

US Electric Utilities & IPPs

PJM Parameter Update is Slightly Positive

Equities

Americas
Electric Utilities

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\$5/MW-day impact from the last parameter update into the auction next week

After making other adjustments to our model and rounding to the nearest \$5, **we leave our own forecast unchanged** at \$125/MW-day for RTO 2019/20 and \$160 for 2020/21. On May 9, PJM released its last update of parameters for next week's Reliability Pricing Model (RPM) capacity auction, with a 345 MW lower subtraction (\$2/MW-day) for Fixed Resource Requirements (FRR) and a 645 MW higher add-back (\$4/MW-day) for supply-side Energy Efficiency than last year's clearing amount. Recall that we expected this adjustment to avoid double counting on both sides of supply/demand. Despite the nominally positive revisions, our own forecast is unchanged as we adjust our own calculation to include the negative -300 MW impact (-2/MW-day) from converting load reductions to a Forecast Pool Requirement (FPR).

No impact on outcome from Ohio, but FE's ATSI assets are on the bubble

Despite the concerns of developers and independent generators, we don't see the proposed revised PPA for FirstEnergy's Ohio fleet as having any meaningful impact on auction outcomes, especially since the revised PPA keeps control over capacity bidding at FE's nonregulated Solutions business. As such, we expect the portfolio to be bid on unsubsidized plant economics as it has in the past, rather than anything below market (if they do, we see a potential -\$20/MW-day impact to the auction). However, while virtually all of FE's fleet cleared in 2018/19 at the CP price of \$164, the lower auction outcome at \$125 vs last year's \$164 could be bad news for FE's 2-GW Mansfield plant, which failed to clear the 2017/18 auction at \$120. Also, the 2.2-GW Sammis and 908-MW Davis Besse plants only partially cleared in the 2018/19 auction at \$164 (525 MW uncleared). Each 1 GW of capacity revenues is worth \$0.09 EPS, with a total ~\$0.45 at risk should all three plants fail to clear. Furthermore, with the proposed PPA passing back capacity revenues to customers, the failure to clear could complicate approval.

Street expectations remain \$125-\$135; we expect ComEd +, EMAAC –

As we noted in our last [5/10 report, "Powering Down into the PJM Auction"](#), Street expectations tend to be in-line with our \$125, although corporate projections show a wider range of outcomes this year vs prior auctions. We continue to see ComEd region clearing at higher levels than last year ~\$225 with Quad Cities and Clinton shutting down and further retirements likely under current forward pricing. For EMAAC, we see lower pricing at \$200 as we count part (1 GW) of the 2.6 GW Talen Portfolio as coming back into the mix after Talen failed to clear the units last year with higher bids under Capacity Performance (CP) rules. With new owners for some of these units, we expect more to clear, perhaps all of it, although we are also mindful that Talen retains enough flexibility under CP to bid the portfolio strategically. As always, there is also the risk of increased Demand Response (DR) in all regions given no increase to 80% CP requirements and the Supreme Court affirming FERC control over DR participation in energy markets. We have included an assumption for an additional 1 GW (-\$6/MW-day impact) of DR over the 11 GW that cleared last year.

Who wins under this outcome?

While FE's ability to clear plants at \$125 appears challenged, we see little upside for the company in this auction. In contrast, Exelon appears among the clearer potential 'winners' of this year's auction outcome, with upside potential for the ComEd zone. For PEG, CPN, and TLN, there is increased risk from Sapphire assets and new generation in EMAAC, although we also note continued robust pricing relative to RTO could still be seen as positive. Meanwhile, results for more RTO-exposed generators such as DYN, NRG, and FE could prove more disappointing.

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Positive impact from additional EE addbacks, but leaving our estimate unchanged

We illustrate the impacts of various supply and demand factors in the table below for the 2019/20 auction vs the prior year's outcome for 2018/19. At the bottom we show incremental positive factors for the 2020/21 auction. Our estimates are unchanged at \$125/MW-day for 2019/20 (down from \$164 last year) and \$160/MW-day for 2020/21.

Figure 1: 2019/2020 Price Forecast: Expecting a Down Year

Change in Forecast Pool Requirement (FPR) parameters	\$ /MW-day	
	MWs	Impact
Increase in Installed Reserve Margin 80 bps to 16.5%	+1,100	+\$6
Other adjustments to FPR	-430	-\$2
Total impact on required MWs from higher FPR	+670	+\$4

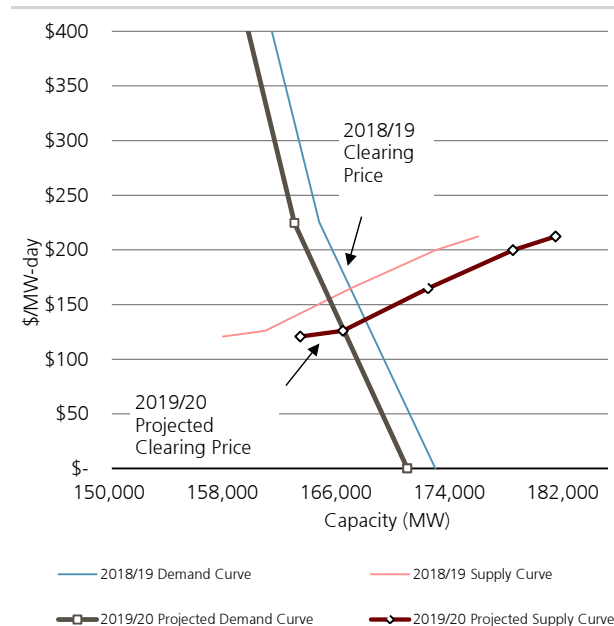
Possible Supply Changes 2019/20 auction		
Dominion's Greenville CCGT - online by 2019	+1,588	-\$9
New Gas Plant Proxy [Merchant CCGT]	+2,000	-\$11
Plants that didn't clear last year but under construction	+1,000	-\$6
Talen - Sapphire Portfolio in NJ (Partial Clearing)	+1,000	-\$6
Demand Response - Unchanged?	+1,000	-\$6
<i>Maryland HAA Regs Take Effect Jan 1, 2020: Possible Compliance</i>		
Dickerson 1-3 (SNCR) - retire May 2019	-588	+\$3
Crane 1 (SNCR) - possible retire in 2020 under MD air regs	-190	+\$1
Crane 2 (SNCR) - possible retire in 2020 under MD air regs	-209	+\$1
Wagner 2 (SNCR) - retire June 2020	-136	+\$1
Total 2019/20 supply impacts vs 2018/19 auction	+5,465	-\$30
Changes in Reliability Requirement adjusted for FRR:		
Load growth 2018/19 to 2019/20	+1,490	+\$8
Reduced 2019 load forecast adjustments	-5,720	-\$31
Adjustment to load change for Forecast Pool Requirement (FPR)	-300	-\$2
Changes to Reserve Margin requirement and FPR (see above)	+670	+\$4
Change in Preliminary FRR Obligation	+345	+\$2
Extract (add back) supply-side EE from the load forecast (UCAP)	+1,891	+\$10
Total 2019/20 impact vs \$165/MW-day 2018/19 BRA Outcome	-\$39	\$126

Incremental Supply Changes 2020/21 auction		
Dropout of 25% of Base product Demand Response under 100% CP	-1,550	+\$8
Dropout of gas peakers under 100% CP	-5,000	+\$27
Placeholder for additional gas-fired gen	+1,000	-\$5
Incremental 2020/21 supply impacts vs 2019/20	-5,550	+\$30
Incremental increase of 2021 load forecast from 2019	+400	+\$2
Incremental 2020/21 impact vs 2019/20 BRA Outcome	+\$32	\$158

Source: PJM and UBS Estimates

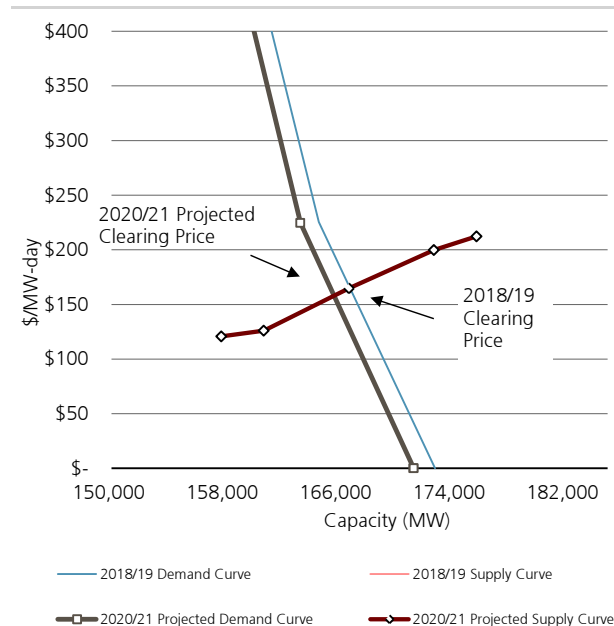
In the next set of charts, we illustrate our projection for supply/demand curve crosses vs the 2018/19 actual results.

Figure 2: +5.5 GW RTO Supply Curve vs -3.5 MW Demand offset by +1.9 GW EE, UBS 2019/20 vs 2018/19



Source: PJM and UBS Estimates

Figure 3: Incremental -5.6 GW RTO Supply Curve vs +400 MW Demand, UBS 2020/21 vs 2018/19



Source: PJM and UBS Estimates

FirstEnergy Ohio plants at risk of *not* clearing

We note that Mansfield, Sammis, and Davis Besse are all at risk of not clearing the auction at our estimated \$125/MW-day outcome for RTO.

- Mansfield (2,490 MW) coal plant did *not* clear in 2016/2017 base auction (\$114/MW-day) or 2017/2018 base auction (\$120), but did clear in the respective transition auctions (\$134 and \$152, respectively) and 2018/2019 CP (\$165/MW-Day). Therefore, we surmise that the implied bid is in range of \$120-\$134.

- Sammis (2,223 MW) and Davis-Besse (908 MW) “essentially cleared” in 2018/2019 at \$165/MW-Day, with a partial 525 MW uncleared in ATSI. While this implies a bid close to \$165, FE has discussed bidding these plants “on a curve”, so there is risk that a further incremental portion (or all) of the plant might not clear in this next auction.

In the table below, we illustrate that as much as \$0.46 EPS is at risk from these three plants vs the \$165/MW-day they cleared in the 2018/19 auction.

Figure 4: Capacity Revenues for FE's ATSI Fleet, 2018/19 Auction

FE ATSI Plant Analysis	Mansfield	Sammis	Davis-Besse	Total	Other ATSI
Capacity (MW)	2,490	2,223	908	5,621	1,995
'18/'19 Price (\$/MW-Day)	\$165	\$165	\$165	\$165	\$165
Revenue (\$Mn)	\$135	\$120	\$52	\$307	\$108
EPS	\$0.20	\$0.18	\$0.08	\$0.46	\$0.16
Implied Bid (\$/MW-Day)	\$120-\$134	Near \$165	Near \$165		
\$10/MW-Day Sensitivity	\$0.01	\$0.01	\$0.00	\$0.03	\$0.01

Source: Company filings, UBS Estimates

Talen Energy: Will They Clear Their Capacity?

Among the most meaningful swing factors in the EMAAC Zone for this upcoming auction will be whether the company decides to clear the balance of its capacity, totalling 2.4GW last year this could meaningfully swing the EMAAC zone. Further, final timing on the implementation of Maryland Healthy Air Act regulations could give latitude to NRG's GenOn subsidiary to (continue to) clear its units for the remainder of the year. This could limit the YoY retirements.

TLN Average clearing prices:
With incremental: \$140/MWD
Ex-incremental: \$130/MWD

Further details are available in our note [‘Capacity Auction Misses the Mark’](#).

Figure 5: 2018/2019 PJM Capacity Auction Results

2018/2019 Capacity Auction							
Core Assets	CP MW	Base MW	Uncleared MW	CP Price	Base Price	Uncleared Price	Revenue (\$Mn)
BGE	1,682	99	270	\$164.77	\$149.98	\$50.00	\$112
EMAAC	-	-	-	\$225.42	\$210.63	\$50.00	\$0
MAAC	1,575	-	-	\$164.77	\$149.98	\$50.00	\$95
PPL	4,913	6	1,382	\$164.77	\$75.00	\$50.00	\$321
PSEG	-	-	-	\$225.42	\$210.63	\$50.00	\$0
PS-North	-	-	-	\$225.42	\$210.63	\$50.00	\$0
Total	8,170	105	1,652				\$527
Portfolio Split	82%	1%	17%	\$MW/Day Average		\$145.47	
Divestiture Assets	CP MW	Base MW	Uncleared MW	CP Price	Base Price	Uncleared Price	Revenue (\$Mn)
BGE	0	0	361	\$164.77	\$149.98	\$50.00	\$7
EMAAC	0	0	109	\$225.42	\$210.63	\$50.00	\$2
MAAC	631	0	45	\$164.77	\$149.98	\$50.00	\$39
PPL	34	246	0	\$164.77	\$75.00	\$50.00	\$9
PSEG	0	0	142	\$225.42	\$210.63	\$50.00	\$3
PS-North	103	0	59	\$225.42	\$210.63	\$50.00	\$10
Total	768	246	716				\$68
Portfolio Split	44%	14%	41%	\$MW/Day Average		\$108.12	
Grand Total	8,938	351	2,368				\$595
Portfolio Split	77%	3%	20%	\$MW/Day Average		\$139.93	

Source: Company Filings and UBS Estimates

What's the offsetting factor to both FE and TLN? Bidding

We note that the bidding strategies and greater bidding latitude afforded under the new PJM Capacity Performance (CP) rules from both companies could prove a key factor in enabling prices to remain elevated.

Recent notes on the PJM auction and power outlook

[5/10 Powering Down Into the PJM Auction](#)

[4/20/16: 1Q16 Playbook: Keeping the Bear at Bay](#)

[4/1/16: Comparing the PJM Solar Markets](#)

[3/28/16 Getting MOPRized](#)

[2/3/16: PJM: Little Changed for the Auction \[auction parameters\]](#)

[2/2/16: PJM's Ohio Conundrum](#)

[1/4/16: PJM: Tweaking Up Our Outlook](#)

[12/24/15: PJM: Accentuating the Positive](#)

[12/17/15: PJM: Driving a Lower Load Forecast](#)

[12/14/15: PJM Unloaded](#)

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Risks for Utilities and Independent Power Producers (IPPs) primarily relate to volatile commodity prices for power, natural gas, and coal. Risks to IPPs also stem from load variability, and operational risk in running these facilities. Rising coal and, to a certain extent, uranium prices could pressure margins as the fuel hedges roll off Competitive Integrations. Further, IPPs face declining revenues as in the money power and gas hedges roll off. Other non-regulated risks include weather and for some, foreign currency risk, which again must be diligently accounted in the company's risk management operations. Major external factors, which affect our valuation, are environmental risks. Environmental capex could escalate if stricter emission standards are implemented. We believe a nuclear accident or a change in the Nuclear Regulatory Commission/Environment Protection Agency regulations could have a negative impact on our estimates.

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Sell	FSR is > 6% below the MRA.	14%	19%
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Source: UBS. Rating allocations are as of 31 March 2016.

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