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# **Revision History**

V	DATE	NOTES	PREPARED/ REVIEWED BY
0	11/30/2020	Initial version	SB & FR/CTM
1	02/26/2021	Minor changes during review after Feb 2021 extreme cold event	FR/FR
2	04/05/2022	Updates made to follow new PUCT Requirements (PUCT, Chapter 25, Subchapter C)	FR/SZ/SB

# **Site Emergency Contact Information**

POC	NAME	TITLE	TELEPHONE	EMAIL
Primary	Frank Reichert	Director, Operations & Maintenance	732-642-0496	freichert@glidepath.net
Backup 1	CES Control Room	Control Room	267-296-4349	genmonitoring@ces-Itd.com
Backup 2	Sarah Zimmerman	Asset Manager I	630-884-9167	szimmerman@glidepath.net

# **Approval and Implementation**

NAME	TITLE	CAN EDIT	MAY APPROVE	INITIALS
Frank Reichert	Director, Operations & Maintenance	YES	NO	FR
Sarah Zimmerman	Asset Manager I	YES	NO	SZ
Sean Baur	Director, Power Markets and Transmission	YES	NO	SB
Deonne Cunningham Nauls	General Counsel	YES	YES	DCN
Byron Boone	Chief Operating Officer	NO	YES	BB
Chris McKissack	Chief Executive Officer	NO	YES	СТМ

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# 1. Executive Summary

This document outlines steps to be taken in the event of an emergency at the Prospect Storage site ("Project") owned by West Columbia Storage LLC ("Owner") (the "Plan"). This Plan satisfies the requirements of the Public Utility Commission of Texas (PUCT) Emergency Operations Plan (Substantive Rule 25, §25.53 & §25.55) and ERCOT Nodal Protocol Section 3.21. See Section 4 of this document for the officer affidavit required under §25.53(c)(1)(A)(i)(IV). This Plan also presents seasonal weather preparedness plan required under the ERCOT Nodal Protocols.

In addition to the procedures outlined in this Plan, personnel should always observe that this version (V2, 4/5/2022) of the Plan supersedes any previously approved versions.

#### **Definition of Emergency**

For the purposes of this Plan, an Emergency is an instance in which the known, potential consequences of a hazard or threat are sufficiently imminent and severe such that an entity should take prompt action to prepare for and reduce the potential impact of harm that may result from the hazard or threat. The term includes an emergency declaration as ordered by local, state, or federal government, or ERCOT or another reliability coordinator designated by the North American Electric Reliability Corporation and is applicable to the entity.

### **Responsibilities During and After an Emergency**

In response to a potential or realized Emergency event, Owner will designate an individual member of the Asset Management, Operations and Maintenance, or other department staff to serve as the primary delegate for the duration of an Emergency. This individual will be responsible for reviewing this Plan, implementing it or adjusting specific to the situation as necessary.

After an Emergency, Owner's designee will prepare a report or otherwise summarize the Emergency event, preparedness, response, and recommended changes to this Plan or other Owner policies.

#### **Training**

Training will occur following every update of this Plan and/or annually as necessary and following the affidavit submittal.

#### **Recent Training**

NAME	DATE COMPLETED		
Frank Reichert	4/15/2022		
Sarah Zimmerman	4/15/2022		
Sean Baur	4/15/2022		
Byron Boone	4/15/2022		
Chris McKissack	4/15/2022		

Owner will review this Plan on an annual basis to confirm correct procedures and compliance with relevant PUCT, ERCOT, or other requirements.

FEMA Certifications IS-100, IS-200, IS-700, and IS-800 National Incident Management System Located in Attachment B.

## Other Responsibilities

Owner will review this Plan at least annually to confirm correct procedures and compliance with relevant PUCT, ERCOT, or other requirements. List of approved people to update and review this Plan is located at the start of this Plan.

### 2. Weatherization Plan

The Project was designed to operate normally for weather conditions reasonably expected at the Project site based on historical recorded weather.

For the purposes of seasonal weather preparedness, only typical routine maintenance is needed, i.e., annual preventative maintenance cycles and monthly site visits to identify and correct any equipment issues. Completion of these planned events, combined with appropriate identification of issues and formulation of preliminary plans to address them, shall constitute the full extent of necessary summer and winter preparedness.

Details of responses to specific extreme weather events are provided for in Section 3 of this Plan.

# 3. Emergency Operating Plan Procedures

# A. Weather Emergency Annex [§25.53(d)(5)] & [§25.53(e)(4)(B)]

#### **Definition**

A situation in which the known, potential consequences of a hazard or threat are sufficiently imminent and severe such that an entity should take prompt action to prepare for and reduce the potential impact of harm that may result from the hazard or threat. The term includes an emergency declared by local, state, or federal government, or ERCOT or another reliability coordinator designated by the North American Electric Reliability Corporation and that is applicable to the entity.

Examples: Tornadoes, Hurricanes, Extreme cold weather, Extreme hot weather, Drought, and Flooding

- Operations are not expected to be impacted by Severely Cold Weather or Severely Hot Weather, as temperatures outside of these ranges are not exceeded in any record low or high temperature for the local area.
- Preventative maintenance activities are performed annually on each inverter, battery array, and transformer.
- Monthly site visits are performed to verify physical condition of Project facilities. This
  inspection is also used to inspect the site after any weather emergency. (See
  attachment A)
- Site equipment status is monitored 24/7.

- Each battery array has an operational range from +5°C (41°F) to +45°C (113°F) within the enclosure.
- Ambient temperatures can affect battery operation due to the HVAC system ambient temperature range of -7°C (19.4°F) to 48.9°C (120°F).
- Each Inverter has an operational range from -25°C (-13°F) to +60°C (140°F).
- Inverter and battery system temperatures are monitored continuously on an ongoing basis by the site controller and offsite control center(s) of the battery manufacturer and Owner.
- Procedures are in place to communicate, in advance and in real-time, extreme weather effects on Prospects operations to the Qualified Scheduling Entity (QSE).

#### Response

- Any defects that are discovered through preventative and routine maintenance will be immediately remedied.
- Outside of the inverter operating temperatures, the inverters will shut down automatically to prevent damage to the equipment.
- Battery system temperatures and operating limits are constantly monitored. If individual battery racks operate outside of their temperature ranges, they will be disconnected. Larger sets of battery racks (i.e., entire arrays) operating outside of their operating temperature range will drive alarms to notify Owner. Based on review of operating data, remote resets and/or dispatching personnel to site to investigate and remedy this issue.
- Loss of auxiliary power or communications (with corresponding inability to monitor temperatures) will drive offsite alarms. Investigations will be immediately launched into the cause(s) of the loss of power and/or communications, including reviewing operating data, discussions with the interconnecting utility, and contacting the local telecommunications provider. Based on the results of this investigation, action will be taken to restore power, communications, and monitoring as soon as reasonably possible.

# B. Critical Failure Points Annex [§25.53(e)(2)(H)]

#### **Definition**

Critical Failure Points were defined in conjunction with the original procurement, design, and engineering of the Project including major components and the balance of plant. Contemporaneously with the battery vendor, automatic monitoring and controls were installed to constantly monitor Critical Failure Points.

This Annex was added under [§25.53(e)(2)(H)] as appropriate to the entities specific circumstance; in support of the understanding of the sites protective control systems and how they serve to minimize equipment loss and site safety under severe weather events.

- Preventative maintenance activities are performed annually on each inverter, battery array, and transformer.
- Monthly site visits are performed to verify physical condition of Project facilities.
- Based on operational history of the Project and others controlled by Owner, periodic updates will be made to battery vendor controls and other Project components

- Battery vendor periodically patches, and updates controls software to address known issues.
- Spare parts will be kept onsite or otherwise available per vendor recommendations and/or Owner policy.

#### Response

- Any defects that are discovered through preventative, routine maintenance, and extreme weather events will be immediately remedied.
- Battery system and inverter Critical Failure Points are constantly monitored. If any limits are exceeded, the applicable device will be disconnected, provide an alarm to Owner and battery manufacturer for immediate investigation, or flagged for investigation at the next periodic maintenance review, as applicable.
- Individual failure events will be analyzed to determine if previously unknown Critical Failure Points exist and will be addressed on an ad hoc basis.

# C. Emergency Water Shortage [§25.53(e)(2)(B)]

Provision does not apply, the Project does not have water service, nor does it rely on water to operate.

### D. Potentially Severe Weather [§25.53(c)(2)(D)]

Severe weather planning and system operations do not change from the Weather Emergency and Critical Failure Point subsections, above.

## E. Inventory of Pre-Arranged Emergency Supplies [§25.53(c)(2)(E)]

#### **Definition**

Emergency supplies are those identified as necessary to maintain operations under any applicable section of these emergency response procedures. During the original procurement, design, and engineering of the Project, only battery system spare parts were identified as being needed on an emergency basis when considering number of components and likelihood of failure. A spare parts list was developed to enumerate all necessary spare parts for routine and emergency operations.

- Preventative maintenance activities are performed annually or as needed on stored spare parts.
- Spare parts are stored onsite to limit exposure to lead times in the event of a failure during routine and emergency operations.
- Monthly site visits are performed to verify physical condition of Project facilities, including spare parts.
- Spare parts consumption, inventory, and replenishment activities are reported in each monthly operating report to Owner.
- Based on operational history of the Project, others controlled by Owner, or others under service contracts with the battery manufacturer, periodic updates will be made to spare parts list.

Periodic reviews will be made of availability of like spares from vendors.

#### Response

- If spare part(s) is/are needed during routine or emergency operations, replenishment will occur in accordance with current spare parts list.
- If spare part(s) is/are found to be defective during routine inspection or maintenance of the onsite spare parts inventory, replenishment will occur in accordance with current spare parts list.
- If periodic review indicates a need for an expanded onsite inventory of spare parts, additional spares will be procured to the site.

## F. Staffing During Severe Weather Event [§25.53(d)(4)]

The Project does not rely on onsite operational staff under normal operations or during severe weather or emergency events. The Project does have remote staff and subcontractors that can respond to an event once the site is deemed safe to access. No additional specific precautions are necessary before an emergency event.

## G. Physical Security Annex [§25.53(e)(2)(G)]

#### **Definition**

Physical security refers to the protection of building sites and equipment (and all information and software contained therein) from theft, vandalism, natural disaster, manmade catastrophes, and accidental damage

#### **Monitoring & Ongoing Maintenance**

- Monthly site visits are performed to verify physical condition of Project facilities in preparation for routine operations and before and after Emergency Events.
- Owner's remote operating center will be notified either by local reports or inspection teams of evidence of a physical security breach.
- Owner and Owner's remote operating center will track presence of onsite personnel.

#### Response

- After a physical security breach is reported the operating control center will notify the local authorities and the owner of the report.
- Owners will dispatch personnel to the site in order to work with local authorities on the breach.
- Once the site is deemed safe to operate dispatched personnel with work with the QSE, ERCOT, and local utility to make sure the site is safe to come back online.

### H. Cyber Security Annex $[\S25.53(e)(2)(F)]$

#### Definition

Cyber security is the application of technologies, processes, and controls to protect systems, networks, programs, devices, and data from cyber-attacks. It aims to reduce the risk of cyber-attacks and protect against the unauthorised exploitation of systems, networks, and technologies.

#### **Monitoring & Ongoing Maintenance**

- Site data and communications are constantly monitored by the Owners, QSE, and Owners operating control room.
- Site Remote access is secured and monitor through owners managed VPN connection
  - access control for Owner's, users, and or contracted users.
- Routine cyber security audits are performed annually.

#### Response

- After a cyber security breach is discovered, the Owner will implement their cyber security response procedure.
- Owners will dispatch personnel in to the site to work with qualified contractors on the breach, as necessary.
- Once the site is deemed safe to operate dispatched personnel with work with the QSE, ERCOT, and local utility to make sure the site is safe to come back online.

# I. Restoration of Service Annex[§25.53(e)(2)(C)]

#### **Definition**

Loss of generation capacity can be caused by loss of upstream interconnecting utility equipment, abnormal grid operating conditions such as voltage or frequency, Project equipment failure, Project control system failure, or Project operator error. The original procurement, design, and engineering of the Project specified monitoring and control points to establish normal, warning, trip, failure, etc. points for major equipment.

#### **Monitoring & Ongoing Maintenance**

- The Project is continuously monitored by battery manufacturer, Owners' control center, and QSE.
- Monthly site visits are performed to verify physical condition of Project facilities, including station power and communications equipment.
- Planned outages will be communicated to QSE, ERCOT, battery vendor, utility, and other parties, as applicable.

#### Response

 After a full or partial outage, Owner will review operating data to determine potential cause(s) of the outage. Remote resets or technician callouts, coordinated between Owner and battery manufacturer, will be used as applicable to restore partial or full generating capability.

- Owner and QSE will communicate about all forced outages and establish an expected timeline for return to service for communication to ERCOT.
- Project will communicate with the interconnecting utility about potential outages and emergency conditions per the interconnection and/or operating agreement.
- Any unavoidable extensions to planned outages will be communicated to all applicable parties, including a plan and timeline for recovery of generating capacity.

## J. Pandemic and Epidemic Annex [§25.53(e)(2)(D)]

#### **Definition**

The Project is designed for unstaffed operations. Personnel are needed at the site only for routine inspection and repairs. Therefore, pandemic concerns will have limited impact on normal operations.

#### **Monitoring & Ongoing Maintenance**

Owner will monitor any pandemic declared by applicable governmental authorities.

### Response

- Owner will communicate applicable pandemic conditions or status to maintenance contractors, battery manufacturer, and control center personnel. To the extent needed to comply with national, state, or local orders, additional PPE, working restrictions, sanitization precautions, or other measures will be implemented by Owner and will be applicable to all Owner personnel and contractors at the Project.
- Owner, battery vendor, and other parties will identify any tasks or activities that can be delayed or altered to limit exposure to pandemic conditions due to travel or onsite exposure.
- If needed based on the nature of the pandemic, in line with public health officials' guidance, individuals that become sick, may be sick, or are high risk may be instructed to delay, cancel, or alter their work at the Project.

#### K. Hurricane Annex [§25.53(e)(2)(E)]

#### **Definition**

The Project is in a hurricane-prone area. Equipment was selected and designed for high wind and water withstanding capabilities in line with the risks present at the Project site. This subsection describes response to hurricanes specifically but will also be applied to tropical storms at the discretion of Owner.

- Monthly site visits are performed to verify physical condition of Project facilities in preparation for routine operations and Emergency Events, including hurricanes.
- Owner and Owner's remote operating center will track presence of onsite personnel.
- Owner will monitor any hurricane and tropical storm declared by applicable governmental authorities that may impact the Project or surrounding area.
- QSE will communicate to Owner any ERCOT operating notice regarding hurricanes.

#### Response

- Hurricanes that are expected to impact the Project will be deemed Emergency Events and will be treated in accordance with the applicable subsection of this Emergency Operations Plan above.
- If directed by ERCOT or the interconnecting utility, the Project will remotely curtail or disconnect from the utility via remote operations (or by dispatching onsite personnel if safe to do so) in preparation for or response to a hurricane.

## L. Drilling Annex [§25.53(e)(2)(E)]

### **Drilling Interval**

The project does the same inspection required under the Weather Emergency Annex on a monthly basis and as required per this Plan. As an unmanned site personnel are wary on scheduling work around any severe weather that may impact work, but immediately after the event an inspection will be conducted once the area is deemed safe.

#### **Checklist and Testing**

- Site owners will maintain the checklist (Attachment A) for a period of 3 years.
- Site owners will also conduct operational checks IAW manufactures maintenance and operational manuals to ensure the system is operating at safely and at peak level.

# 4. Emergency Operating Plan Affidavit

The attached affidavit is presented in accordance with PUCT Substantive Rule §25.53(c)(2)(M).



# **EMERGENCY OPERATIONS PLAN AFFIDAVIT**

	STATE OF ILLINOIS
	COUNTY OF DUPAGE )
	BEFORE ME, the undersigned authority, on this
	"My name is Chris McKissack. I am the Chief Executive Officer of West Columbia Storage LLC. My business address is 132 N. York Street, Suite 3L, Elmhurst, IL 60126.
	I swear or affirm that I have personal knowledge of the facts set forth in this Affidavit. I am over 18 years of age and competent to make this affidavit. West Columbia Storage LLC, a registered Power Generation Company, has emergency operations procedures in accordance with Public Utility Commission of Texas Subst. Rule §25.53(c), and all relevant operating personnel are familiar with and have received training on the applicable contents and execution of the EOP, and such personnel are instructed to follow the applicable portions of the EOP except to the extent deviations are appropriate as a result of specific circumstances during the course of an emergency."
	Name: Chris McKissack
	Title: Chief Executive Officer
	Company: West Columbia Storage LLC
	This instrument was acknowledged before me on Latery of, 202.2_by Chris McKissack as Chief Executive Officer of West Columbia Storage LLC.
Nota	RAH BONNER-ZIMMERMAN Official Seal ary Public - State of Illinois Imission Expires Sep 24, 2022  ARAME NOTARY PUBLIC - STATE OF ILLINOIS Commission# \$3 2 \$30 Valid Through: Sep 24, 2022

# 5. Attachments

# M. Attachment A: Site Inspection Checklist

# Clidepath West Columbia Storage LLC

Fence Line Inspection and Site Riser Pole			
DESCRIPTION	PASS	FAIL	REMARKS
Fenceline damage or signs of tampering	PASS		
Fence grounding condition	PASS		
Visual of Riser Pole for Damage	PASS		
Visual of Riser Switch and Operator / Lock in Place	PASS		
Recloser Inspection (Quantity 1)			
DESCRIPTION	PASS	FAIL	REMARKS
Visual inspection for signs of wear, damage, or rust	PASS		
Ensure door(s) are closed, secured and locked	PASS		
Inspect pad for deterioration	PASS		
Operations counter (if applicable)			NQ ACCESS
Pressure / vacuum reading (if applicable)			NO ACCESS
Cable / boot condition	PASS		
Gasket / seal condition	PASS		
Pad-Mounted Transformer and Inverter Pads (Quant	ity 5)		
DESCRIPTION	PASS	FAIL	REMARKS
Visual inspection for signs of wear, damage, or rust	PASS		
Ensure door(s) are closed, secured and locked	PASS		
Check for leaks around base of XFMR units	PASS		
Check inverter doors are closed and cannot be opened w/o key	PASS		
Oil level (if applicable)	PASS		
Pressure (if applicable)	PASS		
Cable / boot condition	PASS		
Gasket / seal condition	PASS		
Battery Containers (Quantity 5) (panel unit includes	2 panels, n	netering box	, dry-type xfmr)
DESCRIPTION	PASS	FAIL	REMARKS
Inspect panel unit for damage or deterioration	PASS		
Inspect pad for deterioration	PASS		
Inspect conduit for damage / loose fittings	PASS		
Ensure door(s) are closed, secured and locked	PASS		
Battery Container Vaults			
DESCRIPTION	PASS	FAIL	REMARKS
Empty per provided procedure if 50% or above	PASS		

#### F. Reichert; IS-100, 200, 700, & 800

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This Certificate of Achievement is to acknowledge that

#### FRANK REICHERT

has reaffirmed a dedication to serve in times of crisis through continued professional development and completion of the independent study course:

IS-00100.c

Introduction to Incident Command System, ICS-100 ARC

Issued this 25th Day of March, 2022



0.4 IACET CEU

0.4 IACET CEU

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IS-00800.d National Response Framework, An Introduction 

Issued this 4th Day of April, 2022

0.3 FACET CEU



ffiey D. Stein, e.m., specintendent mergency Management Institute oderal Emergency Management Agency

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> Basic Incident Command System for Initial Respons 1CS-200

> > Issued this 31st Day of March, 2022



Jeffrey D. Stem, Ph.D. Superintendent Emergency Management Institute Federal Emergency Management Agency

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IS-00700.b An Introduction to the National Incident Management System

Issued this 31st Day of March, 2022



Superintendent
Emergency Management Institute
Federal Emergency Management Agency