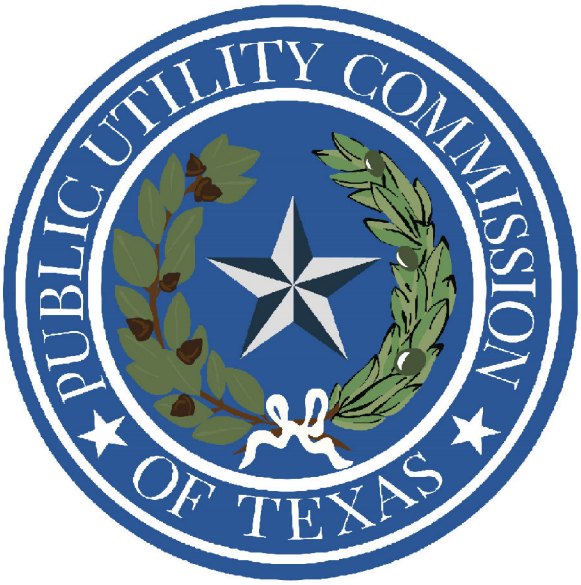

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COMPLAINT OF ENGIE ENERGY MARKETING NA, INC. AND VIRIDITY ENERGY SOLUTIONS, INC. AGAINST THE ELECTRIC RELIABILITY COUNCIL OF TEXAS	**§ § § § §**	**BEFORE THE PUBLIC UTILITY COMMISSION OF TEXAS**

COMPLAINT AND APPEAL OF ENGIE ENERGY MARKETING NA, INC. AND VIRIDITY ENERGY SOLUTIONS, INC. AGAINST THE ELECTRIC RELIABILITY COUNCIL OF TEXAS

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I. EXECUTIVE SUMMARY

ENGIE Energy Marketing NA, Inc. ("ENGIE") and Viridity Energy Solutions, Inc. ("Viridity") (collectively, "Complainants"), pursuant to 16 TEX. ADMIN. CODE ("TAC") § 22.251, bring this complaint and appeal against the Electric Reliability Council of Texas, Inc. ("ERCOT") (herein after, the "Complaint") for failing to compensate or credit ancillary services provided during the Energy Emergency Alert Level 3 ("EEA3") event caused by Winter Storm Uri.

During Winter Storm Uri, ERCOT called on Responsive Reserve Service ("RRS")[1] to maintain the frequency of the electric grid and to help prevent a complete blackout for the entire state of Texas. Viridity is a Qualified Scheduling Entity ("QSE") that represents Load Resources that ERCOT called upon to provide 78 MW of RRS from February 15-19, 2022, including 27 MW of RRS subject to a trade with ENGIE. Viridity schedules the RRS obligations on behalf of its Load Resources. The 27 MW of RRS at issue was self-arranged by ENGIE through Viridity as the QSE and BASA Resources, Inc. ("BASA") as the owner of the designated Load Resources providing the RRS. The Load Resources were deployed, as instructed by ERCOT, for the entirety of the five-day EEA3 event.

[1] Capitalized terms and acronyms, to the extent not defined herein, have the meaning assigned under ERCOT Protocol 2 (Definitions and Acronyms).

ERCOT failed to credit or compensate for RRS that was provided on February 16 to 19 in violation of PURA[2] and the Public Utility Commission of Texas ("PUCT" or "Commission") Rules requiring that ancillary services such as RRS be reasonably priced and properly accounted for.[3] ERCOT has calculated ENGIE's portion of the replacement value of the RRS as at least $47.7 million,[4] yet ERCOT has neither compensated nor credited anything. Viridity estimates the market value of the 78 MW of RRS provided during the affected dates ranges from $67.4 million to $140.55 million based on the verifiable Day-Ahead Market clearing prices for RRS.

Proper pricing and compensation are further required by PURA to provide adequate incentives for meeting reliability needs.[5] The RRS program relies on voluntary customer participation to help maintain the required safety margin of reserve capacity that is necessary to reliably operate the grid. Customers would be unwilling to voluntarily remain offline for five days without credit or compensation for providing the service. There is absolutely no justification for ERCOT to have Load Resources deploy without compensation for the services provided. Such action on the part of ERCOT would cause Load Resources to cease participation in the market.

ERCOT does not dispute that Viridity's and BASA's Load Resources were properly scheduled to provide 78 MW of RRS (including the 27 MW trade of RRS from Viridity to ENGIE on February 14, 2021, for the next operating day. ERCOT also does not dispute that ERCOT

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[2] Public Utility Regulatory Act, Tex. Util. Code §§ 11.001–66.016 ("PURA").

[3] PURA § 35.004(e) (now found at PURA § 35.004(f)) ("The commission shall ensure that ancillary services necessary to facilitate the transmission of electric energy are available at reasonable prices."); 35.004(h) ("The commission shall require [ERCOT] to modify the design, procurement, and cost allocation of ancillary services for the region in a manner consistent with cost-causation principles and on a nondiscriminatory basis "); 39.151(4); & 16 TAC § 25.503(a)(2).

[4] Attachment A, ERCOT Market Notice (ENGIE) at 3 n.2 ("ERCOT's initial review of the alleged costs for February 16-19 reflects a total amount of approximately $47.7 million.").

[5] PURA § 35.004(g)(2) (requiring the commission to evaluate the adequacy of incentives provided in ERCOT for dispatchable generation, which RRS effectively provides).

issued Dispatch Instructions on February 15, 2021, for the Load Resources to deploy and remain deployed (i.e. to remain offline) until recalled—which ended up being four days later. ERCOT only provides unsupportable justifications for not crediting or compensating for the RRS it received and for charging ENGIE for the RRS ERCOT never acquired. Specifically, ERCOT alleges that the RRS was not properly scheduled, and that as a result ERCOT purchased additional replacement RRS. ERCOT's first allegation is contrary to PURA and the Protocols. ERCOT's second allegation is factually false.

With respect to scheduling, ERCOT takes the position that after it instructed the Load Resources to deploy and remain offline, (1) the 27 MW of RRS-NC trade was no longer scheduled to ENGIE; (2) the 78 MW of Load Resources that remained deployed per ERCOT's instruction were not offered in subsequent Day Ahead Markets as available for dispatch; and (3) the Current Operating Plans reflected a resource status of "unavailable" (OUTL), instead of available for dispatch (i.e. ONRL). In other words, ERCOT's reading of its Protocols necessarily assumes the inclusion of language, which is absent from the Protocols, requiring RRS from Load Resources to be offered or scheduled in each subsequent Day Ahead Market, even if it is unavailable due to a previous and ongoing deployment instruction to remain offline. ERCOT also would require the Current Operating Plan to falsely represent that the unit is "available for dispatch" when it has already been dispatched and is thus not available for further dispatch.

ERCOT's reading of its Protocols conflicts with Commission Rules that "[a] market participant must not offer reliability products to the market that cannot or will not be provided if selected."[6] In order to be available for dispatch under the Protocols, a "Load Resource must be

[6] 16 TAC § 25.503(g)(3) ("**Prohibited Activities**. . . . . A market participant must not offer reliability products to the market that cannot or will not be provided if selected.").

loaded and capable of unloading the scheduled amount of RRS within ten minutes of instruction by ERCOT."[7] Thus, ERCOT's interpretation of its Protocols regarding offering and scheduling the RRS would require market participants to engage in activities prohibited by Commission Rules and contrary to ERCOT's Protocols for reliability. The actions ERCOT claims should have been taken would have been unlawful.

With respect to ERCOT's alleged purchase of replacement RRS on ENGIE's behalf, ERCOT's own records show that no replacement RRS was available for purchase during the EEA3 event. Specifically, Attachment D shows a substantial RRS insufficiency during each and every settlement interval at issue. Due to this insufficiency, it was impossible for ERCOT to procure replacement RRS. ERCOT's position is discriminatory as it requires ENGIE to pay for replacement RRS even though none was procured. In reality, ERCOT simply charged ENGIE for a portion of the RRS that ERCOT had previously acquired to meet the RRS obligations of other QSEs. This subsidization is improper.

ENGIE and Viridity request that the Commission direct ERCOT to credit the RRS services ERCOT requested and utilized, that were deployed during Winter Storm Uri and the EEA3 event that followed, and reverse any charges assessed against ENGIE for phantom RRS that ERCOT did not acquire.

[7] ERCOT Protocol 8.1.1.2.1.2(3) ("**Responsive Reserve Service Qualification** . . . A QSE's Load Resource must be loaded and capable of unloading the scheduled amount of RRS within ten minutes of instruction by ERCOT.").

II. PARTIES

The name and address of ENGIE and its authorized representatives are as follows:

Ray Cunningham
Vice President, General Counsel
Engie Resources, LLC
1360 Post Oak Blvd., Suite 400
Houston, Texas 77056
Direct: (713) 636-1980
Email: ray.cunningham@engie.com

Dennis W. Donley, Jr.
Stephanie S. Potter
Stephen Mack
Naman, Howell, Smith & Lee, PLLC
8310 N. Capital of Texas Highway, Suite 490
Austin, TX 78731
(512) 479-0300
(512) 474-1901 (facsimile)
donley@namanhowell.com

ENGIE agrees to accept electronic service. ENGIE requests that service of all pleadings be made on Dennis W. Donley, Jr.

The name and address of Viridity's authorized representatives are as follows:

Diana M. Liebmann
Texas State Bar No. 00797058
Haynes and Boone, LLP
112 East Pecan Street, Suite 1200
San Antonio, Texas 78205-1540
(210) 978-7418 (phone)
(210) 554-0418 (fax)
Diana.Liebmann@haynesboone.com

Jennifer Littlefield
Texas State Bar No. 24074604
Haynes and Boone, LLP
600 Congress Avenue, Suite 1300
Austin, Texas 78701
(512) 867-8413 (phone)
(512) 867-8638 (fax)
Jennifer.Littlefield@haynesboone.com

Viridity agrees to accept electronic service. Viridity requests that service of all pleadings be made on Diana Liebmann and Jennifer Littlefield.

ENGIE and Viridity seek relief against ERCOT. ERCOT's authorized representatives are:

Chad V. Seely
Vice President & General Counsel
Douglas Fohn
Sr. Corporate Counsel
ERCOT
7620 Metro Center Drive
Austin, Texas 78744
(512) 225-7000 (phone)
(512) 225-7020 (fax)
chad.seely@ercot.com
douglas.fohn@ercot.com

III. STATEMENTS REQUIRED BY 16 TAC § 22.251(d)(1)(B)

Underlying proceedings - ENGIE and Viridity each filed settlement and billing disputes with ERCOT, which ERCOT denied. ENGIE and Viridity each also completed the Alternative Dispute Resolution ("ADR") process with ERCOT under ERCOT Protocol 20 and 16 TAC § 22.251, which ERCOT also denied.[8] This Complaint is filed within 35 days of the completion of the ERCOT ADR process and is therefore timely.[9]

Affected Entities – Affected entities include ENGIE, ERCOT, Viridity, and BASA. BASA is a retail customer and the owner of the 27 MW of Load Resources dispatched by ERCOT. ENGIE has a bilateral contract with BASA for BASA to provide and ENGIE to acquire 27 MW of self-arranged RRS from BASA's Load Resources. Viridity is the QSE for several Load Resources, including BASA's Load Resources, that provide RRS, totaling 78 MW. Viridity has executed a Standard Market Participant Agreement with ERCOT that binds both Viridity and

[8] See attached hereto, Attachment A, ERCOT Market Notice (ENGIE) and Attachment B, ERCOT Market Notice (Viridity).

[9] 16 TAC § 22.251(d).

ERCOT to compliance with PURA, the Commission's Rules and the ERCOT Protocols. Similarly, ENGIE has executed a Standard Market Participant Agreement with ERCOT that binds both ENGIE and ERCOT to compliance with PURA, the Commission's Rules and the ERCOT Protocols. Viridity has a QSE Services Agreement to schedule the self-arranged RRS trade of 27 MW of RRS from BASA's Load Resources to ENGIE. Viridity is also the QSE for other Load Resources that provide RRS, amounting to a total of 78 MW.

Conduct From Which Relief is Sought - ENGIE and Viridity complain of ERCOT's refusal to credit the RRS service it directed Viridity and BASA to deploy, and which was deployed as instructed, for the entirety of the Winter Storm Uri's five-day, EEA3 event. ENGIE also complains of ERCOT's assessment of charges against ENGIE for replacement RRS that was never acquired by ERCOT.

Applicable Statutes, Rules and Protocols – Below are the specific provisions of PURA, Commission Rules, and ERCOT Protocols relied on by Complainants.

- PURA § 35.004(e) (now found in 35.004(f)) – The commission shall ensure that ancillary services necessary to facilitate the transmission of electric energy are available at reasonable prices with terms and conditions that are not unreasonably preferential, prejudicial, discriminatory, predatory, or anticompetitive.

- PURA § 39.151(d) – the commission shall adopt and enforce rules relating to the reliability of the regional electrical network and accounting for the production and delivery of electricity among generators and all other market participants . . . .

- PURA § 39.151(a)(4) – ERCOT must ensure the reliability and adequacy of the regional electric network and ensure that electricity production and delivery are accurately accounted for among generators and wholesale buyers and sellers in the region.

- 16 TAC § 25.501(k) – For ancillary capacity services that it competitively procures in the day-ahead or operating day, ERCOT shall use simultaneous optimization and shall set prices for each service to the corresponding shadow price.

- 16 TAC § 25.503(f)(6) – A market participant's bids of energy and ancillary services must be from resources that are available and capable of performing, and must be feasible within

the limits of the operating characteristics indicated in the resource plan, as defined in the Protocols, and consistent with the applicable ramp rate, as specified in the Protocols.

- 16 TAC § 25.503(g)(3) – Any act or practice of a market participant that materially and adversely affects the reliability of the regional electric network or the proper accounting for the production and delivery of electricity among market participants is considered a "prohibited activity." . . . the term "prohibited activity" includes, but is not limited to, . . .:
  (3) A market participant must not offer reliability products to the market that cannot or will not be provided if selected.

- ERCOT Protocol Section 8.1.1.2.1.2(3) – A QSE's Load Resource must be loaded and capable of unloading the scheduled amount of RRS within ten minutes of instruction by ERCOT . . . .

- ERCOT Protocol Section 6.5.7.6.2.2(8) – Once RRS is deployed, the QSE's obligation to deliver RRS remains in effect until specifically instructed by ERCOT to stop providing RRS.

- ERCOT Protocol Section 6.5.7.9(4) – ERCOT's final Dispatch Instruction to a QSE in effect applies for all Protocol-related processes. If the QSE does not comply after receiving the final Dispatch Instruction, the QSE remains liable for failure to meet its obligations under the Protocols and remains liable for any charges resulting from such failure.

Requested Relief – Complainants hereby request the following relief:

ENGIE is requesting to be left unharmed for: (1) self-arranging its RRS obligation, (2) the deployment of RRS as instructed by ERCOT, and (3) compliance with Commission Rules and PURA. ENGIE asks the Commission to direct ERCOT to credit the RRS provided by BASA through Viridity, which could be applied to offset the charges made by ERCOT against ENGIE. In the alternative, ENGIE asks the Commission to reverse ERCOT's charges to ENGIE for replacement RRS service that ERCOT never acquired.

Viridity is requesting to be left unharmed for: (1) the deployment of RRS as instructed by ERCOT, and (2) compliance with Commission Rules and PURA. Viridity asks the Commission to direct ERCOT to credit the RRS provided by Viridity.

Jurisdiction – This complaint regarding ERCOT's conduct is filed under 16 TAC § 22.251, which authorizes any entity affected by an ERCOT decision to appeal to this Commission to address and resolve any conduct by ERCOT that violates PURA, Commission Orders and Rules, or the ERCOT Protocols. PURA § 39.151 provides the Commission complete oversight authority over ERCOT and ERCOT's administration of the Protocols adopted in furtherance of PURA and Commission Rules

The Commission has jurisdiction to oversee the pricing, performance, and operation of ancillary services such as RRS to ensure reliability under PURA § 35.004 and 16 TAC § 25.503. Accordingly, the Commission has jurisdiction over this complaint, which pertains to the enforcement of PURA, Commission Rules, and ERCOT's implementation of its own Protocols in furtherance of PURA and Commission Rules.

A. Notice.

ENGIE will provide notice of this complaint to ERCOT's General Counsel and the Office of Public Utility Counsel pursuant to 16 TAC § 22.251(d)(4).

Complainants request that the Commission direct ERCOT to provide notice of this complaint by email to all QSEs and any relevant ERCOT committees and subcommittees pursuant to 16 TAC § 22.251(e).

B. Proposed Procedural Schedule.

Complainants respectfully request the following proposed procedural schedule be adopted.

Event	Deadline
Complaint filed	March 18, 2022 (within 35 days after market notice received).
Deadline for ERCOT to provide notice per 16 TAC § 22.251(e)	April 1, 2022 (14 days after ERCOT receives complaint)
Deadline for responses to Complaint by ERCOT, 16 TAC § 22.251(f)	April 15, 2022 (28 days after receipt of complaint)

Deadline for Commission Staff's comments, 16 TAC § 22.251(g)	May 2, 2022 (45 days after the filing of the Complaint)
Deadline to intervene and for Intervenor comments 16 TAC § 22.104(b)	May 2, 2022 (45 days after filing the complaint)
Deadline for reply by Complainants to a party's response or Commission Staff's comments 16 TAC § 22.251(h)	May 12, 2022 (55 days after complaint is filed)
Deadline for parties to request a hearing	June 12, 2022 (30 days after reply)

IV. STATEMENT OF ISSUES

ISSUE NO. 1: Is ERCOT permitted to deny issuing compensation or credit for RRS when the RRS was provided as required by ERCOT's Dispatch Instructions, ERCOT Protocols, Commission Rules, and PURA?

ISSUE NO. 2: Should ENGIE be charged for replacement RRS when the RRS was provided through ENGIE's self-arranged Load Resources as required by PURA, Commission Rules, ERCOT Protocols, and ERCOT's Dispatch Instructions?

ISSUE NO. 3: Should ENGIE be charged for replacement RRS that was never procured?

V. STATEMENT OF THE FACTS

RRS provided by Load Resources is a dispatchable ancillary service that is intended to resolve frequency decay or deviation and to provide continued load interruption during an EEA event. RRS is crucial as a dispatchable ancillary service and has been more heavily relied upon by ERCOT and the Commission as an effective means of maintaining reliability of the Texas electricity grid. RRS provided by Load Resources relies on retail customers agreeing to curtail their load when requested by ERCOT in return for compensation for the capacity provided. The program only works if customers and the Market Participants arranging for the RRS are compensated or credited for providing this Ancillary Service. If customers and Market Participants are not compensated or credited for providing the service, the RRS Load Resource program will not be viable.

On February 15, 2021 at 00:15, ERCOT declared an EEA1. Soon after, at 01:07 ERCOT declared an EEA2. At 01:20 ERCOT declared an EEA3 with firm load shed. At 01:23 ERCOT issued a Dispatch Instruction to Viridity and BASA to deploy Load Resources and to remain deployed until recalled. Viridity and BASA complied with the dispatch Instructions and their Load Resources remained continuously deployed until the deployment was recalled by ERCOT on February 19 after the end of the EEA3. On the first day of the EEA3, Viridity had 78 MW online when the event occurred of which 27 MW were attributable to BASA. At the 10:00. a.m. Day Ahead Market deadline on February 15, Viridity did not schedule any RRS due to the ERCOT-instructed deployment.

During the period relevant to this dispute, ENGIE had contracted with BASA to purchase a 27 MW block of RRS supply from Load Resources represented by Viridity and owned by BASA. The Load Resources were approved by ERCOT to provide RRS service and had scheduled its RRS in the Day Ahead Market on February 14, 2021, for the February 15, 2021, Operating Day. ERCOT accepted the RRS service on February 14, 2021. On February 15, 2021, at 1:23 a.m., in response to the decaying frequency on the electric grid resulting from Winter Storm Uri, ERCOT issued a Dispatch Instruction to Viridity to deploy its Load Resources and remain deployed until further instructed. ERCOT was 4 minutes and 37 seconds away from a statewide blackout that would have lasted for an indeterminate amount of time and would have had a devasting impact on the health and safety of Texans and on the Texas economy. The extended deployment of the Load Resources helped ERCOT avoid a statewide blackout.

Load Resource deployment requires the Load Resource to reduce or eliminate its load in order to increase the safety margin of available capacity on the system. Viridity and BASA complied with ERCOT's Deployment Instruction and eliminated the Load Resources' loads,

taking them offline. The Load Resources remained deployed and offline for the remainder of the EEA3 event as required by ERCOT's repeated Dispatch Instruction and ERCOT Protocols. However, ERCOT did not credit ENGIE, Viridity or BASA for the RRS service provided pursuant to ERCOT's Dispatch Instruction for the February 16 to 19 Operating Days. Viridity arranged a conference call with ERCOT on February 18 at 11:00 a.m. to discuss whether its Load Resources could restore Load. ERCOT's initial direction to Viridity was to restore load; ERCOT explained initially that the obligations expired on February 15 at midnight, and Viridity could restore load and then redeploy. Viridity made preparations to do this and provided instructions to customers to restore. Soon after, ERCOT called Viridity and reversed its return-to-service Dispatch Instruction. ERCOT informed Viridity that Viridity had to remain offline (deployed) and that there could be no load restoration under the EEA3. This meant that no obligations, including bilateral, could be made. During these conversations, ERCOT did not advise that Viridity could or should submit offers in the Day Ahead Market to provide RRS by the Load Resources that were already deployed. ERCOT did not change its original Dispatch Instructions that the units remain off-line as originally ordered.

Because the BASA Load Resources were offline as instructed by ERCOT and not available for curtailment pursuant to a subsequent Dispatch Instruction between February 15 and February 19, Viridity did not schedule the Load Resource as available for dispatch. An off-line unit that has already been dispatched cannot be "available for dispatch" because it is off-line. Viridity accordingly set the Load Resource status as unavailable, consistent with ERCOT's Dispatch Instruction that required the Load Resource to remain offline until instructed otherwise by ERCOT.

Also because the Load Resources were offline and not available for dispatch, ENGIE and Viridity could not complete their RRS trade related to BASA. ENGIE's scheduled trade for February 16 resulted in a trade mismatch. ENGIE had scheduled its trade with Viridity by 10:00 a.m. in the February 15 Day Ahead Market for the February 16 operating day but Viridity had not submitted a matching trade. ENGIE also called the ERCOT control room and asked for guidance. ERCOT operators indicated, "At this point, just notifying me is about all you can do. If you can't put it anywhere, then you're just informing me." ENGIE then asked if they needed to change their schedule, and the operator responded, "No, you should leave it because you are going to be short, that's it . . . I mean, if we need to acquire through a [supplemental ancillary service market], I don't think there is anything out there right now that we can acquire." This ultimately resulted in a "failure to provide" charge to Engie of $11.6 million for February 16.

For subsequent Operating Days (February 17 through February 20), because Viridity had informed ENGIE that it could not schedule the RRS-NC, ENGIE discontinued submitting its 27 MW self-arranged trade to ERCOT. This resulted in additional charges to ENGIE of approximately $36 million for replacement RRS. Thus, whether or not ENGIE submitted its trade as ERCOT now claims it should have, the circumstances preventing Viridity from scheduling into the system also prevented ENGIE from receiving credit from ERCOT for the RRS that was being provided in accordance with ERCOT's Dispatch Instruction.

Because ENGIE could not complete its trade with Viridity for the RRS provided by BASA, ERCOT charged ENGIE for the cost of replacing RRS, although there is no dispute that the BASA Load Resources were providing the RRS service as instructed. ERCOT claims that it "was required to procure RRS to cover ENGIE's obligation if ENGIE did not properly report that its

obligation was self-arranged,"[10] and that "ERCOT procured RRS on ENGIE's behalf in the [Day Ahead Market] for the February 17-19 time period."[11] However, ERCOT's claims are false in two respects. First, ERCOT is not required to procure RRS on ENGIE's behalf unless it determines that the RRS is not provided, and there is no dispute that the RRS was provided. Viridity had called ERCOT regarding returning the Load Resources to service and BASA's obligation to remain deployed. ERCOT confirmed the deployment of ENGIE's and Viridity's designated Load Resources and instructed the Load Resources to remain deployed. Second, in any event, ERCOT did not purchase additional RRS to cover an alleged shortfall in ENGIE meeting its obligation. ERCOT's own records show that ERCOT was short hundreds of MW from meeting the system's RRS obligations.[12]

Complainants submit this complaint and appeal of ERCOT's actions so that the RRS that was actually provided to ERCOT may be properly accounted for as required by PURA.[13] Specifically, the parties request that (1) Viridity be paid for the 78 MW of RRS services provided to ERCOT throughout the extended deployment; and (2) ERCOT recognize 27 MW of ENGIE's self-arranged RRS service that Viridity and BASA provided to ENGIE and ERCOT. ENGIE also requests that the Commission reverse both ERCOT's failure to pay and the additional charges to ENGIE for replacement RRS that was never acquired. The end result of any requested action is that ENGIE, BASA, and Viridity are left unharmed for the RRS provided, including the RRS that was self-scheduled and provided for the reliability of the ERCOT market.

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[10] Attachment A, ERCOT Market Notice (ENGIE) at 4.

[11] *Id.*

[12] *See* Attachment D (providing the shortage of RRS MW during the settlement intervals at issue).

[13] PURA § 39.151(a)(4).

VI. ARGUMENT

Failure to credit the RRS deployed by Load Resources violates PURA, Commission Rules, ERCOT Protocols, and ERCOT's own Dispatch Instructions, and undermines the financial viability of the ancillary services program, which relies on voluntary participation by customers. Undermining the financial viability of the RRS program ultimately undermines reliability of the ERCOT market, as dispatching RRS has come to be one of the primary tools for ERCOT's implementation of the Commission's policy of ensuring safe reliable operation of the grid.

A. ERCOT's Refusal to Compensate for the RRS Service Deployed Violates PURA and Commission Rules.

Failure to compensate for RRS service dispatched from Load Resources violates the general directives of PURA and Commission Rules for ERCOT to maintain reliability and financially settle the wholesale market.[14] The failure to accurately account for the dispatch of RRS from Load Resources also directly violates PURA § 39.151(a)(4) that requires ERCOT "ensure that electricity production and delivery are accurately accounted for among generators and wholesale buyers and sellers in the region." Failure to pay for RRS service dispatched specifically violates PURA § 35.004 requiring ancillary services to be:

- Reasonably priced, and not unreasonably preferential, prejudicial, discriminatory, predatory, or anticompetitive.
- Available to meet the needs of the electricity market in the ERCOT region.
- Available for reliability while providing adequate incentives.[15]

ERCOT's actions violate each precept mandated by PURA. Paying nothing for the RRS service provided and used to avoid a statewide blackout is not a "reasonable price" as required by PURA and Commission Rules.[16] Commission Rules require ancillary services to be set to the

[14] PURA § 39.151(a), (d); 16 TAC § 25.361(b).

[15] PURA § 35.004(e) (now found at PURA § 35.004(f)&(g)).

[16] PURA § 35.004(e) (now found at PURA § 35.004(f)) & 16 TAC § 25.503(a)(2).

corresponding shadow price.[17] ERCOT's own calculations of the value of just the 27 MW of RRS provided is approximately $47.7 million,[18] not zero. Viridity estimates the total market value of the 78 MW of RRS provided was between $67.4 million and $140.55 million.

ERCOT claims that the only market process through which Viridity or ENGIE could have sought compensation from ERCOT was through offering or scheduling trades in each subsequent Day Ahead Market while the RRS was deployed.[19] In other words, ERCOT claims that subsequent to the deployment of the Load Resources on February 15, Viridity was required to schedule the Load Resources in each subsequent Day Ahead Market as "available for dispatch" despite the undisputed fact that the Load Resources were deployed under ERCOT's prior Dispatch Instruction and incapable of providing additional capacity in the form of further reductions to load. ERCOT's position that market entities should schedule ancillary services while dispatched and unavailable violates the Oversight of Wholesale Market Participants Rule, 16 TAC § 25.503 (the "Market Oversight Rule"), established by the Commission to require Market Participants to only bid resources available and capable of performing. Specifically:

- 16 TAC § 25.503(f)(6) – A market participant's bids of energy and ancillary services must be from resources that are available and capable of performing, and must be feasible within the limits of the operating characteristics indicated in the resource plan, as defined in the Protocols, and consistent with the applicable ramp rate, as specified in the Protocols.
- 16 TAC § 25.503(g)(3) – A market participant must not offer reliability products into the market that cannot or will not be provided if selected.

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[17] 16 TAC § 25.501(k) ("For ancillary capacity services that it competitively procures in the day-ahead or operating day, ERCOT shall use simultaneous optimization and shall set prices for each service to the corresponding shadow price.").

[18] Attachment A, ERCOT Market Notice (ENGIE) at 3 n.2.

[19] Attachment B, ERCOT Market Notice (Viridity). ERCOT identifies two methods of "seeking compensation," an offer in the day ahead market or an offer in a supplemental ancillary service market. However, ERCOT notes that there were no supplemental ancillary service markets, and consequently this option was not available to Viridity.

The Commission has historically enforced its rules and penalized market entities for offering reliability products that they are not capable of performing.[20] The Market Oversight Rule is intended to prohibit the exact conduct that ERCOT now claims Viridity should have pursued – presenting a Load Resource as available for dispatch when it was not, because it was already fully deployed. For example, the Commission has imposed penalties of $20,000 on a market participant for failing to provide the required megawatt level of RRS responsibility when called upon by ERCOT.[21] Here, ERCOT's interpretation of its own Protocols would require market participants to violate the Commission's Rules and submit trades in the Day Ahead Market for RRS from Load Resources that are not available for dispatch. The Commission's Rules specifically refer to this

[20] *See, e.g., Agreed Notice of Violation and Settlement Agreement Relating to Luminant Energy Company, LLC's Violations of PURA § 39.151(j), 16 TAC § 25.503(f)(2), Related to Oversight of Wholesale Market Participants, and ERCOT Protocols § 8.1.1.4.2(1)(a), Performance Criteria for Responsive Reserve Service Energy Deployment Criteria*, Docket No. 46724, Order (Feb. 9, 2017); *Agreed Notice of Violation and Settlement Agreement Relating to FPL Energy Texas Keir, LLC's Violations of PURA § 39.151(j), 16 TAC §§ 25.503(f)(2) and 25.503(f)(8), Related to Oversight of Wholesale Market Participants, and ERCOT Protocols §§ 8.1.1.4.2(1)(a), Related to Performance Criteria for Responsive Reserve Service Energy Deployment Criteria, and 6.4.6(1), Related to Telemetry of Status Codes*, Docket No. 45756, Order (May 6, 2016); *Agreed Notice of Violation and Settlement Agreement Relating to NRG Texas Power, LLC's Violation of PURA § 39.151(j), P.U.C. Subst. R. § 25.503(f)(2), and ERCOT Protocols § 8.1.1.4.2(1)(b), Related to Performance Criteria for Responsive Reserve Service Energy Deployment Criteria*, Docket No. 44524, Order (Apr. 17, 2015); *Agreed Notice of Violation and Settlement Agreement Relating to Exelon Generation Company, LLC's Violations of PURA § 39.151(j), P.U.C. Subst. R. § 25.503(f)(2), and ERCOT Protocols § 8.1.1.4.2(1)(b), Related to Performance Criteria for Responsive Reserve Service Energy Deployment Criteria*, Docket No. 44454, Order (Mar. 27, 2015); *Agreed Notice of Violation and Settlement Agreement Relating to EDF Trading North America, LLC's Violation of PURA § 39.151(j), P.U.C. Subst. R. § 25.503(f)(2), and ERCOT Protocols § 8.1.1.4.2(1)(b), Related to Performance Criteria for Responsive Reserve Service Energy Deployment Criteria*, Docket No. 44338, Order (Mar. 10, 2015); *Agreed Notice of Violation and Settlement Agreement Relating to Constellation Alliance II, LP's Violation of PURA § 39.151, P.U.C. Subst. R. § 25.503, and ERCOT Protocol § 8.1.1.4.2(1)(b), Relating to Responsive Reserve Service,* Docket No. 40155, Order (Feb. 24, 2012); *Agreed Notice of Violation and Settlement Agreement Relating to Intelligen Resources, LP (QSE) Violation of PURA § 39.151(d) and (j) and P.U.C. Subst. R. § 25.503(f)(2); Relating to Failure to Adhere to ERCOT Protocol § 8.1.1.4.2(1)(b) Relating to Response Reserve Service*, Docket No. 39918, Order (Dec. 19, 2011); *Agreed Notice of Violation and Settlement Agreement Relating to FPL Energy Power Marketing, Inc.'s Violation of PURA § 39.151(j) and P.U.C. Subst. R. § 25.503(f)(2); Relating to Failure to Adhere to ERCOT Protocols § 6.5.4(1) and § 6.5.4(7) Concerning Responsive Reserve Service*, Docket No. 33047, Order (Sept. 8, 2006).

[21] *Agreed Notice of Violation and Settlement Agreement Relating to Constellation Alliance II, LP's Violation of PURA § 39.151, P.U.C. Subst. R. § 25.503, and ERCOT Protocol § 8.1.1.4.2(1)(b), Relating to Responsive Reserve Service,* Docket No. 40155, Order (Feb. 24, 2012) (finding that Constellation deployed 109.74 megawatts of their 131 megawatts RRS responsibility, or 84% of its RRS obligation, within the required 10-minute period in violation of ERCOT Protocol § 8.1.1.4.2(1)(b), and ordering Constellation pay a $20,000 administrative penalty.).

as "Prohibited Activity."[22] The Load Resources are not available for dispatch due to the fact that the Load Resources have already been deployed and are actively contributing to the reliability of the electric system.

B. ERCOT'S Refusal to Compensate for the RRS Service Deployed Violates ERCOT Protocols and Undermines the RRS Program.

The ERCOT Protocols require compensation be paid in exchange for providing RRS.[23] The RRS Load Resource program was designed and exists in the ERCOT Protocols to compensate retail customers with Load Resources to provide additional capacity in times of need by reducing or eliminating their load from the system. The program is not viable as a voluntary customer program without compensation to customers in exchange for the ability to reduce their load.

The ERCOT Protocols also require any deployment of RRS Load Resources to remain deployed until recalled.[24] When a retail customer schedules its Load Resource, and when ERCOT accepts the Load Resource and issues its Dispatch Instruction, it is with the mutual understanding written into the Protocols that the RRS service may be deployed in an emergency beyond the original Operating Period designated. The Protocols are silent as to how or whether to schedule RRS that is under a current Dispatch Instruction to remain deployed. The RRS program has historically required deployment of RRS resources for matters of hours—not days. It is nonsensical, and untenable, to read into the Protocols an unstated exception that a retail customer providing RRS from a Load Resource may not be compensated for providing RRS as instructed by ERCOT, and required by Protocols, beyond the originally scheduled operating period.

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[22] 16 TAC § 25.503(g)(3) ("A market participant must not offer reliability products to the market that cannot or will not be provided if selected.").

[23] ERCOT Protocol 4.6.4.2.3.

[24] ERCOT Protocol 8.1.1.4.2(4) ("The QSE's portfolio shall maintain this response until recalled or the Resource's obligation to provide RRS expires.").

There is no dispute that Viridity properly scheduled the RRS from the Load Resources in the Day Ahead Market and properly scheduled the RRS as available when ERCOT issued its Dispatch Instruction. There is no dispute that ERCOT instructed the Load Resources to remain deployed until recalled and that Viridity and BASA complied with that Instruction. There is no dispute that both ENGIE and Viridity separately communicated with ERCOT regarding the RRS deployment to resolve the scheduling issue. ERCOT could not have issued a further Dispatch Instruction to deploy RRS for a Load Resource that was not qualified and committed under the Protocols to provide RRS.[25]

C. ERCOT's Charges to ENGIE for Failing to Provide the Self-Arranged RRS Provided through BASA and for Acquiring Phantom RRS Violates PURA, Commission Rules, and ERCOT Protocols.

ERCOT's failure to credit ENGIE for the self-arranged RRS provided, and ERCOT's subsequent charge to ENGIE for RRS that ERCOT never acquired, violates PURA's requirements that ancillary services provide adequate incentives to meet the needs of the electricity market in the ERCOT Region and that ancillary services are reasonably priced and not preferential, prejudicial, discriminatory.[26] ENGIE's self-arranged RRS was deployed and remained deployed as instructed by ERCOT for the entire EEA3 event. Yet, ENGIE was ultimately not credited anything for February 16 through February 19 for the dispatchable reliability resource it provided, which is not reasonable compensation for the ancillary service as required under PURA.[27]

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[25] ERCOT Protocol 8.1.1.1 ("Each QSE and the Resource providing Ancillary Service must meet qualification criteria to operate satisfactorily with ERCOT. ERCOT shall use the Ancillary Service qualification and testing program that is approved by TAC and included in the Operating Guides. Each QSE for the Resources that it represents may only provide Ancillary Services on those Resources for which it has met the qualification criteria.").

[26] PURA § 35.004(e) (now found at PURA § 35.004(f)) ("The Commission shall ensure that ancillary services necessary to facilitate the transmission of electric energy are available at reasonable prices with terms and conditions that are not unreasonably preferential, prejudicial, [or] discriminatory"), § 35.004(g)(2) (requiring the Commission to evaluate the adequacy of incentives provided in ERCOT for dispatchable generation, which RRS effectively provides).

[27] *Id.*

ERCOT's failure to credit ENGIE directly violates ERCOT's obligation under PURA § 39.151(a)(4) to ensure that electricity production and delivery are accurately accounted for among generators and wholesale buyers and sellers in ERCOT.

Instead of crediting the reasonable value of RRS, as required, ERCOT charged ENGIE for the cost of replacing the RRS. When Load Resources comply with ERCOT's Dispatch Instruction for RRS Load Resources and go offline, they are providing the RRS obligation. The Commission's Rules and ERCOT Protocols do not authorize charging market entities for performing their ancillary service obligations as requested, rather they only permit charging market participants for *failing to deliver RRS.*[28] Here, there is no dispute that the self-arranged RRS provided by ENGIE through BASA was delivered, just as ERCOT instructed in its Dispatch Instructions.

Because ERCOT did not acquire additional RRS on behalf of ENGIE, as ERCOT claims, ERCOT's charge for replacement RRS is contrary to PURA's requirements that ancillary services are not unreasonably preferential, prejudicial or discriminatory.[29] ERCOT's statement[30] that it procured replacement RRS on ENGIE's behalf in the Day Ahead Market for each Operating Day for February 16 through February 19, is demonstrably false. When a QSE fails to provide ancillary

[28] 16 TAC § 25.501(b) ("To the extent that a market participant does not self-arrange the energy and ancillary capacity services necessary to meet its obligations or to the extent that ERCOT determines that the market participant's self-arranged ancillary services *will not be delivered*, ERCOT shall procure energy and ancillary capacity services on behalf of the market participant to cover the shortfall and charge the market participant for the services provided." (emphasis added)); ERCOT Protocol 6.4.9.1.3. ("ERCOT may procure Ancillary Services to replace those of a QSE that has failed on its Ancillary Services Supply Responsibility through a Supplemental Ancillary Services Market, as described below in Section 6.4.9.2, Supplemental Ancillary Services Market. A QSE is considered to have failed on its Ancillary Services Supply Responsibility when ERCOT determines, in its sole discretion, that some or all of the QSE's Resource-specific Ancillary Service capacity *will not be available in Real-Time*." (emphasis added)).

[29] PURA § 35.004(e) (now found at PURA § 35.004(f)) ("The Commission shall ensure that ancillary services necessary to facilitate the transmission of electric energy are . . . not unreasonably preferential, prejudicial, [or] discriminatory.").

[30] Attachment A, ERCOT Market Notice (ENGIE) at 4.

services, ERCOT may replace the RRS from the market[31] and charge the entity failing to provide its RRS for the replacement cost of RRS.[32] Here, ERCOT did not run a Supplemental Ancillary Service Market ("SASM") and did not acquire additional RRS, because there was none available.[33] ERCOT's own records show that it was hundreds of MW short of meeting the system's RRS obligations.[34] Thus, ERCOT did not acquire replacement RRS on ENGIE's behalf. At best, ERCOT charged ENGIE for the RRS acquired to meet other QSE's RRS obligations, which is unreasonably preferential, prejudicial and discriminatory.[35]

In a recent order, the Commission has required market entities to pay a "failure to provide" charge when they were unable to provide ancillary services due to a derate or outage caused by Winter Storm Uri.[36] It stands to reason that the Commission would reject a "failure to provide" or

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[31] ERCOT Protocol 6.4.9.1.3. ("ERCOT may procure Ancillary Services to replace those of a QSE that has failed on its Ancillary Services Supply Responsibility through a Supplemental Ancillary Services Market, as described below in Section 6.4.9.2, Supplemental Ancillary Services Market.")

[32] ERCOT Protocol 6.7.3 ("A charge to each QSE that fails on its Ancillary Service Supply Responsibility, whether or not a SASM is executed due to its failure to supply, is calculated based on the greatest of the MCPC in the Day-Ahead Market (DAM) or any SASM for the same Operating Hour.")

[33] Attachment B, ERCOT Market Notice (Viridity) at 2 n.9.

[34] *See* Attachment D (providing the shortage of RRS MW during the settlement intervals at issue).

[35] PURA § 35.004(e) (now found at PURA § 35.004(f)) ("The Commission shall ensure that ancillary services necessary to facilitate the transmission of electric energy are . . . not unreasonably preferential, prejudicial, [or] discriminatory.").

[36] Following Winter Storm Uri, the Independent Market Monitor ("IMM") recommended that the Commission invoke the "failure to provide" settlement for all ancillary services that market participants failed to provide during the EEA3 event caused by Winter Storm Uri, noting that there were a number of instances during the EEA3 event in which ancillary services were not provided in real time because of forced outages or derations. *Issues Related to the State of Disaster for the February 2021 Winter Weather Event*, Docket No. 51812, Letter form IMM (March 1, 2021). The IMM noted that invoking the "failure to provide" settlement for all ancillary services that market participants failed to provide during the EEA3 event will produce market outcomes and settlements consistent with underlying market principles. Under her scenario, the principle was that market participants should not be paid for services that they do not provide. Conversely under the scenario made the basis of this complaint, market principles would require that market participants be credited (not charged) for those services that they do provide. The IMM did not recommend that the "failure to provide" treatment be applied to instances where RRS from Load Resources were not scheduled as available for dispatch due to the fact that they were offline under a preexisting Dispatch Instruction.

In response to the IMM's recommendation, the Commission issued an Order directing ERCOT to "claw back all payments for ancillary service that were made to an entity *that did not provide* its required ancillary service during real time on ERCOT operating days starting February 14, 2021 and ending on February 19, 2021." *Issues Related to the State of Disaster for the February 2021 Winter Weather Event*, Docket No. 51812, Order Addressing Ancillary Services (March 3, 2021) (emphasis added). Notably, the Commission did not also require a "failure to provide"

RRS replacement charge where, as here, the ancillary services were self-arranged, and *were actually provided*. Moreover, the Protocols, Commission Rules, and PURA were followed, and no replacement RRS was acquired.[37]

D. ERCOT Should Compensate or Credit for the RRS Dispatched and Provided under Principles of Quantum Meruit

Equitable legal principals such as quantum meruit also apply to require compensation or credit for the RRS service provided as instructed and to prevent ERCOT from denying the value of the RRS provided. A cause of action for quantum meruit arises when a plaintiff establishes that it has provided a valuable service to the defendant, the defendant accepted the service, and the defendant had reasonable notice that the plaintiff expected to receive compensation.[38] In this instance, BASA and Viridity provided the RRS service which ERCOT deployed and utilized. That service benefitted ERCOT through helping to bolster system reliability throughout the entire EEA3 event. ERCOT accepted the service by issuing Dispatch Instructions deploying Viridity and BASA's Load Resources, and then reconfirming the deployment and not recalling it until Friday, February 19, 2021. Using quantum meruit principles, ERCOT should compensate BASA and

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charge against Load Resources that were offline due to a Dispatch Instruction from ERCOT to remain offline for purposes of maintaining reliability and meeting their RRS obligations.

ENGIE, on the other hand, is left worse off for providing the RRS service and complying with ERCOT scheduling Protocols as ENGIE received no credit for the RRS provided and was charged for replacement RRS that was never acquired. ENGIE suggests that the Commission could issue a similar order clarifying that there is no "failure to provide" or replacement charge for any entity providing self-arranged RRS through a Load Resource, where the Load Resource was properly offline pursuant to dispatch instructions from ERCOT during the EEA3 event.

[37] *Id.*

[38] *See Hill v. Shamoun & Norman, LLP*, 544 S.W.3d 724, 732 (Tex. 2018) ("The purpose of this common law doctrine is to prevent a party from being 'unjustly enriched' by 'retain[ing] the benefits of the ... performance without paying anything in return.'"); *In re Kellogg Brown & Root, Inc.*, 166 S.W.3d 732, 740 (Tex. 2005) ("*Quantum meruit* is an equitable remedy that '"is based upon the promise implied by law to pay for beneficial services rendered and knowingly accepted."'); *Vortt Expl. Co., Inc. v. Chevron U.S.A., Inc.*, 787 S.W.2d 942, 944 (Tex. 1990) (detailing the elements for a quantum meruit claim).

Viridity for the service. Because ENGIE had procured 27 MW of RRS service from BASA and was the legal owner of that service, ENGIE should similarly be compensated.

E. ERCOT's Actions Constitute a Regulatory Taking for Which Viridity and ENGIE Should be Compensated.

A regulatory taking occurs when governmental regulations limit the use of private or personal property to such a degree that the property owner is effectively deprived of the economic value of the property.[39] In this instance, by deploying BASA and Viridity's RRS for five days, but without compensation for four of those days, ERCOT has essentially deprived both Viridity and BASA of the economic value of their property. Because ENGIE had procured 27 MW of that RRS service from BASA, this uncompensated deployment of RRS service deprived ENGIE of the economic value of its property as well.

F. ERCOT's Actions Amount to Inverse Condemnation for Which Viridity, BASA and ENGIE Should be Compensated.

To properly assert an inverse-condemnation claim against the State, a party must plead the following elements: (1) the State intentionally performed an act in the exercise of its lawful authority; (2) that resulted in the taking, damaging, or destruction of the party's property; (3) for public use.[40] In this instance, ERCOT's ostensibly lawful exercise of its authority to deploy the

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[39] *See Penn Cent. Transp. Co. v. City of New York*, 438 U.S. 104, 128, 98 S. Ct. 2646, 2661, 57 L. Ed. 2d 631 (1978) (explaining that "government actions that may be characterized as acquisitions of resources to permit or facilitate uniquely public functions have often been held to constitute 'takings.'"); *Horne v. Dept. of Agriculture*, 576 U.S. 350, 358, 135 S. Ct. 2419, 2426, 192 L. Ed. 2d 388 (2015) ("Nothing in the text or history of the Takings Clause, or our precedents, suggest that the rule is any different when it comes to appropriation of personal property. The Government has a categorical duty to pay just compensation when it takes your car, just as when it takes your home."); *Edwards Aquifer Auth. v. Day*, 369 S.W.3d 814, 839 (Tex. 2012) (stating that regulatory takings jurisprudence "aims to identify regulatory actions that are functionally equivalent to the classic taking in which government directly appropriates private property.") (citing *Lingle v. Chevron U.S.A. Inc.*, 544 U.S. 528, 539, 125 S. Ct. 2074, 2082, 161 L. Ed. 2d 876 (2005)).

[40] *See Gen. Servs. Comm'n v. Little-Tex Insulation Co.*, 39 S.W.3d 591, 598 (Tex. 2001) (detailing the elements for an inverse condemnation claim). Texas Govt Code § 2206 prohibits takings if the taking confers a private benefit on a particular private party. *See* Tex. Gov't Code § 2206.001(b)(1) ("A governmental or private entity may not take private property through the use of eminent domain if the taking: (1) confers a private benefit on a particular

BASA and Viridity RRS without compensation, constitutes a taking of BASA, Viridity's, and ENGIE's property. Specifically, by deploying BASA and Viridity's RRS for five days, but without compensation for four of those days, ERCOT has essentially confiscated Viridity and BASA's RRS without compensation. ERCOT's actions also deprived ENGIE of the ability to use the 27 MW of RRS that it had purchased to satisfy its own RRS obligations to ERCOT. As a result, ENGIE's RRS obligations to ERCOT were artificially increased by 27 MW, and ENGIE was charged for 27 MW of additional RRS service from ERCOT at Real Time prices.

G. ERCOT's Actions Amount to a Constitutional Taking for which Viridity and ENGIE Should be Compensated.

Article I, Section 17 of Texas Constitution provides "no persons property shall be taken, damaged, or destroyed for or applied to public use without adequate compensation."[41] As described above, ERCOT's deployment of the BASA and Viridity RRS constituted a taking of BASA, Viridity's, and ENGIE's property. Specifically, it deprived BASA, Viridity, and ENGIE of their property without compensation.

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private party through the use of the property."); *City of Emory v. Lusk*, 278 S.W.3d 77, 85 (Tex. App. 2009) ("An inverse condemnation proceeding is the proper avenue to seek redress when property has been taken or damaged for public use without compensation or a proper condemnation proceeding."); *City of Houston v. Maguire Oil Co.*, 342 S.W.3d 726, 736 (Tex. App.—Houston [14th Dist.] 2011, pet. denied) (explaining that an unconstitutional taking may be present "when regulatory action completely deprives an owner of all economically beneficial use of his property" or when such regulatory action "interferes with a property owner's right to use and enjoy his property."); *State v. Clear Channel Outdoor, Inc.*, No. 14-07-00369-CV, 2008 WL 2986392 at * 4 (Tex. App.—Houston [1st Dist.] July 31, 2008, no pet.)(mem. op) (finding that Clear Channel Outdoor, Inc. properly plead an inverse condemnation claim seeking compensation under Article I, Section 17 of Texas Constitution for the condemnation of its leasehold interest in a parcel of land).

[41] *See City of Sherman v. Wayne*, 266 S.W.3d 34, 42 (Tex. App.—Dallas 2008, no pet.) ("The Texas Constitution provides that no 'person's property shall be taken, damaged or destroyed for or applied to public use without adequate compensation being made.'") (citing Tex. Const. art. I, § 17); *City of San Antonio v. El Dorado Amusement Co., Inc.*, 195 S.W.3d 238, 244–47 (Tex. App.—San Antonio 2006, pet. denied) (finding that the city's actions resulted in a severe economic impact on Appellee's business and caused unreasonable interference with Appellee's investment-backed expectations, which constituted a compensable regulatory taking under Art. I, Section 17 of the Texas Constitution); *State v. Clear Channel Outdoor, Inc.*, No. 14- 07-00369-CV, 2008 WL 2986392 at * 4 (Tex. App.—Houston [1st Dist.] July 31, 2008, no pet.)(mem. op) (finding that Clear Channel Outdoor, Inc. properly plead an inverse condemnation claim seeking compensation under Article I, Section 17 of Texas Constitution for the condemnation of its leasehold interest in a parcel of land).

H. ERCOT's Actions Amount to a Substantive Due Process Violation for which Viridity and ENGIE Should be Compensated.

To prove a substantive due process claim, a plaintiff must show the challenged governmental action is arbitrary, unreasonable, or has no relationship to a legitimate government interest.[42] As discussed earlier, BASA and Viridity provided a service to ERCOT, which helped the system remain operating during the most critical emergency in ERCOT history. Engie was the legal owner of 27 MW of that service. Given ERCOT's interpretation of the Protocols, not only were Viridity and BASA deprived of compensation, but ENGIE was charged for 27 MW of RRS that it actually provided. This is fundamentally contrary to the intent of the Protocols, which is to ensure the reliable operation of the ERCOT System with services provided at reasonable, market driven prices, and PURA, which requires that electricity be properly accounted for between wholesale buyers and sellers.[43]

I. ERCOT's Actions Amount to a Substantive Due Course of Law Violation for which Viridity and ENGIE Should be Compensated.

Article I, Section 19 of the Texas Constitution provides that no citizen "shall be deprived of life, liberty, property, privileges or immunities, or in any manner disenfranchised except by the due course of law of the land.[44] An economic regulation violates this constitutional guarantee if either:

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[42] *See Simi Inv. Co. v. Harris Cnty., Tex.*, 236 F.3d 240, 249 (5th Cir. 2000) (stating government action comports with substantive due process if "rationally related to a legitimate government interest" and impinges upon it if "arbitrary and capricious"); *City of Dallas v. Stewart*, 361 S.W.3d 562, 574 (Tex. 2012) (explaining that substantive constitutional rights, such as property rights, must be considered through constitutionally adequate procedures of due process).

[43] PURA § 39.151(a)(4).

[44] Tex. Const. art. I, § 19.

> (1) the statute's purpose could not arguably be rationally related to a legitimate governmental interest; or (2) when considered as a whole, the statute's actual, real-world effect as applied to the challenging party could not arguably be rationally related to, or is so burdensome as to be oppressive in light of, the governmental interest.[45]

Both prongs of the test are satisfied here. There is no "legitimate government interest" in failing to compensate for the RRS service made available, as directed by ERCOT, and the "real-world effect"—losses in the millions of dollars—bears no rational relationship to any governmental interest in maintaining reliability and is obviously oppressive.[46]

J. ERCOT's Justification for Refusing to Credit RRS from Load Resources Deployed is Contrary to its Own Protocols, Public Policy, and Common Sense.

ERCOT is attempting to justify it actions by relying upon protocols, Commission Rules, and PURA, that actually contradict ERCOT's position. To summarize ERCOT's position, ERCOT relies on:

- A scheduling Protocol that requires offering RRS in the Day Ahead Market while ignoring the reliability Protocols and the Market Oversight Rules that prohibit offering RRS that is unavailable for dispatch.
- A claim that the Current Operating Plan and telemetry of a deployed Load Resource should indicate that a Load Resource is "available for dispatch of RRS" when it is actually deployed as required by ERCOT's Dispatch Instructions and therefore not available.
- A Protocol that authorizes charging QSE's replacement costs for failing to deliver RRS when, in actuality, the RRS was provided and no replacement RRS was acquired.

ERCOT's basis for denying payment for the provision of RRS relies on language that does not exist in the Protocols. ERCOT imagines a requirement not contained in the Protocols that a QSE representing a Resource Entity's Load Resources has to submit trades or offers in the Day

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[45] *Patel v. Tex. Dep't of Licensing & Regulation*, 469 S.W.3d 69, 87 (Tex. 2015).

[46] *Id.*

Ahead Market or a SASM or to voluntarily remain off-line for subsequent days after deployment during an Emergency Condition. ERCOT acknowledges that its Protocols requiring the continued deployment of RRS until instructed otherwise by ERCOT "could be improved to provide more explicit description of the options a QSE representing a Resource Entity's Load Resources has for subsequent days after deployment during an Emergency Condition."[47] This is quite an understatement—the Protocols do not include any requirement to show a deployed Load Resource as still "available" for deployment. Tellingly, ERCOT admitted that it "has begun preparing a Nodal Protocol Revision Request ("NPRR") to address the issue."[48] However, it is unclear how such an NPRR could be drafted that would not violate the Market Oversight Rule by representing capacity as available for dispatch when it is not. ERCOT further tried to shift responsibility by claiming that Market Participants are responsible for understanding their obligations under the ERCOT Protocols.[49] Viridity and ENGIE are knowledgeable about their obligations under the ERCOT Protocols, but it is unreasonable to require a Market Participant to understand obligations which are not expressly addressed in the Protocols, which ERCOT itself admits are unclear, which are different from express directives given by ERCOT during Winter Storm Uri, and which conflict with the Commission's Rules.

Moreover, ERCOT perceives the disconnect between its Protocols addressing reliability and its Protocols addressing scheduling procedures, and ERCOT inexplicably choses the scheduling Protocol over the reliability Protocol. However, public policy and ERCOT's own

[47] Attachment B, ERCOT Market Notice (Viridity) at 4. ERCOT also indicates that it is preparing a Nodal Protocol Revision Request, presumably to permit a Load Resource to offer into the Day Ahead Market while it is deployed. However, and protocol revision to ratify ERCOT's actions would also require a change in the Commission's Rules to allow Load Resources to offer reliability products to the market that are not capable of performing.

[48] ERCOT Market Notice (Viridity) at 4, n.29.

[49] ERCOT Market Notice (Viridity) at 4-5, n.33.

Protocols indicate that reliability is paramount. Specifically, the Protocols state: "ERCOT's final Dispatch Instruction to a QSE in effect applies for all Protocol-related process."[50] And in accounting for RRS provided by a Load Resource that is dispatched, ERCOT's charges to the market should rely on ERCOT's final Deployment Instructions.[51]

1. ERCOT Would Require Qualified Scheduling Entities to Engage in "Prohibited Activities."

ERCOT's primary justification for failing to credit the RRS is that Viridity, after the instructed deployment, did not submit a subsequent offer or schedule the deployed Load Resource into subsequent Day Ahead Markets. ERCOT ignores the very concept of a Load Resources under the Protocols. A "Load Resource must be loaded and capable of unloading the scheduled amount of RRS within ten minutes of instruction by ERCOT,"[52] which is not physically possible when it is already deployed. In addition to being physically impossible, Commission Rules make scheduling RRS from a Load Resource that is not capable of being provided if selected a "Prohibited Activity under the Market Oversight Rule."[53] Thus, ERCOT's primary justification for failing to credit the RRS provided should be rejected outright.

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[50] ERCOT Protocol 6.5.7.9(4) ("ERCOT's final Dispatch Instruction to a QSE in effect applies for all Protocol-related processes. If the QSE does not comply after receiving the final Dispatch Instruction, the QSE remains liable for failure to meet its obligations under the Protocols and remains liable for any charges resulting from such failure.").

[51] ERCOT Protocol 6.5.7.3.1(2)(e) ("For the intervals where there are reliability deployments as described in paragraph (1) above, after the two-step SCED process and also after the Real-Time On-Line Reserve Price Adder and Real-Time Off-Line Reserve Price Adder have been determined, the Real-Time On-Line Reliability Deployment Price Adder is determined as follows: . . . Add the deployed MW from Load Resources . . . to [Generation to be Dispatched] linearly ramped over the 10-minute ramp period. The amount of deployed MW is calculated from the Resource telemetry and from applicable deployment instructions in Extensible Markup Language (XML) messages.").

[52] ERCOT Protocol 8.1.1.2.1.2(3) ("**Responsive Reserve Service Qualification** . . . A QSE's Load Resource must be loaded and capable of unloading the scheduled amount of RRS within ten minutes of instruction by ERCOT and must either be immediately responsive to system frequency or be interrupted by action of under-frequency relays with settings as specified by the Operating Guides.").

[53] 16 TAC § 25.503(g)(3) ("**Prohibited Activities**. . . . . A market participant must not offer reliability products to the market that cannot or will not be provided if selected.").

2. ERCOT Would Require a Load Resource to Submit a Current Operating Plan as "Available for Dispatch of RRS" While it is Deployed as Instructed.

ERCOT's secondary justification for failing to credit the RRS provided as instructed is that Viridity submitted a Current Operating Plan and telemetry as "OUTL," which means "not available,"[54] as opposed to "ONRL," which means "available for dispatch of RRS."[55] However, ERCOT's Market Notices indicate repeatedly that the Load Resource was required to be deployed as instructed by ERCOT.[56] A Load Resource cannot simultaneously be deployed as instructed and loaded and capable of unloading the scheduled amount of RRS within ten minutes of instruction by ERCOT.[57] The Commission has initiated enforcement actions and penalized market participants for offering reliability resources that do not have sufficient load to curtail in response to a Dispatch Instruction by ERCOT.

ERCOT's current interpretation conflicts with the specific Current Operating Plan protocol requirements and ERCOT expectations provided in the *ERCOT Business Practice: Current Operating Plan Practices by Qualified Scheduling Entities ("COP Practice Manual")*, which indicate that QSEs should "[u]se OUTL for a Load Resource that is not available for interruption or control." Also, ERCOT currently claims that Viridity was required to supply additional information used by ERCOT's resource limit calculator; however, ERCOT's *COP Practice Manual* indicates that if a Load Resource is offline, the supply of additional information is merely a request or suggestion. The specific Protocol requirements and ERCOT's resource status *requests*

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[54] ERCOT Protocol 3.9.1(5)(b)(iii)(F) ("OUTL – Not available").

[55] ERCOT Protocol 3.9.1(5)(b)(iii)(E) ("ONRL – Available for Dispatch of RRS").

[56] Attachment B, ERCOT Market Notice (Viridity) ("Because the Load Resources were deployed during Emergency Conditions, they were required to remain off-line until recalled.").

[57] ERCOT Protocol 8.1.1.2.1.2(3) ("**Responsive Reserve Service Qualification** . . . A QSE's Load Resource must be loaded and capable of unloading the scheduled amount of RRS within ten minutes of instruction by ERCOT and must either be immediately responsive to system frequency or be interrupted by action of under-frequency relays with settings as specified by the Operating Guides.").

and *suggestions* are provided as Attachment C, and excerpted below (see added italics/underlined text):

Protocol Requirement	ERCOT Discussion	Resource Status Expectation	Resource Capability Expectation
(D) OUTL – Not available;	ERCOT systems use the Resource Status OUTL in conjunction with the Resource Capabilities reported in the COP. Consequently, ERCOT *suggests* that providing HSL/LSL/HEL/LEL values that would be expected if the Resource is available reduces churn and will help quantify the amount of unavailable capability on an ongoing basis.	Use OUTL for a Load Resource that is not available for interruption or control.	ERCOT *requests* that the QSE report the HSL/HEL/LSL/LEL values that would normally be expected if the Resource were available. Load Resources that are not struck for AS in DAM and that desire to have their AS offers considered in a SASM must use a Resource Status of OUTL with HSL/LSL/HEL/LEL values consistent with their AS offers.

ERCOT's *COP Practice Manual* also indicates that ONRL is only to be used "for a Load Resource . . . that is available for dispatch to provide Responsive Reserve Service in the current and next operating Day." Thus, Viridity's resource status of "OUTL" was consistent with ERCOT's *COP Practice Manual*.

ERCOT also acknowledges that a "QSE must update its [Current Operating Plan] reflecting changes in availability as soon as reasonably practicable, but in no event later than 60 minutes after the event that caused the change."[58] Similarly, ERCOT notes that within one minute following a deployment instruction, the QSE must update the telemetered Ancillary Service Schedule for RRS to reflect the deployment amount for the Load Resources.[59] However, ERCOT seems to argue that once a Load Resource is deployed and required to be offline it should not

[58] Attachment B, ERCOT Market Notice (Viridity) at 3 (citing ERCOT Protocol 3.9.1(1)).

[59] Attachment B, ERCOT Market Notice (Viridity) at 3.

update its Current Operating Plan or telemetry to indicate that it is offline and no longer available for a Dispatch Instruction to provide capacity.[60] ERCOT argues that a Load Resource that has an RRS responsibility must reflect a resource status of "available for dispatch of RRS" at all times while deployed.[61] To support its assertion, ERCOT simply cites the definition of "ONRL," which is "available for dispatch of RRS."[62] ERCOT's interpretation, however, is inconsistent with its own *COP Practice Manual* and would require additional language (in underline/italics below) not present in the definition on which it relies: "available for dispatch of RRS *or offline under a Dispatch Instruction*." Under rules of statutory construction, ERCOT cannot simply read into its Protocols an exception that does not exist.[63]

Finally, ERCOT seems to assert that when a Load Resource is deployed as instructed by ERCOT, it is doing so voluntarily and need not be compensated.[64] ERCOT's argument is not based in fact or reality. In this case, the Load Resources were providing an emergency reliability service for ERCOT in response to a specific Instruction to do so by ERCOT for five consecutive days; ERCOT does not dispute that the deployment was in response to its Instructions. By way of analogy, ERCOT's argument is like telling an employee who has worked five consecutive days

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[60] Attachment B, ERCOT Market Notice (Viridity) at 3.

[61] Attachment B, ERCOT Market Notice (Viridity) at 3 ("A QSE representing a Resource Entity that has a Load Resource that has an RRS responsibility must reflect a Resource status code of 'ONRL' for all times that it carries an RRS responsibility both before and during deployment.")

[62] Attachment B, ERCOT Market Notice (Viridity) at 3 n.20 (citing ERCOT Protocol 3.9.1(5)(b)(iii)(E)).

[63] *See* ERCOT Protocol 3.9.1(5)(b)(iii)(E). *See also Pub. Util. Comm'n v. Constellation Energy Commodities Group, Inc.*, 351 S.W.3d 588, 594–95 (Tex. App.—Austin 2011, pet. denied) ("ERCOT protocols are rules that provide for the administration of the Texas electricity market. *ERCOT protocols*, however, are subject to Commission oversight and review . . . because they have the force and effect of statutes, we construe administrative rules in the same manner as statutes." (citations omitted)); *Complaint of Constellation Energy Commodities Group, Inc. Against the Electric Reliability Council of Texas*, Docket No. 33500, Order at 13 (Jan. 25, 2008), *aff'd by*, 351 S.W.3d 588, (Tex. App.—Austin 2011, pet. denied).

[64] Attachment B, ERCOT Market Notice (Viridity) at 3–4 ("ERCOT acknowledges that the Protocol language in Section 6.5.7.6.2.2(8) could be improved to provide more explicit description of the options a QSE representing a Resource Entity's Load Resources has for subsequent days after deployment during an Emergency Condition (to submit trades or offers in the DAM or a SASM or to voluntarily remain off-line).").

around the clock during an emergency event in response to the employer's instructions to continue working, that the employee is only going to get paid for the first day because they should have clocked out and clocked back in—otherwise the employee is volunteering.

Again, ERCOT's interpretation of its Protocols for scheduling purposes conflicts with the Protocols for reliability purposes. The ERCOT Protocols require ERCOT to generate and post short term system adequacy reports.[65] For Load Resources, the short term adequacy report determines the available capacity for each hour using the current operating plans for Load Resources indicating a status of ONRL.[66] Indicating that a Load Resource is available to provide capacity when it is actually deployed under Dispatch Instruction would send incorrect signals for purposes of assessing short-term reliability as required by the Protocols.

3. ERCOT Protocols Do Not Authorize ERCOT to Instruct Load Resources to Remain Deployed without Payment

ERCOT asserts that even if ENGIE's and Viridity's Load Resources were not instructed to dispatch their RRS by ERCOT, "if necessary to preserve reliability, ERCOT may instruct the Load Resource to remain off-line until conditions improve."[67] ERCOT's assertion implies that the Protocols permit ERCOT to instruct a specific retail customer to curtail its load without compensation, which is not authorized under the Protocols and is not what ERCOT instructed for ENGIE's and Viridity's designated Load Resources. Any instructions for mandatory load shed

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[65] ERCOT Protocol 3.2.3(1).

[66] ERCOT Protocol 3.2.3(1)(c) ("ERCOT shall generate and post short-term adequacy reports on the ERCOT website. ERCOT shall update these reports hourly following updates to the Seven-Day Load Forecast, except where noted otherwise. The short-term adequacy reports will provide: . . . . For Load Resources, the available capacity for each hour aggregated by Forecast Zone, using the COP for the first seven days and considering Resources with a COP Resource Status of ONRGL, ONCLR, or ONRL.").

[67] Attachment B, ERCOT Market Notice (Viridity) at 4 ("Even if a QSE's Load Resources are not carrying an RRS responsibility during a given hour, if necessary to preserve reliability, ERCOT may instruct the Load Resource to remain off-line until conditions improve.").

are made to TDUs to implement system-wide on a rotating basis, not in a discriminatory manner by having ERCOT shed a specific retail customer.[68]

4. ERCOT Improperly Relies on the Actions of other Market Entities Providing RRS.

ERCOT claims that Viridity should have scheduled the RRS from Load Resources (despite their unavailability due to ERCOT's Dispatch Instruction, Commission Rules, and ERCOT Protocols) because "other QSEs representing Load Resources who were similarly deployed . . . submitted offers in the [Day Ahead Market] for RRS and were compensated accordingly."[69] However, there is no basis for this claim and ERCOT fails to cite any provision in the Protocols, Planning Guides, Commission Rules, or elsewhere in support thereof. Complainants simply reiterate that in contradiction to ERCOT's position, offering reliability products in the market that cannot or will not be provided if selected is a Prohibited Activity. ERCOT does not address the remaining QSEs that complied with ERCOT's Dispatch Instructions and were subsequently charged a failure to provide or replacement cost for doing so.

ERCOT seems to be attempting to force its Protocols to favor certain QSEs, although it need not choose one group of QSEs over the other. Instead, ERCOT should compensate all Load Resources subject to ERCOT's Dispatch Instruction for the duration of their deployment—so long as they complied with ERCOT's Dispatch Instruction. ERCOT should rely on its Dispatch Instruction for crediting the RRS for Load Resources as ERCOT would not have issued a Dispatch

[68] *See* ERCOT Protocol 6.5.9.4.2(2)(a)(i)-(v) (listing the actions available to ERCOT, one of them being dispatching RRS and another being instructing TSPs and DSPs to shed load) & Nodal Operating Guide 4.5.3.4.

[69] Attachment B, ERCOT Market Notice (Viridity) at 5; Attachment A, ERCOT Market Notice (ENGIE) at 4–5.

Instruction to deploy RRS for a Load Resource that was not qualified and committed under the Protocols to provide RRS.[70]

5. ERCOT's Position Does Not Compensate for BASA and Viridity Deployment of RRS and Requires ENGIE to pay for other QSE RRS Obligations.

Because ENGIE self-arranged its ancillary service obligation through Viridity from the Load Resource owned by BASA, it met its ancillary service obligation when BASA deployed its RRS pursuant to ERCOT's Dispatch Instruction. The Load Resource remained deployed throughout the EEA3 event, pursuant to ERCOT's Dispatch Instruction. Thus ENGIE met its RRS obligations for the entire EEA3 event.

ERCOT claims that if "ENGIE's ADR were granted, it would result in increased costs being invoiced to all other QSEs for whom ERCOT procured RRS in the [Day Ahead Market] to make up for ENGIE's share of the total RRS costs for February 17-19."[71] However, as stated above, ERCOT did not procure replacement RRS on ENGIE's behalf and so did not incur any additional RRS cost. Any RRS charges incurred by ERCOT were incurred on behalf of those QSEs not self-arranging or providing their RRS responsibility as ENGIE had done. ERCOT Protocols require that those entities pay for the RRS acquired on their behalf.[72] PURA's cost causation requirements require that ENGIE should not subsidize the RRS costs incurred for those other QSEs.[73]

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[70] ERCOT Protocol 8.1.1.1 ("Each QSE and the Resource providing Ancillary Service must meet qualification criteria to operate satisfactorily with ERCOT. ERCOT shall use the Ancillary Service qualification and testing program that is approved by TAC and included in the Operating Guides. Each QSE for the Resources that it represents may only provide Ancillary Services on those Resources for which it has met the qualification criteria.").

[71] Attachment A, ERCOT Market Notice (ENGIE) at 4.

[72] *See* ERCOT Protocol 4.4.7.1 & 4.4.7.4.

[73] PURA § 35.004(h) (The commission shall require the independent organization certified under Section 39.151 for the ERCOT power region to modify the design, procurement, and cost allocation of ancillary services for the region in a manner consistent with cost-causation principles and on a nondiscriminatory basis.).

6. ERCOT Claims that Viridity and ENGIE Cannot Rely on Instructions from ERCOT in an Emergency Condition and that ERCOT may have Provided "Imperfect Advice."

ERCOT's Market Notices indicate that ENGIE and Viridity are responsible for understanding their obligations under the Protocols and cannot rely on phone calls to ERCOT for clarification on offering or scheduling the RRS. As to Viridity, ERCOT claims that even if ERCOT provided "imperfect advice" during the call, that conversation would not affect ERCOT's position in this case.[74] As to ENGIE, ERCOT claims that "[e]ven if ERCOT had incorrectly advised ENGIE on how to report self-arrangement or submit its trades with Viridity, that conversation with the ERCOT control room would not relieve ENGIE of its RRS obligations."[75]

Complainants' claims in this proceeding do not solely rely on any "imperfect advice" that ERCOT provided. Complainants' claims are based on:

- PURA's requirements that the RRS provided by the Load Resource pursuant to ERCOT's Dispatch Instruction be reasonably priced and subject to terms that are not unreasonably preferential or discriminatory.[76]
    - ERCOT's compensation of zero is not a reasonable price for the RRS provided.
    - ERCOT quantifies the applicable value of the 27 MW of ENGIE's RRS to be at least $47.7 million.
    - ERCOT's interpretation that refuses to recognize ENGIE's 27 MW of self-arranged RRS and that refuses to compensate RRS providers who follow

[74] Attachment B, ERCOT Market Notice (Viridity) at 5 ("Viridity complains that, during a conference call on February 18 between ERCOT and Viridity, ERCOT did not provide clear guidance regarding Viridity's options. Even if ERCOT provided imperfect advice during the call, that conversation would not affect the resolution of this ADR.").

[75] Attachment A, ERCOT Market Notice (ENGIE) at 5.

[76] PURA § 35.004(e) (now found at PURA § 35.004(f)) ("The Commission shall ensure that ancillary services necessary to facilitate the transmission of electric energy are available at reasonable prices with terms and conditions that are not unreasonably preferential, prejudicial, [or] discriminatory") & 16 TAC § 25.503(a)(2).

ERCOT Dispatch Instructions is prejudicial as it does not permit appropriate compensation without engaging in a Prohibited Activity,[77]

- ERCOT's interpretation penalizing ENGIE for self-arranging and providing RRS as directed is discriminatory as it charges ENGIE for replacement RRS that ERCOT did not procure.[78]

- The Commission's Rules and ERCOT Protocols that prohibit market participants from offering or scheduling reliability products to the market that are not available or will not be provided if selected.[79]

  - The Commission has ordered penalties against market participants for the same Prohibited Activities that ERCOT now claims Viridity and ENGIE should have engaged in—offering unavailable resources as available reliability products.

  - A Load Resource is not available for dispatch under the Protocols unless it is loaded and capable of dispatch within ten minutes of an instruction by ERCOT.[80]

  - The Protocols require market participants to reflect resource statuses of unavailable when the Load Resource is unavailable.

- Commission Rules and the ERCOT Protocols only permit charging QSEs for the replacement cost of RRS when the RRS is not actually provided.[81]

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[77] PURA § 35.004(e) (now found at PURA § 35.004(f)) ("The Commission shall ensure that ancillary services necessary to facilitate the transmission of electric energy are available at reasonable prices with terms and conditions that are not unreasonably preferential, prejudicial, [or] discriminatory") & 16 TAC § 25.503(a)(2).

[78] PURA § 35.004(e) (now found at PURA § 35.004(f)) ("The Commission shall ensure that ancillary services necessary to facilitate the transmission of electric energy are available at reasonable prices with terms and conditions that are not unreasonably preferential, prejudicial, [or] discriminatory") & 16 TAC § 25.503(a)(2).

[79] 16 TAC § 25.503(g)(3) ("**Prohibited Activities**. . . . . A market participant must not offer reliability products to the market that cannot or will not be provided if selected."); 16 TAC § 25.503(f)(6) ("A market participant's bids of energy and ancillary services must be from resources that are available and capable of performing, and must be feasible within the limits of the operating characteristics indicated in the resource plan, as defined in the Protocols, and consistent with the applicable ramp rate, as specified in the Protocols.").

[80] ERCOT Protocol 8.1.1.2.1.2(3) ("**Responsive Reserve Service Qualification** . . . A QSE's Load Resource must be loaded and capable of unloading the scheduled amount of RRS within ten minutes of instruction by ERCOT.").

[81] 16 TAC § 25.501(b) ("To the extent that a market participant does not self-arrange the energy and ancillary capacity services necessary to meet its obligations or to the extent that ERCOT determines that the market participant's self-arranged ancillary services *will not be delivered*, ERCOT shall procure energy and ancillary capacity services on behalf of the market participant to cover the shortfall and charge the market participant for the services provided." (emphasis added)); ERCOT Protocol 6.4.9.1.3. ("ERCOT may procure Ancillary Services to replace those of a QSE that has failed on its Ancillary Services Supply Responsibility through a SASM, as described below in Section 6.4.9.2, Supplemental Ancillary Services Market. A QSE is considered to have failed on its Ancillary Services Supply

- There is no dispute that the 78 MW of RRS was actually provided as instructed by ERCOT.
- ERCOT did not acquire additional RRS to replace the 27 MW of RRS that was already dispatched.

If Viridity and ENGIE were not supposed to rely on PURA, Commission Rules, or ERCOT reliability protocols in an EEA3 event, then it should be incumbent on ERCOT to clearly indicate such in its deployment instructions and conversations with its control room operators.

VII. CONCLUSION

Failure to pay for the RRS deployed by Load Resources undermines the financial viability of ancillary services program, which relies on voluntary participation by customers. Undermining the financial viability of the RRS program ultimately undermines reliability of the Texas grid as RRS has come to be one of the primary tools for ERCOT's to ensure safe reliable operation. As a matter of both Commission policy and applicable law, ERCOT should not be permitted to disregard PURA and the Commission's Rules intended to provide reliability to the system. ERCOT should not be permitted to arbitrarily impose additional scheduling requirements not present in the Protocols in order to avoid paying for RRS received from Load Resources in an emergency.

For the forgoing reasons, Complainants request that the Commission direct ERCOT to credit the RRS provided in accordance with PURA, Commission Rules, and the ERCOT protocols. Complainants also request that the Commission direct ERCOT to reverse its charges against ENGIE for a failure to provide and charges for the costs of replacement RRS that ERCOT never acquired.

Responsibility when ERCOT determines, in its sole discretion, that some or all of the QSE's Resource-specific Ancillary Service capacity *will not be available in Real-Time*." (emphasis added)).

Respectfully submitted,

Dennis W. Donley, Jr.
State Bar No. 24004620
Stephanie S. Potter
State Bar No. 24065923
Stephen Mack
State Bar No. 24041374
donley@namanhowell.com
spotter@namanhowell.com
smack@namanhowell.com
NAMAN, HOWELL, SMITH & LEE, PLLC
8310 N. Capital of Texas Hwy., Suite 490
Austin, Texas 78731
(512) 479-0300
(512) 474-1901 (Facsimile)

Attorneys for ENGIE Energy Marketing NA, Inc.

And

Diana M. Liebmann
Texas State Bar No. 00797058
Carlos Carrasco
Texas State Bar No. 24092223
Haynes and Boone, LLP
112 East Pecan Street, Suite 1200
San Antonio, Texas 78205-1540

Jennifer Littlefield
Texas State Bar No. 24074604
Haynes and Boone, LLP
600 Congress Avenue, Suite 1300
Austin, Texas 78701

Attorneys for Viridity Energy Solutions, Inc.

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing has been served upon ERCOT, OPUC, and PUCT Staff on this the 18th day of March, 2022.

Dennis W. Donley, Jr.

AFFIDAVIT

STATE OF TEXAS §
§
COUNTY OF HARRIS §

BEFORE ME, the undersigned notary public, this day personally appeared Ray Cunningham, to me known, who being duly sworn according to law, deposes and says:

1. "My name is Ray Cunningham. I am of legal age and a resident of the State of Texas. I am competent to make the following statements on behalf of ENGIE Energy Marketing NA, Inc. ("ENGIE").
2. I am the Vice President and General Counsel of ENGIE Resources LLC and have been employed as an attorney by ENGIE or one of its predecessors for the past 13 years.
3. I have reviewed the Complaint and Appeal of ENGIE Energy Marketing NA, Inc. and Viridity Energy Solutions, Inc. Against the Electric Reliability Council of Texas, including the Attachments (herein after, the 'Complaint'), and the factual statements contained in the Complaint are true and correct to the best of my knowledge.
4. The foregoing statements are true and correct to the best of my knowledge and belief."

Ray Cunningham

Subscribed and sworn to before me, notary public, on this the 17th day of March, 2022.

Notary Public in and for the State of Texas

My Commission expires: 5/04/2022

NAVEEN RABIE
Notary Public, State of Texas
Comm. Expires 05-04-2022
Notary ID 131556617

AFFIDAVIT

STATE OF TEXAS §

§

COUNTY OF WILLIAMSON §

BEFORE ME, the undersigned notary public, this day personally appeared Michael Pavo, to me known, who being duly sworn according to law, deposes and says:

1. "My name is Michael Pavo. I am of legal age and a resident of the State of Maryland. I am competent to make the following statements on behalf of Viridity Energy Solutions, Inc. ("Viridity").
2. I am the Head of Operations of Viridity Energy Solutions, Inc. ("Viridity"), and have been employed as Head of Operations by Viridity for the past 2.5 years.
3. I have reviewed the Complaint and Appeal of ENGIE Energy Marketing NA, Inc. and Viridity Energy Solutions, Inc. Against the Electric Reliability Council of Texas, including the Attachments (herein after, the 'Complaint'), and the factual statements contained in the Complaint are true and correct to the best of my knowledge.
4. The foregoing statements are true and correct to the best of my knowledge and belief."

Michael John Pavo
Signed on 2022/03/18 12:38:45 -8:00

MICHAEL PAVO

Subscribed and sworn to before me, notary public, on this the 18th day of March, 2022.

Lori Denise Mitchell
Commission # 1591307
Notary Public
STATE OF TEXAS
My Comm Exp. Jan 26, 2023

Notary Stamp 2022/03/18 12:38:45 PST D937F3013C37

Signed on 2022/03/18 12:38:45 -8:00

Notary Public in and for the State of Texas
Printed Name: Lori Denise Mitchell

My Commission expires: 01/26/2023

Notarial act performed by audio-visual communication

Attachment A – ERCOT Market Notice (ENGIE)

NOTICE DATE: February 11, 2022

NOTICE TYPE: M-A050720-01 Legal

SHORT DESCRIPTION: Resolution of ADR Proceedings between ERCOT and Engie Energy Marketing NA, Inc. (ADR No. 2021-EEM-01)

INTENDED AUDIENCE: Market Participants

DAY AFFECTED: February 16-19, 2021

LONG DESCRIPTION: Upon ERCOT's determination of the disposition of an Alternative Dispute Resolution (ADR) proceeding, ERCOT Protocol Section 20.9 requires ERCOT to issue a Market Notice providing a description of the relevant facts, a list of the parties involved in the dispute, and ERCOT's disposition of the proceeding and reasoning in support thereof.

Parties: ERCOT and Engie Energy Marketing NA, Inc. (Engie). Viridity Energy Solutions, Inc. (Viridity), Basa Resources, Inc., and Engie Resources, Inc. were listed as affected parties.

Relevant Facts:

Engie is a Qualified Scheduling Entity (QSE) that represents Load Serving Entities (LSEs). Engie had an obligation to provide 27 MW of Responsive Reserve (RRS) during February 15-19, 2021.[1] To meet this obligation, Engie had a contract with Viridity to purchase a 27 MW block of RRS supply from Load Resources represented by Viridity. BASA Resources, Inc. owned the Load Resources.

On February 15, Engie properly reported the RRS obligation as being self-arranged and properly submitted its trade with Viridity. That day at 01:23, ERCOT instructed Viridity to deploy the 27 MW of RRS. Thereafter, Engie's self-arrangement for the RRS obligations and trades with Viridity were not reported in ERCOT's Energy and Market Management System (EMMS) for February 16-19. For those dates, either the RRS obligation was not reported as self-arranged and/or matching trades were not submitted by Engie and Viridity for the 27 MW RRS obligation. As a result, ERCOT's systems did not reflect that Viridity was obligated to provide RRS on behalf of Engie for February 16-19.

The table below reflects the relevant submissions by Engie and Viridity for the February 16-19 time-period.

2/05/2021 20:29	ENGIE submitted Self-Arranged AS for OD 2/16-18/2021 via API
2/11/2021 13:46	ENGIE submitted Self-Arranged AS for OD 2/19-20/2021 via API
2/12/2021 13:52	ENGIE submitted AS-trade for OD 2/16/2021 via API (VIRIDITY did not submit AS-trade)

[1] Engie's initial ADR request filing lists operating days February 16-20 as being at issue, but Engie subsequently confirmed via email that February 20 is not at issue. The only operating days at issue are February 16-19, 2021.

2/12/2021 14:21	ENGIE submitted AS-trade for OD 2/17/2021 via API (VIRIDITY did not submit AS-trade)
2/15/2021 06:25	ENGIE submitted AS-trade for OD 2/18/2021 via API (VIRIDITY did not submit AS-trade)
2/15/2021 07:08	ENGIE submitted AS-trade for OD 2/19/2021 via API (VIRIDITY did not submit AS-trade)
2/16/2021 08:39	ENGIE canceled Self-Arrangement for OD 2/17/2021 via MMSUI
2/16/2021 08:43	ENGIE canceled AS-trade for OD 2/17/2021 via MMSUI
2/16/2021 10:00	Day-Ahead Market (DAM) close for OD 2/17/2021
2/17/2021 08:46	ENGIE canceled Self-Arrangement for OD 2/18/2021 via MMSUI
2/17/2021 08:48	ENGIE canceled AS-trade for OD 2/18/2021 via MMSUI
2/17/2021 09:52	ENGIE submitted AS-trade for OD 2/20/2021 via API (VIRIDITY did not submit AS-trade)
2/17/2021 10:00	DAM close for OD 2/18/2021
2/18/2021 06:35	ENGIE canceled Self-Arrangement for OD 2/19/2021 via API
2/18/2021 06:38	ENGIE canceled AS-trade for OD 2/19/2021 via API
2/18/2021 10:00	DAM close for OD 2/19/2021

As reflected by the table above, as of February 15, Engie properly reported its RRS obligation as self-arranged and submitted its trades with Viridity for all the dates during the February 16-19 time-period. However, Viridity did not submit a matching trade with Engie for any of the dates at issue. On February 15, Engie learned that the trade it reported for February 16 was not valid. Engie contacted Viridity about the trade mismatch and Viridity asserted that it could not schedule their trades for February 16 or any subsequent date until ERCOT recalled its RRS deployment from February 15. Beginning on February 16, Engie proceeded to cancel each report of self-arrangement and corresponding trade submitted for the February 17-19 time-period on the date before each of the applicable operating days. During the February 16-19 time-period, Viridity's Load Resources remained off-line and Viridity's telemetry and Current Operating Plans (COPs) submitted for its Load Resources reflected a resource status code of "OUTL." Engie claims that it called the ERCOT control room on February 15 and asked for guidance on how to report its RRS obligation. Engie complains that ERCOT's control room operator did not offer guidance regarding how it should schedule RRS trades during the multi-day RRS deployment.

Engie's ADR filing alleged damages in the amount of $54,000,000.00. However, information provided subsequently by Engie asserts that it incurred the following costs for the February 16-19 time-period relating to RRS:[2]

Feb. 16	$11,606,260.50
Feb. 17	$13,447,634.00
Feb. 18	$13,399,514.00
Feb. 19	$10,199,218.00
TOTAL:	$48,652,626.50

Engie filed a settlement and billing dispute regarding the issues in this ADR, which ERCOT denied. Engie filed this ADR challenging the denial of its settlement and billing dispute.

ERCOT's Disposition/Reasoning:

ERCOT has determined that the appropriate disposition of this ADR proceeding is to deny Engie's request for relief.

RRS is an Ancillary Service that is intended to resolve frequency decay or deviation, provide back-up regulation, and provide energy or continued Load interruption during an Energy Emergency Alert (EEA).[3] To meet the requirements in ERCOT's Ancillary Service Plan, ERCOT assigns each QSE that represents an LSE an obligation to provide Ancillary Services, including RRS, as needed for every hour of each day based on the LSE's Load Ratio Shares (LRSs).[4] A QSE that has an obligation to provide RRS for a particular hour must provide the RRS itself or make arrangements for another Entity to provide it (these options are referred to as "self-arrangement") or ERCOT will procure the assigned amount of RRS in the DAM on the QSE's behalf.[5] If ERCOT procures RRS on behalf of a QSE that did not self-arrange to meet its obligation, then the QSE will be assessed charges to off-set the cost of procuring the service in the DAM.[6]

Engie was permitted under ERCOT Protocols to self-arrange all or a portion of its 27 MW RRS obligation through the use of an Ancillary Service (A/S) trade.[7] However, on the day before the obligation, Engie was required to indicate before 10:00 the extent to which its RRS obligation was self-arranged so that ERCOT could determine how much RRS it needed to obtain in the DAM.[8] By 2:30, on the day before the obligation, both Engie and Viridity were required to confirm the trade

[2] The costs alleged for February 16 consist of failure to provide charges and appear to be correct. The costs at issue for February 17-19 consist of increased net total costs for RRS and these amounts do not match the amounts reflected by ERCOT's data. ERCOT's initial review of the alleged costs for February 16-19 reflects a total amount of approximately $47.7 million. Because ERCOT has determined that Engie's claims should be denied, this Market Notice does not provide a detailed analysis of the methods of calculating the alleged damages. It should also be noted that if Engie's ADR were granted, then Viridity's settlement would need to be adjusted to add A/S imbalance charges that were not assessed because there was no valid trade submitted for the time-period at issue.

[3] ERCOT Protocols § 2.1 (definition of Responsive Reserve).

[4] *See id.* at § 4.2.1.2(1).

[5] *See id.* at §§ 4.4.7.1(1) and 4.4.7.1(8).

[6] *See id.* at §§ 6.4.9.1.3(1); 6.4.9.1.3(3); and 6.7.4(1).

[7] *See id.* at §§ 4.4.7.1(1) and 4.4.7.1(6).

[8] *Id.* at § 4.4.7.1(2).

before the trade would be considered valid and used in ERCOT processes.[9] ERCOT was required to procure RRS to cover Engie's obligation if Engie did not properly report that its obligation was self-arranged.[10]

Engie's trade with Viridity was not properly reported for its RRS obligation on February 16 because, though Engie reported the obligation for that date as self-arranged and submitted the trade, Viridity did not submit a matching trade. As a result, the trade was invalid and could not be used by ERCOT.[11] Because there was no valid A/S trade submitted, the obligation to provide RRS remained with Engie and was not transferred to Viridity.[12] On the date before each of the other applicable operating days, Engie canceled its report of self-arrangement and canceled the A/S trades it had submitted for the February 17-19 time-period. Engie therefore failed to properly report that its RRS obligations were self-arranged and failed to submit trades for February 17-19. Given the circumstances, ERCOT procured RRS on Engie's behalf in the DAM for the February 17-19 time-period.[13]

Engie asserts that ERCOT received the benefit of Engie's RRS obligation because Viridity's Load Resources were deployed on February 15 and remained deployed until February 19, effectively providing the RRS. However, this argument ignores the fact that Engie's actions affected the market and settlement of other QSEs regarding ERCOT's RRS procurement for that time-period. If Engie's ADR were granted, it would result in increased costs being invoiced to all other QSEs for whom ERCOT procured RRS in the DAM to make up for Engie's share of the total RRS costs for February 17-19.[14] Further, the information submitted to ERCOT during the deployment contradicts the characterization that Viridity's Load Resources were subject to an RRS deployment during the February 16-19 time-period. After February 16 at 12:01, Viridity did not show any RRS obligation in the real-time telemetry submitted on behalf of any of its Load Resources. The COPs submitted by Viridity during that time-period also did not reflect that the Load Resources were subject to RRS obligations as required by ERCOT Protocols.[15]

Engie's allegations regarding phone communications with the ERCOT control room do not provide a valid basis for Engie's claim. It is not the ERCOT control room operator's responsibility to direct Market Participants on how to manage their offers or trades during an Emergency Condition. Engie was responsible for understanding how to properly document its RRS trade with Viridity in MMS.[16] The DAM and ERCOT's systems were functioning properly – the market was not suspended or restarted during the dates at issue.[17] There were other QSEs representing Load

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[9] *Id.* at § 4.4.7.3.1(2).

[10] *Id.* at § 4.4.7.1(7).

[11] *Id.* at § 4.4.7.3.1(2).

[12] *See id.* at § 4.4.7.3(1)("An Ancillary Service Trade is the information for a QSE-to-QSE transaction that transfers an obligation to provide Ancillary Service capacity between a buyer and a seller.")

[13] *See id.* at § 4.4.7.1(7).

[14] Granting Engie's ADR would also increase the total amount of RRS costs for February 16 to be invoiced amongst the other QSEs because the failure to provide charges paid by Engie for that date were deducted from that total RRS amount. ERCOT would have to recalculate the total RRS procurement amount for February 16 and invoice the other QSEs for their share of the increased amount.

[15] *See id.* at § 4.4.7.4(3)("By 1430 in the Day-Ahead, the QSE must notify ERCOT, in the QSE's COP, which Resources represented by the QSE will provide the Ancillary Service capacity necessary to meet the QSE's Ancillary Service Supply Responsibility, specified by Resource, hour, and service type.")

[16] *See* 16 TAC § 25.503(f)(1)("Each market participant shall be knowledgeable about ERCOT procedures.")

[17] *See generally id.* at § 25 (describing the procedures for Market Suspension and Restart).

Resources who were similarly deployed on February 15 for RRS and required to remain off-line during February 16-19 who properly submitted offers into DAM for RRS and were compensated accordingly for those dates. Further, the relevant control room recordings do not reflect ERCOT instructing Engie to cancel its self-arrangement report or that it should not submit its trades with Viridity into MMS. Even if ERCOT had incorrectly advised Engie on how to report self-arrangement or submit its trades with Viridity, that conversation with the ERCOT control room would not relieve Engie of its RRS obligations.[18]

Engie has not demonstrated that ERCOT violated any obligation under the ERCOT Protocols or other applicable law.[19] As a result, the claims asserted by Engie are denied. This Market Notice serves to conclude the ADR proceedings between ERCOT and Engie.

CONTACT: If you have any questions, please contact your ERCOT Account Manager. You may also call the general ERCOT Client Services phone number at (512) 248-3900 or contact ERCOT Client Services via email at ClientServices@ercot.com.

[18] *See* 16 TAC § 25.503(i)(6)("A market particpant may freely communicate informally with ERCOT employees, however, the opinion of an individual ERCOT staff member not issued as an official interpretation of ERCOT pursuant to this subsection may not be relied upon as an affirmative defense by a market participant.")

[19] ERCOT Protocols Section 20.1(1) provides that the ADR procedure only applies to a "claim by a Market Participant that ERCOT has violated or misinterpreted any law, including any statute, rule, Protocol, Other Binding Document, or Agreement, where such violation or misinterpretation results in actual harm, or could result in imminent harm, to the Market Participant."

Attachment B – ERCOT Market Notice (Viridity)

NOTICE DATE: February 11, 2022

NOTICE TYPE: M-A050720-01 Legal

SHORT DESCRIPTION: Resolution of ADR Proceedings between ERCOT and Viridity Energy Solutions, Inc. (ADR No. 2021-VES-01)

INTENDED AUDIENCE: Market Participants

DAY AFFECTED: February 16-19, 2021

LONG DESCRIPTION: Upon ERCOT's determination of the disposition of an Alternative Dispute Resolution (ADR) proceeding, ERCOT Protocol Section 20.9 requires ERCOT to issue a Market Notice providing a description of the relevant facts, a list of the parties involved in the dispute, and ERCOT's disposition of the proceeding and reasoning in support thereof.

Parties: ERCOT and Viridity Energy Solutions, Inc. (Viridity). Viridity identified Engie Energy Marketing NA, Inc. (Engie) as an affected party.[1]

Relevant Facts:

Viridity is a Qualified Scheduling Entity (QSE) that represents Resource Entities that are Load Resources. On February 15, 2021, Viridity's Load Resources had a Responsive Reserve (RRS) responsibility of approximately 124.7 Megawatts (MW).[2] On that day, at around 1:10 a.m., ERCOT instructed Viridity to deploy its Load Resources that were carrying an RRS responsibility.[3] Viridity responded by deploying approximately 75 MW of Load Resources.[4] Because the Load Resources were deployed during Emergency Conditions, they were required to remain off-line until recalled.[5]

When the Load Resources were deployed on February 15, Viridity's submissions in ERCOT's systems did not reflect that the Load Resources had any RRS responsibilities for February 16-19. After deployment, Viridity did not submit any trades and did not offer into the Day Ahead Market (DAM) to provide RRS for February 16-19. Viridity's Current Operating Plans (COPs) and telemetry submitted during February 16-19 did not reflect any RRS responsibility. Viridity's COPs and

[1] Viridity and Engie were parties to an agreement relating to Responsive Reserve (RRS) obligations during the dates at issue.

[2] According to telemetry, Viridity's Load Resource RRS responsibilities for all intervals on February 15 typically ranged from around 117 to 124.7 MW.

[3] The deployment instructions were communicated via Extensible Markup Language (XML) to QSEs representing Resource Entities that are Load Resources with RRS responsibilities. Around 2:09 a.m., ERCOT sent an electronic instruction recalling the Load Resources but then re-sent an instruction around 4:17 a.m. confirming that the Load Resources were deployed. The last electronic dispatch instruction Viridity received for the dates at issue was on February 15 at around 11:32 p.m. instructing the Load Resources to deploy until February 16 at around 11:59 p.m. It appears that Viridity's telemetry resulted in ERCOT's Ancillary Services Manager application not sending further electronic dispatch instructions for the subsequent dates at issue.

[4] The specific MW amounts that Viridity's telemetry reported as deployed during February 15 varied by interval but generally ranged around 74-80 MW.

[5] *See* ERCOT Protocols § 6.5.7.6.2.2(8).

telemetry for the Load Resources at issue reflected a Resource status code of "OUTL" during those dates. On February 19, at 9:00 a.m., ERCOT recalled the deployment of all Load Resources as it moved from Energy Emergency Alert (EEA) Level 3 to EEA Level 2.

Viridity complains that, although its Load Resources remained off-line during February 16-19, 2021, it was not compensated as providing RRS for that time period. Viridity argues that it did not submit offers to provide RRS into the DAM because it believed such an offer would give ERCOT's Energy and Market Management System (EMMS) a false impression that the Load Resources were available if selected in the DAM. Viridity arranged a conference call with ERCOT on February 18 to discuss whether its Load Resources could restore Load. Viridity complains that during the call ERCOT did not advise that it could submit offers in the DAM to provide RRS by the Load Resources that were off-line at the time.

Viridity filed settlement and billing disputes regarding the RRS deployment which ERCOT denied because Viridity did not submit offers in the DAM to receive compensation for providing RRS.[6] Viridity initiated this ADR to challenge the denial of its settlement and billing dispute and claims its damages could range from $67.4 million (based on market clearing prices of $9,000 per MWh), up to $140.55 million (based on published DAM Clearing Prices for RRS) for those dates.[7]

ERCOT's Disposition/Reasoning:

ERCOT has determined that the appropriate disposition of this ADR proceeding is to deny Viridity's request for relief.

RRS is an Ancillary Service that is intended to resolve frequency decay or deviation, provide back-up regulation, and provide energy or continued Load interruption during an EEA.[8] There are two market processes through which a QSE representing a Resource Entity that has a Load Resource may seek compensation from the ERCOT market for providing Ancillary Services: 1) through an offer submitted in the DAM; or 2) an offer submitted in a Supplemental Ancillary Service Market (SASM).[9] An offer to provide an Ancillary Service (A/S), like RRS, is only valid if ERCOT determines that it meets the requirements of the Protocols.[10] If a QSE seeks to provide RRS through the DAM, it must submit the offer to ERCOT by 1000 in the Day-Ahead.[11] A valid offer to provide RRS through a SASM must be submitted before the applicable deadline set by ERCOT for that SASM.[12] A valid A/S offer submitted in the DAM or a SASM must include several different categories of

[6] Viridity filed two settlement and billing disputes based upon the same facts under two different charge type codes. Those settlement and billing disputes have been consolidated into one ADR because they involve the same underlying facts and issues.

[7] Because ERCOT has determined that Viridity's claims should be denied, this Market Notice does not analyze the method of calculating the alleged damages, but it should be noted that if damages were granted, any award would have to be reduced by the amount of Ancillary Service Imbalance Charges that would have been assessed for all hours during which the Load Resources were deployed for RRS. Because Viridity did not submit any offers in the DAM or report any trades for RRS indicating that it was carrying an RRS responsibility during the time-period at issue, it avoided incurring the Ancillary Service Imbalance Charges associated with an RRS deployment.

[8] ERCOT Protocols § 2.1 (definition of Responsive Reserve).

[9] *Id.* at § 4.4.7.2(1)-(2). ERCOT notes there were no SASMs issued in the time widow of February 16-19, consequently this option was not available to Viridity.

[10] *Id.* at § 4.4.7.2.2(1).

[11] *Id.* at § 4.4.7.2(2).

[12] *Id.* at § 4.4.7.2.1(2).

the information listed in the ERCOT Protocols.[13] ERCOT validates all offers to provide A/S and notifies the submitting QSE if the offer was rejected or invalid.[14] If notified that an offer was rejected or invalid, "the QSE may then resubmit the offer within the appropriate market timeline."[15]

A QSE that represents a Resource must submit a COP to ERCOT which reflects the expected operating conditions for each of its Resources for each hour in the next seven Operating Days.[16] A QSE must update its COP reflecting changes in availability as soon as reasonably practicable, but in no event later than 60 minutes after the event that caused the change.[17] A valid COP must include certain information, including the expected Resource status for each hour and the Resource's Ancillary Service Resource Responsibility capacity in MW for RRS as well as other types of Ancillary Services.[18] If a QSE has an A/S responsibility, by 1430 the QSE must submit a COP notifying ERCOT which Resources will provide the capacity necessary to meet the QSE's A/S Supply Responsibility, specified by Resource, hour, and service type.[19] A QSE representing a Resource Entity that has a Load Resource that has an RRS responsibility must reflect a Resource status code of "ONRL" for all times that it carries an RRS responsibility both before and during deployment.[20]

QSEs have similar obligations regarding the Real-Time telemetry they are required to submit to ERCOT. For example, a QSE representing a Resource Entity that has a Load Resource must provide telemetry for each Load Resource which includes: Load Resource net real power consumption (in MW); Low Power Consumption (LPC); Maximum Power Consumption (MPC); A/S Schedule (in MW) for each quantity of RRS and Non-Spin, which is equal to the A/S Resource Responsibility minus the amount of A/S deployment; A/S Resource Responsibility (in MW) for each quantity RRS and Non-Spin for all Load Resources; and the Resource Status.[21] If deployed for RRS, within one minute following a deployment instruction, the QSE must update the telemetered Ancillary Service Schedule for RRS to reflect the deployment amount for the Load Resources.[22]

When Viridity's Load Resources were deployed on February 15, it had a couple of options for how to manage the possibility of its Load Resources being required to remain off-line for subsequent days after deployment. It could have submitted a trade or an offer in the DAM to provide RRS for February 16-19 (in which case it would reflect a Resource status of "ONRL") or it could have elected to remain off-line without submitting a trade or an offer seeking compensation from the market (in which case it would reflect a Resource status code of "OUTL").[23] In this case, Viridity remained off-line and submitted a Resource status of OUTL.[24] Viridity claims that it should be

[13] *Id.* at § 4.4.7.2.1(1)(a)-(h).
[14] *Id.* at § 4.4.7.2.2(1)-(3).
[15] Id. at § 4.4.7.2.2(3).
[16] *Id.* at § 3.9.1(1). A QSE must also provide an updated COP when it submits an offer to provide Ancillary Services in the DAM. *Id.* at § 4.3(1)(a).
[17] *Id.* at § 3.9.1(2)-(3).
[18] *Id.* at § 3.9.1(5)(a)-(g).
[19] *Id.* at § 4.4.7.4(3).
[20] *See id.* at § 3.9.1(5)(b)(iii)(E).
[21] *Id.* at § 6.5.5.2(5)(a)-(m).
[22] *Id.* at § 8.1.1.4.2(1)(a).
[23] These options would only apply in the context of a Non-Controllable Load Resource.
[24] There are reasons that a QSE that has been deployed might not submit a trade or seek compensation by offering to provide RRS in the DAM or a SASM for subsequent days and instead remain off-line with an "OUTL" status. For

compensated for providing RRS on February 16-19, but Viridity did not submit an offer to provide RRS in the DAM for the dates at issue, as was necessary under the ERCOT Protocols, to receive compensation from the ERCOT market. The DAM was functioning properly – it was not suspended or restarted during the dates at issue.[25] Further, Viridity's contention that it was carrying an RRS responsibility on February 16-19 is contrary to the information it submitted to ERCOT through COPs and telemetry during those dates, which reflected a Resource status of "OUTL" instead of "ONRL."

Viridity complains that certain Protocol language regarding RRS deployment does not clearly describe the options that were available. Viridity specifically identifies ERCOT Protocols Section 6.5.7.6.2.2(8), which provides:

> Once RRS is deployed, the QSE's obligation to deliver RRS remains in effect until specifically instructed by ERCOT to stop providing RRS. However, except in an Emergency Condition, the QSE's obligation to deliver RRS may not exceed the period for which the service was committed.

The above language reflects that, in an Emergency Condition,[26] a QSE representing Resource Entities that are Load Resources that have been deployed for RRS may not restore Load until recalled by ERCOT.[27] Even if a QSE's Load Resources are not carrying an RRS responsibility during a given hour, if necessary to preserve reliability, ERCOT may instruct the Load Resource to remain off-line until conditions improve.[28] For example, if a QSE representing a Resource Entity's Load Resources offered to provide RRS for only one hour on a given day and was deployed during that hour, in an Emergency Condition, the Load Resources might be required to remain off-line for the remaining hours of the day if necessary. When a QSE representing a Resource Entity's Load Resources assumes an RRS responsibility, there is a risk that if an Emergency Condition occurs the Load Resources may be deployed and required to remain off-line longer than the QSE anticipated. Further, if an Emergency Condition rises to EEA Level 3, Load Resources may be subject to Load shed, the same as any other Load on the ERCOT System, to preserve reliability.

ERCOT acknowledges that the Protocol language in Section 6.5.7.6.2.2(8) could be improved to provide more explicit description of the options a QSE representing a Resource Entity's Load Resources has for subsequent days after deployment during an Emergency Condition (to submit trades or offers in the DAM or a SASM or to voluntarily remain off-line).[29] However, the fact that Protocol language could be clearer does not support granting this ADR.[30] All Market Participants

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example, by not assuming an RRS responsibility through the DAM or a trade, the QSE would avoid incurring A/S Imbalance Charges for the hours that it must remain off-line beyond its original RRS responsibility. Also, a QSE's deployment might occur after the deadline to offer into the DAM for the next day has passed.

[25] *See generally id.* at § 25 (describing the procedures for Market Suspension and Restart).

[26] Emergency Condition is defined as "An operating condition in which the safety or reliability of the ERCOT System is compromised or threatened, as determined by ERCOT." ERCOT Protocols § 2.1.

[27] There are different types of Resources that deliver RRS in different ways. The phrase "deliver RRS" as used in this section should be interpreted as "remain off-line" in the context of Non-Controllable Load Resources providing RRS.

[28] *See id.* at § 6.5.9.1(2)("It is anticipated that, with effective and timely communication, the market-based tools available to ERCOT will avert most threats to the reliability of the ERCOT System. However, these Protocols do not preclude ERCOT from taking any action to preserve the integrity of the ERCOT System.")

[29] ERCOT has begun preparing a Nodal Protocol Revision Request (NPRR) to address the issue.

[30] *See* 16 TAC § 25.503(f)(11)(providing that the NPRR process or formal Protocol interpretation process are the appropriate procedures to resolve issues arising from Protocol language that is unclear.)

share in the obligation to ensure that Protocol language is clear and consistent.[31] Moreover, there were other QSEs representing Load Resources who were similarly deployed on February 15 for RRS and required to remain off-line during February 16-19 who submitted offers into DAM for RRS and were compensated accordingly for those dates. These other QSEs presumably understood the Protocol language regarding how to receive compensation under the circumstances.

Viridity complains that ERCOT failed to accurately account for "electricity production and delivery" as required under the Protocols and the Public Utility Regulatory Act (PURA). ERCOT settled Viridity in accordance with the Protocols and the data submitted by Viridity pursuant to its obligations. As a result, ERCOT does not find that it failed to properly account for the production or delivery of electricity as asserted by Viridity.

Viridity complains that, during a conference call on February 18 between ERCOT and Viridity, ERCOT did not provide clear guidance regarding Viridity's options. Even if ERCOT provided imperfect advice during the call, that conversation would not affect the resolution of this ADR.[32] Viridity was responsible for understanding its obligations under the ERCOT Protocols.[33] Moreover, the call occurred on February 18 at 11:00 a.m., after the deadline to submit offers in the DAM for the dates at issue had passed.

Viridity has not demonstrated that ERCOT violated any obligation under the ERCOT Protocols or other applicable law.[34] As a result, the claims asserted by Viridity are denied. This Market Notice serves to conclude the ADR proceedings between ERCOT and Viridity.

CONTACT: If you have any questions, please contact your ERCOT Account Manager. You may also call the general ERCOT Client Services phone number at (512) 248-3900 or contact ERCOT Client Services via email at ClientServices@ercot.com.

[31] *See id.* at § 25.503(f)(12)("All market participants must cooperate with the ERCOT subcommittees, ERCOT staff, and the commission staff to develop Protocols that are clear and consistent.")

[32] *See* 16 TAC § 25.503(i)(6)("A market participant may freely communicate informally with ERCOT employees, however, the opinion of an individual ERCOT staff member not issued as an official interpretation of ERCOT pursuant to this subsection may not be relied upon as an affirmative defense by a market participant.")

[33] *See* 16 TAC § 25.503(f)(1)("Each market participant shall be knowledgeable about ERCOT procedures.")

[34] ERCOT Protocols Section 20.1(1) provides that the ADR procedure only applies to a "claim by a Market Participant that ERCOT has violated or misinterpreted any law, including any statute, rule, Protocol, Other Binding Document, or Agreement, where such violation or misinterpretation results in actual harm, or could result in imminent harm, to the Market Participant."

Attachment C – ERCOT *COP Practice Manual*

ERCOT BUSINESS PRACTICE

CURRENT OPERATING PLAN PRACTICES BY QUALIFIED SCHEDULING ENTITIES

Version 2.4

Document Revisions

Date	Version	Description	Author(s)
5-31-10	0.1	Initial draft	Bob Spangler/ Floyd Trefny
6-15-10	0.2	Incorporated comments from ERCOT Market Trials Team	Bob Spangler/ Floyd Trefny
7-22-10	1.0	Incorporated written comments received from 5 Market Participants and from the NATF meeting on 7-8-10 and from ERCOT Market Trials Team on 7-22-10	Bob Spangler/Floyd Trefny
8-10-10	1.1	Revised Section 3.2, COP Reporting for Combined Cycle Trains, first bulleted ¶ to indicated a COP reported Resource Status of either OFF or OUT may be used.	Bob Spangler
11-16-10	1.2	Update the Business Practice to describe COP reporting requirements for Quick Start Generation Resources as described in Nodal Protocols as revised by NPRR272. Added clarification language for Resource Status codes ONEMR and EMR.	Bob Spangler
11/29/10	1.21	Incorporate Resmi Surendran comments in Section 3.5 and Section 4 table entries.	Bob Spangler
12/13/2010	1.22	Incorporate ERCOT Management comments to version 1.21	Bob Spangler
12/15/2010	2.0	Final draft for updates to: 1. add the QSGR guidance, and 2. clarify the use of ONEMR and EMR Resource Status Codes.	R Spangler
1/20/2011	2.0	Approved for Public Release	RGS
8/27/2012	2.1	Updated for NPRR 348, section 4."Specific COP Protocol Requirements and ERCOT Expectations". Updated COP Resource Status Expectations for the following COP Statuses (ON, ONTEST, OFF)	Jimmy Hartmann/Sandip Sharma
2/23/2017	2.2	Updated Section 3.1 to capture NPRR 785 implementation	Pengwei Du, Nick Steffan, Nitika Mago

6/16/2017	2.3	Updated Section 3.5 and the appendix to capture Protocol changes. The revision also includes additional cleanup items.	S. Krein, A. Townsend D. Maggio
2/20/2019	2.4	Update Section 3.6 and appendix to capture NPRR901	J. Chen

PROTOCOL DISCLAIMER

This Business Practice describes ERCOT Systems and the response of these systems to Market Participant submissions incidental to the conduct of operations in the ERCOT Texas Nodal Market implementation and is not intended to be a substitute for the ERCOT Nodal Protocols (available at http://www.ercot.com/mktrules/nprotocols/, as amended from time to time. If any conflict exists between this document and the ERCOT Nodal Protocols, the ERCOT Nodal Protocols shall control in all respects.

APPROVED

Title: Director System Operations

Name: Dan Woodfin

Date: 5/16/2019

Title: Director Wholesale Market Design & Operations

Name: Joel Mickey

Date: 5/16/2019

Contents

1. Background and Purpose

Consistent with the ERCOT Nodal Protocols, the term "Resource" is used throughout this document, without qualification, to refer to both a Generation and Load Resources. Nodal Protocol Subsection 3.9 (1) requires each Qualified Scheduling Entity (QSE) representing Resources to submit a Current Operating Plan (COP). Protocol Section 3.9 includes the following requirements:

- The QSE must reflect in its COP the expected operating conditions for each Resource (including RMR, Black Start Units, Qualifying Facilities (QF), etc) that it represents for each hour in the next seven Operating Days [Subsections 3.9 (7) and (8) and 3.9.1 (1) and (2)].
- The QSE must update its COP to reflect changes in availability of any Resource as soon as reasonably practicable, but in no event later than 60 minutes after the event that caused the change [Subsection 3.9.1 (2)].
- The QSE must notify ERCOT, by means of the COP, of its plans to have a Resource On-Line by using the Resource Status codes listed in Section 3.9.1, Current Operating Plan (COP) Criteria. To reflect changes to a Resource's capability, each QSE is required to report by exception, changes to the COP for all hours after the Operating Period through the rest of the Operating Day [Subsection 3.9 (5)]. When a QSE updates its COP to show changes in Resource Status, the QSE shall update for each On-Line Resource, either an Energy Offer Curve under Section 4.4.9, Energy Offers and Bids, or Output Schedule under Section 6.4.2, Output Schedules [Subsection 3.9 (6)].

Real Time telemetry provides information for the Operating Hour. COP entries always refer to forward hours beginning in the Operating Day with the prompt hour (the hour immediately following the Operating Period) and extending to all hours in the following six Operating Days (for a total of seven Operating Days). For these hours, the COP entries are determined solely by the QSE. The assignment of Resource Status, the operating parameters, High Sustained Limit (HSL), Low Sustained Limit (LSL), High Emergency Limit (HEL), Low Emergency Limit (LEL), and Ancillary Service Resource Responsibilities is expected to be consistent with the

QSE's expected or anticipated operating conditions for each Resource in each hour of the COP reporting period.

The purpose of this document is to communicate to the QSEs, ERCOT's expectations regarding COP entries based on the usage of the COP data by the various ERCOT market and operations systems. The COP is an artifact created in the ERCOT Nodal Protocols that belongs wholly to the QSE, consequently, ERCOT does not proscribe COP entries made by QSE and it is not the intention of this document to do so.

2. Principles and Definitions

1. ERCOT expects each QSE to submit a COP that is based on the QSE's best estimate of the anticipated or expected operating conditions of each of its Generation Resources and Load Resources in each of the hours covered by the updated COP. The nature of the Protocol requirements related to the COP timeline and content suggests that each QSE should have an operator task that periodically (e.g. top of the hour) requires the operator(s) to review and update the COP.
2. QSEs are responsible for notifying ERCOT of a change in Resource Status (availability) via telemetry and through changes in the current COP as soon as practicable following the change [Protocol Subsection 6.5.5.1 (1)] but in no event later than 60 minutes after the event that caused the change.
3. QSE are responsible for assuring that COP entries and Outage Scheduler entries are consistent and meet Protocol requirements.
4. A Generation Resource is "unavailable" if that Generation Resource is unable to start or synchronize to the ERCOT Transmission Grid due to a physical or regulatory impairment. For example, a Generation Resource can be unavailable because it or the associated transmission equipment necessary to interconnect the Generation Resource to the grid is undergoing an outage. In other words, a Resource may be "unavailable" because of a forced or maintenance outage, 100% fuel curtailment, or emissions limit exceedance, or other impairments to operation as determined by the QSE or Resource Owner.
5. A Load Resource is "unavailable" if it is not available for dispatch as determined by the Load Resource Owner and its QSE.

6. A Resource is "available" if it is not "unavailable".
7. COP entries are used in ERCOT system applications for study periods that include the COP reporting period. These applications include Resource Adequacy Reporting, all Reliability Unit Commitment (RUC) studies (DRUC, HRUC and WRUC) and Network Security Analysis with extended time horizons (e.g. studies that are related to voltage support, dynamic system response, etc).
8. If a Generation Resource is offered into the DAM, the DAM will honor the Generation Resource's temporal constraints including start times. The DAM implementation includes logic to initialize, for each Generation Resource, the startup temporal conditions at the beginning of the DAM study period (HE0001). The initialization logic implementation relies on EMS and COP Resource Status entries to determine the applicability of a temporal constraint for hours preceding HE0001.
9. Generation Resources with start times longer than 24 hours must be on-line prior to HE0001 for their Three Part Offer (3PO) to be considered in the DAM optimization.
10. The HRUC process will honor available Generation Resource temporal constraints, including start times. The HRUC implementation includes logic to initialize, for each Generation Resource, the startup temporal conditions at the beginning of the HRUC study period. HRUC relies on the Resource operating history from EMS for On-Line and Off-Line times to initialize Resource temporal constraints. HRUC uses the COP entries to determine the Resource Status during the HRUC study period. Protocols require the QSE to notify ERCOT that it plans to have a Resource On-Line by using the Resource Status codes for the COP. Similarly, Protocols require the QSE to request a Resource decommitment for the remaining hours in the Adjustment Period using the Resource Status codes in the COP. QSEs may also call ERCOT and request a decommitment if the decommitment is to occur in the Operating Period. In the Operating Period, if a QSE desires to change a Resource's Ancillary Service Resource Responsibility, that responsibility can only be transferred, with the verbal concurrence of ERCOT, within the QSE's Resource portfolio. If approved by ERCOT, the QSE is required to update both its Real Time telemetry (Resource Status, AS Resource Responsibility, AS Schedule and any Participation Factors) and its COP, for future hours as necessary, to show the AS move.

11. ERCOT uses the information provided in the COP to calculate the High and Low Ancillary Service Limits (HASL and LASL) for each Resource including Load Resources in all of the RUC processes [Protocol subsection 3.9 (2)].
12. ERCOT uses the HSL and LSL Resource capability reported in the COP during the validation of DAM Resource Energy Offer Curves and Ancillary Service Offers. While the Resource Status reported in the COP is not used in the DAM, Resources reported as being OFF in a COP reporting hour that are offered in the DAM for that hour must have Resource capability entries consistent with the QSE DAM energy or Ancillary Service offers.

3. Discussion and ERCOT Expectations

The Nodal Protocols provide the following definition of the COP in Section 2, "Definitions and Acronyms":

> "A plan by a QSE reflecting anticipated operating conditions for each of the Resources that it represents for each hour in the next seven Operating Days, including Resource operational data, Resource Status, and Ancillary Service Schedule."

Furthermore, the Section 3.9.1(1) requires the following:

> "Each QSE that represents a Resource must submit a COP to ERCOT that reflects expected operating conditions for each Resource for each hour in the next seven Operating Days."

Common to both of these statements in the Nodal Protocols is the idea that the COP represents the QSE's anticipated or expected operating conditions. The expectation is that the amount or level of uncertainty starts low and increases as the time horizon of the plan is extended. This distinction is important, for example, the ERCOT Day-Ahead Market (DAM) and the Day-Ahead and Hourly Reliability Unit Commitment (DRUC & HRUC) applications use data from the COP as needed for the remaining hours in the current Operating Day and next or prompt Operating Day while other applications such as Resource Adequacy Reporting, WRUC, and Outage Evaluation, use data extending beyond the prompt Operating Day to the last COP reporting hour. The ability of these applications to provide solutions that best represent the expected conditions during the study period of the

application is directly related to the QSE's diligence in keeping ERCOT informed of its current plans for the operation of its Resources during the COP reporting period.

The terms "availability, available, and unavailable" as used in the Protocols are intended to differentiate between Resources that can be operated versus those that cannot be operated because of a physical or regulatory impairment associated with the Resource itself, or the transmission equipment necessary to the interconnection of the Resource to the ERCOT Transmission Grid. The QSE is required to use the Resource Status in its COP to reflect the availability/unavailability of the Resource and provide the details concerning the nature and type of physical impediment to ERCOT through the Outage Scheduler. Generation Resource Outages extending longer than the COP timeframe are only reported in the Outage Scheduler. Consequently, for the COP, ERCOT interprets availability as follows: "A Resource is available if it is not unavailable".

The term "resource capability" as used in the Protocols is intended to describe the injection limits reflected by the Resource's HSL/LSL/HEL/LEL values. If the HSL/LSL/HEL/LEL values provided in the COP result from a Generation Resource derating, then the detail of the derating is provided to ERCOT through the Outage Scheduler. Generation Resource deratings that occur in Real Time are provided to ERCOT via telemetry of actual Generation Resource capability (i.e. the HSL/LSL/HEL/LEL telemetry values).

QSEs provide COPs to ERCOT through the MMS applications. QSEs also receive notices and other messages via MIS system for ERCOT detected errors in QSE submissions. Please see Appendix I, Selected Excerpts from MIS Business Requirements for Notices, Notifications, Alarms and Alerts Version 1.0 Applicable to Current Operating Plans for detail of error messages.

3.1. Intermittent Renewable Resources

Nodal Protocol 3.13 (1) requires ERCOT to produce forecasts of Renewable Production Potential for Wind-powered Generation Resources (WGRs) and PhotoVoltaic Generation Resources (PVGR) to be used as input into the Day-Ahead and Hour-Ahead Reliability Unit Commitment processes (DRUC and HRUC).

Additionally, Protocols require QSE's to provide a Resource Status in the COP reporting hours to indicate the availability of the WGR/PVGR and its LEL/LSL/HSL/HEL capability.

If the WGR/PVGR is available the expected Resource Status is either ON (indicating that the WGR/PVGR has submitted an EOC) or ONOS (indicating that the WGR/PVGR will operate under the Protocol provisions for a WGR/PVGR with/without an Output Schedule). A WGR/PVGR reporting a Resource Status OFF may be subject to a Reliability Unit Commitment Dispatch Instruction.

As described in Protocol 4.2.2 (1), ERCOT provides for each WGR a rolling Short Term Wind Power Forecast (STWPF) in the form of an hourly forecast for the next 168 hours. Also Protocol 4.2.3 (1) requires ERCOT to produce a Short-Term PhotoVoltaic Power Forecast (STPPF) every hour that provides a rolling 168-hour hourly forecast of PhotoVoltaic production potential for each PVGR.

Upon implementation of NPRR 785, per protocol 3.9.1 (8), for hours which fall within the 168 hour rolling window for forecasting, ERCOT will automatically update the HSL in the COPs for WGRs with the most recently updated STWPF and HSL values in COPs for PVGRs with the most recently updated STPPF. An Extensible Markup Language (XML) message will be sent every time when a WGR's or PVGR's COP HSL value is updated with the forecast value to its corresponding Qualified Scheduling Entity (QSE).

For hours which fall within the 168-hour rolling window for forecasting and have a forecast from ERCOT, QSEs for WGRs and PVGRs will only be able to update the COP HSL values with values that are lower than the most recent forecast for the resource. For any hour where a QSE update exists, ERCOT's automatic COP HSL update logic will retain the lower of the most recent forecast and the QSE's submitted HSL value.

QSEs that submit COPs for WGRs and/or PVGRs for hours which do not have a forecast from ERCOT, it is recommended that the resource's High Reasonability Limit (HRL) be used as its COP HSL value for these hours. Once these hours fall within the 168-hour rolling window for forecasting, ERCOT's systems will automatically start updating the COP HSL value with the most recent forecast for the resource.

Outages and de-rates should be first entered into the Outage Scheduler. Outages entered prior to a specific hour's adjustment period and that hour's forecast delivery will be taken into account, however outages later in the hour will not be. Given a scenario where the timing doesn't permit this, QSEs representing WGRs or PVGRs are required to adjust the

pre-populated COP and potentially its Resource Status in its COP to account for WGR/PVGR deratings or availability reductions due to outages not captured by STWPF/STPPF. Updates to COP entries represent the QSE's best estimate of the anticipated or expected deratings, expected meteorological, regulatory, and physical conditions for WGRs/PVGRs for the next 168 hours. Updates by the QSE to the forecasted HSL should not be necessary in the event of properly timed outages.

3.2. COP Reporting for Combined Cycle Trains (CCT)

In ERCOT, the CCT owner must submit a Resource Asset Registration Form to register each of the operating configurations that will participate in the ERCOT market as an individual Combined Cycle Generation Resource with a unique Resource ID (i.e. each of the CCT registered configurations are referred to a Combine Cycle Generation Resource (CCGR)). For those CCGRs that are injecting power into the ERCOT Grid, the COP is expected to show an appropriate On-Line Resource Status such as ON.

The following rules should be applied by the QSE when reporting the Resource Status for CCGR configurations in its COP:

- For those COP reporting hours that the QSE expects to commit a CCGR configuration, the QSE should show the committed CCGR configuration to be in an appropriate On-Line Resource Status (i.e. ON, ONREG, etc). All other CCGRs configurations in the CCT should be shown with a Resource Status of OFF or OUT, as appropriate to the CCGR configuration availability, in that hour.
- If the QSE does not intend to commit a CCT in a COP reporting hour, the CCGR configurations that are available should be reported in the COP as OFF and those CCGR configurations that are unavailable should be reported as OUT.
- If a CCGR configuration is RUC committed in a COP reporting hour, the QSE should show the Resource Status for the committed CCGR configuration as ONRUC. All other CCGR configurations should be reported as OUT in a RUC committed hour.

Application of the above rules will assure that the RUC process will not commit a different CCGR configuration in a RUC study period hour in which the QSE has indicated an

intention to commit a CCGR configuration. The protocol requirements for the decommitment of a Resource apply.

The QSE should report an appropriate Resource Capability (HSL/LSL/HEL/LEL) and Ancillary Service Responsibility in its COP in accordance with the guidelines described in Section 4 below. The QSE/CCT Owner for facilities with the ability to interconnect to either ERCOT or another Control Area must assure that the combined commitment of its Generation Resource capacity in each Control Area is not greater than the actual capability of the generation facility.

3.3. RUC Commitment for an Ancillary Service

For Resources that are committed in specific hours of an Operating Day by a RUC process for the purpose of meeting ERCOT System capacity requirements, the QSE must report a COP Resource Status of ONRUC in the commitment hours. In each RUC commitment hour the QSE must also report in its COP an Ancillary Service Resource Responsibility Capacity for each Ancillary Service equal to zero MW. Failure to do so will result in the COP update being rejected.

If the Resource is committed by a RUC process for the purpose of providing a specified Ancillary Service, the QSE must report a Resource Status of ONRUC in the commitment hours. In each RUC commitment hour the QSE must report in its COP the commitment specified Ancillary Service Resource Responsibility in the amount specified in the ERCOT RUC commitment. Failure to do so will result in the COP update being rejected. Resources that receive a RUC instruction to provide an Ancillary Service may not move that Ancillary Service (AS) Responsibility to another Resource or QSE during the RUC commitment period.

3.4. Reliability Must Run Resources

In accordance with Protocol Section 4.4.8, ERCOT shall decide when to make a Reliability Must Run (RMR) Unit available for commitment in the DRUC or HRUC. By 1430 hours in the Day Ahead ERCOT shall submit Three-Part Supply Offers based on the RMR Agreement and any other relevant information as provided under contract on behalf of RMR Units for any RMR Units to be considered in the DRUC or HRUC.

Because ERCOT is responsible for all RMR commitments, ERCOT requests that the QSE show a Resource Status of either EMR for all COP reporting hours during which the RMR is available or OUT in those hours in which the RMR is expected to be unavailable. QSEs comply with Protocol 4.3(2) ("By 0600 hours in the Day Ahead, each QSE representing RMR Units must indicate the availability of the RMR Units for the Operating Day") by updating their COP for the next Operating Day, by 0600 in the Day Ahead, to reflect the expected availability of the RMR Unit during the next Operating Day.

ERCOT shall notify the QSE representing a RMR Unit of any RMR Unit that is being committed by the DRUC or HRUC at the same time it notifies other Market Participants of the results of these processes. Within 1 hour of the notification, the QSE is expected to update the RMR COP Resource Status to ONRUC for commitments by the RUC processes.

In all hours for the COP reporting Period, the QSE should report LEL/LSL/HSL/HEL values consistent with the RMR Agreement, such as the specified RMR Capacity.

3.5. Quick Start Generation Resources Available For Deployment by SCED

Nodal Protocol Section 2.1 defines a Quick Start Generation Resource (QSGR) as Generation Resource that can come On-Line from a cold start state within ten minutes of receiving a notice or instruction from ERCOT. Before engaging in the activities described in this section, a Generation Resource must be qualified by ERCOT as a QSGR in accordance with Protocol Section 8.1.1.2, General Capacity Testing Requirements, paragraph (15).

A QSE may offer a QSGR into the ERCOT Day-Ahead Market in the same manner as it would offer any other Generation Resource into this market (i.e. by submitting a Three Part Supply Offer). If a QSGR Three Part Supply Offer is struck in the DAM, then all Nodal Protocol requirements related to a DAM awarded Three Part Supply Offer apply. For example, the QSGR committed by DAM may be eligible for a DAM make whole payment provided it is started by either the QSE, or a SCED Dispatch Instruction, if the QSGR is provided by the QSE for deployment by SCED during a DAM commitment period.

The QSE shall provide entries in its COP consistent with:

- a DAM award and its decision to operate the QSGR during the DAM committed hours, or
- the QSE's intent to provide the QSGR for deployment by SCED during a COP reporting hour.

A QSE may offer to sell Ancillary Services on a QSGR in the Day-Ahead Market or a Supplemental Ancillary Services Market, or may assign self-arranged Ancillary Service to a QSGR, subject to the following limitations:

- In any COP reporting hour in which the QSE expects to provide a QSGR for deployment by SCED in accordance with Protocol Section 3.8, Quick Start Generation Resources, the QSGR may not be assigned Regulation or Responsive Reserve AS Resource Responsibility in that hour;
- In any COP reporting hour in which the QSGR is assigned Off-Line Non-Spin AS Resource Responsibility ≤ (HSL –LSL) and the QSE expects to provide the QSGR for deployment by the SCED in that hour, the QSGR Resource Status shall be set to "OFFQS" and the Non-Spin AS Resource Responsibility shall be set to the QSE assigned amount of Off-Line Non-Spin AS Responsibility;
- In any COP reporting hour in which the QSGR is assigned Off-Line Non-Spin AS Resource Responsibility > (HSL-LSL) and the QSE expects to provide the QSGR for deployment by the SCED in that hour, the QSGR Resource Status shall be set to "OFFNS" and the Non-Spin AS Resource Responsibility shall be set to the QSE assigned amount of Off-Line Non-Spin AS Responsibility. This is required to avoid a COP validation error and does not restrict the ability of the QSE to provide this QSGR for deployment by SCED in the Operating Hour; and
- If the QSE does not intend to provide the QSGR for deployment by the SCED in accordance with Protocol Section 3.8, Quick Start Generation Resources during a COP reporting hour and the QSGR is assigned Non-Spin AS Resource Responsibility, the QSGR Resource status shall be set to "OFFNS" and the Non-Spin AS Resource Responsibility shall be set to the amount of Non-Spin AS assigned by the QSE.

Whether or not the QSE submits a Three Part Supply Offer for its QSGR in the Day-Ahead Market, the QSE may provide the QSGR for deployment during an Operating Hour in the Nodal Real-Time Market through the operation of SCED as described in Nodal Protocol 3.8.3; however, the Real-Time Settlement Intervals in which the QSGR was provided for SCED deployment are considered as QSE-Committed Settlement Intervals for purposes of Settlement and Billing.

For those hours in the COP reporting period during which the QSE intends to provide the QSGR for deployment by the SCED in accordance with Protocol Section 3.8.3, Quick Start Generation Resources, the QSE shall report the following in the COP:

- QSGR Resource Status set to "OFFQS" if the Non-Spin AS Responsibility is less than or equal to (HSL-LSL); or "OFFNS" if the Non-Spin AS Responsibility is greater than (HSL-LSL);
- LSL/HSL values set to the QSE's expected QSGR low and high sustained limits in the COP reporting hour;
- LEL/HEL values set to the QSE's expected QSGR capability at each of these limits (Note, LEL/HEL may equal LSL/HSL, respectively);
- Regulation and Responsive Reserve AS Resource Responsibility set to 0; and
- Non-Spin AS Resource Responsibility set to the amount of Non-Spin AS assigned to the QSGR by the QSE.

A QSE must submit and maintain an Energy Offer Curve for their QSGRs for each COP reporting hour in which the QSGR has an "OFFQS" or "OFFNS" Resource Status.

3.6. Switchable Generation Resources

Nodal Protocol Section 2.1 defines a Switchable Generation Resource (SWGR) as A Generation Resource that can be connected to either the ERCOT Transmission Grid or a non-ERCOT Control Area.

SWGRs are required to submit COPs just like all other Resources. Protocol Section 3.9.1, Current Operating Plan (COP) Criteria, requires each QSE representing a Resource to submit a COP for all hours for the next seven operating days to reflect the QSE's expected

operation of the Resource. A QSE representing a SWGR shall submit its COP for the hours to reflect its intentions to operate in ERCOT grid or in another grid.

If the QSE's intent is to operate the SWGR synchronized to ERCOT grid, the QSE shall submit its COP in the same manner of any other ERCOT Generation Resource, to reflect the Resource's On-Line status, as described in Protocol Section 3.9.1 (5) (b) (i).

If the QSE's intent is to operate the SWGR in another grid, the QSE shall submit its COP to report the status as "EMRSWGR", for the hours when the Resource operating in non-ERCOT grid.

If the QSE's intent is to operate the SWGR Off-Line, the QSE shall submit its COP as one of the following to reflect the Resource's Off-Line status: "OFFNS", "OFF", "EMR", as described in Protocol Section 3.9.1 (5) (b) (ii). Resource status code of OUT in COP should be used when the Resource is on outage.

As describe in Section 3.2, the QSE representing a Combined Cycle Train (CCT) is required to submit its COP for each Combined Cycle Generation Resource (CCGR) (i.e. each CCT operating configuration) in each operating hour, to reflect the intended operating conditions of CCT.

When a CCT is registered as SWGR, the QSE representing the CCT shall submit its COPs with the following rules:

- If the QSE intends to operate the CCT in a COP reporting hour, and the CCT is only synchronized to ERCOT grid, the QSE shall submit On-Line status (i.e. ON, ONREG, etc.) for the committed CCGR configuration, and OFF or OUT status for all other CCGR configurations, as appropriate to the CCGR configuration availability, in that hour.
- If the QSE intends to not operate the CCT in a COP reporting hour, either in ERCOT grid or non-ERCOT grid, the QSE shall submit OFF or OUT (during outage) status for its all CCGR configurations, as appropriate to the CCGR configuration availability, in that hour.
- If the QSE intends to operate the CCT in a COP reporting hour, and the CCT is only synchronized to non-ERCOT grid, the QSE shall submit:

- EMRSWGR for the CCGR configurations that are available but require switching back the part of CCT committed to non-ERCOT grids;
- OFF for the CCGR configurations that are available without switching back the parts of CCT committed to non-ERCOT grids;
- OUT for the CCGR configurations that are unavailable due to outages.

- If the QSE intends to operate the CCT in a COP reporting hour, part of the CCT is synchronized to ERCOT grid, and other part of the CCT is synchronized to non-ERCOT gird, the QSE shall submit:
  - On-Line status (i.e. ON, ONREG, etc.) for the CCGR configuration that is committed to operate in ERCOT grid in that operating hour;
  - EMRSWGR for the CCGR configurations that are available but require switching back the part of CCT committed to non-ERCOT grids;
  - OFF for the CCGR configurations that are available without switching back the parts of CCT committed to non-ERCOT grids;
  - OUT for the CCGR configurations that are unavailable due to outages.

4. Specific COP Protocol Requirements and ERCOT Expectations

Protocol Requirement	ERCOT Discussion	Resource Status Expectation	Resource Capability Expectation
2.0 Definitions			
Ancillary Service Schedule - The MW of each Ancillary Service that each Resource is providing in Real-Time and the MW of each Ancillary Service for each Resource for each hour in the Current Operating Plan (COP).		ERCOT expects the QSE to report, through its COP, the expected MW of each Ancillary Service that a Resource is required or expected to provide for each hour in the COP. Note: In accordance with Nodal Protocol requirements, Resources that are awarded Ancillary Service Resource Responsibility in the DAM or Resources that are designated as providing self-arranged Ancillary Service Resource Responsibility in the COP immediately preceding the DRUC are required to provide that service in each awarded hour of the Operating Day unless the QSE, subject to ERCOT concurrence, moves that Ancillary Service Resource Responsibility from the COP designate Resource to another Resource or QSE.	
Current Operating Plan (COP) - A plan by a QSE reflecting anticipated operating conditions for each of the Resources that it represents for each hour in the next seven Operating Days, including Resource operational data, Resource Status and Ancillary Service Schedule.			

Protocol Requirement	ERCOT Discussion	Resource Status Expectation	Resource Capability Expectation
Resource Status - The operational state of a Resource as provided in Section 3.9, Current Operating Plan (COP).			
3.9 Current Operating Plan (COP)			
(1) Each Qualified Scheduling Entity (QSE) that represents a Resource must submit a Current Operating Plan (COP) under this Section.			
(2) ERCOT shall use the information provided in the COP to calculate the High Ancillary Service Limit (HASL) and Low Ancillary Service Limit (LASL) for each Resource for the Reliability Unit Commitment (RUC) processes.	ERCOT RUC applications use the COP reported HSL less the total of On-Line Ancillary Service Resource Responsibility for Non-Spin, RRS, and Reg-Up to set the Resource's HASL during the RUC study periods. ERCOT RUC applications use the COP reported LSL plus On-Line Ancillary Service Resource Responsibility for Reg-Down to set the Resource's LASL during the RUC study periods.		
(3) ERCOT shall monitor the accuracy of each QSE's COP as outlined in Section 8, Performance Monitoring.			
(4) A QSE must notify ERCOT that it plans to have a Resource On-Line by means of the COP using the Resource Status codes listed in Section 3.9.1, Current Operating Plan (COP) Criteria, paragraph (4)(b)(i). The QSE must show the Resource as On-Line with a Status	Also, see the discussion for the ONRUC Resource Status.	The QSE is expected to use one of the Protocol designated Resource Status (see Protocol 3.9.1 (4)) for each hour in the COP reporting period that describes the planned/expected operation of each of its Resources. It is imperative that the expected availability	

Protocol Requirement	ERCOT Discussion	Resource Status Expectation	Resource Capability Expectation
of "ONRUC" or "ONOPTOUT" indicating a RUC process committed the Resource for all RUC-Committed Intervals. A QSE may only use a RUC-committed Resource during that Resource's RUC-Committed Interval to meet the QSE's Ancillary Service Supply Responsibility if the Resource has been committed by the RUC process to provide Ancillary Service. A Resource with a status of "ONOPTOUT" may use the Resource to meet the QSE's Ancillary Service Supply Responsibility.		of each Resource be accurately represented in the QSE's COP. During the Operating Day, the MMS validates changes to the COP against Resource Status, and Ancillary Service Resource Responsibilities for those hours in the current and next Operating Day.	
(5) To reflect changes to a Resource's capability, each QSE shall report by exception, changes to the COP for all hours after the Operating Period through the rest of the Operating Day.	ERCOT suggests that the phrase "report by exception" indicates that the QSE may update specific COP entries without having to resubmit the entire COP. The ERCOT Market Manager implementation is accomplished to accommodate updates for individual COP entries by Resource.		Resource capabilities reported in the COP are the HSL/LSL/HEL/LEL and the Ancillary Service Resource Responsibility values for each Resource. The HSL/LSL/HEL/LEL values are the QSE's expectation for the Resource's capability at each limit during the remaining hours in the Operating Day.
(6) When a QSE updates its COP to show changes in Resource status, the QSE shall update for each On-Line Resource, either an Energy Offer Curve under Section 4.4.9, Energy Offers and Bids, or Output Schedule under Section 6.4.2, Output Schedules.			
(7) Each QSE, including QSEs representing Reliability Must-Run (RMR) Units, or Black Start	The DRUC and HRUC applications are most sensitive to availability changes within		

Protocol Requirement	ERCOT Discussion	Resource Status Expectation	Resource Capability Expectation
Resources, shall submit a revised COP reflecting changes in Resource availability as soon as reasonably practicable, but in no event later than 60 minutes after the event that caused the change.	the study periods for each of these applications. Consequently, the 60-minute update time limit is critical to allowing ERCOT the maximum amount of time to recognize the loss of a previously committed Resource and react as needed to such loss.		
(8) Each QSE representing a Qualifying Facility (QF) must submit a Low Sustained Limit (LSL) that represents the minimum energy available, in MW, from the unit for economic dispatch based on the minimum stable steam delivery to the thermal host plus a justifiable reliability margin that accounts for changes in ambient conditions.			
3.9.1 Current Operating Plan (COP) Criteria			
(1) Each QSE that represents a Resource must submit a COP to ERCOT that reflects expected operating conditions for each Resource for each hour in the next seven Operating Days.		Except for Forced Outages, QSE's are expected to honor the Resource's temporal constraints when designating a Resource Status in the COP (e.g. the designated hour in which a Resource Status changes from OFF to ON is reachable from the current Resource operational condition).	
(2) Each QSE that represents a Resource shall update its COP reflecting changes in availability of any Resource as soon as reasonably practicable, but in no event later than 60 minutes after the event that caused the change.	The DRUC and HRUC applications are most sensitive to availability changes within the study periods for these applications. Consequently, the 60-minute update time limit is critical to allowing ERCOT the		

Protocol Requirement	ERCOT Discussion	Resource Status Expectation	Resource Capability Expectation
	maximum amount of time to recognize the loss of previously committed capacity and react as needed to such loss.		
(3) The Resource capacity in a QSE's COP must be sufficient to supply the Ancillary Service Supply Responsibility of that QSE.			
(5) A COP must include the following for each Resource represented by the QSE:			
(a) The name of the Resource;			
(b) The expected Resource Status: (i) Select one of the following for Generation Resources synchronized to the ERCOT System that best describes the Resource's status:			
(A) ONRUC – On-Line and the hour is a RUC-Committed Interval;	Resources that receive a RUC dispatch Instruction to provide an Ancillary Service may not move that AS Responsibility to another Resource or QSE during the RUC commitment period.	Use ONRUC for Resources that are committed in response to an ERCOT RUC instruction and the QSE does not expect to opt out of RUC settlement. ONRUC cannot be an expected Resource Status for hours beyond the current and next Operating Day, unless the QSE is directed otherwise by ERCOT.	The HSL/LSL/HEL/LEL values are the QSE's expectation for the Resource's capability at each limit. For those hours in the COP reporting period with an ONRUC Resource Status, the Ancillary Service Resource Responsibility for each AS must equal 0 unless the Resource is subject to a RUC Dispatch Instruction to provide a specified Ancillary Service. In this case, the Resource must report an Ancillary Service Resource Responsibility for that service in the amount specified in the ERCOT Dispatch Instruction.

Protocol Requirement	ERCOT Discussion	Resource Status Expectation	Resource Capability Expectation
(B) ONREG – On-Line Resource with Energy Offer Curve providing Regulation Service;		Use ONREG for Resources that the QSE expects to commit with an Energy Offer Curve and designates as providing Regulation Ancillary Service (either self-arranged or purchased by ERCOT) during the current and next Operating Day. Do not use ONREG for Resources committed to provide Regulation Service by the RUC process. The Resource may also be providing RRS and on-line Non-Spin AS. ERCOT assumes that an ONREG Resource Status in hours beyond the current and next Operating Day indicates the intention of the QSE to use the available Resource, with an Energy Offer Curve, to provide self-arranged and/or ERCOT purchased Regulation Ancillary Services in the amounts reported for Ancillary Service Resource Responsibilities.	The HSL/LSL/HEL/LEL values are the QSE's expectation for the Resource's capability at each limit. The Ancillary Service Resource Responsibility for Regulation Up and/or Regulation Down equals the amount of QSE assigned Regulation Service. The QSE may also assign Ancillary Service Resource Responsibility for RRS and On-Line Non-Spin. For each Resource, (HSL – LSL) must be ≥ total of all AS Resource Responsibilities assigned by the QSE.
(C) ON – On-Line Resource with Energy Offer Curve;		Use ON for Resources that are available or expected to be available in a forward COP hour and that the QSE expects to commit with an Energy Offer Curve. Resources that the QSE expects to be in a startup sequence and in normal operating range (at or above LSL) at some point within that operating hour. Resources that the QSE expects to be in a shutdown sequence and is expected to be in a normal operating range (above LSL) at some point within that operating hour.	The HSL/LSL/HEL/LEL values are the QSE's expectation for the Resource's capability at each limit. The Ancillary Service Resource Responsibility for RRS and On-Line Non-Spin equals the amount of the QSE assigned service. For each Resource, (HSL – LSL) must be ≥ total of all AS Resource Responsibilities assigned by the QSE.

Protocol Requirement	ERCOT Discussion	Resource Status Expectation	Resource Capability Expectation
		For those COP reporting hours during which the QSE expects to provide a QSGR for Deployment by SCED see Section 3.5 for guidance. Do not use ON Resource Status for Resources committed by the RUC process. Do not use the ON Resource Status if the Resource is assigned Regulation Up and/or Down Responsibility. ERCOT assumes that an ON Resource Status in hours beyond the current and next Operating Day indicates the intention of the QSE to use the available Resource, with an Energy Offer Curve, to provide self-arranged and/or ERCOT purchased Ancillary Services in the amounts reported for Ancillary Service Resource Responsibilities.	
(D) ONDSR – On-Line Dynamically Scheduled Resource;		Use ONDSR for Resources that are available or expected to be available and that are being used by the QSE as a DSR in the current Operating Day or that the QSE expects to operate as a DSR in the next Operating Day and beyond. Do not use ONDSR if the Resource is assigned Regulation Service Responsibility. ERCOT assumes that an ONDSR Resource Status in hours beyond the current and next Operating Day indicates the intention of the QSE to use the available DSR, to provide self-arranged and/or ERCOT purchased	The HSL/LSL/HEL/LEL values are the QSE's expectation for the Resource's capability at each limit. The Ancillary Service Resource Responsibility for RRS and On-Line Non-Spin equals the amount of the QSE assigned service For each Resource, (HSL – LSL) must be ≥ total of all AS Resource Responsibilities assigned by the QSE.

Protocol Requirement	ERCOT Discussion	Resource Status Expectation	Resource Capability Expectation
		Regulation Ancillary Services in the amounts reported for Ancillary Service Resource Responsibilities.	
(E) ONOS – On-Line Resource with Output Schedule;		Use ONOS for Resources that are available or expected to be available in a forward COP hour and that the QSE expects to commit with an Output Schedule. Do not use ONOS Resource Status for Resources committed by the RUC process. Do not use the ONOS Resource Status if the Resource is assigned Regulation Up and/or Down Responsibility. The Resource may be designated to provide RRS and On-Line Non-Spin. ERCOT assumes that an ONOS Resource Status in hours beyond the current and next Operating Day indicates the intention of the QSE to use the available Resource, with an Output Schedule, to provide self-arranged and/or ERCOT purchased Regulation Ancillary Services in the amounts reported for Ancillary Service Resource Responsibilities.	The HSL/LSL/HEL/LEL values are the QSE's expectation for the Resource's capability at each limit. The Ancillary Service Resource Responsibility for RRS and on-line Non-spin equals the amount of the QSE assigned service For each Resource, (HSL – LSL) must be ≥ total of all AS Resource Responsibilities assigned by the QSE. .
(F) ONOSREG – On-Line Resource with Output Schedule providing Regulation Service;		Use ONOSREG for Resources that the QSE expects to commit with an Output Schedule and designates as providing Regulation Ancillary Service (either self-arranged or purchased by ERCOT) during the current and next Operating Day. Do not use ONOSREG Resource Status for Resources committed to provide capacity or	The HSL/LSL/HEL/LEL values are the QSE's expectation for the Resource's capability at each limit. The Ancillary Service Resource Responsibility for Regulation Up and/or Regulation Down equals the amount of QSE assigned Regulation Service.

Protocol Requirement	ERCOT Discussion	Resource Status Expectation	Resource Capability Expectation
		Regulation Service by the RUC process. The Resource may also be providing RRS and On-Line Non-Spin AS. ERCOT assumes that an ONOSREG Resource Status in hours beyond the current and next Operating Day indicates the intention of the QSE to use the available Resource, with an Output Schedule, to provide self-arranged and/or ERCOT purchased Regulation Ancillary Services in the amounts reported for Ancillary Service Resource Responsibilities.	The QSE may also assign Ancillary Service Resource Responsibility for RRS and On-Line Non-Spin. For each Resource, (HSL – LSL) must be ≥ total of all AS Resource Responsibilities assigned by the QSE. .
(G) ONDSRREG – On-Line Dynamically Scheduled Resource providing Regulation Service;		Use ONDSRREG for Resources that the QSE expects to commit as a DSR unit and designates as providing Regulation Ancillary Service (either self-arranged or purchased by ERCOT) during the current and next Operating Day. Do not use ONDSRREG for Resources committed to provide capacity or Regulation Service by the RUC process. The Resource may also be providing RRS and On-Line Non-Spin AS. ERCOT assumes that an ONDSRREG Resource Status in hours beyond the current and next Operating Day indicates the intention of the QSE to use the available Resource as a DSR unit and to provide self-arranged and/or ERCOT purchased Regulation Ancillary Services in the amounts reported for Ancillary Service Resource	The HSL/LSL/HEL/LEL values are the QSE's expectation for the Resource's capability at each limit. The Ancillary Service Resource Responsibility for Regulation Up and/or Regulation Down equals the amount of QSE assigned Regulation Service. The QSE may also assign Ancillary Service Resource Responsibility for RRS and On-Line Non-Spin. For each Resource, (HSL – LSL) must be ≥ total of all AS Resource Responsibilities assigned by the QSE. .

Protocol Requirement	ERCOT Discussion	Resource Status Expectation	Resource Capability Expectation
		Responsibilities.	
(I) ONTEST – On-Line blocked from Security Constrained Economic dispatch (SCED) or performing an operations test or a Resource is in a start-up or shut-down sequence;	For Resources with a telemetered Resource Status of ONTEST, the SCED implementation sends a Base Point equal to the Resource's current telemetered output (HDL=LDL=RT Telemetered Output).	Use ONTEST for: a) Resources that the QSE expects to be On-Line in an hour solely for the purpose of conducting a specific test (e.g., initial startup test for new units, QSE scheduled performance testing, or units returning from an outage). Do not use ONTEST if the Resource has assigned AS Resource Responsibility.	The HSL/LSL/HEL/LEL values are the QSE's expectation for the Resource's capability at each limit. The Ancillary Service Resource Responsibility should be set to 0 for all of the Ancillary Services.
(J) ONEMR – On-Line EMR (available for commitment or dispatch only for ERCOT-declared Emergency Conditions; the QSE may appropriately set LSL and HSL to reflect operating limits); and	ONEMR Resources are considered as "ON" in the ERCOT RUC application. ONEMR Resources require ERCOT/QSE Operator action before commitment.	Use ONEMR for a Resource that is or will be connected to the ERCOT Grid but is available for dispatch by ERCOT systems only during an ERCOT declared Emergency Condition. An example of a Resource that could use this Resource Status is a Hydro facility that is On-Line with limiting water conditions for some period of time. ERCOT Operations manages the commitment of ONEMR Resources manually. Per Protocol requirements, the QSE is expected to submit either an Energy Offer Curve or Output Schedule for those COP reporting hours showing an ONEMR status.	The HSL/LSL/HEL/LEL values are the QSE's expectation for the Resource's capability at each limit. The QSE is expected to set each of these limits according to the resource's expected capability for normal (LSL/HSL) and emergency operations (HEL/LEL). The Ancillary Service Resource Responsibility for all Ancillary Services must be set equal to 0.
(K) ONRR – On-Line as a synchronous condenser (hydro) providing Responsive Reserve but unavailable for dispatch by SCED and available for commitment by RUC.	Note: For Resource Status = ONRR, the SCED sends a Base Point = 0 MW if RRS is not deployed, Otherwise, the BP equals the current telemetered power	Use ONRR for Hydro-Resources that the QSE expects to be On-Line and connected to the ERCOT Transmission Grid to provided RRS but that is not available for SCED dispatch . ERCOT assumes that an ONRR Resource	For those hours in the COP reporting period with an ONRR Resource Status, the Ancillary Service Resource Responsibility Capacity for RRS must equal the RRS Capacity responsibility and the HSL and LSL for each Resource must meet the criteria (HSL-

Protocol Requirement	ERCOT Discussion	Resource Status Expectation	Resource Capability Expectation
	output.	Status in hours beyond the current and next Operating Day indicates the intention of the QSE to use the available Resource in synchronous condenser mode to provide self-arranged and/or ERCOT purchased Responsive Reserve Ancillary Service in the amounts reported for Ancillary Service Resource Responsibilities.	LSL) ≥ RRS. All other Ancillary Service Resource Responsibilities must be set equal to 0.
(L) ONOPTOUT – On-Line and the hour is a RUC Buy-Back Hour;		Use ONOPTOUT for Resources that are committed in response to an ERCOT RUC instruction and the QSE expects to opt out of RUC settlement ONOPTOUT cannot be an expected Resource Status for hours beyond the current and next Operating Day, unless the QSE is directed otherwise by ERCOT.	For those hours in the COP reporting period with an ONOPTOUT Resource Status, the Ancillary Service Resource Responsibility for each AS may be greater than 0.
(O) OFFQS – Off-Line but available for SCED deployment. Only qualified QSGRs may utilize this status			For a QSGR provided for deployment by SCED under Protocol Section 3.8.3 the AS Resource Responsibility for Regulation and RRS must equal zero and the Off-Line Non-Spin AS Responsibility must equal the amount of the QSE assigned Non-Spin service and the Non-Spin AS Resource Responsibility is less than or equal to (HSL-LSL),.
(ii) Select one of the following for Off-Line Generation Resources not synchronized to the ERCOT System that best describes the Resource status:			
(A) OUT – Off-Line and unavailable;	ERCOT expects this Resource Status to be used for Resources that meet the description of	Use OUT only for Resources that the QSE knows to be unavailable to ERCOT or expects to be unavailable at some time in	Set HSL=HEL=LSL=LEL = normal expected values if the Resource were available and all Ancillary Service

Protocol Requirement	ERCOT Discussion	Resource Status Expectation	Resource Capability Expectation
	unavailable described in Sections 2 and 3 above. ERCOT systems do not use the resource capabilities reported in the COP for Generation Resources reported as OUT. Consequently, ERCOT suggests that providing COP HSL/LSL/HEL/LEL values that would be expected if the Resource were available reduces reporting churn, which will help reduce errors and will help quantify the amount of unavailable capability on an ongoing basis.	the COP reporting period.	Resource Responsibility for each AS type = 0.
(B) OFFNS – Off -Line but reserved for Non-Spinning Reserve (Non-Spin) or Off-Line QSGR available for SCED Dispatch;		Use OFFNS for a Resource that is available and that the QSE expects to be Off-Line during the current and next Operating Day and designated to provide Off-Line Non-Spin Ancillary Service (either self-arranged or purchased by ERCOT). ERCOT assumes that an OFFNS Resource Status in hours beyond the current and next Operating Day indicates the intention of the QSE to use the available Resource (such as a fast start Off-Line Generation Resource or Load Resources) to provide self-arranged and/or ERCOT purchased OFF-Line Non-Spin Ancillary Service in the amounts reported for Ancillary Service Resource Responsibilities. For those COP reporting hours during which the QSE expects to provide a QSGR for Deployment by SCED see Section 3.5 for	The HSL/LSL/HEL/LEL values are the QSE's expectation for the Resource's capability at each limit. The Ancillary Service Resource Responsibility for Off-Line Non-Spin Ancillary Services must equal the amount of Non-Spin AS capacity assigned to the Resource by the QSE. For each Resource, (HSL – LSL) must be ≥ amount of Non-Spin AS Resource Responsibility.

Protocol Requirement	ERCOT Discussion	Resource Status Expectation	Resource Capability Expectation
		guidance.	
(C) OFF – Off-Line but available for commitment by DAM and RUC; and		Use OFF for a Resource that is available (or is expected to be available by the QSE in a forward COP hour) but that the QSE is not planning for the Resource to be On-Line. Resources that the QSE expects to be in a startup sequence but not expected to be in normal operating range (at or above LSL) at any point within that Operating Hour. Resources that the QSE expects to be in a shutdown sequence below normal operating range (below LSL) for the entirety of the Operating Hour.	The HSL/LSL/HEL/LEL values are the QSE's expectation for the Resource's capability at each limit. The Ancillary Service Resource Responsibility for all Ancillary Services should be equal to 0.
(D) EMR – Available for commitment as a Resource contracted by ERCOT under Section 3.14.1, Reliability Must Run, or under paragraph (2) of Section 6.5.1.1, ERCOT Control Area Authority, or Available for commitment only for ERCOT-declared Emergency Condition events; the QSE may appropriately set LSL and HSL to reflect operating limits; and	ONEMR Resources are not considered in the ERCOT RUC and SCED applications. ONEMR Resources require Operator action before commitment.	EMR is an expected Resource Status to indicate that the Resource is available but expected to be Off-Line and either: 1. upon an ERCOT declaration of emergency, the Resource is capable of being connected to the ERCOT Transmission Grid; or 2. the Resource is contracted by ERCOT under Section 3.14.1, Reliability Must Run, or under paragraph (2) of Section 6.5.1.1, ERCOT Control Area Authority. EMR is one of the Off-Line Resource Status Codes; however, Generation Resources assigned this Status Code are not provided as an available resource for use by the RUC application. ERCOT Operations manages the commitment of EMR Resources manually.	The HSL/LSL/HEL/LEL values are the QSE's expectation for the Resource's capability at each limit. The QSE is expected to set each of these limits according to the resource's expected capability for normal (LSL/HSL) and emergency operations (HEL/LEL). The Ancillary Service Resource Responsibility for all Ancillary Services should equal 0.

Protocol Requirement	ERCOT Discussion	Resource Status Expectation	Resource Capability Expectation
		The QSE is expected to submit either an Energy Offer Curve or Output Schedule for those COP reporting hours showing an EMR status. Examples of Resources that may use this Resource Status includes: Hydro facilities that can operate around water limiting conditions for some period of time. Facilities that have fully exhausted environmental emissions limits but could operate under a regulatory exemption. Alternately, without a Regulatory, exemption the QSE could report Resource Status of OUT.	
(E) EMRSWGR – Switchable Generation Resource (SWGR) operating in a non-ERCOT Control Area; and		Use EMRSWGR for a Switchable Generation Resource (SWGR) that is not synchronized in ERCOT grid, but is On-Line and operating in a non-ERCOT Control Area. EMRSWGR can only be used for SWGR.	
(iii) Select one of the following for Load Resources:			
(A) ONRGL – Available for dispatch of Regulation Service;		Use ONRGL for a Controllable Load Resource that is available for dispatch to provide the amount of Regulation Service indicated by the Ancillary Service Resource Responsibility for Regulation in the current and next operating Day. ERCOT assumes that an ONRGL Resource Status in hours beyond the current and next Operating Day indicates the intention of the QSE to use the available Controllable Load	The HSL/LSL/HEL/LEL values are the QSE's expectation for the Resource's capability at each limit. The QSE should report HSL and LSL such that for each Resource, (HSL-LSL) is ≥ total amount of Ancillary Service Resource Responsibilities. The Ancillary Service Resource Responsibility for Reg-Up and Reg-

Protocol Requirement	ERCOT Discussion	Resource Status Expectation	Resource Capability Expectation
		Resource to provide self-arranged and/or ERCOT purchased Regulation Ancillary Service in the amounts reported for Ancillary Service Resource Responsibilities. This Resource Status should only be used for Controllable Load Resources. Use ONRGL if Regulation Service is being provided along with RRS. Use ONRGL if providing a subset of Regulation called Fast Responding Regulation Service Up or Down. In real time the telemetered status code should be FRRSUP or FRRSDN. FRRS can only be provided in one direction at any given time.	Down must equal the amount of Regulation AS Responsibility that is provided or expected to be provided including any expectation of providing FRRS. A Resource that intends to provide FRRS may not simultaneously provide RRS.
(B) ONCLR – Available for dispatch of Responsive Reserve Service or Non-Spinning Reserve Service as a Controllable Load Resource;		Use ONRRCLR for a Controllable Load Resource that is available for dispatch to provide the amount of Responsive Reserve Service or Non-Spinning Reserve Service Responsibility in the current and next operating Day. Do not use this Resource code if the Controllable Load Resource will also provide Regulation Service. ERCOT assumes that an ONCLR Resource Status in hours beyond the current and next Operating Day indicates the intention of the QSE to use the available Resource to provide self-arranged and/or ERCOT purchased RRS Ancillary Services in the amounts reported for Ancillary Service Resource Responsibilities for RRS.	The HSL/LSL/HEL/LEL values are the QSE's expectation for the Resource's capability at each limit. The QSE should report HSL and LSL such that for each Resource, (HSL-LSL) is ≥ total amount of Ancillary Service Resource Responsibilities. When using this status code, the CLR must also be SCED qualified and capable of following their Base Point as instructed by ERCOT.
(C) ONRL – Available for dispatch of Responsive Reserve		Use ONRL for a Load Resource (excluding Controllable Load Resources) that is	The HSL/LSL/HEL/LEL values are the QSE's expectation for the Resource's

Protocol Requirement	ERCOT Discussion	Resource Status Expectation	Resource Capability Expectation
Service, excluding Controllable Load Resources; and		available for dispatch to provide Responsive Reserve Service in the current and next operating Day. ONRL may not be used for Controllable Load Resources ERCOT assumes that an ONRL Resource Status in hours beyond the current and next Operating Day indicates the intention of the QSE to use the available Resource to provide self-arranged and/or ERCOT purchased Responsive Reserve Service in the amounts reported for Ancillary Service Resource Responsibilities.	capability at each limit. The QSE should report HSL and LSL such that for each Resource (HSL-LSL) is ≥ total amount of Ancillary Service Resource Responsibilities. For Load Resources: HSL=HEL=MPC ; LSL=LEL=LPC Ancillary Service Resource Responsibility for RRS must equal the amount of RRS that the QSE expects the Load Resource to provide.
(D) OUTL – Not available;	ERCOT systems use the Resource Status OUTL in conjunction with the Resource Capabilities reported in the COP. Consequently, ERCOT suggests that providing HSL/LSL/HEL/LEL values that would be expected if the Resource is available reduces churn and will help quantify the amount of unavailable capability on an ongoing basis.	Use OUTL for a Load Resource that is not available for interruption or control.	ERCOT requests that the QSE report the HSL/HEL/LSL/LEL values that would normally be expected if the Resource were available. Load Resources that that are not struck for AS in DAM and that desire to have their AS offers considered in a SASM must use a Resource Status of OUTL with HSL/LSL/HEL/LEL values consistent with their AS offers.
(c) The High Sustained Limit (HSL);	Section 2 Definitions High Sustained Limit (HSL) for a Generation Resource The limit established by the QSE, continuously updated in Real-Time that describes the maximum sustained energy production capability of the Resource.		ERCOT expects the QSE to report HSL values that always represent the QSE's expected Generation Resource maximum sustained energy production capability in each COP hour. For Load Resources, ERCOT expects the QSE to report HSL values that always represent the QSE's expected

Protocol Requirement	ERCOT Discussion	Resource Status Expectation	Resource Capability Expectation
	High Sustained Limit (HSL) for a Load Resource The limit calculated by ERCOT, using the QSE-established Maximum Power Consumption (MPC).		Maximum Power Consumption in each COP hour.
(d) The Low Sustained Limit (LSL);	Section 2 Definition Low Sustained Limit (LSL) for a Generation Resource The limit established by the QSE, continuously updatable in Real-Time, that describes the minimum sustained energy production capability of a Resource. Low Sustained Limit (LSL) for a Load Resource The limit calculated by ERCOT, using the QSE-established LPC.		ERCOT expects the QSE to report LSL values, whether through the COP that always represents the QSE's expected Generation Resource minimum sustained energy production capability in each COP hour. For Load Resources, ERCOT expects the QSE to report LSL values that always represent the QSE's expected Minimum Power Consumption in each COP hour.
(e) The High Emergency Limit (HEL);	Section 2 Definition High Emergency Limit (HEL) The limit established by the QSE describing the maximum temporary unsustainable energy production capability of a Resource. This limit must be achievable for a time stated by the QSE, but not less than 30 minutes. Protocols do not define HEL as applicable to Load Resources.		HEL values are used by ERCOT as informational input to the ERCOT Operators for their use in evaluating potential maximum capabilities that can be called upon if needed during emergency or off- normal operations. QSE action is required to extend an HSL to the HEL. ERCOT expects the HEL values reported by the QSE in the COP reporting period to be equal to or greater than the reported HSL value for each Resource.

Protocol Requirement	ERCOT Discussion	Resource Status Expectation	Resource Capability Expectation
	However, ERCOT expects the QSE to report HEL for Load Resources as equal to the HSL for consistency purposes.		
(f) The Low Emergency Limit (LEL); and	Section 2 Definition Low Emergency Limit (LEL) The limit established by the QSE describing the minimum temporary unsustainable energy production capability of a Resource. This limit must be achievable for a period of time indicated by the QSE but not less than 30 minutes. Protocols do not define LEL as applicable to Load Resources. However, ERCOT expects the QSE to report LEL for Load Resources as equal to the LSL for consistency purposes.		LEL values are used by ERCOT as informational input to the ERCOT Operators for their use in evaluating potential minimum capabilities that can be called upon if needed during emergency or off-normal operations. QSE action is required to extend an LSL to the LEL. ERCOT expects the LEL values reported by the QSE in the COP reporting period to be equal to or less than the reported LSL value for each Resource.
(g) Ancillary Service Resource Responsibility capacity in MW for:			
(i) Reg-Up;			During the current and next Operating Day hours, this is the amount of MW of Reg-Up Ancillary Service that the Resource is responsible to provide in Real-Time rounded to the nearest MW. In hours beyond the current and next Operating Day ERCOT assumes this indicates the intention of the QSE to use the available Resource to provide self-arranged and/or ERCOT purchased Regulation Ancillary Service.

Protocol Requirement	ERCOT Discussion	Resource Status Expectation	Resource Capability Expectation
(ii) Reg-Down;			During the current and next Operating Day hours, this is the amount of MW of Reg-Down Ancillary Service that the Resource is responsible to provide in Real-Time rounded to the nearest MW. In hours beyond the current and next Operating Day ERCOT assumes this indicates the intention of the QSE to use the available Resource to provide self-arranged and/or ERCOT purchased Regulation Ancillary Service.
(iii) Responsive Reserve Service; and			During the current and next Operating Day hours, this is the amount of MW of Responsive Reserve Ancillary Service that the Resource is responsible to provide in Real-Time rounded to the nearest MW. In hours beyond the current and next Operating Day ERCOT assumes this indicates the intention of the QSE to use the available Resource to provide self-arranged and/or ERCOT purchased Responsive Reserve Ancillary Service.
(iv) Non-Spin			During the current and next Operating Day hours, this is the amount of MW of Non-Spin Ancillary Service that the Resource is responsible to provide in Real-Time rounded to the nearest MW. In hours beyond the current and next Operating Day ERCOT assumes this indicates the intention of the QSE to

Protocol Requirement	ERCOT Discussion	Resource Status Expectation	Resource Capability Expectation
			use the available Resource to provide self-arranged and/or ERCOT purchased Non-Spin Ancillary Service.
(6) For combined-cycle Resources, the above items are required for each operating configuration.	Refer to Subsection 3.2.		
(7) ERCOT may accept a COP only from QSEs.			
(8) For the first 168 hours of the COP, ERCOT will update the HSL values for Wind-powered Generation Resources (WGRs) with the most recently updated Short-Term Wind Power Forecast (STWPF), and the HSL values for PhotoVoltaic Generation Resources (PVGRs) with the most recently updated Short-Term PhotoVoltaic Power Forecast (STPPF). ERCOT will notify the QSE via an Extensible Markup Language (XML) message each time COP HSL values are updated with the forecast values. A QSE representing a WGR may override the STWPF HSL value but must submit an HSL value that is less than or equal to the amount for that Resource from the most recent STWPF provided by ERCOT; a QSE representing a PVGR may override the STPPF HSL value but must submit an HSL value that is less than or equal to the amount for that Resource from the most recent STPPF provided by ERCOT.	Refer to Subsection 3.1.		

Protocol Requirement	ERCOT Discussion	Resource Status Expectation	Resource Capability Expectation
(9) A QSE representing a Generation Resource that is not providing Ancillary Service may only use a Resource Status of ONTEST to indicate to ERCOT in the COP and through telemetry that a Resources is operating in a start-up or shut-down sequence and is being manually dispatched by the QSE or to indicate the Generation Resource is performing a test of its operations either manually dispatched by the QSE or by ERCOT as part of the test.	For Resources with a telemetered Resource Status of ONTEST, the SCED implementation sends a Base Point equal to the Resource's current telemetered output. (HDL=LDL=RT Telemetered Output)		HSL/HEL/LSL/LEL = the QSE's expected sustainable limit. All AS Resource Responsibilities = 0
3.9.2 Current Operating Plan Validation			
(1) ERCOT shall verify that each COP, on its submission, complies with the criteria described in Section 3.9.1, Current Operating Plan (COP) Criteria. ERCOT shall notify the QSE by means of the Messaging System if the QSE's COP fails to comply with the criteria described in Section 3.9.1 and this Section 3.9.2 for any reason. The QSE must then resubmit the COP within the appropriate market timeline.			
(2) ERCOT may reject a COP that does not meet the criteria described in Section 3.9.1, Current Operating Plan (COP) Criteria.			
(3) If a Resource is designated in the COP to provide Ancillary Service, then ERCOT shall verify that the COP complies with	The ERCOT MMS system performs this validation for the hours in the current Operating Day and the next Operating Day.		

Protocol Requirement	ERCOT Discussion	Resource Status Expectation	Resource Capability Expectation
Section 3.16, Standards for Determining Ancillary Service Quantities. The Ancillary Service Supply Responsibilities as indicated in the Ancillary Service Resource Responsibility submitted immediately before the end of the Adjustment Period are physically binding commitments for each QSE for the corresponding Operating Period.	QSEs are encouraged to validate the remaining entries in the COP for errors similar to ERCOT's error checking systems.		
(4) ERCOT shall notify the QSE if the sum of the Ancillary Service capacity designated in the COP for each hour, by service type) is less than the QSE's Ancillary Service Supply Responsibility for each service type for that hour. If the QSE does not correct the deficiency within one hour after receiving the notice from ERCOT, then ERCOT shall follow the procedures outlined in Section 6.4.8.1, Evaluation and Maintenance of Ancillary Service Capacity Sufficiency.			
(5) A QSE may change Ancillary Service Resource designations by changing its COP, subject to Section 6.4.9.1.	Movement of an Ancillary Service Resource Responsibility from one Resource to another requires ERCOT approval. During the Adjustment Period, a QSE requests that an Ancillary Service Resource Responsibility be moved from one Resource to another by changing its COP and updating the Resource Status Code, if necessary, and Ancillary Service Resource Responsibility		

Protocol Requirement	ERCOT Discussion	Resource Status Expectation	Resource Capability Expectation
	entries for the losing and gaining Resources. Note: Ancillary Service Resource Responsibility can be transferred to another QSE via an Ancillary Service Trade. The AS transfer is deemed approved unless ERCOT rejects the change by notifying the QSE typically through the ERCOT Messaging System.		
(6) If ERCOT determines that it needs more Ancillary Service during the Adjustment Period, then the QSE's allocated portion of the additional Ancillary Service may be Self-Arranged.			
(7) ERCOT systems must be able to detect a change in status of a Resource shown in the COP and must provide notice to ERCOT operators of changes that a QSE makes to its COP.			
(8) A QSE representing a Resource that has an Energy Offer Curve valid for an hour of the COP may not designate a Resource Status of ONTEST, ONOS or ONDSR for that hour for that Resource.	The MMS validation checks in the current and next Operating Day hours alarm the ERCOT Operator and the QSE if this validation test fails.		
6.4.7.2 QSE Request to Decommit Resources in the Adjustment Period (1) To decommit an otherwise available Resource for hours other than the Operating Period, the	The QSE enters its request to decommit a previous committed Generation Resource in a COP reporting period hour by changing the COP Resource Status from ON to OFF.	If ERCOT disapproves the decommitment, the QSE must update its COP prior to the end of the Adjustment Period and the Generation Resource will be considered RUC committed. In such cases, the QSE will use a Resource Status of ONRUC. The QSE may also potentially opt out of the RUC	The HSL/LSL/HEL/LEL values are the QSE's expectation for the Resources 'capability at each limit. For those hours in the COP reporting period with an ONRUC Resource Status, the Ancillary Service Resource

Protocol Requirement	ERCOT Discussion	Resource Status Expectation	Resource Capability Expectation
QSE must update the COP indicating the change in Resource Status for each hour in the COP for the remaining hours in the Adjustment Period. On detection of a change from On-Line to Off-Line Available state in future hours for a Resource, ERCOT shall review all requests for decommitment using the next scheduled HRUC. The Resource must be shown as available for HRUC commitment. The next HRUC commitment must consider the Resource's Minimum-Energy Offer excluding the Resource's Startup Offer from the Three-Part Supply Offer. (2) If HRUC continues to require the Resource to be committed, ERCOT shall notify the QSE, using the process described in Section 5.5.3, Communication of RUC Commitments and Decommitments, that the decommitment has been denied, and the affected intervals become RUC-Committed Intervals instead of QSE-Committed Intervals for RUC Settlement purposes. The QSE must update its COP to denote the RUC-Committed Intervals.	Except for Forced Outages, the QSE is expected to honor the Generation Resource's temporal constraint for startup time. In other words, the status change hour must be sufficiently far in the future such that if ERCOT rejects the decommitment sufficient time remains to start the Generation Resource if needed by RUC.	commitment	Responsibility Capacity for each AS must equal 0 unless the Resource is being dispatched by RUC to provide a specified Ancillary Service. In this case, the Resource must report an Ancillary Service Resource Responsibility for the service and amount specified in the ERCOT Dispatch Instruction.

5. Appendix I – MMS System Generated Notices

Selected Excerpts from
MIS Business Requirements for
Notices, Notifications, Alarms and Alerts Version 1.0
Applicable to Current Operating Plans

The following notices are system-generated and will display on the MMS market-facing user interface on the notices page and on MIS notices page. In addition to the protocol-required notices, the MMS system generates some additional notices that are documented below.

Note: Some notices appear more than once if there are multiple protocol requirements for the same notice

#	Description	Source of Req	Owner	Type	Priority	Audience	Text
1	ERCOT shall **notify the QSE if the sum of the Ancillary Service capacity designated in the COP for each hour, by service type) is less than the QSE's Ancillary Service Supply Responsibility for each service type for that hour**. If the QSE does not correct the deficiency within one hour after receiving the notice from ERCOT, then ERCOT shall follow the procedures outlined in Section 6.4.8.1, Evaluation and Maintenance of Ancillary Service Capacity Sufficiency.	3.9.2 (4)	Sys. Ops.	COP Warning	High	A QSE	CM-ASCK-FAIL AS Responsibility Check failed for Trade Date: MM/DD/YYYY, Delivery Hour: HH for AS Type: AS_TYPE. The Total COP is XX MW and the AS Difference = XX MW
15	Five minutes before the end of each hour, ERCOT shall identify inconsistencies between the telemetered Resource Status and the Resource Status stated in the COP for that Resource in the next hour. On detecting an inconsistency, ERCOT shall provide a notice of inconsistent Resource Status to the QSE using the Messaging System	6.4.5 (2) (b)	Sys. Ops.	COP Warning	Med	A QSE	

#	Description	Source of Req	Owner	Type	Priority	Audience	Text
16	If HRUC continues to require the Resource to be committed, ERCOT shall notify the QSE, using the process described in Section 5.5.3, Communication of RUC Commitments and Decommitments, that the decommitment has been denied, and the affected intervals become RUC-Committed Intervals instead of QSE-Committed Intervals for RUC Settlement purposes. The QSE must update its COP to denote the RUC-Committed Intervals.	6.4.6.2 (2)	Sys. Ops.	RUC Commitment	Low	A QSE	
37	Notify QSEs who do not have complete COPs for all hours of the current operating day and the following day	MMS	Sys. Ops.	COP Warning	Med	A QSE	
4	ERCOT will issue an Operating Condition Notice (OCN) to inform all QSEs of a possible future need for more Resources due to conditions that could affect ERCOT System reliability.	6.5.9.3.1 (1)	Sys. Ops.	OCN	Medium	All QSEs	
	ERCOT shall reject the COP and notify the QSE if a QSE submits the COP with EMRSWGR for the Resource not qualified as SWGR	3.9.1 (15)	Sys. Ops.	COP Warning	Med	A QSE	Resource can't submit EMRSWGR status if it is not a qualified SWGR
	ERCOT shall reject the COP and notify the QSE if a QSE submits the COP with EMRSWGR for the Resource carrying Ancillary Service	3.9.1 (1)	Sys. Ops.	COP Warning	Med	A QSE	EMRSWGR can't carry Ancillary Services

Attachment D – ERCOT RRS Insufficiency Amounts

ATTACHMENT D
ERCOT RRS Insufficiency

Delivery Date	Hour Ending	Self Supplied	Gen Award	Load Award	RRS Available	RRS Required	RRS Insufficency
2/16/2021	1	957.4	1,513.1	70.4	2,540.9	3,170.0	(629.1)
2/16/2021	2	952.1	1,512.9	70.4	2,535.4	3,170.0	(634.6)
2/16/2021	3	941.4	1,512.6	70.4	2,524.4	3,092.0	(567.6)
2/16/2021	4	936.4	1,512.5	70.4	2,519.3	3,092.0	(572.7)
2/16/2021	5	935.6	1,512.5	70.4	2,518.5	3,092.0	(573.5)
2/16/2021	6	937.1	1,393.8	70.4	2,401.3	3,092.0	(690.7)
2/16/2021	7	932.0	1,293.7	70.5	2,296.2	2,959.0	(662.8)
2/16/2021	8	929.6	1,611.5	70.5	2,611.6	2,959.0	(347.4)
2/16/2021	9	931.2	1,566.3	70.5	2,568.0	2,959.0	(391.0)
2/16/2021	10	932.7	1,541.1	70.5	2,544.3	2,959.0	(414.7)
2/16/2021	11	933.7	1,570.3	71.3	2,575.3	2,959.0	(383.7)
2/16/2021	12	933.4	1,572.0	71.3	2,576.7	2,959.0	(382.3)
2/16/2021	13	936.7	1,507.1	71.3	2,515.1	2,959.0	(443.9)
2/16/2021	14	939.2	1,584.0	71.3	2,594.5	2,959.0	(364.5)
2/16/2021	15	943.0	1,564.8	71.3	2,579.1	2,959.0	(379.9)
2/16/2021	16	948.1	1,480.5	71.3	2,499.9	2,959.0	(459.1)
2/16/2021	17	947.3	1,436.8	71.3	2,455.4	2,959.0	(503.6)
2/16/2021	18	944.4	1,386.4	71.3	2,402.1	2,959.0	(556.9)
2/16/2021	19	951.3	1,456.7	71.3	2,479.3	3,002.0	(522.7)
2/16/2021	20	946.1	1,581.7	71.3	2,599.1	3,002.0	(402.9)
2/16/2021	21	940.8	1,560.8	71.3	2,572.9	3,002.0	(429.1)
2/16/2021	22	937.4	1,568.5	71.3	2,577.2	3,002.0	(424.8)
2/16/2021	23	944.7	1,477.7	70.4	2,492.8	3,170.0	(677.2)
2/16/2021	24	939.8	1,477.6	70.4	2,487.8	3,170.0	(682.2)
2/17/2021	1	953.2	1,600.1	78.4	2,631.7	3,170.0	(538.3)
2/17/2021	2	948.9	1,584.3	78.4	2,611.6	3,170.0	(558.4)
2/17/2021	3	936.1	1,596.0	78.4	2,610.5	3,092.0	(481.5)
2/17/2021	4	935.8	1,553.7	78.4	2,567.9	3,092.0	(524.1)
2/17/2021	5	940.0	1,485.0	78.4	2,503.4	3,092.0	(588.6)
2/17/2021	6	969.7	1,341.4	78.4	2,389.5	3,092.0	(702.5)
2/17/2021	7	972.3	1,166.5	78.4	2,217.2	2,959.0	(741.8)
2/17/2021	8	947.9	1,470.0	78.4	2,496.3	2,959.0	(462.7)
2/17/2021	9	953.6	1,468.5	83.0	2,505.1	2,959.0	(453.9)
2/17/2021	10	956.8	1,419.2	83.0	2,459.0	2,959.0	(500.0)
2/17/2021	11	959.1	1,393.7	83.0	2,435.8	2,959.0	(523.2)
2/17/2021	12	960.1	1,395.7	83.0	2,438.8	2,959.0	(520.2)
2/17/2021	13	962.1	1,330.3	83.0	2,375.4	2,959.0	(583.6)
2/17/2021	14	962.5	1,399.4	83.0	2,444.9	2,959.0	(514.1)
2/17/2021	15	962.8	1,418.7	83.0	2,464.5	2,959.0	(494.5)
2/17/2021	16	964.0	1,368.6	78.4	2,411.0	2,959.0	(548.0)

2/17/2021	17	977.9	1,325.4	78.4	2,381.7	2,959.0	(577.3)
2/17/2021	18	999.4	1,269.4	78.4	2,347.2	2,959.0	(611.8)
2/17/2021	19	1,004.3	1,345.4	78.4	2,428.1	3,002.0	(573.9)
2/17/2021	20	983.5	1,598.1	78.4	2,660.0	3,002.0	(342.0)
2/17/2021	21	984.0	1,598.1	78.4	2,660.5	3,002.0	(341.5)
2/17/2021	22	985.5	1,581.5	78.4	2,645.4	3,002.0	(356.6)
2/17/2021	23	1,002.4	1,579.9	78.4	2,660.7	3,170.0	(509.3)
2/17/2021	24	1,002.7	1,598.1	78.4	2,679.2	3,170.0	(490.8)
2/18/2021	1	989.2	1,631.5	143.5	2,764.2	3,170.0	(405.8)
2/18/2021	2	991.5	1,597.1	143.5	2,732.1	3,170.0	(437.9)
2/18/2021	3	973.9	1,609.0	143.5	2,726.4	3,092.0	(365.6)
2/18/2021	4	976.1	1,567.6	143.5	2,687.2	3,092.0	(404.8)
2/18/2021	5	992.8	1,501.2	143.5	2,637.5	3,092.0	(454.5)
2/18/2021	6	1,026.4	1,345.0	143.5	2,514.9	3,092.0	(577.1)
2/18/2021	7	1,028.0	1,174.5	143.5	2,346.0	2,959.0	(613.0)
2/18/2021	8	984.5	1,484.4	143.5	2,612.4	2,959.0	(346.6)
2/18/2021	9	989.1	1,465.9	170.5	2,625.5	2,959.0	(333.5)
2/18/2021	10	994.1	1,434.3	170.5	2,598.9	2,959.0	(360.1)
2/18/2021	11	999.7	1,417.1	170.5	2,587.3	2,959.0	(371.7)
2/18/2021	12	1,001.6	1,433.4	170.5	2,605.5	2,959.0	(353.5)
2/18/2021	13	1,014.0	1,373.0	170.5	2,557.5	2,959.0	(401.5)
2/18/2021	14	998.6	1,442.9	170.5	2,612.0	2,959.0	(347.0)
2/18/2021	15	998.3	1,445.7	170.5	2,614.5	2,959.0	(344.5)
2/18/2021	16	1,012.1	1,388.4	143.5	2,544.0	2,959.0	(415.0)
2/18/2021	17	1,021.2	1,362.0	143.5	2,526.7	2,959.0	(432.3)
2/18/2021	18	1,036.4	1,305.3	143.5	2,485.2	2,959.0	(473.8)
2/18/2021	19	1,036.3	1,379.9	143.5	2,559.7	3,002.0	(442.3)
2/18/2021	20	993.6	1,637.3	143.5	2,774.4	3,002.0	(227.6)
2/18/2021	21	992.4	1,652.0	143.5	2,787.9	3,002.0	(214.1)
2/18/2021	22	991.6	1,649.4	143.5	2,784.5	3,002.0	(217.5)
2/18/2021	23	1,018.2	1,638.1	143.5	2,799.8	3,170.0	(370.2)
2/18/2021	24	1,010.3	1,660.5	143.5	2,814.3	3,170.0	(355.7)
2/19/2021	1	1,024.1	1,953.3	30.4	3,007.8	3,170.0	(162.2)
2/19/2021	2	1,027.2	1,956.4	30.4	3,014.0	3,170.0	(156.0)
2/19/2021	3	996.4	1,994.3	30.4	3,021.1	3,092.0	(70.9)
2/19/2021	4	998.5	1,974.4	30.4	3,003.3	3,092.0	(88.7)
2/19/2021	5	1,001.8	1,907.7	30.4	2,939.9	3,092.0	(152.1)
2/19/2021	6	1,033.7	1,749.6	30.4	2,813.7	3,092.0	(278.3)
2/19/2021	7	1,019.0	1,577.1	30.4	2,626.5	2,959.0	(332.5)
2/19/2021	8	981.4	1,885.3	30.4	2,897.1	2,959.0	(61.9)
2/19/2021	9	981.3	1,866.1	58.0	2,905.4	2,959.0	(53.6)
2/19/2021	9:21	ERCOT Recalls Basa deployment					