

# **Filing Receipt**

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# ERCOT Summer Weatherization Plan

HECATE ENERGY FRYE SOLAR, LLC REV 0

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# 1.0 PURPOSE

This Plan provides guidance and direction to Hecate Energy Frye Solar Solar, LLC (Site) regarding compliance with the severely hot weather emergency operations requirements as a Power Generation Company (PGC) under Chapter 25 of the Public Utilities Commission of Texas (PUCT) Electric Substantive Rules.<sup>1</sup>

This plan is intended to be used as a placeholder until substantial completion of the project and turnover to the operations & maintenance group.

# 2.0 SCOPE

This Summer Weatherization Plan is a supporting document to the Job Site Emergency Response Plan and addresses the requirements related to preparing for and responding to severe hot weather events.

Site understands and affirms that corporate and facility management, with critical execution and support from the operations and maintenance (O&M) provider, will play a significant role in maintaining an effective weatherization program for Site. It is the responsibility of all personnel to exercise good judgment in the performance of this plan.

Any questions regarding this plan should be directed to the ROCC Manager. The final reporting to ERCOT must be submitted by the Generator Owner, confirming compliance to this plan.

#### 3.0 ROLES AND RESPONSIBILITIES

#### 3.1 Remote Operations Control Center (ROCC) Manager

- 3.1.1 Role The ROCC Manager and owner of this plan.
- 3.1.2 Responsibilities include:
  - Ensure completion of all required reporting (ERCOT, PUCT, etc.) within the specified timeframes.
  - Oversee the development and implementation of this plan. Ensure the plan is up-to-date and aligns with Site's business objectives and addresses requirements.
  - Oversee revisions and updates to the Plan as necessary, as well as the implementation of the revised Plan, and a review of supporting documents, as needed.
  - Ensure the activities documented in this Plan are completed, in concert with the Site Manager
  - Reviews and approves this Plan annually.

<sup>&</sup>lt;sup>1</sup>§25.53 – Electric Service Emergency Operations Plans, Subchapter C, Item 2

#### 3.2 Site Manager

- 3.2.1 Role the manager of the team contracted to perform the O&M services at the Site Facility.
- 3.2.2 Responsibilities include:
  - Ensure the processes documented in the Plan are followed by all site personnel.
  - Lead Field Services in the execution of this Plan and set expectations with Field Service Technicians for safe and reliability operational performance of the facility, as detailed in this Plan.
  - Provide annual written affirmation to the ROCC Manager that pre-summer checks and summer season review activities have been complete.
  - Oversee the day-to-day operations of the Site facility.
  - Ensure the execution of weatherization tasks, procurement of inventory, completion of checklists, and overall preparation and readiness for seasonal operations is performed within the timeframes required.
  - Document remediation activities in the work management system that are required to address summer preparation needs or deficiencies.
  - Notify the ROCC Manager of weatherization tasks progress, scheduling, or concerns with meeting deadlines
  - Participate in the development, administration, execution, and update of the plan.
  - Provide evidence to ROCC Manager upon completion and request.

#### 3.3 PRE Field Services

- 3.3.1 Role Contracted to perform the O&M services at the Site Facility.
- 3.3.2 Responsibilities include:
  - Follow the requirements and processes documented in the Plan.
  - Conduct plant readiness reviews and provide reports to Site Manager and ROCC Manager upon completion and request.
  - Coordinate with and report facility weather-related information to Site Manager and PRE Operating Personnel.
  - Identify potential risk areas due to summer weather conditions and report opportunities to improve readiness and response to the Site Manager.
  - Participate in post-summer evaluations to assess the effectiveness of this plan and provide feedback.

#### 3.4 PRE Operating Personnel

3.4.1 Role – The Operator for the Site facility

#### 3.4.2 Responsibilities include:

- Operates the Site from the PRE operations center in Aurora, Colorado.
- Communicate with QSE and other entities, as appropriate, of weather conditions leading to a Site outage, shutdown, or curtailment.

## 4.0 FACILITY INFORMATION AND LOCAL CONDITIONS

#### 4.1 Facility Information

Hecate Energy Frye Solar, LLC., is a 500 MWac solar facility located in Swisher County, Texas. Hecate Energy Frye Solar, LLC will commence 450 MWac of commercial operations December 1<sup>st</sup>, 2023 and substantial completion of the entire facility on February 28, 2024. Hecate Energy Frye Solar, LLC is interconnected to Oncor Electric at the Kress Switch Station, located in the Electric Reliability Council of Texas (ERCOT) footprint. The registered Generator Operator (GOP) is unidentified at time this plan is being produced. PRE is the acting operations and maintenance (O&M) provider for the Hecate Energy Frye Solar, LLC between substation energization in July 2023 and substantial completion/turnover of the project site in February 2024.

See the Site Solar Site Map and Location Map in Attachment 1 and 2.

#### 4.2 Local Conditions

The City of Tulia, TX is used for comparison of the local Facility conditions. The average high temperature during summer months of June through August is roughly 91 degrees Fahrenheit, with recorded temperatures as high as 110 degrees Fahrenheit.



Figure 1 Tulia, Texas Daily Temperature Data

#### 5.0 **REQUIRED TIMELINES FOR SUMMER PREPARATIONS**

#### 5.1 **Pre-Summer Checks**

Prior to April 1 of each calendar year, Field Services will complete a Pre-Summer Checklist (Attachment 5).

#### 5.2 Summer Season Review

By <u>May 1<sup>2</sup></u> of each calendar year, Field Services will commence summer season review by completing the *Summer Season Review Checklist* (Attachment 6).

#### 5.3 Pre-Event Checks

Field Services will complete the *Pre-Event Checklist* (**Attachment 7**) prior to the forecasted temperature reaching 110°F and/or the possibility of extreme heat or severe summer weather event.

# 6.0 SITE CRITICAL COMPONENTS AND EQUIPMENT

As part of its summer weather readiness and preparation, Field Services personnel will identify and prioritize critical components, equipment, and other areas of vulnerability which may experience severe summer weather operational issues (i.e., critical equipment or components that have the potential to cause a trip, de-rate, or failure to start due to extreme heat or a severe summer weather event).

The *Critical Equipment Matrix*, provided in **Attachment 3**, identifies the critical components and equipment at the facility that perform or support significant reliability or operating functions, including any existing type(s) of weather protection and any manufacturer-provided weather design limits.

Field Services personnel will ensure all critical site-specific equipment and components have adequate protection to ensure operability during extreme heat or severe summer weather events, including but not limited to performing maintenance prior to the beginning of summer and increasing surveillance during extreme heat or severe summer weather events.

#### 6.1 Equipment Design Parameters and Weather Design Limits

The facility has a design maximum ambient temperature (maximum operating temperature) of 113 degrees Fahrenheit (temperature >113 degrees Fahrenheit results in equipment derations) and a design minimum ambient temperature (minimum operating temperature) of -4 degrees Fahrenheit.

Field Services personnel will utilize, as part of the implementation of this plan, manufacturers recommendations to determine at what ambient temperature the facility and any critical equipment will be able to operate.

#### 7.0 SUMMER WEATHER PREPARTION AND RESPONSE PROCESSES

To support the Facility's seasonal summer preparedness, address known critical failure points, and address the effects of equipment and Facility weather design limitations, checklists are

<sup>&</sup>lt;sup>2</sup> Must be completed by this date to meet requirement for Coniglio to submit *Declaration of Completion of Generation Resource Weatherization Procedures* between May 1 and June 1, as required by ERCOT.

provided to prepare and safeguard the facility. Field Services personnel will utilize these checklists to prepare for summer and respond to summer weather events.

#### 7.1 Summer Weather Equipment Inventory List

Prior to the onset of the summer season and/or a severe summer weather event, Field Services personnel will ensure there are adequate inventories of all critical supplies, spare parts, equipment, and consumables that would aid in keeping the plant operational during severe summer weather events and responding to these events. Field Services personnel will use and complete the *Summer Weather Equipment Inventory* in **Attachment 4** and provide the dated checklist as evidence that the inventory review was performed.

#### 7.2 Pre-Summer Checklist and Summer Season Review Checklist

The *Pre-Summer Checklist* and *Summer Season Review Checklist* include verifications of Field Services personnel readiness and review of this Plan. These checklists are due within specified timeframes as they connect directly to required reporting to ERCOT and the PUCT.

#### 7.3 Extreme Heat and Severe Summer Weather Checklist

The *Extreme Heat or Severe Weather Checklist* (Attachment 9) will be completed by Field Services personnel to verify that the Facility's critical equipment is protected and functioning properly in advance of each forecasted extreme heat or severe summer weather event.

#### 7.4 Post-Event and Annual Review

After each severe summer weather event and before the kickoff of the summer season preparations, Field Services personnel will utilize a review process to formally recognize procedural strengths, evaluate improvement opportunities, corrective actions needed, and lessons learned, which will be incorporated into this plan going forward.

Any work orders arising from this review process will also be implemented. All changes to these procedures and the plan must be communicated to all appropriate personnel and regulators. In addition, the ROCC Manager will identify and communicate to the Site Manager any weatherization improvements that should be included for the subsequent year's budget.

#### 7.5 Documenting Summer Preparedness Activities via Work Order Management

Field Services personnel will review its work management system to ensure adequate annual preventative work orders exist for summer weather preparedness. Field Services personnel will also ensure: (i) all open corrective maintenance items that could affect plant operation and reliability in summer weather; and (ii) all summer weather preparedness preventative work orders, are completed prior to the onset of the summer season.

#### 7.6 Additional Staffing Consideration for Weather Events

The ROCC Manager will consider the need for enhanced staffing at the facility (including on a 24x7 basis) during anticipated severe weather events. Planning for this staffing should include arrangements for transportation, lodging/meals, and in-house food inventories, as appropriate.

#### 8.0 HEAT-RELATED SAFETY INFORMATION

#### 8.1 Personnel Safety

Personnel safety during extreme heat or severe summer weather events is a priority. The information in this section is aimed at reducing or preventing personnel weather-related risks.

Site personnel will stay informed of potential severe weather events and utilize the information in this plan to respond. Job safety briefings will be conducted as needed during preparation for and in response to extreme heat or severe summer weather events.

#### 8.2 Heat Exhaustion

8.2.1 Signs of heat exhaustion include:

- Heavy sweating
- Weakness
- Cold, pale, clammy skin
- Fast, weak pulse
- Nausea or vomiting
- Fainting
- 8.2.2 Response to a heat exhaustion illness should include the following actions:
  - Move to a cooler location.
  - Lie down and loosen clothing.
  - Apply cool, wet clothes to as much of your body as possible.
  - Sip water.

Seek immediate medical attention by calling 911 if you experience vomiting or if your symptoms get worse or last longer than an hour.

#### 8.3 Heat Stroke

Heat stroke is a condition in which your body is unable to adequately cool any longer.

- 8.3.1 Signs of heat stroke include:
  - High body temperature (103F or higher)
  - Hot, red, dry, or damp skin
  - Headache

- Dizziness
- Nausea
- Confusion
- Loss of Consciousness
- 8.3.2 Response to heat stroke should include the following actions:
  - Contact Emergency Services by calling 911 if you suspect heat stroke.
  - Move person to a cooler place.
  - Help lower the person's temperature with cool cloths or a cool bath.
  - <u>DO NOT</u> give the person anything to drink.

#### 8.4 Safety Procedures

- 8.4.1 During extreme heat of severe summer weather events, Facility personnel should adhere to the following procedures.
  - 8.4.1.1 Review heat stress training and related illness signs and symptoms with all personnel on at least a monthly basis during the summer months and prior to anticipated extreme heat or severe summer weather events.
  - 8.4.1.2 Take breaks in air-conditioned spaces.
  - 8.4.1.3 Wear loose, lightweight, light-colored clothing.
  - 8.4.1.4 Wear hats when working outdoors.
  - 8.4.1.5 Wear and reapply sunscreen as indicated on the package.
  - 8.4.1.6 Regularly drink water to remain hydrated (two to four 8-ounce cups of water every hour while working).
  - 8.4.1.7 Where possible, schedule outdoor work for earlier or later in the day to avoid the hottest part of the day.
  - 8.4.1.8 Seek medical care immediately if you or a co-worker shows symptoms of heat-related illness.

#### 9.0 SUMMER EVENT COMMUNICATIONS

#### 9.1 Communication Protocols

9.1.1 The Site Manager will communicate all summer preparation and response activities to the ROCC Manager.

- 9.1.2 Before anticipated extreme heat or severe summer weather events, the Site Manager will:
  - 9.1.2.1 Communicate with Field Services, PRE Operating Personnel, and the ROCC Manager that the site-specific summer weather readiness activities and preparation procedures, checklists, and reviews have been completed.
  - 9.1.2.2 Communicate with all personnel about changing conditions and potential areas of concern to heighten awareness around safe and reliable operations.
- 9.1.3 Field Services personnel will notify PRE Operating Personnel (who is required to notify the QSE and other entities) of instances of weather conditions leading to a plant outage, shutdown, or curtailment.
- 9.1.4 Conduct job safety briefings during extreme heat or severe summer weather events that include the availability of interpersonal communication capability and available back-up communications options. Field Services personnel will identify and verify the operations of all back-up communications options in case the primary system is not available.

# 10.0 ANNUAL TRAINING AND PLAN REVIEW

It is imperative that all relevant personnel are familiar with and committed to following this plan, except to the extent that deviations are appropriate under the circumstances during an extreme heat or severe summer weather event.

To that end, annual review and training will be conducted on summer weather and facilityspecific awareness topics to support readiness for executing and implementing this Plan. Training must use this Plan and may include the following topics:

- Identification of the checks required on critical facility components and equipment most affected by summer conditions.
- A review of summer weather health and safety precautions.
- A review of possible site-specific weather-related concerns.
- Procedures for troubleshooting, inspections, and repairs; and
- ERCOT extended weather outlook.

All records of attendance for the annual training, drills, or exercises involving this *Summer Weatherization Plan* will be retained in the Site evidence repository.

#### **11.0 REQUIRED ANNUAL REPORTING**

## 11.1 Requirement to File Updated Plan with ERCOT and PUCT

- 11.1.1 Both ERCOT and the PUCT require that Site file any updated version of this Plan within specific timeframes.
- 11.1.2 PUCT has an additional requirement that significant changes must be filed no later than 30 days after the changes take effect.

Summary Table of Filing Requirements				
Changes during this time period: Must be filed with by:				
November 1 through April 30	June 1			
May 1 through October 31	December 1			
Significant changes made at any time	No later than 30 days after the changes take effect			

#### 11.2 Requirement to File Annual Summer Weatherization Declaration

11.2.1 Site must submit a declaration between **May 1 and June 1** that it has completed or will complete all weather preparations required by this Plan for equipment critical to the reliable operation of the Generation Resource during the summertime period (June through September).

#### 11.3 ERCOT

- 11.3.1 ERCOT Nodal Protocols 3.21(2)<sup>3</sup> requires Site, as a Resource Entity, to (i) specifically designate which portions of Site's emergency operations plan address weatherization or (ii) maintain and submit to ERCOT a separate weatherization plan for Site. The weatherization plan must include a description of the Generation Resource's practices and procedures undertaken in preparation for summer (and winter) weather and during specific occurrences of extreme weather. If a weatherization plan is submitted to ERCOT separately, the Resource Entity must provide ERCOT with any updated versions of the plan by June 1 (for any updates made between November 1 and April 30), and by December 1 (for any updates made between May 1 through October 31).
- 11.3.2 <u>Between May 1 and June 1 of each year</u>, Site will also submit the declaration to ERCOT per Section 22, Attachment K (*Declaration of Completion of Generation Resource Summer Weatherization Preparations and Natural Gas Pipeline*

<sup>&</sup>lt;sup>3</sup> ERCOT Nodal Protocols, Section 3: Management Activities for the ERCOT System

Coordination for Resource Entities with Natural Gas Generation Resources),<sup>4</sup> stating that, at the time of submission, Site has completed or will complete all weather preparations required by the *Summer Weatherization Plan* for equipment critical to the reliable operation of the Generation Resource during the summer time period (June through September). Site will follow all other requirements in ERCOT Protocols 3.21(3) concerning the submission of the declaration, as applicable.

## 11.4 PUCT

11.4.1 PUCT Substantive Rule §25.53(b)<sup>5</sup> requires a market entity to file a copy of its emergency operations plan (or a comprehensive summary thereof) before it begins commercial operations. <u>A power generation company (PGC), such as Site, that makes a significant change to its plan between November 1 through April 30 must file that change by June 1. For a significant change that occurs between May 1 through October 31, the change must be filed by December 1.
</u>

<sup>&</sup>lt;sup>4</sup> ERCOT Nodal Protocols, Section 3, §3.21(4)

<sup>&</sup>lt;sup>5</sup> https://www.puc.texas.gov/agency/rulesnlaws/subrules/electric/25.53/25.53ei.aspx

# **12.0 RESOURCES AND RELATED DOCUMENTS**

#### Jobsite Emergency Response Plan

PUCT

- <u>Electric Substantive Rules: Chapter 25 Rules webpage</u>
   https://www.puc.texas.gov/agency/rulesnlaws/subrules/electric/25.53/25.53ei.aspx
- Section 25.53 Electric Service Emergency Operations Plans

https://www.puc.texas.gov/agency/rulesnlaws/subrules/electric/25.53/25.53.pdf

#### ERCOT

#### ERCOT Nodal Operating Guides webpage:

#### http://www.ercot.com/mktrules/guides/noperating/current

- Relevant document: Section 3: Management Activities for the ERCOT System
- Relevant document: Section 22 Attachment K: Declaration of Completion of Generation Resource Summer Weatherization Preparations and Natural Gas Pipeline Coordination for Resource Entities with Natural Gas Generation Resources

# DOCUMENT OWNERS

Entity	Title	Name
Owner (Repsol)		

# **DISTRIBUTION LIST**

Entity	Title	Name	
Repsol	Owner's Representative		
Repsol	Owner's Representative		
PRE	Director of Operations & Maintenance	Wayne Atkinson	
PRE	ROCC Manager	Hays Willis	
PRE	Site Manger	Malek Al-Husseini	

# APPROVALS

The approval signatures in this section indicate review of the document and approval to publish.

Name	Date	Signature

# VERSION HISTORY

Version	Effective Date Author Description of		Description of Changes
0.0	April 24, 2024	Charlie Maynard	1 <sup>st</sup> version of plan





# ATTACHMENT 2: SITE LOCATION MAPS





# ATTACHMENT 3: SITE CRITICAL EQUIPMENT MATRIX

Extreme heat or severe summer weather conditions can impact performance of solar generation facilities even more so than severe weather. The Sungrow SG3600UD-MV inverters can produce the maximum power output at temperatures up to 45 degrees Celsius before they de-rate. However, it is unlikely that solar modules will fail because of extreme heat conditions. In addition to the effect of temperature on the Site Facility, these extreme heat events tend to be accompanied by high wind events or extreme thunderstorms that can adversely impact operations of the plant. This critical equipment matrix gives weather design limits and identifies all components necessary to operate the plant during severe weather conditions.

Item #	Description (Manufacturer and Model)	Quantit y	Weather Protections	Weather Design Limits
1.	345 kV Main Circuit Breaker GE	Two (2)	SF6 Gas Filled Equipment	
2.	345-34.5/13.8kV Main Power Transformer Siemens	Two (2)	Oil Filled	Operational temperature between -20 degrees C and +45 degrees C
3.	34.5kV 1200A Circuit Breaker EMA	Ten (10)	Vacuum Breakers	-30 to +50 degrees C operating temperature range
4.	34.5 Capacitor Bank Nepsi	Two (2)	Vacuum cap switcher	
5.	PCU (Inverter + Step-Up Transformer) Sungrow SG3600UD-MV	154		Operating temperature range of -20 degrees C to +45 degree C at full rate power
6.	Splice Boxes Premier PV PPV-SPL-4X-2 & PPV-SPL-4X-4	909		Max continuous temperature is 175 degrees F
7.	Tracker Gamechange Genius 1P	11,049		Wind rating of 101 mph
8.	Modules Astroenergy CHSM66M(DG)-F-BH	966,000		Temperature range unclear
9.	Combiner Boxes Premier PV PPV-CBX-5-400-4X- 14-G-SS-NEC	2,796		Max continuous temperature is 175 degrees F

# ATTACHMENT 4: SUMMER WEATHER EQUIPMENT INVENTORY

Date inventory completed	
Completed by Site Manager	
or Designee	

ltem #	Description	Model # (if req.)	Qty. Required	Qty. On Hand	Notes
1.	Tarps				
2.	Battery-powered radio with National Oceanic and				
	Atmospheric Administration (NOAA) weather radio				
	with tone alert				
3.	Extension cords				
4.	Flashlights and batteries				
5.	Portable generator				
6.	Verify adequate fuel reserves both for backup				
	generator (if present) and for ATV/Vehicle fuel.				
7.	Potable water supply				
8.	Non-potable water supply				
9.	Hot weather gear that is compatible with PPE (e.g.,				
	fire-resistant clothing that breathes, cooling				
	bandanas, sunscreen).				
10.	Fully stocked First Aid kits				
11.	Verify adequate inventory of spare parts for				
	reliable operation of the plant during summer				
	season				
12.					
13.					

ltem #	Description	Model # (if req.)	Qty. Required	Qty. On Hand	Notes
14.					
15.					

# ATTACHMENT 5: PRE-SUMMER CHECKLIST – DUE BY APRIL 1 ANNUALLY

Date performed	
Completed by (name)	

	Pre-Summer Checks			
Instructi	Instructions: Check each item when complete and provide completed checklist to Site Manager and ROCC Manger. Use blank lines to add items as needed.			
	Complete and submit the Summer Weather Equipment Inventory.			
	Conduct annual summer readiness training and drill with all Field Services personnel. Utilize and follow the Weatherization Plan during the training and drill.			
	Collect Field Services feedback on Summer Weatherization Plan (if any) and, without unnecessary delay, provide ROCC Manager so they can update and submit the Plan to ERCOT within the required timeframe (by June 1).			
	Ensure all critical site-specific equipment and components have adequate protection to ensure operability during extreme heat or severe summer weather event, including but not limited to scheduling and performing maintenance prior to the beginning of summer and increasing surveillance during extreme heat or severe summer weather event, summer weather events by scheduling tasks in the work management system.			

# ATTACHMENT 6: SUMMER SEASON REVIEW CHECKLIST - DUE BY MAY 1 ANNUALLY

Date performed	
Completed by (name)	

	Summer Season Review Checklist				
Instructi	Instructions: Check each item when complete and provide completed checklist to Site Manager and ROCC Manger. Use blank lines to add items as needed.				
	Conduct plant summer readiness meeting to review the current Plan and summer weather events from the previous summer season.				
	Review any industry best practices or lessons learned from the previous summer season.				
	Identify any lessons learned or procedural improvements to include in this Summer Weatherization Plan, including any updates to this readiness timeline or extreme heat or severe summer weather preparedness checklist.				
	Ensure all weed abatement and/or summer weather preparedness preventative work orders are scheduled and completed prior to the onset of the summer season.				
	Notify ROCC Manager in writing that weatherization work has been completed work and/or identify any exceptions and scheduled work to be performed to complete summer weatherization.				

# ATTACHMENT 7: PRE-EVENT CHECKLIST

Date performed	
Completed by (name)	

	Pre-Event Checklist			
Instruct	Instructions: Check each item when complete and provide completed checklist to Site Manager and ROCC Manger. Use blank lines to add items as needed.			
	Monitor weather and weather alerts. Note in shift logs when a summer weather advisory has been issued, and subsequently recalled or released.			
	Place severe weather protections in service where extreme heat or severe summer weather could adversely impact Personnel, operations, or forced outage recovery (can include severe thunderstorms or monsoonal flooding).			
	Establish communications with to Personnel on weather event conditions.			
	Establish staffing plan (including supplemental coverage) and review/update emergency callout list as needed.			
	Monitor temperatures to limit or prevent impact reliability impacts to instrumentation and equipment due to extreme heat.			
	To protect Personnel, impose prudent and appropriate restrictions on maintenance during summer weather advisories.			
	Site Manager to schedule and conduct meeting to discuss the weather forecast at the beginning of each shift during shift turnover and to keep all personnel alerted to possible weather conditions.			

# ATTACHMENT 8: DURING SUMMER AND WEATHER EVENT CHECKLISTS

Date performed	
Completed by (name)	

	During Summer Checklist				
Instructi	Instructions: Check each item when complete and provide completed checklist to Site Manager and ROCC Manger. Use blank lines to add items as needed.				
	Conduct weekly summer readiness updates and performance meetings with management.				
	Monitor critical equipment performance (monitor control house HVAC system and temperature on a weekly basis during extreme heat above 108°F ).				
	During Weather Event Checklist				
	Communicate event information, conditions, changes, etc. to Operating Personnel, Field Services, Personnel, etc., as appropriate, for the duration of the event.				
	Direct and participate in daily status update meetings with management when temperatures are above 108°F for two or more consecutive days.				
	Monitor weather and weather alerts.				
	Execute staffing plan and adjust accordingly based on changing conditions.				
	Notify PRE Operating Personnel of weather conditions leading to a plant outage, shutdown, or curtailment.				
	Escalate and report known critical equipment deficiencies immediately for risk assessment (inc. to Site Manager and Operating Personnel).				
	Check Summer Weather Equipment Inventory List and ensure emergency supplies of food and water are at required levels; restock as needed.				

# ATTACHMENT 9: EXTREME HEAT OR SEVERE WEATHER CHECKLIST

Date performed	
Completed by (name)	

Extreme Heat or Severe Summer Weather Checklist			
Instru Item #	ctions: Answer each item and provide completed checklist to Site Manager and ROCC Manger. Item	Use blank lines to add Complete? Yes, No, or N/A	items as needed Notes Include any follow-up activity required.
1.	Review work order system to ensure adequate annual preventative work orders exist for weed abatement and facility protection.		
2.	Perform necessary and immediate work needed to protect the facility (e.g. weed abatement, fire prevention activities, flood preparation).		
3.	Establish and document staff responsibilities to monitor weather and weather alerts.		
4.	Establish and document a communications plan with the PRE Operating Personnel.		
5.	Ensure all critical equipment is operating and protected per the manufacturer's recommendations during extreme heat or severe summer weather events. Emphasize the points at the facility where weed abatement and fire safety are necessary to protect critical equipment.		
6.	Develop a list of critical equipment that require increased surveillance during extreme heat or severe summer weather events. Refer to <b>Critical Equipment Matrix</b> attachment.		
7.	Monitor and address any bird or animal nesting in or around the high voltage substation.		
8.	Inspect building entrances, windows, fan louvers, and other openings for potential exposure of critical equipment to the elements.		
9.	Check equipment inventory and replenish all quantities. Refer to <b>Summer Weather Equipment Inventory</b> attachment. <u>Be sure to check all First Aid</u> <u>kits and confirm PPE "in use" dates.</u>		

Extreme Heat or Severe Summer Weather Checklist Instructions: Answer each item and provide completed checklist to Site Manager and ROCC Manger. Use blank lines to add items as needed			
ltem #	Item	Complete? Yes, No, or N/A	Notes Include any follow-up activity required.
10.	Review and update emergency response personnel contacts for emergency response (specifically fire and EMS).		
11.			
12.			

# ERCOT Winter Weatherization Plan

HECATE ENERGY FRYE SOLAR, LLC REV 0

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# 1.0 PURPOSE

This Plan provides guidance and direction to Hecate Energy Frye Solar Solar, LLC (Site) regarding compliance with the severely cold weather emergency operations requirements as a Power Generation Company (PGC) under Chapter 25 of the Public Utilities Commission of Texas (PUCT) Electric Substantive Rules.<sup>1</sup>

This plan is intended to be used as a placeholder until substantial completion of the project and turnover to the operations & maintenance group.

# 2.0 SCOPE

This Winter Weatherization Plan is a supporting document to the Job Site Emergency Response Plan and addresses the requirements related to preparing for and responding to severe hot weather events.

Site understands and affirms that corporate and facility management, with critical execution and support from the operations and maintenance (O&M) provider, will play a significant role in maintaining an effective weatherization program for Site. It is the responsibility of all personnel to exercise good judgment in the performance of this plan.

Any questions regarding this plan should be directed to the Compliance Manager. The final reporting to ERCOT must be submitted by the Generator Owner, confirming compliance to this plan.

#### 3.0 ROLES AND RESPONSIBILITIES

#### 3.1 Remote Operations Control Center (ROCC) Manager

- 3.1.1 Role The ROCC Manager and owner of this plan.
- 3.1.2 Responsibilities include:
  - Ensure completion of all required reporting (ERCOT, PUCT, etc.) within the specified timeframes.
  - Oversee the development and implementation of this plan. Ensure the plan is up-to-date and aligns with PRE's business objectives and addresses requirements.
  - Oversee revisions and updates to the Plan as necessary, as well as the implementation of the revised Plan, and a review of supporting documents, as needed.
  - Ensure the activities documented in this Plan are completed, in concert with the Site Manager

<sup>&</sup>lt;sup>1</sup>§25.53 – Electric Service Emergency Operations Plans, Subchapter C, Item 2

#### Frye Winter Weatherization Plan

• Reviews and approves this Plan annually.

#### 3.2 Site Manager

- 3.2.1 Role the manager of the team contracted to perform the O&M services at the Site Facility.
- 3.2.2 Responsibilities include:
  - E Ensure the processes documented in the Plan are followed by all site personnel.
  - Lead Field Services in the execution of this Plan and set expectations with Field Service Technicians for safe and reliability operational performance of the facility, as detailed in this Plan.
  - Provide annual written affirmation to the ROCC Manager that pre-summer checks and summer season review activities have been complete.
  - Oversee the day-to-day operations of the Site facility.
  - Ensure the execution of weatherization tasks, procurement of inventory, completion of checklists, and overall preparation and readiness for seasonal operations is performed within the timeframes required.
  - Document remediation activities in the work management system that are required to address summer preparation needs or deficiencies.
  - Notify the ROCC Manager of weatherization tasks progress, scheduling, or concerns with meeting deadlines
  - Participate in the development, administration, execution, and update of the plan.
  - Provide evidence to Compliance Manager upon completion and request.

#### 3.3 PRE Field Services

- 3.3.1 Role Contracted to perform the O&M services at the SiteFacility.
- 3.3.2 Responsibilities include:
  - Follow the requirements and processes documented in the Plan.
  - Conduct plant readiness reviews and provide reports to Site Manager and ROCC Manager upon completion and request.
  - Coordinate with and report facility weather-related information to Site Manager and PRE Operating Personnel.
  - Identify potential risk areas due to summer weather conditions and report opportunities to improve readiness and response to the Site Manager.
  - Participate in post-Winter evaluations to assess the effectiveness of this plan and provide feedback.

#### 3.4 PRE Operating Personnel

- 3.4.1 Role The Operator for the Site facility
- 3.4.2 Responsibilities include:
  - Operates the Site from the PRE operations center in Aurora, Colorado.
  - Communicate with QSE and other entities, as appropriate, of weather conditions leading to a Site outage, shutdown, or curtailment.

# 4.0 FACILITY INFORMATION AND LOCAL CONDITIONS

#### 4.1 Facility Information

Hecate Energy Frye Solar, LLC., is a 500 MWac solar facility located in Swisher County, Texas. Hecate Energy Frye Solar, LLC will commence 450 MWac of commercial operations December 1<sup>st</sup>, 2023 and substantial completion of the entire facility on February 28, 2024. Hecate Energy Frye Solar, LLC is interconnected to Oncor Electric at the Kress Switch Station, located in the Electric Reliability Council of Texas (ERCOT) footprint. The registered Generator Operator (GOP) is unidentified at time this plan is being produced. PRE is the acting operations and maintenance (O&M) provider for the Hecate Energy Frye Solar, LLC between substation energization in July 2023 and substantial completion/turnover of the project site in February 2024.

See the Solar Site Map and Location Map in Attachment 1 and 2.

#### 4.2 Local Conditions

Tulia, Texas is used for comparison of the local Facility conditions. The average high temperature during Winter months of December through February is 23 degrees Fahrenheit, with recorded temperatures as low as -11 degrees Fahrenheit.



# Daily Temperature Data - TULIA, TX

Figure 1 Tulia, Texas Annual Temperatures

#### **REQUIRED TIMELINES FOR WINTER PREPARATIONS** 5.0

#### 5.1 **Pre-Winter Checks**

Prior to October 1 of each calendar year, Field Services will complete a Pre-Winter Checklist.

#### 5.2 Winter Season Review

By <u>November 1<sup>2</sup></u> of each calendar year, Field Services will commence Winter season review by completing the *Winter Season Review Checklist*.

# 5.3 Pre-Event Checks

Field Services will complete the *Pre-Event Checklist* prior to the forecasted temperature reaching 35°F and/or the possibility of extreme cold or severe winter weather event.

# 6.0 CRITICAL COMPONENTS AND EQUIPMENT

As part of its Winter weather readiness and preparation, Field Services personnel will identify and prioritize critical components, equipment, and other areas of vulnerability which may experience severe Winter weather operational issues (i.e., critical equipment or components that has the potential to cause a trip, de-rate, or failure to start due to extreme cold or a severe Winter weather event).

The *Critical Equipment Matrix* (Attachment 3) identifies the critical components and equipment at the facility that perform or support significant reliability or operating functions, including any existing type(s) of weather protection and any manufacturer-provided weather design limits.

Field Services personnel will ensure all critical site-specific equipment and components have adequate protection to ensure operability during extreme cold or severe Winter weather events, including but not limited to performing maintenance prior to the beginning of Winter and increasing surveillance during extreme cold or severe Winter weather events.

#### 6.1 Equipment Design Parameters and Weather Design Limits

The facility has a design maximum ambient temperature (maximum operating temperature) of 113 degrees Fahrenheit (temperature >113 degrees Fahrenheit results in equipment derations) and a design minimum ambient temperature (minimum operating temperature) of -4 degrees Fahrenheit.

Field Services personnel will utilize, as part of the implementation of this plan, manufacturers recommendations to determine at what ambient temperature the facility and any critical equipment will be able to operate.

# 7.0 WINTER WEATHER PREPARTION AND RESPONSE PROCESSES

To support the facility's seasonal winter preparedness, address known critical failure points, and address the effects of equipment and facility weather design limitations, several checklists are provided to prepare and safeguard the facility. Field Services personnel will utilize these checklists to prepare for Winter and respond to winter weather events.

<sup>&</sup>lt;sup>2</sup> Must be complete by this date to meet requirement for Hecate Solar Frye LLC to submit *Declaration of Completion of Generation Resource Winter Weatherization Preparations* between November 1 and December 1, as required by ERCOT.

#### Frye Winter Weatherization Plan

#### 7.1 Winter Weather Equipment Inventory List

Prior to the onset of the winter season and/or a severe winter weather event, Field Services personnel will ensure there are adequate inventories of all critical supplies, spare parts, equipment, and consumables that would aid in keeping the plant operational during severe winter weather events and responding to these events. Field Services personnel will use a complete the *Winter Weather Equipment Inventory* and provide the dated checklist as evidence that the inventory review was performed.

#### 7.2 Pre-Winter Checklist and Winter Season Review Checklist

The *Pre-Winter Checklist* and *Winter Season Review Checklist* includes verifications of Field Services personnel readiness and review of this Plan. These checklists are due within specified timeframes as they connect directly to required reporting to ERCOT and the PUCT.

#### 7.3 Extreme Cold and Severe Winter Weather Checklist

The *Extreme Cold or Severe Weather Checklist* will be completed by Field Services personnel to verify that the facility's critical equipment is protected and functioning properly in advance of each forecasted extreme cold or severe winter weather event.

#### 7.4 Post-Event and Annual Review

After each severe winter weather event and before the kickoff of the winter season preparations, Field Services personnel will utilize a review process to formally recognize procedural strengths, evaluate improvement opportunities, corrective actions needed, and lessons learned, which will be incorporated into this plan going forward.

Any work orders arising from this review process will also be implemented. All changes to these procedures and the plan must be communicated to all appropriate personnel and regulators. In addition, the ROCC Manager will identify and communicate to the Site Manager any weatherization improvements that should be included for the subsequent year's budget.

#### 7.5 Documenting Winter Preparedness Activities via Work Order Management

Field Services personnel will review its work management system to ensure adequate annual preventative work orders exist for winter weather preparedness. Field Services personnel will also ensure: (i) all open corrective maintenance items that could affect plant operation and reliability in winter weather; and (ii) all winter weather preparedness preventative work orders, are completed prior to the onset of the winter season.

#### 7.6 Additional Staffing Consideration for Weather Events

The ROCC Manager will consider the need for enhanced staffing at the facility (including on a 24x7 basis) during anticipated severe weather events. Planning for this staffing should include arrangements for transportation, lodging/meals, and in-house food inventories, as appropriate.

## 8.0 COLD-RELATED SAFETY INFORMATION

#### 8.1 Personnel Safety

Personnel safety during extreme cold or severe winter weather events is a priority. The information in this section is aimed at reducing or preventing Personnel weather-related risks.

PRE Personnel will stay informed of potential severe weather events and utilize the information in this plan to respond. Job safety briefings will be conducted as needed during preparation for and in response to extreme cold or severe winter weather events.

#### 8.2 Frostbite

Frostbite is most common on the fingers, toes, nose, ears, cheeks, and chin. Because of skin numbness, you may not realize you have frostbite until someone else points it out.

8.2.1 Signs and symptoms of frostbite include:

- At first, cold skin and a prickling feeling
- Numbness
- Red, white, bluish-white, or grayish-yellow skin
- Hard or waxy-looking skin
- Clumsiness due to joint and muscle stiffness
- Blistering after rewarming, in severe cases
- 8.2.2 Seek medical attention if you experience:
  - Signs and symptoms of superficial or deep frostbite
  - Increased pain, swelling, redness or discharge in the area that was frostbitten
  - Fever
  - New, unexplained symptoms.

#### 8.3 Hypothermia

#### <u>Seek immediate medical attention if you suspect hypothermia, a condition in which your</u> <u>body loses heat faster than it can be produced</u>.

- 8.3.1 Signs of hypothermia include:
  - Intense shivering
  - Slurred speech
  - Drowsiness and loss of coordination

#### 8.4 Safety Procedures

- 8.4.1 During extreme cold or severe winter weather events, facility Personnel should adhere to the following procedures.
  - 8.4.1.1 Limit your time outdoors in cold, wet, or windy weather.
  - 8.4.1.2 Dress in multiple layers of loose, warm clothing, along with using Personal Protective Equipment (PPE), as needed.
  - 8.4.1.3 Change out of wet clothing as soon as possible.
  - 8.4.1.4 Wear a hat or headband that fully covers your ears.
  - 8.4.1.5 Wear socks and sock liners that fit well, wick moisture, and provide insulation.
  - 8.4.1.6 Seek medical care immediately if you or a co-worker shows symptoms of cold weather-related illness.

#### 9.0 WINTER EVENT COMMUNICATIONS

#### 9.1 Communication Protocols

- 9.1.1 The Regional Manager will communicate all winter preparation and response activities to the Compliance Manager.
- 9.1.2 Before anticipated extreme cold or severe winter weather event, the Regional Manager will:
  - 9.1.2.1 Communicate with Field Services, PRE Operating Personnel, and the Compliance Manager that the site-specific winter weather readiness activities and preparation procedures, checklists, and reviews have been completed.
  - 9.1.2.2 Communicate with all personnel about changing conditions and potential areas of concern to heighten awareness around safe and reliable operations.
- 9.1.3 Field Services personnel will notify PRE Operating Personnel (who is required to notify the QSE and other entities) of instances of weather conditions leading to a plant outage, shutdown, or curtailment.

9.1.4 Conduct job safety briefings during extreme cold or severe winter weather events will include the availability of interpersonal communication capability and available back-up communications options. To that end, Field Services personnel will identify and verify the operations of all back-up communications options in case the primary system is not available.

# **10.0 ANNUAL TRAINING AND PLAN REVIEW**

It is imperative that all relevant all personnel are familiar with and committed to following this plan, except to the extent that deviations are appropriate under the circumstances during an extreme cold or severe winter weather event.

To that end, annual review and training will be conducted on winter weather and facilityspecific awareness topics to support readiness for executing and implementing this Plan. Training must use this Plan and may include the following topics:

- Identification of the checks required on critical facility components and equipment most affected by winter conditions.
- A review of winter weather health and safety precautions.
- A review of possible site-specific weather-related concerns.
- Procedures for troubleshooting, inspections, and repairs.
- ERCOT extended weather outlook.

All records of attendance for the annual training, drills, or exercises involving this winter Weatherization Plan will be retained in the Site evidence repository.

# 11.0 REQUIRED ANNUAL REPORTING

#### 11.1 Requirement to File Updated Plan with ERCOT and PUCT

- 11.1.1 Both ERCOT and the PUCT require that the Site files any updated version of this Plan within specific timeframes.
- 11.1.2 PUCT has an additional requirement that significant changes must be filed no later than 30 days after the changes take effect.

Summary Table of Filing Requirements		
Changes during this time period:	Must be filed with by:	
November 1 through April 30	June 1	
May 1 through October 31	December 1	

Summary Table of Filing Requirements		
Changes during this time period:	Must be filed with by:	
Significant changes made at any time	No later than 30 days after the changes take effect	

#### 11.2 Requirement to File Annual Winter Weatherization Declaration

11.2.1 must submit a declaration between November 1 and December 1 that it has completed or will complete all weather preparations required by this Plan for equipment critical to the reliable operation of the Generation Resource during the winter time period (December through February).

#### 11.3 ERCOT Nodal Protocol Requirements

- 11.3.1 ERCOT Nodal Protocols 3.21(2)<sup>3</sup> requires Frye, as a Resource Entity, to (i) specifically designate which portions of emergency operations plan address weatherization or (ii) maintain and submit to ERCOT a separate weatherization plan for. The weatherization plan must include a description of the Generation Resource's practices and procedures undertaken in preparation for winter (and winter) weather and during specific occurrences of extreme weather. If a weatherization plan is submitted to ERCOT separately, the Resource Entity must provide ERCOT with any updated versions of the plan by June 1 (for any updates made between November 1 and April 30), and by December 1 (for any updates made between May 1 through October 31).
- 11.3.2 <u>Between November 1 and December 1 of each year</u>, will also submit the declaration to ERCOT per Section 22, Attachment O (*Declaration of Completion of Generation Resource Winter Weatherization Preparations*),<sup>4</sup> stating that, at the time of submission, has completed or will complete all weather preparations required by the Winter Weatherization Plan for equipment critical to the reliable operation of the Generation Resource during the winter time period (December through February). will follow all other requirements in ERCOT Protocols 3.21(3) concerning the submission of the declaration, as applicable.

#### 11.4 PUCT Requirements

<sup>&</sup>lt;sup>3</sup> ERCOT Nodal Protocols, Section 3: Management Activities for the ERCOT System

<sup>&</sup>lt;sup>4</sup> http://www.ercot.com/mktrules/nprotocols/current

11.4.1 PUCT Substantive Rule §25.53(b)<sup>5</sup> requires a market entity to file a copy of its emergency operations plan (or a comprehensive summary thereof) before it begins commercial operations. <u>A power generation company (PGC), such as Frye, that makes a significant change to its plan between November 1 through April 30 must file that change by June 1. For a significant change that occurs between May 1 through October 31, the change must be filed by December 1.
</u>

# **12.0 RESOURCES AND RELATED DOCUMENTS**

#### Jobsite Emergency Response Plan

#### <u>PUCT</u>

Electric Substantive Rules: Chapter 25 Rules webpage: <a href="https://www.puc.texas.gov/agency/rulesnlaws/subrules/electric/25.53/25.53ei.aspx">https://www.puc.texas.gov/agency/rulesnlaws/subrules/electric/25.53/25.53ei.aspx</a>

Section 25.53 - Electric Service Emergency Operations Plans: <u>https://www.puc.texas.gov/agency/rulesnlaws/subrules/electric/25.53/25.53.pdf</u>

#### ERCOT

#### ERCOT Nodal Operating Guides webpage:

http://www.ercot.com/mktrules/guides/noperating/current

- Relevant document: Section 3: Management Activities for the ERCOT System
- Relevant document: Section 22 Attachment O: Declaration of Completion of Generation Resource Winter Weatherization Preparations

<sup>&</sup>lt;sup>5</sup> https://www.puc.texas.gov/agency/rulesnlaws/subrules/electric/25.53/25.53ei.aspx

# DOCUMENT OWNERS

Entity	Title	Name
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# DISTRIBUTION LIST

Entity	Title	Name
Repsol	Owner's Representative	
Repsol	Owner's Representative	
PRE	Director of Operations & Maintenance	Wayne Atkinson
PRE	ROCC Manager	Hays Willis
PRE	Site Manger	Malek Al-Husseini

# APPROVALS

The approval signatures in this section indicate review of the document and approval to publish.

Name	Date	Signature

# **VERSION HISTORY**

Version	Effective Date	Author	Description of Changes
0.0	April 24, 2023	Charlie Maynard	New plan



# **ATTACHMENT 1: SITE MAP**

# ATTACHMENT 2: LOCATION MAP



# ATTACHMENT 3: CRITICAL EQUIPMENT MATRIX

Extreme cold or severe winter weather conditions can impact performance of solar generation facilities. Freezing temperatures can have an adverse impact on electronic and oil-filled equipment, as they are highly impacted by ambient temperatures. Voltage, current, and temperature readings can drift when sensitive equipment attempts to function outside of their normal operating range. Snow accumulation can prevent PV panels from generating power, and the weight of accumulated snow may place stress on the PV system's support structure.

This critical equipment matrix gives weather design limits and identifies all components necessary to operate the plant during severe weather conditions.

Item #	Description (Manufacturer and	Quantit	Weather	Weather Design
	Model)	Y	Protections	Limits
1.	345 kV Main Circuit Breaker GE	Two (2)	SF6 Gas Filled Equipment	
2.	345-34.5/13.8kV Main Power Transformer Siemens	Two (2)	Oil Filled	Operational temperature between -20 degrees C and +45 degrees C
3.	34.5kV 1200A Circuit Breaker EMA	Ten (10)	Vacuum Breakers	-30 to +50 degrees C operating temperature range
4.	34.5 Capacitor Bank Nepsi	Two (2)	Vacuum cap switcher	
5.	PCU (Inverter + Step-Up Transformer) Sungrow SG3600UD-MV	154		Operating temperature range of -20 degrees C to +45 degree C at full rate power
6.	Splice Boxes Premier PV PPV-SPL-4X-2 & PPV-SPL-4X-4	909		Max continuous temperature is 175 degrees F
7.	Tracker Gamechange Genius 1P	11,049		Wind rating of 101 mph
8.	Modules Astroenergy CHSM66M(DG)-F-BH	966,000		Temperature range unclear
9.	Combiner Boxes Premier PV PPV-CBX-5-400-4X- 14-G-SS-NEC	2,796		Max continuous temperature is 175 degrees F

# ATTACHMENT 4: WINTER WEATHER EQUIPMENT INVENTORY

Date inventory completed	03/01/2023
Completed by Regional Manager or Designee	

ltem #	Description	Model # (if req.)	Qty. Required	Qty. On Hand	Notes
1.	Tarps		0	0	
2.	Battery-powered radio with National Oceanic and Atmospheric Administration (NOAA) weather radio with tone alert		0	0	
3.	Extension cords		0	1	In technician vehicles
4.	Flashlights and batteries		0	1	In technician vehicles
5.	Portable generator and fuel		0	0	
6.	Verify adequate fuel reserves both for backup generator (if present) and for ATV/Vehicle fuel.		0	0	
7.	Potable water supply		0	1	In technician vehicles
8.	Non-potable water supply		0	0	
9.	Cold weather gear that is compatible with PPE (e.g., gators, rain gear).		0	0	Technician owned
10.	Fully stocked First Aid kits		1	1	Included in Spare Parts location and technician vehicles
11.	Verify adequate inventory of spare parts for reliable operation of the plant during winter season	Various	-	-	Majority of spare parts have not arrived yet.

# ATTACHMENT 5: PRE-WINTER CHECKLIST – DUE BY OCTOBER 1 ANNUALLY

Date performed	03/01/2023
Completed by (name)	

	Pre-Winter Checks		
Instructi	ons: Check each item when complete and provide completed checklist to Regional Manager and Compliance Manger. Use blank lines to add items as needed.		
	Complete and submit the Winter Weather Equipment Inventory.		
	Conduct annual winter readiness training and drill with all Field Services personnel. Utilize and follow the Winter Weatherization Plan during the training and drill.		
	Collect Field Services feedback on Winter Weatherization Plan (if any) and, without unnecessary delay, provide Compliance Manager so they can update and submit the Plan to ERCOT within the required timeframe (by October 1).		
	Ensure all critical site-specific equipment and components have adequate protection to ensure operability during extreme cold or severe winter weather event, including but not limited to scheduling and performing maintenance prior to the beginning of winter and increasing surveillance during extreme cold or severe winter weather events by scheduling tasks in the work management system.		

# ATTACHMENT 6: WINTER SEASON REVIEW CHECKLIST – DUE BY NOVEMBER 1 ANNUALLY

Date performed	03/01/2023
Completed by (name)	

Winter Season Review Checklist				
Instructions: Check each item when complete and provide completed checklist to Regional Manager and Compliance Manger. Use blank lines to add items as needed.				
	Conduct plant winter readiness meeting to review the current Plan and winter weather events from the previous winter season.			
	Review any industry best practices or lessons learned from the previous winter season.			
	Identify any lessons learned or procedural improvements to include in this Winter Weatherization Plan, including any updates to this readiness timeline or extreme cold or severe winter weather preparedness checklist.			
	Notify Rippey Compliance Manager in writing that weatherization work has been completed work and/or identify any exceptions and scheduled work to be performed to complete winter weatherization.			

# ATTACHMENT 7: PRE-EVENT CHECKLIST

Date performed	
Completed by (name)	

Pre-Event Checklist			
Instructions: Check each item when complete and provide completed checklist to Regional Manager and Compliance Manger. Use blank lines to add items as needed.			
	Monitor weather and weather alerts. Note in shift logs when a winter weather advisory has been issued, and subsequently recalled or released.		
	Place severe weather protections in service where extreme cold or severe or freezing winter weather could adversely impact Personnel, operations, or forced outage recovery.		
	Establish communications with to Personnel on weather event conditions.		
	Establish staffing plan (including supplemental coverage) and review/update emergency callout list as needed.		
	Monitor temperatures to limit or prevent impact reliability impacts to instrumentation and equipment due to extreme cold.		
	To protect Personnel, impose prudent and appropriate restrictions on maintenance during winter weather advisories.		
	Regional Manager to schedule and conduct meeting to discuss the weather forecast at the beginning of each shift during shift turnover and to keep all personnel alerted to possible weather conditions.		

# ATTACHMENT 8: DURING WINTER AND WEATHER EVENT CHECKLISTS

# Frye Winter Weatherization Plan

Date performed	
Completed by (name)	

During Winter Checklist			
Instructions: Check each item when complete and provide completed checklist to Regional Manager and Compliance Manger. Use blank lines to add items as needed.			
$\boxtimes$	Conduct weekly winter readiness updates and performance meetings with management.		
	Monitor critical equipment performance.		
During Weather Event Checklist			
	Communicate event information, conditions, changes, etc. to Operating Personnel, Field Services, Personnel, etc., as appropriate, for the duration of the event.		
	Direct and participate in daily status update meetings with management when temperatures are below 35° and/or snow or ice are forecasted for two or more consecutive days.		
	Monitor weather and weather alerts.		
	Execute staffing plan and adjust accordingly based on changing conditions.		
	Notify PRE Operating Personnel of weather conditions leading to a plant outage, shutdown, or curtailment.		
	Escalate and report known critical equipment deficiencies immediately for risk assessment (inc. to Regional Manager and Operating Personnel).		
	Check Winter Weather Equipment Inventory List attachment and ensure emergency supplies of food and water are at required levels; restock as needed.		

# ATTACHMENT 9: EXTREME COLD OR SEVERE WEATHER CHECKLIST

Date performed

Completed by (name)

Extreme Cold or Severe Winter Weather Checklist			
Instructions: Answer each item and provide completed checklist to Regional Manager and Compliance Manger. Use blank lines to add items as needed			
Item	Item	Complete?	Notes
#		Yes, No, or N/A	Include any follow-up activity required.
1	Review work order system to ensure adequate annual preventative work orders exist for		No freeze protection other than control house in
	freeze protection and winter weather preparations.	Yes	substation
2.	Perform necessary and immediate work needed to protect the facility.	Yes	
3.	Establish and document staff responsibilities to monitor weather and weather alerts.	Yes	
4.	Establish and document a communications plan with the PRE Operating Personnel.	Yes	
-	Ensure all critical equipment is operating and protected per the manufacturer's		
5.	points at the facility where freezing can occur (e.g. building piping, heat tracer piping).	Yes	rating
	Develop a list of critical equipment and transmitters that require increased surveillance		
6.	during extreme cold or severe Winter weather events. Refer to Critical Equipment Matrix		Forecasted temperatures will not exceed manufacturer
	attachment.	Yes	rating
7	Consider the effect of wind chill when applying freeze protection, including checking		
7.	insulation thickness, quality, and proper installation.	Yes	
8	Inspect building entrances, windows, fan louvers, and other openings for potential		
0.	exposure of critical equipment to the elements.	Yes	
	Check equipment inventory and replenish all quantities.		
9.	Refer to Winter Weather Equipment Inventory attachment. Be sure to check all First Aid		
	kits and confirm PPE "in use" dates.	Yes	All First Aid Kits and PPE are with in the "In use Dates"
10.	Review and update emergency response personnel contacts for emergency response		
	(specifically fire and EMS) <sup>6</sup> .	Yes	
11.			

<sup>6</sup> Consult the Rippey Reportable Event Notifications Contact List (an attachment to the Rippey Event Reporting Operating Plan).

Extreme Cold or Severe Winter Weather Checklist			
Instructions: Answer each item and provide completed checklist to Regional Manager and Compliance Manger. Use blank lines to add items as needed			
Item	(Norm	Complete?	Notes
#	item	Yes, No, or N/A	Include any follow-up activity required.
12.			