

# Office of Energy Projects

## Energy Infrastructure Update

For December 2011

### Natural Gas Highlights

- D'Lo Gas Storage filed an application to construct and operate a new storage facility in the D'Lo salt dome formation in Simpson County, MS. This project will develop three caverns, each with a working gas capacity of 8 Bcf.
- Tennessee filed an application to construct and operate its MPP Project. This project will provide 240 MMcf/d of new capacity for the firm transportation of Marcellus Shale gas to established markets, including markets in the Northeast.
- Transcontinental filed an application to construct and operate its Northeast Supply Link Project which will provide 250 MMcf/d of new capacity for the firm transportation of gas supplies located in North Central PA to markets in New Jersey and New York City.
- Corpus Christi Liquefaction commenced the Commission's pre-filing process for its proposed project to liquefy domestic gas for export, as well as to receive and regasify imported LNG at a terminal to be built near Corpus Christi, TX. The project will be designed to liquefy 1,800 MMcf/d of pipeline quality gas and to vaporize 400 MMcf/d of LNG.

#### Natural Gas Activities in December 2011

Status	No. of Projects	Storage Capacity (Bcf)	Deliverability (MMcf/d)	Capacity (MMcf/d)	Miles of Pipeline	Compression (HP)
<b>Pipeline</b>						
Placed in Service	0			0.0	0.0	0
Certificated	0			0.0	0.0	0
Proposed	2			490.0	20.4	41,000
<b>Storage</b>						
Placed in Service	0	0.0	0			0
Certificated	0	0.0	0			0
Proposed	1	24.0	1,200			36,735
<b>LNG</b>						
Placed in Service	0	0	0			0
Certificated	0	0	0			0
Proposed	1	10.1	400			0

Source: Staff Database

#### Natural Gas Activities through December 31, 2011 Through December 31, 2010

Status	No. of Projects	Storage Capacity (Bcf)	Deliverability (MMcf/d)	Capacity (MMcf/d)	Miles of Pipeline	Compression (HP)
<b>Pipeline</b>						
Placed in Service	30			12,549.4	1,765.4	816,369
through December 31, 2010	31			11,864.8	1,162.4	421,688
Certificated	18			4,177.7	323.5	312,255
through December 31, 2010	24			9,236.4	1,589.3	522,194
<b>Storage</b>						
Placed in Service	9	40.5	2,555			30,218
through December 31, 2010	13	74.1	4,337			32,180
Certificated	13	181.4	4,495			143,010
through December 31, 2010	20	149.4	5,608			138,104
<b>LNG</b>						
Placed in Service	2	23.2	3,500			0
through December 31, 2010	1	4.22	400			0
Certificated	0	0	0			0
through December 31, 2010	0	0	0			0

Source: Staff Database

# Office of Energy Projects

## Energy Infrastructure Update

For December 2011

### Hydropower Highlights

- On December 2, 2011, a small hydro exemption from licensing was issued to Jonathan and Jayne Chase for the 0.85-MW Troy Hydroelectric Project No. 13381. The project would be located on the Missisquoi River in Orleans County, Vermont.
- On December 8, 2011, OEP issued an original license to Ha-Best, Inc. for the 1.26-MW Miner Shoal Waterpower Project No. 12492. The project would be located at Miner Shoal on the Soque River near Demorest, Georgia.
- On December 15, 2011, an original license was issued to Marseilles Land & Water Company for the 10.26-MW Marseilles Lock and Dam Hydroelectric Project No. 13351. The project would be located at the U.S. Army Corps of Engineers' Marseilles Lock and Dam on the Illinois River in Marseilles, Illinois.
- On December 5, 2011, Historic Harrisville, Inc. filed an application for a small hydro exemption from licensing for the proposed 0.09-MW Cheshire Mills Hydroelectric Project No. 14332. The project would be located at the existing Cheshire Mills Dam on Nubanusit Brook in the Town of Harrisville, Cheshire County, New Hampshire.
- On December 8, 2011, Symbiotics LLC, on behalf of Barren River Lake Hydro LLC, filed an application for an original license for the proposed 6.8-MW Barren River Lake Dam Hydroelectric Project No. 13022. The project would be located on the Barren River in Bowling Green, Allen County, Kentucky.
- On December 13, 2011, Symbiotics LLC, on behalf of Oliver Hydro LLC, filed an application for an original license for the proposed 11.7-MW William Bacon Oliver Lock and Dam Hydroelectric Project No. 13005. The project would be located on the Black Warrior River near the city of Tuscaloosa, Tuscaloosa County, Alabama.
- On December 27, 2011, Symbiotics LLC, on behalf of Mississippi 8 Hydro LLC, filed an application for an original license for the proposed 14.0-MW Lock and Dam 8 Hydroelectric Project No. 13010. The project would be located at the U.S. Army Corps of Engineers' Lock and Dam 8 on the Mississippi River in Houston County, Minnesota.
- On December 7, 2011, Brookfield Power notified FERC that Project No. 12451, Lower St. Anthony Falls, achieved operation of all 16 of the STRATFLOMATRIX submersible turbine-generators with an estimated total generating capacity of 9.2 MW. The units are controlled from an operating gallery above the units, there is no conventional powerhouse associated with this project. Initial commercial operations began on that date. Total authorized generation is 8.98 MW.
- On December 15, 2011, the New York Power Authority filed an application for non-capacity amendment of license for the Niagara Project (FERC No. 2216), located on the Niagara River, in towns of Niagara and Lewiston, Niagara County, New York. The licensee proposes to rehabilitate the twelve 50-year old, 20-MW pump-turbine units at the Lewiston Pump Generating Plant by replacing runners and other overhaul activities. The upgrades will result in an installed capacity increase of at least 24 MW and an increase in hydraulic capacity of 7 percent.
- On December 16, 2011, the Consumers Energy Company and Detroit Edison Company filed an application for non capacity amendment of license for the Ludington Pumped Storage Project (FERC No. 2680), located on the eastern shore of Lake Michigan near the town of Ludington, Mason County, Michigan. The licensees are proposing to perform a maintenance upgrade on each of the six units. The maintenance upgrade will consist of replacement of the pump-turbine runners combined with rewinding the associated motor/generators. The existing units have a combined authorized installed capacity of 1,657.5 MW. Following completion of the proposed maintenance upgrades, the units are expected to have a combined, authorized, installed capacity of 1,785 MW.

### Hydropower Activities in December 2011

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	32.500	0	0	0	0	3	32.500
5-MW Exemption	1	0.090	0	0	0	0	1	0.090
Capacity Amendment	4	160.950	0	0	0	0	4	160.950
Conduit Exemption	0	0	0	0	0	0	0	0
<b>Issued</b>								
License	2	11.520	0	0	0	0	2	11.520
5-MW Exemption	1	0.850	0	0	0	0	1	0.850
Capacity Amendment	0	0	0	0	0	0	0	0
Conduit Exemption	0	0	0	0	0	0	0	0

**Office of Energy Projects**  
**Energy Infrastructure Update**  
*For December 2011*

	Conventional		Pumped Storage		Hydrokinetic			
<b>Placed in Service</b>								
License	1	9.200	0	0	0	0	1	9.200
5-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

**Hydropower Activities Year to Date (through December 31, 2011)**

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	17	384.308	1	1,000.000	1	0.300	19	1,384.608
5-MW Exemption	6	1.785	0	0	0	0	6	1.785
Capacity Amendment	14	224.370	0	0	0	0	14	224.370
Conduit Exemption	13	10.216	0	0	0	0	13	10.216
<b>Issued</b>								
License	9	84.430	0	0	0	0	9	84.430
5-MW Exemption	1	0.850	0	0	0	0	1	0.850
Capacity Amendment	13	50.217	0	0	0	0	13	50.217
Conduit Exemption	9	2.419	0	0	0	0	9	2.419
<b>Placed in Service</b>								
License	3	22.200	0	0	0	0	3	22.200
5-MW Exemption	2	0.375	0	0	0	0	2	0.375
Capacity Amendment	1	3.000	0	0	0	0	1	3.000
Conduit Exemption	5	21.365	0	0	0	0	5	21.365

Source: Staff Database

**Electric Generation Highlights**

- U.S. Geothermal Inc. announced the completion of the Phase I of the San Emido Project in Washoe County, Nevada is online. The electric power produced by the 8.6 MW geothermal plant is sold to Sierra Pacific Power Company under a 25-year purchase agreement. Phase II, another 8.6 MW plant is expected to be online in 2013.
- Enel Green Power North America Inc.'s 200 MW Caney River Wind Farm in Elk County, Kansas is online. The facility consists of 111 V-90 1.8-MW wind turbines. The electricity generated is purchased by TVA under a 20 year-contract.
- Iberdrola Renewables Inc.'s 128 MW Blue Creek Wind Farm in Van Wert County, Ohio is online. Phase I of this project consists of 64 2-MW turbines. The electricity generated will be sold to First Energy Solution.
- Wisconsin Electric Power Company's 162 MW Glacier Hills Wind Park in Columbia County, Wisconsin is online. The project consists of 90 Vestas 1.8-MW turbines.
- EDF Energies Nouvelles Company's 100 MW Shiloh III Wind Project in Solano County, California is online. The project consists of 50 Repower 2-MW turbines. The electricity generated is sold to Pacific Gas and Electric Company.
- Infigen Energy's 99 MW Blue Canyon Wind Farm VI in Caddo County, Oklahoma is online. The project consists of 55 Vestas 1.8-MW turbines. Blue Canyon is the largest wind farm in Oklahoma, totaling 423 MW with this latest phase.
- Ridgeline Energy's 79 MW Rockland Wind Farm in Power County, Idaho is online. The project consists of 44 Vestas 1.8-MW turbines. Power generated is purchased by Idaho Power under long-term agreement.
- RPM Access' 41 MW Elk Wind Project in Greeley, Iowa is online. The project consists of 17 Nordex 2.5-MW turbines. Electricity generated is sold to Central Iowa Power Cooperative under a 20-year power purchase agreement.
- Jay Cashman Inc.'s 20 MW Spruce Mountain Wind Project in Woodstock, Maine is online. The project consists of 10 Gamesa 2-MW turbines. Power generated is purchased by various municipalities.
- Sempra Energy's 42 MW Mesquite Solar 1 in Arlington, Arizona came online. Another 108 MW will be completed by early 2013, totaling 105 MW. Power generated from the facility is sold to Pacific Gas and Electric Company.

## Office of Energy Projects Energy Infrastructure Update For December 2011

- Gemini Solar Development Company's 30 MW Webberville Solar in Williamson County, Texas is online. Power generated is sold to Austin Energy.
- Iberdrola Renewable's 30 MW San Luis Valley Solar near Alamosa, Colorado is online. The electricity generated is purchased by the Public Service Company of Colorado.
- Two landfill gas-to-energy plants in Nevada came online: Republic Services' 11 MW Apex Landfill Renewable Energy Generation Facility near Las Vegas, and Waste Management Inc's 3 MW Lockwood Landfill near Sparks. Power generated from both plants is sold to NV Energy under 20-year agreements.

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

Primary Fuel Type	December 2011		January – December 2011 Cumulative		January – December 2010 Cumulative	
	No. of Units	Installed Capacity (MW)	No. of Units	Installed Capacity (MW)	No. of Units	Installed Capacity (MW)
Coal	0	0	13	1,835	24	6,607
Natural Gas	0	0	92	9,719	88	7,397
Nuclear	0	0	0	0	0	0
Oil	0	0	7	17	34	254
Water	0	0	11	47	13	26
Wind	10	835	118	5,475	86	4,845
Biomass	17	23	91	305	130	364
Geothermal Steam	1	9	7	33	1	5
Solar	23	148	197	783	82	280
Waste Heat	0	0	2	136	4	98
Other	0	0	10	20	0	0
<b>Total</b>	<b>51</b>	<b>1,014</b>	<b>548</b>	<b>18,371</b>	<b>462</b>	<b>19,876</b>

Source: Data derived from Ventyx Global LLC, Velocity Suite.

### Total Installed Operating Generation Capacity

Primary Fuel Type	Installed Capacity (GW)	% of Total Capacity
Coal	343.76	29.91%
Natural Gas	478.06	41.60%
Nuclear	108.53	9.44%
Oil	52.94	4.61%
Water	99.68	8.67%
Wind	45.13	3.93%
Biomass	13.65	1.19%
Geothermal Steam	3.42	0.30%
Solar	1.99	0.17%
Waste Heat	0.97	0.08%
Other	1.04	0.09%
<b>Total</b>	<b>1,149.18</b>	<b>100.00%</b>

Source: Data derived from Ventyx Global LLC, Velocity Suite.

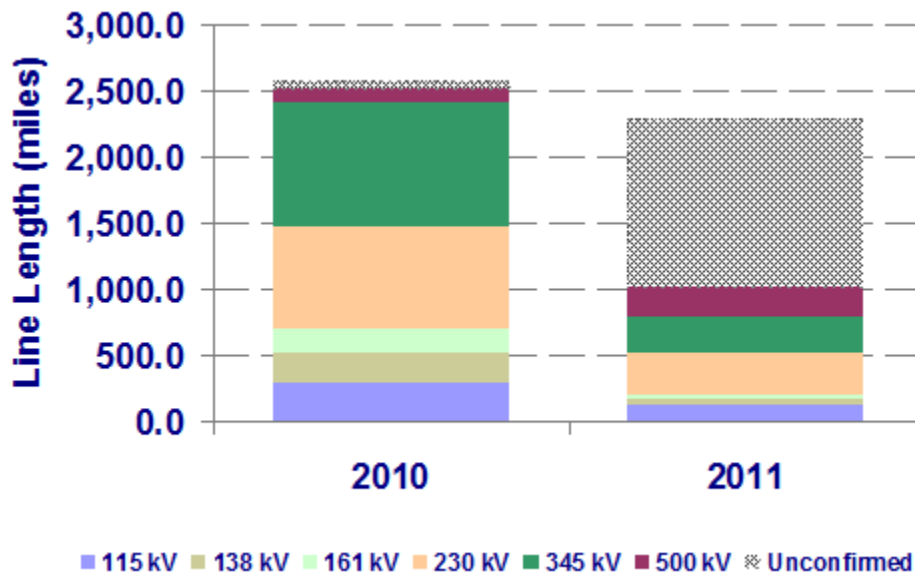
# Office of Energy Projects Energy Infrastructure Update *For December 2011*

## Electric Transmission Highlights

- On December 2, 2011, 21 mile, 230 kV Fort St.Vrain - Fordham transmission project in CO was placed in to service.
- On December 7, 2011, Kansas regulators approved Clean Line Energy Partners (Clean Line) application for utility status. The new designation as a public utility will allow Clean Line to move forward with its \$1.7 billion Grain Belt Express transmission project. The 550 mile, 500 kV or 600 kV HVDC transmission project would connect Kansas, Missouri and PJM by 2018.
- In December the 240 mile, 765 kV, \$950 million Pioneer Transmission line, a joint venture between American Electric Power Co. Inc. and Duke Energy Corp., was approved as a regional project by the Midwest ISO. The project is expected to be completed in 2018.
- On December 21, 2011 the 28 mile, 345 kV Monticello – St. Cloud transmission line was energized. It is part of the CapX2020 project and the first to be completed and placed in service.

Voltage (kV)	Transmission Projects Completed				Proposed Transmission Projects In-Service by November 2013	
	December 2011	December 2010	January – December 2011 Cumulative	January –December 2010 Cumulative	High Probability of Completion	All
	Line Length (miles)					
≤230	34.0	202.1	524.7	1,461.6	2,941.5	5,713.9
345	28.0	88.8	254.2	948.3	4,661.1	6,179.6
500	0	0	236.0	112.0	1,664.7	7,282.0
Total U.S.	62.0	290.9	1,014.9	2,521.9	9,267.3	19,175.5

**Completed Transmission Projects  
As of December 31, 2011**



**Note:** In 2010 approximately 55 miles of transmission projects have not been confirmed as placed into service. In 2011, approximately 1,277 miles have been unconfirmed.

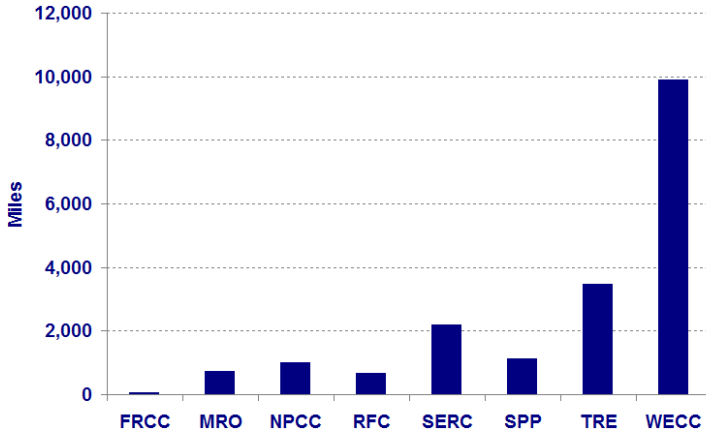
**Sources:** Data derived from Staff Database and U.S. Electric Transmission Projects ©2011 The C Three Group, LLC

# Office of Energy Projects

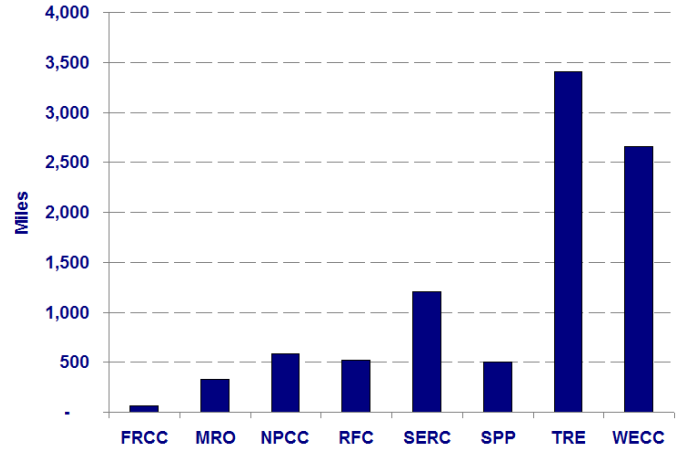
## Energy Infrastructure Update

*For December 2011*

**All Transmission Projects with a Proposed In-Service Date by December 2013**



**Transmission Projects with a High Probability of being completed by December 2013**



**Sources:** Data derived from Staff Database and U.S. Electric Transmission Projects ©2011 The C Three Group, LLC

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