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September 3, 2019

Via Email and Overnight Delivery

Jim Minnick
Imperial County
Planning and Development
801 Main Street
El Centro, CA 92243
Email: JimMinnick@co.imperial.ca.us

Re: Comments on the Draft Supplement Environmental Impact Report (SCH. No. 2010111056) for the Proposed Le Conte Energy Storage System Project (CUP No. 180018)

Dear Mr_ Minnick:

On behalf of the Citizens for Responsible Industry, we submit these comments on the Draft Supplemental Environmental Impact Report ("DSEIR") for the Le Conte Battery Energy Storage Project, a proposed 125 megawatt ("MW") battery energy storage facility, located on 3-5 acres of land in southeastern Imperial County ("County") at 319 Brockman Road, Calexico, California_

The battery energy storage system ("BESS"), proposed by Le Conte Energy Storage, LLC ("Applicant"), would consist of one or two buildings 85,000 square feet in area, banks of electrochemical batteries, a substation, power conversion systems, and ancillary systems, such as fencing, security, lighting, fire protection, heating, air-conditioning, and venting (collectively "Project").[1] The buildings will contain the batteries and their enclosures_ The substation, along with the transformers and inverters will be located outside, adjacent to the buildings.[2] The Project will be connected to the San Diego Gas and Electric ("SDG&E") owned power grid, which is

1 DSEIR, p. ES-1.
2 *Id.* at 2-11.
3800-013acp

controlled by the California Independent System Operator ("CAISO").[3] The Project will receive, store, and return up to 125 MW of electric energy to and from the wholesale power grid.[4]

The Project is located on rural, agriculturally zoned land in Imperial County, one mile north of the U.S.-Mexico border.[5] The Project will be constructed entirely within the existing fence line of the Centinela Solar Energy Project site, which underwent its own environmental review process in 2011.[6] The Centinela Project was approved by the County Board of Supervisors after certification of the Centinela EIR, Conditional Use Permit, and variance, which allowed the transmission towers to exceed the 120-ft zoning limit.[7] The BESS, proposed in the current Project, was not included in the Centinela Project or its environmental review process, so the County prepared a DSEIR, tiering from the original Centinela EIR, to analyze the Project's environmental impacts.

The BESS proposed in the Project is an entirely different type of facility than the Centinela Solar Plant. Specifically, a BESS contains rows of electrochemical batteries, in this case lithium-ion, that consist of hazardous materials and can pose a fire danger.[8] Moreover, while solar plants generate renewable electricity and transmit that electricity to the grid, a BESS does not generate electricity. Rather, a BESS receives energy from the grid generated by other sources, and then transmits that energy back to the grid at a later time.[9] BESS' are thus ***not*** renewable energy sources, but neutral energy sources, reflecting the energy composition of the grid they are connected to.

We reviewed the DSEIR, its technical appendices, and the reference documents with the assistance from air quality and hazardous resources expert, Dr.

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[3] *Id.* at 2-10.
[4] *Id.* at ES-3.
[5] *Id.* at 2-10.
[6] *Id.* at 2.2.
[7] DSEIR Appendices, Initial Study/Notice of Preparation of DSEIR/Comment Letters &Mitigation and Monitoring and Reporting Program.
[8] *See* Fox Comments § 4.1.1.
[9] DSEIR, p. 2-4.

Phyllis Fox PhD, PE, and utilities expert, Mr. David Marcus.[10] The County must respond to the attached experts' comments separately.

I. STATEMENT OF INTEREST

These comments are submitted on behalf of Citizens for Responsible Industry ("Citizens"). Citizens is an unincorporated association of individuals and labor organizations with members who may be adversely affected by the potential public and worker health and safety hazards and environmental and public service impacts of the Project. The association includes Imperial County residents, Virgil Saunders and Jose Luis Miranda, and California Unions for Reliable Energy ("CURE") and its local affiliates, and the affiliates' members and their families, as well as other individuals who live, work and recreate in Imperial County. Accordingly, they would be directly affected by the Project's environmental and health and safety impacts. Individual members of CURE's affiliates may also work on the Project itself. They will, therefore, be first in line to be exposed to any hazardous materials, air contaminants or other health and safety hazards that exist onsite.

The organizational members of Citizens and their members also have an interest in enforcing environmental laws that encourage sustainable development and ensure a safe working environment for the members that they represent. Environmentally detrimental projects can jeopardize future jobs by making it more difficult and more expensive for industry to expand in Imperial County, and by making it less desirable for businesses to locate and people to live and recreate in the County. Continued degradation can, and has, caused construction moratoriums and other restrictions on growth that, in turn, reduces future employment opportunities.

Finally, the organizational members of Citizens are concerned with projects that can result in serious environmental harm without providing countervailing economic benefits. CEQA provides a balancing process whereby economic benefits are weighted against significant impacts to the environment. It is in this spirit that we offer these comments.

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[10] Letter from Dr. Phyllis Fox and Mr. David Marcus to Imperial County, Re: Comments on the Draft Supplemental Environmental Impact Report for the Le Conte Battery Energy Storage System, Sep. 3, 2019, (attached as Attachment A) (hereinafter referred to as "Dr. Fox's Comments").

II. THE DSEIR FAILS TO COMPLY WITH CEQA'S PURPOSE AND GOALS

CEQA requires that an agency analyze the potential environmental impacts of its proposed actions in an environmental impact report ("EIR") (except in certain limited circumstances).[11] The EIR is the very heart of CEQA.[12] "The foremost principle in interpreting CEQA is that the Legislature intended the act to be read so as to afford the fullest possible protection to the environment within the reasonable scope of the statutory language."[13]

CEQA has two primary purposes. First, CEQA is designed to inform decision makers and the public about the potential, significant environmental effects of a project.[14] "Its purpose is to inform the public and its responsible officials of the environmental consequences of their decisions before they are made. Thus, the EIR 'protects not only the environment but also informed self-government.'"[15] The EIR has been described as "an environmental 'alarm bell' whose purpose it is to alert the public and its responsible officials to environmental changes before they have reached ecological points of no return."[16]

Second, CEQA requires public agencies to avoid or reduce environmental damage when "feasible" by requiring "environmentally superior" alternatives and all feasible mitigation measures.[17] The EIR serves to provide agencies and the public with information about the environmental impacts of a proposed project and to "identify ways that environmental damage can be avoided or significantly reduced."[18] If the project will have a significant effect on the environment, the agency may approve the project only if it finds that it has "eliminated or substantially lessened all significant effects on the environment where feasible" and

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[11] *See, e.g.,* Public Resources Code § 21100.
[12] *Dunn-Edwards v. BAAQMD* (1992) 9 Cal.App.4th 644, 652.
[13] *Communities. for a Better Env. v. Cal. Res. Agency* (2002) 103 Cal. App.4th 98, 109 ("*CBE v. CRA*").
[14] 14 Cal. Code Regs. § 15002(a)(1).
[15] *Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal. 3d 553, 564.
[16] *Berkeley Keep Jets Over the Bay v. Bd. of Port Comm'rs.* (2001) 91 Cal. App. 4th 1344, 1354 ("*Berkeley Jets*"); *County of Inyo v. Yorty* (1973) 32 Cal.App.3d 795, 810.
[17] 14 CCR § 15002(a)(2) and (3); *see also Berkeley Jets*, 91 Cal.App.4th at 1354; *Citizens of Goleta Valley*, 52 Cal.3d at p. 564.
[18] 14 Cal. Code Regs. §15002(a)(2).

that any unavoidable significant effects on the environment are "acceptable due to overriding concerns."[19]

While the courts review an EIR using an "abuse of discretion" standard, "the reviewing court is not to 'uncritically rely on every study or analysis presented by a project proponent in support of its position. *A clearly inadequate or unsupported study is entitled to no judicial deference.*"[20] As the courts have explained, "a prejudicial abuse of discretion occurs "if the failure to include relevant information precludes informed decision making and informed public participation, thereby thwarting the statutory goals of the EIR process."[21]

The DSEIR for this Project fails to comply with CEQA's basic requirement to act as an informational document. It lacks details in key areas, which the public and decision-makers rely upon to assess the Project's significant environmental impacts. The DSEIR fails to (1) provide an accurate project description (2) accurately disclose and analyze the Project's significant impacts, (3) accurately disclose and analyze the Project's considerable cumulative impacts; and (4) incorporate all feasible mitigation measures to mitigate those impacts. Because of these flaws, the DSEIR is insufficient as a matter of law and lacks substantial evidence to properly identify and mitigate the Project's significant impacts, thus violating CEQA.

III. THE DSEIR IS INTERNALLY INCONSISTENT AND FAILS TO INCLUDE A COMPLETE PROJECT DESCRIPTION

The DSEIR does not meet CEQA requirements because it fails to include a complete and accurate project description, rendering the entire impact analysis unreliable. An accurate and complete project description is necessary to perform an evaluation of the potential environmental effects of a proposed project.[22] Without a

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[19] PRC § 21081; 14 CCR § 15092(b)(2)(A) & (B).
[20] *Berkeley Jets*, 91 Cal. App. 4th 1344, 1355 (emphasis added), *quoting, Laurel Heights Improvement Assn. v. Regents of University of California* (1988) 47 Cal.3d 376, 391 409, fn. 12.
[21] *Berkeley Jets*, 91 Cal.App.4th at 1355; *San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus* (1994) 27 Cal.App.4th 713, 722; *Galante Vineyards v. Monterey Peninsula Water Management Dist.* (1997) 60 Cal.App.4th 1109, 1117; *County of Amador v. El Dorado County Water Agency* (1999) 76 Cal.App.4th 931, 946.
[22] *See, e.g., Laurel Heights Improvement Association v. Regents of the University of California* (1988) 47 Cal.3d 376.

complete project description, the environmental analysis will be impermissibly narrow, thus minimizing the project's impacts and undercutting public review.[23] The courts have repeatedly held that "an accurate, stable and finite project description is the *sine qua non* of an informative and legally sufficient [CEQA document]."[24] "Only through an accurate view of the project may affected outsiders and public decision makers balance the proposal's benefit against its environmental costs."[25]

CEQA Guidelines §15378 defines "project" to mean "the whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment."[26] "The term 'project' refers to the activity which is being approved and which may be subject to several discretionary approvals by governmental agencies. The term project does not mean each separate governmental approval."[27] Courts have explained that for a project description to be complete, it must address not only the immediate environmental consequences of going forward with the project, but also all "*reasonably foreseeable* consequence[s] of the initial project."[28]

a. The DSEIR Fails to Describe the Batteries, Battery Lay-Out, and Battery Enclosures

The DSEIR includes only brief and general information about the batteries that the Project will use, impeding a comprehensive environmental impact analysis. The main component of a BESS are the batteries, but the DSEIR does not describe the specific kind of lithium-ion batteries the Project will use, nor the number of batteries the Project will include.[29] Indeed, the DSEIR states only that the Project will use "traditional" lithium-ion batteries.[30] But as stated by Tesla, a prominent lithium-ion battery manufacturer, the term "lithium-ion batteries" actually contains "a broad set of storage technologies," all of which have unique chemical components, 1

[23] *See ibid.*
[24] *County of Inyo v. County of Los Angeles* (1977) 71 Cal.App.3d 185, 193.
[25] *Id.* at 192-193.
[26] 14 CCR § 15378.
[27] *Id.* at § 15378(c).
[28] *Laurel Heights*, 47 Cal.3d at p. 396 (emphasis added); *see also Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova* (2007) 40 Cal.4th 412, 449-50.
[29] *See* DSEIR, p. 2-10.
[30] DSEIR, p. 2-1.

as well as "different properties and associated risks."[31] Without a description of the specific kind of lithium-ion batteries used, an accurate analysis of the Project's environmental impacts is impossible. 1

Additionally, while§ 2.6.3.9 of the DSEIR lists some of the chemical components of the batteries, the DSEIR fails to include the total amounts of the chemical components contained either in each individual battery, or the Project as a whole.[32] The DSEIR also fails to explain any of the properties of these chemical components, including whether they are hazardous to human health, stating only "[t]he [Centinela Solar Energy] project Environmental Protection Plan will be updated to incorporate any hazardous material associated with the Project."[33] A later update to the Environmental Protection Plan does not allow the public or the agency decision-makers to fully analyze the health and environmental impacts. Moreover, this information is normally included in a Material Safety Data Sheet (MSDS) for the batteries, which is missing from the DSEIR. Since the batteries contain chemicals that are "sufficient to raise serious concerns about health and safety[,]"[34] the DSEIR must be revised to fully explain what those potentially significant health and safety issues are. 2

The DSEIR also fails to adequately describe the layout of the batteries or the battery enclosures. The DSEIR fails to state how close the hatteries will be placed either to each other or the building walls. In addition, the DSEIR fails to state how much wattage may be contained in a single enclosure. All of these and other design details impact the fire risk associated with the Project.[35] As explained in Dr. Fox's comments, "the layout of battery facilities can prevent adequate firefighting access."[36] But since the DSEIR does not contain any information on the battery system layout, it is impossible to determine the fire and explosion risk associated with the Project. The DSEIR must be revised to include this information so the 3 4

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31 Letter from Sarah Van Cleve, Manager, US Energy Policy, Tesla, Inc., to Arizona Corporation Commission, Re: Tesla Response to Commissioner Kennedy's August 2nd Letter Regarding Lithium-Ion Battery Safety/Docket No. E-01345A-19-0076, August 19, 2019; available at https://clocket.irnages.azcc.gov/E000002454.pdf.
32 DSEIR, p. 2-15.
33 *Ibid.*
34 Fox Comments, p. 2
35 *Id.* at 17.
36 *Id.* at 16.
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agency decision-makers and the public have a clear picture of the Project and its associated risks. 4

b. The DSEIR Fails to Accurately Describe the Project's Decommissioning Phase

The DSEIR fails to adequately describe the full scope of the Project being approved, and thus fails to disclose the full range and severity of the Project's environmental impacts. A complete project description must include details as to the "later phases of the project, and any secondary, support, or off-site features necessary for its implementation."[37] The requirements of CEQA cannot be avoided by chopping the project into many small parts or by excluding reasonably foreseeable future activities that may become part of the project.[38] The DSEIR must supply enough information so that the decisionmakers and the public can understand the full scope of the Project.[39] The DSEIR must then analyze the whole project in a single environmental review document and may not piecemeal or split a project into pieces for purposes of analysis.

Here, the DSEIR fails to fully describe the decommissioning phase of the Project. For instance, the DSEIR claims that at the end of the Project's lifetime, "[t]he batteries are also recyclable and will be recycled at a facility approved by the battery supplier...."[40] But the DSEIR fails to explain which recycling facility would take the batteries, or even if such a facility exists. In addition, removing the batteries from the BESS during decommissioning and transporting the batteries to a recycling facility pose risks to the public and the environment as accidents during transport could result in chemical fires or explosions, and the extent of this risk is dependent on the method (rail, road, etc.), length, and route of this transport. The DSEIR fails to identify whether a recycling facility exists that will take the Project batteries and fails to describe how the batteries will get there. This failure makes it impossible for the County to accurately gauge the environmental impacts from decommissioning the Project. 5

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[37] CEQA Guidelines, Appendix G, Environmental Checklist Form § 8.
[38] Pub. Resources Code § 21159.27 (prohibiting piecemealing); *see also Rio Vista Farm Bureau Center v. County of Solano* (1992) 5 Cal.App.4th 351, 370.
[39] *Dry Creek Citizens Coalition v. County of Tulare* (1990) 70 Cal.App.4th 20, 26.
[40] DSEIR, p. 3.5-17.

c. The DSEIR Fails to Describe the Ancillary Equipment Needed to Operate the Project

The DSEIR also lacks key details regarding the ancillary equipment involved in the Project, such as the cooling and control systems, the inverters, the ventilation and the HVAC units.[41] Although much of this equipment requires electricity and thus causes GHG and criteria pollutant emissions, the equipment was not described in sufficient detail to allow the public or agency decision-makers to calculate these impacts. The DSEIR must be revised to include vendor specifications for the equipment used in the Project, or at the very least provide estimates for the electricity requirements for this equipment. 6

d. The DSEIR's Description of How the Project will Receive and Return Energy from the Grid is Vague and Inconsistent

The Project description is inadequate because it does not accurately explain how the BESS will be connected to the electrical grid. The DSEIR states that the Project will "[r]eceive solar-generated electricity during times of excess generation or times of low energy demand and store that power for release when the customer deems it to be more valuable thus increasing the effectiveness of Imperial County renewable energy projects...."[42] But the DSEIR also states that the Project will "allow for efficient storage of energy available on the wholesale power grid, including renewable energy...."[43] These two statements are contradictory. Either the Project will only receive, store, and return solar-generated renewable energy ***or*** it will receive, store, and return energy from the wholesale power grid, which includes non-renewable energy sources such as natural gas and coal. This contradictory and incomplete description of how the Project receives and returns energy to the grid renders a conclusion about the Project's energy impacts impossible, as discussed in more detail below. 7

In addition, the DSEIR lacks essential information necessary to determine how much energy the Project will use. As stated in the Dr. Fox's comments: 8

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[41] *See* DSEIR, p. 2-10.
[42] *Id.* at 2-6.
[43] *Id.* at 2-10.

> The environmental impacts of the Project from pollutant emissions during operation depends on how many megawatt hours (MWh) of generation are required to charge the Project batteries, which grid sources are the marginal sources[44] of supply during the hours when Project charging or discharging is occurring, and the emission rates of those grid sources. The number of MWh of charging energy required will in turn depend on the expected Project generation and the Project efficiency (the percentage of charging energy which can be recovered as generation during discharge).[45]

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None of this information required for an analysis of the Project's impacts is included in the DSEIR: the DSEIR does not include the efficiency of the Project batteries, the generation required to charge the batteries, or the expected generation of the Project. Likewise, the DSEIR does not include any specific information about what kind of energy will charge the batteries, besides making vague assertions that *some* of it will come from renewable sources.[46] The DSEIR must be revised to include this information so the public and agency decision-makers can be fully informed of the Project's energy and greenhouse gas ("GHG") impacts.

IV. THE DSEIR LACKS SUBSTANTIAL EVIDENCE FOR ITS CONCLUSIONS ON SIGNIFICANT IMPACTS AND FAILS TO INCORPORATE ALL FEASIBLE MITIGATION MEASURES TO REDUCE IMPACTS TO LESS THAN SIGNIFICANT

An EIR must fully disclose all potentially significant impacts of a Project and implement all feasible mitigation to reduce those impacts to less than significant levels. The lead agency's significance determination with regard to each impact must be supported by accurate scientific and factual data.[47] An agency cannot conclude that an impact is less than significant unless it produces rigorous analysis and concrete substantial evidence justifying the finding.[48]

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[44] The marginal source of supply in a given hour is the source whose output would be increased if demand increases in that hour from the previous hour, or whose output would be decreased in that hour if demand decreases in that hour from the previous hour.
[45] Fox/Marcus Comments, p. 5.
[46] DSEIR, p. 2-10; p. 2-4.
[47] 14 CCR § 15064(b).
[48] *Kings Cty. Farm Bur. v. Hanford* (1990) 221 Cal.App.3d 692, 732.

Moreover, the failure to provide information required by CEQA is a failure to proceed in the manner required by CEQA.[49] Challenges to an agency's failure to proceed in the manner required by CEQA, such as the failure to address a subject required to be covered in an EIR or to disclose information about a project's environmental effects or alternatives, are subject to a less deferential standard than challenges to an agency's factual conclusions.[50] In reviewing challenges to an agency's approval of an EIR based on a lack of substantial evidence, the court will 'determine de novo whether the agency has employed the correct procedures, scrupulously enforcing all legislatively mandated CEQA requirements....'[51]

Even when the substantial evidence standard is applicable to agency decisions to certify an EIR and approve a project, reviewing courts will not 'uncritically rely on every study or analysis presented by a project proponent in support of its position. A clearly inadequate or unsupported study is entitled to no judicial deference.'"[52]

Here, the DSEIR fails to adequately analyze and mitigate the Project's energy and GHG impacts, fails to adequately analyze and mitigate significant impacts from fires, explosions, and accidental release of hazardous materials, and fails to identify and analyze health impacts during the Project's construction, operation, and decommissioning phases.

a. The DSEIR Fails to Identify, Analyze, and Mitigate the Project's Energy Impacts and Greenhouse Gas Emissions

CEQA requires agencies to analyze a project's energy impacts when "the project's energy use reveals that the project may result in significant environmental effects due to the wasteful, inefficient, or unnecessary consumption use [sic] of energy...."[53] The CEQA Guidelines also state that the analysis of a project's energy impacts "should include the project's energy use for all project phases and components," and that relevant considerations include "the project's size, location, orientation, equipment use and any renewable energy features that could be

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[49] *Sierra Club v. State Bd. Of Forestry* (1994) 7 Cal.4th 1215, 1236.
[50] *Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova* (2007) 40 Cal.4th 412, 435.
[51] *Ibid.*
[52] *Berkeley Jets*, 91 Cal.App.4th at 1355.
[53] 14 CCR § 15126.2(b).

incorporated into the project."[54] Further guidance for considering energy impacts is included in Appendix F of the Guidelines, which states that the energy analysis may include "[t]he effects of the project on peak and base period demands for electricity and other forms of energy," as well as the "the effects of the project on energy resources."[55] The CEQA Guidelines also state that the energy analysis "may be included in related analyses," such as the GHG impact analysis.[56]

In addition to analyzing energy impacts, CEQA requires agencies to analyze GHG impacts. The CEQA Guidelines state that lead agencies "shall make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of greenhouse gases resulting from a project."[57] "The agency's analysis also must reasonably reflect evolving scientific knowledge and state regulatory schemes."[58] The Guidelines also state that the lead agency "may use a model or methodology to estimate greenhouse gas emissions resulting from a project ... The lead agency must support its selection of a model or methodology with substantial evidence. The lead agency should explain the limitations of the particular model or methodology used."[59]

Here, the DSEIR fails entirely to conduct an energy impacts analysis. Because of this, the DSEIR vastly underestimates the Project's GHG emissions. Because a BESS draws energy from the grid, stores it, and then discharges energy back to the grid later, it has a profound impact on "peak and base period demands for electricity...."[60] Yet, the DSEIR omits entirely any discussion of the Project's energy impacts. Instead, the DSEIR concludes without any evidence that the Project will "[a]ssist the State in achieving ... greenhouse gas (GHG) emissions reduction objectives by constructing a BESS...."[61] This assertion is baseless. Recent evidence shows that energy storage has actually increased energy use in the United States due to "energy arbitrage," the practice of storing energy when cheapest and discharging energy when most expensive, without regard to the

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[54] *Ibid.*
[55] CEQA Guidelines, Appendix F: Energy Conservation, Section C(3); Section C(5).
[56] 14 CCR § 15126.2(b).
[57] *Id.* at § 15064.4(a).
[58] *Ibid.*
[59] *Id.* at § 15064.4(c).
[60] CEQA Guidelines, Appendix F: Energy Conservation, Section C(3).
[61] DSEIR, p. 2-4.

electricity source that charges the battery.[62] As discussed below, it is likely that the Project will also operate in this manner.

The DSEIR suggests that the Project will merely move energy around, stating the Project will "receive, store and return up to 125 MW of electric energy to the electric grid."[63] But this statement obscures the fact that the Project will also *use* energy. Batteries are imperfect instruments: energy is lost every time a battery is charged and discharged. This means that if a battery absorbs 1 MWh of electricity, it will discharge **less** than 1 MWh back to the grid. The ratio of how much the battery stores versus discharges is referred to as the energy efficiency of the batteries. As stated above, this number is not included in the DSEIR and thus an accurate analysis of the Project's energy impacts is impossible. That said, Dr. Fox and Mr. Marcus were able to calculate the average efficiency of batteries on the CAISO grid based on recent CAISO data as roughly 80% efficient.[64] So, if a battery on the CAISO grid absorbs 1 MWh of energy, it will on average discharge only 0.8 MWh back to the grid.

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If the Project batteries have an efficiency of 80% like the average battery connected to the CAISO grid, every 1 MWh that a customer receives from the Project requires 1.25 MWh of electrical generation due to efficiency losses. Sources connected to the CAISO grid will have to increase electricity generation to compensate for this 20% loss. If fossil-fuel derived energy generation increases to compensate for this loss, the Project will result in increased GHG emissions.

The DSEIR fails to analyze this issue. Instead, the DSEIR uses the CalEEMod to calculate GHG emissions from electricity usage at the facility and emissions from vehicle trips.[65] The CalEEMod is not specific to BESS facilities and only includes emissions from electricity use and vehicle trips to service a typical "General Light Industry" facility of a specified size.[66] It excludes the significant electrical demand to operate inverters, transformers, cooling and controls systems and HVAC equipment, as well as the energy required to charge the batteries, as

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[62] Eric S. Hittinger and Ines M.L. Azevedo, *Bulk Energy Storage Increase United states Electricity System Emissions*, J. OF ENV. SCI. TECH. (2015) available at https://doi.org/10.1021/es505027p.
[63] DSEIR, p. 2-4.
[64] Fox/Marcus Comments, p. 7.
[65] DSEIR, Appendix B, Section 4.2 and Appendix A to Appendix B, CalEEMod Emission Calculations; See also Fox Comment, p. 4.
[66] *Ibid.*

discussed above. The Guidelines require that any model used to estimate GHG emissions must be supported by substantial evidence and that the lead agency explain any limitations of the model used. The DSEIR fails to meet this mandate. The CalEEMod does not include any data on emissions from energy storage systems and is thus an inadequate model to calculate the Project's GHG emissions.

Rather than performing a comprehensive GHG impact analysis, the DSEIR states (without any evidence) that the Project will make "renewable energy projects more efficient by capturing and transmitting energy that might otherwise go unused."[67] But this is unlikely to be true. As explained in Dr. Fox's comments, a BESS usually charges when electricity is cheapest (i.e., when demand for electricity is low) and discharges when electricity is most expensive (i.e., when demand for electricity is high).[68] The Project will likely also operate this way, because the DSEIR states that "[c]harging energy will be provided from the electric grid which will include solar energy currently produced by projects interconnected at the Drew and IV substations."[69] This statement suggests that the batteries will be charged using whatever energy is available on the CAISO grid, which includes non-renewable sources like natural gas and coal.[70] Thus, there is no evidence that the Project will charge using only emissions-free, renewable energy. In fact, the likelihood that the Project will use renewable energy to charge is quite low because the Project can only use renewable energy to charge when there is "extra" renewable energy on the grid—i.e. when renewable energy would be otherwise "curtailed," or cut-off. However, Mr. Marcus determined, based on data from CAISO, that renewable energy is rarely curtailed on the CAISO grid.[71] Thus, most of the time, the Project will use fossil-fuel derived energy to charge the batteries, which will increase GHG emissions. 9

As explained in Dr. Fox's comments, an accurate analysis of the Project's potentially significant impacts requires much more information than was disclosed

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[67] DSEIR, p. 2-4.
[68] Fox/Marcus Comments, p. 5.
[69] DSEIR, p. 2-4.
[70] CAISO participates in the Western Energy Imbalance Market, so marginal sources of generation outside the CAISO are also available from a wide swath of the Western U.S. grid, which includes coal-powered generators. The Western Energy Imbalance Market is a real-time, wholesale energy trading market that enables participants anywhere in the West to buy and sell energy when needed. *See* https://www.westerneim.com/pages/default.aspx.
[71] Fox/Marcus Comment, p. 8.

in the DSEIR. Not only must the DSEIR describe the energy efficiency of the batteries, but it must also include the energy sources used to charge the batteries and the energy source the BESS displaces when it discharges the batteries. Absent such information, it is impossible to determine whether the roundtrip energy loss of the batteries is offset by emissions reductions during battery discharge.

Despite the DSEIR's omission of essential information, data available to the public about existing batteries currently connected to the CAISO grid suggest that the Project will increase GHG emissions rather than decrease them as claimed. Dr. Fox and Mr. Marcus compiled data from CAISO on existing batteries to estimate energy and GHG impacts of the Project. They found that "[t]he net increase in energy generation, after taking account of hours when the Project would be discharging, will be 25.5 GWh per year."[72] As explained above, very little of this energy is likely to be from renewable sources. Therefore, the Project will likely be charged with energy derived from natural gas, which is the primary marginal source of energy on the CAISO grid.[73] 9

Using emissions data from a modern natural-gas fired generation plant on the SDG&E system, Dr. Fox and Mr. Marcus calculated that the Project will produce 10,331 metric tons ("MT") of CO2e per year, far more than the DSEIR estimated and greatly in exceedance of the CAPCOA GHG significance threshold of 900 MT/yr.[74] This number only represents the emissions generated by the extra energy it takes to compensate for the batteries' roundtrip energy loss. Thus, 10,331 MT/yr of CO2e are attributable directly to the Project's operation, but the majority of these emissions, 94% (9,752 MT/yr) were completely excluded from the DSEIR's GHG impact analysis.

Moreover, 9,742 MT/yr of GHG emissions is an underestimate because the DSEIR's CalEEMod calculation excluded emissions from the ancillary cooling and control systems, inverters, transformers, and HVAC units, using an energy intensity based on "General Light Industry" instead.[75] However, as explained in Dr. Fox's comment, "[a] BESS is not 'General Light Industry'" and requires significantly

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[72] Fox/Marcus Comment, p. 7.
[73] *Ibid.*
[74] *Id.* at 8.
[75] DSEIR, Appendix B, Section 4.2, p. 4-2 and Appendix A or Appendix B, pdf 35; Fox Comments, p. 4.

more electricity to operate than the typical light industry operation.[76] Thus, the model the DSEIR uses to calculate GHG emissions is not supported by substantial evidence and violates CEQA.

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The DSEIR must be revised to fully analyze the GHG impacts that would result from the inefficiency of the Project batteries and from how the Project affects other energy sources on the electrical grid. In addition, given that the Project's GHG impacts are significant, the DSEIR must be revised to include appropriate mitigation measures, such as restricting battery charging to daytime hours when solar is available, restricting charging to times when renewable generation would otherwise be curtailed, or implementing carbon offsets at other locations.

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b. The DSEIR Fails to Adequately Disclose, Analyze, and Mitigate Significant Impacts from Hazardous Materials Contained in the Project Batteries

Appendix G of the CEQA Guidelines states that lead agencies should consider whether the project would "create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous waste" or "[c]reate a significant hazard to the public or the environment through reasonably foreseeable upset or accident conditions involving the release of hazardous materials into the environment."[77] Here, the DSEIR failed to fully analyze the significant impact of a lithium-ion battery fire and failed to designate fire prevention and suppression measures as mitigation measures.

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c. The DSEIR Fails to Analyze All of the Upset and Accident Conditions that Could Expose the Public to Hazardous Chemicals Released from the Batteries

The DSEIR claims that "[t]he Project will not exposure [sic] the public to hazardous materials and wastes." [78] The DSEIR does not provide substantial evidence for this conclusion. In fact, the Project could expose the public, including workers, to hazardous materials during transport of the batteries, during

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[76] Fox/Marcus Comments, p. 4.
[77] CEQA Guidelines, Appendix G, Evaluation of Environmental Impacts, Section IX(a)-(b), Hazards and Hazardous Materials.
[78] DSEIR. p. 3.5-12.

construction or decommissioning of the Project, or during operation of the Project in the event of a fire.

1. The Batteries Could Release Hazardous Materials During Transport or Construction

The batteries could expose the public to hazardous materials if an accident occurs during transport from the manufacturing facility to the Project site and from the Project site to the unidentified recycling center referenced in the DSEIR. The DSEIR only mentions this possibility in passing, stating "[t]he batteries will be transported/shipped in compliance with all applicable federal, state and local regulations addressing hazardous materials transport."[79] But regulations do not prevent accidents and do not mandate particular haul routes, which minimize passage through dense urban areas, or by schools, hospitals, or other sensitive receptors. Likewise, neither regulations nor the DSEIR specify how the batteries will be transported, i.e. by truck, car, plane, etc. In addition, because the DSEIR fails to disclose where the batteries will be manufactured and fails to identify the recycling center, the public does not know the number of miles the batteries will be transported. All of these factors influence the degree of risk posed by the batteries during transportation. As stated in Dr. Fox's comments: 12

> The batteries will likely be shipped from warehouses in unknown location(s) and transported to the site from these undisclosed locations by undisclosed means (rail, truck, ship?), over undisclosed routes and roadways. These routes could include sensitive desert habitat that would be irreversibly damaged in the event of a transportation accident. Further, an explosion triggered by a fire during handling and transportation could result in injuries and deaths of workers and motorists and could irreversibly damage the immediately adjacent CSE facility, as well as other nearby solar facilities.[80]

As shown in Dr. Fox's comment, there are clearly many kinds of significant impacts that could result from an accident during transport of the batteries. By failing to identify the manufacturing facility, recycling center, and the haul routes, the true risk of exposure to hazardous materials cannot be analyzed as required by CEQA.

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[79] *Id.* at 3.5-17.
[80] Fox Comments, p. 26.

In addition, a fire could occur during construction or decommissioning, before or after the safety measures incorporated in the Project design are functioning. As discussed further below and in Dr. Fox's Comments,[81] a fire would release multiple toxic chemicals that would impact worker health and the environment. The DSEIR does not consider this possibility and must be revised to incorporate mitigation measures for **all** phases of the Project. 12

2. The Batteries Could Release Hazardous Materials in the Event of a Fire

The DSEIR states that "[t]he batteries used for the Project would not release any hazardous material to the surrounding environment during operation."[82] However, hazardous materials would be released to the surrounding environment in the event of a fire. And lithium-ion battery fires are a well-documented problem.[83] As explained in Dr. Fox's comment: 13

> Lithium-ion batteries are ... very sensitive to mechanical damage and electrical surges. This type of damage can result in internal battery short circuits which lead to internal battery heating, battery explosions, and fires. The loss of a single battery can rapidly cascade to surrounding batteries, resulting in a large fire.[84]

The DSEIR underestimates the risk of a lithium-ion battery fire, stating "any potential fire risk that the traditional lithium-ion cells have will most likely be

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[81] *Id.* at 33.
[82] DSEIR, at p. 3.5-17.
[83] *See* Ligzi Kong et al., *Li-Ion Battery Fires Hazards and Safety Strategies*, ENERGIES (2018), doi:10.3390/en11092191, stating "There have been numerous incidents of Li-ion batteries catching fire and exploding. For example. the United States (U.S.) Federal Aviation Administration (FAA) reported 206 air/airport Li-ion battery fire/explosion incidents from March 1991 to January 2018 [2]. In May 2011, a Chevrolet Volt caught fire three weeks after a crash test [3]. In 2013, several Tesla Model S sedans caught fire after they were damaged by road debris. Although Tesla strengthened the battery shield on its new and existing cars, in August 2016, a Tesla electric car caught fire in France during a promotional tour. In 2016, 92 Samsung Note 7 smartphones caught fire and caused a mass product recall [4]. Other Li-ion battery-powered devices have also been mentioned in fire-type incidents, such as notebook computers [4,5], hoverboards [4], and electronic cigarettes [6,7]. The corresponding causes for the Li-ion battery incidents vary. Short circuits, mechanical abuse, battery overcharging, and design and manufacturing flaws can all result in a battery fire/explosion."
[84] Fox Comments, p. 19.
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caused by over-charging or through short circuit due to age."[85] However, fires can result from any number of factors, in addition to overcharging and age, including "manufacturing defects, battery aging, thermal runaway, malfunction of the cooling system, and charging a severely discharged cell—which can result in internal cell breakdown and damage to neighboring cells."[86] In addition, "Li-ion batteries are sensitive to abusive conditions such as high temperatures, crashing, overcharge, over-discharge, and short circuit."[87] Thermal runaway, which the DSEIR never mentions, is the most common cause of lithium-ion battery fires.[88] Moreover, the Project is located in a seismically active region.[89] The DSEIR does not contemplate how earthquakes might increase the risk of fires, or how this increased risk might be mitigated through design or construction. The DSEIR must be revised to consider the various foreseeable mechanisms that could start a fire at the facility, so the agency-decision makers can fully analyze the risk of fire and make a significance finding if appropriate. 13

Failing to analyze the various events that could trigger fires at the Project site is not the DSEIR's only flaw. The DSEIR also fails to analyze the unique challenges associated with fighting a lithium-ion battery fire. As explained by Dr. Fox, lithium-ion battery fires burn hotter, are more difficult to extinguish, and can reignite days after being put out.[90] Indeed, based on experiences with previous fires at energy storage facilities, flames can grow to 75 feet in length. Lithium-ion battery fires also pose "a serious risk of a large-scale explosion."[91] As Dr. Fox explains, an explosion at the Project based on the amount of energy stored on site would be equivalent to an explosion of 108 tons of trinitrotoluene ("TNT").[92] In this context, conventional methods for controlling fires are largely insufficient.[93] The use of water to extinguish lithium-ion battery fires, for example, could cause "the formation of additional toxic gases and increase the production of hydrogen fluoride,"[94] a toxic gas described in more detail below. In addition, when water *is* an 14

[85] DSEIR, p. 3.5-20.
[86] Fox Comments, p. 17.
[87] *Id.* at 18.
[88] *Ibid.*
[89] DSEIR, p. 3.4-3.
[90] Fox Comment, p. 15.
[91] *Id.* at 26.
[92] *Ibid.*
[93] *Id.* at 34.
[94] *Id.* at 26.

appropriate extinguishing agent, lithium-ion battery fires require much more of it than expected.[95] Because the DSEIR does not identify the unique challenges associated with fighting lithium-ion battery fires, the agency decision-makers cannot determine whether a lithium-ion battery fire constitutes a significant impact in need of mitigation. 14

d. The DSEIR Fails to Analyze the Significant Impacts on Health and the Environment from the Foreseeable Release of Battery Chemicals

The DSEIR never analyzes the serious risks to human health and the environment that a lithium-ion battery fire would cause. Indeed, the DSEIR claims that "[t]he analysis [in the DSEIR] reviews the types and amounts of materials to be used for the Project as well as the use, transport, and disposal of those materials onsite."[96] But this claim does not bear scrutiny. The DSEIR only lists *some* of the chemicals contained in the batteries and does not describe the "amounts of materials to be used" in the batteries as claimed.

Moreover, the DSEIR fails to explain the health implications of these chemicals, or how they could be released and transformed into something even more toxic in a fire. This omission is significant, because the DSEIR states that the batteries will contain cobalt oxide; manganese dioxide; nickel oxide; carbon; electrolyte; polyvinylidene fluoride; aluminum foil; copper foil; aluminum and inert materials.[97] As explained in Dr. Fox's comments, this specific chemistry includes "compounds that can release hydrogen fluoride."[98] Hydrogen fluoride is an extremely toxic gas. The Center for Disease Control states that "[b]reathing in hydrogen fluoride at high levels or in combination with skin contact can cause death from an irregular heartbeat or from fluid buildup in the lungs."[99] Just last April, a fire at a BESS in Surprise, Arizona, caused the hospitalization of four firefighters for chemical and chemical inhalation burns.[100] In her comments, Dr. Fox lists the various health impacts associated with burning batteries, stating: 15

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[95] *Id.* at. 22.
[96] DSEIR, p. 3.5-15.
[97] *Id.* at p. 2-15.
[98] Fox Comments, p. 24.
[99] Center for Disease Control and Prevention, *Facts About Hydrogen Fluoride*, https://emergency.cdc.gov/agent/hydrofluoricacid/basics/facts.asp (last visited Aug. 30, 2019).
[100] Fox Comments, p. 24.

> batteries may rupture when exposed to extreme heat/fire, leaking corrosive materials, and/or emit toxic fumes. Burning batteries may emit acrid smoke, irritating fumes, and toxic fumes of fluoride, resulting in acute and chronic health effects in responding firefighters (and any nearby workers and residents). Acute health hazards include chemical inhalation burns and damage to lungs, eyes, and skin. Cobalt, present in the Project's batteries, is a suspected human carcinogen.[101]

These kinds of health impacts that are known to occur during a lithium-ion battery fire must be fully analyzed in the DSEIR, but they are not. The DSEIR never once mentions hydrogen fluoride, or the possibility that the batteries will release this toxic chemical in the event of a fire. Likewise, the DSEIR never mentions the health implications of cobalt, a possible human carcinogen contained in the battery chemistry. Indeed, Dr. Fox identified numerous toxic chemicals that could be released in the event of a lithium-ion battery, which were never discussed in the DSEIR.[102] **15**

In the event of a fire or explosion, these chemicals would not only pose a serious threat to construction workers, solar plant workers, agricultural workers on adjacent lots, and passing motorists, these chemicals could also enter the environment. The Project site is approximately 700 feet from the Wormwood Canal,[103] which is "a small portion of the complex water delivery system in the Imperial Valley that irrigates some of the most productive agricultural land in the United States."[104] As noted in Dr. Fox's comments, accidental releases of battery chemicals into waterways "could result in acute and chronic toxicity."[105] The DSEIR's failure to analyze these serious impacts to public health and the environment is unacceptable and violates the law.

The DSEIR must be revised to conduct a full hazards analysis on the possibility of a battery fire, including identification of the chemicals that would be

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[101] *Ibid.*
[102] *Id.* at 33.
[103] *See* Google Earth, https://earth.google.com/web/@32.6782208,-115.67181851,-4.22950109a,550.40299481d,35y,50.14794315h,59.99927276t,0r.
[104] *See* Draft Cultural Resource Inventory for the Vega SES LLC Solar Project at p. 18, available at http://www.icpds.com/CMS/Media/Appendix-E1_Cultural-Resource-Inventory.pdf.
[105] Fox Comments, p. 35.

released into the environment if such a reasonably foreseeable event were to occur, who might be exposed, and the health implications associated with that exposure. Mitigation must be identified for the significant impacts. 15

e. The DSEIR Fails to Properly Characterize Fire Prevention and Suppression Measures as Mitigation Measures

In *Lotus v. Department of Transportation*, an EIR approved by CalTrans contained several measures "[t]o help minimize potential stress on the redwood trees" during construction of a highway.[106] Although those measures were clearly separate mitigation, the project proponents did not designate them as mitigation and the EIR concluded that because of the planned implementation of those measures, no significant impacts were expected.[107] However, the Appellate Court found that because the EIR had "compress[ed] the analysis of impacts and mitigation measures into a single issue, the EIR disregard[ed] the requirements of CEQA."[108] The Court continued, stating "[a]bsent a determination regarding the significance of the impacts... it is impossible to determine whether mitigation measures are required or to evaluate whether other more effective measures than those proposed should be considered."[109] *Lotus* emphasized that an EIR must make a finding "for each identified significant effect" and include an explanation and rationale for each such finding.[110]

Like the CEQA document in *Lotus*, the DSEIR "compress[es] the analysis of impacts and mitigation measures into a single issue...."[111] Various sections of the DSEIR include measures to prevent and suppress lithium-ion battery fires. For example, both the project description and the DSEIR's analysis on hazards state that the Project will meet "the latest standards from UL and National Fire Protection Association" and that the applicant will conduct a "destructive test for battery racks that determines that a fire at one location will not propagate to any neighboring batteries." [112] The DSEIR also states that the Project will have an Emergency Response Plan and "include redundant safety features including 16

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[106] *Lotus v. Department of Transportation* (2014) 223 Cal.App.4th 645, 650.
[107] *Id.*, at 651.
[108] *Id.*, at 656.
[109] *Ibid.*
[110] *Id.* at 654
[111] *Id.* at 650.
[112] DSEIR, p. 3.5-6.

electrical fuses and overcharge protection."[113] But none of these measures are included as mitigation measures. Indeed, like in *Lotus*, it is unclear whether the lead agency believes that the risk of a lithium-ion battery fire is significant absent mitigation or not. For instance, the DSEIR concludes that:

> The impacts associated with the reasonably foreseeable upset and accident conditions involving an accidental release of hazardous materials into the environment during operation are considered potentially significant unless mitigation is incorporated. Mitigation Measure HM-1 is provided below.[114]

This finding of significance comes before any discussion of fire risk in the section analyzing release of hazardous materials due to upset or accident conditions. Moreover, Mitigation Measure HM-1 has nothing to do with fire safety and merely directs the Applicant to terminate work on the Project if the contractor detects soil contamination during construction.[115] Thus, while numerous fire prevention and suppression measures are included in the DSEIR's analysis on hazardous release into the environment, the DSEIR never explicitly concludes that fire risk creates a significant impact. 16

Despite never concluding that fire risk and resulting chemical release creates a significant impact, the DSEIR nevertheless includes mitigation measures disguised as project design features. Indeed, the DSEIR expressly substitutes mitigation for design features, stating "[f]ire risk factors would be mitigated through Project design and fire prevention features, as previously described"[116] and

> Measures would be taken to reduce the risk of potential lithium-ion battery fire at the site. As previously indicated, any potential fire risk that the traditional lithium-ion cells have will most likely be caused by over-charging or through short circuit due to age. This risk will be mitigated through monitoring and a fire suppression system....[117]

The DSEIR clearly contemplates that fire danger poses a large enough risk to include numerous design features to avoid it. Yet, the DSEIR never explicitly finds

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[113] *Ibid.*
[114] *Id.* at 3.5-20.
[115] *Id.* at 3.5-23.
[116] *Id.* at p. 3.5-17.
[117] *Id.* at 3.5-20.

that fire risk poses a significant impact. Instead, the DSEIR evades a significance finding by leaping straight to mitigation measures that are disguised as project design features. This compression of mitigation measures into other sections of the CEQA document is exactly what *Lotus* forbids.

Furthermore, as described in *Lotus*, the danger of compressing mitigation measures into the significance analysis is that such compression "precludes both identification of potential environmental consequences arising from the project and also thoughtful analysis of the sufficiency of measures to mitigate those consequences."[118] This danger is realized in the DSEIR at hand. Precisely because the DSEIR fails to conduct a hazards analysis on the possibility of lithium-ion battery fire, the public and agency decision-makers cannot determine whether the fire prevention and suppression measures contained in the DSEIR are adequate. This problem is compounded by the fact that the fire suppression and prevention measures are only vaguely identified. For example, the DSEIR states that "[t]he Project will meet the latest standards from UL and National Fire Protection Association (NFPA)...."[119] But the latest NFPA standards are insufficient to safely regulate energy storage systems, which is why NFPA is creating a new standard, NFPA 855, that is not yet finalized. As NFPA states: 16

> While the technology [of Energy Storage Systems] is attractive, it is not without risks. Recent innovations allow more energy to be stored in less space, increasing the energy density and in turn increasing the fire and life safety hazards associated with certain ESS. Even though there are currently published requirements for ESS in NFPA 1, Fire Code, and NFPA 70®, National Electrical Code®, authorities having jurisdiction (AHJs) are looking for additional guidance when the request for an ESS installation lands on their desks.[120]

Indeed, NPFA is developing NFPA 855 because there are gaps in current regulation regarding the fire safety of energy storage systems.[121] Thus, when the DSEIR states that the Project will use NFPA's latest standards, it could be referring either to

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[118] *Lotus*, 223 Cal.App.4th at 658.
[119] DSEIR, p. 3.5-6.
[120] Bryan O'Connor, *A Handful of Highlights of NFPA 844, The New Standard for the Installation of Energy Storage Systems*, NFPA Journal, available at https://www.nfpa.org/News-and-Research/Publications-and-media/NFPA-Journal/2019/May-June-2019/Features/Energy-Storage-Systems
[121] *Ibid.*

existing standards, such as NFPA 1 and NFPA 70, which both AHJs and NFPA recognize as insufficient for regulating energy storage systems, or NFPA 855, which is not yet finalized. Moreover, because NFPA 855 is not yet finalized,[122] neither the public nor the agency decision-maker can determine whether these standards are sufficient to prevent and suppress lithium-ion battery fires at the Project site. 16

The DSEIR must be revised to designate all fire prevention and suppression measures as mitigation. Moreover, the DSEIR must indicate exactly which fire safety standards the Project will use. Absent such information, it is impossible to determine whether the Project has fully mitigated the significant risk from a lithium-ion battery fire.

f. The DSEIR Improperly Defers Mitigation to an Indeterminate Future Date

In addition to improperly designating mitigation measures as project design features, the DSEIR improperly defers fire prevention and suppression mitigation to an indeterminate future date. Under CEQA, it is generally improper to defer the formulation of mitigation measures.[123] An exception to this general rule applies when the agency has committed itself to specific performance criteria for evaluating the efficacy of the measures to be implemented in the future, and the future mitigation measures are formulated and operational before the project activity that they regulate begins.[124] As the courts have explained, deferral of mitigation may be permitted only where the lead agency: (1) undertakes a complete analysis of the significance of the environmental impact; (2) proposes potential mitigation measures early in the planning process; and (3) articulates specific performance criteria that would ensure that adequate mitigation measures were eventually implemented.[125] 17

Here, the DSEIR improperly deferred mitigation. The DSEIR states:

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[122] See the NFPA website, stating NFPA 855 will not be available until September 6, 2019 electronically and will not be available until October 4, 2019 in hard copy, available at https://catalog.nfpa.org/NFPA-855-Standard-for-the-Installation-of-Stationary-Energy-Storage-Systems-P20704.aspx?icid=D729 (last visited Sep. 3, 2019).
[123] 14 CCR § 15126.4(a)(1)(B); *POET v. CARB* (2013) 218 Cal.App.4th 681, 735.
[124] *POET*, 218 Cal.App.4th at 738.
[125] *Comtys. for a Better Env't v. City of Richmond* (2010) 184 Cal.App.4th 70, 95; *Cal. Native Plant Socy' v. City of Rancho Cordova* (2009) 172 Cal.App.4th 603, 621.

> The Project will also be required to have an Emergency Response Plan (ERP) acceptable to County Fire, as a standard condition of the approval of the CUP. The ERP will address potential emergencies including chemical releases, fires, and injuries. The ERP will describe emergency response equipment and equipment locations, evacuation routes, procedures for reporting to local emergency response agencies, responsibilities for emergency response, and other required actions to be taken in the event of an emergency.[126]

This deferral of the identification of measures to mitigate the possible release of chemicals and other fire hazards is impermissible under CEQA. The DSEIR not only defers the implementation of the ERP to the time the building permit is obtained, but also states that "[t]he Applicant will work with the fire marshal to design the Project in compliance with all local codes and standards."[127] Once again, this future decision-making with the fire marshal is improperly proposed outside of CEQA review at a later, unspecified date, based on no analysis of the significance of the environmental impact and no specific performance criteria that would ensure that adequate mitigation measures were eventually implemented. Such future identification of mitigation is impermissible under CEQA. The DSEIR must be revised to include both the ERP and any other fire plan developed to minimize fire risks. 17

g. The DSEIR Fails to Analyze and Mitigate Health Impacts from Pesticide and Herbicide Residues Contained in the Soil

The DSEIR analyzes the risk of pesticide and herbicide exposure during construction and operation, stating "[d]uring construction, ground disturbing activities have the potential to disperse pesticide residuals."[128] Ultimately, based on compliance with County dust control regulation (Regulation VIII), the DSEIR concludes that the "impacts associated with hazard through upset/release of hazardous materials resulting from exposure to pesticide residue and herbicides during construction, operation and decommissions are considered less than 18

[126] DSEIR, p. 2-16.
[127] DSEIR, p. 2-16, 2.5-20.
[128] *Id.* at 3.5-18.

significant."[129] Despite this finding of no significance, the DSEIR goes on to state, "there is potential for the discovery of unidentified hazards during construction. Mitigation Measure HM-1 describes procedures for managing unidentified hazards and reduce [sic] potential impacts related to unidentified hazards during construction to less than significant levels."[130] However, requiring a mitigation measure despite a finding of no significance violates the court's holding in *Lotus*, as discussed above.[131] First, the Applicant must collect soil samples and analyze them for pesticide residue.[132] Then, the DSEIR must be revised to make a clear significance finding about the risk of chemical residues in the soil. If the analysis reveals a significant impact, then mitigation is required. Moreover, if chemical residues in the soil do pose a significant impact, then Mitigation Measure HM-1, which purports to minimize this impact, is ineffective. Mitigation Measure HM-1 requires the contractor to terminate construction if the contractor "observes visual or olfactory evidence of contamination or if soil contamination is otherwise suspected...."[133] However, as stated in Dr. Fox's comments, "[p]esticide and herbicide contamination cannot be detected by visual observation or smell...."[134] Thus, if soil contamination poses a significant impact, feasible and effective mitigation that will actually reduce the impact is necessary. **18**

h. The DSEIR Finds that Storage of Chemicals on Site is a Significant Impact but Fails to Mitigate this Impact

The DSEIR states that the Project will store hazardous materials onsite.[135] The DSEIR is silent as to what these hazardous materials are and how they will be used. The DSEIR also states that "[d]esign features and [Best Management Practices] would minimize spill and leak risks associated with use, handling, and storage of hazardous materials at the Project site" and that all such materials would be handled according to applicable regulations.[136] After this vague and brief description of an impact, the DSEIR then makes a significance finding, stating **19**

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[129] *Ibid.*
[130] *Ibid.*
[131] See *Lotus*, 223 Cal.App.4th at 565 stating, "By compressing the analysis of impacts and mitigation measures into a single issue, the EIR disregards the requirements of CEQA."
[132] Fox Comments, p. 31.
[133] DSEIR, p. 3.5-18.
[134] Fox Comments, p. 31.
[135] DSEIR, p. 3.5-19
[136] *Ibid.*

"[t]he impacts associated with the reasonably foreseeable upset and accident conditions involving an accidental release of hazardous materials into the environment during operation are considered potentially significant unless mitigation is incorporated. Mitigation Measure HM-1 is provided below."[137] Confusingly, Mitigation Measure HM-1 has nothing to do with the storage or handling of hazardous material during operation. Rather, Mitigation Measure HM-1, as discussed above, pertains to terminating construction if the contractor detects chemical residue in the soil.

The Guidelines require an EIR to "describe feasible mitigation measures which could minimize significant adverse impacts...."[138] Here, the DSEIR identified a significant adverse impact and then failed to describe feasible mitigation measures for that impact, instead referring to a mitigation measure (HM-1) that focuses on mitigating an entirely different impact. To further confuse the issue, HM-1 mitigates an impact that the DSEIR deemed **not** significant, as discussed above. The DSEIR's failure to identify feasible mitigation measures for the handling and storage of hazardous materials at the Project site, which the DSEIR found significant, violates CEQA. The DSEIR's reference to an irrelevant mitigation measure to mitigate that issue confuses the reader and frustrates CEQA's requirement that the DSEIR serve as an informational document. The DSEIR must be revised to clarify this issue. **19**

i. The DSEIR Fails to Adequately Analyze the Project's Air Quality Impacts During Construction

The DSEIR uses the CalEEMod to calculate Diesel Particulate Matter ("DPM") emissions during Project construction. The calculation uses emissions data from "Tier 2" construction equipment and makes no significance finding about cancer risks from DPM exposure. However, the DSEIR never commits to using Tier 2 equipment, merely stating that "[a]ll on-site equipment is *expected* to be Tier 2 compliant.[139] Thus, Tier 1 equipment could be used during Project construction. As explained in Dr. Fox's comments, Tier 1 and older equipment have "DPM emissions that are at least three times higher than those from Tier 2 equipment."[140] The **20**

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[137] *Id.* at 3.5-20.
[138] 14 CCR § 15126.4
[139] DSEIR, p. 3.1-16 (emphasis added).
[140] Fox Comments, p. 29.

DSEIR must either be revised to calculate reasonably foreseeable DPM emissions from construction using Tier 1 equipment, or the DSEIR must fully commit to using Tier 2 equipment. Absent this calculation or commitment, the DSEIR fails to analyze a potentially significant impact. 20

V. THE DSEIR'S CUMULATIVE IMPACTS ANALYSIS IS INADEQUATE

An EIR is required to discuss the cumulative impacts of a project "when the project's incremental effect is cumulatively considerable."[141] Cumulative impact analyses are necessary because "environmental damage often occurs incrementally from a variety of small sources [that] appear insignificant when considered individually, but assume threatening dimensions when considered collectively with other sources with which they interact."[142] Mere conclusory statements are not sufficient to satisfy the cumulative impacts analysis requirement.[143] A proper cumulative impacts analysis must be supported by references to specific evidence.[144] As the Court in *Mountain Lion Coalition* explained, "it is vitally important that an EIR avoid minimizing the cumulative impacts. Rather, it must reflect a conscientious effort to provide public agencies and the general public with adequate and relevant detailed information about them."[145] "A cumulative impacts analysis which understates information concerning the severity and significance of cumulative impacts impedes meaningful public discussion and skews the decisionmaker's perspective concerning the environmental consequences of the project, the necessity for mitigation measures, and the appropriateness of project approval."[146]

Furthermore, the Guidelines specifically direct agencies to "define the geographic scope of the area affected by the cumulative effect and provide a reasonable explanation for the geographic limitation used."[147] An EIR's cumulative impacts discussion "should be guided by the standards of practicality and reasonableness," but several elements are deemed "necessary to an adequate

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[141] 14 CCR § 15130(a).
[142] *Communities for a Better Env't v. Cal. Res. Agency* (2002) 103 Cal.App.4th 98, 114.
[143] *Mountain Lion Coalition v. Fish & Game Comm'n* (1989) 214 Cal.App.3d 1043, 1047.
[144] *Ibid.*
[145] *Id.* at 1051
[146] *Ibid.*
[147] 14 CCR § 15130(b)(3); *Bakersfield Citizens for Local Control v. City of Bakersfield* (2004) 124 Cal.App.4th 1184, 1216.

discussion of significant cumulative impacts" including "[a] list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency."[148]

Here, the DSEIR mislabels the geographic scope used in the cumulative analysis on air impacts, fails to identify all similar projects in the "list of past, present, and probable future projects," and replaces the cumulative impacts analysis on air quality with conclusory statements of insignificance.

a. The DSEIR Identifies the Salton Sea Air Basin as the Geographic Scope for Examining Cumulative Impacts on Air Quality but Uses a Much Smaller Geographic Scope Instead

The DSEIR identifies one geographic scope as appropriate for conducting the cumulative impacts analysis on air quality, but then uses a different geographic scope. The DSEIR properly identifies the Salton Sea Air Basin ("SSAB") as the geographic scope for analyzing cumulative impacts on air quality, stating:

> The SSAB is used as the geographic scope for the analysis of cumulative air quality impacts due to the geographic factors which are the basis for designating the SSAB, the existence of an AQMP, SIP, and requirements set forth by the ICAPCD, which apply to all cumulative projects within the SSAB. Table 4-1 lists the projects considered for the air quality cumulative impact analysis.[149]

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But Table 4-1 omits multiple similar projects located within the SSAB without explanation, including multiple solar plants located in and around the city of Calipatria.[150] Thus, while the DSEIR claims to use the SSAB as the geographical

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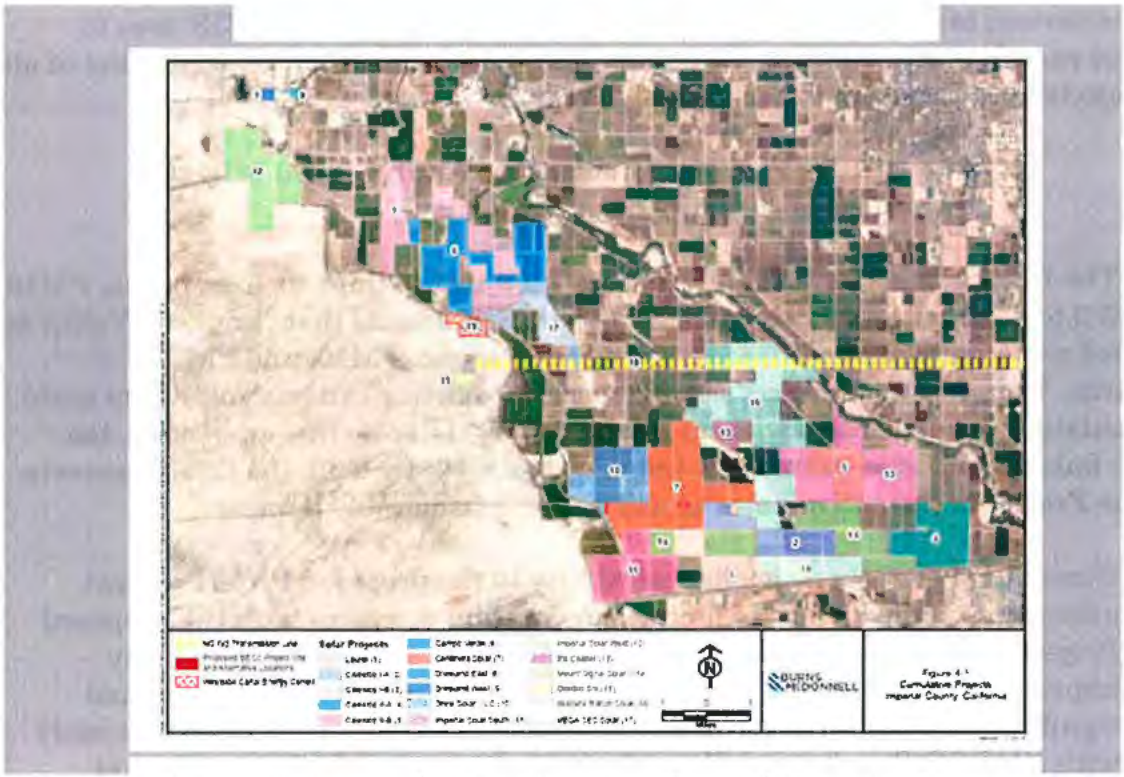
[148] 14 CCR § 15130(b); *Rialto Citizens for Responsible Growth v. City of Rialto* (2012) 208 Cal.App.4th 899, 928-29.
[149] DSEIR, p. 4-9.
[150] Southern Company, Solar Gen 2 Solar Facility, https://www.southerncompany.com/content/dam/southern-company/pdf/southernpower/SolarGEN2_Solar_Facility_factsheet.pdf; Imperial County, FEIR for Citizens Imperial Solar, LLC Project, available at http://www.icpds.com/CMS/Media/01---Citizens-Imperial-Solar-LLC.-Project.pdf;

scope for examining cumulative impacts on air quality, the DSEIR actually uses a far smaller geographic scope, which is depicted here.[151]



This inconsistency between the stated geographic and the actual geographic scope used in the DSEIR misleads the public and agency decision-makers and undermines the DSEIR's conclusion that cumulative impacts on air quality are not considerable.

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Moreover, the DSEIR does not explain why this more limited geographic scope was chosen for examining cumulative impacts and the chosen area seems to be entirely arbitrary, violating CEQA's requirement to "provide a reasonable explanation for the geographic limitation used."[152] Even more bewildering, the cumulative impacts analysis excludes projects located within this smaller, arbitrarily-chosen geographic scope. For example, the Heber Solar Project, located

[151] DSEIR, p. 4-4; This geographic scope extends approximately 10 miles north of the project size, 6 miles west of the project site, 8 miles east of the project site, and 4 miles south of the project site.
[152] 14 CCR § 15130(b)(3); *Bakersfield Citizens*, 124 Cal.App.4th at 1216.

approximately 6 miles northeast of the project is excluded without explanation.[153] A comprehensive list of the past, present, and probable future projects is "necessary to an adequate discussion of significant cumulative impacts."[154] Thus, the DSEIR must be revised to correctly identify which geographic scope the DSEIR uses to examine cumulative impacts on air quality and to include a comprehensive list of all the projects located within that geographic region. 21

b. The DSEIR Fails to Adequately Analyze and Mitigate Cumulative Impacts on Air Quality

The DSEIR fails to adequately analyze cumulative impacts from ozone, PM10 and PM 2.5 during construction. Indeed, the DSEIR admits that "Imperial Valley is classified as non-attainment for federal and state ozone, PM10, and PM2.5 standards. Therefore, the Project's contribution to existing criteria pollutants could be cumulatively considerable without mitigation."[155] Despite this admission, the DSEIR fails to conduct a cumulative impacts analysis. Instead, the DSEIR asserts that the Project's cumulative impacts will not be considerable because:

> Cumulative projects ... in close proximity to the proposed Project are not anticipated to involve overlapping construction activities with the proposed Project, therefore the potential for a cumulative, short-term air quality impact as a result of construction activities is anticipated to be less than significant. In addition, all other cumulative projects are required to comply with ICAPCD Regulation VIII and would also be assumed to implement mitigation measures to reduce their individual construction air quality emissions. In this way, each individual cumulative project would reduce construction emissions on a project by- project basis resulting in less than cumulatively considerable contributions to existing criteria pollutants. Because the proposed Project's construction air quality emissions would fall below ICAPCD thresholds, and other cumulative projects would also mitigate construction emissions on a project- by-project basis, impacts associated with 22

[153] *See* Solar Energy Industries Association, *Major Solar Projects List*, https://www.seia.org/research-resources/major-solar-projects-list (last visited Aug. 30, 2019).
[154] 14 CCR § 15130(b); *Rialto Citizens for Responsible Growth v. City of Rialto* (2012) 208 Cal.App.4th 899, 928-29.
[155] DSEIR, p. 3.1-21.

> a cumulatively considerable net increase of criteria pollutant would be considered less than cumulatively considerable.[156]

But the DSEIR's reasons for evading a thorough cumulative impacts analysis defy logic. The DSEIR identified 11 similar projects that are either under construction currently, are approved but not built, or are pending entitlement.[157] Any of the construction activities associated with these 11 projects could overlap with the Project's construction. Moreover, these 11 concurrent projects are all located within 10 miles of the Project site.[158] Yet the DSEIR assumes that "cumulative projects ... are not anticipated to involve overlapping construction activities...."[159] This assertion lacks substantial evidence. The 11 identified projects, like the proposed Project, often have construction periods of a year or more. It therefore seems incredibly likely that these projects will have overlapping construction activities, and the DSEIR supplies no evidence indicating that the construction periods will be staggered or coordinated. Thus, the DSEIR's conclusion that there will be no overlapping construction and therefore the Project's cumulative impacts will not be considerable lacks substantial evidence and violates case law, which requires the cumulative impact analysis to "be supported by references to specific scientific and empirical evidence."[160] 22

Finally, the DSEIR's reliance on ICAPCD Regulation VIII to avoid a cumulative impacts analysis is also unjustified. The DSEIR states that cumulative impacts of construction on air quality would be insignificant because "all other cumulative projects are required to comply with ICAPCD Regulation VIII."[161] But for this assertion to be true, ICAPCD Regulation VIII must mandate zero or near zero emissions. Instead, ICAPCD Regulation VIII only requires that projects 23

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[156] DSEIR, pp. 3.1-21 to 3.1-22.
[157] *Id.* at 4-7 to 4-8. The 12 projects include Laurel Cluster Solar Farms—approved but not built; Calexico I-A –under construction; Caleixco I-B—approved but not built; Caleixco II-A—approved but not built; Drew Solar Project –pending entitlement; Iris Cluster—under construction; Ocotillo Sol—approved but not built; Wistaria Ranch Solar –under construction; Vega SES solar Project—approved not built; North Gila Transmission Line Project—pending entitlement; Westside Canal Energy Center—pending entitlement.
[158] DSEIR, p. 4-4.
[159] *Id.* at 3.1-21 to 3.1-22.
[160] *Mountain Lion Coalition v. Fish & Game Comm'n* (1989) 214 Cal.App.3d 1043, 1047.
[161] DSEIR, pp. 3.1-21 to 3.1-22.

mitigate "Visual Dust Emissions" to 20% opacity,[162] which limits PM 10 emissions from construction activities. The Project thus could still cumulatively have a significant environmental impact on air quality, depending on the number of concurrent projects, the size of those projects, and the location of those projects. Moreover, Regulation VIII does not mitigate any of the other air pollutants caused by construction activities for which the region is out of attainment, such as ozone precursors. Instead of performing an analysis to determine the impact of these various pollutants, the DSEIR asserts that compliance with a law aimed at reducing, but not eliminating, PM 10 from construction activities renders such an analysis unnecessary. 23

The DSEIR must be revised to either conduct an adequate cumulative impacts analysis, or revised with evidence showing that the Project will not overlap its construction phase with other projects. By failing to include that information, the DSEIR relies on empty conclusory statements and assumptions to evade a proper cumulative impacts analysis, thus violating CEQA.

VI. CONCLUSION

We urge the County to fulfill its responsibilities under CEQA by revising the DSEIR and preparing a legally adequate DSEIR to rectify the legal errors and address the potentially significant impacts described in this comment letter, the attached letter from Dr. Fox and Mr. Marcus, and the other public comments in the record. This is the only way the County and the public will be able to ensure that the Project's potentially significant environmental and public health impacts are disclosed and mitigated to less than significant levels.

Sincerely,

Danika L. Desai
Associate

Attachments
DLD:acp

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[162] *See* e.g. ICAPCD Regulation XIII § F.5.c, available at https://www.co.imperial.ca.us/AirPollution/RULEBOOK/RULES/1RULE800.pdf.