

EPA CO2 rules could boost nuclear power

ANALYSIS The Environmental Protection Agency's recently released plan to reduce carbon dioxide emissions from existing power plants could provide a boost to nuclear power.

EPA's Clean Power Plan, which aims to reduce CO2 emissions 30% by 2030, sets individual CO2 reduction targets for each state and gives states latitude in how they propose to meet those goals.

When the EPA calculated those state-by-state CO2 reduction goals, it gave credit for nuclear plants under construction. The agency also acknowledged that economic conditions have put some nuclear plants at risk of closure, but gave full credit for all nuclear plants, providing a de facto incentive for states to keep at-risk plants running.

By including under construction and at-risk nuclear plants in its calculation of state goals, the agency put pressure on states to *(continued on page 12)*

FERC called to act in Cal-ISO resettlement spat

MARKETS Retail marketers and Shell's electricity trading arm are asking the Federal Energy Regulatory Commission to order that California Independent System Operator "cease and desist" an ongoing market resettlement.

The Alliance for Retail Energy Markets and Shell Energy North America in a complaint filed Monday argued that Cal-ISO is charging them rate increases and surcharges retroactively on an illegal and unauthorized basis. The parties said that the intent of the complaint is "to verify the existence of the illegal retroactive rate increases/surcharges and for the commission to require the CAISO to cease and desist from attempting to charge them."

The complaint is just the latest in a long-running matter over Cal-ISO's approach to must-offer minimum load compensation *(continued on page 13)*

AMP seeks more time on new generation in Ohio

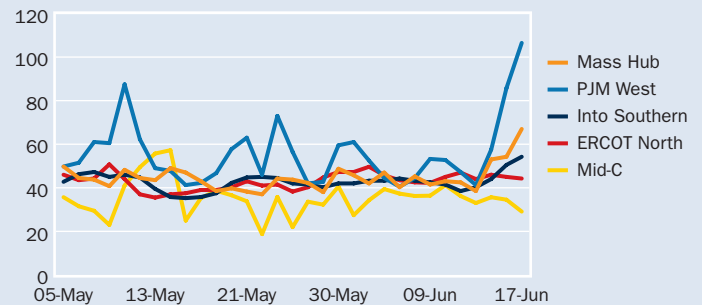
GENERATION American Municipal Power has held "confidential discussions" with independent power producers about a joint venture generation project in Meigs County, Ohio, and is asking a state agency for more time to begin development of the 900 acre site near the Ohio River.

AMP suggested in a new filing with the Ohio Power Siting Board that it could develop a natural gas or solar power project at the site near LeTart Falls that once was destined for a 1,000 MW baseload coal-fired power plant.

In an interview Tuesday, AMP attorney John Bentine said gas-fired or solar power are the most likely resources to be developed at the site.

The siting board, part of the Ohio Public Utilities Commission, is being asked by AMP to approve an 18-month extension of a *(continued on page 14)*

Price trends at key trading points (\$/MWh)



Source: Platts

Low and high average day-ahead LMP for Jun 18 (\$/MWh)

	On-peak low	On-peak high	Off-peak low	Off-peak high
ISONE	59.24	64.98	37.06	39.82
NYISO	53.31	92.25	31.06	38.63
PJM	57.77	114.94	25.78	35.94
MISO	44.93	66.46	22.13	30.36
ERCOT	41.18	92.79	29.79	30.36
SPP	42.04	45.71	16.80	23.09
CAISO	46.48	48.90	34.62	36.17

Note: Lows and highs for each ISO are for various hubs and zones. A full listing of average LMPs are available for the hubs and zones inside this issue.

Day-ahead bilateral indexes and spark spreads for Jun 18

	Index	Marginal heat rate	Spark spreads				
			@7k	@8k	@10k	@12k	@15k
Northeast							
Mass Hub	67.00	10593	22.73	16.40	3.75	-8.90	-27.88
N.Y. Zone-A	80.00	21371	53.80	50.05	42.57	35.08	23.85
PJM/MISO							
PJM West	106.50	27111	79.00	75.07	67.22	59.36	47.58
Indiana Hub	66.25	14096	33.35	28.65	19.25	9.85	-4.25
Southeast & Central							
Southern, Into	54.25	11530	21.32	16.61	7.20	-2.21	-16.33
ERCOT, North	44.25	9501	11.65	6.99	-2.33	-11.64	-25.61
West							
Mid-C	29.08	6434	-2.56	-7.08	-16.12	-25.16	-38.72
SP15	48.75	10263	15.50	10.75	1.25	-8.25	-22.50

Note: All indexes are on-peak. Spark spreads are reported in (\$) and Marginal heat rates in (Btu/kWh). A full listing of bilateral indexes and marginal heat rates are inside this issue.

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dispute with Wall Street banks on the application of cross-border guidance and the re-proposed rule for commodity position limits will be Lawranne Stewart, serving as interim senior counsel, and Jonathan Marcus, who will continue as general counsel.

Stewart, who started in her role recently under Acting Chairman Mark Wetjen, previously served as chief counsel to the House Financial Services Committee.

Current CFTC Director of Public Affairs Steve Adamske will continue his role as the agency's spokesman, a position he has held for the past three years.

— Christopher Tremulis

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make sure those plants enter service and stay in service.

"It seems the EPA is putting a very clear emphasis on nuclear power, but it is hard to unpack" because technically the agency is technology neutral, Benjamin Salisbury, a senior vice president at FBR Capital Markets, said.

EPA's treatment of under construction nuclear plants seems the most straightforward. There are five reactors currently under construction and under the agency's proposed rules the three states where those reactors are being built are credited as if those plants will enter service.

Southern Co. is building two reactors totaling 2,200 MW at its Vogtle plant in Georgia. In South Carolina SCANA is building two reactors totaling 2,200 MW at its VC Summer plant. And the Tennessee Valley Authority is adding a 1,270-MW reactor at its Watts Bar facility in Tennessee.

If those plants were not to reach completion, those states would have further to go to meet their EPA mandated goals. Because nuclear plants have zero emissions, even the cleanest thermal plant would add to the state's emissions tally. Likewise, states with at-risk nuclear plants also would fall behind if those plants were to close.

From the perspective of a nuclear plant operator, EPA's proposals pertaining to at-risk nuclear plants could be among the

Nuclear plants at risk

Plant	Location	State	Owner	Capacity (MW)
Indian Point	Buchanan	NY	Entergy	2,311
FitzPatrick	Scriba	NY	Entergy	882
Nine Mile Point	Scriba	NY	Exelon	1,901
Ginna	Ontario	NY	Exelon	614
Clinton	Clinton	IL	Exelon	1,138
Byron	Byron	IL	Exelon	2,450
Quad Cities	Cordova	IL	Exelon	2,018
Three Mile Island	Londonderry	PA	Exelon	976
Davis-Besse	Oak Harbor	OH	FirstEnergy	925
Robinson	Hartsville	SC	Duke Energy	769
Pilgrim	Plymouth	MA	Entergy	670
Palisades	Covert	MI	Entergy	812
Fort Calhoun	Fort Calhoun	NE	Omaha Public Power District	502
Millstone	Waterford	CT	Dominion	2,163
Total				18,131

Source: Platts, company information, various analyst reports

Daily CSAPR allowance assessments, Jun 17

CSAPR (\$/st)	2012 Range	Mid	2013 Range	Mid
SO ₂ Group 1	5.00-35.00	20.00	5.00-25.00	15.00
SO ₂ Group 2	25.00-75.00	50.00	25.00-65.00	45.00
NO _x Annual	40.00-70.00	55.00	30.00-70.00	50.00
NO _x Seasonal	20.00-90.00	55.00	20.00-80.00	50.00

All prices in \$/st

Daily CAIR allowance assessments, Jun 17

	\$/allowance	Change	\$/st
SO ₂ 2014	0.84	0.00	1.68

For methodology, visit www.emissions.platts.com. Full coverage of SO₂ and NO_x emissions markets now appears in Platts Coal Trader. For information on Coal Trader, contact support@platts.com or call 1-800-PLATTS-8.

RGGI carbon allowance futures, Jun 16 (\$/allowance)

ICE	Settlement	Volume	NYMEX GE	Settlement	Volume
Dec14 V11	5.00	0	Dec14	1.97	0
Dec14 V12	5.00	0			
Dec14 V13	5.00	0			
Dec14 V14	5.00	0			
Dec15 V11	5.12	0			
Dec15 V12	5.12	0			
Dec15 V13	5.12	0			
Dec15 V14	5.12	0			
Dec16 V11	5.25	0			
Dec16 V12	5.25	0			
Dec16 V13	5.25	0			
Dec16 V14	5.25	0			

The Regional Greenhouse Gas Initiative is a carbon cap-and-trade program for power generators in nine Northeast and Mid-Atlantic US states. One RGGI allowance is equivalent to one short ton of CO₂. The volume listed is the number of futures contracts traded. Each futures contract represents 1,000 RGGI allowances.

most promising provisions in the proposed rules. They are also the most difficult to unravel and to understand.

The EPA, citing Energy Information Administration data, said there are 5,700 MW at six nuclear plants at risk of closing because of "increasing fixed operation and maintenance costs, relatively low wholesale electricity prices, and additional capital investment associated with ensuring plant security and emergency preparedness."

Neither the EIA nor the EPA identify the individual plants at risk, but a variety of analysts and consultants have drawn up lists of specific at-risk nuclear plants.

The lists vary depending on who drew it up, but most are longer than EIA's. The plants identified also vary, but there are some common themes.

The most vulnerable plants are smaller single reactor facilities, such as Entergy's 882-MW FitzPatrick and Exelon's 614-MW Ginna, both in New York. Plants with recent operating problems, like FirstEnergy's 900-MW Davis-Besse in Ohio or Omaha Public Power District's 925-MW Fort Calhoun in Nebraska, as well as plants that face political opposition, such as Entergy's 2,311 MW Indian Point in New York.

The EPA includes avoiding retirement of nuclear plants with adding more renewable generation in the third of the four

“building blocks” that it lays out for states to construct their own CO2 reduction programs.

The EPA then takes that a step further by proposing that the emission reductions supported by retention nuclear plants be included in the calculation of the state targets for the 30 states that have nuclear power — Vermont is not included because it does not have fossil fuel power and its single nuclear reactor is scheduled to close later this year — and sets that level at 6% of each state’s nuclear portfolio, even though not all states with nuclear plants have at-risk reactors.

The EPA does not explain why it sets a 6% “credit” for all nuclear states. Presumably the EPA uses 6% because that is total of the US fleet that is at risk and the agency does not want to single out at-risk plants.

It seems clear that the EPA is creating a strong incentive for states to keep marginal nuclear plants running, even if their operators have said that they are economically challenged. The EPA leaves it to the states to solve that problem, but the agency does suggest that creating a program analogous to a renewable portfolio standard could preserve at-risk nuclear plants and support new nuclear plants.

The EPA’s Clean Power Plan also encourages the creation of multi-state organizations for trading CO2 emission reduction credits, such as the Regional Greenhouse Gas Initiative in the Northeast. “But the EPA seems to think that the implied price of

CO2 is not going to be sufficient to ensure that at-risk nuclear plants keep running,” FBR’s Salisbury said.

States with renewable portfolio standards could amend them to include nuclear power, but that may not be enough to preserve nuclear plants. Other forms of zero emission generation, such as wind and solar power, would compete with nuclear power, and nuclear plants would not receive credit for their reliability. However, a specific nuclear clean portfolio standard could include incentives such as tax credits or capacity payments for both zero emissions and reliability.

Some states are apparently already moving in that direction. In a report this week on EPA’s CO2 rules, UBS analyst Julien Dumoulin-Smith said it is likely that the Illinois legislature will agree on an “appropriate resolution by next May” to save Exelon’s three distressed nuclear plants in the state (Byron, Clinton and Quad Cities).

Dumoulin-Smith also expects New York to negotiate a bilateral arrangement this year to save Exelon’s Ginna plant.

And regions such as the Southeast could be eager to adopt clean portfolio standards to help put them on par with states with ample wind and solar resources.

Even if it is aimed at at-risk nuclear plants a clean portfolio standard would likely aid all existing nuclear plants, and could even encourage new nuclear plants.

“Any system that recognizes the low carbon benefit of nuclear is good for the industry as a whole,” Tyson Smith, a partner with Winston & Strawn, said. There are nuclear plants on hold in Florida, Michigan and Texas. The EPA rules could increase the possibility of a new plant getting built. “There might even be a nuclear renaissance 2.0,” Smith said.

— Peter Maloney

Nuclear states (includes planned retirements in FL, NJ and VT)

State	Aggregate capacity
IL	12,415
PA	10,015
SC	9,075
FL	7,305
GA	6,242
NY	5,708
NC	5,395
AL	5,270
TX	5,139
TN	4,981
CA	4,577
MI	4,314
AZ	4,209
NJ	4,181
VA	3,654
OH	2,237
LA	2,236
CT	2,163
MN	1,871
WI	1,846
AR	1,845
MD	1,829
MS	1,440
NE	1,303
KS	1,268
NH	1,242
MO	1,236
WA	1,200
IA	680
MA	670
VT	563
Total	116,109

Source: Environmental Protection Agency

FERC called to act in resettlement spat

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costs (ER04-835, EL04-103). According to a January filing in the matter, Cal-ISO noted that a resettlement of the market is necessary to account for FERC’s directives both with regards to an order in 2006 as well as rehearing order in 2007.

“There is no question that the ISO is under an obligation to satisfy the commission’s directives in the proceedings and that doing so requires the ISO to resettle the market as of the refund effective date,” Cal-ISO said in January.

Cal-ISO in a May 12 filing said that the total amount of the resettlement would be \$217 million, up from a projected resettlement amount of \$197.6 million in December. Cal-ISO attributed the difference to an “an error identified in the dispute review process.”

AREM and Shell on Monday argued that Cal-ISO’s actions amount to raising rates on a past service, noting that the grid operator has indicated that “it intends to both provide refunds and charge retroactive rate increases/surcharges.” The parties as well said that Cal-ISO is expected to invoice market participants on June 19, asking FERC to step in.

The parties also argued that Cal-ISO must “meaningfully address” questions of how it calculated the resettlement amount.