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US Electric Utilities & IPPs

From The Regulators Vantage Point

Equities

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Electric Utilities

Julien Dumoulin-Smith
Analyst
julien.dumoulin-smith@ubs.com
+1-212-713 9848

Michael Weinstein
Associate Analyst
michael.weinstein@ubs.com
+1-212-713 3182

Paul Zimbardo
Associate Analyst
paul.zimbardo@ubs.com
+1-212-713 1033

Industry remains singularly focused on carbon compliance… you should too.
We hosted our latest mini-conference with regulators, RTOs, and executives alike in NYC. Among the clearest priorities for all remains how the Clean Power Plan (CPP) will impact their respective states and business. We reiterate our belief this single issue will shape much of our future understanding of the sector in the months ahead – we suggest utility investor see opportunities through the lens of eventual carbon regulations. While some states will take an initial just say 'no' strategy, other appear poised to attempt to comply with preliminary investments already driving utility strategies (eg- efforts led by Dominion for the Atlantic coast Pipeline). We clearly anticipate delineation of respective utility strategies will remain the primary topic this Fall, heading into the annual EEI. Amidst continued uncertainty on utility load growth and concerns over DG growth, we emphasize the opportunity for a reacceleration in renewables, gas infrastructure, and electric transmission remains of the essence for later in the decade.

Timing of CPP remains later in the summer, August-September timeframe
The EPA's final rule remains with the Office of Management and Budget (OMB), pending a release in August-September as best we can tell.

Power markets: General bias remains to help out where possible

We continue to sense a bias among regulators to sustain compensation for energy and capacity markets alike, consistent with recent decisions to approve PJM's Capacity Performance (CP) scheme, hike the implicit price floor for New England (dynamic delist set at $5.50/kW-mo or $180/MW-day, up from $3.94/mo previously). Moreover, we see widespread support for the higher price trends despite recent critique of price spikes; we see MISO as positioned to actually *raise* their reference price levels, rather than move away from the mechanism that allowed Illinois/Zone 4 to clear notably higher than adjacent zones. Lastly, we see some willingness to revisit the ORDC scarcity price methodology in ERCOT; specifically, allowing demand to set LMP would appear to be a modestly bullish. Lastly, we see stakeholders as more meaningfully pushing efforts around PJM energy market 'price formation' rules following success on CP reforms for capacity markets. While hard to quantify, expect much more on this from FERC in coming months too – specifically Staff. In contrast, re-evaluation of chronic over-forecasting of load methodology by PJM could well results in substantial offsets to CP benefits.

Transmission: capex still deferred but consistent on the logic employed

On transmission, MISO commentary suggests a reacceleration remains at least several years away in our view, however, FERC appeared to suggest latest ROE levels represented a new consistency in setting rates, with the NY Transco case an anomaly in setting capital structure in setting its hypothetical capital structure for hearing.

Gas remains a hot button issue; this is increasingly attractive niche.

Consistent with our theme focusing on CPP, gas investment opportunities remain among the most closely watched development, with FERC emphasizing petitions remain at record levels nationally. In tandem with these comments, we see gas safety and accelerated pipeline replacement as a major source of capex acceleration. We see ED, PSEG, and EXC as among those seeking the greatest recent expansion as we see the northeast the largest target opportunity, with many programs either just filed or poised to be. The question remains just how accelerated regulators will approve these programs reinvestment cycles?

Carbon & the Clean Power Plan

- **Carbon cap-and-trade:** *taking a step closer*

We sense growing chorus of willingness to entertain a carbon cap-and-trade regime on a regional basis from across a variety of constituencies including many of which are firmly in Republican camps. We see this as a seemingly inevitable outcome of implementing the EPA's CPP program given the efficiencies provided – and the relative ease of implementing this across a multi-state jurisdiction. We see the RTOs such as MISO and PJM as likely serving a key role in reflecting carbon prices via formal or 'shadow' LMP prices. We note a wider hesitancy to use 'carbon trading' lingo to describe many of these efforts.

- **But will others join RGGI?** *Probably not; starting new regimes.*

Despite the willingness to revisit the subject, we see states like PA, which had previously flirted with membership to the Northeast RGGI scheme as more likely to strike it out on their own in tandem with other more coal-friendly states like Ohio. The question will be how such constituents operate across the same RTO.

- **We continue to see renewables as the de-facto procurement.**

We emphasize that a combination of wind and solar remain the de-facto choice for many utility regulators seeking to achieve aggregate carbon targets arising from EPA's implementation of both new and existing source of carbon regulations in the sector. While readily apparent to regulators and industry executives already, we see utility investors as less aware, with most solar/renewable investors largely unaware of the single most important prospective driver of future growth.

- **How will FERC and competitive markets deal with CPP?**

Given the CPP's likely result in driving significant new entry of renewables and efficiency, the question remains how much of a 'step back' will states take from their commitments to restructured markets. The economic signals to drive renewables will largely prove 'outside' the context of power, and necessarily cannibalize existing power generation. We see concerns from FERC on both the extent of 'integrated resource planning' likely to be pursued by nominally restructured states, but also the lack of oversight around reliability FERC will possess through this process.

PJM: The Latest

PJM's Load Forecasting Correction Could Reduce another 7.5 GW in 2016?

New load forecast could be in place for subsequent auction

We met with PJM's new CEO Andy Ott to discuss this summer's Capacity Performance (CP) FERC compliance filing as well as proposed peak load model enhancements that could result in a 7.5GW reduction if adopted as planned beginning with the 2016 load forecast. While potentially offset by existing efficiency impacts, we see a real risk for a potential meaningful reduction to prospective load and prices (*largely offsetting much of the upside arising from latest capacity performance regulations?)*. This appears the critical issue to track at PJM in 2H15.

Structurally over-procuring in PJM? Biggest risk to future auctions.

- Load forecast corrections coming: PJM intends to fix an identified problem of systematic over forecasting over the past decade. The biggest impact will be an improved forecast of energy efficiency impacts. For the 2015 load forecast, some simplistic binary variable corrections were made to the 1-5 year statistical analysis to result in a 1.5% drop in forecasted demand. This is expected to be improved with an autoregressive [AR (1)] adjustment and other adjustments for weather and solar impacts.

PJM 10-Year Growth Rate: 0.7% using New Specification versus 1% using Current Specification

- Applying these corrections to the 2018 forecast is expected to shave almost -6% off the current projection for 161.1 GW, or nearly -9.1 GW, of which about -1% or -1.6 GW has already been accounted for with the error corrections already applied to the 2015 load forecast. This could mean another -7.5 GW reduction when the 2016 forecast is released next year in January. Our supply/demand modelling indicates this could depress capacity prices by approximately $55/MW-day.

Revisiting the reserve margin targets in PJM too?

Reflecting the circularity in the PJM capacity market auction parameters, PJM's reserve margin is directly determined off the pool wide outage (EFORd) rate. We suspect these will moderate, driving down the total procurement in light of penalties. We emphasize there could well be a push to review the reserve margin in aggregate later as well.

Slowing ramping units in PJM not threatened

- The standard PJM intends to adopt for CP compliance is "best available"; i.e., generators should seek the best available contracts for gas transportation and/or storage capacity. This is intended to avoid having astronomical compliance costs placed on consumers for unreasonable levels of risk reduction.

- CP penalties are only intended for units that are not able to operate within their expected design parameters during "Capacity Emergencies", which would normally be events forecasted and announced day-ahead. For example, PJM does not intend to apply penalties to units that are designed to ramp over a period of several hours (i.e., a coal unit) as long as the unit is operating as expected vs design and is following dispatch instructions correctly. More specifically, PJM does not intend to force the retirement of entire classes of baseload generation with CP parameters.

Could storage and DR's future be in collecting emergency payments

We suspect not, but adds to compensation profile

- PJM intends to pay collected penalties out to other generators and demand response (DR) providers that did not clear the CP auction but are able to respond anyway to Capacity Emergencies. This method of payment could prove to be particularly valuable to DR and energy storage providers that are able to respond quickly even if they could not make the commitment necessary to qualify as a CP resource.

CP implementation: FERC compliance filings and re-hearings lodged, but we're not so concerned

The FERC order requiring changes to the proposed Capacity Performance (CP) auction was not a surprise to PJM and its compliance filing is not expected to hold up the auction later this summer. The deadline for comments to FERC on the many requests for rehearing is July 20 and PJM intends to execute the auction even before any possible rehearing date. Essentially, management believes that the order is relatively easy to interpret correctly and that there is little chance that they will ultimately run afoul of its requirements.

What is going on at FERC?

The key question is jurisdictional: Can Demand Response set direction?

Continued confidence expressed on success of fed-regulation of order 745

A key question– which encompasses several issues being discussed at FERC - is how issues will be split between the States and the Federal level. A lot of jurisdictional questions are cropping up in different forms such as between retail rate restructuring and the desire to have a state say in policies such as in Ohio and Illinois. The conflict appears for example when the states want to pick and choose plants/units and at the same time have retail choice. To stress the point, CP was never about favoring a particular type of generation, it was supposed to filter on the basis of just performance and be technology agnostic.

The big ticket capacity market item which is still uncertain is demand response (DR). The Commissioner opined that DR participation is slated to increase in any future scenario; rather the question is whether it will continue to exist supported through state legislation, or whether it will exist as it currently does on the wholesale side.

Transmission: ROE policy; hypothetical capital structure

It appears the latest slew of authorized ROEs are indeed all consistent with what appears a new firmer methodology in setting rates. We suspect future cases can be reliably be depended on in setting rates via this method, albeit, we see risk to the composition of the peer group and associated variable inputs.

Talking on the recent order that rejected the use of the hypothetical 60/40 debt to equity capital structure for several transmission projects in New York State, FERC suggested said that New York was a unique circumstance since the incumbent owners were building in their own service territory, which is what drove the decision to set their use of a hypothetical structure for hearing.

EPA may require review given tough infra investment expectations

Given EPA requirements and the time it takes to build associated pipelines/transmission networks, the Commission agrees that the EPA timeline is inappropriate and the 2020 target may need review.

Further, someone with grid level view (such as say the RTO, ISO or even FERC) needs to review reliability issues that may arise from the EPA; such that a route is made available to critical units that have reliability implications to stay online despite failing EPA hurdles.

Prices suppressed: Higher capacity prices ahead

Capacity prices remain depressed; although there are differences depending on regions. We maintain our view that through the depressed power and gas price environment, FERC will attempt to be as supportive as possible around capacity compensation in an effort to support baseload generators.

How will politics shift with more nuclear retirements?

With the real potential for further nuclear retirements later this summer, we suspect constituencies of all flavors will jump at FERC and other executive agencies suggesting they are not doing 'enough' to keep existing plants open amidst calls to implement carbon regulations. The question is if all these calls will amount to anything of critical mass.

Price formation: Suggested energy market rather than capacity market

Among the critical issues to be likely visited by the

The Latest on MISO Matters:

Permissible bidding behavior: status-quo over next 2016/17 cycle

As expected we wanted to hit right on the key subject: the concerns given the quantum by which prices exceeded expectations/previous auction results in Zone 4: clearing at a $150/MW-day in Zone 4 (or ~$4.5/kw-mo), vs $16.75/MW-day price last year, and vs street consensus for flat to upwards – and vs. the ~$3/MW-day the other regions cleared. Although there is not much clarity yet we noted some desire/palatability for revision of the processes involved here.

We would expect the next April MISO cycle to have the same process that is in place now; and any changes are likely with what MISO will file two cycles out according to MISO. In the end we got the sense that although several ideas may be in discussion, it is still too early in the process. So it's largely wait and see as the process goes on.

However reference prices <u>may actually be revised up</u>

In sharp contrast to our concerns, we see potential for reference prices to be revised up, putting upwards pressure on constrained capacity prices

On pricing, the two main issues are the independent market monitor's reference price (how he decides he pick it) and use of lost opportunity cost (what role does that play) - the opportunity cost will be a function of these elements; the lost opportunity cost for a unit that may or may not be deliverable into PJM for instance.

In long-term we continue to see transmission as solving constraints

We continue to see development of MVP projects across the MISO footprint as the ultimate 'solution' to constraints in Illinois (Zone 4), bringing down pricing, rather than necessarily seeing new capacity added as a function of the higher prices.

Dividing zones: strike the balance between engineering breakup vs a "social-political legitimacy"

Determining appropriate capacity zones always tricky

We also asked MISO if they were looking at possible reforms around zonal definitions. MISO said they were already looking at ways to redefine zone before the auctions. To put things in perspective, when the system was being designed, it was FERC who advised MISO to create zones based on relevant electrical transmission system characteristics. However because once zones are created it also brings along cost differentials and cost shifts, MISO's initial zone breakups

were based on state boundaries or utility system boundaries. High level, MISO said in the meeting they are looking to reform such that they can strike a balance between engineering breakup vs a social-political legitimacy of the zones.

Transmission infrastructure spend: Is clearly in a lull following substantial build out in recent years on Multi-Value Projects (MVPs). Overall transmission capex is $2.4bn cumulative over the 2013-2015 cycle. There are four key themes to be aware of:

(1) **Carbon-oriented spend: remains the long-term opportunity.** The Clean Power Plan due in September may reaccelerate what has been a recent slowdown in transmission spending in the region. Clearly there is an "option value" to transmission in light of what precisely materializes in the CPP.

(2) **North-South integration:** Expects the new batch of projects which MISO expects over the next few years to address both CPP related issues but also to address the north and south parts of the region.

(3) **Adding to the MISO-South (Entergy) capex:** In the south, MISO had a series of projects that addressed load pocket issues, and the industrial renaissance there. MISO has announced 15 projects in the south and one large project at Lake Charles. In total they represent $385mn – half of that was Lakes Charles project. *We suspect this will be a positive update for ETR's regulated plans on its upcoming 2Q15 call.*

(4) **Getting resolution on MISO-SPPm:** The other positive change we noted was potential for joint SPP-MISO projects, although they will hinge on final cost allocation between the two. While there is no clear timeline, four potential projects have been identified. We flag that the extent of these projects will be dictated by the capacity charges by SPP for MISO use.

Load growth in the south: *Consistent with ETR guidance at ~3%.*

MISO confirmed they have heard from several utilities in the region of strong industrial growth in the South, in Louisiana , Texas – and that this growth is real and consistent. Load growth forecasts are 0.8% for the midwest for the 2016 period; 3% for at least Louisiana and parts of Texas over a 3-5 years horizon. We see this, and possible out of cycle transmission planning that may be entailed if a strong 3% demand growth is sustained as a positive for Entergy.

MISO Renewables round-up

We continue to see wind renewable deployment across MISO as the single most important driver of energy prices, with a notably remaining gap in achieving the regional RPS standards. We emphasize MVP project completion should allow much of this price impact to hit across the region, rather than limited to a given region.

1) **Where is the push in wind?**

MISO said they have a significant backlog of wind projects. Total RPS in the MISO footprint aggregates to ~24GW, with MISO presently at 14GW right now provides for an incremental 10GW. We caution a bit on this figure as we see some states (such as Missouri) as likely capped out on hitting their RPS due to cost offramps. Most of the wind development would remain on the western extremities of the foot print including MN, IA, ND, and SD, and ultimately delivered to respective jurisdictions.

2) And a little sprinkling of Solar too

Interestingly, there have also been two utility scale projects announced in MISO – a 100MW facity in Xcel service territory; and the other is a 81MW facility with Entergy Arkansas. We suspect more utility-scale projects will emerge in coming months. The bulk will remain wind.

3) Looking at resource adequacy in the renewables age

One of the things MISO is focused on is to fix the generation interconnection queue. When MISO initially started the process in 2005, installed wind capacity was 400MW; now MSIO has 14GW. Essential approach in the process changed from the first in/first system put in place for combustion turbines; but rather adjustments to garner the ability to bring in multiple projects at one time. However, there is commercial uncertainty in the process because in a situation where multiple projects need to get connected but some projects pull out on account of unaffordable update costs. Then those costs get allocated to the zone, i.e, in the end to the project that did get interconnected. Overall in terms of tweaks to the process, expect MISO to go down a path where they ask for much more financial certainty upfront, which is something they will need if they want to add new capacity to the extent they have to.

Arizona

Scaling the utility rooftop program to full-strength from pilot

Poised to move from pilot to wider deployment in next rate case?

It appears that APS & TEP solar pilots are poised to be full, and the next step will be to evaluate the impacts of the pilots to determine the proper next steps. The APS & TEP pilots differ greatly in practice, with APS providing a zero-down system owned by the utility with the customer receiving a fixed $30/month bill credit for 20 years, while TEP's product is more similar to the 3-party providers by offering a 25-year fixed bill in return for TEP installing and owning the system. The ACC believes that the consequences of the pilots will lead to discussions surrounding both the scaling out of the pilots as well as the potential for 3rd party leasing. It is much more likely that utility-owned rooftop solar will expand resulting from the pilots as opposed to the regulators opening up the market for 3rd party providers.

Folding the fixed grid access charge into a rate case

Expect APS to have its higher solar fixed tariff proposal pushed into the case

Additionally, APS' proposal to increase the solar grid access charge for net metering from ~$5/month to ~$21/month is likely to be filed through a wider rate case docket rather than in a separate rate design docket. This will take substantially longer to get resolved (more than ~12 months from the time the rate design is filed in 2016, vs APS' original goal of receiving a decision by ~August under an issue specific docket) from APS' standpoint than through a separate document as they originally attempted.

PNW poised to join the Energy Imbalance Market (EIM)

With APS poised to join the EIM, the ACC is concerned about the governance prospects, which are today done under the guise of California. The commission is currently in discussions with EIM around establishing a new structure for governance, which would include all potential entrants including AZ and WA among others. Net-net, the ACC maintains an open mind to the potential customer savings afforded by EIM membership. Ultimately, the ACC doesn't have the authority to obstruct them from joining.

Decoupling: Learning from SWX's experience

The ACC will evaluate Southwest Gas' (SWX) data since they got full decoupling, and leverage the results in future recommendations. We suspect the subject of decoupling will remain of the utmost importance in designing rate structures under the next rate case for many of the states' utilities.

Elections + ratecase in 2016: a clear risk?

The commissioner stated that the elections and rate case both falling in 2016 could pose to be a problem, with the possibility that the focus will be taken off of the rate case. It is the commissioner's preference that she focus on the rate cases and not focus on the election, but she is concerned that her message will not be communicated if she doesn't follow the normal process.

Election reform – nope, just a plea for modesty

The ACC has explicitly called on APS and other solar parties to stay out of the next round of elections, with a record amount of funding already flowing to the candidates in the 2014 election season. While legally tricky to stop either party from pursuing such advocacy, the credibility of the agency has been tarnished by sums of money spent advocating for specific candidates. There does not appear to be any effort afoot in the state to either transition to an appointed commission or engage in ACC specific campaign finance reform.

Delaying the next round of Resource Plans to 2017

Regarding the upcoming IRP, it looks to be delayed by one-year to April 2017, as the ACC is poised to reflect the realities from CPP. Recall AZ has significant coal exposure and potential coal ash liabilities; we continue to see improving ratebase opportunities in AZ for PNW.

SCTY: The Next Policy Direction

From the West to the Southeast: The Next Frontier. SolarCity's policy team stated the next opportunities for geographic expansion could lie in the Southeastern states, referring to South Carolina as a potential target. State regulation would be particularly significant here: they hoped that the South would leave itself open to fair competition and also mentioned that the region's regulated utilities would be prepped for the potential entry of distributed solar. The team also stressed that the biggest priority right now is to keep existing markets open. In that respect, they have been focusing on AZ, NY, and CA. In AZ, the property tax issue has been largely resolved in favor of SCTY, and net metering and rate design will be the next key issues to come up. In NY, the REV initiative and performance-based regulations could provide new revenue opportunities, in their view, in addition to lowering costs for rate payers. They pointed out that the Northeast market opportunity has already arrived, while the West is behind them (NV could potentially hit net metering caps by early 2016, for instance, while WA yields difficulties with consumer protection legislation).

For rooftop solar:

Yesterday = Western US

Today = Northeast US

Tomorrow = Southeast US Key examples include SC

We suspect those states that have not yet been entered by rooftop solar marketers by the start of 2016 are unlikely to be touched until after the ITC economics are reset given scaling back of economic attractiveness of many marginal areas in the US.

Unclear expectations as stare down the next solar controversy

Reactions to California NEM 2.0: Fundamentally, SCTY and other solar parties are advocating no substantial changes to energy metering and are opposed to rate basing for solar as a discriminatory practice. The SCTY team has pushed hard to have the case litigated at the PUC in their attempts to get a fair treatment on the issue. We note that the firm's reaction was generally positive to the overall bill, and in particular, to the introduction of a $10/month minimum charge, instead of a fixed charge, for non-low income customers.

Competing head to head with utilities for rooftop programs? Utility companies have been escalating their solar efforts recently to compete with third party installers. In AZ, APS' and TEP's pilot programs mark the arrival of utility-owned rooftop solar. Duke Energy has also been making headway into the space with plans to move into Florida, South Carolina, Indiana, and California, among others. And Georgia Power is aiming to install 1 GW of rooftop solar by the end of 2016.

Putting Storage in Focus: TSLA's Powerwall home batteries will be used primarily as 7- and 10-kWh grid backup solutions, as storage is still in its early stages: implementation for residential won't occur any time before 2016. The 7kWh system is emphasized as being a product with daily retail cycling ambitions, whereas the 10kWh solution much more of a backup solution. At the moment, HI is the only state where its LCOE is below the retail rate. They also highlighted the differences between resi and commercial: the DemandLogic storage product is used primarily for demand charge mitigation efforts rather than backup power.

Some Thoughts on Texas

- **ORDC and Demand Response:** Load serving entities are being more active with demand response/load shifting programs to reduce exposure to peak power prices under the new Operating Reserve Demand Curve (ORDC) scarcity pricing regime. While still early, we sense that underlying parameters of the ORDC could at least be reviewed later this year when more data is available about both peak and off-peak months to ensure that demand is setting the price for energy to the best degree possible with the tools available. With the slew of new capacity announced (Exelon, Calpine, NRG, etc.) we would expect any 'relaxing' of standards designed to stimulate power price formation signals are less urgent that they were two years ago.
- **M&A:** Potential acquisitions or mergers involving Competitive generation assets focus primarily on whether the entity has in excess of 20% total ERCOT capacity and poses market power concerns. On the regulated side the regulatory review process is more detailed in assessing whether a potential transaction would be in the public interest. If M&A involves a regulated party, the PUCT continues its policy of minimizing the risk to ratepayers by using mechanisms such as ring fencing and preventing companies from recovering non-useful electric investments in rates (ex. goodwill).

- **REITs:** It is important to recognize the existing Sharyland settled case is not precedent for a future utility to rely upon if they request similar REIT status as it was a very small utility at the time. Furthermore, the Sharyland decision did not explicitly approve of a REIT status but merely permitted a transaction could facilitate a REIT. The PUCT does not appear opposed to a REIT or other tax-advantaged structure on its face but sees some key questions that the utility would have to address. An interesting nuance is that any acquirer contemplating a REIT conversion might not raise the issue explicitly in the change of control docket but instead have it addressed in a subsequent rate filing.

REIT precedent is not sufficiently established in TX to have comfort on a wider adoption policy

  - **What is the capitalization structure and would there be sufficient equity?** Given robust investment needs, any future capitalization of Texas utilities that would encourage distributing cash needed to fund long-term reliability would likely be viewed negatively (i.e. above and beyond normal return on equity earnings). That said, preservation of the ring fencing structure remains a clear focus.
  - **How would the IRS requirements of a REIT impact ordinary utility spending?** The concerns about distributing 90% of cash flows when utility operations are very capital intensive would have to be addressed.
  - **What parent/creditor encumbrances would be present to ensure that ratepayers are protected in the case of a default? Will there be proper independence at the different layers in the corporate structure?** The objective would be to prevent adverse intentions before they have an opportunity to manifest. Again, a goal is ensuring that the ratepayers shoulder almost zero risk via ring fencing and other means.
  - **What sharing of tax benefits would be permitted?** Even if a decision were made to allow a REIT structure today, there would be nothing legally binding to force future commissions or legislature on ruling around any future tax sharing. To maximize flexibility the sharing could be addressed via an ROE adjustment rather than an explicit rule that X% of the tax expense saved is shared with customers. We expect to be a reality.
  - **At what point would REIT structure ratemaking be reviewed?** While it's not entirely clear, it appears that ratemaking for any regulated entity would be established under the context of a ratecase, rather than necessarily at the initial approval of the REIT structure under 'change of control' evaluation.
  - **Will the IRS 'uphold' REIT treatment?** A scenario where the PUCT approves (explicitly or implicitly) a REIT structure for a utility which the IRS does not agree with would be a undesirable scenario that would like to be avoided to the extent possible.

- **More transmission coming?:** We understand that there is a Sharyland transmission line that was originally designed to be a double-circuit facility as part of Texas' Competitive Renewable Energy Zone (CREZ) transmission project but the original approved project only included one circuit out of caution for the amount of generation that would be developed. This continuation of CREZ appears to have a relatively high probability of approval given the continued wind build-out in the region. Beyond CREZ,

PREZ could yet yield further spend

there is the potential that Panhandle Renewable Energy Zone (PREZ) could see additional investment given the combination of aging infrastructure in the west and high congestion as renewables continue to grow.

- **Storage** nice to have but preference is not to add more subsidies: While there is clear value to adding storage to its market, but has had to exercise caution in disrupting the competitive market or exasperating the wind development vs conventional generation. The goal would be to see batteries implemented without subsidies and compete on their own merits against other fuel type, seemingly outside of a ratebase construct.

New York Prospects

- **REV opportunities:** Remain few and far between for ConEd. While we see the potential for the utilities be allowed to over-earn their ROE based on specific targets, we see a slowing investment opportunity set given the explicit and implicit limits on participation by incumbent utilities.

- **REV: More of an opportunity for Distributed resources:** While SCTY and others have yet to clarify how they see the opportunity, we suspect many are poised to capture any opportunities to build out commercial and residential solutions, including behind-the-meter storage.

- **Capacity market reform:** Nothing too significant; real key to watch remains to focus on latest triennial demand curve reset process.

- **Be careful of declining load upstate:** While quite opaque how NYISO establishes it's regional breakout for the purpose of the capacity auction, we understand the future of Zone G is in part predicated on tightness and transmission further upstate as well.

- **Energy highway initiative:** remains on ice, seemingly amidst push to secure resources via the REV effort.

Washington

Washington State Considers Colstrip Options – increasing to reduce?

TLN could be poised to strike a deal to sell its interest in Colstrip?

Washington UTC Chairman David Danner discussed the options that are being considered in the state for the reduction of CO2 generated by the Colstrip plant in Montana, now owned by Talen (TLN). The Governor of the state has announced his intention to stop "coal by wire" to the state from the plant. One possible near term solution could be to shut down the two older units 1&2, which have yet to be retrofitted with any significant pollution control equipment while continuing to operate unit 3. This might be accomplished by allowing Puget Sound Energy to acquire Talen's interest in the plant and securitize the costs for closure and remediation of the site, including coal ash ponds. Regulators believe that securitization might prevent a significant rate increase. The Sierra Club has sued Talen on ash pond issues among others and they believe that costs could be higher than estimated by the company. However, despite extra sessions in the Wash legislature this year, required bills were not passed. Chairman Danner expressed disappointment and stressed that his focus was on supporting a fair process above all.

He also noted that other initiatives were sunk as well, including an extension for 3rd party solar incentives that was opposed by some solar participants over a provision

to grant regulators jurisdiction over consumer protection issues (in addition to the Attorney General).

Statement of Risk

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 Integrateds. 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. Risks for regulated utilities include the uncertainty around the composition of state regulatory Commissions, adverse regulatory changes, unfavorable weather conditions, variance from normal population growth, and changes in customer mix. Changes in macroeconomic factors will affect customer additions/subtractions and usage patterns.

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Buy	FSR is > 6% above the MRA.	45%	36%
Neutral	FSR is between -6% and 6% of the MRA.	42%	32%
Sell	FSR is > 6% below the MRA.	13%	20%
Short-Term Rating	**Definition**	**Coverage[3]**	**IB Services[4]**
Buy	Stock price expected to rise within three months from the time the rating was assigned because of a specific catalyst or event.	less than 1%	less than 1%
Sell	Stock price expected to fall within three months from the time the rating was assigned because of a specific catalyst or event.	less than 1%	less than 1%

Source: UBS. Rating allocations are as of 30 June 2015.
1:Percentage of companies under coverage globally within the 12-month rating category. 2:Percentage of companies within the 12-month rating category for which investment banking (IB) services were provided within the past 12 months.
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KEY DEFINITIONS: Forecast Stock Return (FSR) is defined as expected percentage price appreciation plus gross dividend yield over the next 12 months. **Market Return Assumption (MRA)** is defined as the one-year local market interest rate plus 5% (a proxy for, and not a forecast of, the equity risk premium). **Under Review (UR)** Stocks may be flagged as UR by the analyst, indicating that the stock's price target and/or rating are subject to possible change in the near term, usually in response to an event that may affect the investment case or valuation. **Short-Term Ratings** reflect the expected near-term (up to three months) performance of the stock and do not reflect any change in the fundamental view or investment case. **Equity Price Targets** have an investment horizon of 12 months.

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UBS Securities LLC: Julien Dumoulin-Smith; Michael Weinstein; Paul Zimbardo.

Company Disclosures

Company Name	Reuters	12-month rating	Short-term rating	Price	Price date
Consolidated Edison[16]	ED.N	Sell	N/A	US$60.69	13 Jul 2015
Exelon Corp.[4, 6a, 6b, 7, 16]	EXC.N	Neutral	N/A	US$32.70	13 Jul 2015
Pinnacle West Capital Co.[6a, 16]	PNW.N	Buy	N/A	US$60.18	13 Jul 2015
Public Service Enterprise Group[16]	PEG.N	Neutral	N/A	US$40.98	13 Jul 2015
Talen Energy Corp[16]	TLN.N	Sell	N/A	US$17.58	13 Jul 2015

Source: UBS. All prices as of local market close.
Ratings in this table are the most current published ratings prior to this report. They may be more recent than the stock pricing date

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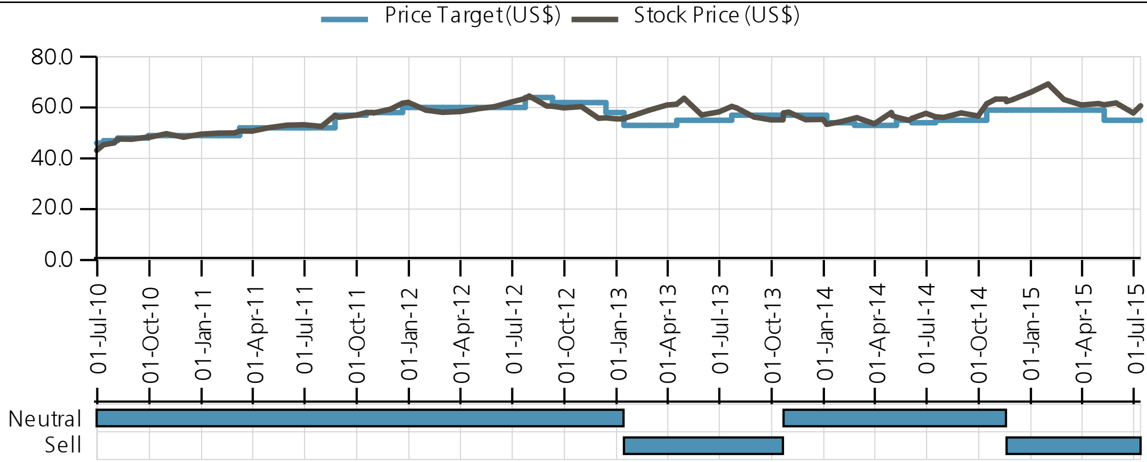
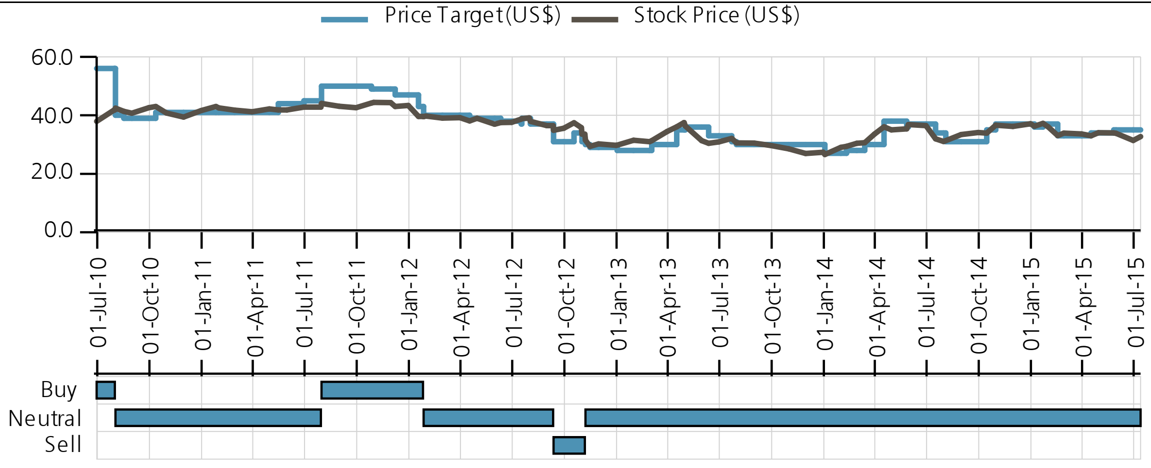
Consolidated Edison (US$)



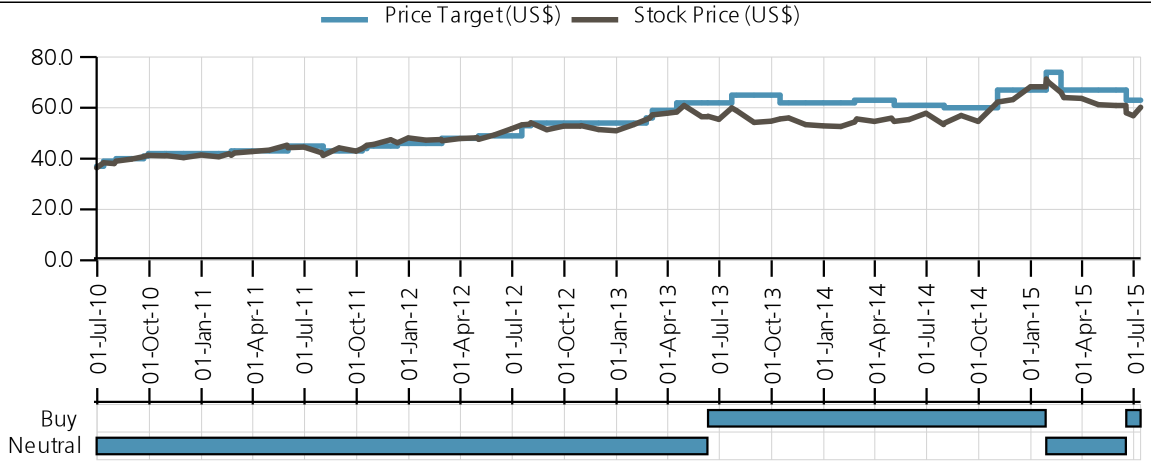
Source: UBS; as of 13 Jul 2015

Exelon Corp. (US$)



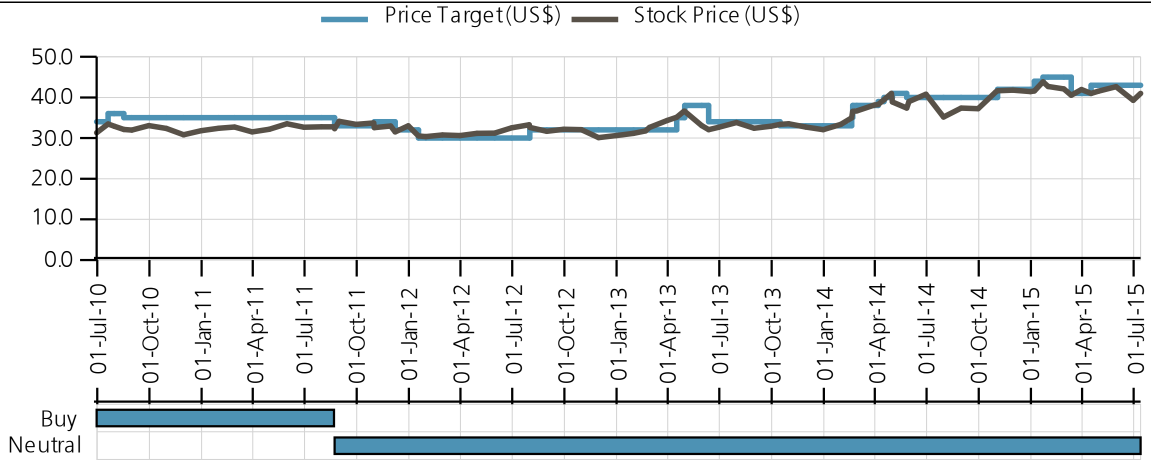
Source: UBS; as of 13 Jul 2015

Pinnacle West Capital Co. (US$)



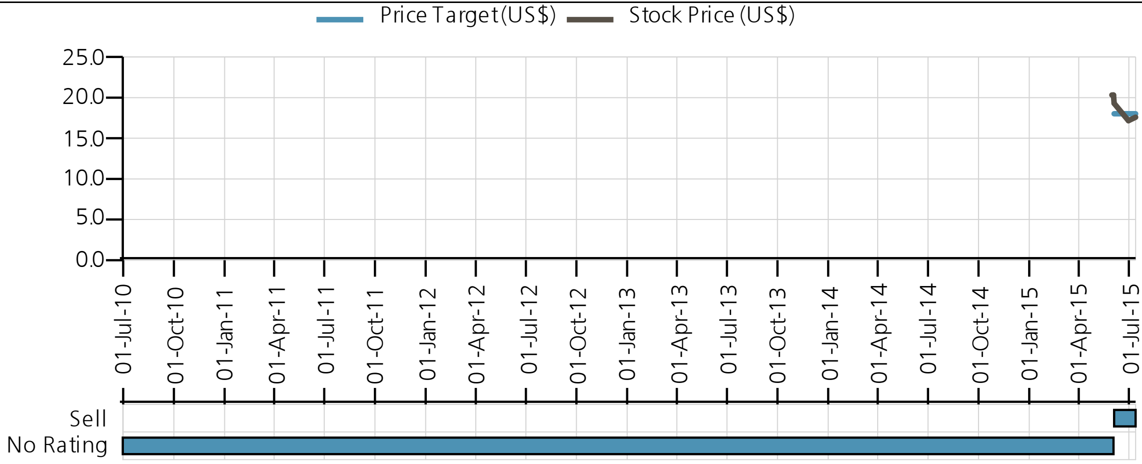
Source: UBS; as of 13 Jul 2015

Public Service Enterprise Group (US$)



Source: UBS; as of 13 Jul 2015

Talen Energy Corp (US$)



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