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March 7, 2023

Public Utility Commission of Texas  
Chairman Peter Lake  
Commissioner Will McAdams  
Commissioner Lori Cobos  
Commissioner Jimmy Glotfelty  
Commissioner Kathleen Jackson  
1701 N. Congress Ave.  
Austin, TX 78711

Re: PUC Project No. 52373, *Review of Wholesale Electric Market Design*; and  
PUC Project No. 53298, *Wholesale Electric Market Design Implementation*

Dear Chairman and Commissioners:

Electric Reliability Council of Texas, Inc. (ERCOT) hereby provides the aggregated results of ERCOT's recent fuel-use survey, which is attached at Exhibit A. This survey was conducted to gauge willingness and potential capacity of Generation Entities<sup>1</sup> to provide Firm Fuel Supply Service (FFSS) as the qualifications for Resources to provide the product are expanded in a second phase (Phase 2).

### **Fuel-Use Survey**

On February 14, 2023, ERCOT sent out a fuel-use survey to Generation Entities with natural gas units to gather information about Generation Resources potentially eligible to participate in the first phase (Phase 1) or Phase 2 of the FFSS program. Responses were due on February 27, 2023.

#### **I. Phase 1 Resources**

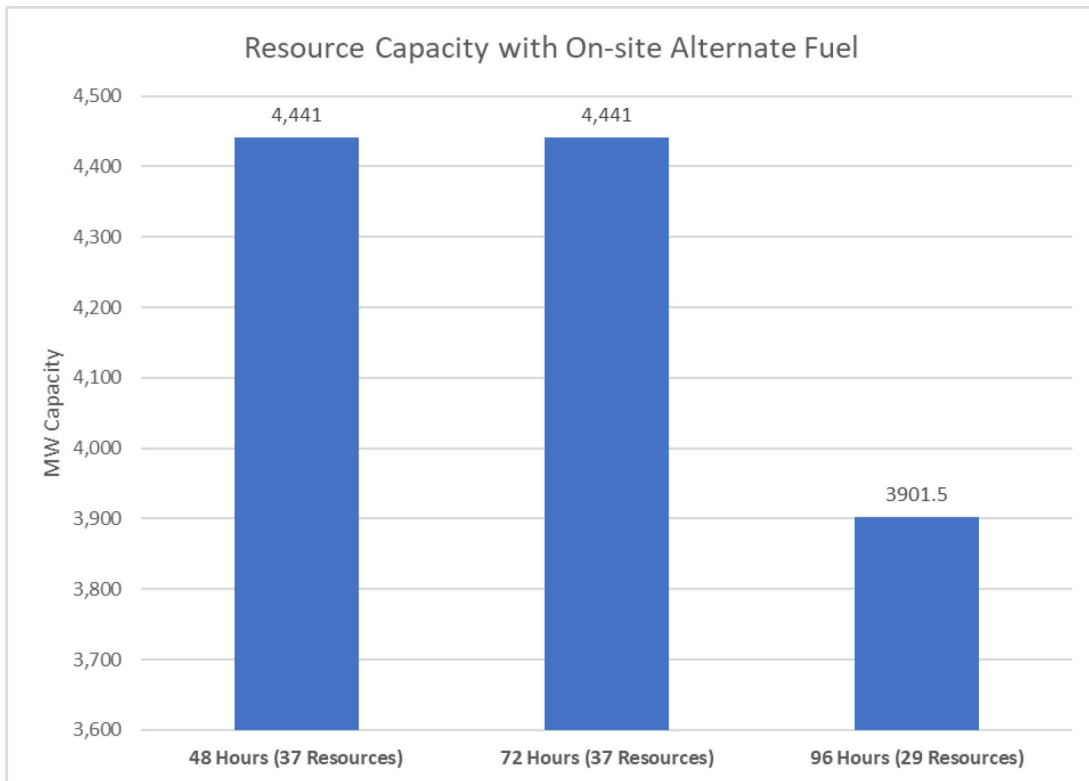
Regarding Generation Resources that qualify to provide FFSS under Phase 1, 37 Generation Resources at 11 plant sites were identified as capable of running on alternate fuel stored onsite that is exclusively for use by the plants at that site. These are the same Resources that were identified in ERCOT's last fuel-use survey.<sup>2</sup> Each unit of a combined cycle plant was counted as a separate Resource.

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<sup>1</sup> Capitalized terms used but not defined herein have the meaning set forth in the ERCOT Protocols.

<sup>2</sup> See PUC Project No. 52373, *Review of Wholesale Electric Market Design*, ERCOT Letter Regarding Firm Fuel in ERCOT With Correction (Mar. 11, 2022).

All the Resources use diesel fuel oil as the alternative fuel. Six of the Resources also require some natural gas to start on the diesel fuel oil. The table below shows the total maximum output of these Resources when they are running on diesel fuel oil for the specified hours of output.



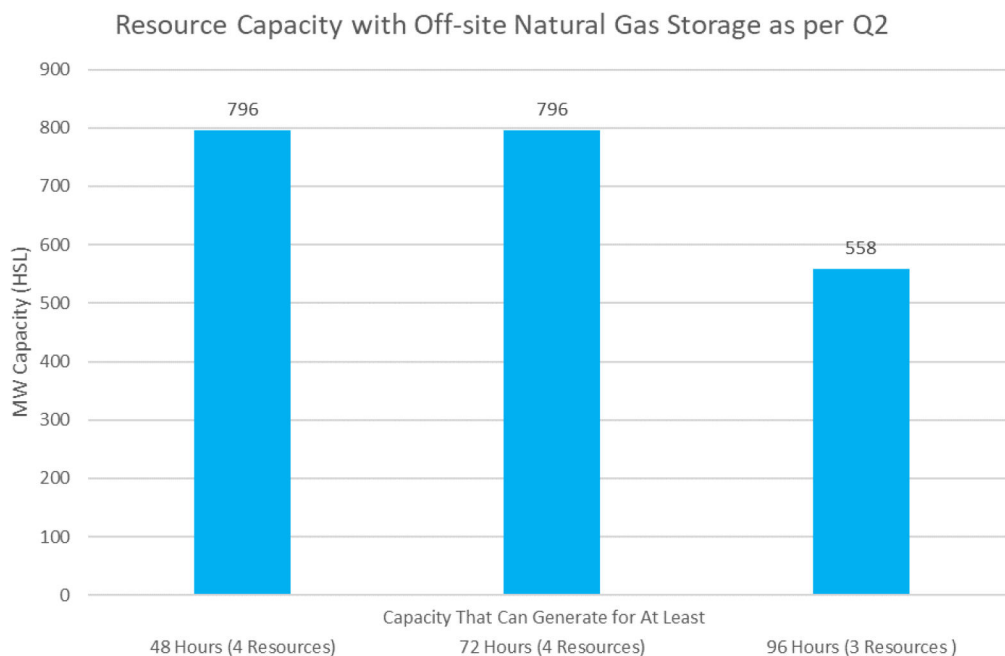
More than half of the Resources that can run on diesel fuel oil may make the switch within 1 hour or less; however, 6 of the Resources require 6 or more hours.

The Resources that can run on diesel fuel oil are subject to air permits or other limitations on the amount of alternate fuel that can be burned. In all cases, the Resources may run on diesel fuel oil for at least 168 hours over a rolling 12-month period under the existing permits. Many of these Generation Resources may be able to run on diesel fuel oil for longer than 168 hours over a rolling 12-month period without exceeding permit limits, but the exact number of hours is dependent on variables such as the level of generation.

No responses identified Generation Resources that run on natural gas stored onsite that is exclusively for use by the plants at that site.

Ten Generation Resources at 3 plant sites were identified that run on natural gas stored offsite where the natural gas in the offsite storage facility and the pipeline from the storage facility are owned by the Generation Entity. All of these Resources were also identified in ERCOT's last fuel-use survey.

The number of hours shown in the table below are based on off-site storage capacity, assuming the fuel tanks are full. All Resources could generate at maximum output for at least 72 hours based on storage capability.



No Generation Resources were identified that run on natural gas stored offsite where the natural gas in the offsite storage facility and the pipeline from the storage facility are owned by affiliates of the Generation Entity.

Finally, ERCOT inquired about Generation Resources that are not currently in service but are under consideration to be put into service and would qualify to provide FFSS under Phase 1. Numerous respondents indicated they would be willing to consider making investments to bring such facilities into service if it was economically justified or capacity were available. However, no Resources or additional amounts of capacity were identified.

## II. Phase 2 Resources

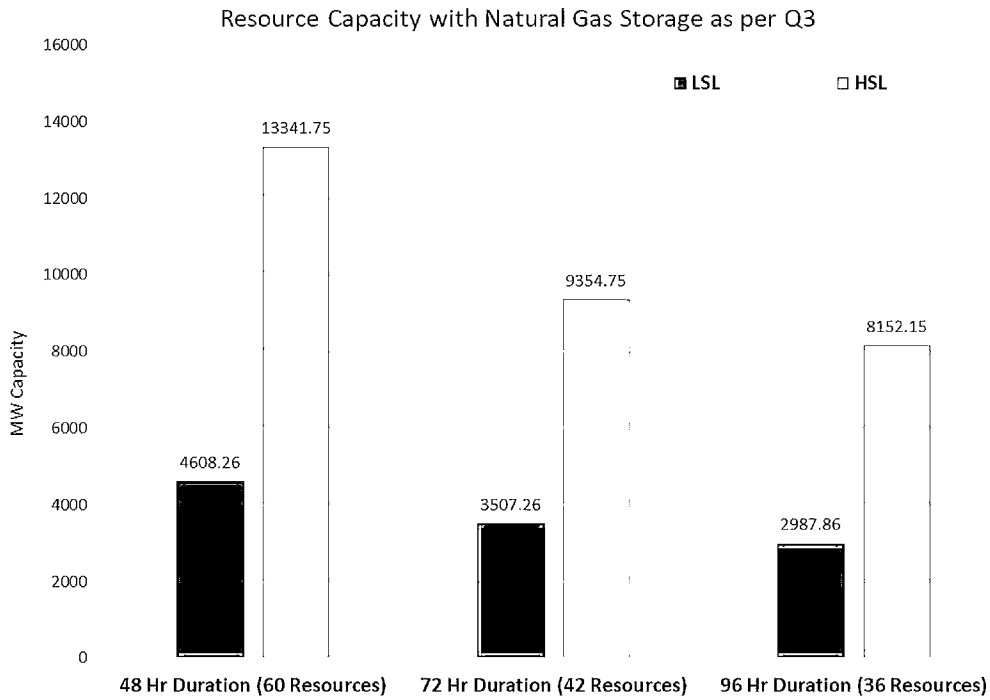
ERCOT’s fuel-use survey also sought information about (1) additional Generation Resources that might qualify under the expanded criteria proposed in the Phase 2 Framework that ERCOT filed with the Public Utility Commission of Texas (Commission) on January 23, 2023 (the Framework); and (2) Generation Resources that might qualify if the proposed definition of “Qualifying Pipeline” in the Framework were further expanded. These questions not only inquired about Generation Entities’ existing contractual arrangements, but also those into which they would be willing to enter. This framing was an acknowledgement that the Framework includes contractual requirements that may not be in Generation Entities’ existing contracts for firm storage or transportation service. These requirements are intended to maintain a high level of reliability and include defining what qualifies as “Firm Service,” specifying pipeline or storage providers’ responsibilities in the event of force majeure and requiring the pipeline or storage provider to make

available to the Generation Resource information such as detailed accounts of receipts and deliveries of natural gas.

Respondents identified 60 Resources that can run on natural gas stored offsite and fulfill the following requirements:

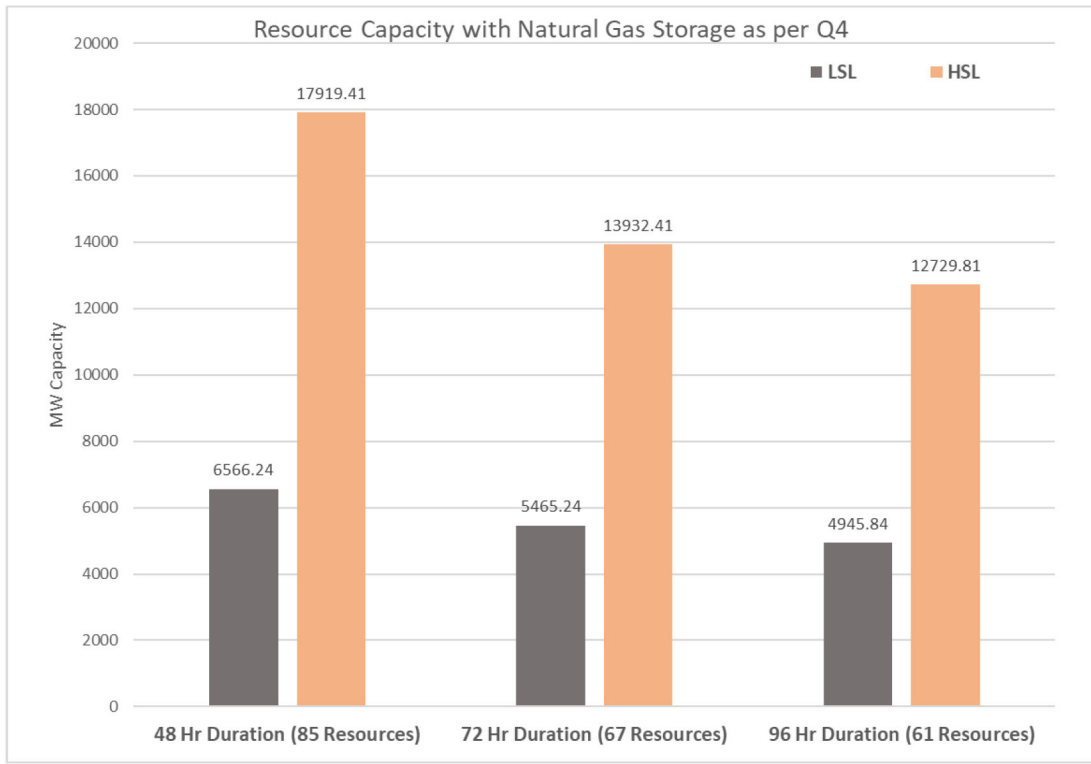
- a) The natural gas in the offsite storage facility is or would be owned by the Generation Entity or an affiliate;
- b) The Generation Entity or an affiliate owns the offsite storage facility or has or would be willing to enter into a “Firm Gas Storage Agreement,” as defined in the Framework, with:  
(i) a contractual term that includes November 15, 2023 through March 15, 2024 and (ii) sufficient contracted capacity for the Generation Resource to deliver an amount of megawatt (MW) equal to or greater than its Low Sustained Limit (LSL) for at least 48 hours;
- c) The Generation Entity or an affiliate has or would be willing to enter into one or more “Firm Transportation Agreement(s)” on one or more “Qualifying Pipeline(s),” as those terms are defined in the Framework, with a contractual term that includes November 15, 2023 through March 15, 2024; 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.

The chart below provides the LSL and High Sustained Limit (HSL) of those Resources that met the above requirements and would also be able to run on natural gas stored offsite if the duration were 48, 72, or 96 hours.



When the question was changed to expand the definition of a “Qualifying Pipeline” to include intrastate gas utility pipelines that provide firm service to human needs customers or local distribution systems that serve human needs customers, respondents identified 80 Resources.

The chart below provides the LSL and HSL of those Resources that met the above requirements and would also be able to run on natural gas stored offsite if the duration were 48, 72, or 96 hours.



As explained previously, the above graphs regarding Phase 2 Resources represent amounts of capacity for which Generation Entities expressed at least a willingness to enter into qualifying agreements for firm gas storage and transportation. As such, some respondents noted their responses were conditional; actual ability for a Resource to offer to provide FFSS would depend on factors such as whether the Generation Entity could find available firm capacity and a willing service provider. This means that the reported numbers of available generation capacity may overstate the MWs that would actually be able to participate under the expanded criteria. ERCOT respectfully recommends that the Commission consider the hypothetical nature of these amounts when considering sizing the upcoming FFSS procurement and whether to revise the definition of “Qualifying Pipeline.”

ERCOT will be available at the upcoming March 9, 2023 Open Meeting to answer questions and respectfully requests that the Commission issue guidance regarding the appropriate definition of “Qualifying Pipeline.” Such guidance will be incorporated into a Nodal Protocol Revision Request seeking approval and an effective date before the next FFSS procurement.

Respectfully submitted,

/s/ Chad Seely

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**Exhibit A**  
**Fuel-Use Survey**



ERCOT ISO Department Leading Analysis: Demand Integration

**MARKET PARTICIPANT**

Market Participant Name:

**REQUEST FOR INFORMATION**

Current Date: February 16, 2023

Response Due By: February 27, 2023

ERCOT is requesting the following information from Generation Entities (GEs) with natural gas units to examine potential improvements to system reliability. 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"><li>a) Running on alternate fuel stored onsite that is exclusively for use by the plants at that site.</li><li>b) Running on natural gas stored onsite that is exclusively for use by the plants at that site.</li><li>c) Running on natural gas stored offsite and fulfills the following requirements:<ul style="list-style-type: none"><li>i. The natural gas in the offsite storage facility is owned by the GE; and</li><li>ii. The pipeline from the storage facility is owned by the GE.</li></ul></li><li>d) Running on natural gas stored offsite and fulfills the following requirements:<ul style="list-style-type: none"><li>i. The natural gas in the offsite storage facility is owned by an affiliate of the GE; and</li><li>ii. The pipeline from the storage facility is owned by an affiliate of the GE.</li></ul></li></ul> <p>Include all Generation Resources even those that were identified in the 2021-2022 Winter Fuel Survey. 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 the GE is considering placing into service that would be capable of any of the following:</p> <ul style="list-style-type: none"><li>a) Running on alternate fuel stored onsite that is exclusively for use by the plants at that site.</li><li>b) Running on natural gas stored onsite that is exclusively for use by the plants at that site.</li><li>c) Running on natural gas stored offsite and fulfills the following requirements:<ul style="list-style-type: none"><li>i. The natural gas in the offsite storage facility is owned by the GE; and</li><li>ii. The pipeline from the storage facility is owned by the GE.</li></ul></li><li>d) Running on natural gas stored offsite and fulfills the following requirements:</li></ul>

	<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 (<i>e.g.</i> 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"><li>a) The natural gas in the offsite storage facility is or would be owned by the GE or an affiliate;</li><li>b) The GE or an affiliate owns the offsite storage facility or has or would be willing to enter into a “Firm Gas Storage Agreement” (as defined in the Proposed Firm Gas FFSS Product framework document that was filed with the Public Utility Commission of Texas in its Project No. 52373 on January 23, 2023 (the Framework) and is attached to this request), with: (i) a contractual term that includes November 15, 2023 through March 15, 2024 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;</li><li>c) The GE or an affiliate has or would be willing to enter into one or more “Firm Transportation Agreement(s)” on one or more “Qualifying Pipeline(s),” as those terms are defined in the Framework, with a contractual term that includes November 15, 2023 through March 15, 2024; and</li><li>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.</li><li>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.</li></ul>
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"><li>a) The natural gas in the offsite storage facility is or would be owned by the GE or an affiliate;</li><li>b) The GE or an affiliate owns the offsite storage facility or has or would be willing to enter into a “Firm Gas Storage Agreement” (as defined in the Framework), with (i) a contractual term that includes November 15, 2023 through March 15, 2024 and (ii) sufficient contracted capacity for the Generation Resource to deliver the an amount of MW equal to or greater than its Low Sustained Limit for at least 48 hours;</li><li>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 Framework except that definition of Qualifying Pipeline is modified to include intrastate gas utility pipelines that have contracts for firm service on such pipeline(s) with human needs customers or local distribution systems that serve human needs</li></ul>

	<p>customers. All such contracts have a contractual term that includes November 15, 2023 through March 15, 2024; and</p> <p>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.</p> <p>e) For each Generation Resource, please identify the “Qualifying Pipeline(s)” (under the modified definition discussed 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> <p>a) 72 hours; or</p> <p>b) 96 hours.</p>
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> <p>a) 72 hours; or</p> <p>b) 96 hours.</p>
7.	<p>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.).</p> <p>b) If not provided in the 2021-2022 Winter Fuel Survey, 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 there are full tanks (or a firm commitment is fully used) when the plant or unit is first dispatched.</p>
8.	<p>Please provide the amount of alternate fuel or natural gas storage that is not available due to each of the following:</p> <p>a) Portions of the system that are not operable;</p> <p>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;</p> <p>c) Fuel being old, unfiltered, untreated, or otherwise unfit to be consumed by the generation equipment; or</p> <p>d) Other reasons (please specify).</p>
9.	<p>a) For each unit, does the maximum MW capacity decrease as the amount of fuel in storage decreases to the minimum?</p> <p>b) If so, for each unit, please provide details on how much the MW capacity is reduced as the volume of fuel decreases.</p>
10.	<p>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.)</p>
11.	<p>For each unit, please provide any additional notice or time requirements to switch fuel supply from natural gas to alternate fuel, if different or unlisted in your response to the 2021-2022 Winter Fuel</p>



	Survey. In the case of heavy oil, provide time required to reach burning temperature and ready the plant to switch.
12.	If not provided in your response to the 2021-2022 Winter Fuel Survey, 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, if not provided in your response to the 2021-2022 Winter Fuel Survey, 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.	How can ERCOT verify the amount of stored fuel that remains fit for service?
17.	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.