## Office of Energy Projects Energy Infrastructure Update For December 2017

### Hydropower Highlights (nonfederal)

There were no hydropower activities this month.

**Hydropower Project Activities in December 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	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>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 December 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	3	506.400	1	5.000	0	0	4	511.400
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
<b>Issued</b>								
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	5	5.460	0	0	0	0	5	5.460
Conduit Exemption	0	0	0	0	0	0	0	0
<b>Placed in Service</b>								
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



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### Electric Generation Highlights

- Carroll County Energy LLC's 832.3 MW natural gas-fired Carroll County Energy Project in Carroll County, OH is online.
- Utah Municipal Power Agency's 10.0 MW natural gas-fired Provo Power Plant in Utah County, UT is online.
- Radfords Run Wind Farm LLC's 305.8 MW Radfords Run Wind Farm LLC in Macon County, IL is online.
- Thunder Ranch Wind Project LLC's 298.0 MW Thunder Ranch Wind Project in Noble County, OK is online. The power generated is sold to Anheuser Busch Inc. under long-term contract.
- Rock Falls Wind Farm LLC's 154.0 MW Rock Falls Wind Farm in Grant County, OK is online. The power generated is sold to Kimberly Clark Corp. under long-term contract.
- Buckthorn Wind Project LLC's 100 MW Buckthorn Wind Project in Erath County, TX is online.
- Deerfield Wind LLC's 30.0 MW Deerfield Wind Project in Bennington County, VT is online. The power generated is sold to Central Vermont Public Service Corp. and Green Mountain Power Corp. under long-term contracts.
- Hog Creek Wind Farm LLC's 16.0 MW Hog Creek Wind Farm in Hardin County, OH is online. The power generated is sold to Southern Maryland Electric Coop. Inc. under long-term contract.
- EDF Renewable Energy's 179.0 MW Dry Lake Valley Solar Project in Clark County, NV is online. The power generated is sold to Nevada Power Co. under long-term contract.
- CA Flats Solar 130 LLC's 130.0 MW California Flats Solar Project in Monterey County, CA is online. The power generated is sold to PG&E Corp. and Apple Inc. under long-term contracts.
- Moffett Solar I LLC's 71.4 MW Jasper Solar I Project in Jasper County, SC is online.
- MS Solar 3 LLC's 52.0 MW Sumrall Solar Project in Lamar County, MS is online. The power generated is sold to Mississippi Power Co. under long-term contract.
- Bladen Solar LLC's 50.0 MW Bladen Solar Project in Bladen County, NC is online. The power generated is sold to Duke Energy Progress under long-term contract.
- Bayshore Solar A LLC's 20.0 MW Bayshore Solar Project in Los Angeles County, CA is online.
- Bayshore Solar B LLC's 20.0 MW Bayshore Solar Project in Los Angeles County, CA is online.
- Bayshore Solar C LLC's 20.0 MW Bayshore Solar Project in Los Angeles County, CA is online.
- Buckingham Solar I LLC's 20.0 MW Buckingham Solar LLC in Buckingham County, VA is online.
- Correctional Solar LLC's 20.0 MW Correctional Solar Project in New Kent County, VA is online. The power generated is sold to Amazon Web Services under long-term contract.
- Sappony Solar LLC's 20.0 MW Sappony Solar Project in Sussex County, VA is online. The power generated is sold to Amazon Web Services under long-term contract.
- Scott II Solar LLC's 20.0 MW Scott II Solar Project in Powhatan County, VA is online. The power generated is sold to Amazon Web Services under long-term contract.
- Origis Holdings USA Inc.'s 20.0 MW Tallahassee International Airport Solar Project in Leon County, FL is online. The power generated is sold to the City of Tallahassee FL under long-term contract.
- SR Platte LLC's 16.0 MW SR Platte Solar Farm in Weld County, CO is online.
- MCE Solar One LLC's 10.5 MW MCE Solar One Solar Facility in Contra Costa County, CA is online. The power generated is sold to Marin Clean Energy under long-term contract.
- Duke Energy Florida's 8.8 MW Suwannee Solar Project in Suwannee County, FL is online.
- Bartow Solar Energy LLC's 7.2 MW Bartow Solar Energy Project in Polk County, FL is online.
- SCDA Solar 1 LLC's 7.0 MW SCDA Solar 1 Project in Sacramento County, CA is online.
- Capella Community Solar Gardens LLC's 5.0 MW Capella Community Solar Project in Pipestone County, MN is online.
- P2 Investors LLC's 5.0 MW Grand Isle Solar Project in Grand Isle County, VT is online. The power generated is sold to Vermont Electric Coop. Inc. under long-term contract.
- Tungsten Mountain's 37.0 MW geothermal Tungsten Mountain Project in Churchill, NV is online.



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

Primary Fuel Type	December 2017		January – December 2017 Cumulative		January – December 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	6	842	79	11,980	125	9,283
Nuclear	0	0	1	102	3	1,290
Oil	0	0	10	40	22	67
Water	0	0	11	214	37	449
Wind	8	913	69	6,881	93	8,045
Biomass	0	0	26	268	57	110
Geothermal Steam	1	37	2	55	0	0
Solar	42	798	503	4,853	612	9,282
Waste Heat	0	0	1	220	2	23
Other *	2	0	23	1	27	22
<b>Total</b>	<b>59</b>	<b>2,590</b>	<b>725</b>	<b>24,614</b>	<b>981</b>	<b>28,616</b>

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	277.49	23.35%
Natural Gas	517.14	43.51%
Nuclear	108.18	9.10%
Oil	43.53	3.66%
Water	100.86	8.49%
Wind	88.53	7.45%
Biomass	16.68	1.40%
Geothermal Steam	3.83	0.32%
Solar	30.30	2.55%
Waste Heat	1.26	0.11%
Other*	0.79	0.07%
<b>Total</b>	<b>1,188.59</b>	<b>100.00%</b>

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 December 2017

### Proposed Generation Additions and Retirements by January 2021

Primary Fuel Type	Additions		Retirements	
	No. of Units	Installed Capacity (MW)	No. of Units	Installed Capacity (MW)
Coal	4	1,927	74	20,650
Natural Gas	380	92,708	118	10,803
Nuclear	6	6,363	6	5,585
Oil	31	736	36	571
Water	265	12,563	25	706
Wind	464	79,770	2	68
Biomass	62	890	21	47
Geothermal Steam	28	1,173	0	0
Solar	1,861	47,071	5	2
Waste Heat	8	176	0	0
Other *	50	680	0	0
<b>Total</b>	<b>3,159</b>	<b>244,057</b>	<b>287</b>	<b>38,432</b>

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

- National Grid and Northeast Utilities have completed 32.5 mile, 345 kV Greater Boston – North Transmission Projects. The interstate project connects MA and NH.
- Electric Transmission Texas has completed the 8.0 mile, 138 kV Barney Davis – Naval Base Transmission Project in TX.
- Texas Central Company has completed the 15.0 mile, 138 kV Esmeralda – Yucca Transmission Project in TX.
- Guadalupe Valley Electric Cooperative has completed the 10.0 mile, 138 kV Gillette – Nopal Transmission Project in TX.
- Tennessee Valley Authority has completed the 19.0 mile, 115 kV Swamp Creek – Fuller Transmission Project in GA.

Voltage (kV)	Transmission Projects Completed				Proposed Transmission Projects In-Service by December 2019	
	December 2017	December 2016	January – December 2017 Cumulative	January – December 2016 Cumulative	High Probability of Completion	All
	Line Length (miles)					
≤230	52.0	75.3	193.6	830.8	1,375.1	2,919.2
345	32.5	551.0	154.5	965.9	2,212.2	3,876.1
500	0.0	14.0	0.0	85.0	393.4	1,074.4
<b>Total U.S.</b>	<b>84.5</b>	<b>640.3</b>	<b>348.1</b>	<b>1,881.7</b>	<b>3,980.7</b>	<b>7,869.7</b>

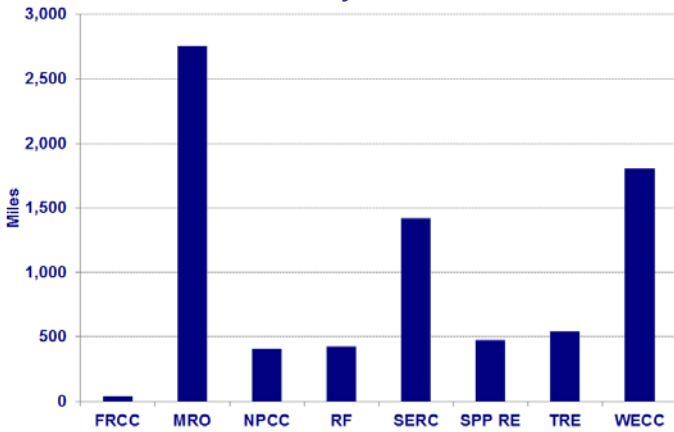
Sources: Data derived from Staff Database and U.S. Electric Transmission Projects ©2018 The C Three Group, LLC.



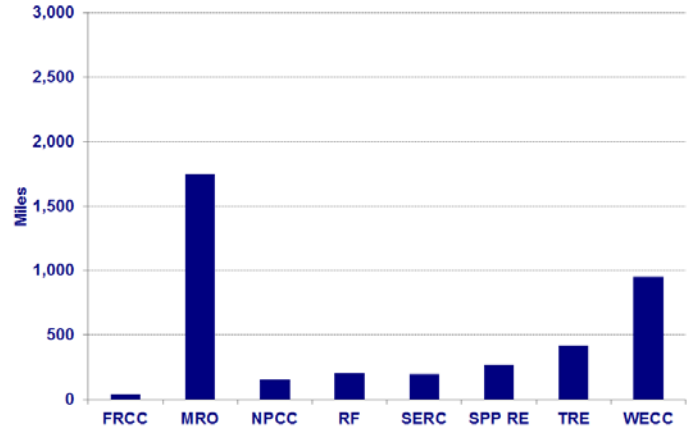


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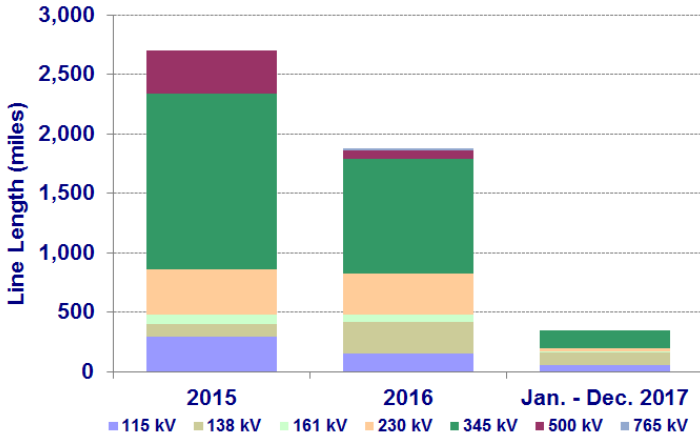
**All Transmission Projects with a Proposed In-Service Date by December 2019**



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



**New Transmission Projects by Voltage**



**Sources:** Data derived from Staff Database and U.S. Electric Transmission Projects ©2018 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.