From: Faruqui, Ahmad <Ahmad.Faruqui@brattle.com>
To: Rich Scheer <scheerllc@verizon.net>; 'Roger Levy' <rogerl47@aol.com>
Subject: RE: Dynamic Pricing Tech Conference
Date: Wed, Mar 21, 2012 11:05 am

Yes, and that would be a good course. Maybe we should try to offer it through some other mechanism, with guest lecturers. It could even be offered through the web. NARUC might be willing to sponsor it. We could get regulators, academics, consultants and so on to give lectures, maybe even utility folks and consumer advocates. What do you think? Long shot?

In terms of my talk, I will talk about why dynamic pricing is worth doing, the different forms of dynamic pricing, the experimental evidence to date, the two pilots that are underway in Ohio (AEP and FE), the low income issue and how to design your own pilot.

How does that sound?

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From: Rich Scheer [mailto:scheerllc@verizon.net]
Sent: Wednesday, March 21, 2012 10:09 AM
To: Faruqui, Ahmad; 'Roger Levy'
Subject: RE: Dynamic Pricing Tech Conference

Wow. That list could be the curriculum for a college-level course. I agree that you can only focus on a few topics. Which were you planning to address?

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From: Faruqui, Ahmad [mailto:Ahmad.Faruqui@brattle.com]
Sent: Wednesday, March 21, 2012 12:49 PM
To: Roger Levy; Rich Scheer
Subject: FW: Dynamic Pricing Tech Conference

I have already mentioned this to Paul -- I am only going to focus on a few of these topic areas, just so you know. Many of them are beyond my area of expertise. And even I could cover all of them, it would take the entire morning if not the entire day to do them justice. The list is overly ambitious.

Do you agree?

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From: Centolella, Paul [mailto:Paul.Centolella@puc.state.oh.us]
Sent: Tuesday, March 20, 2012 11:51 AM
To: Faruqui, Ahmad
Cc: Stafford, Benjamin
Subject: Dynamic Pricing Tech Conference

Ahmad,

You had asked for some ideas on topics that you might cover in the Dynamic Pricing Tech Conference next week. These are some rough ideas, you should decide what you feel comfortable addressing. Here are a few thoughts:

1. Benefits of LMP Energy (or Energy/Ancillary Service) Markets and Basic Value of reflecting these prices in Dynamic Retail Energy Pricing, i.e. Why We Should Care about having Dynamic Retail Pricing that reflects Wholesale Markets? (Note: PJM Energy & AS Markets currently are not co-optimized, but PJM proposed co-optimization, first, in their scarcity pricing compliance filing and, second, has or intends to request again in a DR compliance filing - I can find out details if necessary.):

    1. Economic Efficiency - Prices reflect the cost of next unit of production at specific time and location
    2. Non-discriminatory - Reflects cost causation people who use more when power is expensive would pay more and vice versa
    3. Resilience - Dynamic pricing makes the power system more reliable by creating beneficial feedback in that the occurrence of a constraint or contingency will impact prices and create an offsetting effect on demand. Additionally, dynamic prices convey information about conditions of transmission system, Note: Ohio Revised Code Section 4928.02(E) makes it State Policy to: "Encourage cost-effective and efficient access to information regarding the operation of the transmission and distribution systems of electric utilities in order to promote both effective customer choice of retail electric service."
    4. Reduces the opportunity for generation to exercise market power: Market monitoring and mitigation are needed because demand is inelastic. Engaging consumers and the intelligent devices in homes and businesses supplements monitoring and mitigation and reduces ability to raise prices above competitive levels. There is some good experimental econ lit on this topic.
    5. Consumer Choice: Opportunity for consumers to control their bills by managing when they use power and to decide for themselves the how much they want to purchase at a fixed price.

2. Wholesale energy and (co-optimized) ancillary services markets provide rich, granular information about both cost of additional power and operating constraints on the transmission system. Traditional rate making greatly simplifies pricing and thus suppresses this information. While historically this was required by the limits of meter technology & the Commission is NOT considering whether to expand advanced metering deployments in this proceeding, where interval or advanced metering is available it is possible to provide much greater information to consumers to allow them to manage their energy costs.
3. Distinguish between setting rates (either fixed or time differentiated) and flowing through to consumers market prices in which a decision is made regarding the market structure(s) and resulting prices could be dynamic, fixed in various forms, or multi-part (e.g. 2-part pricing more below) combining elements of both.
4. Discuss potential objectives for retail pricing:

    1. Incorporates Dynamic Signals to permit consumers to manage their energy costs
    2. Address Consumer Loss Aversion: Discuss that for most consumers this may relate more to changes in total bill than to specific generation price
    3. Consumer choice - enabling consumers to decide how much price protection they want to purchase

5. Describe continuum from fixed or seasonal rates (what Ohio largely has today), through and providing more detailed descriptions of TOU, PTR, CPP, 2-part RTP, Consumer subscription, RTP. I don't know whether you might be able to graph options back to potential objectives.

6. Since it will be a new concept to many describe consumer subscription option in some detail & relate back to potential objectives - I can send you the high level slide that I have been using
7. Mention the AEP Residential RTP pilot where technology is being used to address loss aversion
8. Suggest that when considering dynamic pricing that it can be considered in a broader context involving:

    1. Consumer education
    2. Feedback on usage information to consumers with appropriate privacy protections - subject of a different PUCO proceeding;
    3. Broadcasting of real-time price signals -- naturally needs to happen if doing RTP, also could cite prices to devices discussion with RTOs and appliance/consumer electronics manufacturers in SGIP Business & Policy DEWG, System & Device Integration Subgroup (I have been helping to coordinate this group & can update you.)
    4. Enabling technology: provide examples
    5. Potential for competition based on services that could help consumers manage costs

9. What do we know from past experience: Pull in your prior work. Describe results from past and current programs. Identify what elements makes a difference. Describe some specific examples. What can we learn, where are there still gaps in our knowledge.
10. How dynamic pricing fits with wholesale SSO auctions: Issue is auction / market structure - could have index auction with suppliers bidding margins from RTO load zone settlement prices, comparable to gas auctions where suppliers bid margins from Henry Hub prices
11. Default pricing:

    1. Since Ohio is a retail access state with a Commission approved Standard Service Offer, PUCO influences retail pricing through SSO options & this can be an important influence:

        1. SSO auction / market structure can help create a market for products or product attributes e.g. call option component of consumer subscription pricing
        2. Defaults matter is creating the architecture for consumer choices, i.e. "Nudge"

12. Address potential objections and other issues:

    1. Low Income impacts - we have some data from AEP Gridsmart program showing low income consumers tend to use less during peak hours
    2. Uncertainty - Consider how to address the impact of more modest hedges on reducing bill volatility

13. How to learn more: Development of experiments testing different combinations of prices, technology, consumer education, information feedback to discover what works best for different groups of consumers.

    1. Discuss precedents for experiments and how to capture and transfer learning

You should tell us how much time you think you would like to take. We have the whole morning and you will have by far the most to cover.

Talk with you this afternoon.

Paul
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