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## **STAFF REPORT**

# **Localized Health Impacts Report**

**Addendum 3 for Selected Projects Awarded  
Funding Through the Clean Transportation  
Program Under Solicitation GFO-17-607 –  
School Bus Replacement for California Public  
School Districts, County Offices of Education,  
and Joint Power Authorities**

**Gavin Newsom, Governor  
February 2020 | CEC-600-2019-008-AD3**

# California Energy Commission

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## **DISCLAIMER**

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# ADDENDUM 3

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On February 6, 2019, the California Energy Commission (CEC) published a notice of proposed award (NOPA)<sup>1</sup> announcing the schools, school districts, and other educational agencies selected to receive grant funding under Solicitation GFO-17-607. The Localized Health Impacts (LHI) Report for Solicitation GFO-17-607 (Publication: CEC-600-2019-008)<sup>2</sup> was published and made available for public comment on March 6, 2019. This addendum uses the same approach to assess the LHI information for new project locations as in the original LHI report.

On June 3, 2019, the CEC published a revised NOPA<sup>3</sup> where the project applicant, Eureka City Schools Unified School District, was added to the list of projects recommended by CEC staff for a funding award. Table 1 lists the proposed awardee along with their project details, and environmental justice (EJ) indicators<sup>4</sup> corresponding to their project site location. See Appendix A of this LHI report for EJ indicator definitions.

**Table 1: Project Details Along With EJ Indicators**

Awardee	EV Buses Awarded Funding	Awardee Location	EV Infrastructure Project Site	EJ Indicator(s)
Eureka City Schools Unified School District	1	2100 J Street Eureka, CA 95001	642 West 14th Street Eureka, CA 95501	Poverty

Source: California Energy Commission staff

Project funding is contingent upon the approval at a publicly noticed CEC business meeting and the execution of a grant agreement.

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<sup>1</sup> CEC [funding page for GFO-17-607](http://www.energy.ca.gov/solicitations/2018-05/gfo-17-607-school-bus-replacement-california-public-school-districts-county). Available at [www.energy.ca.gov/solicitations/2018-05/gfo-17-607-school-bus-replacement-california-public-school-districts-county](http://www.energy.ca.gov/solicitations/2018-05/gfo-17-607-school-bus-replacement-california-public-school-districts-county).

<sup>2</sup> Bobadilla, Jonathan. 2019. *Localized Health Impacts Report Under Solicitation GFO-17-607-School Bus Replacement*. California Energy Commission, Fuels and Transportation Division. Publication Number: CEC-600-2019-008.

<sup>3</sup> CEC [Revised NOPA for GFO-17-607](http://www.energy.ca.gov/sites/default/files/2020-01/GFO-17-607_Revised_NOPA7_ADA.pdf). Available at [www.energy.ca.gov/sites/default/files/2020-01/GFO-17-607\\_Revised\\_NOPA7\\_ADA.pdf](http://www.energy.ca.gov/sites/default/files/2020-01/GFO-17-607_Revised_NOPA7_ADA.pdf).

<sup>4</sup> [EJ indicators](#) developed by the United States Environmental Protection Agency (U.S. EPA), Office of Policy. Available at [www.epa.gov/ejscreen/environmental-justice-indexes-ejscreen](http://www.epa.gov/ejscreen/environmental-justice-indexes-ejscreen).

## Project Information and Emissions Reductions

Toxic air pollutants such as nitrogen oxides (NO<sub>x</sub>),<sup>5</sup> particulate matter (PM)<sup>6</sup> 2.5 microns in diameter or less (PM<sub>2.5</sub>), and PM 10 microns in diameter (PM<sub>10</sub>) are known to cause harmful effects to heart and lungs in humans.<sup>7</sup> Children, the elderly, and people suffering from heart or lung disease, asthma, or chronic illness are most sensitive to the effects of these pollutants. Replacing old diesel school buses with new electric school buses will benefit local communities by reducing the amount of NO<sub>x</sub> and PM typically emitted by older diesel school buses.

CEC staff analyzed potential emissions reductions by using an emission factor model (EMFAC)<sup>8</sup> developed by California Air Resource Board (CARB) to assess mobile source vehicle emissions from on-road vehicles, including school buses. EMFAC per-mile emission rates of a Model Year 2005 diesel-powered bus are compared to the emission rates of a Model Year 2019 battery-powered electric bus to provide a baseline for the emissions analysis done in this LHI report. Table 2 lists the expected annual reduction in vehicle emissions from replacing a diesel-powered bus with an electric bus.

**Table 2: Expected Annual Emissions Reductions\***

Awardee	Estimated Annual Miles**	NO <sub>x</sub> Reductions (pounds per year)	PM <sub>2.5</sub> Reductions (pounds per year)	PM <sub>10</sub> Reductions (pounds per year)
Eureka City Schools Unified School District	9,412	140.7	1.4	1.1

Source: California Energy Commission staff. \*Figures based on the EMFAC emissions difference between a 2005 diesel school bus and a 2019 electric school bus, when both are driven the same number of estimated annual miles.\*\*Miles estimate provided by Awardee staff

## Location Analysis Summary

A project location must meet a two-part environmental and demographic standard for staff to identify it as a high-risk community project location (see Appendix A for details). Staff finds that the proposed project located in the city of Eureka does not meet the criteria for a high-risk community project location. While the project location does meet the environmental standard due to existing poor air-quality, it does not meet the demographic standard of having more than one EJ indicator threshold exceeded (shown in Table 3).

<sup>5</sup> Nitrogen oxides are a chief component of air pollution that can be produced by the burning of fossil fuels. Also called oxides of nitrogen.

<sup>6</sup> *Particulate matter* is unburned fuel particles that form smoke or soot and stick to lung tissue when inhaled. The number following "PM" represents particle size in microns.

<sup>7</sup> CARB [list of common air pollutants](http://ww2.arb.ca.gov/resources/common-air-pollutants) and effects on health and environment. Available at [ww2.arb.ca.gov/resources/common-air-pollutants](http://ww2.arb.ca.gov/resources/common-air-pollutants).

<sup>8</sup> CARB [EMFAC](http://ww2.arb.ca.gov/our-work/programs/mobile-source-emissions-inventory/msei-modeling-tools) modeling tool webpage. Available at [ww2.arb.ca.gov/our-work/programs/mobile-source-emissions-inventory/msei-modeling-tools](http://ww2.arb.ca.gov/our-work/programs/mobile-source-emissions-inventory/msei-modeling-tools).

**Table 3: EJ Indicators by Project Location City Demographic**

	Below Poverty (2017)	Black or African American (2017)	American Indian and Alaska Native (2017)	Asian and Native Hawaiian and Pacific Islander (2017)	Hispanic or Latino Race (2017)	Persons Under 5 Years of Age (2017)	Persons Over 65 Years of Age (2017)	Unemployment (August 2019)
California	11.1%	5.8%	0.7%	14.5%	38.8%	6.4%	13.2%	3.7%
<b>EJ Indicator Threshold</b>	<b>&gt;11.1%</b>	<b>&gt;30%</b>	<b>&gt;30%</b>	<b>&gt;30%</b>	<b>&gt;30%</b>	<b>≥26.4%</b>	<b>≥33.2%</b>	<b>&gt;3.7%</b>
Eureka	13.0%	2.3%	3.4%	7.1%	11.1%	5.9%	15.5%	3.0%

Sources: California Energy Commission staff, Employment Development Department, and U.S. Census Bureau.

Based on Energy Commission staff analysis, there are no anticipated adverse health impacts to local communities affected by the proposed project. If approved, these projects stand to provide improved quality of life by reducing unhealthy diesel school bus-generated emissions, bringing cleaner air to schoolchildren, and providing new jobs to the communities the awardee serves.

### **Public Comment**

As provided by Title 13 CCR Section 2343 of the California Code of Regulations, a 30-day public review period applies to this LHI report from the date it is posted on the CEC website. The [original posting date for this report](http://ww2.energy.ca.gov/altfuels/documents/) is listed at [ww2.energy.ca.gov/altfuels/documents/](http://ww2.energy.ca.gov/altfuels/documents/).

The CEC encourages comments by email. Please include your name or organization’s name in the name of the file. Send comments in either Microsoft® Word format (.doc) or Adobe® Acrobat® format (.pdf) to [FTD@energy.ca.gov](mailto:FTD@energy.ca.gov).

The public can email comments to [FTD@energy.ca.gov](mailto:FTD@energy.ca.gov) or send them to:

California Energy Commission  
 Fuels and Transportation Division  
 1516 Ninth Street, MS-44  
 Sacramento, CA 95814-5512

All written comments will become part of the public record and may be posted to the Internet.

News media should direct inquiries to the Media and Public Communications Office at (916) 654-4989 or by email at [mediaoffice@energy.ca.gov](mailto:mediaoffice@energy.ca.gov).

# APPENDIX A:

## Localized Health Impacts Report Method

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This LHI report assesses the potential health impacts to communities from projects proposed to receive Clean Transportation Program (also known as the Alternative and Renewable Fuel and Vehicle Technology Program) funding. This LHI report is prepared under the *California Code of Regulations, Title 13, Motor Vehicles, Chapter 8.1 (CCR § 2343)*:

“(6) Localized health impacts must be considered when selecting projects for funding. The funding agency must consider EJ consistent with state law and complete the following:

(A) For each fiscal year, the funding agency must publish a staff report for review and comment by the public at least 30 calendar days prior to approval of projects. The report must analyze the aggregate locations of the funded projects, analyze the impacts in communities with the most significant exposure to air contaminants or localized air contaminants, or both, including, but not limited to, communities of minority populations or low-income populations, and identify agency outreach to community groups and other affected stakeholders.

(B) Projects must be selected and approved for funding in a publicly noticed meeting.”

This LHI report is not intended to be a detailed pollution analysis of proposed projects, nor is it intended to substitute for the environmental review conducted as part of the California Environmental Quality Act. This LHI report includes staff’s application of the EJSM developed by the U.S. Environmental Protection Agency to help identify projects located in areas where social vulnerability indicators, high exposure to pollution, and greater health risks are present.

High-risk community project locations are identified using data from CARB, the U.S. Census Bureau, and other public agencies. Energy Commission staff analyzes these data to assign EJ indicators for each project location specified in the LHI report. The proposed project location must meet a two-part standard as follows:

### **Part 1 – Environmental Standard:**

- Communities located within an air quality nonattainment zone for ozone, PM<sub>2.5</sub>, or PM<sub>10</sub>, as designated by the CARB for criteria pollutants.

### **Part 2 – Demographic Standard:**

- Communities having more than one of the following EJ indicators for (1) minority, (2) poverty, (3) unemployment, and (4) age. The EJ indicator thresholds are defined by staff as:
  - 1) A minority subset represents more than 30 percent of a given city’s population.
  - 2) A city’s poverty level exceeds the state average poverty level.
  - 3) The city (or county if city data are unavailable) unemployment rate exceeds the state average unemployment rate.

- 4) The percentage of people living in a city who are younger than 5 years of age or older than 65 years of age is 20 percent higher than the state average for persons under 5 years of age or over 65 years of age.