

Power plant sales ahead of forward prices

ANALYSIS Are power market players getting ahead of themselves by increasing generation asset purchase prices? Recent power plant transactions seem to indicate that asset sale prices are richer than forward power prices warrant.

The valuations “imply that power plant purchasers are betting that power markets will turn out to be stronger than current forwards,” Paul Freemont, analyst at Jefferies, said in a report last week.

The most recent of those transactions was Dynegey’s announcement late last month of plans to buy 12,500 MW of generation for \$6.25 billion from Duke Energy and Energy Capital Partners. That transaction values the mix of the two companies’ coal and gas plants spanning the ISO New England and PJM Interconnection regions at about \$500/kW.

(continued on page 14)

Gas-fired power set PJM prices more often in July

ANALYSIS The substantial dip in natural gas prices in July, in contrast with coal’s higher prices, caused gas-fired generation to set PJM Interconnection electricity prices much more often than July of 2013, according to recently released data.

The average spot price for natural gas in July at the Texas Eastern M-3 hub was down about 26% to \$2.678/MMBtu this July, compared with \$3.633/MMBtu in July 2013, Platts data show. In contrast, the equivalent price for Central Appalachian coal in July was up about 1.6% to \$2.821/MMBtu, compared with \$2.777/MMBtu in July 2013.

As a result, PJM’s gas-fired generation was on the margin almost 44% in July, compared with less than 36% in July 2013, while PJM’s coal-fired power was on the margin less than 49% in

(continued on page 15)

Brattle says PJM could improve load forecasting

LOAD FORECASTS Consumers in PJM Interconnection could be saving about \$433 million annually over the next three years if PJM were to improve inclusion of energy efficiency in its load forecasts, the Brattle Group found in a report.

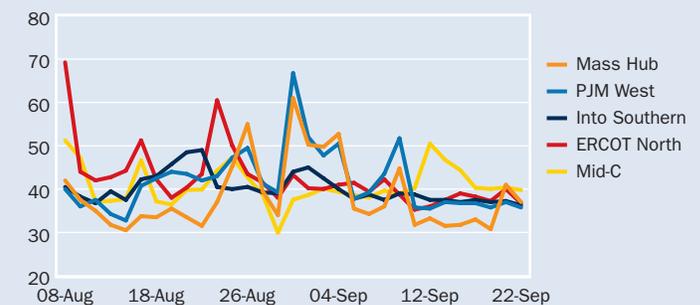
The report finds that a significant level of energy efficiency is not accounted for in PJM’s load forecasts, resulting in PJM overestimating the region’s electricity needs at an increasing rate into the future.

PJM on Monday said there has been a continuing review of its load forecasting with stakeholders over the last few years.

The Brattle report was completed for The Sustainable FERC project, which is within the Natural Resources Defense Council. The group is a collection of state, regional and national environmental organizations seeking to increase deployment of

(continued on page 16)

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



Source: Platts

Low and high average day-ahead LMP for Sep 23 (\$/MWh)

	On-peak low	On-peak high	Off-peak low	Off-peak high
ISONE	33.36	34.20	21.58	23.10
NYISO	22.43	34.15	14.36	21.41
PJM	27.49	48.11	16.94	36.53
MISO	26.87	38.49	18.73	28.18
ERCOT	35.21	43.13	25.80	25.87
SPP	24.75	37.16	14.89	25.01
CAISO	47.67	50.33	37.55	38.71

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 Sep 23

	Index	Marginal heat rate	Spark spreads				
			@7k	@8k	@10k	@12k	@15k
Northeast							
Mass Hub	37.00	11376	14.23	10.98	4.48	-2.03	-11.79
N.Y. Zone-A	39.75	14750	20.89	18.19	12.80	7.41	-0.68
PJM/MISO							
PJM West	35.75	13689	17.47	14.86	9.63	4.41	-3.43
Indiana Hub	35.25	8969	7.74	3.81	-4.05	-11.91	-23.70
Southeast & Central							
Southern, Into	36.25	9391	9.23	5.37	-2.35	-10.07	-21.65
ERCOT, North	36.75	9646	10.08	6.27	-1.35	-8.97	-20.40
West							
Mid-C	39.77	10473	13.19	9.39	1.80	-5.80	-17.19
SP15	50.50	12228	21.59	17.46	9.20	0.94	-11.45

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.

Inside this Issue

- Murray CEO gives gloomy view of coal industry 11
- Southeast transmission eyed to move wind power 11
- FERC called to act on changes in Michigan 12
- California, Quebec set GHG auction for Nov. 19 12
- LG&E/KU reach tolling deal with LS Power 13
- Duquesne reaches deal on default service 13
- ERCOT group looks at load zone definitions 14

would add a degree of objectivity to this retail adder," RESA said.

Duquesne's industrial customers oppose RESA's recommendation, saying it is unclear that the retailers' recommendation would result in a lower cost to the large customers. "Retail shopping remains very strong in the large C&I class, which demonstrates that the current method of in-house procurement does not impede retail competition. No valid reason exists to change the status quo," the industrials said.

The Office of the Small Business Advocate supports Duquesne's plan for small C&I customers because it would result in reasonable price stability. RESA's proposal would subject customers to price instability in pursuit of a more market-reflective and market-responsive rate, the small business advocate said.

Duquesne proposed to continue its practice of requiring wholesale suppliers providing default service to also provide the alternative energy credits.

Citizens for Pennsylvania's future recommended that the credits be obtained through long-term, short-term and spot market purchases and competitively bid.

"If rational markets are defined as being reflective of the marginal cost of a product, then long-term contracts will allow utilities such as Duquesne to procure AECs at a price that is more reflective of the actual value of the AEC," the environmental group said.

As part of the settlement, Duquesne agreed to develop a time-of-use program that would allow retail suppliers to participate.

— Mary Powers

ERCOT group looks at load zone definitions

An Electric Reliability Council of Texas group is examining if there is a need to determine whether load zones are correctly mapped, although the effort drew critical remarks at a recent meeting.

On directive from the Wholesale Market Subcommittee, ERCOT's Congestion Management Working Group on Friday discussed whether it should look into load zone definitions and, following discussion on the need and specific task assigned, agreed to take the matter back to WMS for further direction.

Load zone boundaries are currently based on 2003 definitions.

While CMWG is not the right authority to determine if zones are incorrectly mapped, it is the first step to examine if there is a way to find out if the zones are incorrectly mapped.

"It's not like this is a brand new discussion," said Kris Dixit, CMWG vice chair. "We're had this before."

There were several CMWG members who spoke out against the possibility of changing load zone definitions. "It's a huge open-ended question and we don't know how we'd solve it," said Eric Goff, director with Citigroup Energy, Inc. "I don't see a particular need to change anything."

"Once Pandora's Box is opened, fundamentals are out the window ... and it's a big dog fight," said one CMWG member. "I'm failing to see the need to redefine any of the zones," added an ERCOT staff member.

ERCOT protocol allows for load zone changes through a

36-month process following ERCOT board approval.

Dixit will return to WMS to seek guidance on the next steps CMWG should take, if any. He said he needs to hear from WMS if that is something the group wants CMWG to pursue.

The next WMS meeting is scheduled for October 1, with the next CMWG meeting scheduled for October 22.

— Kassia Micek

Power plant sales ahead of forward prices ...from page 1

In a late August report, Julien Dumoulin-Smith of UBS assigned valuations for the various groups of assets Dynegy is acquiring, ranging from \$100/kW for ECP's mostly coal-fired 1,493-MW Brayton Point plant in Massachusetts to \$950/kW for ECP's 600-MW combined-cycle gas plant in PJM and \$850/kW for ECP's 1,900-MW combined-cycle gas fleet in New England.

In Dumoulin-Smith's view, ECP's assets drew the richest valuations. He estimated that the deal values Duke's coal fleet in PJM at \$350/kW and its PJM gas fleet at \$600/kW.

"We see the implied valuation on an asset level basis as suggestive of near new entrant economics for the CCGT assets for both New England, and particularly PJM," Dumoulin-Smith said in the report.

Dumoulin-Smith was positive on the transaction from Dynegy's perspective, mostly on the potential for cost cutting, but he also says higher valuations are warranted because of the prospects for higher capacity prices in PJM's next capacity auction, for the 2018-19 delivery year. That would be a result of the pending introduction of a new capacity product that puts a premium on reliability and secure fuel supplies. He estimated that the new capacity product could add \$50/MW-day to the capacity clearing price.

In his report, Jefferies' Freemont said that coal plants have seen a two-fold increase in prices and gas plants in New England are approaching replacement value. But, he noted, most of those purchases are going to require "significant price improvement in order to achieve 10% return on equity."

Freemont pegs the range of valuations in the Dynegy deal between \$350/kW and \$700/kW.

He estimated that Dynegy would earn a break-even return on its coal assets based on current forward prices. To achieve a 10% return on equity, he estimated that forward prices would need to increase by roughly 5%, to \$38/MWh. Alternatively, he said, Dynegy could boost its returns through cutting costs.

That "optimistic" outlook also extends to other recent gas plant sales, Freemont said. Citing Calpine's July 2014 sale of 3,498 MW of Southeastern plants to LS Power, he said LS Power would earn a negative return based on prevailing 2015 forward prices, but that actual returns will likely be much higher because several of the plants have long-term contracts. Otherwise, earning a 10% return on equity would require spark spreads to triple, he said. And for Calpine to earn more than a 6% return on its \$530 million purchase of Exelon's 726-MW Fore River plant in Massachusetts, spark spreads would have to increase by 25%.

Freemont said the highest recent valuation for a coal plant was

Blackstone Group's purchase out of bankruptcy of Cascade Investment's 305-MW Twin Oak plant in Texas for \$126 million, yielding a valuation of \$413/kW. Based on prevailing 2015 prices in the Electric Reliability Council of Texas, Blackstone would earn a negative return, he said.

But, Freemont added, "forward energy markets have statistically been a poor predictor of energy prices with almost no correlation to actual future energy prices." Given that there are more than 30,000 MW of planned coal plant retirements next year, with roughly half occurring in PJM, "the bet on power price improvement embedded in recent power plant purchases may prove to be profitable," he said.

But not all analysts were as positive on Dynegy deal. In a report, Macquarie analyst Angie Storozynski said that the deal allows Dynegy to grow its portfolio but at an "elevated" cost.

Dynegy is paying about 7.5 times her 2017 EBITDA estimate for the plants, and close to 8 times 2017 EBITDA if the Brayton plant, which is slated to retire in June 2017, is excluded. The implied valuation is "particularly rich" compared with other recent acquisitions that have been done at about 6 times enterprise value/EBITDA.

Whether those prices are warranted remains to be seen. As Freemont noted, transaction prices as a percentage of replacement value have "improved markedly," particularly in New England.

That could turn into a problem. If secondary assets are

available at replacement value, it could encourage the building of new plants, which would put downward pressure on capacity prices and erode expected returns.

— Peter Maloney

Gas-fired power set prices more often ...from page 1

July, compared with almost 56% in July 2013. The numbers are gathered from the marginal fuel report posted last week on the website of Monitoring Analytics, PJM's independent market monitor.

In terms of generation output, gas-fired power in the PJM mix during July was about 20.1%, virtually flat with July 2013, at about 20.2%, according to data from PJM's System Mix report. Coal-fired units' share of all PJM electricity was 43.1% in July, compared with 45.1% in July 2013.

Electricity prices were also substantially lower in July compared with July 2013. At the PJM West Hub, the average on-peak day-ahead price was \$43.39/MWh in July, down 24% from July of last year.

The numbers are consistent with modest summer demand, which the relatively mild summer temperatures would support. PJM does not report total electricity usage on a monthly basis, but the number of cooling degree days in July in Pittsburgh, which lies near the center of PJM, was 32% less than July 2013 and 26%

PJM Interconnection fuel data

PJM fuel mix			
	Jul 2013	Jun 2014	Jul 2014
Coal	45.10%	43.60%	43.10%
Nuclear	32.00%	34.39%	34.10%
Natural gas	20.20%	18.52%	20.10%
Wind	0.80%	1.21%	1.10%
Other	0.90%	1.37%	1.00%
Hydro	1.00%	0.91%	0.60%
Total	100.00%	100.00%	100.00%
Fuel on margin			
	Jul 2013	Jun 2014	Jul 2014
Coal	55.70%	52.12%	48.50%
Nuclear	0.00%	0.10%	0.00%
Natural gas	35.70%	37.35%	43.60%
Wind	3.50%	6.89%	2.10%
Other	5.10%	3.54%	5.80%
Total	100.00%	100.00%	100.00%
Average price for natural gas and coal (\$/MMBtu)			
	Jul 2013	Jun 2014	Jul 2014
Central Appalachian coal	2.777	2.885	2.821
Texas Eastern M-3 natural gas	3.633	3.205	2.678
Average LMP for electricity (\$/MWh)			
	Jul 2013	Jun 2014	Jul 2014
PJM Western Hub on-peak	57.06	47.68	43.39
PJM Western Hub off-peak	27.99	27.01	24.91
PJM Western Hub all-day	47.37	40.79	37.23
*Percentage of time each type of generation set the marginal price			
Sources: PJM Interconnection, Monitoring Analytics and Platts			