FRAME SWITCH ENERGY
Electricity from Clean Texas Natural Gas ™
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SENT BY E-MAIL AND HAND DELIVERED.

Air Permits Initial Review Team, MC 161
Texas Commission on Environmental Quality
PO Box 13087
Austin, Texas 78711-3087

Re: Request for 18-Month Extension to Deadline to Commence Construction
Frame Switch Energy, Inc.
(TCEQ Standard Permit No. 166116, CN604334714, RN106780653)

Dear Sir or Madam,

On August 26, 2021, the Texas Commission on Environmental Quality (TCEQ) authorized the construction of the proposed Frame Switch Energy Inc. (FSE) facility located in Williamson County, Texas (TCEQ Standard Permit No. 166116) (Electric Generating Units Air Quality Standard Permit). Once operational, the facility will consist of up to twelve (12) Wärtsilä 18V50DF-D 4-stroke lean-burn (4SLB) dual fuel reciprocating internal combustion engines (RICE) to generate electricity to be sold and fed into the Electric Reliability Council of Texas (ERCOT) interconnected electric grid. The facility would have additional auxiliary equipment authorized under Permit by Rule.

In accordance with Texas Administrative Code (TAC) Title 30 Rule 116.120(a)(1), construction authorized under a TCEQ New Source Review (NSE) Permit must begin within 18 months of permit issuance or the permit would be voided. For Standard Permit No. 166116, the initial deadline was February 26, 2023. That February 26, 2023 deadline was in the middle of the 2023 Texas Legislative Session which was dealing with the growing potential of power shortages on the Texas interconnected grid. As the Texas Legislature started its session in early 2023, FSE filed a request for an 18 month extension on its construction authorization. This extension would allow the Texas Legislature time to address the shortage of fast-start, standby, conventional power stations to meet the growing need for dependable emergency capacity.

FSE would like to point out that the 18 month extension that was received in early 2023 extended the period to start construction from February 26, 2023 to August 26, 2024.

The Texas Legislature, in its 2023 legislative session, recognized the growing danger of power shortages. But the Legislature only took partial action to encourage "peaking" type generating plants (similar to FSE's proposed 210 MWe, 12-unit facility) to be built. The Texas Legislature and ERCOT only addressed the "capital funding of construction" side of the equation but not how to pay back the debt associate with plant construction.

For 30% of the Texas "power production/consumer market", monthly payments on the debt for the new electric generating plants would not be an issue since the power supplier is tied to the consumer – through power/consumer co-operatives and municipal electric systems. The City Public Service of San Antonio and the Lower Colorado River Authority are two examples of power supply entities tied to customers or electric cooperatives. The consumer in a co-operative or municipal electric system is charged for the additional power plants. Those reserve electric generating plants stand ready to supply additional power:

- as demands of the customers increase during the day, or
- during the peak loads of the season, or

- during loss of output from wind and/or solar generating plants, or
- during an unexpected outage of a conventional electric generating plant.

And the customer base of the Cooperative or Municipality is charged monthly for this "standby" generating capacity in the 30% of the Texas Interconnected System supplied by cooperatives and municipalities.

For the 70% of the customers in that portion of the ERCOT market where customers are not tied to generators, the competitive nature of pricing brought somewhat lower prices to Texas customers initially. But, there was no guarantee of supply. Thus for example, supply of electricity was cut OFF to millions of customers for 70%, 80%, 90%, even 100% of the time in the disastrous February 2021 electrical supply shortage event.

The advent of "favored" wind and solar generating units also created a squeeze on the flow of payments to conventional generators. Numerous conventional generators filed for bankruptcy. Further, Federal subsidies of wind and solar power plants have produced a large increase in those plants on the ERCOT electrical grid. When the wind is blowing and the sun is shining, power supply is great --- for wind and solar generators. But if the wind is NOT BLOWING and the sun is NOT SHINING and conditions are VERY HOT or VERY COLD, supply to the Texas electric grid is in **trouble**.

Pricing signals may be increasing and falsely make conditions more favorable for fast-start, peaking generating units. But the market signal is **FALSE**! If enough peaking plants are built, in an open market, to supply peak demand, prices drop even during high demand periods. Owners of independent peaking units GO BROKE. If a year or two has mild conditions, owners of independent peaking units GO BROKE FASTER! The need for new peaking type units to replace very aged generating capacity is increasing. Yet the predictability of adequate funding being available to pay for the new peaking plant units over a twenty year period is not there.

In February of 2021, Texas experienced an extreme winter storm that resulted in blackouts on the ERCOT system. These blackouts resulted in over 200 deaths and WELL over $19.5 billion in property damage (see https://energy.utexas.edu/research/ercot-blackout-2021).

The additional capacity added to the ERCOT system through the development of the FSE Facility will help ERCOT assure that electricity is available during periods of high demand. Adding the FSE 210 MWe facility will help to potentially avert future blackouts like those that occurred in February of 2021. The current lack of a pricing structure on the ERCOT grid to pay for needed "standby" capacity is the last factor that must be solved by the Texas Legislature and ERCOT to get additional electrical generating units, such as FSE's 210 MWe plant, to be built.

Based on the projection that the Texas Legislature and ERCOT finally take action on a stable funding structure for Emergency Standby Units such as the FSE 210 MWe Plant, construction could start in the fall of 2025. An extension in the permit by TCEQ from August 26, 2024 to February 26, 2026, during which FSE could start construction, would be consistent with the Texas Legislature and ERCOT's opportunity to adequately address this critical Texas issue.

FSE's technical consultant believes that TCEQ has constrained itself to only allowing one 18 month extension on a permit such as FSE received as a permit extension to start construction by August 26, 2024. FSE disagrees that the TCEQ is so constrained. FSE's position is that Legislative decisions must be made first for the 70% of the customer market that comprise the open market. Those decisions must be made before needed "emergency capacity" can be built and brought on-line without the "open market" electric generation companies going bankrupt.

Below is a quick analysis of the position of the LEGISLATURE and TCEQ.

DOES ERCOT NEED MORE EMERGENCY GENERATING CAPACITY – NOW?

LEGISLATURE TCEQ

Yes! Dependable On-Call Capacity Old polluting units are running now.

WHO SETS THE RULES?

LEGISLATURE TCEQ

Sets the financial & environmental rules Applies the environmental rules

DO THE RULES, NEED TO BE ADJUSTED?

LEGISLATURE TCEQ

Yes. To fund new peaking units Old, polluting units are running.

WHAT IS THE NEEDED CHANGE TO GET PEAKING UNITS BUILT?

LEGISLATURE TCEQ

Peaking units need monthly revenue Not TCEQ problem.

This is the critical point. In the open market, no one can build a peaking unit on the **hope** that it will be called on to run. The unit might not get a good price for its output. The unit could sit idle for months and never be called to generate electricity. Investors do not want to build a power plant, not get revenue, and then go bankrupt!

IS THE NEED FOR A STEADY REVENUE INCOME STREAM AN ISSUE?

LEGISLATURE should answer TCEQ

Yes, to build in 70% of the market Old, dirty plants are running now.

COULD FSE BUILD ITS GENERATING UNIT WITH THIS REVENUE CHANGE?

LEGISLATURE should know TCEQ

A steady income pays the debt. New units, environment is improved.

CAN FSE BUILD ITS GENERATING UNIT BEFORE THIS FUNDING CHANGE?

LEGISLATURE should know TCEQ

No predictable revenue means NO. Shortages & old, polluting units run.

No company wants to go broke building a power plant. No company can operate that has no reliable method of paying back the debt and paying its employees AND paying its investors a return for using THEIR money.

The TEXAS LEGISLATURE must make changes to get “emergency backup” peaking plants built. The TEXAS LEGISLATUR meets starting in January. Frame Switch Energy is requesting an 18-month extension to the August 26, 2024, deadline to commence construction under Standard Permit No. 166116. This would extend the deadline to begin construction to February 26, 2026. This extension would give the TEXAS LEGISLATURE time to adjust its rules and regulations. This extension would give Frame Switch Energy time to evaluate whether or not the TEXAS LEGISLATURE really wants new backup power plants to provide reliability to the ERCOT grid.

In accordance with 30 TAC §116.120(b), an 18-month extension to the construction deadline can be granted by the Executive Director, although the permit may be subject to revision, “based on best available control technology (BACT), lowest achievable emission rate (LAER), and netting or offsets as applicable.” LAER, netting and offsets would not apply to this request since Standard Permit No. 166116 was not issued pursuant to those regulations. An Electric Generating Unit Air Quality Permit (effective date August 26, 2021 and extended February 26, 2023) as issued to Frame Switch Energy has not been modified as of the date of this letter. Furthermore, Frame Switch Energy is not proposing any change to the equipment or facility designed as authorized in Standard Permit No. 166116.

In order to demonstrate that the controlled emission rates from the Frame Switch Energy Facility still represent BACT, they are compared against the applicable TCEQ current BACT standards in Table 1. The controlled emission rates from the Frame Switch Energy Facility in Table 1 are from the application submitted in 2021 and repeated in 2023, and represent the highest controlled

emission rate for each pollutant from the proposed engine models. In addition, the RICE at the facility will be subject to the emissions standards contained in New Source Performance Standard (NSPS) Subpart JJJJ, which are lower than TCEQ's BACT in several instances.

Table 1 – Comparison of Current TCEQ BACT, NSPS Subpart JJJJ Emission Standards, NSPS Subpart IIII Emission Standards, and Controlled Emission Rates of Proposed RICE at Frame Switch Facility

Pollutant	Current TCEQ BACT for Internal Combustion Engines for Natural Gas Combustion [1]	Current TCEQ BACT for Internal Combustion Engines for Diesel Combustion [2]	NSPS Subpart JJJJ for Natural Gas Combustion [3]	NSPS Subpart IIII for Diesel Combustion [4]	Frame Switch Controlled Emission Rate for Proposed RICE for Natural Gas Combustion [5]	Frame Switch Controlled Emission Rate for Proposed RICE for Diesel Combustion [5]
NO_X	0.14 lb/MW-hr [6]	7.8 g/bhp-hr	1.0 g/bhp-hr	7.8 g/bhp-hr	0.139 lb/MW-hr (0.047 g/bhp-hr)	0.38 g/bhp-hr
CO	3.0 g/bhp-hr	NA	2.0 g/bhp-hr	NA	0.09 g/bhp-hr	0.13 g/bhp-hr
VOC	1.0 g/bhp-hr	NA	0.7 g/bhp-hr	NA	0.12 g/bhp-hr	0.15 g/bhp-hr
PM	Good Combustion Practices <10 grains of Sulfur per 100 dry standard cubic feet of natural gas	0.3 g/bhp-hr Good Combustion Practices Low sulfur diesel (<500 ppmw sulfur) [6]	NA	0.3 g/bhp-hr	Good Combustion Practices <10 grains of Sulfur per 100 dry standard cubic feet of natural gas	0.1 g/bhp-hr Good Combustion Practices Ultra-low sulfur diesel (<15 ppmw sulfur)
SO_2	Good Combustion Practices <10 grains of Sulfur per 100 dry standard cubic feet of natural gas	Low sulfur diesel (<500 ppmw sulfur) [6]	NA	Low sulfur diesel (<0.05 wt% sulfur)	Good Combustion Practices <10 grains of Sulfur per 100 dry standard cubic feet of natural gas	Good Combustion Practices Ultra-low sulfur diesel (<15 ppmw sulfur)

[1] TCEQ Current BACT Guidelines for Internal Combustion Engines (APDG 6498v2, Revised 06/19)

[2] These engines serve as emergency power when fired by diesel. TCEQ Current BACT Guidelines for Internal Combustion Engines (APDG 6498v2, Revised 06/19) for Emergency Diesel Engines incorporates the requirements of 40 CFR Part 60 (40 CFR 60), Subpart IIII by reference and provide fuel sulfur content requirements.

[3] Per Table 1 to Title 40 of the Code of Federal Regulations, Part 60 (40 CFR 60), Subpart JJJJ for Non-Emergency SI Natural Gas and Non-Emergency SI Lean Burn LPG for HP>500.

[4] Per 40 CFR 60.4205, emergency engines installed on or after January 1, 2012, NOx must be limited to 44 n^−0.23 g/KW-hr (33 n^ −0.23 g/HP-hr) when maximum engine speed is greater than or equal to 130 but less than 2,000 rpm and where n is maximum engine speed. PM emissions must be limited to 0.40 g/KW-hr (0.30 g/HP-hr). Engine speed provided my manufacturer is constant 514 rpm.

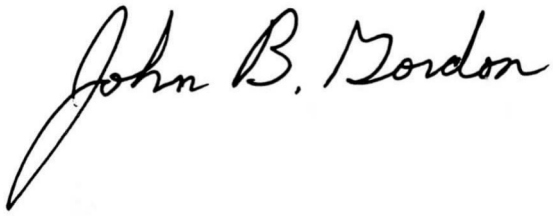
[5] Emission rates taken from Electric Generating Units Air Quality Standard Permit Application submitted to TCEQ on August 5, 2021. Emission rates in permit application are based on manufacturer specifications.

[6] Emission rate specified in the Air Quality Standard Permit for Electric Generating Units, Section 4 (d)(ii)(a).

As Table 1 demonstrates, the proposed RICE at the Frame Switch Energy Facility meet current TCEQ BACT and Standard Permit No. 166116 does not require a revision pursuant to TAC Title 30 Rule 116.120(b) to qualify for an 18-month extension to the construction deadline.

Thank you for your consideration of this request. If you have any questions regarding this request, please contact me at 512-789-5073

Sincerely,



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