



## Office of Energy Projects Energy Infrastructure Update For May 2020

### Natural Gas Highlights

- Sendero Carlsbad Gateway received authorization to place in service 23-miles of pipeline and appurtenant facilities in Eddy County, NM and Culberson County, TX. The new pipeline will transport up to 400 MMcf/d of natural gas from processing plants to an interconnect with the Agua Blanca Pipeline.
- Gulf South received authorization to place in service its Willis Lateral Project, including 19-miles of pipeline and 15,876 HP of new compression in Montgomery and San Jacinto Counties, TX, to transport up to 200 MMcf/d of natural gas to a proposed power plant.
- Eastern Shore received authorization to place in service facilities associated with the Woodside Loop portion of the Del-Mar Energy Pathway Project in Kent County, DE.
- Southern Star Central received authorization for its Tougaloo Project - Nash Compressor Station, including a 3,750 HP compressor station in Grant County, OK, that will provide up to 40 MMcf/d of firm capacity for a customer.
- Columbia Gas received authorization for its Quarry Road Meter Station Project, including a greenfield receipt meter station and associated appurtenant facilities at the interconnection of the NEXUS pipeline and Columbia's L2542 pipeline in Lorain County, OH, to allow Columbia to receive up to 215 MMcf/d from NEXUS.
- ANR received authorization to increase from 9,700 to 10,800 HP, the certificated horsepower at its Grand Chenier Compressor Station in Cameron Parish, LA, in order to improve efficiency and reliability at the station.
- Northern Natural received authorization to build three injection and withdrawal wells and related facilities at its Redfield Storage Field in Dallas County, IA. The project will not affect the capacity or deliverability of the field.
- Bluewater Gas Storage received authorization to construct an 11,150 HP compressor station in Macomb County, MI in order to restore the storage field's firm delivery capacity to its authorized 500 Mcf/d.
- Alaska Gasline received authorization to construct a natural gas liquefaction and export terminal near Nikiski in Southcentral AK. The project will include 2 tanks with a storage capacity of 10.3 Bcf, 2.7 Bcf/d of deliverability, and 871 miles of pipeline from production fields in Northern AK.
- Transwestern requests authorization for its Station 8 Project, including a 5,000 HP compressor unit and a compressor building at its Compressor Station 8 in Lincoln County, NM. The project will not affect system capacity.
- Texas Eastern requests authorization for its Appalachia to Market Project, including 0.8 miles of new pipeline, two pipeline crossovers, and related appurtenances in Westmoreland, Berks, and Fayette counties, PA, in order to provide up to 18 MMcf/d of firm transportation for UGI.
- Dominion Overthrust requests authorization for its Wamsutter West Expansion Project, including piping and valving modifications at four compressor stations in Lincoln and Sweetwater Counties, WY, in order to add 120 MMcf/d of capacity between the Wamsutter and the Opal interconnects.
- Northwest Pipeline requests authorization to abandon its 6-inch Bellingham Lateral Pipeline in Whatcom County, WA. This line has been inactive since 2001 and is not needed to meet contractual commitments.
- Golden Pass Pipeline requests an amendment to its certificate in order to relocate an interconnect, 3-miles of pipeline looping, a compressor station, and add 15,910 HP of compression in Calcasieu Parish, LA.
- Northern Natural requests authorization for its Clifton to Palmyra A-line Abandonment Project, including abandoning in-place its A and J-lines in Clay and Washington counties, KS and Gage, Jefferson, Lancaster and Otoe counties, NE; and authorization to build a 15,900 HP compressor at its Beatrice compressor station in Gage County to maintain existing service.
- Lower Valley Energy requests a service area determination within which, without further Commission authorization, it may enlarge or expand its natural gas distribution facilities to serve customers in Caribou County, ID.
- National Fuel requests authorization to use its Q 12-inch Pipeline at the Allegheny River Crossing in Warren County, PA as a FERC jurisdictional facility in the event that the 6-inch line at the same crossing needs to be taken out of service for maintenance.
- National Fuel requests authorization to abandon three injection/withdrawal storage wells and associated well lines at its East Branch Storage Field in Warren and McKean Counties, PA. The abandonment will have no impact on customers or operations.
- Enable Mississippi River Transmission requests to amend the certificate for its East Unionville Storage Field in Lincoln Parish, LA, in order to reduce base gas capacity to 19.1 Bcf and increase working gas capacity to 36.1 Bcf. The field's total certificated capacity would remain unchanged.
- National Fuel requests authorization to abandon two injection/withdrawal storage wells and associated well lines at its Sheridan Storage Field in Chautauqua County, NY.



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- Freeport LNG requests authorization for its Noble Gas Project, including modifications to its existing pretreatment facility in Brazoria County, TX, to allow for the extraction of helium from the existing compressed boil-off gas.
- Golden Pass LNG requests an amendment to its certificate authorizing a 197 Bcf per year increase in the export capacity of its LNG export terminal in Sabine Pass, TX. The increase would not include new construction activity.

### Natural Gas Activities in May 2020

Status	No. of Projects	Storage Capacity (Bcf)	Deliverability (MMcf/d)	Capacity (MMcf/d)	Miles of Pipeline	Compression (HP)
<b>Pipeline</b>						
Placed in Service	3			614	62	15,876
Certificated	2			40	0	4,850
Proposed	5			138	1	36,810
<b>Storage</b>						
Placed in Service	0	0	0			0
Certificated	1	0	0			11,150
Proposed	1	0	0			0
<b>LNG (Import &amp; Export)</b>						
Placed in Service (Export)	0	0	0			0
Certificated (Import/Export)	1	10	3			0
Proposed (Import/Export)	1	197	0			0

Source: Staff Database

### Natural Gas Activities through May 31, 2020

#### January through May 31, 2019

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			937.3	61.8	31,776
through May 31, 2019	5			4,101.0	1.4	282,400
Certificated	19			3,031.1	359.1	170,157
through May 31, 2019	14			9,988.4	393.6	584,535
<b>Storage</b>						
Placed in Service	0	0.0	0.0			0
through May 31, 2019	0	0.0	0.0			0
Certificated	2	81.0	2,836.0			11,150
through May 31, 2019	1	0.0	79.0			0
<b>LNG (Import &amp; Export)</b>						
Placed in Service (Export)	5	3.4	1,531.0			0
through May 31, 2019	2	10.1	1413.0			0
Certificated (Import/Export)	2	20.3	1,022.6			0
through May 31, 2019	4	33.6	8185.0			0

Source: Staff Database



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### Hydropower Highlights (nonfederal)

- Douglas Leen was issued an exemption for the .002 MW Kupreanof Microhydro Project No. 14862 in Petersburg Borough, AK.
- Northwestern Corporation was issued an order raising the capacity of its Missouri-Madison Project No. 2188 from 308.880 to 312.140 MW. The project is located on the Missouri and Madison Rivers in Cascade, Gallatin, Lewis and Clark, and Madison Counties, MT.
- Alabama Power Company was issued an order raising the capacity of its Martin Dam Project No. 349 from 182.500 to 187.500 MW. The project is located on the Tallapoosa River in Coosa, Elmore, and Tallapoosa Counties, AL.
- Duke Energy Carolinas, LLC filed an application to increase the capacity of its Catawba-Wateree Project No. 2232 from 805.302 to 810.252 MW. The project is located on the Catawba-Wateree River in Burke, McDowell, Caldwell, Catawba, Alexander, Iredell, Mecklenburg, Lincoln, and Gaston Counties, NC, and York, Lancaster, Chester, Fairfield, and Kershaw Counties, SC.

#### Hydropower Project Activities in May 2020

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	1	4.950	0	0	0	0	1	4.950
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	1	0.002	0	0	0	0	1	0.002
Capacity Amendment	2	8.260	0	0	0	0	2	8.260
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 May 31, 2020)

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	4	14.785	0	0	0	0	4	14.785
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	1	0.002	0	0	0	0	1	0.002
Capacity Amendment	5	10.481	0	0	0	0	5	10.481
Conduit Exemption	0	0	0	0	0	0	0	0



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Status	Conventional		Pumped Storage		Hydrokinetic		Total No. of Projects	Total Capacity (MW)
	No.	Capacity (MW)	No.	Capacity (MW)	No.	Capacity (MW)		
<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

### Electric Generation Highlights

- Hickory Run Energy LLC's 1,000.0 MW natural gas-fired Hickory Run Energy Station in Lawrence County, PA is online.
- Riverside Energy Center LLC's 700.00 MW natural gas-fired Riverside Energy Center in Rock County, WI is online. The power generated is sold to Madison Gas & Electric Co. and Wisconsin Power & Light Co. under long-term contract.
- Tenaska Clear Creek Wind LLC's 242.0 MW Clear Creek Energy Center in Nodaway County, MO is online. The power generated is sold to Associated Electric Coop. Inc. under long-term contract.
- Beech Ridge Energy II LLC's 52.5 MW Beech Ridge Wind Farm in Greenbrier County, WV is online. The power generated is sold to Appalachian Power Co. under long-term contract.
- High Lonesome Wind Power LLC's 50.6 MW High Lonesome W Expansion in Crockett County, TX is online.
- Duke Energy Florida's 74.5 MW DeBary Solar Plant in Volusia County, FL is online.
- Florida Power & Light Co.'s 74.5 MW Echo River Solar Energy Center in Suwannee County, FL is online.
- Florida Power & Light Co.'s 74.5 MW Hibiscus Solar Energy Center in Palm Beach County, FL is online.
- Florida Power & Light Co.'s 74.5 MW Okeechobee Solar Energy Center in Okeechobee County, FL is online.
- Florida Power & Light Co.'s 74.5 MW Southfork Solar Energy Center in Manatee County, FL is online.
- LightSource BP's 27.0 MW Johnson Center Solar 1 Project in Stanton County, KS is online.
- Rock Garden Solar LLC's 10.0 MW Rock Garden Solar Facility in Lake County, OR is online. The power generated is sold to Portland General Electric Co. under long-term contract.

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

Primary Fuel Type	May 2020		January – May 2020 Cumulative		January – May 2019 Cumulative	
	No. of Units	Installed Capacity (MW)	No. of Units	Installed Capacity (MW)	No. of Units	Installed Capacity (MW)
Coal	0	0	3	20	0	0
Natural Gas	2	1,700	24	5,682	62	4,904
Nuclear	0	0	0	0	1	155
Oil	0	0	0	0	14	57
Water	0	0	6	25	11	56
Wind	3	345	35	3,449	23	1,771
Biomass	0	0	2	11	2	18
Geothermal Steam	0	0	0	0	0	0
Solar	13	418	138	2,661	201	1,749
Waste Heat	0	0	0	0	0	0
Other *	2	0	7	5	22	0
<b>Total</b>	<b>20</b>	<b>2,463</b>	<b>215</b>	<b>11,853</b>	<b>336</b>	<b>8,710</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.



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### Total Available Installed Generating Capacity

	Installed Capacity (GW)	% of Total Capacity
Coal	244.88	20.29%
Natural Gas	539.60	44.71%
Nuclear	103.74	8.60%
Oil	39.73	3.29%
Water	100.74	8.35%
Wind	109.75	9.09%
Biomass	15.89	1.32%
Geothermal Steam	3.88	0.32%
Solar	46.52	3.85%
Waste Heat	1.28	0.11%
Other	0.78	0.06%
<b>Total</b>	<b>1,206.79</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.

### Generation Capacity Additions and Retirements (June 2020 – May 2023)

From ABB Velocity Suite's Generating Unit Capacity Dataset

Primary Fuel Type	All Additions		High Probability Additions		Retirements	
	No. of Units	Installed Capacity (MW)	No. of Units	Installed Capacity (MW)	No. of Units	Installed Capacity (MW)
Coal	1	77	0	0	63	20,696
Natural Gas	214	53,311	77	23,415	73	5,935
Nuclear	6	4,460	4	2,560	3	2,558
Oil	15	685	2	4	29	3,986
Water	230	14,429	99	2,063	9	7
Wind	462	89,544	153	26,798	1	239
Biomass	47	259	23	191	24	67
Geothermal Steam	15	540	4	213	10	35
Solar	2,927	113,298	720	26,154	0	0
Waste Heat	3	49	2	29	0	0
Other *	266	475	65	15	1	2
<b>Total</b>	<b>4,186</b>	<b>277,127</b>	<b>1,149</b>	<b>81,442</b>	<b>213</b>	<b>33,525</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.

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



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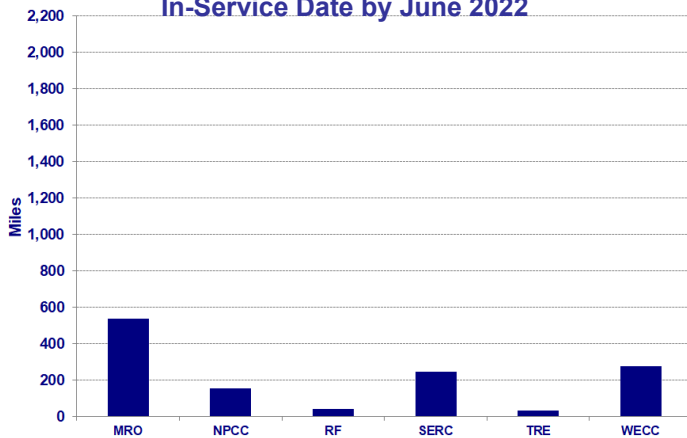
## Electric Transmission Highlights

- Great River Energy has completed 1.4 mile, 115 kV Lebanon Hills Transmission Project in MN.

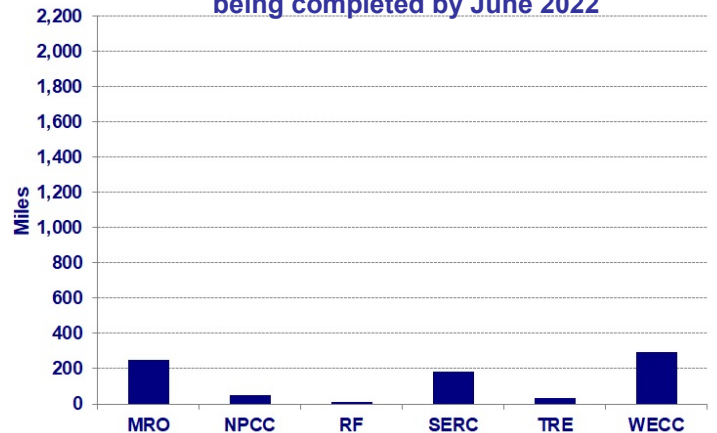
Voltage (kV)	Transmission Projects Completed				Proposed Transmission Projects In-Service by June 2022	
	May 2020	May 2019	January – May 2020 Cumulative	January – December 2019 Cumulative	High Probability of Completion	All
	Line Length (miles)					
≤230	1.4	27.2	39.0	296.5	347.7	505.5
345	0.0	92.0	14.6	604.5	224.0	594.4
500	0.0	0.0	0.0	7.7	251.4	191.4
<b>Total U.S.</b>	<b>1.4</b>	<b>119.2</b>	<b>53.6</b>	<b>908.7</b>	<b>823.1</b>	<b>1,291.3</b>

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

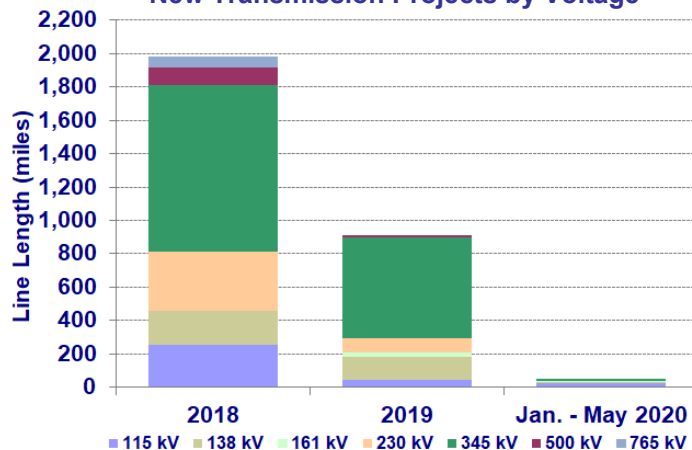
**All Transmission Projects with a Proposed In-Service Date by June 2022**



**Transmission Projects with a High Probability of being completed by June 2022**



**New Transmission Projects by Voltage**



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

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