



Item 7.3.1: Real-Time Co-optimization (RTC) Update

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Reliability and Markets Committee Meeting

ERCOT Public

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Real-Time Co-optimization (RTC) Update

- **Key updates since last Board meeting:**
 - Internal daily activities for RTC+B
 - Received first delivery of code from key Vendor for Day-Ahead Market changes.
 - Transitioning from Business Requirements to details of integration and market interface changes.
 - External monthly RTC+B Task Force (RTCBTF) meetings:
 - Ongoing progression of 20 implementation-related issues.
 - The two market design issues approved by TAC.

• **Key Takeaways**

- RTC+B Program is maintaining momentum and developing software.
- At RTCBTF, ERCOT is partnering with Market Participants every month in 2024 to address various implementation details.

Current RTCBTF Issues List

- Link to issues on [RTCBTF home page](#)



Id	Source	Issue to resolve	Type	Protocol needed?	Approval	Timeline												
						Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25
1	RTCTF issue	Parameters for Ancillary Service proxy offers (values for the parameters)	Policy	No	TAC													
2	RTCTF issue	ASDCs for use in Reliability Unit Commitment (RUC) studies (values for parameters)	Policy	No	TAC													
3	RTCTF issue	Framework for periodic analysis comparing RTC and the current ORDC design – KP 1.1(8)	Analysis	No	No													
4	RTCTF issue	Verifiable Cost Manual (Change for on-line hydro Resources per Key Principle 1.3(3))	Other	VCMRR NPRR	TAC													
5	RTCTF issue	Additional review of transmission constraint max. shadow price values (Sec 22 protocols per NPRR1211)	Policy	Yes	Normal process													
6	RTCTF issue	Operation Procedures (e.g., removing SASM and HASL/LASL), note to include any needed discussion on triggers for initiating off-cycle SCED execution	Readiness	No	Existing processes													
7	RTCTF issue	Business Practice Manuals (e.g., changes to COP and telemetry)	Readiness	No	Existing processes													
8	RTCTF issue	Mapping of bill determinants to extracts and reporting for developing shadow settlement	Readiness	No	No													
9	RTCTF issue	Changes to ICCP handbook, and documentation for non-ICCP market submissions	Readiness	No	Existing processes													
10	RTCTF issue	Market trials/training/annual seminar engagement (release plans/dates for market trials)	Readiness	No	TAC													
11	RTCTF issue	Any details MPs need for designing their control systems	Readiness	No	No													
12	ERCOT 2023	Scaling Factor Values for RegU and RegD (ie, ramp sharing as values, dynamic or static?)	Other	No	TAC													
13	ERCOT 2023	How DRRS would work in an RTC paradigm	Other	Yes	TAC													
14	ERCOT 2023	Inclusion of firm load shed in the pricing run - (RTC changes to align with NPRR1081)	Policy	Yes	TAC													
15	ERCOT 2023	Various protocol references need to be updated	Other	Yes	TAC													
16	ERCOT 2023	RTC SOC duration parameter discussion	Policy	No	TAC													
17	ERCOT 2023	RUC Capacity Short Calculations with SOC	Policy	NPRR	TAC													
18	RTCBTF 1/12/24	Review of the AS Demand Curves in the context of current policy.	Other	No	No													
19	RTCBTF 1/12/24	Emergency Price Program alignment to RTC (imbedded within NPRR1216, monitor only for RTCBTF)	Policy	Yes	Normal process													
20	RTCBTF 4/10/24	Review of the Energy and AS Offer Caps in the context of current policy.	Other	No	No													

Blue is to reflect new or updated dates of review
 Gray is to reflect existing review schedule
 Green is to reflect completion

Status of in-flight discussions

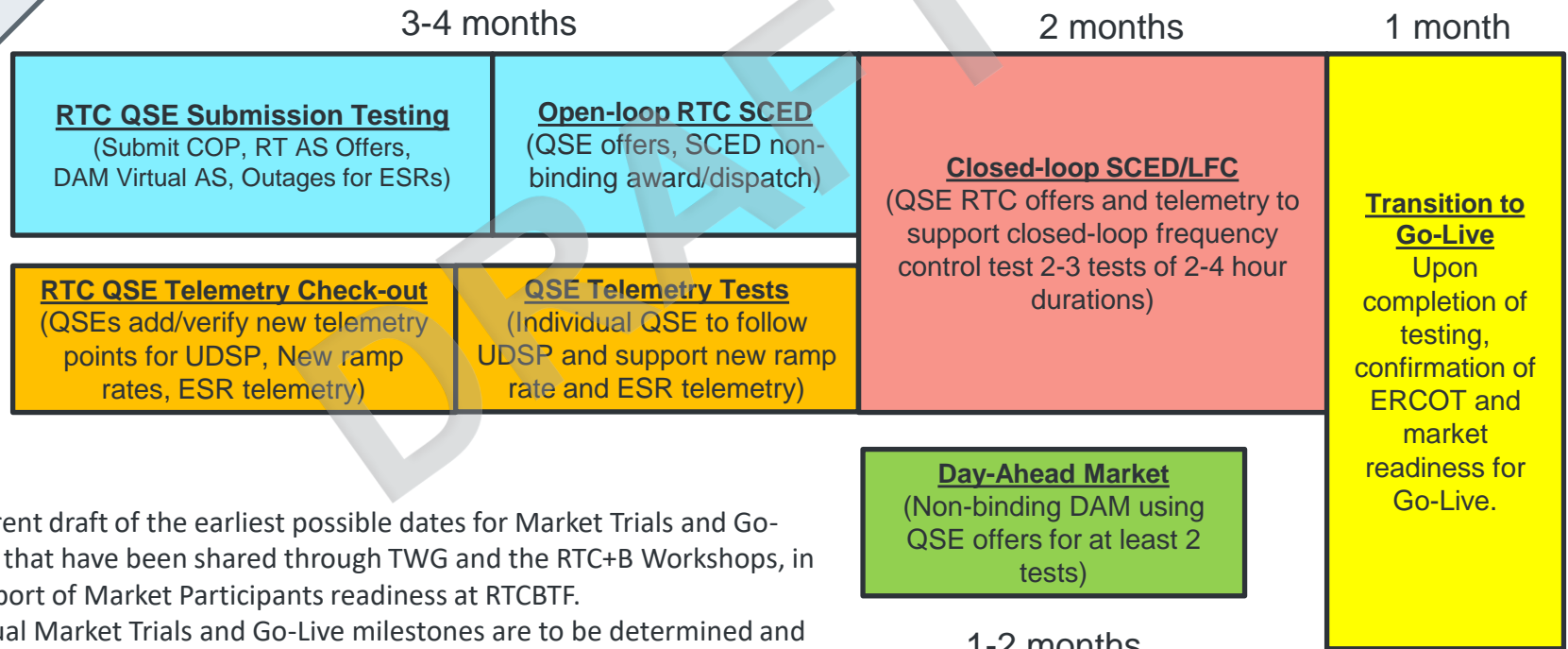
- Completed RTCBTF review and received TAC approval of two key issues related to protocol market design changes:
 - Issue 17 – Reliability Unit Commitment Capacity Short (April TAC)
 - Issue 4 - Change for on-line hydro Resources mitigation (May TAC)
- Remaining issues can be categorized into:
 - Market Trials and Readiness (eg, new telemetry points and how to test)
 - Analysis of market outcomes (eg, price formation for certain historical days)
 - Parameter values (eg, proxy offer for Ancillary Services)
 - Open discussion of other risks and concerns (eg, shape of AS Demand Curves)

Sequence and Potential Dates for Market Trials (dates subject to change while in Planning phase)

May 2025	June 2025	July 2025	Aug 2025	Sep 2025	Oct 2025	Nov 2025	Dec 2025
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QSE
Attestation
9 months
before
Trials

Each activity will have a public-facing Scorecard and exit Criteria



- Current draft of the earliest possible dates for Market Trials and Go-Live that have been shared through TWG and the RTC+B Workshops, in support of Market Participants readiness at RTCBTF.
- Actual Market Trials and Go-Live milestones are to be determined and will be communicated no later than 9/30/24.

Other Progress to date and Next Steps

- ERCOT received vendor code in May for Day-Ahead Market changes and is in process of initial testing of new functionality:
 - Virtual AS Offers, Single Model Batteries, AS Demand Curves
- ERCOT supporting deep-dive technical workshops May-June on interface changes.
 - Detailed QSE telemetry and market submission changes
 - Releasing technical specifications 10-11 months prior to initiating market trials
- As shared in Board T&S, RTC+B Program has significant upcoming milestone:
 - Publish the planned release for RTC+B Go-Live (Stretch Goal of 7/31/24 Target Goal of 9/30/24)
- RTCBTF will continue discussion and resolution of issues with near-term focus on market changes and readiness.
- Questions?