PJM/MISO Cost Allocation For Economic Upgrades

Stakeholder Meeting
Hilton Baltimore BWI, Baltimore MD

May 19, 2008

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Energizing the Heartland

Topics for Discussion

Background (RTO Staffs)

- FERC Order / Schedule
- Review Internal RTO Economic Project Criteria / Allocation

Issues to be Addressed (MISO and PJM TO)

Stakeholder Discussion (All)

Next Steps (All)

FERC Order - Schedule

Comparison of Intra-MISO & Intra-PJM Economic Project Planning Criteria & Cost Allocation Methodologies

Economic Project Planning Criteria

MISO

- Docket No. ER06-18-04– conditionally approved by FERC on March 15, 2007; covered both economic project planning criteria and cost allocation methodology.

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- Docket No. ER06-1474-004 – accepted in part and rejected in part by FERC on April 17, 2008; covers economic planning criteria
- Docket No. ER06-456 et al. – Sept. 14, 2007 Settlement is pending at FERC regarding cost allocation for reliability and economic-based projects < 500 kV.

Economic Project Planning Criteria

MISO

- If the Adjusted Production Cost > $0
- And if the LMP-based energy cost benefit > $0
- And the project passes the Threshold Test (see next slide)
- And the project meets the 3 Qualifying Tests
- Then it is classified as a Regionally Beneficial Project

PJM

- If the project meets the Benefit/Cost Ratio Threshold, then it is included in the RTEP and goes to the PJM BOM for approval

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Economic Project Planning Criteria

MISO

- Benefit/Cost Ratio Threshold Test – on a sliding scale
  - 1.2 if there is 1 yr between approval date and in-service date
  - 3.0 if there are 10+yrs between approval date and in-service date
  - PV of total benefit through minimum 10 years of project life, with max 20 year horizon (from approval year) divided by PV of total project cost for same period

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- Total Annual Enhancement Benefit = Energy Market Benefit + RPM Benefit (see next slide)
- Benefit/Cost Ratio Threshold
  - 1.25
  - PV of total benefit for 1st 15 years divided by PV of total cost of 1st 15 yrs of upgrade

Economic Project Planning Criteria

MISO

- Total Project Benefit = 70%* Production Cost benefit + 30%*LMP benefit

PJM

- Energy Market Benefit = 70%*change in Total Energy Production Cost + 30%*change in Load Energy Payment (net of ARRs)
- Reliability Pricing Benefit = 70%*change in Total System Capacity Cost + 30%*change in Load Capacity Payment (net of CTRs)

Economic Project Planning Criteria

MISO

- Qualifying Tests:
  - Project Cost > $5 million
  - And project voltage is >= 345 kV
  - And the project is not exclusively a Baseline Reliability Project or a New Transmission Access Project
  - If a project is both a BRP and a RBP, allocated as RBP

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Cost Allocation of Economic Projects

MISO

- For projects >= 345 kV:
  - 20% of project cost is regionally allocated to MISO zones based on load-ratio share
  - 80% of project cost is assigned to a region (East, West or Central) based on relative Benefit; then the sub-regional costs are allocated on load-ratio share
- For projects < 345 kV: No defining criteria; cost assigned on a license plate basis (I.e. to construction zone)

PJM

- For projects >= 500 kV:
  - 100% of project cost is regionally allocated to PJM zones based on load-ratio share
- For projects < 500 kV:
  - TBD 1 year after approval by FERC of ER06-456 et al. settlement

Issues

Rich Marinelli – PJM Transmission Owners
Paul Jett – MISO Transmission Owners

Categories of Issues

Scope Issues
Planning Criteria and Benefits/Cost Issues
Cost Allocation Issues

Scope Issues

Scope of August 1 filing
Extension of economic project criteria within each RTO

Source of projects
Projects must go through the Joint Operating Agreement study process
(aka The Coordinated System Planning Process)

Eligible Projects
In service date after December 31, 2008
Exclude list of projects that meet the date
Not interconnection required upgrades
Not reliability required baseline projects

Scope of planning criteria
Passing planning criteria for super-region is sufficient
Must pass planning criteria for super-region and for each RTO separately

Planning Criteria and Benefit/Cost Issues

Minimum eligible voltage
500 KV
345 kV
All voltages

Minimum project cost threshold
$20 million
$5 million
$10 million allocated cost to the non-constructing RTO

Minimum % allocation to the other RTO
Amount ?

Planning Criteria Issues, continued

NPV benefit/cost threshold to qualify

1.25 – (PV of total benefit for first 15 years divided by PV of total cost for first 15 years of upgrade)

Sliding scale beginning at 1.2 for one year to service date, to 2.0 for ten years to service date (similar to MISO's current methodology)

Years of analysis of benefits and cost

15 years from service date

10 years from in service date

Limit years of NPV benefits and costs to maximum years of planning study horizon

20 years

Planning Criteria Issues, continued

Benefits showing
Benefits to each RTO above the benefit/cost ratio threshold
Benefits to super-region above the benefit/cost ratio threshold

Measure of energy benefit – production cost
Fuel and variable O&M
Fuel and variable O&M plus any adjustments

Measure of energy benefit – load LMP
Load LMP net of FTR/ARR benefits
Gross load LMP
No LMP metric

Planning Criteria Issues, continued

Split of production cost and load to determine benefits
70% production cost, 30% load LMP

Discount rate

Modeling assumptions; i.e.,fuel costs projections, generation expansion, load growth, etc
Basis of assumptions
Degree of consistency between RTOs

Sensitivity analysis
Parameters to analyze for sensitivity
How to incorporate analysis

Planning Criteria Issues, continued

Energy projections beyond year of model
Escalate from last year of analysis
Perform actual analysis

Modeling tool
Combined analysis using a single model, currently Promod

Capacity value included as a benefit
PJM includes RPM capacity benefit in internal analysis
MISO uses energy only

Cost estimates of projects
As handled internally within each RTO

Planning Criteria Issues, continued

Input of Stakeholders

Through internal RTO and JOA planning processes

Through voting whether projects go forward – 30/30 test

- Parties to whom costs are ultimately allocated by the respective RTO will have a vote on whether the project actually moves forward based on a voting mechanism developed within the RTOs.
- Those entities (in both RTOs) at risk for payment of the costs of an economic project would cast a vote (thus votes could be cast by transmission owner, load-serving entity or a representative of load depending on which entity is at risk for payment)
- Votes weighted pro-rata based on cost allocation percentages
- 30/30 rule applied – if 30% or more of entities allocated costs for a project vote in support of the project as proposed, and no more than 30% oppose the project, the project moves forward and is constructed as proposed.
- If a project passes the 30/30 test, all beneficiaries pay for the project, including those who voted in opposition to the project.

Cost Allocation Issues

Costs allocated to who

Divided between the RTOs and each RTO uses its own tariff to allocate within itself

- Between RTOs based on benefits developed in planning criteria

Allocated to all load in the super-region on a load ratio share basis

- 100% of eligible projects
- 20% of eligible projects
- Postage stamp based on voltage level
  - 500 kV and above allocated to super-region load on a load ratio share basis
  - 345 kV allocated 100% sub-regionally to each pricing zone based on economic benefits

Cost Allocation Issues, continued

Priority of this economic cross-border cost allocation

Projects justified by existing methods (reliability internal or cross-border, interconnection internal, economic internal) are charged according to that existing methodology

Projects qualifying for economic cost allocation are charged that way even if they are also needed for reliability

Next Steps

- Next stakeholder meeting in Carmel
  - Date to be determined
- Internal Meetings with filing details or status updates
- Filing due at FERC by August 1, 2008