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**NOTICE OF PREPARATION OF ENVIRONMENTAL IMPACT REPORT (EIR) DOCUMENT FOR THE (JVR ENERGY PARK (PDS2018-GPA-18-010, PDS2018-REZ-18-007, PDS2018-MUP-18-022))**

Thank you for the opportunity to comment on the above-mentioned document. My comments are recommendations regarding the analyses of potential impacts to air quality, fire services and facilities, mitigation measures for cultural resources, infrastructure capacity planning and the determinants of equity in human health and wellbeing as environmentally just service by San Diego public agencies under the California Environmental Quality Act (CEQA).

In section VIII. GREENHOUSE GAS EMISSIONS, regarding the perceived less than significant impact of JVR energy park on Earth's climate, the leading statement, *"These changes are now broadly attributed to GHG emissions, particularly those emissions that result from the human production and use of fossil fuels"*, is in contrast to the truth, or an integrated reality. There is one rule in ecology, biodiversity needs space. [The larger the area the area the greater the biodiversity](#). 1/10 of the world's population has encroached on natural terrestrial and marine habitats as a fundamental reason for the collapse of species populations and biodiversity worldwide. In 2004 scientists confirmed, if 1/10 of humanity continues to contaminate and disrupt nature at the current increasing rate, there will be a loss of [22% to 31% of species by 2050 in the optimistic scenario and a loss of 38% to 52% in the pessimistic scenario](#). You have confused the symptoms with the disease.

The classification into biomes (land and marine areas of similar weather, temperature, animals and plants) is no longer relevant. Scientists and researchers are currently classifying the Earth's ecology by using [Anthromes, or human biomes](#), to reflect anthropogenesis and our impact on the patterns and processes of our natural world.

Members of the lead agency under 40 years of age may consider whether their current trajectory is career based or merely a job maintaining a status quo that is not serving them. Consider the words of 15-year-old climate advocate Greta Thunberg, ***"... we have to speak clearly, no matter how uncomfortable that may be. You only speak of green eternal economic growth because you are too scared of being unpopular. You only talk about moving forward with the same bad ideas that got us into this mess, even when the only sensible thing to do is pull the emergency brake. You are not mature enough to tell it like it is. Even that burden you leave***

***to us children. But I don't care about being popular. I care about climate justice and the living planet. Our civilization is being sacrificed for the opportunity of a very small number of people to continue making enormous amounts of money. Our biosphere is being sacrificed so that rich people in countries like mine can live in luxury. It is the sufferings of the many which pay for the luxuries of the few.***

In a current reality and in future generations' hindsight, it is the individuals' [stupidity and delusion](#) , inspired by ownership, that will result in an increase in the Earth's average surface temperature commonly referred to as global warming. This rise in global temperature is associated with long-term changes in precipitation, temperature, wind patterns, and other elements of the Earth's climate system, known as climate change. Humans can only fake food, when the plant life is gone and steal water when there is none left, yet narcissistic individuals, in possession of data confirming climate changes are producing an array of adverse environmental impacts including water supply shortages, severe drought, increased flooding, sea level rise, air pollution from increased formation of ground level ozone and particulate matter, ecosystem changes, increased wildfire risk, agricultural impacts, ocean and terrestrial species impacts, food injustice, homelessness through human displacement, transmigration of pathogens and pests, among other adverse effects, lacked the courage to save themselves.

*"[Functional stupidity](#) involves narrow thinking, where established frameworks are accepted uncritically...Most workplaces these days seek to encourage and cultivate critical thinking, reflection and 'out of the box' ideas, yet they often remain better at doing the opposite. Managers and subordinates follow organisational and professional templates and cultures without paying much attention to assumptions and beliefs...Outside the box, stupidity often rules."*

*To be stupid, selfish, and have good health are three requirements for happiness, though if stupidity is lacking, all is lost - Gustave Flaubert*

- **AIR QUALITY ANALYSES IMPACT**

VIII. GREENHOUSE GAS EMISSIONS — Would the project: a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? LESS THAN SIGNIFICANT IMPACT.

**COMMENT:**

1. The report/mitigation should extend to the lead agencies identification of all potential adverse air quality impacts that could occur from all phases of the project and all air pollutant sources related to the project. Air quality impacts from both construction (including demolition, if any) and operations should be calculated. Construction-related air quality impacts typically include, but are not limited to, emissions from the use of heavy-duty equipment from grading, earth-loading/unloading, paving, architectural coatings, off-road mobile sources (e.g., heavy-duty construction equipment) and on-road mobile sources (e.g., construction worker vehicle trips, material transport trips).

Operation-related air quality impacts may include, but are not limited to, emissions from stationary sources (e.g., substations, ), area sources (e.g., solvents and coatings), and vehicular trips (e.g., on- and off-road tailpipe emissions and entrained dust). Air quality impacts from indirect sources, that is, sources that generate or attract vehicular trips should be included in the analysis.

2. The report/mitigation should extend to the lead agencies quantification of criteria pollutant emissions and compare the results to the recommended regional significance thresholds found in the National Ambient Air Quality Standards (NAAQs) for pollutants that harm health, the environment, and cause property damage.
3. The report/mitigation should extend to quantify electromagnetic radioactive criteria pollutant emission ranges and compare the results presented by the World Health Organization in Environmental Health [Criteria 137](#)- Geneva, Switzerland 1993. All electrical and electronic devices create electromagnetic fields or EMF around them when used and also emit electromagnetic radiation or EMR. This includes solar panels and solar inverters. In 2002, [the International Agency for Research on Cancer \(IARC\)](#), a component of the World Health Organization, appointed an expert Working Group to review all available evidence on static and extremely low frequency electric and magnetic fields (12). The Working Group classified ELF-EMFs as “possibly carcinogenic to humans,” based on limited evidence from human studies in relation to childhood leukemia.

- **FIRE SERVICE AND FACILITIES –**

1. The report/mitigation should extend to the cost, scope and impact on fires safety in expected fulfillment of the pending NFPA 855 Standard for the Installation of Stationary Energy Storage Systems (ESS).

An ESS is defined as “one or more devices, assembled together, capable of storing energy in order to supply electrical energy at a future time to the local power loads, to the utility grid, or for grid support.”

Before we get into the body of the proposed standard, it would be good to look at excellent information provided in the several annex sections, in particular:

- Annex B: Battery Energy Storage System Hazards.
- Annex C: Fire-Fighting Consideration (Operations).
- Annex D: Overview of Engineering Storage Systems Technologies.
- Annex F: A Short History on Station Storage Battery Systems.

Annex B provides examples of the specific fire hazards involved with a wide variety of battery types including lithium-ion batteries. Annex F contains information currently appearing in other codes and standards.

Chapter 4 provides general requirements for ESS systems and comes right out of the gate by letting us know what the major issue is.

“4.1.1 General ESS Gas Release. ESS shall not release toxic or highly toxic gas creating conditions in excess of the permissible exposure limit (PEL) in the room or space in which they are located during normal charging, discharging, and use.”

Under certain conditions, Chapter 4 requires a hazard mitigation analysis which must address the following failure modes:

- Thermal runaway condition in a single module or array
- Failure of an energy storage management system
- Failure of a required ventilation or exhaust system
- Voltage surges on the primary electric supply
- Short circuits on the load side of the ESS
- Failure of a required smoke detection, fire detection, fire suppression or gas detection system

The following guidance is provided for the AHJ reviewing the analysis.

“4.1.4.2. The AHJ shall be permitted to approve the hazardous mitigation analysis as documentation of the safety of the ESS installation provided the consequences of the analysis demonstrate the following: (1) Fires will be contained within unoccupied ESS rooms for the minimum duration of the fire resistance rating specified in 4.3.6. (2) Suitable deflagration protection is provided where required. (3) ESS cabinets in occupied work centers allow occupants to safely evacuate in fire conditions. (4) Toxic and highly toxic gases released during normal charging, discharging and operation will not exceed the PEL in the area where the ESS is contained. (5) Toxic and highly toxic gases released during fires and other fault conditions will not reach concentrations in excess of immediately dangerous to life or health (IDLH) level in the building or adjacent means of egress routes during the time deemed necessary to evacuate from that area. (6) Flammable gases released during charging, discharging and normal operation will not exceed 25 percent of the LFL.

Table 4.4.2 contains a list of fire safety features required for indoor ESS installations. The table makes a distinction between dedicated-use ESS buildings and nondedicated-use buildings. Separation, smoke and fire detection, and fire suppression will be required for indoor installations in either case.

Regarding separation: “4.3.6 Separation. Rooms or spaces containing ESS shall be separated from other areas of the building by fire barriers with a minimum fire resistance rating of two

hours and horizontal assemblies with a minimum fire resistance rating of two hours, constructed in accordance with the local building code.”

The requirements for fire suppression system reflects the lack of good information on how to properly protect these systems with sprinklers or alternate suppression systems.

The following is from Annex Section A.4.11.1: “Thermal Runaway. While nonwater-based fire suppression has been shown to be effective at suppressing Class B and Class C fires in ESS enclosures, current suppression agents, both water-based and nonwater-based, are probably not going to be able to stop thermal runaway. No published case studies, test reports or data generated to date indicate otherwise.

“The current protection concepts in NFPA 855, including size and separation, maximum-rated energy and elevation are designed to try and keep a thermal runaway event from propagating from one ESS unit to another, contain a fire within a room or outdoor walk-in unit and not allow it to compromise exposures.”

Currently, the standard contains design discharge criteria of 0.30 gal./min./ft.<sup>2</sup> over 2,500 ft.<sup>2</sup> for sprinkler systems. There is an option to use a different density based on the results of large-scale fire testing.

Alternatives to sprinklers also may be used if their effectiveness is supported by large-scale testing.

### **Battery Storage System Requirements**

Chapter 9 deals specifically with battery storage systems. Table 9.2. Electrochemical ESS Technology-Specific Requirements indicates which general requirements must be met based on the type of battery technology used. Compliance features included in the table are exhaust ventilation, spill control, neutralization, safety caps, thermal runaway, explosion control and size/separation.

The proposed standard also contains specific requirements in Chapter 17 which address one- and two-family dwellings and townhouse units. The key provision of the chapter is the location requirements.

17.5.1. ESS shall only be installed in the following locations: (1) In attached garages separated from the dwelling unit living area and sleeping units in accordance with the local building code (2) In detached garages and detached accessory structures (3) Outdoors on exterior walls or on the ground located a minimum of 3 ft (914 mm) from doors and windows (4) In enclosed utility closets and storage or utility spaces.

“17.5.1.1. If the room or space where the ESS is to be installed is not finished, the walls and ceiling of the room or space shall be protected with not less than 5/8-in. Type X gypsum board.”

No suppression is required for one- and two-family dwellings but there is a requirement for detection.

“17.8.1. Interconnected smoke alarms shall be installed throughout the dwelling, including in rooms, attached garages and areas in which ESS are installed in compliance with local building code.”

The members of the technical committee for energy storage systems should be congratulated for their effort. It is an excellent standard, well-written, very comprehensible and ahead of the curve — the avalanche of battery storage systems that are coming.

And it bears repeating: This column is based on the standard as currently proposed and that changes are likely before we see the final document from NFPA. - [reference](#)

*“The only thing firefighters fear more than fire is solar. So long as a solar panel is getting sunlight, it's impossible to turn off. “During daylight, there can be enough voltage and current to injure or even kill a firefighter who comes in contact with the energized conductors,” -Matthew Paiss, San Jose Fire Department.*

In December of 2017, wildfires devastated portions of Ventura and Santa Barbara counties. At the time, what became known as the Thomas Fire was the largest wildfire in California’s history. The Thomas Fire burned [more than 280,000 acres](#) before it was finally contained on Jan. 12, 2018. The fire destroyed more than 1,000 structures including hundreds of homes. There was also a second, related fire that broke out in Ojai, a small city in Ventura County, located a little northwest of Los Angeles, about an hour later after a transformer [reportedly](#) exploded in a residential area on Koenigstein Road. So far, [170 homeowners and business owners](#) who suffered damage in connection with the [Woolsey Fire](#) that broke out in November 2018 have filed suit in Los Angeles and Ventura Counties claiming the utility’s electrical equipment was responsible for the fire. Meanwhile, [PG&E has announced that it will file for bankruptcy](#) since it is now drowning under “at least \$7 billion in claims from the [Camp Fire](#),” according to [news reports](#). The California Department of Forestry and Fire Protection has also [blamed PG&E](#) for some of the 2017 wildfires. The Camp Fire is now on record as the deadliest fire in state history in terms of fatalities and destruction to infrastructure. Williams, the PG&E CEO, has announced that she is stepping down.

2. The report/mitigation should extend to the cost, support, management, maintenance, acquisition and storage of materials and personnel required to effectively respond to Class C fires in the region. The formula for calculating the needed foam concentrate at a flammable liquid release is as follows: Area X Critical Application Rate (CAR) X Education Rate (ER) X 15 = Foam Concentrate Needed. "Area" refers to the area the spill occupies, usually in square feet, in this case, 1,345 acres.

a. Potential resources to be included:

[Type 1 Fire Engine](#)  
[Type 3 Fire Engine](#)  
[ALS Rescue Ambulance](#)  
[BLS Rescue Ambulance](#)  
[Foam Tender](#)  
[Gator](#)  
[HAZ MAT Apparatus](#)  
[Heavy Rescue](#)  
[Helicopter](#)  
[Helicopter Tender](#)  
[Firefighting Aircraft](#)  
[Rehab Tender](#)  
[Tractor Company](#)  
[Fire Crew Support](#)  
[Urban Search and Rescue](#)  
[Water Tender](#)

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b. Potential Training requirements to include:

- i. Fire Scenarios and Foam Policies AM Foams and their relevant standards, tank risk scenarios, understanding tank fires, case study review.
- ii. Familiarisation with the importance of foam testing, taking samples and meaningful measurements. Live fire exercises demonstrating foam types and techniques, and emergency planning and incident command scenarios.
- iii. An overview of current global legislation and best practice guidelines. Emergency planning for tank fires and significant emergencies as well as an understanding of specifying foam systems.
- iv. Practical fire ground awareness, equipment familiarization, Practical firefighting scenarios that include running fuel fires from a pressurized flange, tank-top rimseal fires as and manual v's automatic protection. Blevé and boilover simulators, transformer, electrical bund fires and a full surface tank fires.
- v.

c.

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3. The report/mitigation should extend to identify the Critical and Minimum application rates at which Class C foam will extinguish wildfires under ideal conditions.

**NEPA 11**

“Tests have shown that foam may travel effectively across at least 100 feet of burning liquid surface”.

*“Sometimes”*

- **MITIGATION MEASURES FOR CULTURAL RESOURCES**

Due to the facts that the project is located within the area of sensitivity of the Campo Kumeyaay native peoples, the report mitigation should extend to implement the language below as mitigation measures:

- All ground disturbing activities performed on the project property shall be monitored by professional Native American monitors.
- The applicant shall retain one professional Native American monitor per excavation team to monitor all ground disturbing activities performed on the project property.

- **INFRASTRUCTURE/CAPACITY PLANNING - Regional Water Quality Control Board (RWQCB)**

*b) Is the project tributary to an already impaired water body, as listed on the Clean Water Act Section 303(d) list? If so, could the project result in an increase in any pollutant for which the water body is already impaired? LESS THAN SIGNIFICANT IMPACT*

*JCSD's current habitual non-compliance under the monitoring requirements of the Safe Drinking Water Act, indicate an inability to support the continuous delivery of potable water to residents.*

*Regards,*

*S. Ray.*