

**On December 9, 2022**, the Plug In IE workshop brought together a diverse group of about 50 individuals at Teamsters Local 1932 in San Bernardino, California, to discuss the electrification of the Inland Empire region's logistics industry. Participants included representatives from environmental justice, labor, and other community organizations; community colleges; industry; and state regulatory agencies; as well as researchers and faculty from across the natural sciences, social sciences, and humanities at UC Riverside. This report summarizes some of the key themes and ideas that emerged from the workshop.

For the first two conversations summarized below, participants were organized into four groups based on the focus of their work: industry experts, workforce development, environmental justice, and other community development issues. Subsequent conversations brought together individuals across sectors.

### OPPORTUNITIES AND CHALLENGES

- Working to align policy, infrastructure, and stakeholders across the region, not locale by locale.
- Making sure frontline stakeholders, such as truck owner-operators, have a genuine opportunity to speak to agencies through public comment.
- Grounding community education and engagement in the direct, everyday experiences residents have with logistics/goods movement in our region.
- Ensuring that frontline worker safety issues are addressed in the zero-emissions transition.
- Empowering communities during the transition, while more possibilities are open, instead of after the fact.
- Addressing costs to small businesses; ensuring they have genuine access to funding opportunities, not just reimbursement-based incentives that require large amounts of upfront capital.
- Creating alternative economic formations, e.g., owner-operator cooperatives.
- Inadequate infrastructure: not enough chargers; not enough power in the grid for the chargers planned; lengthy timelines for installing infrastructure.
- Ensuring that frontline stakeholders (electrical workers, truck drivers and owner-operators, people who live near warehouses and truck charging sites) shape how infrastructure gets built out.
- New ways to distribute and access energy: cleaner sources, vehicle-to-grid technologies, microgrids
- Limits of heavy-duty zero-emission truck technology: range; capacity in different temperatures and terrains; lack of standardization

- Bringing zero-emission vehicle manufacturing to our region.
- Making vehicle battery recycling widespread; reducing harmful impacts on communities where battery raw materials are extracted.
- Ensuring there is useful data by which to gauge progress.

## “WHAT DO YOU WISH OTHER STAKEHOLDERS UNDERSTOOD ABOUT WHAT YOU KNOW?”

- Residents of the IE did not decide for the region to be a logistics epicenter. As the industry expands with no end in sight, residents need to have a role in planning.
- The region faces serious health concerns that affect everyone, especially children. These concerns have been aired for decades, but businesses and public decision-makers ignore them.
- Many people who are concerned about the negative effects of warehouse development are not opposed to it, but they want “smart development” with affordable housing, community-oriented infrastructure, and green spaces.

## BENEFITS AND BEST POSSIBLE OUTCOMES

**Potential environmental and health improvements.** Participants described how warehouses and trucking exacerbate the air pollution that the Inland Empire already receives from the coast due to terrain and wind currents. The intensified pollution has contributed to serious respiratory health issues among residents. The transition to electrification promises to improve environmental and public health, reduce mortality due to respiratory diseases, and save billions of dollars in healthcare spending. Participants also argued that this transition could help to address long-term environmental problems associated with climate change.

**Community investment.** Participants noted that funding for the transition to electric trucks could benefit the community if resources are invested not only in trucking companies and contractors, but also in community organizations and co-ops.

**Better employment opportunities.** The transition to electric trucks, if planned and executed with purpose, could offer new training and upskilling opportunities. With a concerted effort, workers who are displaced by the transition could be prepared for successful careers in the new employment pathways that electrification is creating.

## WINNERS AND LOSERS

**Frontline communities.** Communities that are most negatively affected by warehouse development and trucks (poor BIPOC communities) could be winners if they are included as decision-makers in all stages of the transition. If they are not, there is the risk that these communities will lose out through displacement and/or an increased cost of living. In order to balance the impacts, a community-based approach is necessary in this transition.

**The environment.** This transition will significantly reduce air pollution. Cleaner air would improve public health in communities most affected by warehouses and trucking.

**Workers.** With new jobs creating opportunities for training and upskilling, there could potentially be major benefits to workers in the region. Community colleges can play a leading role in keeping training affordable. And if training programs and employers take the opportunity to create access to well-paying careers for workers that have traditionally been excluded from those opportunities (e.g., formerly incarcerated workers, workers with disabilities), our region can raise the bar for economic equity. There is also the potential to attract technology-sector businesses to the region.

**Small-fleet owners and owner-operators.** It is necessary to make electrification funds and public support accessible to all truck owners. Independent contractors that own small fleets (less than five trucks, for example) do not have staff to navigate the electrification incentives available and may have trouble securing funding to purchase electric trucks even with incentives. In order to balance the impacts, the incentives should be more accessible to everyone, not just the big companies that can afford accountants, consultants, grant writers, and attorneys.

**Fossil fuel industries.** They will lose customers.

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## PRESENTATION

### TROY MUSGRAVE, DEPENDABLE HIGHWAY EXPRESS/VOLVO LIGHTS

A keynote presentation was provided by Troy Musgrave, Director of Process Improvement at Dependable Highway Express (DHE), a logistics company that has served the region for the past 72 years. Musgrave described his experience with the Volvo LIGHTS project, through which DHE's fleet of local delivery trucks were replaced with electric ones. He spoke to issues ranging from utilities' role in installing charging infrastructure to battery duty cycles.

Although Volvo LIGHTS took five years to complete (2017–2022), it has been highly successful and provides important lessons and hope for other logistics companies interested in transitioning to EVs.

For more information, see [lightsproject.com](https://lightsproject.com) and the *Volvo LIGHTS Lessons Learned Guidebook* ([learn.lightsproject.com/lessons-learned-guidebook](https://learn.lightsproject.com/lessons-learned-guidebook)).

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## GOALS: THE NEXT 5 YEARS

- Increase electrical grid resiliency and reliability.
- Increase environmental justice education among community members.
- Increase community outreach and organizing among truckers.
- Deepen the impact of California's High Road Training Partnerships.
- Study the number and types of jobs needed for electrification.
- Focus on providing technical assistance to small fleets.

## RESOURCES: WHAT'S NEEDED TO ATTAIN THOSE GOALS?

- Shared information for all stakeholders
- Investment in solar energy, in case the electric grid goes down
- Better incentives for owner-operators and operators of micro-fleets (less than five trucks)
- A regional planning committee to share information across different agencies
- Air quality regulations that provide for air quality monitoring so we can assess the results of electrification

## CLOSING REFLECTIONS: THE WAY FORWARD

**Counteracting the dominant narrative.** The Inland Empire is not just “cheap labor and cheap dirt.”

**Taking action at multiple scales.** Fostering awareness through personal relationships. Expanding technical assistance providers’ community outreach and public education. Pursuing community-designed blueprints for infrastructure. Engaging in redistributive and reparative efforts to counteract past harms. Bringing the most and least powerful to the table together. Building coalitions toward collective visions of a regional economy that is more just, environmentally sustainable, and equitable.

**Prioritizing workers.** Seizing the opportunity to increase access to upskilling and quality jobs. Tracking the range of occupations that will be needed for electrification, from infrastructure installers to vehicle technicians to contractors and grant writers. Building up training programs in universities, community colleges, and high schools.

**Continuing to learn.** Researching the best (and worst) practices of the electric vehicle transition in other states so those lessons can be applied in California. Ensuring that lessons learned by those with firsthand knowledge of heavy-duty truck electrification reach those who face the same transition.

**Expanding the conversation.** Bringing in truck owner-operators, large fleet operators who are enthusiastic about electrification, city and regional planners, utility companies, policy makers, tribal representatives, and residents of the IE’s desert areas for future conversations. ■

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