CITY OF COPPELL, TEXAS
PLANNING AND ZONING COMMISSION HEARING
MARCH 16, 2023
APPLICANT PRPEARED MEETING QUESTIONS AND ANSWERS

PD-272R2R2-LI, Battery Energy Storage System at Prologis Park One Twenty One, Lot 4R, Block A

The following table includes a summary of questions that were presented by planning commissioners during the March 16, 2023 Planning and Zoning Commission Hearing and where further information can be obtained from applicant-prepared materials.

Questions	Answers
Drainage easement that runs through the middle – is there an existing pipe in there or is it a surface drain?	No surface drainage, all underground drainage. Refer to the site plans.
Screening wall – is there anything that needs to be added to prevent a vehicle from driving through the project site?	Staff identified that it may be a good addition to include barriers at the project entrance corners as a condition of approval.
Is there anything in the codes that limits the amount of batteries that can be stores in one place/one lot?	The project has been designed to be in conformance with City codes for the lot size.
What is the safety record for this kind of operation? (Concern of batteries exploding and firefighting issue – referenced Tesla stories)	Project Description Section 1: "Battery storage devices do not generate any air emissions or harmful radiation and involve little to no fire risk when properly designed, installed, tested, and operated. The battery storage systems contain protection and control features, including a battery management system that shuts down when operational environments are anything less than optimal." Also see Project Description Sections 3.5 (Fire Safety), 4.1, 4.4, and 4.5
How often are the batteries tested?	Project Description Section 3.5 Fire Safety "The batteries are required to go through UL9540A testing per NFPA 855 at the cell, module, and unit level." (Prior to manufacturing)
What are the skids?	Project Description Section 3.2 includes a description of the power conversion system that sit on "skids". PCSs will convert the electricity from AC/DC (and vice-versa) and step the electricity delivered up on its way to the Project's interconnection and main on-site transformer.
Any associated data mining companies or other business with the facility?	Project Description Section 2 Project Objectives. The project is strictly for energy storage and not associated with data mining.
Who is the energy sold to?	Energy stored and discharged from the facility will be sold to grid via ERCOT.
How many of these facilities has RavenVolt built within the ERCOT footprint?	The BESS supplier has constructed approximately 15 projects throughout ERCOT.
Prior experience of Prologis of owning and operating an energy storage facility like this?	Prologis is growing a diversified portfolio of both power generation and stand-alone storage projects through greenfield development utilizing industrial real estate. We are committed

	to achieving sustainable development and redevelopment projects globally. We pursue best-in-class sustainability standards around the world, including LEED, BREEAM, WELL, CASBEE, DGNB and HQE. Prologis to date installed 400MW of rooftop solar installed at its facilities and has grown to developing and owing energy storage projects across the globe. Prologis has developed solar and energy storage power projects in California, Washington, Colorado, New York and Texas, and we are actively working to expand our footprint.
Peak shifting?	Project Description Section 4.2 "By enabling peak shifting, BESS facilities, such as the one proposed by this Project, allow for more effective use of pre-existing power available on the grid, thus providing electrical resiliency and lower cost energy to the community."
How many of these facilities exist in ERCOT?	Project Description Section 2 "In ERCOT's 2021 State of the Market Report, approximately 24 storage projects came online in 2021 and increased ERCOT's storage capacity to approximately 1 GW. According to the latest Generator Interconnection Status report (Feb. 2023) of planned generation resources in the ERCOT Region, there over 300 planned stand-alone BESS facilities (>50,000 MW)."
What's the battery cabinet made of? What kind of metals?	The energy storage containers are made of corten steel. The battery cabinets include a battery rack, DC panel, fire suppression system, system BMS, and battery protection unit. The power pool system (stack) is installed in the bus cabinet. Switch off/circuit breaker, three-level BMS (ESMU), and UPS power supply.
What are the containment systems within the cabinet made of?	The battery cabinets include a battery rack, DC panel, fire suppression system, system BMS, and battery protection unit. The power pool system (stack) is installed in the bus cabinet. Switch off/circuit breaker, three-level BMS (ESMU), and UPS power supply.
How does this system's systems differ from those of Surprise Arizona in 2019 that had an energy fire?	The main difference if that the battery chemistry in our project is Lithium Iron Phosphate (LFP) compared to Nickel Manganese cobalt (NMC). The surprise Arizona battery system was comprised of (nickel manganese cobalt) NMC which is a relatively new technology with much higher rates of incidents. compared to Lithium Iron Phosphate. LFP which has been around since the 90s. Both are lithium-based batteries as they generate electricity through chemical reactions of lithium, but the difference lies in the choice of cathode material in the battery cell. Lithium, in its element form, is unstable and thus requires a cathode combination to keep it stabilized as a source of lithium ions in a battery. DNV GL was asked to perform technical analysis of what caused the thermal event and reported that "The lessons the industry has learned from these incidents is that Li-ion batteries are inherently fragile, and any electrical, thermal, or mechanical abuse, along with internal defects, can potentially initiate cell failure and thermal runaway," the DNV GL McMicken incident report said." DNV GL concluded that certain best practices that are available to the industry could have prevented the tragic incident in Arizona, beginning first with addressing cell quality and NMC chemistry. Further to that, barriers to limit or prevent cascading could be put in place, both from cell-to-cell and module-to-module. Better means to safely ventilate the system would have meant dissipation of flammable gases before first responders gained access, while strategies for extinguishing fires inside systems including new fire suppression, ventilation and cooling management that are now requirements today"

Describe the internal fire suppressant system in more detail.	Project Description Section 3.5 Fire Safety: "Each battery cabinet has its own aerosol fire suppression system integral to its construction. This system is powered from a remote uninterruptable power supply as well as a redundant battery backup local to each cabinet. They are also equipped with a port on the top side to enable the fire department to fill any container needed with water without having to open the door."
Is there a port on each cabinet for the fire department?	See response above.
How does the fire department enter the facility? Do they pull the truck up against a battery storage system that's on fire and flood it with water?	The Applicant will use battery storage systems that are NFPA 855 Code compliant and UL Certified and that include built-in failsafe and cooling systems designed to prevent thermal runaway and the spread of fire. A fire protection system will be installed to automatically shut down the affected battery storage components and prevent the spread of the fire to the other battery storage modules.
Chemical fumes from the lithium battery fire?	Hazardous Consequence Analysis, Methodology: "During normal operations, there will be no toxic air emissions from the Facility… Lithium-ion battery system fires are generally considered Class A (plastics fires, from materials such as the separator) and Class B (flammable liquids, from materials such as the electrolyte) but may also have characteristics of Class C (electrical fires) as well. As such, the pollutants generated are not dissimilar from other common residential and commercial fires… In the unlikely event of a battery cell malfunction, the primary emissions released would be carbon dioxide (CO_2) and carbon monoxide (CO), along with lesser amounts of other compounds. The emissions also include the chemicals released by the fire suppression system (for non-water-based systems)."
Prevailing winds studies to determine the potential risk levels to the residential area nearby during certain times of years were there to be a fire?	Hazardous Consequence Analysis, "The results of the offsite consequence analysis showed that concentrations at the ERPG-2 or AEGL-2 thresholds would not exceed the applicable thresholds from the toxic release. Therefore, the project would result in a less than significant impact due to thermal runway of battery modules offsite."
What are the typical health concerns?	See response above.
What is the typical maintenance routine and how often?	Project Description Section 3.5 "Typical operations and maintenance activities that will occur on the project site during operation include, but are not limited to, liaison and remote monitoring administration and reporting; semi-annual and annual services; remote operations of batteries, PCSs, and site security and management; additional communication protocols; and repair and maintenance of the BESS, and other project facilities."
How much noise does it actually generate?	Project Description Section 4.3 "Per noise modeling completed for similar facilities, sound emission from a 1-hour-long period of all operating battery energy storage enclosures stays below 63 dBA Leq within 10 feet of the operating components.
Who does the installation to the gird?	Project Description Section 3 "The proposed facility will provide a service to the regional electric grid by receiving energy (charging) from the Oncor electric transmission system, storing energy on site, and then later delivering energy (discharging) back to the regional grid."
Is there a possibility the project would pull power from the grid?	ERCOT system operators will determine how energy is received and discharged from the project site in order to ensure grid reliability.
Is this a backup for the Subaru facility or something Oncor can tap in to?	See response above.

How can you tell if the power form this facility is going directly to the local Coppell area once it hits the ERCOT grid?	See response above.
What is the substance that is in the suppressant system?	Project Description Section 3.5 Fire Safety "Each battery cabinet has its own aerosol fire suppression system integral to its construction. This system is powered from a remote uninterruptable power supply as well as a redundant battery backup local to each cabinet."
If a child gets over the fence, how easy is it to get into the batteries?	Project Description Section 3.2 Site Access and Security. All BESS system and project components will be secured with locks.
Where is the closest fire hydrant to the system?	Refer to Sheet A101 of the Site Plan. The nearest fire hydrant is approximately 1,100 feet east of the proposed project.
How much will the system support?	10 megawatts (MW) of energy provided to the local ERCOT node in the City of Coppell.