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STATE OF CALIFORNIA

CALIFORNIA ENERGY COMMISSION

IN THE MATTER OF: APPLICATION FOR CERTIFICATION OF THE **PUENTE POWER PROJECT**	DOCKET NO. 15-AFC-01 **TESTIMONY OF STRELA CERVAS ON BEHALF OF THE CALIFORNIA ENVIRONMENTAL JUSTICE ALLIANCE**

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I. WITNESS BACKGROUND

My name is Strela Cervas, and I am the Co-Director of the California Environmental Justice Alliance (CEJA). Since 2008, I have, among other responsibilities, I directed CEJA's Energy Equity program. The Energy Equity program is working to build democratic, equitable energy solutions that do not reproduce ecologically and socially harmful energy and social systems, starting with the communities who have borne the burden of pollution for decades.

In CEJA's energy equity work, I engage with screening tools that indicate which of California's communities are suffering cumulative impacts of pollution and other social burdens. CalEnviroScreen, which I describe below, is the preeminent tool in use assist agencies and the public to screen for environmental justice. I am extremely familiar with CalEnviroScreen, and have provided explanations of its uses and value to legislators and agency decisionmakers. My Curriculum Vitae, describing my academic and professional background, are attached hereto.

CEJA is a statewide coalition of grassroots, community-based environmental justice organizations throughout California. CEJA is an intervenor party in this matter. The Central Coast Alliance United for a Sustainable Economy (CAUSE) is a partner member of CEJA.

II. CALENVIROSCREEN

A. Background to Development of CalEnviroScreen.

The development of CalEnviroScreen dates back more than 15 years. Since 1999, State law has required "the fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies[,]"[1] and incorporation of environmental justice policies into all of its programs.[2] In 2000, Senate Bill 89 (Escutia) established a procedural framework for pursuing environmental justice in California. Senate Bill 89 mandated the creation of a CalEPA Interagency Working Group on Environmental Justice, as well as the Advisory Committee on Environmental Justice (EJ Advisory Committee), composed of external stakeholders, to assist the Interagency Working

[1] Cal. Gov. Code § 65040.12(e).
[2] *See* Cal. Pub. Res. Code §§ 71110-71114.1.

Group in developing a strategy to identify and address environmental justice gaps in Cal/EPA programs.[3]

The EJ Advisory Committee (EJAC) was made up of 17 members, including the Environmental Health Coalition, a founding member of CEJA and thirty-year old environmental justice community group in San Diego. Diane Takvorian, Executive Director of the Environmental Health Coalition, co-chaired the EJAC. The EJAC recommended in its Final Report to the Interagency Working Group that the State develop a cumulative impacts screening tool.[4] As a result, in 2009, the Cumulative Impacts/Precautionary Approaches Work Group was created and charged with overseeing the development of such a tool, in which the Environmental Health Coalition also participated.

CalEnviroScreen was created by the California Office of Environmental Health Hazard Assessment ("OEHHA") as the tool to "identif[y] the communities most burdened by multiple sources of pollution and that are especially vulnerable to its effects."[5] CalEnviroScreen is an important tool that was developed through a lengthy public process.[6] Beginning in 2009, CalEPA held numerous public meetings and workshops to discuss the development of CalEnviroScreen. A "discussion draft" was first released in 2010, and members of environmental justice communities, and of CAUSE and CEJA in particular, participated in virtually every opportunity for public engagement since that time, from attending workshops to submitting public comments.

CalEnviroScreen is a "science-based tool" that is designed to assist California's agencies to "implement a variety of state programs aimed at reducing pollution and providing a healthier

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[3] RECOMMENDATIONS OF THE CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY (CAL/EPA) ADVISORY COMMITTEE ON ENVIRONMENTAL JUSTICE TO THE CAL/EPA INTERAGENCY WORKING GROUP ON ENVIRONMENTAL JUSTICE, FINAL REPORT (September 30, 2003), at 3-7 *available at* http://www.calepa.ca.gov/EnvJustice/Documents/2003/FinalReport.pdf; Cal. Pub. Res. Code § 71114.

[4] *Id.* at 15 & 20.

[5] *See* CALEPA AND OEHHA FINALIZE MAJOR UPDATE TO ENVIRONMENTAL HEALTH SCREENING TOOL: CALENVIROSCREEN 3.0 TO HELP GUIDE INVESTMENT IN DISADVANTAGED COMMUNITIES ACROSS THE STATE *available at* http://oehha.ca.gov/calenviroscreen/press-release/press-release-calenviroscreen/calepa-and-oehha-finalize-major-update (describing CalEnviroScreen).

[6] OEHHA, CALIFORNIA COMMUNITIES ENVIRONMENTAL HEALTH SCREENING TOOL, VERSION 3.0 ii-iii (Jan. 2017), *available at* http://oehha.ca.gov/media/downloads/calenviroscreen/report/ces3report.pdf (hereinafter "CalEnviroScreen Final Report").

environment in California's most disadvantaged communities."[7] CalEnviroScreen gives decision-makers a clear, credible scientific methodology to identify environmental justice communities. It is the largest public effort, both in scope and in scale, to identify disadvantaged communities in the nation, and includes a strong methodology that has been vetted by environmental justice academics and advocates.[8] It provides a reliable definition of disadvantaged communities, using a cumulative impact screening tool.

Since it was finalized, CalEnviroScreen has been in use by increasing numbers of agencies to implement legislation and assess the cumulative impacts in a community. For example, CalEnviroScreen is being utilized to help inform CalEPA's identification of disadvantaged communities pursuant to SB 535,[9] which requires "that 25 percent of the proceeds from the state's cap-and-trade auctions be invested in projects that benefit disadvantaged communities, including 10 percent for projects located within these areas."[10] Because CalEnviroScreen has been developed to identify areas that are "disproportionately affected by pollution and those areas whose populations are socioeconomically disadvantaged," CalEPA has relied on CalEnviroScreen to meet SB 535 requirements.[11]

The Public Utilities Commission recognized in its SB 43 proceeding that CalEnviroScreen is a reliable tool when it found that it should be used to identify disadvantaged communities.[12] SB 43 uses the term "disadvantaged communities," and defines it to mean vulnerable communities disproportionately affected by "environmental pollution and other

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[7] CALEPA AND OEHHA FINALIZE MAJOR UPDATE TO ENVIRONMENTAL HEALTH SCREENING TOOL: CALENVIROSCREEN 3.0 TO HELP GUIDE INVESTMENT IN DISADVANTAGED COMMUNITIES ACROSS THE STATE (*available at* http://oehha.ca.gov/calenviroscreen/press-release/press-release-calenviroscreen/calepa-and-oehha-finalize-major-update.)

[8] UPDATE TO THE CALIFORNIA COMMUNITIES ENVIRONMENTAL HEALTH SCREENING TOOL CALENVIROSCREEN 3.0 ("CALENVIROSCREEN 3.0 Report"), p. v. *(available at* http://oehha.ca.gov/media/downloads/calenviroscreen/report/ces3report.pdf.)

[9] Cal. EPA, *Designation of Disadvantaged Communities Pursuant to Senate Bill 535 (De León)* (Oct. 2014), *available at* http://www.calepa.ca.gov/EnvJustice/GHGInvest/Documents/SB535DesCom.pdf.

[10] OEHHA, *CalEPA Finalizes Major Update to Environmental Health Screening Tool CalEnviroScreen 2.0 to Help Direct Investments to Disadvantaged Communities*, Press Release (Aug. 14, 2014), *available at* http://oehha.ca.gov/public_info/press/ces2pressrelease2014.html (hereinafter "CalEnviroScreen Press Release").

[11] Cal. EPA, *Designation of Disadvantaged Communities Pursuant to Senate Bill 535 (De León)* (Oct. 2014), p. 1, *available at* http://www.calepa.ca.gov/EnvJustice/GHGInvest/Documents/SB535DesCom.pdf.

[12] D.15-01-051, pp. 53-54.

hazards that can lead to negative public health effects, exposure, or environmental degradation" *and* "areas with socioeconomic vulnerability."[13] In addition to CalEPA and the PUC, at least a dozen agencies rely on CalEnviroScreen to identify disadvantaged communities.[14] In short, CalEnviroScreen is the preeminent screening tool used to identify communities in California experiencing environmental injustice.

B. Recent Updates to Create CalEnviroScreen 3.0.

In January 2017, OEHHA released CalEnviroScreen 3.0, the latest iteration of CalEnviroScreen. Changes from version 2.0 include incorporation of more recent data; addition of two new indicators that show "health and socioeconomic vulnerability to pollution"; and "improvements" in the calculations to better reflect either the environment or vulnerability.

The purpose of the update was to better "help identify California communities that are disproportionately burdened by multiple sources of pollution."[15] CalEnviroScreen 3.0 ranks California's approximately 8,000 census tracts using a quantitative analysis of multiple pollution sources and stressors.[16] CalEnviroScreen "includes two components representing Pollution Burden – Exposures and Environmental Effects – and two components representing Population Characteristics – Sensitive Populations (e.g., in terms of health status and age) and Socioeconomic Factors."[17] CalEnviroScreen 3.0 uses 20 statewide indicators to characterize both pollution burden and population characteristics.

The exposures indicators of the pollution burden component consist of pollutants with which people come into direct contact, such as "ozone concentrations in air" "PM 2.5 concentrations in air" or "diesel particulate matter emissions."[18] The environmental effects indicators of the pollution component consist of adverse environmental conditions caused by pollutants, such as toxic cleanup sites, which can directly "affect people by limiting their ability

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[13] Cal. Senate Bill 43, Ch. 413, Cal. Pub. Util. Code § 2833 (1)(A) (emphasis added) (hereinafter "SB 43").
[14] *See* USING CALENVIROSCREEN *available at* http://oehha.ca.gov/calenviroscreen/how-use.
[15] CALENVIROSCREEN 3.0 (*available at* http://oehha.ca.gov/calenviroscreen/report/calenviroscreen-30.)
[16] CALENVIROSCREEN 3.0 Report, p. 8.
[17] CALENVIROSCREEN 3.0 Report, p. 5.
[18] *Id.* at p. 10.

to make use of ecosystem resources (e.g., eating fish or swimming in local rivers or bays). Also, living in an environmentally degraded community can lead to stress, which may affect human health. In addition, the mere presence of a contaminated site or high-profile facility can have tangible impacts on a community, even if actual environmental degradation cannot be documented."[19]

The sensitive populations indicators of the populations characteristics component consist of individual biological characteristics that result in increased vulnerability to pollutants. The socioeconomic factors indicators consist of community characteristics that result in increased vulnerability to pollutants. Indicators include asthma and low birth weight.[20] CalEviroScreen 3.0 has been updated to include cardiovascular incidents because "[r]ecent studies have shown that individuals with preexisting heart disease or [a heart attack] … respond differently to the effects of pollution than individuals without heart disease. Specifically, individuals who have had [a heart attack] … may have a higher risk of dying after exposure to both short- and long-term increases in air pollution."[21] These studies confirm a growing body of evidence that pollution and cardiovascular health are linked, and present one of several important indicators of a community's relative burden.[22]

Socioeconomic indicators, such as linguistic isolation and poverty, are modeled as well. These factors have been included because studies indicate a "heightened vulnerability of people of color and lower socioeconomic status to environmental pollutants."[23]

The tool's scientific methodology examines how many indicators are present within each census tract using a scoring system. The Exposures, Environmental Effects, Sensitive Populations, and Socioeconomic Factors are each averaged. CalEnviroScreen 3.0 then "[c]ombines the component scores to produce a CalEnviroScreen score for a given place relative to other places in the state."[24]

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[19] *Id.* at p. 11.
[20] *Id.*
[21] *Id.* at p. 112.
[22] *See id.*
[23] *Id.* at p. 12.
[24] *Id.* at p. 6.

Numerical scores for each census tract, as well as the individual indicator scores for each census tract, are publicly available online at OEHHA's CalEnviroScreen 3.0 web site.[25] An online mapping application shows CalEnviroScreen 3.0 scores for all census tracts across the state, and allows users to search the scores on the scale of individual census tracts. For every census tract, the individual indicators score is available on the map detail. For example, for the screen for census tract 6111002905 shows each of the 20 indicators, according to statewide comparative ranking (e.g. asthma – 92% indicates that only seven percent of the census tracts in the state have more asthma incidence than census tract 6111002905.) The map also shows the tract's overall comparative ranking (e.g. CalEnviroScreen 3.0 Percentile: 86 - 90% indicates that only 14 – 9% of the census tracts in the state have cumulative burdens greater than census tract 6111002905.)[26] The information is also available in a Microsoft Excel spreadsheet format showing raw data and calculated percentiles for individual indicators, and combined CalEnviroScreen 3.0 scores for individual census tracts with additional demographic information.[27]

III. OXNARD IS IDENTIFIED AS A VULNERABLE, ENVIRONMENTALLY BURDENED COMMUNITY.

I reviewed searches of CalEnviroScreen 3.0's online mapping of census tracts within Oxnard and the Moorpark Subarea, in order to determine assigned combined scores of areas pertinent to this matter, as well as scores for individual indicators and racial characteristics. I also reviewed searches of CalEnviroScreen 3.0's findings reflected in OEHHA's Microsoft Excel spreadsheet format showing raw data and percentiles for individual indicators, combined CalEnviroScreen 3.0 scores for individual census tracts, and additional demographic information. In particular, because the Energy Commission staff analysis considered a six mile radius of NRG's existing Mandalay Generating Station and proposed site for a new 262 MW

[25] *Available at:* http://oehha.ca.gov/calenviroscreen/report/calenviroscreen-30
[26] *Available at* http://oehha.maps.arcgis.com/apps/webappviewer/index.html?id=4560cfbce7c745c299b2d0cbb07044f5.
[27] *Download* CalEnviroScreen 3.0 Results *available at:* http://oehha.ca.gov/calenviroscreen/report/calenviroscreen-30.

natural gas power plant ("the Mandalay Power Plants"), I reviewed information about census tracts within a six mile radius, and compared that information to census tracts in the Moorpark sub-area outside a six mile radius of the Mandalay Power Plants. These findings are discussed below.

A. The Mandalay Power Plants Census Tract

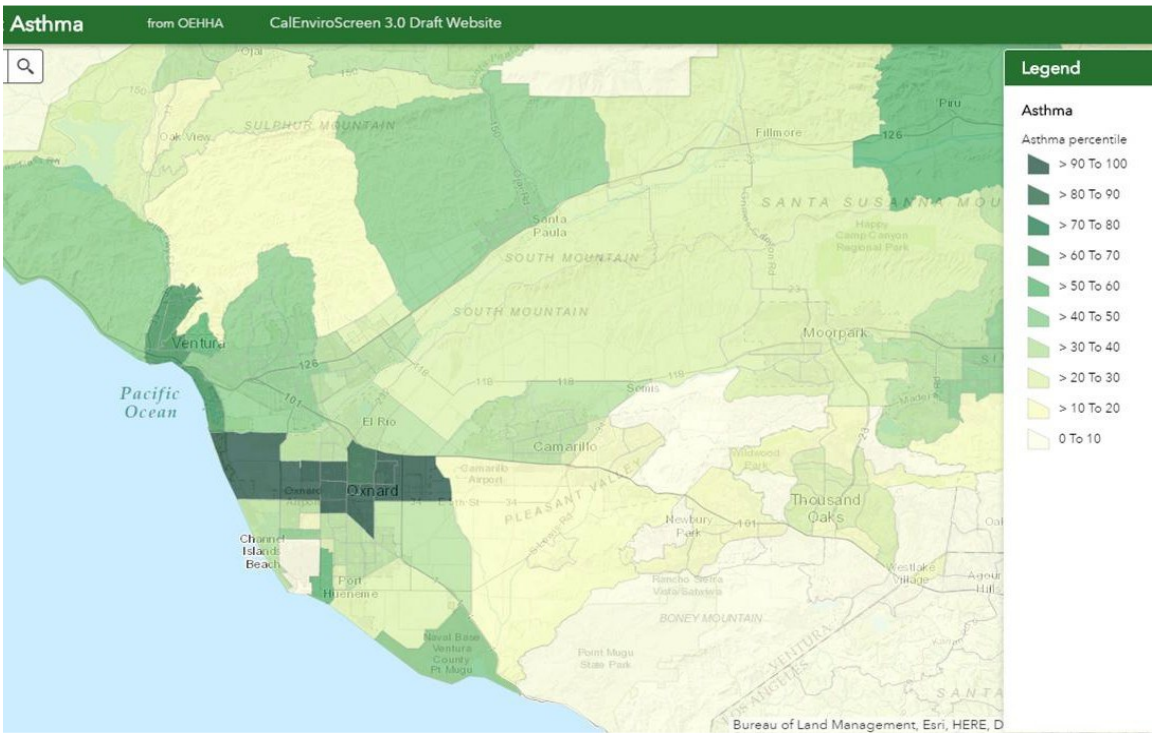
The census tract of the Mandalay Power Plants is in the 86-90th percentile range of the most environmentally burdened disadvantaged communities in the state, according to CalEnviroScreen 3.0.[28] It has a population of over 5,000 people that is 56% Latino and 75% people of color. It is in the 94th percentile in the state for pollution burden, the 100th percentile for pesticides, the 92nd percentile for cleanup sites, 92nd percentile for groundwater threats, 78th percentile for hazardous waste, 91st percentile for impaired water bodies, 79th percentile for solid waste, 92nd percentile for asthma, 89th percentile for low birth weight, and 92nd percentile for cardiovascular rate.

B. Oxnard has multiple census tracts within the top 25% most environmentally burdened communities in the state.

Two census tracts within 6 miles of the project rank in the top 5% of impacted communities in California on CalEnviroScreen 3.0.[29] Beginning with the Project site, the tracts to the east of the project create a swath of the city ranging from the 92nd-96th percentile rates in asthma in the state.[30] The concentration of industrial facilities and agricultural pesticides in Oxnard contribute to this health inequity. The Moorpark Sub-Area contains many affluent communities, and only eight census tracts that score within the top 25% of environmentally impacted disadvantaged communities under Cal Enviroscreen 3.0. Six of those census tracts are either fully or partially within a 6 mile radius of the Puente project in Oxnard and Port Hueneme. The other two tracts are partially within a 6 mile radius, to the north in Ventura.[31]

[28] CALENVIROSCREEN 3.0 MAP search result Oxnard *Available at* http://oehha.maps.arcgis.com/apps/webappviewer/index.html?id=4560cfbce7c745c299b2d0cbb07044f5.
[29] *Id.* (Tracts 6111009100 and 6111004902.)
[30] *Id.* (tracts 6111002905, 6111003300, 6111008600, 6111008700, 6111003201, 6111009100 and 6111004902.)
[31] *Id.* (Showing: tracts 6111002300 and 6111002400.)

Asthma in census tracts around the proposed Puente site:



No other city within the Moorpark Sub-area suffers from the burdens faced by Oxnard's residents, as not even one census tract of those other cities score within the 90th percentile.[32] Altogether, at least 26,914 residents live in Oxnard communities ranked in the top 25% by CalEnviroScreen 3.0.[33]

IV. THE MANDALAY POWER PLANTS ARE SURROUNDED BY AGRICULTURAL FIELDS, SCHOOLS, AND STATE BEACHES WHERE THOUSANDS OF DISADVANTAGED OXNARD RESIDENTS WORK, RECREATE, AND LEARN

A. Workers in Close Proximity to the Power Plants.

In addition to the number of disadvantaged communities living in close proximity to the Mandalay Power Plants, there are thousands of farm workers who *work* in even *closer* proximity to the plants.

[32] CALENVIROSCREEN 3.0 MAP search result Oxnard *Available at* http://oehha.maps.arcgis.com/apps/webappviewer/index.html?id=4560cfbce7c745c299b2d0cbb07044f5
[33] *Id*. (Showing: Tract 6111002905 pop 5,478; Tract 6111003201 pop. 4577; Tract 6111009100 pop. 5279; Tract 6111004704 pop 1469; Tract 6111004902 pop 5091; Tract 6111004715 pop. 5020.)

The City of Oxnard is largely an agricultural city. According to a 2013 publication by the Oxnard Chamber of Commerce, agriculture is the largest industry job sector.[34] A search in the U.S. Census Bureau's "Fact Finder" website for "industry by occupation" in Oxnard reveals that agriculture is the second largest job sector, only slightly below the educational, health care, and social assistance services sector.[35] According to the U.S. Census Bureau, over 15,000 Oxnard residents are employed in the agricultural industry, with well over 90% in non-management, non-sales jobs.[36]

A Google map search shows that numerous agricultural fields surround the Mandalay Power Plants. The agricultural fields and their workers in closest proximity are less than half a mile away from the power plants. Of the body of fields immediately surrounding the power plants, those furthest out are only about four miles away. The U.S. Census Bureau provides an estimate of the number of agricultural workers who labor in these fields. This data is found in the Census Bureau's "On The Map" internet application,[37] accessed through a link on the Bureau's website for the Longitudinal Employer-Household Dynamics,[38] which is part of its Center for Economic Studies. A search in the Census Bureau's "On the Map" database reveals that between 1,000 and over 3,000 people labor in the agricultural fields surrounding the Mandalay Power Plants.[39]

B. Coastal Access is Critical for Oxnard's Communities

Public coastal access is a critical source of free outdoor recreation for Oxnard residents as much of the community is designated as "park poor" by The City Project, with less than 3 acres of parkland per 1,000 residents in their neighborhoods and low median incomes that limit

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[34] *City of Oxnard Community Profile* (October 2013), p. 13. *Available at: http://www.cityofoxnard.org/uploads/oxnard%20community%20profile.pdf*

[35] U.S. Census "Fact Finder" *available at* https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=EEO_10_5YR_EEOALL2R&prodType=table

[36] *See id.*

[37] *Available at:* http://onthemap.ces.census.gov.

[38] *Available at*: http://lehd.ces.census.gov.

[39] This search is conducted on http://onthemap.ces.census.gov by searching "Ventura County" in the Search field, and then selecting the link to "perform analysis of selection area." In the analysis settings, select and run a search for "all workers," and then from the menu on the right side, select the industry sector of "Agriculture, Forestry, Fishing, and Hunting." Finally, use the zoom feature to view the data for the agricultural area surrounding the Mandalay Power Plants.

transportation to more distant recreational areas such as the Channel Islands National Park or the Los Padres National Forest.[40] The beach is the primary open space for recreational activity for Oxnard residents, who are consistently rated as having among the highest child obesity rates and lowest child physical fitness scores in the county.[41] Industrial uses like power plants have limited public access to Oxnard's coast and serve as a major barrier to coastal wetlands restoration. Furthermore, while the narrow strip of beachfront homes directly on the coast tend to be owned by fairly affluent households, the users of the public beach itself tend to reflect Oxnard's overwhelmingly Latino low-to-moderate income population.

C. Oxnard's Sensitive Receptors, Especially Youth, Are Near the Plant Location

Oxnard High School, in the same census tract as the project, is the second largest school in the district, with an enrollment of over 2,800 students who spend 7-10 hours per day on campus five days per week. It is a Title I school, the federal designation for schools with socioeconomically disadvantaged students. It has a student body that is 84% Latino, 91% students of color, and 65% economically disadvantaged. 10% of its students have disabilities and 15% are English Learners[42].

During most of the day, Oxnard's coastal power plants are surrounded by thousands of local working-class immigrant families and youth of color attending school, working in the fields, and recreating on the beach that do not appear in residency statistics. Estimates used in assessment of the Puente project gravely underestimate the number of disadvantaged residents who spend most of their days in close proximity to the project.

V. RENEWABLE GENERATION IS FEASIBLE FOR THE OXNARD COMMUNITY

Based on my experience with energy equity, and information I have reviewed described below, I believe renewable generation is a feasible alternative to the Puente plant. For example,

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[40] The City Project, *Healthy Parks, Schools and Communities: Mapping Green Access and Equity for Southern California* (2011), p. 47, 50. *Available at: http://sustain.scag.ca.gov/Sustainability%20Portal%20Document%20Library/TheCityProjSouthern_California_Report_Final_Medium_Res.2.pdf*

[41] *Id.* at 48.

[42] Oxnard Union High School District, *Oxnard High School 2014-2015 School Accountability Report Card* (February 2016),p.2. *Available at: http://www.ouhsd.k12.ca.us/wp-content/uploads/2016/04/OHS-2014-15-SARC-English.pdf*

former California Assemblymember and current County Supervisor Das Williams is working to change Santa Barbara County land use policy to allow a large utility scale solar project in the Cuyama Valley. The County of Santa Barbara has already approved a 327 acre, 40 MW project from First Solar in the Cuyama Valley, and Williams is working with county regulators and utilities to further expand solar development in the area.[43]

Utility-scale solar projects, such as the one contemplated by Supervisor Williams, could provide most of the functions sought by Edison and promised by NRG with its Puente project. For example, this month the California Independent System Operator (CAISO) published an assessment of a demonstration project establishing the capabilities of a solar project to provide ancillary services typically sought from gas-fired generation.[44] As CAISO explained,

> First Solar, and National Renewable Energy Laboratory (NREL) [and CAISO], conducted a demonstration project on a large utility-scale photovoltaic (PV) plant in the CAISO's balancing area to test its ability to provide important ancillary services to the grid. With an increasing share of solar and wind generated energy, traditional power generation resources equipped with automatic governor control and automatic voltage regulation controls, specifically fossil thermal, are being displaced. Deployment of utility-scale, grid-friendly PV power plants that incorporate advanced capabilities to support grid stability and reliability is essential for the large-scale integration of PV generation into the electric power grid, among other technical requirements. A typical photovoltaic (PV) power plant consists of multiple power electronic inverters and can contribute to grid stability and reliability through sophisticated "grid-friendly" controls. It may in this way mitigate the impact of its variability on the grid, and contribute to important system requirements more like traditional generators.
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> In August 2016, testing was conducted on one of the First Solar's 300-megawatt plant, and a large amount of test data was produced and analyzed that demonstrates the capability of PV power plants to provide various types of new grid-friendly controls. This data showed how the development of advanced power controls can leverage PV's value from being simply an intermittent energy resource to providing services that range from spinning reserves, load following, voltage support, ramping, frequency response, variability smoothing and frequency regulation to power quality.[45]

The capabilities of solar are not limited to the specific configuration studied by CAISO in 2016. Storage, paired with other preferred resources, would avoid many of the project impacts, and must be considered. Solar and storage are already being procured by utilities in California,

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[43] http://www.firstsolar.com/-/media/Documents/Projects/Cuyama/FS_Cuyama_01511_DS_NA_23APR14.ashx.
[44] USING RENEWABLES TO OPERATE A LOW-CARBON GRID: DEMONSTRATION OF ADVANCED RELIABILITY SERVICES FROM A UTILITY-SCALE SOLAR PV PLANT (*available at* http://www.caiso.com/Documents/UsingRenewablesToOperateLow-CarbonGrid.pdf.)
[45] *Id.* at p. 5.

and Hawai'i's latest effort promises to meet more than 10% of Kauai's electricity load with a single solar/storage power purchase agreement.[46]

Combining storage and renewable generation can provide critical relief for environmental justice communities that suffer poor air quality in addition to cumulative impacts of other pollution and social stressors. A recent study connects California peaker plants, air pollution and the ability of storage to provide significant air quality benefits by reducing use of gas-fired power plants as peak power ("California Peaker Study").[47] It is my understanding that one of the functions proposed for the Puente plant is as a peaker. The Peaker Study observed that "84% of the 64 peaker plants mapped are in locations that have higher than average EJ scores (i.e., are located in more disadvantaged communities). Over half of the plants are located in communities with the top 30% of EJ scores."[48] The Peaker Study explains that, while air districts regulate on a basinwide basis, the air quality impacts of peakers operation are more concentrated in the community in near proximity to them. As a result, the Peaker Study explains that offsetting local emissions from peakers is not the best approach:

> Siting of large powerplants in California requires an assessment of EJ measures, including minority concentration within a six-mile radius, but if sufficient pollutant offsets are purchased then the environmental impact is considered negligible. Instead of simply limiting emissions in a specific air basin, we suggest siting cleaner energy resources to actively displace emissions in areas with poor air quality, and especially near high populations densities and populations that are disproportionately exposed to poor air quality and other environmental and socio- economic stressors.[49]

The functions performed by gas-fired peakers include providing power when the electricity system is most taxed. The Peaker Study found that peak demand tended to coincide with poorest air quality days.[50] The Peaker Study assessed four technologies: renewable generation and energy efficiency, demand response, natural gas-plant grid-charged storage, and storage charged with a renewable/conventional grid mix. Assessing ability to meet peak demand

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[46] https://www.greentechmedia.com/articles/read/aes-puts-energy-heavy-battery-behind-new-kauai-solar-peaker.
[47] A FRAMEWORK FOR SITING AND DISPATCH OF EMERGING ENERGY RESOURCES TO REALIZE ENVIRONMENTAL AND HEALTH BENEFITS: CASE STUDY ON PEAKER POWER PLANT DISPLACEMENT, Krieger et al., Energy Policy 96 (2016) 302–313.
[48] *Id.* at p. 308.
[49] *Id.* at p. 306.
[50] *Id.* at p. 307.

at optimal air quality moments, each technology demonstrated significant air quality benefits. The Study did not review, but did observe, that dispatchable storage and demand response could provide ancillary grid services at an air quality savings as well.[51]

Because Oxnard is subject to cumulative impacts, and has several identified environmental justice communities that would be impacted by the Puente plant, the Energy Commission must consider clean feasible alternatives such as renewable energy and storage.

DATED: January 18, 2017 By: /s/
Strela Cervas

[51] *Id.* at p.310.

STRELA CERVAS

AREAS OF EXPERTISE

- Managing and overseeing organization
- Environmental justice and energy equity expertise
- Strategy development
- Policy analysis
- Coalition coordination
- Organizing and movement-building
- Training and capacity-building
- Event planning
- Low-wage workers and immigration expertise

ABOUT

Worked in social justice sector for 16 years. Co-Director of premier environmental justice organization for 8 years. Specializes in management, coordination and organizing in low-income communities and communities of color. Advanced expertise in the fields of environmental justice, energy equity, and

EDUCATION & CERTIFICATES

- 2000 - B.S. Psychology, Minors in Biology and Visual Arts, University of California San Diego
- 2001 - Litigation Paralegal Certificate,
- University of California Los Angeles Extension
- 2007 - Alum, Women's Policy Institute

SKILLS

- Proficient in Microsoft Office Suite: Word, Excel, Power point
- Familiar with Adobe InDesign and WordPress
- Knowledge of social media platforms
- Fluent in Filipino language

Co-Director
2008 - present
California Environmental Justice Alliance

- Co-Manage and oversee statewide alliance of environmental justice organizations
- Manage overall budget and support fundraising for $1 million organization
- Oversee overall organizational development
- Manage energy equity and civic engagement programs
- Oversee legislative and administrative advocacy efforts
- Coordinate 11-member coalition
- Conduct policy analysis and research of renewable energy, climate, and environmental justice issues
- Oversee organizational advocacy on statewide environmental justice platform
- Oversee overall strategic planning
- Train and provide leadership development for communities
- Provide expert testimony in legislative and regulatory hearings and proceedings
- Speaker for organization in high level public events, press conferences, and in coalitions
- Oversee coordination of major events such as annual Congreso

Organizer
2001 - 2008
Current Board Treasurer
2010 - present
Pilipino Workers' Center

- Organize Pilipino caregivers and low-wage workers in Historic Filipinotown, LA
- Led campaign for domestic worker rights
- Led case management on immigration and worker rights

Litigation Support
2001 - 2002
Sidley Austin Brown & Wood

- Supported casework in Federal litigation
- Prepared and docketed trial documents

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