



Office of Energy Projects Energy Infrastructure Update *For March 2023*

Natural Gas Highlights

- Columbia Gas received authorization for its Lines VB, VB-Loop, and VB-5 Cedar Springs Class Replacement Project in Shenandoah County, VA, including replacement of 4.3 miles of line and performing hydrostatic testing. The project would ensure compliance with PHMSA requirements.
- Northern Natural received authorization for its West Leg 2023 Expansion Project, including 4.9 miles of pipeline at two locations in Martin County, MN and Dickenson County, IA, a town border station (TBS) at Platinum Crush in Buena Vista County, IA, and modifications to the TBS at Freemont in Dodge County, NE. The project would provide up to 18.3 MMcf/d of new transportation capacity for LDCs and industrial customers.
- WBI Energy received authorization for its Grassland South Expansion Project, including 15.3 miles of new pipeline lateral and a receipt station in Dunn County, ND, and an interconnect with Big Horn Gas Gathering in Campbell and Sheridan Counties, WY. The project would provide up to 94 MMcf/d of firm transportation capacity from a gas processing facility.
- Alliance Pipeline received authorization for its Three Rivers Interconnection Project, including 2.85 miles of new lateral line that would supply up to 210 MMcf/d of natural gas to a planned power plant in Grundy County, IL.
- Columbia Gas received authorization for its Virginia Electrification Project, including modifying two compressor stations, increasing the certificated HP at a third station, and expanding one point of receipt in Louisa, Goochland, and Prince George Counties, VA in order to provide 35 MMcf/d of transportation capacity.
- Florida Gas received authorization for its Tampa West Project, which involves constructing 1.26 miles of pipeline and adding and modifying facilities in order to reallocate 10 MMcf/d of firm transportation from two delivery points in Pinellas County, FL to the PGS West delivery point in Hillsborough County, FL.
- Mountainwest Overthrust Pipeline received authorization for its Solvay American Soda Delivery Project, including constructing 2.8 miles of lateral line, a delivery tap and a meter station in Sweetwater County, WY. The project would provide up to 47 MMcf/d of firm transportation service for an industrial user.
- Columbia Gas received authorization for its 2023 Southcentral Ohio Abandonment Project, including abandoning three injection/withdrawal wells and connecting pipelines and appurtenances at its Benton, Crawford, and McArthur Storage Fields in Hocking and Vinton Counties, OH. The project would reduce integrity risk and not affect the fields' parameters or customers.
- Columbia Gas received authorization for its 2023 Ripley New Drill 12641 Project, including drilling a new injection/withdrawal well and constructing related storage pipe and appurtenances at its Ripley Storage Field in Jackson County, WV. The project would not change the field's parameters and would help maintain reliability and overall performance.
- Cameron LNG's Trains 4 & 5 Expansion Project was amended to eliminate the previously authorized Train 5, decrease the total deliverability of the project from 515 to 350 MTPA, all produced from Train 4, and implement design changes to reduce the overall GHG emissions from Train 4. The project is located in Cameron and Calcasieu Parishes, LA.
- Bison Pipeline requests authorization to reduce the maximum allowable Operating Pressure of its pipeline system from 1,440 to 1,296 psig to align with PHMSA requirements. The permanent reduction would result in a decrease in designed summerday capacity 407 to 376.5 MMcf/d. The reduction would not affect customers since the pipeline is already underutilized.
- WBI Energy requests authorization for its Line Section 15 Expansion project, including uprating a pipeline segment, building 1,900 HP of new compression and 500 feet of new line in Butte, Lawrence, Meade and Pennington Counties, SD. The project would allow WBI to provide up to 25 MMcf/d of firm transportation capacity for two customers.
- Tennessee Gas requests authorization to abandon its capacity lease with Kinder Morgan Tejas and Kinder Morgan Border Pipelines in TX. The leased capacity is not needed and the abandonment would not impact any customers.
- WBI Energy requests authorization to abandon by sale to Kentex Worland, 4.8 miles of its Worland-Cabin Creek mainline, from WBI's Worland Compressor Station in Washakie County, WY to the Rairden Loop Take-Off Valve in Big Horn County, WY. The abandonment will not affect service to any customers.
- Northern Natural requests authorization to amend its Ogden to Ventura A - Line Capacity Replacement project, reducing the length of the replacement line from 6.04 to 1.51 miles. There has been a turn back of some capacity and Northern has determined that contracted capacity can be met with the reduced facilities.
- Gulf South requests authorization to abandon in place and by removal its Index 293-2 and Index 293-2S Pipelines in Plaquemines Parish, LA. The abandonment would accommodate the U.S. Army Corps of Engineers' Mississippi River Ship Channel Deepening Project, and would not impact customers.



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- East Tennessee Natural Gas requests authorization for its System Alignment Program project, which includes construction of 22.5 miles of new pipeline, two new compressor stations with a total of 16,500 HP and related modifications and appurtenances in Knox, Jefferson and Sevier Counties, TN, Washington, Wythe and Patrick counties, VA, and Rockingham County, NC. The project, which would not increase system capacity, would improve the operational reliability of the system.
- Columbia Gas requests authorization for its Lucas and Pavonia Wells Abandonment Project, which includes abandoning 37 injection/withdrawal wells and associated pipelines and appurtenances at its Lucas and Pavonia Storage Fields in Ashland and Richland Counties, OH. The project would lower the overall safety risk of the Columbia system and increase the overall reliability of Columbia's storage services
- Columbia Gas requests authorization for its 2023 Lanham Well Abandonment Project, which includes abandoning one injection/withdrawal well and connecting pipeline and appurtenances at its Lanham Storage Field, in Kanawha County, WV. The abandonment would protect the integrity of the field and have no impact on customers.
- ANR Pipeline requests authorization for its 2023 Reed City Wells Abandonment Project, including abandoning two I/W wells and appurtenances within its Reed City Storage Field, in Osceola County, MI. The abandonment would protect the integrity of the field and would not affect service to customers.
- Southern Star Central Gas requests authorization to drill a new horizontal well at its Webb Storage Field in Grant County, OK. The well would supplement existing deliverability, improve overall efficiency and serve as an alternative to installation of new dewatering facilities on existing storage gathering laterals. The project would not change the field's certificated parameters or its customers.
- WBI Energy requests authorization to abandon six gas storage wells at its Baker Storage Field in Fallon County, MT. The abandonment, part of WBI's ongoing integrity management of the field, would not affect the field's certificated parameters or service to customers.
- NGPL requests authorization for its Herscher 2023 I/W Well Reclassification Project, including reclassifying four injection/withdrawal wells to water removal wells and related activities at its storage field in Kankakee County, IL. The project would increase the ability to remove water from the field in order to maintain the ability to inject the volumes needed to achieve the certificated capacity.
- Corpus Christi LNG requests authorization for its CCL Midscale Trains 8 & 9 project, which involves the construction of two midscale liquefaction trains adjacent to its Corpus Christi Stage III (Trains 1-7) already under construction. The project, in San Patricio and Nueces Counties, TX, would have the capacity of producing up to 0.47 MMcf/d of liquefied natural gas.



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Natural Gas Activity - March 2023

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	6			404	31	6,750
Proposed	1			25	18	18,400
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)	1	-0.5	-0.5			0
Proposed (Import/Export)	1	0.0	0.5			0

Source: Staff Database

Natural Gas Activities through March 31, 2023 January through March 31, 2022

Status	No. of Projects	Storage Capacity (BCF)	Deliverability (MMcf/d)	Capacity (MMcf/d)	Miles of Pipeline	Compression (HP)
Pipeline						
Placed in Service	1			165.0	0.0	15,900
through March 31, 2022	5			1033.7	113.2	159,020
Certificated	16			1873.7	144.0	89,499
through March 31, 2022	10			2083.5	33.1	131,830
Storage						
Placed in Service	0	0.0	0.0			0
through March 31, 2022	0	0.0	0.0			0
Certificated	1	0.0	0.0			690
through March 31, 2022	0	0.0	0.0			0
LNG (Import & Export)						
Placed in Service (Export)	0	0.0	0.0			0
through March 31, 2022	0	0.0	0.0			0
Certificated (Import/Export)	1	-0.5	-0.5			0
through March 31, 2022	0	0.0	0.0			0

Source: Staff Database



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Hydropower Highlights (nonfederal)

- The City of Tacoma, Washington filed an application to increase the capacity of its Nisqually River Project No. 1862 from 115.687 to 116.387 MW. The project is located on the Nisqually River in Pierce and Thurston Counties, WA.
- The South San Joaquin and Oakdale Irrigation Districts filed an application to increase the capacity of their Beardsley/Donnells Project No. 2005 from 82.500 to 83.700 MW. The project is located on the Middle Fork Stanislaus River in Tuolumne County, CA.
- Mad River Power Associates was issued an order increasing the capacity of its Campton Hydroelectric Project No. 3253 from 0.639 to 0.766 MW. The project is located on the Mad River in Grafton County, NH.

Hydropower Project Activities in March 2023

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	2	1.900	0	0	0	0	2	1.900
Conduit Exemption	0	0	0	0	0	0	0	0
Issued								
License	1	0.127	0	0	0	0	1	0.127
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 Databases

Hydropower Project Activities Year to Date (through March 31, 2023)

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	1	972.00	0	0	1	972.00
10-MW Exemption	0	0	0	0	0	0	0	0
Capacity Amendment	2	1.900	0	0	0	0	2	1.900
Conduit Exemption	0	0	0	0	0	0	0	0
Issued								
License	1	0.127	0	0	0	0	1	0.127
10-MW Exemption	0	0	0	0	0	0	0	0
Capacity Amendment	2	77.070	0	0	0	0	2	77.070
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)		
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 Databases

Electric Generation Highlights

- Chaparral Springs LLC's 102.0 MW Chaparral Solar Project in Kern County, CA is online. The power generated is sold to Peninsula Clean Energy Authority under long-term contract.
- Crossett Solar Energy LLC's 100.0 MW Crossett Solar Project in Ashley County, AK is online. The power generated is sold to Arkansas Electric Coop Corp under long-term contract.
- Chaparral Springs LLC's 72.0 MW Willow Springs Solar (CA) Expansion Project in Kern County, CA is online. The power generated is sold to Valley Clean Energy Alliance under long-term contract.
- Sycamore Solar I LLC's 42.0 MW Sycamore Solar I Project in Pittsylvania County, VA is online.
- Granada Solar LLC's 20.0 MW Grissom Solar Project in Fulton County, NY is online.
- Grissom Solar LLC (NY)'s 20.0 MW NY 078 003 Grissom Solar Project in Montgomery County, NY is online. The power generated is sold to National Grid USA under long-term contract.
- Janis Solar LLC's 20.0 MW Janis Solar Project in Cortland County, NY is online.
- Prospect14's 20.0 MW CL Viaduct Solar Project in Clearfield County, PA is online.
- Watlington Solar LLC's 20.0 MW Watlington Solar Project in Halifax County, VA is online. The power generated is sold to Dominion Energy Inc under long-term contract.
- Gosh Enterprises Inc's 7.0 MW Richmond Community Solar Project in Ontario County, NY is online.
- Appleton Solar 1 LLC's 5.8 MW Appleton Road Project in Saratoga County, NY is online.
- Buffalo Climate Action LLC's 5.0 MW Millersport GM 1 Solar Project in Erie County, NY is online.
- North Carolina Electric Membership Corp's 5.0 MW Arba Solar Energy Project in Greene County, NC is online.
- Seven Cowboy Wind Project LLC's 297.3 MW Seven Cowboy Wind Project in Washita County, OK is online.
- TN Solar 1 LLC's 100.0 MW Skyhawk Solar Project in Obion County, TN is online. The power generated is sold to Tennessee Valley Authority under long-term contract.
- Deerfield Wind Energy 2 LLC's 112.0 MW Deerfield Wind Energy II Project in Huron County, MI is online. The power generated is sold to Facebook under long-term contract.



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New Generation In-Service (New Build and Expansion)

	March 2023		January – March 2023 Cumulative		January – March 2022 Cumulative	
Primary Fuel Type	No. of Units	Installed Capacity (MW)	No. of Units	Installed Capacity (MW)	No. of Units	Installed Capacity (MW)
Coal	0	0	0	0	0	0
Natural Gas	0	0	18	2,259	28	429
Nuclear	0	0	0	0	3	0
Oil	0	0	2	2	4	5
Water	0	0	5	100	6	11
Wind	2	409	8	1,475	20	4,617
Biomass	0	0	1	29	0	0
Geothermal Steam	0	0	0	0	0	0
Solar	26	491	99	2,530	136	2,389
Waste Heat	0	0	0	0	0	0
Other *	9	0	19	0	24	0
Total	37	900	152	6,395	221	7,451

Sources: Data derived from Velocity Suite, Hitachi Energy 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.

Total Available Installed Generating Capacity

	Installed Capacity (GW)	% of Total Capacity
Coal	217.61	17.12%
Natural Gas	559.21	44.00%
Nuclear	102.43	8.06%
Oil	37.99	2.99%
Water	101.35	7.97%
Wind	146.28	11.51%
Biomass	15.21	1.20%
Geothermal Steam	4.12	0.32%
Solar	84.79	6.67%
Waste Heat	1.29	0.10%
Other	0.81	0.06%
Total	1,271.07	100.00%

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



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Generation Capacity Additions and Retirements (April 2023 – March 2026) From Hitachi Energy Velocity Suite's Generating Unit Capacity Dataset

	All Additions		High Probability Additions		Retirements	
Primary Fuel Type	No. of Units	Installed Capacity (MW)	No. of Units	Installed Capacity (MW)	No. of Units	Installed Capacity (MW)
Coal	0	0	0	0	66	28,507
Natural Gas	176	28,616	120	16,878	133	17,452
Nuclear	2	2,200	2	2,200	2	2,323
Oil	9	650	5	10	104	1,582
Water	160	12,192	47	599	16	43
Wind	293	66,667	94	17,120	19	49
Biomass	13	140	11	135	19	238
Geothermal Steam	7	145	1	37	10	35
Solar	2,931	211,816	831	77,594	0	0
Waste Heat	15	131	3	60	1	27
Other *	747	610	276	23	0	0
Total	4,353	323,167	1,390	114,656	370	50,256

Sources: Data derived from Velocity Suite, Hitachi Energy 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

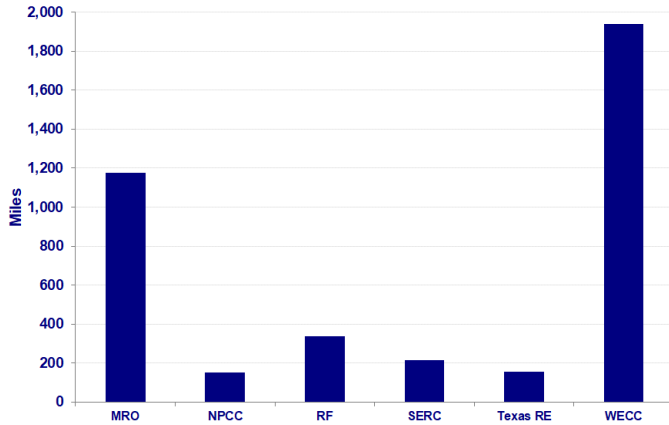
- Allegheny Energy has completed the 1.5 mi, 138 kV Tap of Fawn – Lawson Jct Transmission Project in PA.
- Black Hills Energy has completed the 4.6 mi, 115 kV West Station – North Penrose in CO.

	Transmission Projects Completed				Proposed Transmission Projects In-Service by August 2025	
Voltage (kV)	March 2023	March 2022	January – March 2023 Cumulative	January – December 2022 Cumulative	High Probability of Completion	All
	Line Length (miles)					
≤230	6.1	6.0	77.1	476.6	580.8	915.0
345	0.0	0.0	0.0	197.7	319.5	911.6
500	0.0	0.0	0.0	0.3	1,452.0	2,144.0
Total U.S.	6.1	6.0	77.1	674.6	2,352.3	3,970.6

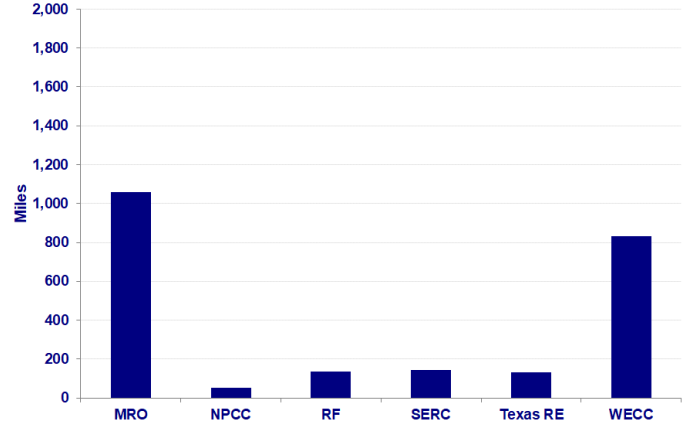


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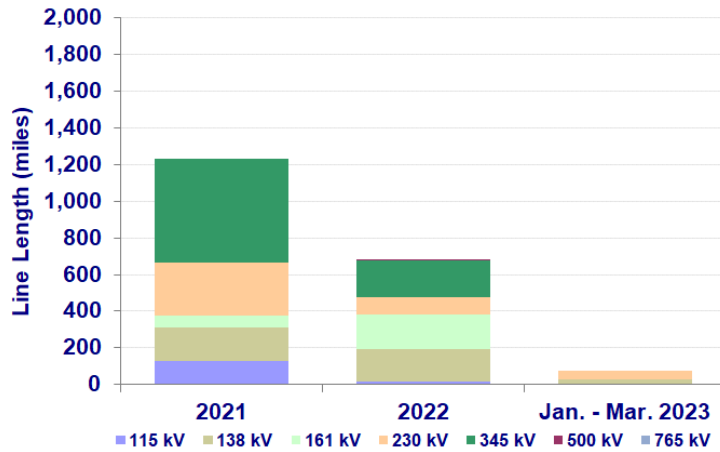
All Transmission Projects with a Proposed In-Service Date by August 2025



Transmission Projects with a High Probability of being completed by August 2025



New Transmission Projects by Voltage



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