MWTG – CRSP UPDATE

- DISCLAIMER: Information provided here is CRSP specific and does not necessarily reflect the views of other MWTG participants
OVERVIEW

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Purpose of Customer Meetings

• Provide CRSP Customers with an update on CRSP MWTG activities
• Continue dialogue with Customers
• Share additional information
• Increase awareness and impact of possible participation
MWTG

• Discussions began in 2013 with Transmission Owners seeking to increase efficient use of transmission system
  • Began as Joint Transmission Tariff Initiative
  • Reduction of pancaked transmission rates
  • Production Cost benefits

• MWTG participants:
  • two IOUs, two municipals; two REA G&Ts; two WAPA projects
  • MWTG members are a sub-set of the WestConnect planning region and are members of the Colorado Coordinated Planning Group (CCPG)
Participating Transmission Owners*

- Basin Electric Power Cooperative (BEPC)
- Black Hills Corporation (BHC) including its three affiliates
  - Black Hills Power, Inc. (BHP), Black Hills Colorado
  - Electric Utility Company, LP (BHCE) and Cheyenne Light
  - Fuel & Power Company (Cheyenne)
- Colorado Springs Utilities (CSU)
- Platte River Power Authority (PRPA)
- Public Service Company of Colorado (PSCo)
- Tri-State Generation and Transmission Association, Inc. (Tri-State)
- WAPA
  - Loveland Area Projects (LAP)
  - Colorado River Storage Project (CRSP)

* Others may join after initial implementation of joint tariff and/or market.
MWTG - Footprint
MWTG – Goals

• Overall Goal – Create a single multi-company transmission tariff and explore “Day 2” RTO market alternatives

• CRSP Goal – Protect the FES deliveries
  • Determine benefits associated with joint tariff and Day 2 markets
  • Continue to foster relationships with utilities in the West
  • Maintain the ability to negotiate specific terms within an expanding market
MWTG - Significant Work to Date

• Created initial rate design and cost shift mitigation structure

• Developed a Request for Information for RTO response
  • Sent to CAISO, MISO, SPP, and PJM

• Market Study to evaluate resource-side benefits of having a joint tariff or joining an RTO
  • Brattle Group
  • Two Phases: Adjusted Production Cost (APC) models for 2016 and 2024 (APC = Production Cost + Purchases – Sales)

• Ongoing outreach in various forums
MWTG - Progression

• Initially focused on joint transmission tariff
  • Optimize transmission system and de-pancake transmission rates
  • Flow based determination of ATC/AFC (Available Transfer Capacity/Available Flow Capacity)
  • Improved transmission planning and interconnection processes

• Focus shifted from Joint Tariff to fully integrated Day 2 Market
  • Optimize the transmission system and de-pancake transmission rates
  • Utilize network service
  • Optimize generation resources within the footprint
  • Realize benefits from one Balancing Authority
  • Reliability benefits
  • Regional transmission planning benefits
MWTG Analyses

• Transmission Cost Study/Rate Design
• Request for Information from RTOs
• Market Study
• Additional evaluations:
  • Staffing
  • IT (Meters, Settlements, EMS, etc.)
  • Ancillary Services
  • NERC Compliance
  • Pancaked Losses
  • Planning Reserve Margin
  • Marketing Plan
  • Reliability Coordinator
  • Governance
MWTG Transmission Cost Study

• 8 zones
  • Each transmission owner is a zone, except Tri-State
  • Tri-State facilities are split between Western LAP and PSCo zones

• Network customers pay the zonal rate in which their load sinks
  • Owners in zone retain revenue for zonal network load

• Single Regional Through and Out Rate (RTOR) applied to PTP
  • RTOR = Total MWTG ATRR divided by Total MWTG load
  • Revenues allocated based off of ATRR and MW-Mile split, after mitigation

• Cost shifts mitigated through 7 year agreement

• MWTG Agreement for special arrangements for WAPA
  • Federal Service Exemption (FERC approved for UGP in SPP)
Request for Information from RTOs

• Issued to SPP, CAISO, MISO and PJM in May
• Obtain information and cost estimates from qualified entities
• Requested that entities provide information on a wide range of services from joint transmission tariff administration to RTO operator
  • TSP services
  • Ancillary services, losses, and other provisions
  • Interconnection processes
  • Planning concepts
  • Market operator
• RFI is one of multiple sources of information to assist the group in consideration of path forward
MWTG Market Study

• Group is conducting a two-phase adjusted production cost study
  • Brattle Group conducting study

• Executed study agreement and completed Phase I

• Study Current Year 2016 (Phase I)
  • Status quo with nine tariffs
  • Remove pancaked transmission charges to simulate a joint tariff
  • Add Day-2 market structure

• Future Year 2024 (Phase II)
  • Multiple scenarios, evaluation underway
MWTG Analyses – CRSP Transmission Cost Study Results

• Initial study used FY13 data
  • CRSP preserved the current PTP reservations
    • 4,395 MW used as ATRR denominator
    • CRSP did not utilize network service

• Currently updating study using FY15 Data
  • Shifted from PTP to Network Service for FES deliveries
  • Reduction in denominator for ATRR from 4,395 MW to approx. 2,197 MW
  • Studying OATT Transmission Rate change
  • Studying eligibility for cost shift mitigation
MWTG Analyses – CRSP RFI Analysis

• Analyzed all RFI responses

• Considerations included:
  • FSE Implementation
  • CRSP Provisions
  • Governance/Processes and State Rights
  • Cost/Admin Fees
  • Expansion Potential
  • Market Benefits
MWTG Analyses – CRSP RFI Analysis Results

• Group has set CAISO aside from consideration

• Continue to analyze responses and discuss with the group

• Goal is to gain consensus on one RFI respondent
MWTG Market Study – CRSP Results

• Adjusted Production Cost Study
  • Only Day Ahead modeled
  • Conservative estimate of benefits

• Study Current Year 2016 (Phase I)
  • Completed in the summer
  • Showed small benefit to CRSP

• Future Year 2024 (Phase II)
  • Completion anticipated early December
  • Showed small benefit to CRSP
MWTG Analyses – CRSP Other considerations

• Continue to analyze items listed below:
  • Staffing
  • IT (Meters, Software, EMS, etc.)
  • Ancillary Services
  • NERC Compliance
  • Pancaked Losses
  • Planning Reserve Margin
  • Marketing Plan
  • Reliability Coordinator
  • Governance

• Look at impacts of not participating
Current Overview - CRSP

• Modeled adjusted production cost benefits may be small
• Actual net benefits will include other factors, such as:
  • Real Time Markets
  • BA Costs
• CRSP is unique
  • Most of load is not within the CRSP zone
• CRSP Specific Provisions needed
CRSP Specific Provisions

- Similar Federal Service Exemption (FSE) as UGP
  - Federal Generation to FES load exempt from
    - Regional Cost Allocation
    - Marginal Losses
    - Congestion Charges

- Working to determine what additional provisions may be necessary for CRSP
CRSP Specific Provisions

• Need additional provisions for CRSP:
  • FES load external to footprint
  • Grandfathered Agreements (GFA)
    • Working to determine how they will be handled
    • Minimize the impact to CRSP
  • Exchange Agreements
    • May ask for CRSP specific provisions
• Treat certain bilateral purchases as WAPA-CRSP resource
CRSP Specific Provisions—CRSP Zone for FES Load External to Footprint

• CRSP is unique: much of load is external to zone and current market footprint
  • CRSP FES load external to the footprint would be served by network service as if it were in the CRSP zone
  • Would pay CRSP zonal Rate
  • Avoid being charged RTOR rate
CRSP Specific Provisions—CRSP Purchases

• Reduction in operational flexibility due to Grand Canyon Protection Act has resulted in need to purchase to meet FES deliveries

  • Purchases made in advance of Day Ahead and Real Time Market and which only utilize CRSP transmission system treated as if Western Resource

  • FSE would apply to these bilateral purchases
Anticipated Benefits – CRSP

- Adjusted Production Cost Benefit anticipated
- Benefit from reduction in Regulation requirement
- Staffing benefits
- Likely some Real Time benefits – generation optimization
- Reduction in amount of transmission reservations needed for FES deliveries
- May receive additional Revenue from ROTR distribution
- DC-Tie Optimization Benefits
- One loss rate for MWTG footprint
Anticipated Costs - CRSP

• Market Administration Costs
• Transmission may be subject to Market Charges
  • Marginal Losses
  • Congestion Charges
  • Zonal Cost Allocation
• OATT Transmission Rate will increase
• Metering/IT
• Wheeling (non FES transmission) out of footprint
• Training Costs
Possible Costs – CRSP Not Participating

• Market expansion likely will occur
  • Loss of negotiating position if we wait
  • Loss of bilateral trading partners
• Increase in cost of firming purchases
• Change of BA
• Loss of operational flexibility
• Loss of any potential benefit from market participation
• Need to maintain point to point reservations
NEXT STEPS

• MWTG to come to a consensus as a group about which RTOs it will negotiate with further

• CRSP needs to continue to analyze the impacts of participation to CRSP (and also non-participation)

• Continue to engage Customers
FRN - Public Process

• Anticipate FRN being published sometime during beginning of year

• Anticipate it will outline the RTO we intend to begin discussing market participation with

• Will outline consideration factors

• Provide opportunity for public comment
MWTG Decision Timeline (Estimated)

December 2016: MWTG Steering Committee consensus on which option to pursue

Jan-Feb 2017: Proposal to executives/boards within each of the seven organizations

Mar-May 2017: Stakeholder and regulator meetings, comment period

Jun-Jul 2017: Each organization will make a decision on the direction their organization will pursue

Aug 2017 - Early 2018: State and federal regulatory processes

2018/2019: Implementation
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