



## **Item 7.2: Real-Time Co-Optimization Task Force Update**

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ERCOT Compliance Director

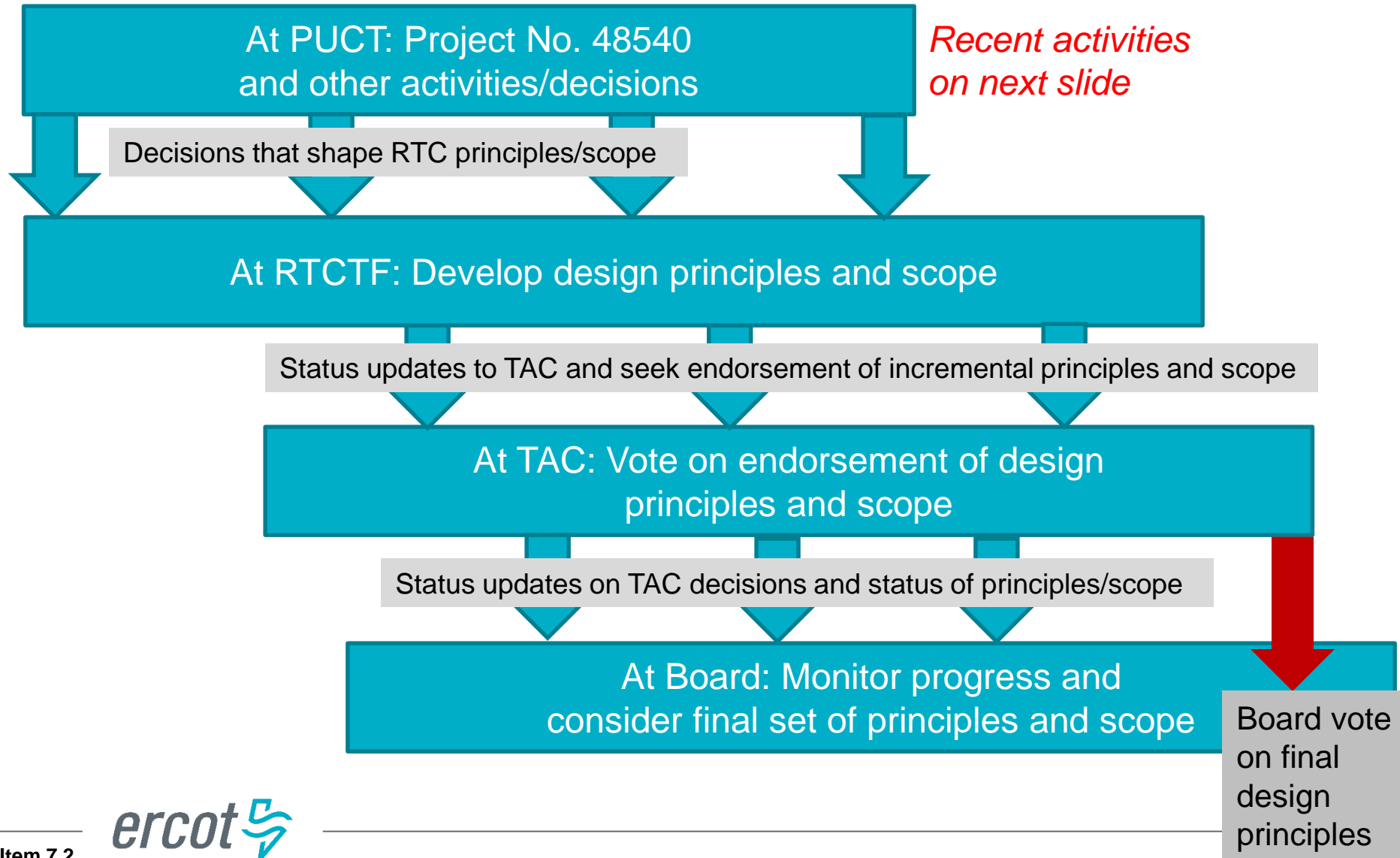
Board of Directors Meeting

ERCOT Public  
August 13, 2019

# Real-Time Co-Optimization Task Force (RTCTF) Update

- RTCTF Stakeholder Review Process
- Summary of TAC July 24 Votes
- Next Steps
- Appendix
  - RTC Key Principles

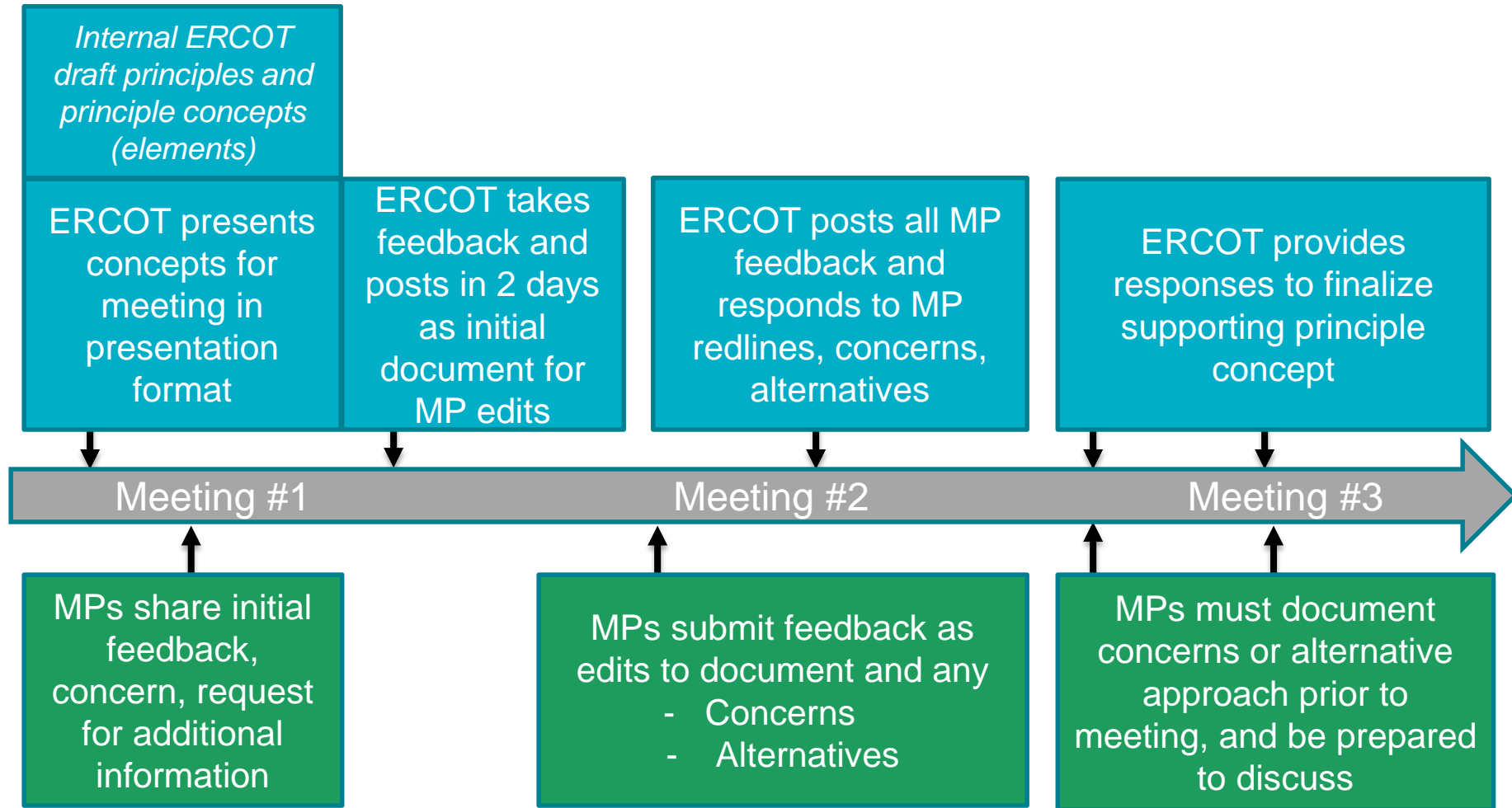
# Review Process for RTCTF, TAC, and Board



# Recent PUCT Open Meetings Impacting RTC

- Key updates since last Board meeting for PUCT Project No. 48540
  - June 26, 2019 Chair Memo: <http://interchange.puc.texas.gov/Search/Documents?controlNumber=48540&itemNumber=60>
  - June 27, 2019 PUCT Open Meeting: [http://www.adminmonitor.com/tx/puct/open\\_meeting/20190627/](http://www.adminmonitor.com/tx/puct/open_meeting/20190627/)
  - July 17, 2019 ERCOT Letter on RTC Timeline: <http://interchange.puc.texas.gov/Search/Documents?controlNumber=48540&itemNumber=62>
  - July 18, 2019 PUCT Open Meeting: [http://www.adminmonitor.com/tx/puct/open\\_meeting/20190718/](http://www.adminmonitor.com/tx/puct/open_meeting/20190718/)
  - Ancillary Services Demand Curves – Curves should follow current Operating Reserve Demand Curve (ORDC) parameters.
  - System-wide Offer Cap (SWCAP) and Power Balance Penalty Curve (PBPC) – Set SWCAP \$2,000 per MWh, Max ASDC \$9,000 per MWh, VOLL \$9,000 per MWh. Prices capped at \$9,000 per MWh exclusive of congestion costs. LCAP will apply if necessary.
  - Ancillary Service Offers – Creation of Proxy AS Offers if qualified and available but not offered.
  - Suite of Ancillary Service Products – All Ancillary Service products finalized with the approval of NPRR863.
  - Day-Ahead Market – The Commission did not want to add DAM enhancements to the RTC Project that would jeopardize the RTC delivery timeline.

# RTCTF Review Process



## TAC and Board Stakeholder Review Process

- TAC serves as the stakeholder body to vote on Design Principles from the RTCTF.
- RTC Key Principles are non-binding and will not go directly to the Board after TAC consideration.
  - Procedures set forth in Protocol Section 21 do not apply to discussions, opinions or approvals by TAC with respect to RTC Key Principles.
  - Section VIII of the ERCOT Board Policies and Procedures does not apply to discussions, opinions or unofficial approvals by TAC with respect to RTC Key Principles.
- After TAC endorsement of all RTC Key Principles, ERCOT will compile the RTC Key Principles into a single package, and submit it to TAC for a courtesy review prior to Board review. The package will contain a full record of TAC votes.
- Following TAC review of the complete RTC Key Principles package, ERCOT will submit it to the Board for discussion and consideration.
  - Any stakeholder opposed to an RTC Key Principle may, at this time, request Board consideration in accordance with Section VIII of the ERCOT Board Policies and Procedures.

# TAC Voting Results

- At the July 24, 2019 TAC meeting, TAC voted to endorse the following Key Principle subsections:
- Unanimous Endorsement:
  - Key Principle 1.4 Subsection 1: System Inputs into RTC
  - Key Principle 1.6 Subsections 1-4: AS Imbalance Settlement with RTC
  - Key Principle 3 Subsections 1-9: Reliability Unit Commitment
  - Key Principle 4 Supplemental Ancillary Service Market
- Non-unanimous Endorsement:
  - Key Principle 1.5, Subsections 1-6, Process for Deploying Ancillary Services, included two alternative designs for TAC.
  - After detailed discussion TAC endorsed Alternative 1, which was unanimous with the exception of one abstention (Independent Power Marketer segment).

## Next Steps

- Updates on TAC/RTCTF progress will be regularly provided to the ERCOT Board.
  - Phase 1 continues through 2019 to define principles and scope.
  - Phase 2 in 2020 will transition to developing revisions to protocols and other binding documents.
- Appendix includes high-level summary of RTC Key Principles
- Any final questions?



# APPENDIX

# RTC Key Principles

1. The RTM will be modified to co-optimize energy and the AS products.
  - 1.1 The implementation of RTC will require the development of a separate demand curve for each AS product in the RTM (in discussion at PUCT).
  - 1.2 The SWCAP and PBPC will be updated per discussion and direction from the PUCT.
  - 1.3 The RTM will be modified to use Resource-specific AS Offers in the optimization, and rules will be put into place regarding how the AS Offers are used and awarded.
  - 1.4 Systems and applications that provide input for the RTM optimization engine will be modified to account for RTC (e.g., the RLC).
  - 1.5 The processes for deploying AS will be modified, as needed, to accommodate the awarding of AS in Real-Time and the use of ASDCs.
  - 1.6 The current AS imbalance settlement processes for ORDC will be replaced with a new process in RTC.
2. The suite of AS products assumed for the implementation of RTC are those defined in the framework provided by NPRR 863, Creation of ERCOT Contingency Reserve Service and Revisions to Responsive Reserve (in discussion at PUCT).

## RTC Key Principles (continued)

3. To facilitate this change to the RTM, RUC will be modified to co-optimize energy and AS. RUC will look at the Resources planned to be available to determine whether additional Resource commitments are needed to meet the load forecast and minimum AS requirements, as well as resolve transmission congestion.
4. The current SASM process goes away, and the RUC process will be used to ensure sufficient capacity is projected to be available in Real-Time to meet the load forecast and minimum AS requirements, as well as resolve transmission congestion.
5. Changes to the DAM specifically associated with the implementation of RTC will be limited (in discussion at PUCT).
6. Market-facing reports will be modified to facilitate the new suite of information being provided with the implementation of RTC.
7. Metrics for monitoring Market Participant performance will be modified to account for any changes in the provision and deployment of AS created by the implementation of RTC.
8. Out of Scope Items