

Promoting Careers in Electric Mobility

GROSSMONT UNION HIGH SCHOOL DISTRICT BUS
FLEET ELECTRIFICATION PROJECT



San Diego
Workforce
Partnership

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INTRODUCTION

As more and more vehicles are being electrified in San Diego County, the San Diego Workforce Partnership worked in collaboration with ENGIE Impact and Grossmont Union High School District (GUHSD) to create a bus fleet electrification plan for the district. We specifically worked to understand the jobs that would change and the career opportunities that will be created by this movement toward electric vehicles (EV). We have created several tools that can be used to share our discoveries with the local community, including:

- A research report: "Workforce Training Needs: Meeting Workforce Challenges for GUHSD Bus Fleet Electrification"
- Five online career profiles highlighting professionals working in electric mobility
- A webinar for career and technical education students at GUHSD

This guide was created to empower educators and school administrators to share these growing careers with students and families. It first provides an overview of the three resources created specifically for this project, as well as several other tools to support career exploration. It then describes suggested strategies for implementing the tools. Finally, it provides a summary of industry and government partners who can introduce students and families to the possibility of a quality job in clean energy.

THE TOOLS

1. Report: Workforce Training Needs: Meeting Workforce Challenges for GUHSD Bus Fleet Electrification

What is it?

This report summarizes the impact of GUHSD bus fleet electrification and similar projects on the local workforce. It examines the ways several jobs might change and identifies opportunities for new careers to emerge.

How can it help?

Individuals can use insights from the report to think more expansively about the EV ecosystem and where they might fit in. They might choose to research some careers more deeply as a result, or provide educators with ideas about where to guide student interests in this industry.

Link: tinyurl.com/electricbusfleet

2. EV Career Profiles

What is it?

These profiles have been created based on interviews with a variety of professionals in the EV ecosystem, from school bus manufacturers to school district energy managers. The profiles include information about an individual's career, educational journey and include a look into the day-to-day life of their current job. They also share the things they like about their job, their biggest challenges and advice for others interested in their career.

How can it help?

These profiles can give students and families insight into clean transportation careers by learning about professionals already working in this growing field and serving San Diego County. Each profile provides relatable information to help students and families to envision their own career path:

- Company of employment
- Priority sector
- Education
- [RIASEC](#) interest themes
- Photos of professionals at work
- Written interview on the professional's education and career pathway
- A roadmap graphic visually illustrating the professional's career pathway

Links:

workforce.org/profiles/joe-bielawski
workforce.org/profiles/lindsey-danner
workforce.org/profiles/annamay-luyun
workforce.org/profiles/tysen-brodwolf
workforce.org/profiles/bianca-heroiu/
workforce.org/profiles/claire-garcia/

3. Webinar**What is it?**

GUHSD's career and technical education (CTE) team hosted and recorded a webinar on electric vehicles featuring vehicle electrification professionals speaking about the future of clean energy and giving advice on how to attain a career in this growing industry.

How can it help?

Students and families who learn best by watching and listening would benefit from watching this webinar recording. This is also a great way to learn more from the career profile professionals that students admire.

Link: bit.ly/GUHSDWebinar

4. RIASEC**What is it?**

The RIASEC framework is used to organize personal interests in a way that aligns with work environments. There are six interest themes to learn about and each person typically aligns most closely with two or three themes. A person can learn about each theme and take online assessments to help identify their leading interest themes.

How can it help?

Knowing their RIASEC themes can help people to identify careers where they are likely to thrive. When a person's work environment fits their interest themes, they are more likely to perform better at work, achieve greater academic and career success, and may even earn more money than their peers. Students and

families can take the RIASEC quiz on the San Diego Workforce Partnership's website and learn about their top themes and aligned careers. Because each of the EV career profiles include RIASEC themes, students can relate more strongly with those professionals through shared themes.

Link: workforce.org/RIASEC

5. My Next Move

What is it?

An interactive online experience with comprehensive tools from the San Diego Workforce Partnership to support current and future workers.

How can it help?

It's packed with tools and information to help people:

- Identify career opportunities that align with their strengths and interests
- Find local training programs and live job postings
- Connect with services and resources to help them stand out
- Use labor market information to make informed training and career decisions

Link: workforce.org/mynextmove

STRATEGIES

There are many ways to promote community education with these tools. While we share a few strategies here to inspire you, feel free to come up with more ideas for incorporating them into your class curriculum, job seeker outreach/education or another setting.

1. For Working With Students

Whole class

- Watch the recorded webinar and follow up with a discussion
- Introduce the vehicle electrification concept to the whole class; students then explore career profiles to dig deeper in small groups or independently
- Invite a professional to speak to your class
- Take your class to visit a charging station, San Diego Gas & Electric (SDG&E), Nuvve or another company specializing in clean energy

Enrichment: If you are teaching a lesson related to environmental preservation, energy sources or another related topic, offer students who finish their work early time to read the career profiles and reflect on what they have learned.

Individual counseling: As students share interests and career aspirations that align with careers in clean transportation, offer career profiles as a resource to explore this career path.

2. For Working With Families

At school

- Introduce the idea of electric mobility in a newsletter, email or website. You might consider language such as:
 - *Did you know that our district is transitioning to a zero-emission bus fleet? This means we will save money and energy and help protect the environment. In fact, more and more vehicles will become electric in the near future, which means great jobs for our local community. To learn more, check out these career profiles and watch this webinar to hear from professionals in the industry.*
- Invite parents to attend and participate in a lesson on electric mobility
- Select one to three resources from below that are most relevant for your communities, and share them along with simple instructions

At home

- Explore resources as a family
- Ask each other probing and reflective questions about what you have learned or what you would like to know more about
- Using the tools as a guide, sketch out a possible career pathway in EV
- Visit companies like SDG&E or Nuvve and point out charging stations or EVs on the road

SUGGESTED PARTNERS

As you work with students and families to explore electric mobility careers, connecting them to partners within the industry can enrich and deepen understanding and motivation. The following are suggested partners that can support career learning and exploration. Use the research on their websites to broaden your awareness of the EV ecosystem or to connect with employees through LinkedIn to engage them with your school community.

1. American Public Transportation Association (APTA)

Who are they?

APTA represents all modes of public transportation including bus, paratransit, light rail, commuter rail, subways, waterborne services, and intercity and high-speed passenger rail. More than 90 percent of the people using public transportation in the United States ride on APTA member systems.

How can they help?

They provide a wealth of research and technical resources on autonomous and electric vehicles.

Link: apta.com/research-technical-resources/mobility-innovation-hub/autonomous-vehicles

2. Advanced Transportation and Logistics

Who are they?

Funded by California Energy Commission, they ensure that California has a highly-skilled clean transportation and logistics workforce.

How can they help?

They provide the Zero Emissions Vehicle Training Enhancement Program at San Diego Miramar College. They are also expanding their program at Southwestern College and developing courses for troubleshooting, diagnosing and repairing battery electric transit vehicles.

Link: atleducation.org

3. Electric Vehicle Infrastructure Training Program

Who are they?

They are a non-profit, brand neutral, national collaborative training program for electric vehicle infrastructure.

How can they help?

Their trainings are available online with in-person proctored exam (in California only) on the following areas of expertise:

- Vehicle manufacturers
- Charger manufacturers
- Battery manufacturers
- Utilities
- Electrical inspectors
- First responders

Link: evitp.org/training

4. ENGIE Impact

Who are they?

ENGIE Impact was created to accelerate the sustainability transformation for corporations, cities and governments. ENGIE Impact helps organizations embed sustainability into their operational strategies, allowing them to bridge the gap between sustainability commitments and realized results that capture economic value and make organizations more competitive over the long term.

How can they help?

ENGIE Impact has valuable expertise and learning resources in the areas of:

- Carbon offsets
- Climate resilience
- Green hydrogen
- Renewables
- Resource optimization
- Sustainability data

Link: engieimpact.com/expertise

5. The Lion Electric Company

Who are they?

The Lion Electric Company is a Canadian-based manufacturer of commercial vehicles. Currently the biggest electric vehicle manufacturer in its segment, Lion primarily produces yellow school buses, public transit buses, semi-trucks, bucket trucks and garbage/refuse trucks, all of which feature zero emission

battery-electric powertrains. They have partnered with their local school district as the electric bus manufacturer.

How can they help?

They provide specifications and other educational information about various types of commercial electric vehicles.

Link: thelionelectric.com/en/products/electric

6. Nuvve

Who are they?

Nuvve is headquartered here in San Diego, California and offers turnkey electrification solutions for fleets of all types. Nuvve combines advanced vehicle-to-grid (V2G) technology with an ecosystem of electrification partners to manage power among electric vehicle (EV) batteries and the grid to deliver new value to EV owners, accelerate the adoption of EVs and support the world's transition to clean energy.

How can they help?

They provide educational information about EV charging and energy management as well as opportunities for local employment.

Links:

nuvve.com/technology

nuvve.com/careers-us

7. Proterra

Who are they?

Proterra is an automotive and energy storage company based in Burlingame, California that designs and manufactures electric transit buses and electric charging systems. Proterra's Catalyst series includes transit buses in various lengths and battery configurations.

How can they help?

Proterra has valuable expertise and learning resources in the areas of:

- Fleet planning
- Charging infrastructure
- Energy management
- Financial charging infrastructure

Links:

proterra.com/energy-services

proterra.com/company/careers

8. San Diego Gas & Electric (SDG&E)

Who are they?

SDG&E provides natural gas and electricity to San Diego County and southern Orange County. They help install make-ready charging infrastructure for medium- and heavy-duty electric vehicles, working with fleets from the initial infrastructure planning stage through to design, construction and ongoing site maintenance.

How can they help?

Go to the SDG&E Energy Innovation Center for a field trip or suggest that families visit on their own to learn about sustainability through an interactive tour and free classes. Their website provides learning resources on topics including fleet electrification as well as local career opportunities.

Links:

sdge.com/energy-innovation-center

sdge.com/business/electric-vehicles/power-your-drive-for-fleets

sdge.com/careers

9. San Diego Workforce Partnership

Who are we?

We are the workforce development agency of the City and County of San Diego. Our mission is to empower job seekers to meet the current and future workforce needs of employers in San Diego County. We equip job seekers to increase their economic mobility and prepare children and young adults for the world of work.

How can we help?

We offer a wide variety of programs that can help individuals access and pay for job training. We also operate six career centers throughout the county where anyone can access career resources or use computers for job searching.

Link: workforce.org