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# Clean Energy and Workforce Development

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# Infrastructure Investments and Jobs Act 2021

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November 15, 2021, signed by President Biden

Significant funding to advance EV charging infrastructure

## Impacts on California, by 2030:

- 700,000 public and shared private EV chargers needed to support 5 million light-duty ZEVs
- 1.2 million EV chargers needed to support the 8 million light-duty ZEVs
- 157,000 EV chargers needed to support 180,000 medium-duty and heavy-duty ZEVs.

# California Goals: Increasing Supply of ZEVs & Infrastructure

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Timeline	California Goals
By 2025	1.5 million ZEVs on the road. 200 public hydrogen-fueling stations and 250,000 battery-electric vehicle chargers.
By 2030	5 million ZEVs on the road
By 2035	100% of new sales of passenger vehicles & trucks to ZEVs. 100% of operating drayage (transportation of good from ports) trucks to zero-emission. 100% of operating off-road vehicles & equipment to zero-emission everywhere feasible.
By 2045	100% of operating medium-duty & heavy-duty trucks and buses to zero emission everywhere feasible.

# Challenges: Workers Displaced by Transition to Clean Energy

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## **Oil/gas extraction and refining workers: jobs heavily impacted**

- Loss of high paying jobs
- Loss of health insurance
- Loss of continued Retirement pension contributions
- Loss of worker health & safety protections: current protective union contracts have been fought for over many generations

## **Some jobs will remain in oil/gas extraction and refining**

- Petroleum based products will still need to be produced and oil extraction and refining will continue
- Safety of these facilities and workers will be potentially compromised

# Opportunities: Types of Jobs Created

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- Manufacturing of EV
- Manufacturing of electric medium and heavy duty vehicles
- Planning, design, construction:
  - Charging stations
  - Charging networks, power grid and distribution systems
- Building solar, wind and other renewable energy generation utilities (solar farms, onshore/offshore wind turbines)
- Installation of solar panels and storage batteries in homes

# Workforce Development Training Needs

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- Automotive
- Electrical safety
- Electrical layout, mounting and wiring
- Conduit bending
- Electronics
- Engineering and construction
- Trenching, laying pipes
- Installation of solar panels on structures



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# Thank you!

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