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Filing Date - 2025-01-23 07:29:36 PM

Control Number - 56000

Item Number - 7

PROJECT NO. 56000**FIRM FUEL SUPPLY SERVICE**§
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§**PUBLIC UTILITY COMMISSION****OF TEXAS****ELECTRIC RELIABILITY COUNCIL OF TEXAS, INC.'S
FIRM FUEL SUPPLY SERVICE 2025 UPDATE REPORT**

Electric Reliability Council of Texas, Inc. (ERCOT) files this *Firm Fuel Supply Service 2025 Update Report* to provide the results of a Firm Fuel Supply Service (FFSS)-related survey conducted by ERCOT and provide an option to expand FFSS participation. A copy of the survey issued is included as **Attachment A** and a summary of the survey results is included as **Attachment B**. If the Public Utility Commission of Texas (Commission) desires changes to the FFSS program before the winter 2025-2026 FFSS contract period, then input would be appreciated in the February timeframe to proceed forward with an urgent Nodal Protocol Revision Request (NPRR) to proceed through the stakeholder process and be approved prior to the August 2025 Request for Proposal (RFP) issuance.

I. BACKGROUND

On July 3, 2024, Commission Staff filed a memorandum providing recommendations for the FFSS program parameters for the winter 2024-2025 FFSS contract period. Commission Staff expressed concerns regarding the lack of liquidity in the FFSS market and recommended that ERCOT perform a new survey to identify barriers to entry and how the scope of resources eligible to participate in FFSS could be expanded.¹ At the Open Meeting on July 11, 2024, the Commission agreed with Commission Staff's recommendations and requested that ERCOT perform the recommended survey.

Prior to previous FFSS contract periods, ERCOT has issued a Request for Information (RFI) to Generation Entities with natural gas Generation Resources to better understand potential FFSS participants' capabilities. In consultation with Commission Staff, ERCOT adapted the prior contract period's RFI to use as the FFSS survey requested by the Commission with two primary additions:

¹ See Commission Staff Memorandum for 24-25 Contract Period at 2 (July 3, 2024).

1. Question 4(c) requests a list of Generation Resources that are capable of running on natural gas stored offsite and that have, or would be willing to enter into, a Firm Transportation Agreement as defined by the ERCOT Nodal Protocols, except that the definition of “Qualifying Pipeline” would utilize an alternative, more expansive definition; and
2. Question 17 requests any changes beyond the alternative definition described in Question 4(c) that would lower barriers to additional participation in FFSS.

The alternative definition for Qualifying Pipeline included in RFI Question 4(c) is the definition recommended by the ERCOT Technical Advisory Committee (TAC) on May 23, 2023 in NPRR 1169, *Expansion of Generation Resources Qualified to Provide Firm Fuel Supply Service in Phase 2 of the Service*, but that was ultimately not adopted by the Commission.² This alternative definition differs from the definition currently included in Protocol § 2.1 primarily in that it would allow for an intrastate pipeline that is owned or operated by a gas utility³ to be a Qualifying Pipeline so long as that gas utility:

- (i) provides only transmission service in accordance with its gas utility tariff;
- (ii) certifies to the Generation Entity that if it reduces firm deliveries to customers pursuant to 16 Tex. Admin. Code (TAC) § 7.455(a)(3) it will have sufficient operational capacity, including sufficient pipeline pressure, to provide Firm Service for the volume of gas required by the Generation Resource’s Firm Transportation Agreement on the transportation path between the storage facility and a Generation Resource to provide continuous service in the event of a curtailment; and
- (iii) has not curtailed deliveries of gas, pursuant to 16 TAC § 7.455(a)(3) or any applicable predecessor rule or order, to a Generation Resource that was subject to a firm transportation agreement during a curtailment event that occurred at any time since January 1, 2021.

² See Nodal Protocol Revision Request 1169, TAC Report at 13 (May 23, 2023) (definition of “Firm Fuel Supply Service (FFSS) Qualifying Pipeline” proposed in ERCOT Nodal Protocol § 2.1), available on the ERCOT website at: <https://www.ercot.com/mktulcs/issues/NPRR1169>.

³ “Gas utility” is defined by statute in Title 3 of the Texas Utilities Code.

For intrastate pipelines, the current definition in Protocol § 2.1 only allows those owned or operated by a gas utility to be eligible as a Qualifying Pipeline if that gas utility “has certified to the Generation Entity that it does not have any contracts for firm service on such pipeline with human needs customers or local distribution systems that serve human needs customers[.]” Accordingly, the definition included in the survey is *a broader definition* that would be expected to permit more pipelines to be eligible but would also carry additional risk in that the pipelines may serve human needs customers, which as the Commission is aware are a category that receives a higher level of protection from curtailment under the Railroad Commission of Texas’ rule 16 TAC § 7.455 than electric generation facilities.

II. POTENTIAL EXPANSION OF FFSS

ERCOT issued the FFSS survey RFI to Resource Entities with natural gas Generation Resources on December 17, 2024, with responses due by January 8, 2025. As noted above, the RFI is included here as Attachment A and the summary of RFI responses is included as Attachment B. Based on the responses received to RFI Question 4(c), if the alternative definition for Qualifying Pipelines were to be adopted, then approximately 90 Generation Resources that are capable of running on natural gas stored offsite could be eligible to participate in FFSS.⁴ These 90 Generation Resources together represent a total Low Sustained Limit (LSL) of 7,652.13 megawatts (MW) and a High Sustained Limit (HSL) of 17,759.39 MW. For context, Table 1 below shows the number of Generation Resources that offered into and were procured for FFSS each season compared to the Generation Resources that survey respondents indicated could be eligible to offer under the criteria specified in RFI Question 4(c):

⁴ Certain respondents to the RFI survey did not list Generation Resources specifically in response to Question 4(c) as requested but instead included responses such as, “With the existing firm transportation agreements that the Generation Resources currently have, additional firm transportation agreements are not expected to be required” or “Yes, the Generation Entity would be willing to enter into a firm agreement.” ERCOT interpreted such responses to mean that all natural gas Generation Resources for which that Resource Entity is responsible would thus be the responsive to the RFI question and accordingly included all such Generation Resources for that Resource Entity in the count presented here. That totals 134 units, but once the units from combined cycle Resources are combined to the Generation Resource level, that results in approximately 90 eligible Generation Resources.

Table 1: Generation Resource FFSS Participation Comparison

FFSS Contract Period	Generation Resources Offering FFSS	Generation Resources Procured for FFSS
Winter 2022-2023	19	19
Winter 2023-2024	32	32
Winter 2024-2025	33	33
Potential Winter 2025-2026	~90	

Accordingly, use of the alternative definition for Qualifying Pipelines could result in approximately 57 more Generation Resources being eligible to offer into the FFSS program.⁵

As ERCOT has previously described in its June 12, 2023 Comments to NPRR1169, while use of the alternative definition for Qualifying Pipelines would expand the pool of Generation Resources eligible to participate in FFSS, that definition also entails additional risks.⁶ Namely, because the Railroad Commission of Texas' curtailment rule gives human needs customers the highest priority (i.e., they will be curtailed last) and electric generation facilities the second highest priority, use of the alternative definition raises the risk that a gas utility subject to the rule would be required to curtail firm service to electric generation facilities if it is unable to concurrently serve all of the highest-priority customers alongside electric generation facility customers. As acknowledged in ERCOT's Comments, the three criteria included in the alternative definition of Qualifying Pipeline are likely to substantially mitigate the risk of curtailment associated with a pipeline that would be used to serve customers with a higher priority alongside Generation Resources being offered for FFSS.⁷ However, ERCOT is unable to quantify the remaining risk and that risk will vary by gas utility, pipeline, the share of capacity reserved for firm service to other customers, and the circumstances of any curtailment event.

In addition to the alternative definition of Qualifying Pipeline in RFI Question 4(c), RFI Question 17 asked respondents if any other changes to the FFSS program could decrease barriers to additional participation. Survey respondents' responses are included anonymously as part of

⁵ Note that 35 of the 102 applicable Generation Entities had not yet responded to ERCOT's survey RFI as of January 21, 2025. Accordingly, it is possible that additional Generation Resources beyond those identified by the RFI respondents could also be eligible under the alternative definition of Qualifying Pipeline.

⁶ See Nodal Protocol Revision Request 1169, ERCOT Comments at 2-3 (June 12, 2023), available on the ERCOT website at: <https://www.ercot.com/mktrules/issues/NPRR1169>.

⁷ See *id.* at 3.

Attachment B for the Commission's consideration. Most did not identify changes to the FFSS program beyond use of the alternative definition of Qualifying Pipeline.

If the Commission would like the alternative definition (or some version of it) of Qualifying Pipelines to be adopted in order to expand the pool of Generation Resources eligible to offer into FFSS, or to institute any other change to FFSS, ERCOT can sponsor an urgent NPRR to incorporate that revised definition or other change into the ERCOT Protocols prior to the August 2025 RFP issuance for the winter 2025-2026 FFSS contract period. To do so, ERCOT would appreciate guidance from the Commission in the February timeframe in order to ensure sufficient time for the NPRR to proceed through the stakeholder process.

III. CONCLUSION

ERCOT appreciates the Commission's consideration of this report and would be pleased to provide any additional information. ERCOT personnel will attend the Commission's January 31, 2025, Open Meeting to address Commissioner comments or questions and receive any feedback regarding potential next steps for the FFSS program.

Dated: January 23, 2025

Respectfully submitted,

/s/ Matthew A. Arth

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ATTORNEYS FOR ELECTRIC RELIABILITY
COUNCIL OF TEXAS, INC.



ERCOT ISO Firm Fuel Supply Service Request for Information

ERCOT ISO Department Leading Analysis: Demand Integration

MARKET PARTICIPANT

Market Participant Name:

REQUEST FOR INFORMATION

Current Date:	December 17, 2024
Response Due By:	January 8, 2025

ERCOT is requesting the following information from Generation Entities (GEs) with natural gas units to examine potential improvements to system reliability related to the Firm Fuel Supply Service (FFSS) program. Some of the information requested in this RFI may have previously been provided by the GE, but supplemental information is required.

1.	<p>Please provide a list of Generation Resources that are capable of any the following:</p> <ul style="list-style-type: none"> a) Running on alternate fuel stored onsite that is exclusively for use by the plants at that site. b) Running on natural gas stored onsite that is exclusively for use by the plants at that site. c) Running on natural gas stored offsite and fulfills the following requirements: <ul style="list-style-type: none"> i. The natural gas in the offsite storage facility is owned by the GE; and ii. The pipeline from the storage facility is owned by the GE. d) Running on natural gas stored offsite and fulfills the following requirements: <ul style="list-style-type: none"> i. The natural gas in the offsite storage facility is owned by an affiliate of the GE; and ii. The pipeline from the storage facility is owned by an affiliate of the GE. <p>Please include Generation Resources that may need additional time or outages for equipment modifications, repairs, or testing such that they may run on alternate fuel or stored natural gas. Please include if the Generation Resource has any alternate fuel or natural gas storage capability, regardless if the site has, or has had, empty storage tanks.</p>
2.	<p>Please identify any Generation Resources that are not currently in service, but that the GE intends to place into service by November 15, 2025 that would be capable of any of the following:</p> <ul style="list-style-type: none"> a) Running on alternate fuel stored onsite that is exclusively for use by the plants at that site. b) Running on natural gas stored onsite that is exclusively for use by the plants at that site. c) Running on natural gas stored offsite and fulfills the following requirements: <ul style="list-style-type: none"> i. The natural gas in the offsite storage facility is owned by the GE; and ii. The pipeline from the storage facility is owned by the GE. d) Running on natural gas stored offsite and fulfills the following requirements:


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	<p>i. The natural gas in the offsite storage facility is owned by an affiliate of the GE; and</p> <p>ii. The pipeline from the storage facility is owned by an affiliate of the GE.</p> <p>Please include what would be the capability of the Generation Resource (e.g. onsite stored alternative fuel, onsite stored natural gas). Please include the projected in service date.</p>
3.	<p>Please provide a list of Generation Resources that are capable of running on natural gas stored offsite and fulfill the following requirements:</p> <ul style="list-style-type: none"> a) The natural gas in the offsite storage facility is or would be owned by the GE or an affiliate; b) The GE or an affiliate owns the offsite storage facility or has or intends to enter into a “Firm Gas Storage Agreement” (as defined in the ERCOT Protocols), with: (i) a contractual term that includes November 15, 2025 through March 15, 2026 and (ii) sufficient contracted capacity for the Generation Resource to deliver an amount of MW equal to or greater than its Low Sustained Limit for at least 48 hours; c) The GE or an affiliate has or intends to enter into one or more “Firm Transportation Agreement(s)” on one or more “Qualifying Pipeline(s),” as those terms are defined in the ERCOT Protocols, with a contractual term that includes November 15, 2025 through March 15, 2026; and d) The point of delivery for each “Firm Transportation Agreement” is or would be a primary receipt point under the “Firm Transportation Agreement” such that there is a complete path for firm transportation service from the storage facility to the Generation Resource. e) For each Generation Resource, please identify the “Qualifying Pipeline(s)” that would provide the complete path for firm transportation service from the storage facility to the Generation Resource.
4.	<p>Please provide a list of Generation Resources that are capable of running on natural gas stored offsite and fulfill the following requirements:</p> <ul style="list-style-type: none"> a) The natural gas in the offsite storage facility is or would be owned by the GE or an affiliate; b) The GE or an affiliate owns the offsite storage facility or has or intends to enter into a “Firm Gas Storage Agreement” (as defined in the ERCOT Protocols), with (i) a contractual term that includes November 15, 2025 through March 15, 2026 and (ii) sufficient contracted capacity for the Generation Resource to deliver an amount of MW equal to or greater than its Low Sustained Limit for at least 48 hours; c) The GE or an affiliate has or would be willing to enter into one or more “Firm Transportation Agreement(s),” as defined in the ERCOT Protocols except using the following definition for “Qualifying Pipeline” rather than the definition in the ERCOT Protocols, “A pipeline that is a critical natural gas facility, as defined in subsection (c)(2) of P.U.C. SUBST. R. 25.52, Reliability and Continuity of Service, and: <ul style="list-style-type: none"> (a) A natural gas pipeline subject to the jurisdiction of the Federal Energy Regulatory Commission (FERC) under the Natural Gas Act (15 U.S.C. Section 717 <i>et seq.</i>);


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	<p>(b) An intrastate natural gas pipeline that is not a “gas utility” under Title 3 of the Texas Utilities Code; or</p> <p>(c) An intrastate pipeline that is owned or operated by a “gas utility” under Title 3 of the Texas Utilities Code that:</p> <ul style="list-style-type: none"> (i) Provides only transmission service, in accordance with its gas utility tariff; (ii) Certifies to the Generation Entity that if it reduces firm deliveries to customers pursuant to 16 TEX. ADMIN. CODE Section 7.455(a)(3), Curtailment Standards, it will have sufficient operational capacity, including sufficient pipeline pressure, to provide Firm Service for the volume of gas required by the Generation Resource’s Firm Transportation Agreement on the transportation path between the storage facility and a Generation Resource to provide continuous service in the event of a curtailment; and (iii) Has not curtailed deliveries of gas, pursuant to 16 TEX. ADMIN. CODE Section 7.455 or any applicable predecessor rule or order, to a Generation Resource that was subject to a firm transportation agreement during a curtailment event that occurred at any time since January 1, 2021. <p>A pipeline operated by an Entity that participates in ERCOT’s Load Resource program, Emergency Response Service (ERS) program, or any Demand response programs with respect to any equipment that supports that pipeline will not be eligible to be an FFSS Qualifying Pipeline.”;</p> <p>d) All such contracts have a contractual term that includes November 15, 2025 through March 15, 2026; and</p> <p>e) The point of delivery for each “Firm Transportation Agreement” is or would be a primary receipt point under the “Firm Transportation Agreement” such that there is a complete path for firm transportation service from the storage facility to the Generation Resource.</p> <p>f) For each Generation Resource, please identify the “Qualifying Pipeline(s)” (under the modified definition used here in Question 4.c) that would provide the complete path for firm transportation service from the storage facility to the Generation Resource.</p>
5.	<p>Please provide a list of Generation Resources that are capable of running on natural gas stored offsite and fulfill the same requirements as (3), but the duration is extended to:</p> <ul style="list-style-type: none"> a) 72 hours; or b) 96 hours.
6.	<p>Please provide a list of Generation Resources that are capable of running on natural gas stored offsite and fulfill the same requirements as (4), but the duration is extended to:</p> <ul style="list-style-type: none"> a) 72 hours; or b) 96 hours.
7.	<ul style="list-style-type: none"> a) For sites with fuel storage capabilities, offsite gas with owned pipeline, or offsite gas that meet all the criteria in questions 3 or 4 above, please provide the fuel type and the total fuel storage capacity at the plant or each unit (volume in gallons, barrels, cubic ft/m, etc.). b) Please provide the maximum and minimum MW output for each unit running on alternate fuel or stored natural gas, and the number of hours each unit can run at maximum MW output if


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	there are full tanks (or a firm commitment is fully used) when the plant or unit is first dispatched.
8.	<p>Please provide the amount of alternate fuel or natural gas storage that is not available due to each of the following:</p> <ul style="list-style-type: none"> a) Portions of the system that are not operable; b) Some of the alternate fuel is below suction pipes that take fuel out of the tank and move it to the burner deck or combustion turbine; c) Fuel being old, unfiltered, untreated, or otherwise unfit to be consumed by the generation equipment; or d) Other reasons (please specify).
9.	<ul style="list-style-type: none"> a) For each unit, does the maximum MW capacity decrease as the amount of fuel in storage decreases to the minimum? b) If so, for each unit, please provide details on how much the MW capacity is reduced as the volume of fuel decreases.
10.	For each unit, how much natural gas must be available to support running on alternate fuel? (Many units require natural gas to be used as an igniter and cannot go to 100% capacity on alternate fuel alone.)
11.	For each unit, please provide any additional notice or time requirements to switch fuel supply from natural gas to alternate fuel. In the case of heavy oil, provide time required to reach burning temperature and ready the plant to switch.
12.	Please provide details of any air permit or other restrictions regarding how much alternate fuel may be burned and for how long for each unit.
13.	For natural gas plants/units with offsite natural gas, please provide details of any limits on the ability to deliver the offsite natural gas to the Generation Resource.
14.	How does the GE verify amounts of fuel actually in storage?
15.	What processes, if any, are used to assure that the stored fuel remains fit for service?
16.	Please identify any Generation Resources listed in response to an answer above that have been curtailed during the last three years while they had contracts for firm natural gas supply, noting (a) the length of the curtailment and (b) whether the contracts were with intrastate or interstate pipelines.
17.	Other than the changes to the definition of "Qualifying Pipeline" described in Question 4, if the scope of Generation Resources eligible to participate in the FFSS program could be further expanded, please describe such changes that would lower barriers to additional participation in the FFSS program. Note that responses to this Question 17 may be publicly included in a filing to the Public Utility Commission of Texas. If you are open to inclusion of your company's name in that filing as the submitter of this response to Question 17, please include your company's name in your response to this question.

Number of REs Represented: 67

Number of Units Represented: 373

Question	Number of Units Represented	Total LSL	Total HSL
1a	9	443.00	1,493.50
1b	4	300.00	432.23
1c	14	420.00	1,523.00
1d	22	688.00	2,609.00
2a	0	0.00	0.00
2b	0	0.00	0.00
2c	0	0.00	0.00
2d	0	0.00	0.00
3a	70	2,490.08	6,907.03
3b	82	2,895.08	7,736.03
3c	80	2,655.08	6,866.03
3d	82	2,895.08	7,736.03
3e	129	9,176.93	22,200.49
4a	68	2,089.72	5,903.89
4b	80	2,494.72	6,732.89
4c	90	7,652.13	17,759.39
4d	50	1,244.72	2,486.09
4e	68	2,089.72	5,903.89
4f	89	4,122.12	10,626.79
5a	88	3,795.82	9,499.79
5b	112	8,183.93	19,650.99
6a	118	9,243.53	22,735.59
6b	101	8,103.93	19,372.99
7a	102	8,889.81	22,285.61
7b	102	8,707.41	21,911.21
8a	26	1,717.00	5,274.00
8b	45	1,708.60	6,016.58
8c	27	1,585.00	5,298.30
8d	25	1,345.00	4,428.30
9a	34	1,845.00	6,216.30
9b	38	1,897.00	5,927.00
10	32	1,867.70	4,886.18
11	31	1,401.60	4,060.28
12	50	2,467.60	7,682.58
13	82	4,643.00	13,709.30
14	132	10,016.31	26,164.01
15	75	6,869.31	16,693.71
16	115	8,266.43	20,527.92

Responses to RFI Question 17

- Our generators are used primarily for internal steam and power generation for the industrial site at which they are located and are not operated to intentionally sell electricity into the market. The FFSS program is not applicable to our operating strategy.
- We have no off-site or on-site natural gas storage or natural gas contracts. Natural gas is supplied via two pipelines by our QSE.
- We recommend that ERCOT considers the inclusion of the Generation Resources' firm transport and supply agreements as qualifying for the FFSS Phase 3. Given the robust gas infrastructure [REDACTED] area, demonstrated performance of these pipelines during Uri, and the absence of any firm curtailments since their respective CODs, these Generation Resources can be an important counterparty in the FFSS Phase 3. [REDACTED].
- Allow for use of firm gas storage and transportation prior to dispatch of FFSS if fuel supply and delivery is restricted prior to FFSS deployment.
- Changes to expand the scope of Generation Resources eligible to participate in FFSS needs further study.
- Changes to the definition of "Qualifying Pipeline" is the only item that would impact [REDACTED] ability to participate in the FFSS program.
- Some of the pipelines that qualify under the alternate definition of "Qualifying Pipeline" described in Question 4, offer contracts for Firm No-Notice Gas Supply, delivered to the generator's meter in lieu of contracts for Firm Transport and Firm Storage as contemplated herein. Such contracts provide for similar, and in some cases superior, gas deliverability to Transport/Storage as the supplier often has access to multiple storage facilities and paths to deliver gas. Another benefit to such a contract is that the generator is not time-limited assuming that they have contracted for 24-hours of supply. Including generators with Firm No-Notice Gas Supply contracts in the FFSS program could lower the barriers to participation without sacrificing reliability.
- Currently the Generation Resources eligibility to participate in FFSS program cannot be further expanded.
- No other generation resources could be included by realistically changing the scope of those eligible to participate in the FFSS program for this site.
- Guaranteeing refueling of DFO or providing separate offer caps for DFO would make FFSS attractive to utilities with DFO storage. Absent the implementation of one of these changes, participation in FFSS could result in the utility paying to participate in the service.
- We believe the changes to the definition of "Qualifying Pipeline" are sufficient and a good starting point to expand the eligible pool of Resources while still maintaining a high threshold for qualification.