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Energy Efficiency as a Supply Resource

June 18, 2014

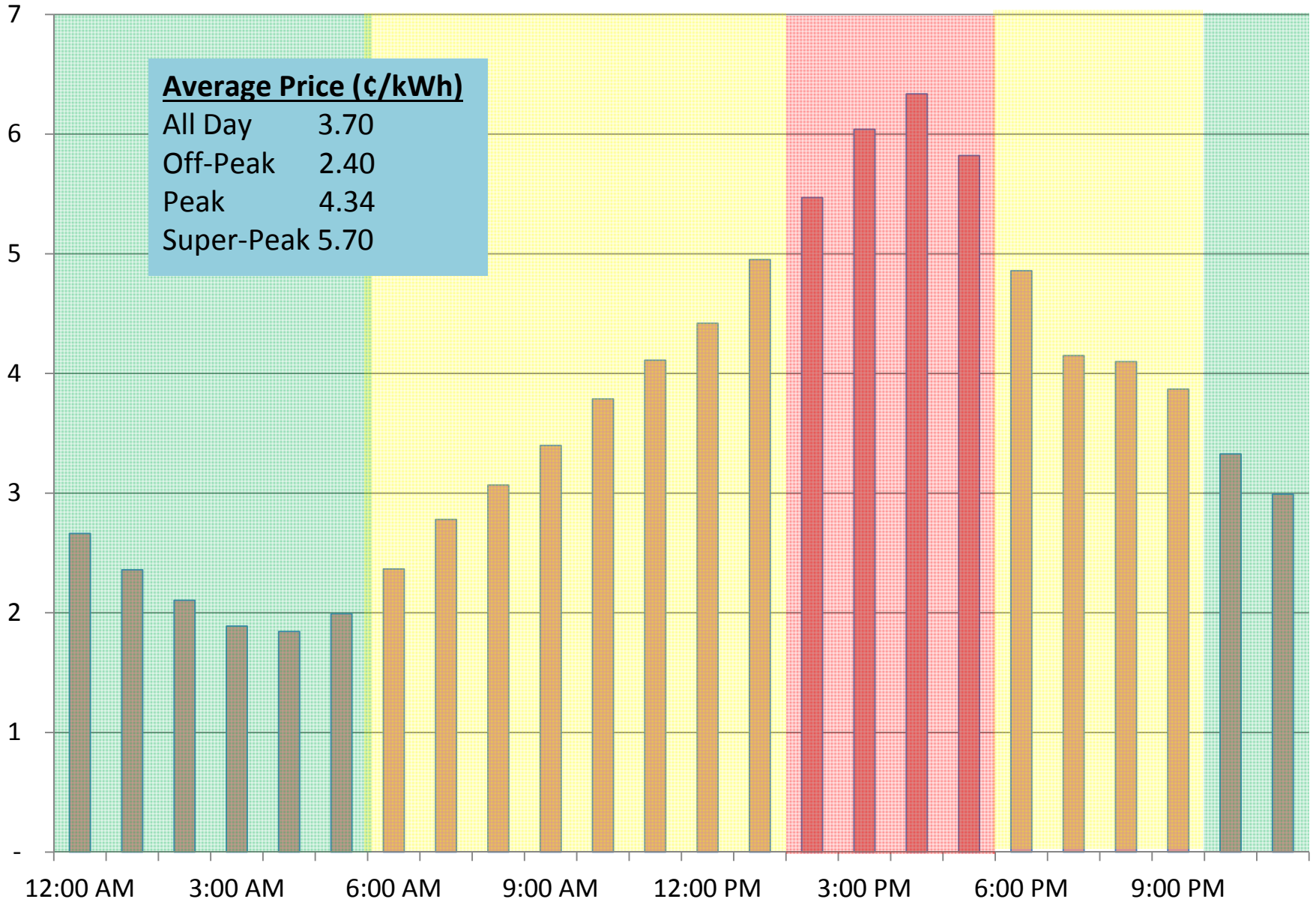
Agenda

1. Overview of IPA's interest in Energy Efficiency as a Supply Resource
2. CUB/EDF Presentation
3. EnergyHub Presentation
4. Discussion of key implementation challenges
   - A. Product definition
   - B. Eligible participants
   - C. Procurement process and timing
   - D. Verification of delivery/supplier defaults
   - E. Pricing relative to supply side resources
   - F. Interaction with current energy efficiency and demand response programs

Rationale

- **Goal: Reduce energy price for eligible retail customers**
- Section 16-111.5B energy efficiency programs include estimates of reductions of MW load reductions and are reflected in utility load forecasts
- No special emphasis placed on programs that deliver more peak demand reduction (which generally would impact higher power prices), or programs that consistently lead to peak reductions
- Could another model lower the energy procurement costs of the IPA?

Average 2013 June/July/August Weekday Prices (¢/kWh)



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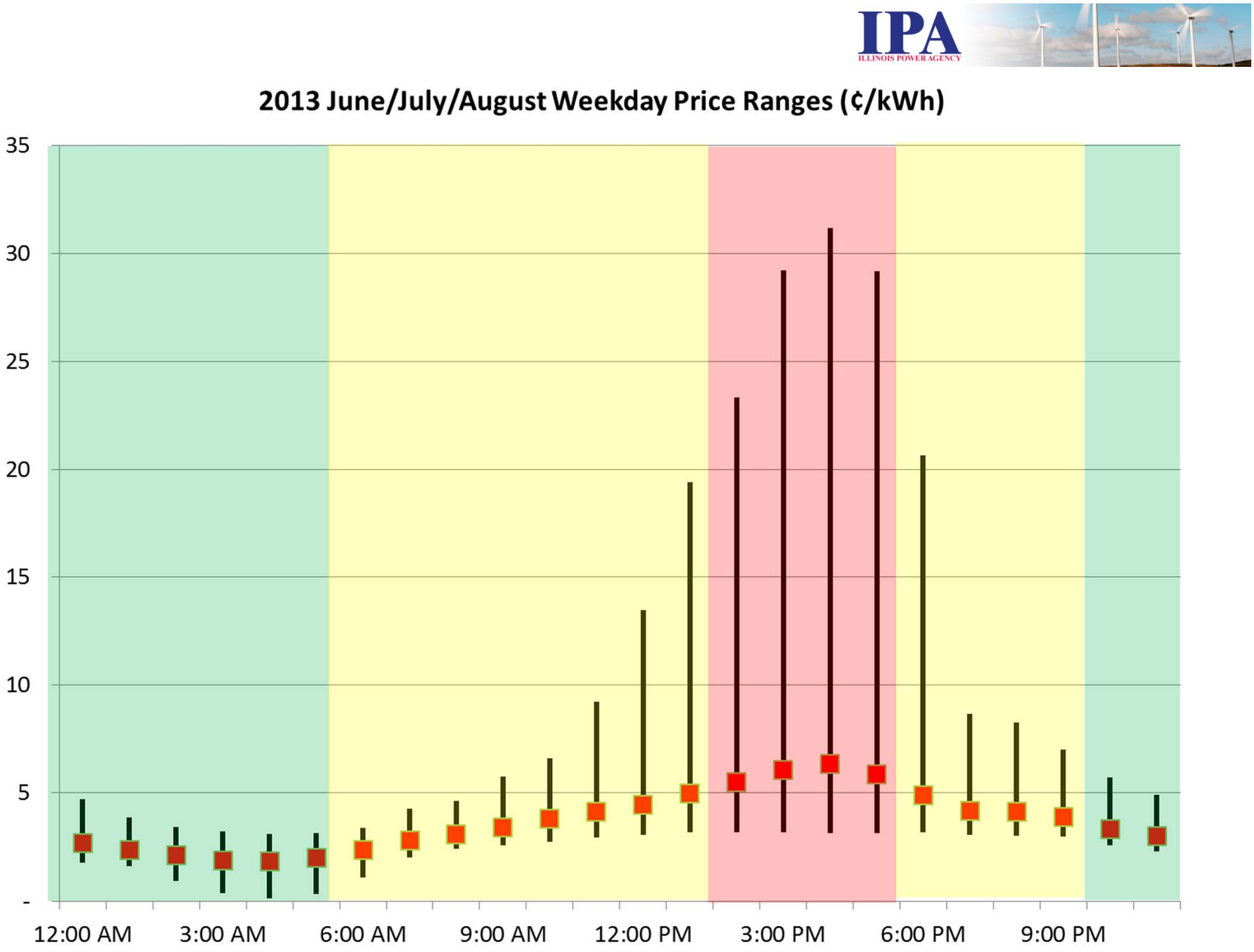

2011 Procurement Plan

- Included proposal for Energy Efficiency as Alternative Resource ("EEAR") with the goals of establishing if:
  - Energy efficiency can be cost competitive with more traditional resources
  - Additional benefits such as price stability can be gained through the expansion in the type of resource products placed into the portfolio
- Only to be procured when the cost of the EEAR is less than the combined cost of the energy swaps, capacity, and renewable energy resource contracts held by the utility for the contract period offered by the EEAR provider
- Did not specifically target peak demand

2011 Procurement Plan, cont.

- ICC noted that,

  "Because the least expensive electricity is frequently the electricity never generated, the Commission is intrigued by the notion of procuring electricity in this way."

  [Final Order in ICC Docket 10-0563 at 42]

- However did not approve proposal for several reasons including:
  - Lack of clear authority to implement program
  - Lack of detail on quantity and terms of proposed procurement
  - Lack of detail on overlap with Section 8-103 energy efficiency programs

2014 Draft Plan

- IPA requested input on the idea of procuring "negawatts", defined as:
  - Peak load reductions backed by energy efficiency that must be bid and delivered every on-peak hour
  - Purchase of "negawatt blocks," *i.e.,* strips of defined size of guaranteed reductions
  - Contract terms defined and bids evaluated on the basis of price

Draft 2014 Plan Framework for Comments

- **Technology neutrality:** a vendor may use any technology or behavior shift it desires, and is only responsible for delivering the on-peak reduction – a vendor would bid in a price for a particular reduction, and then be responsible for implementing and guaranteeing (including any penalties) the reductions;
- **Multiple-year procurements:** Recognizing that energy efficiency projects are often capital intensive, have a front-loaded cost structure, or both, procurements should cover multiple years of supply to allow for better prices;
- **Smart meter-verified reductions:** Especially if the load reduced comes from eligible retail customers or classes that qualify to be eligible retail customers, actual reductions should be evaluated based on smart meter-based verification; and
- **Full cost recovery for utilities:** As with all procurements, utilities should recover costs associated with administering the program.

Comments Requested On The Following

- Whether such a program is feasible
- Whether such a program is desirable
- The specifics of a feasible and desirable program, including:
  - What customer classes should be eligible to provide negawatts,
  - How to mitigate impact on Section 8-103 goal attainment
  - Technical aspects of guaranteeing reductions and associated penalties for non-attainment

Comments Received

- ComEd and Ameren did not support inclusion in the plan
- AG favored altering Section 16-111.5B process to separate out peak period impacts
- NRDC noted that peak savings revenue may be insufficient and programs may require other revenue streams. Also noted need for rigorous M&V
- CUB suggested three models:
  - High Load
  - High Price
  - Peak Hours

Consideration for 2015 Plan

- Peak Hours model most closely matches IPA procurement model
  - High Load could be met through traditional DR
  - High Price could be met through real-time pricing
  - Peak Hours could be layered on top of on-peak blocks and/or reduce the quantity of generation-based peak power procured

Key Implementation Challenges

A. Product definition
B. Eligible participants
C. Procurement process and timing
D. Verification of delivery/supplier defaults
E. Pricing relative to supply side resources
F. Interaction with current energy efficiency and demand response programs