



Initial ISO IMAPP Comments

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Initial ISO IMAPP Comments – Presentation Outline

- Important first considerations: Problem statement, design principals and objectives.
- ISO initial observations and questions on several IMAPP solution ideas to date.
- ISO values stakeholder’s efforts to identify workable approaches to the integration of markets and public policy.
- IMAPP has identified several solution approaches that merit further discussion.
- In the spirit of facilitating productive discussion, ISO will highlight today some of the central issues to be addressed as we move forward together.



Coming to Agreement on a Problem Statement that is Clear is Invaluable

- For the 'Framework' document, a clear and concise overarching problem statement would be beneficial.
 - For example: *A possible problem statement could be: How can the region simultaneously achieve both its environmental objectives and reliability objectives competitively and cost-effectively, when the ISO's mission does not stipulate the former and requires the latter?*
- The ISO is eager to understand stakeholders' preferred problem statement.
- A clear, concise problem statement enables the ISO to assess how well solutions that it can implement would solve them.
 - It defines the task ahead



Design Principles are an Important Next Step

- Design principles are useful to specify at the outset. Many are possible.
- As an initial observation, at least three seem applicable to IMAPP solutions.
 - **Objective Clarity.** Successful market designs require a clear and precise objective. This guides the ISO's detailed design decisions, and sets the 'yardstick' of success.
 - **Compatibility.** Solutions should be compatible with the ISO's mission: Efficient markets, reliable bulk power system, (plus environmental objectives?)
 - **Non-Discriminatory and Jurisdictional.** Solutions requiring ISO administration should be expected to be deemed non-discriminatory and jurisdictional.
- What other principles are critical to be applied to the proposals?
- Is design success a reduction in carbon emissions, a reduction in state contracting, or both? Something else?



Three IMAPP “categories” of solution ideas to date

- ISO sees three “categories” of solution ideas emerging.
- Two address carbon emissions with energy market focused solutions, and the third addresses capacity market impact of out-of-market subsidies:
 - Carbon shadow pricing
 - Forward clean (low-carbon) energy market, or FCEM
 - New capacity auction rules/ repricing strategies (e.g., multi-tiered FCM pricing)
- As conceptual proposals, these are not mutually exclusive.
- Will need careful attention to how these designs would interact.



IMAPP IDEAS: ISO OBSERVATIONS AND KEY QUESTIONS



Carbon Shadow Pricing: Initial ISO Observations

- See Exelon and Synapse presentations (8/11 and 8/30).
- Mirrors successful SO₂ and NO_x emissions-reductions programs – implementation differs (emissions are priced without tradeable allowances), but effect on emissions is similar.
- Likely to integrate harmoniously with existing energy and capacity market designs.
- Likely to be technically feasible.
- Jurisdictional questions.



Carbon Shadow Pricing: Key Clarifying Questions

- **Emissions price?** How would the emissions 'price' (in \$ per ton) be determined and by whom? How frequently would it be adjusted and by what mechanism?
- **Rebate allocation?** How would NEPOOL allocate the emitters' payments among participants? Is there a defensible basis for any non-uniform allocation?
- **Design linkages?** Should the shadow price be used to settle FCEM obligations?
- **Policy linkages?** This directly reduces carbon emissions (perhaps substantially); how would it change current or potential future state subsidies and OOM contracting and other related structures such as RGGI and RECs?



Forward Clean Energy Market: Initial ISO Observations

- See presentations (8/11, 8/30) from NationalGrid, NextEra, Renew, Synapse, FirstLight
- Presentations suggest various possibilities so designs are understandably not clear yet at this stage.
- Could mirror the long-term contract structure(s) that LSEs use to procure energy from renewable sources; or could be different.
 - Should have good reasons for differences.
- This *forward contract settlement structure* greatly affects many things: risk allocation between consumers and suppliers, total procurement costs, suppliers RT production incentives (therefore carbon abatement), the initial FCEM auction design and bid format, and the ISO's LMPs (potentially).
- Many FCEM possibilities may be technically feasible.



Forward Clean Energy Market: Key Clarifying Questions

- **Jurisdictional issues?** Could the ISO jurisdictionally administer a ‘stand-alone’ centralized market for clean resources (i.e., that are not needed for reliability)?
- **What (exactly) is the product, and how does it settle?** These are the *primary* questions to square away first to develop a viable forward product market.
- **What is the FCEM’s contractual structure? Is it:**
 - A Contract for Differences against the Real Time LMP? Or the carbon component of LMP?
 - An “energy put” against the LMP (i.e., “greater of” pricing)?
 - Obligation (of sellers) to buy-out any non-delivered forward clean energy commitments (or clean energy credits) at an alternative compliance rate?
 - A simple formula payment (set premium price, paid plus LMP)?
 - Some other, non-standard settlement structure?



Forward Clean Energy Market: Key Clarifying Questions

- **Eligibility (qualification rules) governance?** Who determines what resources are eligible, and how? Technology changes rapidly; state policies can change; market rules don't foresee everything.
 - Can it discriminate between new and existing in eligibility?
- **Policy linkages?** Unclear if a FCEM is *in addition to*, or *a substitute for*, state subsidies and OOM contracting; how does/would MOPR apply to FCEM resources in the FCA?



New Capacity Auction Rules (“Tiered Pricing”): Initial ISO Observations

- See NRG presentation (8/30), and PJM Discussion Paper (8/18), which explain two (somewhat different) ‘multi-tiered’ capacity pricing approaches.
- These proposals related to capacity market pricing (or re-pricing) address the impact of renewable (or other) subsidies or out-of-market purchases on the ISO/RTOs’ capacity markets but do not specifically address carbon emissions reduction objectives.
- These also seek to address concerns that renewables initiatives and ‘as is’ MOPR rules would “over-procure” more than the demand curve.



New Capacity Auction Rules: Key Questions

- **What's the compensation objective and rationale?**
 - To provide a price signal for adequate future investment over the long term?
 - To pay non-subsidized resources the capacity price that would prevail in the absence of (some or all) subsidies?
- **Price discrimination issues?** Can the ISO pay different prices for the same obligation in the FCA, or is the product differentiated? How would legal *and* economic issues be addressed?
- **Bidding incentive problems?** Do suppliers have proper bidding incentives (to bid their cost of supplying capacity) in the FCA under these mechanisms? How would that be ensured?
- **What defines a subsidized resource?** Is it necessary for the ISO to identify what resources are 'subsidized'? How would that be done?



Closing Thoughts

- **IMAPP initiative.** This process provides a valuable forum for identifying conceptual ideas and for ongoing discussions to refine the objectives, principles, and solution ideas.
- **Expectations.** Achieving significant change in the short term will be extremely challenging.
 - New products, market designs, and software always takes time (years) for detailed development, vetting, regulatory approval, and implementation.
- **State subsidies and OOM initiatives.** How these solution approaches would (or should) alter states' subsidies and OOM contracts merits further understanding and discussion.



Questions

