Summary of Sonia Aggarwal's Presentation to the Minnesota Public Utilities Commission on Performance-Based Ratemaking: Why and How

On March 15, 2016, Sonia Aggarwal, Director of Strategy at Energy Innovation presented on performance-based ratemaking to the Minnesota Public Utilities Commission. This is a summary of the discussion. You can view Ms. Aggarwal's complete presentation on the PUC's website here.

- Brief introduction to America's Power Plan.
- Lange—customer desires are perhaps the least transparent aspect of this for regulators. What are the drivers for PBR from a customer perspective, from those customers who have options and interests, service providers, etc. How do you think about customer orientation and what that means for regulators?
- Aggarwal—There are a ton of new options from third party providers. Example: Nest thermostat In order to optimize these technologies, customer-facing rates may need to change. Private companies may help customers optimize inside their home, but smart rate design can make sure that those customers stay connected to the system and help improve the system as a whole. We get a lot more value when the customers remain connected to the broader system.
- Lipschultz—are there other products beyond Nest? What are other consumer products that would benefit from rate design – is this existing or do we need the rate design to enable the new products?
- Aggarwal—The emergence of more TOU and critical peak pricing in some places have encouraged some other new technologies (switches and radios on hot water heaters, battery options, distributed generation), but it's a little chicken and egg. Until there are TOU rates, the business case for some new technologies isn't as good.
- Tuma—If we go toward electrifying transportation, it will mean more electricity generation. EVs fit into COS more than some of the other technology developments. You might have customer-facing rates that "tell" people when to charge their vehicle, but otherwise EVs could fit well in a COS model.
- Aggarwal— Smart charging is, in many cases ready to go (some technologies still down the line). Electrification of the vehicle fleet fits more into COS than other technologies. You might change customer facing rates to make sure it comports with when wind and solar are available with the drawing of power.
- COS vs. PBR: "Did we pay the right amount for what we got" VS. "Are we paying the right amount for what we want?"
- ROR
    - ROR is greatest opportunity for shareholder value creation: Neither the absolute level of a company's revenue, nor its rate of return, directly drive shareholder value—it's the DIFFERENCE between the Rate of Return and the cost of capital that determines utility's value. This delta

helps approximate the profit motive that would normally be present in a competitive market.
  - We don't want ROR to equal the cost of capital because shareholders/investors would be completely neutral and utilities would not be encouraged to invest.
  - Heydinger—Also want utilities to optimize their operational expenses (not just capital expenses).
  - In PBR, the ROR becomes closer to the cost of capital. As they create more value for their shareholders they are also creating more value for society. As utility performance improves, their revenue and value increases.
  - Showed bar chart comparing COS to PBR: Utilities still earn ROR on either CAPEX AND/OR OPEX + PIMs (Performance Incentive Mechanisms available for value-creating activities). Utilities are already driven by standards; many standards just aren't tied to financial incentives.
- Lipschultz—Performance incentives are a substitute for the dynamics that would be present in a competitive market. This seems inherently difficult in a regulated environment.
- Aggarwal—A COS regime used to align perfectly well with the societal goals we had before (build out the system and make electricity ubiquitous, etc.); but today we want utilities to deliver a different set of social outcomes. It becomes very important how you develop the performance outcomes and the metrics you use; could start with just a few outcomes and begin to measure them before tying any revenue to them.
- Heydinger—What about when value is being created, but that value is not shared equally among all customer classes?
- Aggarwal—If the performance outcomes you choose focus on improving and optimizing the system as a whole, the greater the chances they will benefit all customers. Having a central system optimizer will create value for all customers – there may be particular activities that create more or less value for diff customers, but if the incentives are designed around system optimization (e.g., there are ways to think about where upgrades may be needed and where DG may be more appropriate). If the planning across the system minimizes cost, then you end up in a better scenario for all customers.
- Heydinger—the concern we have is that this (PBR) is going to be MORE expensive. Need to have assurance that any PIMs are creating system-wide benefits that actually moderate otherwise rising costs and rates.
- Aggarwal—Some jurisdictions have employed a revenue cap in combination with TOTEX (total expenditures). TOTEX helps eliminate the bias toward capital expenditures and level the playing field between capital and operational expenditures. Combining TOTEX with a revenue cap would help squeeze out any operational inefficiencies while acknowledging that sometimes an operational expense can be a better solution that a capital investment. With

TOTEX, the ROR is earned on all expenditures (see UK's RIIO model and Alberta, Canada).

- Lipschultz—How do you know that you're getting more value? Are there things NOT getting done today that WOULD get done under a PBR system that would get us to those outcomes more cheaply than the current system?
- Aggarwal—You know based on whether or not the utility is achieving the performance outcomes you've set – and have quantitatively defined. PBR requires a certain "letting go" of the accounting, line-by-line approach and toward evaluating that you're getting desired outcomes and paying a reasonable amount.
- Tuma—Under PBR, the ROR "bar" would get smaller; then the "PIM" bar could be lower or higher than today. The idea is that the utility would drive down TOTEX in order to get the PIMs. Seems like organized labor would dislike this approach because it might look like a lower "spend" overall.
- Aggarwal—the main protections are a revenue cap and making sure that affordability/cost efficiency be explicitly one of the performance outcomes. The revenue cap has been popular because it ensures the baseline isn't increasing. You can look at historic spending, whether you're moving into a period or more or less investment, and set the cap. There are also ways to design "caps" and "floors" for PIMs to put a band around both rewards and penalties. Want to keep an eye on how any of these changes affect the cost of capital for utilities, since we want them to remain financially healthy.
- Lange—We are already paying an incentive for energy efficiency. Now we are in the midst of a review to see if we are over-paying for that performance outcome. As we contemplate changes in the efficiency incentive, it underscores the challenge of phasing-in incentives so that you don't get them wrong to start with and feel forced to make sudden changes. How do you assess claims about what does and doesn't affect the utility's cost of capital?
- Aggarwal—The best way is to try to ensure that investor voices are heard at the Commission. Analysts who get assigned to utilities are often younger and less experienced.
- Lipschultz—Doesn't the idea of giving utility's latitude and the ability to be entrepreneurial mean that the performance outcomes need to be broad?
- Aggarwal—the PIMs need to be precise, but outcome oriented so that the utility faces many options for achieving the outcome.
- Tuma—PBR would mean that we don't care so much how you got there, just that they met the performance outcome.
- Lange—One of the things that MN has a leg up on is that we do have fairly clear goals already. We have goals around carbon, energy efficiency, and renewables. We are able to measure some of the accomplishments on quality of service (though some of the metrics are clunky). Utilities have already been given incentives for lots of different outcomes—which makes we wonder exactly what problem we're trying to fix with PBR?

- Aggarwal—This is not about wholly choosing one system or the other. The question is, Can we try to eliminate as many of the misaligned shareholder incentives as possible? There is a broad spectrum of approaches to choose from in terms of integrating performance into the regulatory approach.
- Lipschultz—We have clearly had some success with a command and control approach, but I hear you saying that a PBR approach may create a system in which incentives exist to go beyond any particular mandated outcome.
- AG Economist—Setting PBR seems like we're getting away from cost.
- Aggarwal—PBR does not get rid of accounting for cost or utility's ability to recover those costs. This shifts more risk to utilities because if customers aren't getting what they want out of the system then they pay less, and if they get more of what they want then they pay more.
- Tuma—this means that the performance outcomes need to be things that all customers really want.
- Heydinger—the number one priority for the utility this legislative session is to get out from under the IRP, and the competitive bidding process. Trickier to figure out how we move forward when we see the utilities still emphasizing capital investment.
- Mike Bull—Involved in both e21 and the legislative effort. Asking that the legislation include competitive bidding, and that size, type and timing of resources are still left to the Commission.