PLATTS
McGRAW HILL FINANCIAL
www.platts.com
[ELECTRIC POWER]
MEGAWATT DAILY
www.twitter.com/plattspower

FILED
December 4, 2014
Data Center
Missouri Public
Service Commission

Thursday, November 20, 2014

EPA emission conversion formula not so simple

ANALYSIS The Environmental Protection Agency's recent guidance on converting carbon dioxide emission rates to comply with its proposed Clean Power Plan is not as simple as it may seem.

Earlier this month, EPA released a technical support document on converting the CO2 emission reduction goals from the rate-based approach of the June 2 proposed rule to a mass-based approach. The conversion formula will allow states to calculate their emission rate targets to a specific number of tons of CO2 per year they would be allowed to emit from existing power plants.

The document is designed to provide guidance to states as they formulate plans to comply with the EPA's Clean Power Plan, which aims to reduce CO2 emissions by 30% from 2005 levels by 2030.

(continued on page 12)

'Worsening' price suppression alleged in NY

MARKETS A New York Public Service Commission order requiring a utility to negotiate a power purchase agreement is evidence that the problem with price suppression from uneconomic resources in the state has gotten worse, merchant generators said in a filing with the Federal Energy Regulatory Commission.

At issue is the PSC's order last week requiring Rochester Gas & Electric to negotiate a reliability support services contract with Exelon to keep the 581-MW R.E. Ginna nuclear power plant operating. Prior to the order, Exelon determined that the expected revenues from the sale of the plant's output in the New York Independent System Operator's energy and capacity markets would not cover its cost of operating and was considering retiring it.

(continued on page 13)

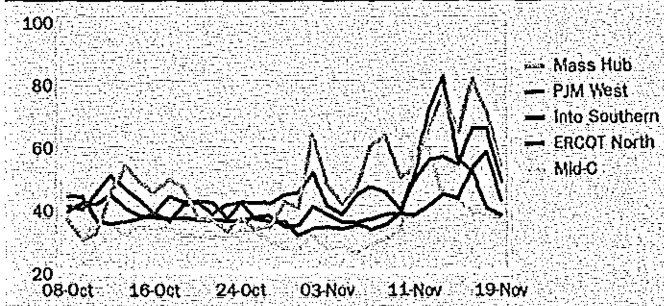
NRDC says EPA plan will save $9 billion

REGULATION While it might not seem possible to anyone in the power industry, the Environmental Protection Agency's Clean Power Plan is gaining increased attention this week, with comments coming from state consumer advocates, an environmental group and PJM Interconnection.

While the Natural Resources Defense Council said the proposed rule will result in billions of dollars in benefits to the country, state consumer advocates called it an opportunity and a challenge for states to craft implementation plans. "For most states, compliance with the EPA's proposed rule does not have to be costly or burdensome due to the wide latitude that states have in determining their own compliance strategy. However, it is up to states to take advantage of this flexibility" said a report prepared for the National Association of State Utility

(continued on page 13)

Price trends at key trading points ($/MWh)



Source: Platts

Low and high average day-ahead LMP for Nov 20 ($/MWh)

	On-peak low	On-peak high	Off-peak low	Off-peak high
ISONE	48.86	52.25	41.88	44.12
NYISO	43.15	68.84	27.71	44.18
PJM	41.05	68.37	24.47	58.26
MISO	40.95	49.42	30.68	37.68
ERCOT	35.64	41.05	25.68	25.85
SPP	38.63	43.09	24.28	33.23
CAISO	52.59	54.37	39.93	40.82

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

Day-ahead bilateral indexes and spark spreads for Nov 20

	Index	Marginal heat rate	Spark spreads @7k	@8k	@10k	@12k	@15k
Northeast							
Mass Hub	53.25	9217	12.81	7.03	-4.53	-16.08	-33.41
N.Y. Zone-A	54.00	13322	25.63	21.57	13.47	5.36	-6.80
PJM/MISO							
PJM West	48.25	11923	19.92	15.88	7.78	-0.31	-12.45
Indiana Hub	44.75	9198	10.70	5.83	-3.90	-13.63	-28.23
Southeast & Central							
Southern, Into	42.50	9610	11.54	7.12	-1.73	-10.57	-23.84
ERCOT, North	37.52	8655	7.18	2.84	-5.83	-14.50	-27.51
West							
Mid-C	36.92	7965	4.48	-0.16	-9.43	-18.70	-32.61
SP15	53.25	11378	20.49	15.81	6.45	-2.91	-16.95

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.

GBE Exhibit No. 146
Date 11-24-14 Reporter KF
File No. EA-2014-0207

Inside this Issue:

EPA emission formula not so simple ...from page 1

When the EPA issued its proposed rule, it based its reduction targets on the emission rates of individual generating units. But in the proposal, EPA repeatedly said it would welcome an approach that treated emission reductions on a mass or aggregated basis, as long as the final emission reductions were equivalent.

Adopting a mass-based approach to CO2 reduction could pave the way for states to adopt a multi-state or regional approach to emission reductions, including through a cap-and-trade type program such as the Regional Greenhouse Gas Initiative adopted by states in the Mid-Atlantic and Northeast, something EPA mentions several times in its CPP.

Since June, stakeholders have been waiting for EPA's guidance on how to convert the targets in the proposed rule to a tons of CO2 figure under a mass-based approach.

It would seem to be a simple matter to convert rate-based emissions targets to mass-based targets, as EPA includes a formula in its guidance document.

It quickly becomes apparent, however, that the devil is in the details, as analysts at consulting firm Energy Ventures Analysis said this week. Under EPA's rate-based targets, the Lower 48 states would emit 1,801 million short tons of CO2 by 2030 from existing and new fossil-fired power plants, which represents the 30% by 2030 metric.

But, as Benjamin Stravinsky at EVA noted, using the mass-based equivalents guidance for new and existing sources would only allow plants in the Lower 48 to emit 1,714 short tons of CO2, a 39% reduction from 2005 levels.

"For some states, the mass targets are more stringent than the rate-base targets" Stravinsky said in an interview. "We are just trying to highlight this for the industry; the next question we have to answer is why this is so."

In EVA's analysis of the EPA conversion formula, Maine, Washington, Delaware and Idaho are at the top of the list for having less stringent emission reduction targets under a mass-based approach, while Missouri, Nebraska, South Dakota and Rhode Island are at the bottom of that list, with more stringent targets.

One of the complicating factors in EPA's conversion is that the agency uses two different scenarios in its guidance. The first includes only existing power plants. In fact, the basis of the CPP is that it would apply to existing generation sources because EPA addressed CO2 emissions from new power plants in January, when it published its New Source Performance Standards

In the guidance document, however, EPA gives an option that includes existing sources and provides a second option for existing and new sources, and that is where things start to get complicated.

EPA's targets are based on generation emission rates, but there are no historical rates for plants that are not yet built. So, EPA used Energy Information Administration data to project demand and extrapolate generation figures and then used those figures to calculate emission rates.

Comparing the effect of those approaches against 2012 emissions, analysts at Synapse Energy Economics say that the first option would reduce 2030 emissions by 31% from 2012 levels, but using the second option, which includes new plants, 2030 emissions would be reduced by 20% from 2012 levels.

The second option would appear to be less stringent in Synapse's analysis, but the amount of allowed emissions is larger because it applies to a larger universe of generation units. The first option results in fewer tons of CO2 because it applies only to existing units.

So, although options one and two are intended to be equivalent, the numbers are different because they apply to different sets of generationunits, Jennifer Macedonia, senior advisor at the Bipartisan Policy Center, said in an interview.

Macedonia also noted that EPA's second option may be of interest to companies with existing gas-fired power plants, because it allows for consistent policy treatment of new and existing gas-fired generation. "Some companies were seeking clarification of the ground rules regarding coverage of new generation under a mass-based approach," she said, and with good reason.

If new units are excluded from a mass-based goal, a company with existing generation could be undercut in the market by new generation that might be able to bid into the market more cheaply because it does not have the cost of complying with the EPA rule.

Daily CSAPR allowance assessments, Nov 19

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
NOx Annual	40.00-70.00	55.00	30.00-70.00	50.00
NOx Seasonal	20.00-90.00	55.00	20.00-80.00	50.00

All prices in $/st

Daily CAIR allowance assessments, Nov 19

	$/allowance	Change	$/st
S02 2014	0.57	0.00	1.14

For methodology, visit www.emissions.platts.com. Full coverage of S02 and NOx 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, Nov 18 ($/allowance)

ICE	Settlement	Volume	NYMEX GE	Settlement	Volume
Dec14 V13	5.19	0	Dec14	1.97	0
Dec15 V13	5.38	0			
Dec16 V13	5.57	0			
Dec14 V14	5.19	0			
Dec15 V14	5.38	0			
Dec16 V14	5.57	0			
Dec14 V15	5.19	0			
Dec15 V15	5.38	0			
Dec16 V15	5.57	0			
Dec14 V16	5.19	0			
Dec15 V16	5.38	0			
Dec16 V16	5.57	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.

"EPA is giving states flexibility with option two to use a higher mass-based state goal, if they choose to apply it to both new and existing sources," Macedonia said.

— *Peter Maloney*

Price suppression alleged in NY ...from page 1

In a motion to lodge the order with FERC, the Independent Power Producers of New York asked FERC to include the order in its earlier complaint against NYISO.

IPPNY said in the original complaint that NYISO prices are being suppressed by out-of-market contracts to support resources that would have otherwise left the market. The group asked FERC to order NYISO to revise its tariff to prevent the continued suppression of prices in the New York Control Area installed capacity market.

"The proposed RSSA for the Ginna facility provides further evidence that in the 18 months that have passed since the complaint was filed, the uneconomic 'non-exit' problem that prompted the complaint has only gotten worse," IPPNY told FERC.

Without mitigation to such uneconomic resources, prices in the NYCA installed capacity market will continue to be artificially suppressed, the generators said. "The commission can expect RSSAs and other out-of-market arrangements to continue to proliferate," IPPNY said.

In a related event, NRG Energy in a letter to the PSC said it was surprised to see that the PSC based its decision in part on a request for proposals that RG&E is conducting to seek alternatives to the Ginna plant. "To the NRG companies knowledge, RG&E did not post the RFP on its website or provide notice of the RFP to all parties on the service list in this proceeding," the letter said.

The PSC order said the RFP was issued October 6 and that RG&E must coordinate responses due November 21 with the contract negotiations with Exelon associated with the Ginna plant.

At press time, RG&E had no comment on the RFP or on the progress of negotiations.

NRG reiterated its concern that requirements established as necessary steps before an RSSA is negotiated were not followed. The requirements are important and have a material impact on the ability of the market to respond with potentially lower-cost alternatives, NRG said.

"The NRG companies recommend that the commission carry out its full obligations under those procedures by requiring the NYISO and RG&E to conduct a full evaluation of the reliability impacts of a retirement of the Ginna facility and directing those parties to conduct a solicitation and evaluation of alternatives to resolve any identified reliability needs," NRG said.

"What you can see is slow-motion reregulation with these ratepayer-supported PPAs," Paul Patterson, an analyst with Glenrock Associates, said Wednesday.

Patterson expects to see more such situations, especially as regulators wrestle with the issue from a policy point of view that says nuclear plants add to fuel diversity and they are carbon free, dependable generation. "It's different from the reality of the market," he said.

Patterson agrees that the out-of-market contracts suppress prices. "The merchant generators have a point, it's not fair, but life's not fair, especially in a market that can be changed," he said.

— *Mary Powers*

NRDC says EPA plan will save $9 billion ...from page 1

Consumer Advocates.

NASUCA issued the report this week at its annual meeting in San Francisco. The report, prepared by Synapse Energy Economics, does not reach a conclusion on costs of complying with the rule or benefits from it. Rather, it is designed as a resource for states to use in considering various compliance approaches.

The NRDC did not take such a broad approach in its report. The EPA "overestimates" the cost of the power sector's compliance with the proposal "by as much as $9 billion," the NRDC said, adding that the $9 billion difference "indicates that the proposal could achieve significantly greater carbon reductions at a reasonable cost."

"Simply by making the cost and performance parameters for renewable generation and energy efficiency consistent with today's technologies, NRDC has found that compliance could be achieved at a savings of $1.8 billion to $4.3 billion by 2020, or $6.4 to $9.4 billion by 2030," the group said.

By factoring in "more accurate and current cost and performance data for energy efficiency and renewables," NRDC said, it found that EPA's targets for curbing power plant carbon pollution "can be met at a savings for America's power sector, rather than an additional cost." It said this is the case "because power generators will spend less to cut carbon pollution," and "customers will save as well."

In analyzing the EPA's Clean Power Plan, NRDC said it "identifies and corrects two central shortcomings in EPA's blueprint — and thereby refutes claims from some that the agency's plan would prove costly to the industry and its customers." First, that EPA overestimated the cost of deploying increased amounts of energy efficiency by nearly double current projections. Second, the EPA used "outdated cost and performance estimates" for renewable electricity generation that were "nearly 50% more expensive than current experience shows," the NRDC said.

The EPA uses "conservative and outdated assumptions," that overstate the costs of compliance and shortchange the potential for deeper critical carbon reductions, the NRDC said. The NRDC "updated" the EPA's cost and performance data for renewable power and energy efficiency "to reflect current costs" and group provided asked ICF International to run that data using the same model EPA used to analyze its proposed rules.

The EPA estimates that, including health and environmental benefits as well as compliance costs, its proposal would produce net benefits of up to $50 billion in 2020 and up to $84 billion in 2030. But the NRDC's analysis "shows that the net benefits would be $9 billion higher than EPA's estimates in 2020 and $15 billion higher than estimates in 2030."

The NRDC also estimates that in 2030, energy efficiency savings could total 140 terawatt-hours more than what EPA projected and renewable generation could be 171 terawatt-hours higher than EPA's projections. Collectively, that's equivalent to the electricity used by roughly the population of the New York and Chicago metropolitan areas together, the NRDC said.

In its report for NASUCA, Synapse said the EPA rule will have implementation costs, but it also "could lead to significant consumer benefits."

Higher wholesale power prices following implementation of the rule "would mean more money for existing low-emission resources and higher costs to consumers. This is an important area for additional research and modeling," and examining existing carbon trading efforts "will provide useful insights" for states, the report said.

Because each state is unique, costs to comply with the EPA rule can vary widely, depending on existing resources in place and whether the state is part of a regional compliance plan, it said.

States should conduct "a thorough analysis of compliance options," including whether or not to join other states in a multi-state plan and use market-based mechanisms such as a carbon market, the report advised.

PJM also issued an analysis of the EPA proposal, laying out various scenarios for states to consider. The analysis was done for the Organization of PJM States, and it examines mass-based targets using EPA's November 6 guidance and the rate-based targets in the June 2 proposed rule.

The information is not a forecast of what it will cost to comply with the rule; it provides a result of various modeling done by the grid operator, said Ray Dotter, spokesman for PJM.

The analysis includes wholesale power market prices and carbon costs under several compliance scenarios.

A power flow analysis that models retirement of "at-risk" generation units for reliability issues has yet to be completed, but is in the works by PJM.

— Jeffrey Ryser, Tom Tiernan

PLATTS
McGRAW HILL FINANCIAL

MEGAWATT DAILY

Volume 19 / Issue 225 / Thursday, November 20, 2014

ISSN # 1088-4319

Megawatt Daily is published daily by Platts, a division of McGraw Hill Financial. Registered office Two Penn Plaza, 25th Floor, New York, NY 10121-2298

Officers of the Corporation: Harold McGraw III, Chairman; Doug Peterson, President and Chief Executive Officer; Lucy Fato, Executive Vice President and General Counsel; Jack F. Callahan, Jr., Executive Vice President and Chief Financial Officer; Elizabeth O'Melia, Senior Vice President, Treasury Operations.