**ERCOT’S RESPONSES ARE SHOWN IN BLUE TEXT AFTER EACH QUESTION.**

Edison Mission Marketing & Trading (EMMT) appreciates the effort that ERCOT has undertaken to describe the Fast Responding Regulation Service (FRRS) through the various presentations and the draft governing document posted at: <http://www.ercot.com/mktrules/pilots/>

In response to ERCOT’s solicitation for comments on the Governing Document for Fast-Responding Regulation Service Pilot Project, EMMT provides the following:

ERCOT states that it will conduct the qualification test to “demonstrate that it [FRRS] can deploy within 60 cycles of either (1) receipt of a deployment signal from ERCOT or (2) a deviation of frequency in excess of +/-.09Hz (or other automatic deployment threshold established by ERCOT) from 60 Hz.”[[1]](#footnote-1)

* How will the time stamp the “receipt of the signal” by the QSE be obtained by ERCOT?

The FRRS Resource will provide this to ERCOT.

* Will ERCOT timestamp and keep track of its own deployment signal to understand the signal latency (looking at when the signal was sent, when it was received by the QSE, and whether the response was within 60 cycles)?

Yes. ERCOT will time-stamp the signal and the response on its side and will compare this to the FRRS Resource’s time stamp to help determine the signal latency and response time.

ERCOT states: “ERCOT will use high-resolution recorded frequency and MW output data to determine whether the Resource met its performance obligations during the test.”[[2]](#footnote-2)

* What is the source of the “high-resolution recorded frequency and MW output data” that will be used to determine performance?

The FRRS Resource will be providing the high-resolution data. The sentence in question has been revised to clarify this.

ERCOT states: “By 5 p.m. on Tuesday each week, each QSE representing an FRRS Resource must submit to frrs\_commitment@ercot.com a list of Resources the QSE wishes to make available to FRRS, along with the available quantity of qualified capacity from each Resource. QSEs may offer all or any portion of the Resource’s qualified capacity to provide FRRS. The offer must specify each Resource’s available qualified capacity for each hour in the upcoming week.”[[3]](#footnote-3) Further, ERCOT states, “QSEs representing FRRS Resources will be paid the clearing price for Regulation Service applicable to each Operating Hour for which the FRRS Resource is awarded, multiplied by the amount of the Resource’s capacity award during that Operating Hour.”[[4]](#footnote-4)

* Is compensation on the MW “cleared” for a week commensurate with the availability during the week? For instance if X MW are accepted into the pilot, but over a given week, fewer than X MW are participating as stated by the entity in the weekly process, will the full X MW be compensated?

Not all qualified MW are necessarily awarded. Compensation is only for the awarded MWs that meet the performance requirements.

If not, how are the unavailable MW compensated? If a pilot Resource does not perform as required by the performance criteria, ERCOT will claw back the capacity payment for the hour.. The draft Governing Document appears to indicate that all MW participating will be compensated regardless of availability. Thus, if not all MW that are enrolled in the pilot are participating in a given week it seems like a mechanism is needed to prorate the payments. This would not appear to fall under the “failure to comply” provision that ERCOT sets forth in Section 9—because it is not operational failure to comply. It appears that ERCOT provides an opportunity for fewer MW to be available than are enrolled in the pilot, but there is no “market down” for the enrolled pilot MW that are not participating for a given period (during the pilot).

See above answer.

ERCOT states: “By 5 p.m. on Thursday each week, ERCOT will notify each QSE via MIS of its Resources’ obligations for the coming Saturday through Sunday period. Each Resource’s Current Operating Plan (COP) should be promptly updated to reflect a status of “ONREG” for each committed hour. However, a Resource shall not telemeter a status of “ONREG” for any FRRS obligation.”[[5]](#footnote-5)

* Does this mean that deployments for the Pilot will only be conducted on weekends? No. The draft Governing Document has been updated to read “Saturday through Friday.”
* Are there any telemetry requirements for the FRRS involved in the Pilot?

Since FRRS Resources must be registered Generation Resources or Controllable Load Resources, they will have to provide telemetry to ERCOT as otherwise required by the Protocols. FRRS Resources will also be required to telemeter a special signal indicating availability for FRRS deployment.

If they are not telemetering “ONREG” what are the QSEs telemetering to indicate availability to ERCOT?

FRRS Resources will be required to telemeter a special signal indicating availability for FRRS deployment.

* How will ERCOT know whether the MW are charging or discharging at a given moment?

ERCOT is not interested in whether a Resource is charging or discharging.

ERCOT has discussed posting the procurement amount of FRRS for the upcoming weekly period on the ERCOT Website.

We support this proposal. Such posting is consistent with the daily Ancillary Service Plan that ERCOT provides to the market for other Ancillary Services. The procurement amount for future weeks will be posted to the pilot page.

ERCOT states: “If a Resource fails its Generation Resource Energy Deployment Performance (GREDP) metrics due to its participation in FRRS, ERCOT will review the calculation of the Resource’s GREDP score to determine the degree to which FRRS contributed to that failure. ERCOT will communicate any such conclusions to the Texas Reliability Entity or Public Utility Commission, as appropriate.”[[6]](#footnote-6)

* Will ERCOT report GREDP for FRRS resources on the monthly report to the QSE Managers about Resource GREDP?

No.

* Does ERCOT anticipate any impacts to GREDP for Resources that are not in the FRRS pilot?

No.

ERCOT states: “Participation in FRRS does not preclude a Resource from consuming or injecting energy, as applicable, outside of an FRRS deployment. Such consumption or injection will be settled in accordance with the Protocols as for any other Resource.”[[7]](#footnote-7)

* How is availability calculated while consuming energy?

It isn’t.

* Or is a specific MW availability always required when not deployed?

No.

ERCOT states: “Within 24 hours following the end of each seven-day obligation period, each QSE must submit all frequency deployment data for each FRRS Resource in the QSE’s portfolio for the preceding obligation period. ERCOT will review performance data to ensure compliance with the applicable performance criteria for deployments due to frequency deviations in excess of +/- .09 Hz (or other Trigger Frequency) and will conduct reviews of data to ensure compliance with the applicable performance criteria for deployments due to frequency deviations in excess of +/- .03 Hz (or other frequency requiring a Dispatch Instruction).“[[8]](#footnote-8)

* What data that ERCOT independently collects measures or calculates will be used for compliance evaluation for the pilot?

ERCOT will have a record of the time stamps for any Dispatch Instructions and will also have a record of the system frequency. However, most of the data used to evaluate compliance will come from Resource.

ERCOT states: “ERCOT anticipates an impact on the ERCOT Operations Analysis group equivalent to 1 Full-Time Employee for the duration of the pilot project.”[[9]](#footnote-9)

* Is the expected cost of the pilot inclusive of the labor cost?

The $3.4 million figure does not include the FTE impact.

ERCOT states: “If ERCOT determines that FRRS provides substantial operational benefits, ERCOT may recommend that the Board of Directors request revisions to the Protocols to allow formal integration of FRRS as an Ancillary Service. ERCOT may also request that the Board extend the duration of the pilot to allow for additional analysis or may request that the Board terminate the pilot.”[[10]](#footnote-10)

* How will ERCOT quantify and calculate “substantial operational benefits?” How will ERCOT estimate a market based cost for FRRS which during the pilot is paid at historical costs for a different product?

Benefits and costs will most likely be analyzed in a manner similar to the KEMA PJM study, with careful attention to ERCOT’s unique characteristics. ERCOT will not estimate the clearing price for FRRS based off of any observations during the pilot.

* Does ERCOT intend to as the Board to Direct an NPRR or would ERCOT ask the Market Participants engaged in the pilot to submit their own NPRR?

ERCOT would likely file the NPRR, but any Market Participant is welcome to do so and/or comment on the ERCOT NPRR (if any).

* If ERCOT submits an NPRR for an Ancillary Service based on FRRS, would ERCOT also update the Ancillary Service Procurement document?

Yes, this would probably be necessary.

* If ERCOT submits an NPRR for an Ancillary Service based on FRRS, would ERCOT also anticipate a market procurement mechanism similar to other Ancillary Services? Or does ERCOT envision procurement based on an RFP?

It is difficult to predict the procurement mechanism that might ultimately be proposed or approved, but it is unlikely that ERCOT would use an RFP.

ERCOT states: “If the Board chooses to extend the duration of the pilot project for any reason, the program will terminate at the end of the Operating Day prior to the implementation of the NPRR, except as otherwise directed by the Board.”[[11]](#footnote-11)

* This statement appears to presuppose that the pilot will result in an NPRR creating a new Ancillary Service.

ERCOT proposes a change to this sentence to avoid any confusion.

As part of the potential creation of a new Ancillary Service, would ERCOT also be developing market mechanisms to ensure that the service providers are bidding into provide the service on a daily basis? Since ERCOT has stated that multiple providers of the service are looking to participate in the pilot, we would encourage ERCOT to develop market mechanisms for clearing the service.

The current vision is that qualified Resources would provide FRRS offers just like Resources provide offers for other AS today.

Are Pilot participants expected to complete the Resource Asset Registration Form?

Yes. Generation Resources and Controllable Load Resources are required to submit RARFs.

Are the Pilot Participant MWs modeled in the ERCOT network model?

If they are associated with a modeled Resource, then yes.

Are Pilot Participants required to file the ERCOT New Generator Commissioning Checklist, the application for Resource Entity Registration, posted in the Other Binding Documents section on the ERCOT Website?

All FRRS Generation Resources will have to comply with all applicable interconnection standards.

Are the Pilot Participants expected to provide Reactive Support to the system?

FRRS Generation Resources would be obligated to meet the reactive requirements.

1. Governing Document for Fast-Responding Regulation Service Pilot Project, p. 3, emphasis added. [↑](#footnote-ref-1)
2. Governing Document for Fast-Responding Regulation Service Pilot Project, p. 3. [↑](#footnote-ref-2)
3. Governing Document for Fast-Responding Regulation Service Pilot Project, p. 3. [↑](#footnote-ref-3)
4. Governing Document for Fast-Responding Regulation Service Pilot Project, p. 6. [↑](#footnote-ref-4)
5. Governing Document for Fast-Responding Regulation Service Pilot Project, p. 4. [↑](#footnote-ref-5)
6. Governing Document for Fast-Responding Regulation Service Pilot Project, p. 4. [↑](#footnote-ref-6)
7. Governing Document for Fast-Responding Regulation Service Pilot Project, p. 5. [↑](#footnote-ref-7)
8. Governing Document for Fast-Responding Regulation Service Pilot Project, p. 5. [↑](#footnote-ref-8)
9. Governing Document for Fast-Responding Regulation Service Pilot Project, p. 7. [↑](#footnote-ref-9)
10. Governing Document for Fast-Responding Regulation Service Pilot Project, p. 7. [↑](#footnote-ref-10)
11. Governing Document for Fast-Responding Regulation Service Pilot Project, p. 7. [↑](#footnote-ref-11)