

Vehicle Electrification— Policy Considerations



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Guidance (if applicable)



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This presentation is focused on policy.

- I will be discussing the following topics:
 - Policy considerations for electrification
 - Federal activity
 - State activity
 - Q&A session



Policy Considerations for Electrification

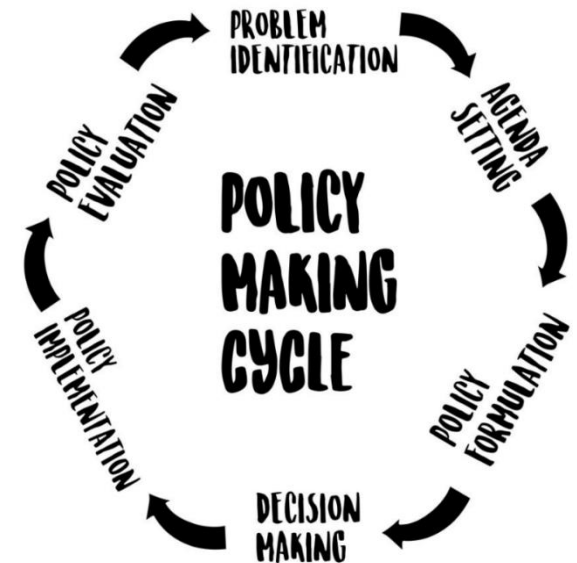
Operational aspects set the landscape for electrification policy discussions.

1. It is a generally accepted truth that electric vehicles (EVs) are capable of drastically lowering transportation-sector CO₂ emissions.
2. Advances in technology (e.g., lithium-ion batteries) have led to decreased upfront costs and increasing range.
3. Transportation trends leading to connected, automated, and shared vehicle platforms; and

As a result, policymakers are considering a variety of measures to support electrification (fiscal incentives for vehicles, support for charging stations, and R&D funding, etc.)

Policymaking can be initiated by diverse entities.

- Policies that create a marketplace for electrification can emerge from the following:
 - ✓ Legislation
 - ✓ Regulations
 - ✓ Governors' Offices, State Agencies
 - ✓ Cities, Municipalities
 - ✓ Private businesses
 - ✓ Transit Agencies
 - ✓ Utilities

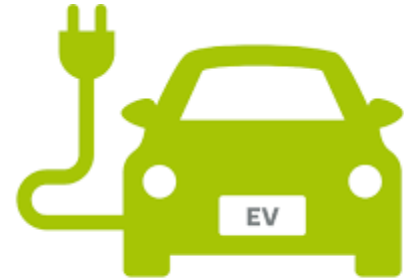


Electrification policymaking can also be built around specific objectives.

- Create a regulatory framework for EVs
- Encourage / enable the purchase of electric vehicles
- Increase the availability of charging infrastructure (and determine ownership rights)
- Electrify the light-duty vehicles and bus fleets
- Encourage utility investments in EVs
- Develop new utility rate designs
- Ensure equity and expanded access to EVs
- Provide consumer education and protection

EV policymaking can result in a number of initiatives.

- Policies that promote the adoption of EVs can include the following measures:
 - ✓ Rebates, tax credits, and grants for charging infrastructure
 - ✓ Rebates and tax credits for vehicles
 - ✓ Zero-emission vehicle mandates
 - ✓ Free HOV lane access
 - ✓ Fleet acquisition requirements
 - ✓ Licensing fees
 - ✓ Emissions testing fee exemptions



Federal Vs. State Policy

Federal Policy is often the baseline.

- Congress has set federal clean vehicle standards that are enforced by the EPA and the DOT.
 - ✓ The Clean Air Act (CAA) requires new engines and equipment sold or distributed in the USA to be certified to meet EPA-established emissions requirements.
- Federal statute within the CAA and the Environmental Policy & Conservation Act (EPCA) have been used to pre-empt state-level EV mandates.
- Legislation has been introduced to require auto manufacturers to sell a minimum of 50-percent zero emission vehicles by 2030, and 100-percent zero emission vehicles by 2040.

Despite pre-emption concerns, states are moving forward with EV policymaking.

- EV policymaking at the state level has been focused mostly on a few specific issues:
 - ✓ Gasoline vehicle phase-out
 - ✓ Vehicle electrification mandates
- Through legislation, the following states are leading the way:



California



Hawaii



Massachusetts



Washington

PNM is setting a course in New Mexico.

- A state law adopted in 2019 requires utilities to submit plans for how they will expand the infrastructure for electric transportation.
- The cornerstone of PNM's plan is a series of customer rebate proposals for installing charging infrastructure and charging during off-peak times.
- Utilities also can recover costs through increases in customer rates. PNM estimates its program will cost close to \$8.5 million over two years.



Remaining policy issues at the state level.

- In most regions, technology is advancing more rapidly than policy development.
 - ✓ Utilities are submitting proposals which put regulators in a reactive rather than proactive position.
- Through policy, what is the clearest path toward expanding Electric Vehicle Supply Equipment (EVSE) Infrastructure?
- Should charging stations be exempt from public utility regulation? Seven states (IA, KY, MO, MT, NM, NC, and VT have established this policy).
- Lingering concerns about federal pre-emption may stagnate policymaking at the state level.

The energy storage policy landscape
continues to evolve.

Sandia National Labs monitors and analyzes activity at
the federal and state levels and publishes information
in the Global Energy Storage Database, available at this
link:

[https://www.sandia.gov/ess-ssl/global-energy-storage-
database/](https://www.sandia.gov/ess-ssl/global-energy-storage-database/)

Q&A Session

Thank you!

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