Evolution of Market Efficiency B/C Ratio

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MEPETF

Regional Planning Process Task Force (2011 – 2015)

- Evaluate and make recommendations to implement additional planning criteria or procedures to include a broader range of assumptions that would be required to plan for public policy initiatives such as renewable resource integration, demand response programs, or other environmental initiatives

- Evaluate and make recommendations on modifying or expanding PJM criteria or procedures related to "at risk" generation in the RTEP

- Evaluate PJM's current method for designating entities to construct and own RTEP baseline upgrades and modify existing RTEP processes and procedures for PJM to consider alternate transmission project proposals and to prioritize and choose among competing projects

- May 2012 – Proposed changes to the existing 18-month cycle to the current 24-month cycle
    - Aligns with 24-month RTEP cycle
    - Other misc. changes
- October 2012 – Key issues:
    - Benefit/Cost test and cost allocation
    - Generation modeling
    - Upgrade benefit determination

Transmission Owner proposal in October 2012

		Market Efficiency	
		Current	TO Proposal
Definition	Regional Project	500 KV and higher*	500 KV and higher*
			double circuit 345 KV lines where both circuits originate at same station and both circuits terminate at same station.
	Lower Voltage Project	Projects not defined as Regional Project	Projects not defined as Regional Project
Cost Allocation	Regional Project	Load Ratio share	50% Load Ratio Share and 50% to zones with decreased load payments
	Lower Voltage Project	100% to zones with decreased net load payments	100% to zones with decreased load payments
Benefit/Cost Test	Regional Project	Energy Benefit: 70% change in production costs + 30% change in net load payments	TBD
		Capacity Benefit: 70% change in capacity costs + 30% change in net capacity payments	TBD
	Lower Voltage Project	Energy Benefit: 70% change in production costs + 30% change in net load payments (only zones with decrease in net load payments)	TBD
		Capacity Benefit: 70% change in capacity costs + 30% change in net capacity payments (only zones with decrease in net capacity payments)	TBD

*Includes facilities necessary to support regional projects

Highlighted blocks are differences

Package "10" proposed by PJM which could be considered to match cost allocation most appropriately

- Regional Energy Benefit: 50% change in production costs + 50% change in net load payments (only zones with decrease in net load payments)
- 86.5% in favor of changing benefit determination
- 29% favored status quo

- Benefit Determination was changed in June 2013 for regional projects
  - Status Quo was 70% change in production costs + 30% change in net load payments all zones for regional projects
  - Status Quo was 70% change in production costs + 30% change in net load payments (only zones with decrease in net load payments) for lower voltage projects
- Regional project benefit determination was changed to 50% change in production costs + 50% change in net load payments (only zones with decrease in net load payments) to align with TO proposals to alter the cost allocation and definition of regional projects

	Existing Cost Allocation: Market Efficiency Projects.	Existing Benefit Determination: May 2013	Benefit Determination Package 4	Benefit Determination Package 10
Regional Projects	50% Load Ratio Share and 50% to zones with decreased net load payments	Total Benefit= Energy + Capacity Benefit		
		Energy Benefit: 70% change in production costs + 30% change in net load payments all zones	Energy Benefit: 50% change in production costs + 50% change in net load payments all zones	Energy Benefit: 50% change in production costs + 50% change in net load payments (only zones with decrease in net load payments)
		Capacity Benefit: 70% change in capacity costs + 30% change in net capacity payments all zones	Capacity Benefit: 50% change in capacity costs + 50% change in net capacity payments all zones	Capacity Benefit: 50% change in capacity costs + 50% change in net capacity payments (only zones with decrease in net capacity payments)
Lower Voltage Projects	100% to zones with decreased net load payments	Total Benefit= Energy + Capacity Benefit		
		Energy Benefit: 70% change in production costs + 30% change in net load payments(only zones with decrease in net load	Energy Benefit: 50% change in production costs + 50% change in net load payments(only zones with decrease in net load	Energy Benefit: 100% change in net load payments (only zones with decrease in net load payments)
		Capacity Benefit: 70% change in capacity costs + 30% change in net capacity payments (only zones with decrease in net capacity payments)	Capacity Benefit: 50% change in capacity costs + 50% change in net capacity payments (only zones with decrease in net capacity payments)	Capacity Benefit: 100% change in net capacity payments (only zones with decrease in net capacity payments)

PJM stakeholders approved rules for the Benefit/Cost Metric to only include zones with a decrease in net load/capacity payments

- Market Efficiency projects by definition address market congestion inefficiencies that exist because customers on both sides of a constraint are not paying equitable costs.

- Zones that are currently benefiting from the inefficiency should not be included in B/C Metric because the following:
  - These zones would not derive benefits absent the inefficiency in first place
  - These zones are benefitting from the inefficiency before the market efficiency project is placed into service via artificially low prices
  - These zones are not paying for the direct cost to build the upgrade to remove the inefficiency
  - Threshold to pass a Market Efficiency project if include all zones more difficult because not addressing the cost inefficiency