

E-RSC
Entergy Update on CBA Addendum Studies
January 26, 2011

E-RSC Update – CRA Cost Benefit Study

- **FERC funded study complete**
 - Final report was presented September 30, 2010
- **SPP contracted with CRA to study EAI only joining SPP RTO**
 - Final report was released October 27, 2010
- **Entergy addendum studies**
 - Non-MISO addendums are complete
 - report posted December 8th
 - ETR to MISO, EAI to MISO
 - Target complete by 1st quarter 2011
 - MISO modeling details creating challenges

FERC Sponsored Sensitivity Cases

- **As part of the SPP-Entergy CBA, a number of sensitivity analyses were performed:**
 - High and Low Gas
 - High and Low Load Growth
 - Increased Wind Power
 - Copper Sheet
- **During the course of the study, other potentially important parameters were identified and, in consultation with stakeholders, several additional sensitivity cases were identified.**

Entergy Sponsored Sensitivity Cases

- **The additional sensitivity cases tested the following areas:**
 - QF Put Treatment (Firm vs. Non-Firm)
 - Seams Charges
 - Elimination of Wheel Charges between Cleco and Entergy
 - Elimination of Wheel Charges between SPP and Entergy
 - Delayed SPP Day 2 Market
 - Carbon Adder
- **Calendar year 2013 was simulated for all sensitivities**
- **Calendar year 2022 was simulated for only three of the cases**

Background

- **The following slides will focus on the CRA GE-MAPS results for the Entergy area for calendar year 2013**
- **The values reported on the following pages are further limited to Entergy's "Trade Benefits" (including avoided wheeling costs and lost revenues) and do not include implementation cost, administrative cost, FERC fees and transmission cost allocations, etc.**

Entergy joins SPP Case

- **The FERC sponsored study estimated \$107 MM in trade benefits for the Entergy area.**
- **These benefits were estimated by running two production cost simulations:**
 - Base Case (\$4,098 MM)
 - Change Case (\$3,991 MM)
- **The Change Case had two “Changes”**
 - The QF Put energy was treated as firm.
 - The Seams Charges between the Entergy, CLECO and SPP areas were reduced to zero.

Question 1: How much of the Entergy trade benefits resulted from the QF Put energy being treated as firm in the change case?

- **Two new cases. Each case had only one change from original base case:**
 - Treat QF Put energy as firm \approx \$56 MM trade benefits
 - Eliminate seams charges \approx \$72 MM trade benefits
- **Conclusions: If Entergy joined SPP but did not get an exemption from PURPA (which would make QF energy firm), the estimated Entergy trade benefits would be limited to approximately \$72 MM for 2013.**

Question 2: How sensitive are the Entergy trade benefits to the assumptions for commitment and dispatch seams charges?

- **Ran two new cases with reduced seams charges between and within the Entergy, Cleco and SPP areas.**
 - Case 1 reduced commitment seams charge from \$10/MWh (\$5/MWh for IPPs) to \$3.00/MWh.
 - Case 2 reduced the commitment seams charge as indicated in Case 1 plus it reduced the dispatch seams charge from \$3/MWh to \$2/MWh.

Base Case Production Cost:	\$4,098 MM	<u>Savings</u>
Case 1:	\$4,054 MM	\$44 MM
Case 2 :	\$4,051 MM	\$47 MM
All Seams Charges Removed:	\$4,026 MM	\$72 MM

Question 2: How sensitive are the Entergy trade benefits to the assumptions for commitment and dispatch seams charges?

Conclusions:

- The net benefits are very sensitive to the assumption regarding commitment seams charges.
- The net benefits are not as sensitive to the assumption regarding dispatch seams charges.

Question 3: How much of the Entergy Area benefits are related to elimination of wheel charges between Entergy and SPP or between Entergy and Cleco?

Base Case Entergy Production Cost:	\$4,098 MM	<u>Savings</u>
Eliminate SPP-ETR Wheel Charges:	\$4,100 MM	(\$2 MM)
Eliminate ETR-Cleco Wheel Charges:	\$4,092 MM	\$6 MM

Conclusion: The benefits are offset by the lost Point-to-Point revenue the Entergy Area currently receives for service to these regions.

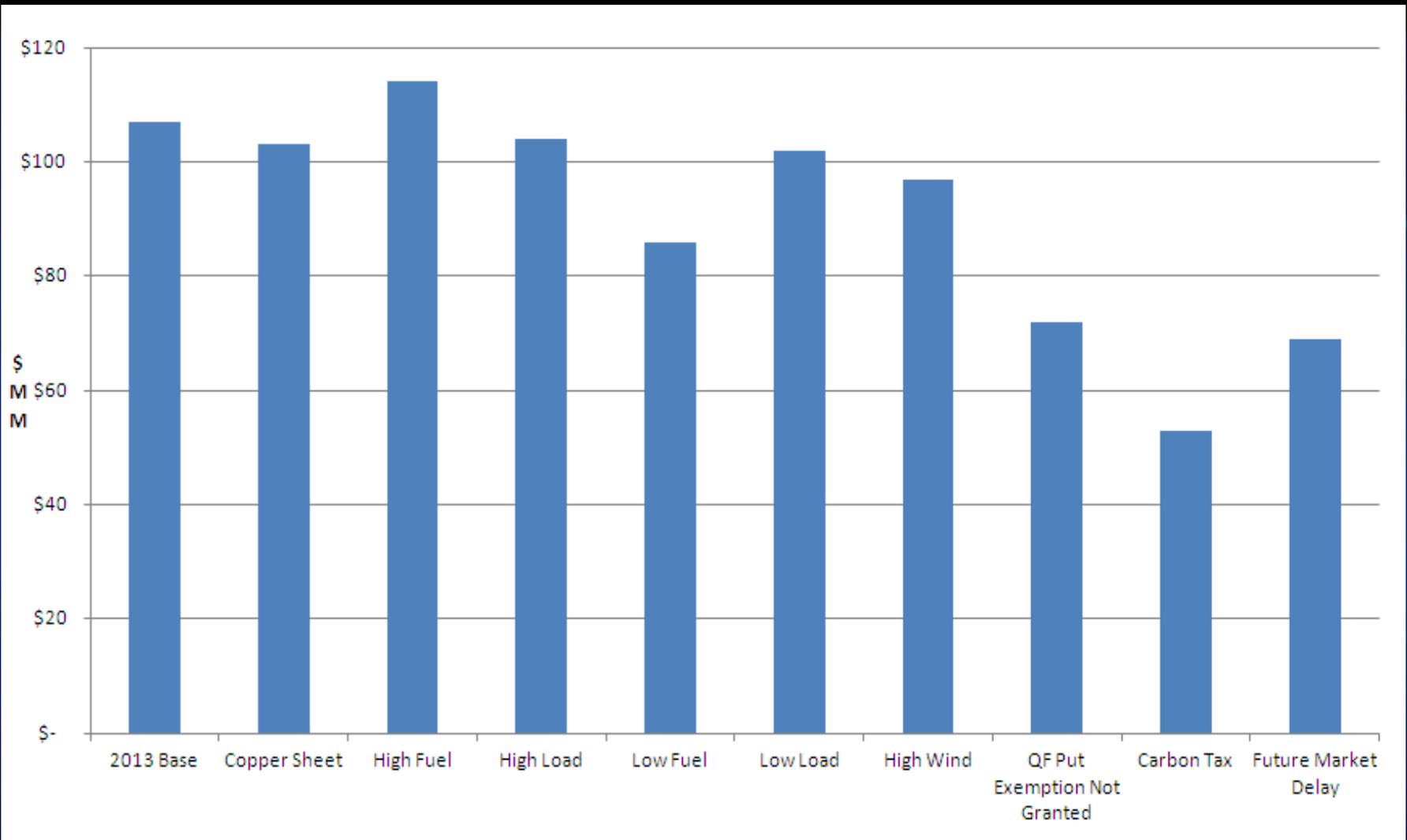
Question 4: How are the Entergy benefits impacted if the SPP Future Market is not operational in 2013?

- **Produced a new change case:**
 - Commitment seams charges remained in place.
 - Dispatch and wheeling seams charges were removed.
 - QF Put energy was still assumed to become firm in the change case.
- **Savings decreased from \$107 MM to \$69 MM.**
- **A significant portion of this \$69 MM in savings is a result of the QF Put energy assumption which is less certain when only a current day market is in place.**
- **Conclusion: A delay in the future market implementation is significant.**

Question 5: How would a carbon allowance cost of \$20/ton of CO2 impact the Entergy trade benefit?

- **Produced a new base and change case with the allowance cost included in both cases.**
- **Results:**
 - The trade benefits from joining the RTO decreased from \$107 MM to \$53 MM
 - Base case net production costs for Entergy increase 37% or \$1,500 MM
 - Coal unit capacity factors drop from 84% to 71%
 - Combined cycle capacity factors increase from 20% to 46%

2013 Entergy Area Trade Benefits



Conclusions

- **The results of the sensitivity cases confirmed our intuition on the effect of the modeling assumptions used.**
 - The lower the seams charges in the base case, the less are the model calculated production cost benefits of RTO membership.
- **The assumption that QFs will become “firm” resources in the RTO is a significant driver of the production cost benefits of joining an RTO.**
- **Elimination of wheel charges between CLECO and Entergy or between SPP and Entergy will likely produce little, if any, net benefits.**