



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

### Natural Gas Highlights

- Transco received authorization to put into partial service approximately 20 miles of pipeline for Phase 1 of its Hillabee Expansion Project in central AL.
- Texas Eastern received authorization to place into service its Access South, Adair Southwest, and Lebanon Extension Projects, which will transport 622 MMcf/d from Southwestern PA to OH and Southeastern states.
- Texas Eastern received authorization to construct and operate the 300 MMcfd Bayway Lateral Project in Linden, NJ.
- Dominion Transmission received authorization to increase the horsepower rating of a new unit at its Burch Ridge Compressor Station in Marshall County, WV from 6,130 HP to 6,276 HP.
- Algonquin Gas Transmission received authorization to replace 1,300 feet of 24-inch pipeline on its J-1 system underneath the channel at the confluence of the Mystic River and Alewife Brook in Somerville, Medford, and Arlington, MA.
- Northern received authorization to construct 13.8 miles of pipeline loop in two non-contiguous segments in Boone and Polk Counties, IA, and to abandon two pipeline segments in Polk County, IA.
- Equitrans received authorization to plug and abandon an injection/withdrawal well at its Hunters Cave Storage Field in Greene County, PA. This will not affect the field's capacity or deliverability.
- Caledonia Energy Partners received authorization to abandon Gas Storage Wells No. 7 and No. 9 at its Caledonia Storage Facility in Lowndes and Monroe Counties, MS. There will be no effect on deliverability or storage capacity.
- Equitrans L.P. received authorization to partially abandon wells 8215 and 8217 at its Rhodes Complex and Skin Creek Storage field in Lewis County, WV. The project will have no impact on the physical parameters of the facility.
- Colorado Interstate Gas received authorization to reclassify seven wells to observation status at its Latigo and Flank storage fields in Arapahoe and Baca Counties, CO. There will be no change to the certificated parameters.
- Texas Gas Transmission withdrew its request to abandon or remove 6.8 miles of the Calliu Bay-Dog Lake, and 11.8 miles of the Deep Saline-Peltex pipelines in Terrebonne Parish, LA.
- Paiute Pipeline requests authorization to construct 8.46 miles of upsized or looped pipeline, including abandonment of certain sections along its Carson and South Tahoe Laterals in Western NV.
- Kinder Morgan Border Pipeline requests authorization to increase, from 300 to 450 MMcfd, the design capacity of its facilities at the border crossing between TX and Mexico.
- National Fuel requests authorization to abandon Colden Well 0925-I at its Colden Storage Field in Erie County, NY. This will not affect the capacity or deliverability of the field.
- National Fuel requests authorization to abandon Henderson Well 3168 at its Henderson Storage Field in Venango County, PA. This will not affect the capacity or deliverability of the field.
- Southwest Gas Storage requests 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 capacity or deliverability of the field.
- Columbia Gas requests 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.



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### Natural Gas Activities in July 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	2			1,440	60	85,375
Certificated	4			300	14.49	146
Proposed	2			155	8.46	0
<b>Storage</b>						
Placed in Service	0	0	0			0
Certificated	0	0.0	0.0			0
Proposed	0	0.0	0			0
<b>LNG (Import &amp; Export)</b>						
Placed in Service	0	0	0			0
Certificated (Import/Export)	0	0	0			0
Proposed (Export)	0	0	0			0

Source: Staff Database

### Natural Gas Activities through July 31, 2017 January through July 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 July 31, 2016	14 17			6,874.3 2,882.3	260.3 150	308,314 93,695
Certificated through July 31, 2016	22 37			9,927.9 13,411.9	1,271.49 997.8	623,464 1,044,454
<b>Storage</b>						
Placed in Service through July 31, 2016	1 0	7.5 0	600.0 0			9,500 0
Certificated through July 31, 2016	0 0	0 0	0 0			0 0
<b>LNG (Import &amp; Export)</b>						
Placed in Service through July 31, 2016	1 1	0 0	570 700			0 0
Certificated (Import/Export) through July 31, 2016	0 4	0 10.2	0 3,181			0 0

Source: Staff Database



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

### Hydropower Highlights (nonfederal)

- Solia 4 Hydroelectric, LLC was issued an original license for the 12.0 MW Monongahela Locks and Dam 4 Hydroelectric Project No. 13767. The project will be located in Washington County, PA.
- Solia 5 Hydroelectric, LLC was issued an original license for the 13.0 MW Maxwell Locks and Dam Hydroelectric Project No. 13766. The project will be located in Fayette County, PA.
- Brookfield White Pine Hydro, LLC was issued an order raising the capacity of its Gulf Island-Deer Rips Project No. 2283 from 37.233 MW to 38.133 MW. The project is located on the Androscoggin River in Androscoggin County, ME.

#### Hydropower Project Activities in July 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	2	25.000	0	0	0	0	2	25.000
10-MW Exemption	0	0	0	0	0	0	0	0
Capacity Amendment	1	0.900	0	0	0	0	1	0.900
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 July 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	3	1.770	0	0	0	0	3	1.770
Conduit Exemption	0	0	0	0	0	0	0	0
<b>Issued</b>								
License	9	180.900	0	0	0	0	9	180.900
10-MW Exemption	1	0.360	0	0	0	0	1	0.360
Capacity Amendment	3	5.120	0	0	0	0	3	5.120
Conduit Exemption	0	0	0	0	0	0	0	0
<b>Placed in Service</b>								
License	1	7.000	0	0	0	0	1	7.000
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



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

### Electric Generation Highlights

- North American Project Development, LLC's 1,060 MW natural gas-fired Oregon Clean Energy Center, in Lucas County, OH is online.
- MS Solar 2 LLC's 52 MW Sumrall Project in Lamar County, MS is online. The power generated is sold to Mississippi Power Co. under long-term contract.
- Jacumba Solar LLC's 20 MW Jacumba Solar Farm in San Diego County, CA is online.
- TGC LADWP LLC's 11MW USPS 1A&2A Solar Project in Los Angeles County, CA is online. The power generated is sold to Los Angeles Dept of Water & Power under long-term contract.
- Onyx Renewable Partners LP's 5 MW Brockton Landfil Solar Project in Plymouth County, MA is online.
- Bio Energy (Ohio III), LLC's 5 MW landfill gas-fired Brown County LFG Project in Brown County, OH, is online.

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

Primary Fuel Type	July 2017		January – July 2017 Cumulative		January – July 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	1,060	60	10,730	73	7,370
Nuclear	0	0	1	102	0	0
Oil	0	0	1	14	5	12
Water	0	0	5	13	30	429
Wind	0	0	38	3,942	28	2,244
Biomass	3	5	17	206	21	50
Geothermal Steam	0	0	1	18	0	0
Solar	7	94	214	2,346	233	2,617
Waste Heat	0	0	1	220	1	8
Other *	0	0	13	1	6	21
<b>Total</b>	<b>12</b>	<b>1,159</b>	<b>351</b>	<b>17,592</b>	<b>400</b>	<b>12,796</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	284.62	23.92%
Natural Gas	516.87	43.44%
Nuclear	108.16	9.09%
Oil	43.64	3.67%
Water	100.71	8.46%
Wind	85.70	7.20%
Biomass	16.83	1.41%
Geothermal Steam	3.80	0.32%
Solar	27.49	2.31%
Waste Heat	1.26	0.11%
Other*	0.81	0.07%
<b>Total</b>	<b>1,189.89</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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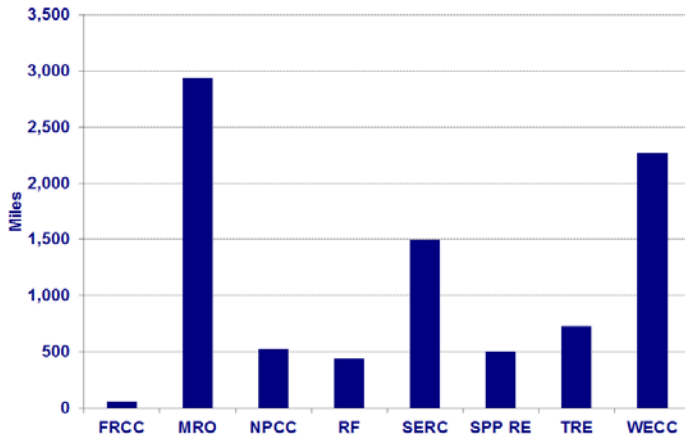
## Electric Transmission Highlights

- The National Energy Board approved ITC Holding Corp. proposed to build the 63.0 mi bi-directional Lake Erie Connector Project. The +/- 320 kV HVDC transmission line would connect Nanticoke, on Southwestern Ontario's Lake Erie shore, and Erie, PA. The Lake Erie Connector Project is expected to be completed in 2019.

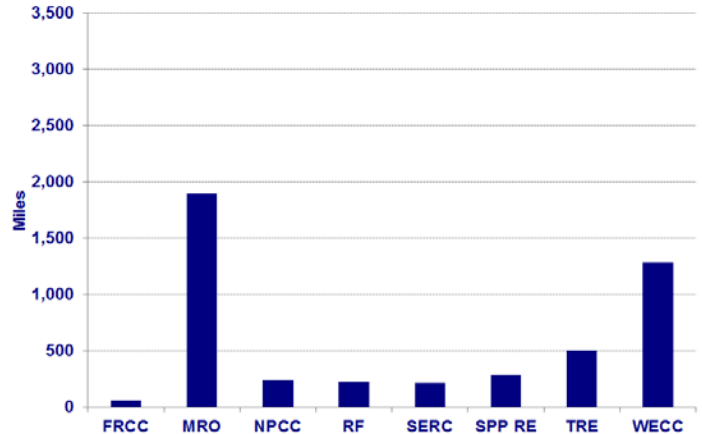
Voltage (kV)	Transmission Projects Completed				Proposed Transmission Projects In-Service by July 2019	
	July 2017	July 2016	January – July 2017 Cumulative	January – December 2016 Cumulative	High Probability of Completion	All
	Line Length (miles)					
≤230	0.0	103.0	108.6	732.8	1,915.7	3,805.1
345	0.0	0.0	57.0	965.9	2,252.7	3,938.6
500	0.0	0.0	0.0	85.0	540.6	1,221.6
<b>Total U.S.</b>	<b>0.0</b>	<b>103.0</b>	<b>165.6</b>	<b>1,783.7</b>	<b>4,709.0</b>	<b>8,965.3</b>

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

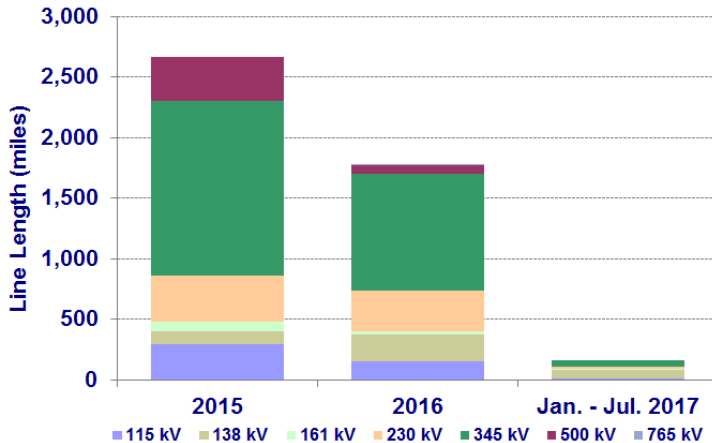
**All Transmission Projects with a Proposed In-Service Date by July 2019**



**Transmission Projects with a High Probability of being completed by July 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.