|  |  |  |  |
| --- | --- | --- | --- |
| NPRR Number | [1154](https://www.ercot.com/mktrules/issues/NPRR1154) | NPRR Title | Include Alternate Resource in the Availability Plan for the Firm Fuel Supply Service |
| Date of Decision | | January 26, 2023 | |
| Action | | Approved | |
| Timeline | | Urgent - to ensure that alternate Resources will be considered in the Availability Plan for the next Firm Fuel Supply Service (FFSS) contract period. | |
| Effective Date | | Upon system implementation | |
| Priority and Rank Assigned | | Priority – 2023; Rank – 3770 | |
| Nodal Protocol Sections Requiring Revision | | 3.14.5, Firm Fuel Supply Service  6.6.14.2, Firm Fuel Supply Service Hourly Standby Fee Payment and Fuel Replacement Cost Recovery  8.1.1.2.1.6, Firm Fuel Supply Service Resource Qualification, Testing, and Decertification | |
| Related Documents Requiring Revision/Related Revision Requests | | None | |
| Revision Description | | This Nodal Protocol Revision Request (NPRR) updates language to allow for a qualified alternate Resource to be considered in the calculation of the availability reduction factor for the Firm Fuel Supply Service Resource (FFSSR).  Additionally, this NPRR provides a new Settlement billing determinant that will provide the Firm Fuel Supply Service Award Amount per Qualified Scheduling Entity (QSE) per FFSSR by hour. | |
| Reason for Revision | | Addresses current operational issues.  Meets Strategic goals (tied to the [ERCOT Strategic Plan](https://www.ercot.com/files/docs/2018/12/13/ERCOT_Strategic_Plan_2019-2023.pdf) or directed by the ERCOT Board).  Market efficiencies or enhancements  Administrative  Regulatory requirements  Other: (explain)  *(please select all that apply)* | |
| Business Case | | This NPRR clarifies language to allow for the Availability Plan of a qualified alternate Resource to be considered in the event the FFSSR is unavailable. This treatment aligns with the Black Start Service and counts the availability across all Resources that have been designated by ERCOT to satisfy the obligation.  Additionally, adding the Firm Fuel Supply Service Award Amount billing determinant will provide QSEs information necessary to validate the results. | |
| PRS Decision | | On 11/11/22, PRS voted unanimously to grant NPRR1154 Urgent status; to recommend approval of NPRR1154 as amended by the 11/9/22 LCRA comments; and to forward to TAC NPRR1154. All Market Segments participated in the vote. | |
| Summary of PRS Discussion | | On 11/11/22, the sponsor provided an overview of NPRR1154 and the 11/9/22 LCRA comments. | |
| TAC Decision | | On 12/5/22, TAC voted to recommend approval of NPRR1154 as recommended by PRS in the 11/11/22 PRS Report and the 11/29/22 Impact Analysis with a recommended priority of 2023 and rank of 3770. There was one abstention from the Independent Retail Electric Provider (IREP) (Reliant) Market Segment. All Market Segments participated in the vote. | |
| Summary of TAC Discussion | | On 12/5/22, TAC reviewed the ERCOT Opinion, ERCOT Market Impact Statement, Impact Analysis, and Independent Market Monitor (IMM) Opinion for NPRR1154. | |
| ERCOT Board Decision | | On 12/20/22, the ERCOT Board voted unanimously to recommend approval of NPRR1154 as recommended by TAC in the 12/5/22 TAC Report. | |
| PUCT Decision | | On 1/26/23, the PUCT approved NPRR1154 and accompanying ERCOT Market Impact Statement as presented in Project No. 54445, Review of Rules Adopted by the Independent Organization. | |

|  |  |
| --- | --- |
| **Opinions** | |
| Credit Work Group Review | ERCOT Credit Staff and the Credit Work Group (Credit WG) have reviewed NPRR1154 and do not believe that it requires changes to credit monitoring activity or the calculation of liability. |
| Independent Market Monitor Opinion | IMM has no opinion on NPRR1154. |
| ERCOT Opinion | ERCOT supports approval of NPRR1154. |
| ERCOT Market Impact Statement | ERCOT Staff has reviewed NPRR1154 and believes the market impact for NPRR1154 provides additional flexibility to FFSSRs without compromising the quality of the FFSS provided. |

|  |  |
| --- | --- |
| Sponsor | |
| Name | Emily Jolly |
| E-mail Address | [Emily.Jolly@LCRA.org](mailto:Emily.Jolly@LCRA.org) |
| Company | Lower Colorado River Authority (LCRA) |
| Phone Number | 512-578-4011 |
| Cell Number | 214-641-4398 |
| Market Segment | Cooperative |

|  |  |
| --- | --- |
| **Market Rules Staff Contact** | |
| **Name** | Cory Phillips |
| **E-Mail Address** | [cory.phillips@ercot.com](mailto:cory.phillips@ercot.com) |
| **Phone Number** | 512-248-6464 |

|  |  |
| --- | --- |
| **Comments Received** | |
| Comment Author | **Comment Summary** |
| LCRA 110922 | Modifed the request for Urgent status to acknowledge that NPRR1154 would not be in effect for the current FFSS contract period. |

|  |
| --- |
| Proposed Protocol Language Revision |

***3.14.5 Firm Fuel Supply Service***

(1) Each Generation Resource providing Firm Fuel Supply Service (FFSS) must meet technical requirements specified in Section 8.1.1, QSE Ancillary Service Performance Standards, and Section 8.1.1.1, Ancillary Service Qualification and Testing.

(2) ERCOT shall issue an RFP by August 1 of each year soliciting bids from QSEs for Generation Resources to provide FFSS. The RFP shall require bids to be submitted on or before September 1of each year.

(3) QSEs may submit bids individually for one or more Generation Resources to provide FFSS using a bid submission form posted on the ERCOT website. A QSE may not submit a bid for a given Generation Resource unless it is the QSE designated by the Resource Entity associated with that Generation Resource. ERCOT must evaluate bids using criteria identified in an appendix to the RFP. ERCOT will issue FFSS awards for each Generation Resource by September 30 and will post the awards to the MIS Certified Area for each QSE that is awarded an FFSS obligation. The posting will include information such as, but not limited to, the identity of the Resource, the FFSS Standby Fee awarded, the amount of reserved fuel associated with the FFSS award, and MW amount awarded, and the Generation Resource’s initial minimum LSL when providing FFSS. The RFP awards shall cover a period beginning November 15 of the year in which the RFP is issued and ending on March 15 of the second calendar year after the year in which the RFP is issued. A QSE may submit a bid for one or more Generation Resources to provide FFSS beginning in the same year the RFP is issued or beginning in a subsequent year covered by the RFP. An FFSS Resource (FFSSR) shall be considered an FFSSR and is required to provide FFSS from November 15 through March 15 for each year of the awarded FFSS obligation period. ERCOT shall ensure FFSSRs are procured and deployed as necessary to maintain ERCOT System reliability during, or in preparation for, a natural gas curtailment or other fuel supply disruption.

(a) On the bid submission form, the QSE shall disclose information including, but not limited to, the amount of reserved fuel offered, the MW available from the capacity offered, and each limitation of the offered Resource that could affect the Resource’s ability to provide FFSS.

(b) When a Resource is selected to provide FFSS, the Resource shall complete all applicable testing requirements as specified in Section 8.1.1.2.1.7, Firm Fuel Supply Service Resource Qualification, Testing, and Decertification. A QSE representing a FFSSR is allowed to provide the FFSS with an alternate Resource previously approved by ERCOT to replace the FFSSR.

(c) An offer to provide FFSS is an offer to supply an awarded amount of capacity, maintain an awarded amount of fuel, and to designate a specific number of emissions hours for which the awarded FFSSR is obligated to perform in the event that FFSS is deployed. Reserved fuel, emissions hours, and other attributes, in excess of the FFSS awards can be used at the discretion of the QSE as long as the awarded fuel reserves and emissions hours are maintained for the purposes of ERCOT deployment of FFSS.

(4) The QSE for an FFSSR shall ensure that the Resource is prepared and able to come On-Line or remain On-Line in order to maintain Resource availability in the event of a natural gas curtailment or other fuel supply disruption.

(a) When ERCOT issues a Watch for winter weather, ERCOT will notify all Market Participants, including all QSEs representing FFSSRs to begin preparation for potential FFSS deployment. Such preparation may include, but is not limited to, circulation of alternate fuel to its facilities, if applicable; heat fuel oil to appropriate temperatures, if applicable; call out additional personnel as necessary, and be ready to receive a Dispatch Instruction to provide FFSS. An FFSSR may begin consuming a minimum amount of alternate fuel to validate it is ready for an FFSS deployment.

(b) In anticipation of or in the event of a natural gas curtailment or other fuel supply disruption to an FFSSR, the QSE shall notify ERCOT as soon as practicable and may request approval to deploy FFSS to generate electricity. ERCOT shall evaluate system conditions and may approve the QSE’s request. The QSE shall not deploy the FFSS unless approved by ERCOT. Upon approval to deploy FFSS, ERCOT shall issue an FFSS VDI to the QSE.

(c) In conjunction with a QSE notification under paragraph (b) above, the QSE shall also report to ERCOT any environmental limitations that would impair the ability of the FFSSR to provide FFSS for the required duration of the FFSS award.

(d) ERCOT may issue an FFSS VDI without a request from the QSE, however ERCOT shall not issue an FFSS VDI without evidence of an impending or actual fuel supply disruption affecting the FFSSR.

(e) If the FFSSR is generating at a level above the FFSS MW awarded amount and that level of output cannot be sustained for the required duration of the FFSS award, ERCOT may use a manual High Dispatch Limit (HDL) override to ensure the FFSSR can continue to generate at the FFSS MW award level for the entire FFSS award duration.

(f) The FFSSR shall continuously deploy FFSS to generate electricity until the earlier of (i) the exhaustion of the FFSS service duration as defined in the RFP, (ii) the fuel supply disruption no longer exists, or (iii) ERCOT determines the FFSS deployment is no longer needed. Upon satisfying one of these qualifications, ERCOT shall terminate the VDI and the FFSSR shall not be obligated to continue its FFSS deployment for the remainder of the Watch.

(g) A QSE shall notify ERCOT of the anticipated exhaustion of emissions credits or permit allowances at least six hours before the exhaustion of those credits or allowances. Upon receiving such notification, ERCOT shall modify the VDI so the FFSS deployment is terminated upon exhaustion of those credits or allowances.

(h) Upon deployment or recall of FFSS, ERCOT shall notify all Market Participants that such deployment or recall has been made, including the MW capacity of service deployed or recalled.

(5) During or following the deployment of FFSS, the QSE for an FFSSR may request an approval from ERCOT to restock their fuel reserve to restore their FFSS capability. Following approval from ERCOT, a QSE may restock their FFSS obligation. In the event ERCOT does not receive the request to restock from a QSE representing an FFSSR, ERCOT may instruct QSE to start restocking fuel reserve to restore its FFSS capability.

(6) FFSSRs providing BSS must reserve FFSS capability in addition to the contracted BSS obligation. Any remaining fuel reserve in addition to that required for meeting FFSS and BSS obligations can be used at the QSE’s discretion.

(7) If ERCOT issues an FFSS VDI to an FFSSR for the same Operating Hour where a RUC instruction was issued, for Settlement, ERCOT will consider the RUC instruction as cancelled.

(8)       ERCOT will provide a report to the TAC or its designated subcommittee within 45 days of any FFSS deployments, including the Resources deployed and the reason for the deployments.

(9) Any QSE that submits a bid or receives an award for a SWGR to provide FFSS, and the Resource Entity that owns or controls that SWGR, shall:

(a) Not nominate the SWGR to satisfy supply adequacy or capacity planning requirements in any Control Area other than the ERCOT Region during the period of the FFSS obligation; and

(b) Take any further action requested by ERCOT to ensure that ERCOT will be classified as the “Primary Party” for the SWGR under any agreement between ERCOT and another Control Area Operator during the period of the FFSS obligation.

(10) On an annual basis after the FFSS season, ERCOT will provide a report separately for the total amounts from Section 6.6.14.1, Firm Fuel Supply Service Fuel Replacement Costs Recovery, and Section 6.6.14.2, Firm Fuel Supply Service Hourly Standby Fee Payment and Fuel Replacement Cost Recovery, to the TAC or its designated subcommittee.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| [NPRR1120: Insert Sections 6.6.14, 6.6.14.1, 6.6.14.2, and 6.6.14.3 below upon system implementation:]  6.6.14 Firm Fuel Supply Service Capability  6.6.14.1 Firm Fuel Supply Service Fuel Replacement Costs Recovery  (1) If ERCOT approves a Firm Fuel Supply Service Resource (FFSSR) to switch to consume the reserved fuel, ERCOT shall pay the QSE representing the FFSSR for the replacement of burned fuel, if the QSE has:  (a) Complied with the Firm Fuel Supply Service (FFSS) instruction to switch to the reserved fuel;  (b) Submitted a Settlement and billing dispute consistent with the dispute process described in Section 9.14, Settlement and Billing Dispute Process;  (c) Submitted the following within 90 days of the issuance of a Real-Time Market (RTM) Initial Statement for the Operating Day on which the FFSS instruction was issued:  (i) An attestation signed by an officer or executive with authority to bind the QSE stating that the information contained in the dispute is accurate;  (ii) For each deployment of FFSS, the quantity of total fuel consumed for the hours in each instance when FFSS was deployed;  (iii) For thermal units, the input-output equation or other documentation that allows for verification of fuel consumption for the hours when FFSS was deployed;  (iv) The dollar amount and quantity of fuel purchased to replace the consumed fuel;  (v) Sufficient documentation to support the QSE’s determination of the amount and cost of replaced fuel; and  (vi) Any other technical documentation within the possession of the QSE or Resource Entity which ERCOT finds reasonably necessary to verify paragraphs (i) through (v) above. Any additional request from ERCOT for documentation or clarification of previously submitted documentation must be honored within 15 Business Days.  (2) The Firm Fuel Supply Service Fuel Replacement Cost shall only represent the replacement fuel costs not recovered during the FFSS deployment period through Day-Ahead energy sales and Real-Time energy imbalance settlement revenues related to the Resource with the FFSS award.  (3) ERCOT shall allocate any approved fuel replacement costs to the hours of the corresponding FFSS deployment period when the fuel was consumed following ERCOT’s approval to switch to utilize the awarded FFSS.  6.6.14.2 Firm Fuel Supply Service Hourly Standby Fee Payment and Fuel Replacement Cost Recovery  (1) ERCOT shall pay an Hourly Standby Fee to a QSE representing an FFSSR. This standby fee is determined through a competitive bidding process, with an adjustment for reliability based on an Hourly Rolling Equivalent Availability Factor greater than or equal to 90% of the awarded FFSS capability as well as with adjustments for capacity and deployment.  (2) The Firm Fuel Supply Service Resource will be considered available when calculating the Firm Fuel Supply Service Hourly Rolling Equivalent Availability Factor during each non-FFSS deployment hour for which the FFSSR shows available in its Availability Plan, during any successful FFSS deployment, and during the period defined in the FFSS request for proposal (RFP) to restore FFSS capability following the instruction from ERCOT. In the event ERCOT does not issue an instruction or approval to restore FFSS capability, the FFSSR shall be considered to be available.  (3) The FFSS Hourly Standby Fee is subject to reduction and claw-back provisions as described in Section 8.1.1.2.1.7, Firm Fuel Supply Service Resource Qualification, Testing, and Decertification.  (4) ERCOT shall pay an FFSS payment to each QSE for each FFSSR. The FFSS payment for each hour of November 15, through March 15, during the FFSS obligation is calculated as follows:  FFSSAMT *q, r, h* = (-1) \* (FFSSSBF *q, r, h +* FFSSFRC *q, r, h*)  Where:  FFSSSBF *q, r, h* = FFSSAWARD *q, r, h* \* FFSSCRF *q, r, h* \* FFSSARF *q, r, h* \* (1 - FFSSDRP *q, r, h*)  FFSSAWARD *q, r, h* = FFSSPR *q, r, h* \* FFSSACAP *q, r, h*  And:  FFSS Capacity Reduction Factor  If (FFSSTCAP *q, r, h* ≥ FFSSACAP *q, r, h*)  Then: FFSSCRF *q, r, h* = 1  Otherwise: FFSSCRF *q, r, h* = Max (0, 1 – 2 \* (FFSSACAP *q, r, h* – FFSSTCAP *q, r, h*) **/**  FFSSACAP *q, r, h*)  FFSS Availability Reduction Factor  If (FFSSHREAF *q, r, h* ≥ 0.90)  Then: FFSSARF *q, r, h* = 1  Otherwise: FFSSARF *q, r, h* = Max (0, 1 - (0.90 - FFSSHREAF *q, r, h*) \* 2)  FFSS Hourly Rolling Equivalent Availability Factor  FFSSHREAF *q, r, h* = max(AVCAP *q, r, hr*)) / FFSSACAP *q, r, hr*)  Where,  If the Resource is a Combined Cycle Train:  AVCAP*q, r, hr*  = max*train,hr* (max(FFSEDFLAG *q, train, hr*, FFSSAFLAG *q, ccgr, hr*)\* min(HSL *q, ccgr, hr*, FFSSACAP*q, train, hr*))  Otherwise:  AVCAP *q, r, hr* = max(FFSEDFLAG *q, r, hr*, FFSSAFLAG *q, r, hr*)\* min(HSL *q, r, hr*, FFSSACAP *q, r, hr*)  Availability for a Combined Cycle Train will be determined pursuant to terms set forth in the RFP but no more than once per hour.  The above variables are defined as follows:   | Variable | Unit | Definition | | --- | --- | --- | | **FFSSAMT *q, r, h*** | $ | *Firm Fuel Supply Service Amount per QSE per Resource by hour*—The payment to QSE *q* for the FFSS provided by FFSSR *r*, for the hour, calculated each hour of November 15 through March 15 during the awarded FFSS obligation period. Where for a Combined Cycle Train, the Resource *r* is the Combined Cycle Train. | | FFSSAWARD *q, r, h* | $ | *Firm Fuel Supply Service Award Amount per QSE by hour—*The payment to the QSE *q* for the FFSS awarded to the FFSSR *r* for each hour *h*, during the awarded FFSS obligation period. Where for a Combined Cycle Train, the Resource *r* is the Combined Cycle Train. | | FFSSPR *q, r, h* | $/MW per hour | *Firm Fuel Supply Service Price per QSE per Resource by hour*—The standby price of FFSSR *r* represented by QSE *q*, as specified in the FFSS award. Where for a Combined Cycle Train, the Resource *r* is the Combined Cycle Train. | | FFSSCRF *q, r, h* | none | *Firm Fuel Supply Service Capacity Reduction Factor per QSE per Resource by hour*—The capacity reduction factor for the FFSSR *r*, represented by QSE *q*, for the hour. Where for a Combined Cycle Train, the Resource *r* is the Combined Cycle Train. | | HSL *q, r, hr* | MW | *High Sustained Limit*—The HSL of a Generation Resource *r* represented by QSE *q* as submitted in the COP, for the hour *h*. Where for a combined cycle Resource *r* is a Combined Cycle Generation Resource. | | FFSSFRC *q, r, h* | $ per hour | *Firm Fuel Supply Service Fuel Replacement Cost*—The fuel costs and fees to replace the burned fuel, not recovered during the FFSS deployment period, for FFSSR *r* represented by QSE *q* for each FFSS instructed hour. Where for a Combined Cycle Train, the Resource *r* is the Combined Cycle Train. | | FFSSDRP *q, r, h* | none | *Firm Fuel Supply Service Deployment Reduction Percentage*—The percentage of the Firm Fuel Supply Service Standby Fee subject to clawback per paragraphs (5) through (12) of Section 8.1.1.2.1.7, Firm Fuel Supply Service Resource Qualification, Testing, and Decertification,for the QSE *q*, for the FFSSR *r*, for the hour *h*. Where for a Combined Cycle Train, the Resource *r* is the Combined Cycle Train. | | FFSSSBF *q, r, h* | $ | *Firm Fuel Supply Service Standby Fee per QSE per Resource by hour*—The standby fee to QSE *q* for the FFSS provided by FFSSR *r*, for the hour. Where for a Combined Cycle Train, the Resource *r* is the Combined Cycle Train. | | FFSSTCAP *q, r, h* | MW | *Firm Fuel Supply Service Testing Capacity per QSE per Resource*—The tested capacity of FFSSR *r*, represented by QSE *q*, for the hour. Where for a Combined Cycle Train, the Resource *r* is the Combined Cycle Train. | | FFSSACAP *q, r, hr* | MW | *Firm Fuel Supply Service Awarded Capacity per QSE per Resource*—The awarded FFSS capacity of FFSSR *r*, represented by QSE *q* as specified in the FFSS award, applicable to each hour of November 15 through March 15 during the awarded FFSS obligation period. Where for a Combined Cycle Train, the Resource *r* is the Combined Cycle Train. | | FFSSARF *q, r, h* | none | *Firm Fuel Supply Service Availability Reduction Factor per QSE per Resource by hour*—The availability reduction factor of FFSSR *r* represented by QSE *q* for the hour. Where for a Combined Cycle Train, the Resource *r* is the Combined Cycle Train. | | FFSSHREAF *q, r, h* | none | *Firm Fuel Supply Service Hourly Rolling Equivalent Availability Factor per QSE per Resource by hour*—The equivalent availability factor of the FFSSR *r* represented by QSE *q* over 1,452 hours, for the hour. Where for a Combined Cycle Train, the Resource *r* is the Combined Cycle Train. | | FFSSAFLAG *q, r, hr* | none | *Firm Fuel Supply Service Availability Flag per QSE per Resource by hour*—The flag of the availability of Resource *r* represented by QSE *q*, 1 for available and 0 for unavailable, for the hour. Where for a Combined Cycle Train, the Resource *r* is a Combined Cycle Generation Resource within the Combined Cycle Train. | | FFSEDFLAG *q, r, hr* | none | *Firm Fuel Supply Event Deployment Flag per QSE per Resource by hour*—The flag of successful FFSS deployment of the Resource *r* for hours in the period defined in the RFP following the instruction from ERCOT to restore FFSS capability represented by QSE *q*, 1 for successful and 0 for unsuccessful, , for the hour. Where for a Combined Cycle Train, the Resource *r* is the Combined Cycle Train. | | AVCAP *q, r, hr* | MW | *Available Capacity per Resource by hour*—The available capacity of Resource *r* represented by QSE *q* as calculated for the hour. Where for a Combined Cycle Train, the Resource *r* is the Combined Cycle Train. | | *q* | none | A QSE. | | *r* | none | An FFSSR or an alternate Resource approved by ERCOT. | | *hr* | none | The index of a given hour and the previous 1,451 hours counted only during each hour of November 15 through March 15 during the awarded FFSS obligation period, or during the period as defined in the FFSS RFP. | | *h* | none | The Operating Hour. | | *train* | none | A Combined Cycle Train or an alternate Combined Cycle Train approved by ERCOT. | | *ccgr* | none | A Combined Cycle Generation Resource within the Combined Cycle Train. |   (5) The total of the payments to each QSE for all FFSSRs represented by this QSE for a given hour is calculated as follows:  FFSSAMTQSETOT *q* = FFSSAMT *q, r*  The above variables are defined as follows:   | Variable | Unit | Definition | | --- | --- | --- | | **FFSSAMTQSETOT *q*** | $ | *Firm Fuel Supply Service Amount QSE Total per QSE*⎯The total of the payments to QSE *q* for FFSS provided by all the FFSS Resources represented by this QSE for the hour. | | FFSSAMT *q, r* | $ | *Firm Fuel Supply Service Amount per QSE per Resource*—The payment to QSE *q* for the FFSS provided by Resource *r*, for the hour, calculated each hour of November 15 through March 15 during the awarded FFSS obligation period. Where for a Combined Cycle Train, the Resource *r* is the Combined Cycle Train. | | *q* | none | A QSE. | | *r* | none | An FFSSR. |   6.6.14.3 Firm Fuel Supply Service Capacity Charge  (1) ERCOT shall allocate the total FFSS capacity and fuel replacement payment to the QSEs representing Loads based on an hourly LRS. The resulting charge to each QSE for a given hour is calculated as follows:  LAFFSSAMT *q* = (-1) \* FFSSAMTTOT \* HLRS *q*  Where:  FFSSAMTTOT = FFSSAMTQSETOT *q*  The above variables are defined as follows:   |  |  |  | | --- | --- | --- | | Variable | Unit | Definition | | LAFFSSAMT *q* | $ | *Load-Allocated Firm Fuel Supply Service Amount per QSE*—The charge allocated to QSE *q* for the FFSS, for the hour. | | FFSSAMTQSETOT *q* | $ | *Firm Fuel Supply Service Amount QSE Total per QSE*⎯The total of the payments to QSE *q* for FFSS provided by all the FFSSRs represented by this QSE for the hour. | | FFSSAMTTOT | $ | *Firm Fuel Supply Service Amount QSE Total ERCOT-Wide—*The total of the payments to all QSEs for FFSS for the hour. | | HLRS *q* | none | The hourly LRS calculated for QSE *q* for the hour. See Section 6.6.2.4, QSE Load Ratio Share for an Operating Hour. | | *q* | none | A QSE. | |

**8.1.1.2.1.6 Firm Fuel Supply Service Resource Qualification, Testing, and Decertification**

(1) Generation Resources that meet the following requirements will be considered qualified to provide Firm Fuel Supply Service (FFSS) and may be selected in the bidding process for FFSS:

(a) Successfully demonstrates dual fuel capability, the ability to establish and burn an alternativeonsite stored fuel, and has onsite fuel storage capability in an amount that satisfies the minimum FFSS capability requirements set forth in the FFSS request for proposal (RFP). This minimum alternative fuel storage capability must be demonstrated such that the Firm Fuel Supply Service Resource (FFSSR) has the capability to operate at the awarded MW value for a period defined in the FFSS RFP. A QSE demonstrates this capability by confirming the following in its bid submission form:

(i) The onsite fuel storage for the FFSSR is sufficient to satisfy the requirements established in the Protocols and the FFSS RFP;

(ii) The FFSSR is capable of being dispatched by SCED but does not have to be qualified for any specific Ancillary Service; and

(iii) The FFSSR is able to begin operation using onsite stored alternative fuel within the period defined in the RFP; or

(b) Has an onsite natural gas storage capability in an amount that satisfies the minimum FFSS capability requirements set forth in the FFSS RFP. This minimum alternative onsite storage capability must be demonstrated such that the FFSSR has the capability to operate at the awarded MW value for a period defined in the FFSS RFP. A QSE demonstrates this capability by confirming the following in its bid submission form:

(i) The onsite natural gas fuel storage for the FFSSR is sufficient to satisfy the requirements established in the Protocols and the FFSS RFP;

(ii) The FFSSR is capable of being dispatched by SCED but does not have to be qualified for any specific Ancillary Service; and

(iii) The FFSSR is able to begin operation using onsite stored natural gas fuel within the period defined in the RFP; or

(c) Successfully demonstrates the ability to provide FFSS in order to maintain Resource availability in the event of a natural gas curtailment or other fuel supply disruption consistent with qualifying technologies identified by the Public Utility Commission of Texas (PUCT).

(2) A QSE representing an FFSSR must annually demonstrate the FFSSR’s capability to use an onsite stored alternative fuel or reserved fuel sources identified in paragraphs (1)(b) and (1)(c) above and sustain its output for 60 minutes at the maximum awarded MW amount. Each QSE representing an FFSSR must annually complete the test or successfully deploy at the maximum awarded MW amount for at least 60 minutes and inform ERCOT by November 1 of each year. The QSE representing the FFSSR shall show the Resource as “ONTEST” in its COP and through its Real-Time telemetry for the duration of the demonstration.

(3) A QSE representing an FFSSR must ensure the full awarded FFSS capability is available by November 15 of each year awarded in the RFP.

(4) A QSE representing an FFSSR shall update its Availability Plan for an FFSSR to show the FFSSR is unavailable if the FFSSR is not available to come On-Line or generate using reserved fuel. The QSE representing an FFSSR may submit an Availability Plan for an alternate Resource previously approved by ERCOT to replace the FFSSR. The FFSSR shall continue to be shown as unavailable until it can successfully come On-Line using reserved fuel or completes a successful test as described in paragraph (2) above.

(5) If the FFSSR does not reflect that it is available, through its Availability Plan, for the hours for which ERCOT has issued a Watch for winter weather, ERCOT shall claw back and/or withhold the FFSS Standby Fee for 90 days, unless the FFSSR successfully deployed for its entire FFSS award obligation and exhausted emission hours allocated in the RFP for the FFSSR.

(6) If the FFSSR fails to come On-Line or stay On-Line during an FFSS deployment due to a fuel-related issue, ERCOT shall claw back and/or withhold the FFSS Standby Feefor 90 days. A QSE representing an FFSSR may coordinate with ERCOT and seek approval to take the FFSSR Off-Line for no more than four hours to perform critical maintenance associated with consuming the reserved fuel. If the QSE coordinates with ERCOT and receives approval to take the FFSSR unit Off-Line and brings the FFSSR back On-Line within four hours or less, this shall not count as failure to stay On-Line for the purpose of this paragraph.

(7) If the FFSSR comes On-Line or continues generating using reserved fuel during an FFSS deployment, but fails to telemeter on average an HSL equal to or greater than 95% of the awarded FFSS MW value due to a fuel-related issue, ERCOT shall claw back and/or withhold the FFSS Standby Feefor 90 days, in proportion to the difference between the awarded MW value and the average telemetered HSL over the FFSS deployment period.

(8) If the FFSSR comes On-Line or continues generating using reserved fuel during an FFSS deployment but fails to generate on average at the minimum of either 95% of the MW level instructed by ERCOT or 95% of the awarded FFSS MW value due to a fuel-related issue, ERCOT shall claw back and/or withhold the FFSS Standby Fee for 90 days, in proportion to the difference between the average MW level instructed by ERCOT over the FFSS deployment period and the corresponding average generation of the FFSSR.

(9) If the FFSSR fails to come On-Line or stay On-Line during an FFSS deployment due to a non-fuel related issue, ERCOT shall claw back and/or withhold the FFSS Standby Feefor 15 days.

(10) If the FFSSR comes On-Line or continues generating using reserved fuel during an FFSS deployment but fails to telemeter on average an HSL equal to or greater than 95% of the awarded FFSS MW value due to a non-fuel related issue, ERCOT shall claw back and/or withhold the FFSS Standby Feefor 15 days, in proportion to the difference between the awarded MW value and the average telemetered HSL over the FFSS deployment period.

(11) If the FFSSR comes On-Line or continues generating using reserved fuel during an FFSS deployment but fails to generate on average at the minimum of either 95% of the MW level instructed by ERCOT or 95% of the awarded FFSS MW value due to a non-fuel related issue, ERCOT shall claw back and/or withhold the FFSS Standby Fee for 15 days, in proportion to the difference between the average MW level instructed by ERCOT over the FFSS deployment period and the corresponding average generation of the FFSSR.

(12) Notwithstanding paragraphs (5) through (11) above, if the FFSSR is otherwise available but fails to come On-Line or is forced Off-Line due to a transmission system outage or transmission system limitation that would prevent the unit from being deployed to LSL, ERCOT shall not claw back the hourly FFSS Standby Fee. If conditions described in paragraphs (7) and (8) occur for the same deployment period, ERCOT shall only claw back the larger amount calculated in paragraph (7) or (8). If conditions described in paragraphs (10) and (11) occur for the same deployment period, ERCOT shall only claw back the larger amount calculated in paragraph (10) or (11).