



Office of Energy Projects Energy Infrastructure Update For October 2019

Natural Gas Highlights

- Equitrans received authorization for its TP-7575 Pipeline Segment Abandonment Project, which consists of abandoning 4,287 feet of the TP-7575 pipeline by sale to Peoples Natural Gas, in Allegheny County, PA.
- Sendero Carlsbad Gateway received authorization to construct approximately twenty-three miles of pipeline and appurtenant facilities in Eddy County, NM and Culberson County, TX. The new pipeline would transport up to 400 MMcf/d of natural gas from processing plants to an interconnect with the Agua Blanca Pipeline.
- NGPL received authorization for its Lockridge Extension Pipeline Project, including the construction of 16.8 miles of pipeline and other appurtenances in Ward, Reeves and Pecos Counties, TX, to provide up to 500 MMcf/d of firm southbound transportation capacity.
- Transco received 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 7.7 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.
- Columbia Gas received authorization for its Laurel Wells Abandonment Project, including abandoning three injection/withdrawal wells and associated pipelines and appurtenances at its Laurel Storage Field in Hocking County, OH. This project would have no impact on existing customers or operations.
- Spire Storage West received authorization for its Storage Wells at the Clear Creek Project, which consists of converting four existing observation wells at its Clear Creek storage facility in Uinta County, WY, to Injection/Withdrawal wells. This project would increase the efficiency of the Clear Creek storage facility.
- Vector Pipeline requests authorization to construct a 1.2 mile lateral that would deliver up to 360 MMcf/d of firm capacity to the new Blue Water Energy Center in St. Clair County, MI.
- Southern Star Central requests authorization to abandon a delivery point and related lateral line on its Line Segment XW-004 in Ellsworth County, KS.
- ANR requests authorization for its Grand Chenier Xpress Project, including equipment installation and modification at three compressor stations and a meter station in Acadia, Jefferson Davis, and Cameron Parishes, LA. The project would add 38,840 HP of compression and provide 400 MMcf/d of firm transportation to Venture Global Calcasieu Pass LNG.
- ANR requests authorization to abandon leases and acquire certain storage assets from Mid-Michigan Gas Storage Company at the Austin, Goodwell, Lincoln-Freeman, Loreed, and Reed City storage fields in Central Michigan.
- National Fuel requests authorization for its Line Q, QP, and Queen Storage Facility Project, which involves amending Commission authorizations associated with the abandonment and sale of these facilities located in Forest and Warren Counties, PA, in order to retain some of these facilities and sell others.
- Columbia Gas of Maryland requests the determination of a service area within which it may, without further Commission authorization, enlarge or expand its facilities in order to transport gas from a delivery point in Somerset County, PA, across the state line into Maryland.
- Southern Star requests authorization to abandon Wells SW #70 and SWB #21 and related infrastructure at its South Welda Field in Anderson County, KS. The abandonment will not affect the field's certificated parameters or service to customers.
- Southern Natural Central Gas requests authorization to abandon two compressors at its Rankin Compressor Station in Rankin County, MS. The units have not been used for several years.



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Natural Gas Activities in October 2019

Status	No. of Projects	Storage Capacity (Bcf)	Deliverability (MMcf/d)	Capacity (MMcf/d)	Miles of Pipeline	Compression (HP)
Pipeline						
Placed in Service	0			0	0	0
Certificated	3			1,196	48	60,720
Proposed	2			760	1	38,840
Storage						
Placed in Service	0	0.0	0.0			0
Certificated	0	0.0	0.0			0
Proposed	0	0.0	0.0			0
LNG (Import & Export)						
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 October 31, 2019 January through October 31, 2018

Status	No. of Projects	Storage Capacity (BCF)	Deliverability (MMcf/d)	Capacity (MMcf/d)	Miles of Pipeline	Compression (HP)
Pipeline						
Placed in Service	9			4,785.0	16.6	323,770
through October 31, 2018	17			10,491.8	615.0	737,613
Certificated	28			16,387.3	573.0	697,623
through October 31, 2018	44			9,044.9	643.0	299,995
Storage						
Placed in Service	0	0.0	0.0			0
through October 31, 2018	0	0.0	0.0			0
Certificated	3	1.0	429.0			10,000
through October 31, 2018	4	3,600.3	152.0			0
LNG (Import & Export)						
Placed in Service (Export)	5	23.7	2,874.0			0
through October 31, 2018	1	0.0	825.0			0
Certificated (Import/Export)	7	51.8	13,447.0			0
through October 31, 2018	1	0.0	20.0			0

Source: Staff Database



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Hydropower Highlights (nonfederal)

- Andrew Peklo III filed an application to raise the capacity of his Pomperaug Project No. 12790 from 0.076 MW to 0.090 MW. The project is located on the Pomperaug River in Litchfield County, CT.

Hydropower Project Activities in October 31, 2019

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	0.014	0	0	0	0	1	0.014
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 October 31, 2019)

Status	Conventional		Pumped Storage		Hydrokinetic		Total No. of Projects	Total Capacity (MW)
	No.	Capacity (MW)	No.	Capacity (MW)	No.	Capacity (MW)		
Filed								
License	4	3.924	0	0	1	20.000	5	23.924
10-MW Exemption	0	0	0	0	0	0	0	0
Capacity Amendment	5	4.225	0	0	0	0	5	4.225
Conduit Exemption	1	2.000	0	0	0	0	1	2.000
Issued								
License	1	5.000	1	393.300	1	0.070	3	398.370
10-MW Exemption	1	0.140	0	0	0	0	1	0.140
Capacity Amendment	2	3.870	0	0	0	0	2	3.870
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



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Electric Generation Highlights

- Foard City Wind LLC's 350.0 MW Foard City Wind Project in Foard County, TX is online. The power generated is sold to Innergex Renewable Energy Inc. under long-term contract.
- Rancho Wind Farm LLC's 300.0 MW Rancho Wind Farm in Crockett County, TX is online.
- Antelope DSR 3 LLC's 20.0 MW Antelope DSR 1 2 Expansion in Los Angeles County, CA is online. The power generated is sold to Southern California Public Power Authority under long-term contract.
- Oxy Renewable Energy LLC's 16.2 MW Oxy Solar Project in Ector County, TX is online.
- Public Service Co of New Mexico's 10.0 MW San Miguel 2 Solar Energy Center in San Miguel County, NM is online.
- Geoelectric Power Co NM LLC's 10.0 MW Lightning Dock Geothermal Expansion in Hidalgo County, NM is online. The power generated is sold to Public Service Co of New Mexico under long-term contract.

New Generation In-Service (New Build and Expansion)

Primary Fuel Type	October 2019		January – October 2019 Cumulative		January – October 2018 Cumulative	
	No. of Units	Installed Capacity (MW)	No. of Units	Installed Capacity (MW)	No. of Units	Installed Capacity (MW)
Coal	0	0	3	62	4	10
Natural Gas	1	1	77	7,808	101	15,956
Nuclear	0	0	1	155	4	30
Oil	0	0	15	77	35	65
Water	0	0	19	131	10	117
Wind	2	650	31	4,488	43	3,563
Biomass	1	2	8	65	13	102
Geothermal Steam	1	10	1	10	7	42
Solar	8	59	334	2,923	486	3,806
Waste Heat	0	0	0	0	2	51
Other *	1	0	35	1	28	2
Total	14	722	524	15,720	733	23,744

Total Available Installed Generating Capacity

	Installed Capacity (GW)	% of Total Capacity
Coal	250.73	20.96%
Natural Gas	534.75	44.70%
Nuclear	106.33	8.89%
Oil	39.82	3.33%
Water	100.80	8.43%
Wind	101.62	8.50%
Biomass	15.93	1.33%
Geothermal Steam	3.85	0.32%
Solar	40.27	3.37%
Waste Heat	1.32	0.11%
Other*	0.77	0.06%
Total	1,196.18	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.



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Generation Capacity Additions and Retirements (November 2019 – October 2022) From ABB Velocity Suite's Generating Unit Capacity Dataset

Primary Fuel Type	All Proposed Additions		Proposed Additions Under Construction**		Proposed Retirements	
	No. of Units	Installed Capacity (MW)	No. of Units	Installed Capacity (MW)	No. of Units	Installed Capacity (MW)
Coal	1	77	0	0	50	14,226
Natural Gas	220	57,864	101	30,735	102	9,249
Nuclear	6	5,896	1	1,100	6	5,951
Oil	11	682	1	2	16	2,778
Water	226	14,310	90	1,924	12	481
Wind	527	96,305	187	29,837	3	330
Biomass	48	391	21	327	28	89
Geothermal Steam	14	695	4	213	0	0
Solar	2,669	96,530	655	19,464	1	1
Waste Heat	3	49	2	29	0	0
Other *	174	486	49	26	1	2
Total	3,899	273,285	1,111	83,657	219	33,107

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.

** Under Constructions includes units that have started site preparation or construction. It also includes units that are in the testing phase.

Electric Transmission Highlights

- Texas Central Company has completed the 26.0 mile, 345 kV Bonilla – Ladekidde Project in TX.
- Garland Power & Light has completed the 8.5 mile, 230 kV Dent Road – Wieland Project in TX.
- Dominion Virginia Power has completed the 6.2 mile 230 kV Warrenton – Gainesville Project in VA.
- Appalachian Power has completed the 25.0 mile, 138 kV Bradley Station – McClung Project in WV.
- Dominion North Carolina Power has completed the 22.0 mile, 115 kV Pantego – Trowbridge Transmission Line in NC.

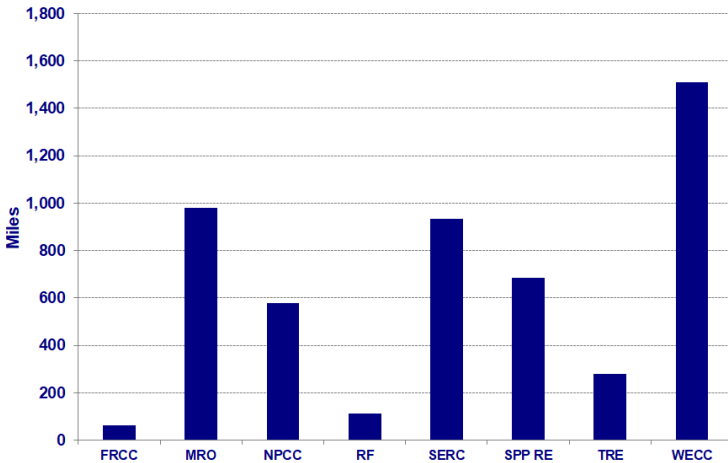
Voltage (kV)	Transmission Projects Completed				Proposed Transmission Projects In-Service by November 2021	
	October 2019	October 2018	January – October 2019 Cumulative	January – December 2018 Cumulative	Planned and Under Construction	All
	Line Length (miles)					
≤230	61.7	69.0	184.6	521.5	533.8	1,296.7
345	26.0	114.0	397.5	847.2	701.4	2,065.3
500	0.0	0.0	7.7	69.4	670.0	1,784.0
Total U.S.	87.7	183.0	589.8	1,438.1	1,905.2	5,146.0

Sources: Data derived from North American Electric Reliability Corporation (NERC) Electricity Supply and Demand (ES&D) and U.S. Electric Transmission Projects ©The C Three Group, LLC.

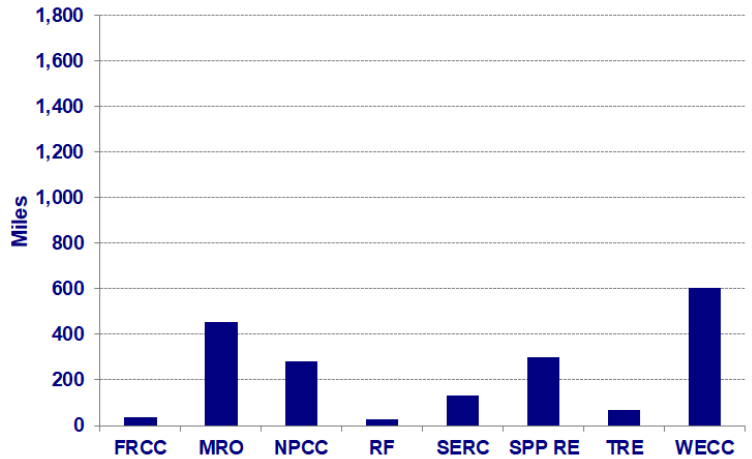


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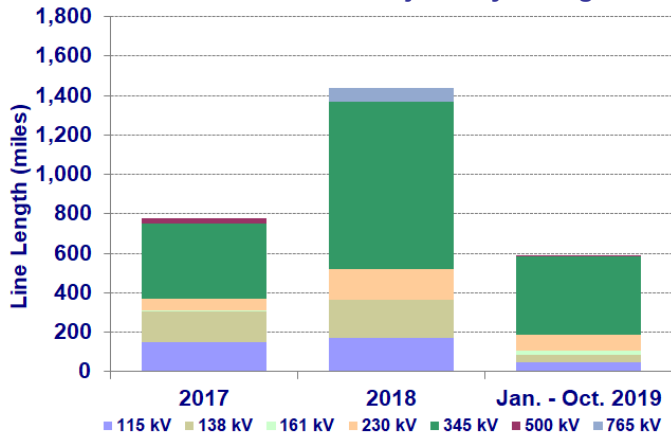
All Transmission Projects with a Proposed In-Service Date by November 2021



Planned and Under Construction Transmission Projects with a Proposed In-Service Date by November 2021



New Transmission Projects by Voltage



Sources: Data derived from North American Electric Reliability Corporation (NERC) Electricity Supply and Demand (ES&D) and U.S. Electric Transmission Projects ©The C Three Group, LLC.

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