The Status of EV Market Development in the US

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The Regulatory Assistance Project
Where We Work: RAP’s Strategic Venues

- U.S.
- E.U.
- India
- China
Today’s Major Topics of Discussion

• US Legal Framework
• Important Electric Industry Changes
• The Policy World
  • Federal
  • State/Regional
• Concluding Thoughts
**The Legal Framework**

• *Federalism*, a dynamic relationship between
  • the **federal** government and
  • **state** governments

• If the federal government isn’t doing something, states still may be able to

• **Regional** Activity: States may also coordinate among themselves, subject to conditions
Many Changes in the Electric Industry
The US Policy World
Policies at the Federal Level

• Executive Branch continues efforts to relax emissions regulations

• Congress not inclined to move EV clean transportation legislation, including extension of federal tax credit for EV purchases
Federal Efforts to Relax Emissions Standards

- **September 2019**: CA and 4 major automakers finalize agreement to maintain tougher standards
- **October 2019**: EPA blocks CA's agreement
- **November 2019**: GM, Toyota, and Hyundai align with federal government urging nationwide standard
- **November 2019**: CA and 23 states sue U.S. DOT to maintain tougher standards
Congressional Inaction

America’s Transportation Infrastructure Act (S.2302)

- Carbon Emissions Incentive Programs
- Support projects that would lower highway-related carbon emissions
- Competitive Grants for Alternative Fuel Infrastructure
- Funds to build hydrogen, natural gas, and electric vehicle fueling infrastructure along designated highway corridors
- Other Emissions Reduction Provisions
- Authorizes a new program to help states reduce traffic congestion, reduce truck idling at ports
- Additionally -- Federal Tax Credit
  - Tesla now phased out of federal tax credit
  - GM will follow in March
Volkswagen Settlement

• Trust funds from settlement with the US Environmental Protection Agency settlement with Volkswagen for car sales with a “defeat device” in diesel engines that changed the report of emission performance

• $3 billion settlement with federal authorities, making funds available to states
Policies at the State Level

- Zero Emissions Vehicles – ZEVs
- Supportive Legislation
- Utility Commissions and Utility Programs
- State Strategies
  - Notable Practices
    - Tariffs to control EV load
    - Licensing EVs
- Regional Participation
Zero Emission Vehicle (ZEV) States
State EV Legislation

Recent Legislation

- CA: BEV/PHEV rebate/AB 841 requires utilities to provide necessary utility-side electrical distribution infrastructure
- CO: BEV/PHEV, MD/HD rebate
- GA: HBBEV/PHEV, EVSE rebate
- HI: BEV/PHEV rebate extension
- ME: BEV rebate
- NY: PHEV tax exemption, 100% ZEV transit buses by 2035, 800 DCFC by 2025
- NJ: 100% ZEV transit buses purchases by 2032, 400 DCFC by 2025, $5k EV rebate
- WA reintroduced 2019 EV legislation to support
  - Statewide climate goals
  - Clean fuel standard credit program
  - New funding for public EV charging targeting rideshare vehicles
One State Example: Colorado

• Expanded State EV tax credits
• EV charging grant program
• Utilities required to file transportation electrification plans
• Governor’s Executive Order – all remaining VW Settlement funds to go toward EVs and charging
• State award $16.5m for E-Transit buses
State Awards for E Buses in 2019
## Public Utility Programs – 2019

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Sample of Other State Strategies

• NY DPS has filed reports in support of utility-led EV charging deployment

• In 2020 Dominion Energy seeks to deploy 1,000 electric school buses in Virginia

• Utilities continue to explore vehicle-grid integration (VGI):
  • ConEd (NY) exploring bidirectional power flow (V2G) with school buses
  • California VGI Working Group seeking to establish statewide standards and targets
Controlling Load

• EVs can be a benefit … or a problem for the electric grid.

• Drawing high amounts of power for short periods of time.
Controlling Load

**EV load must be managed** effectively, otherwise all ratepayers will share in the expensive costs of upgrading and maintaining the distribution system to accommodate increased load on the system.

Managing Load

Pairing EV adoption and EV charging with intelligent rate design can improve electric distribution system utilization and create downward pressure on rates through load management and system peak reduction.

Pricing for Time of Use

TOU Rate Deployment – Work to Be Done

Imposition of Fees on EVs

• Over 35 US States have various taxes and other mechanisms unable to keep up with transportation infrastructure costs
• These mechanisms designed largely without regard for the ways bridge and roadway costs are incurred
• Questions
  • How has transportation infrastructure traditionally been funded?
  • How can states improve on that track record by adding electrified transport so it will contribute to maintaining and improving transportation infrastructure?
• Consider the RAP publication: Revisiting the Gas Tax (Feb. 2019)
Regional Activities: The Transportation and Climate Initiative -

• A regional collaboration of 12 Northeast and Mid-Atlantic states and the District of Columbia

• Goal: To improve transportation, develop the clean energy economy and reduce carbon emissions from the transportation sector

• Modeled on the Regional Greenhouse Gas Initiative (RGGI), a power sector cap and invest program started in 2009

• Participating states are: CT, DE, ME, MD, MA, NH, NJ, NY, PA, RI, VT, and VA
Regional Activities: Northeast States for Coordinated Air Use Management – NESCAUM

- NESCAUM – a longstanding association of Northeastern US regional air quality agencies
- July 2020 – 15 states and the District of Columbia announce joint memorandum of understanding (MOU): an agreement to work collaboratively to advance and accelerate the market for electric medium- and heavy-duty vehicles
- Goal: 100% of all new medium- and heavy-duty vehicle sales be zero emission vehicles by 2050 with an interim target of 30% zero-emission vehicle sales by 2030
- States signing the MOU: CA, CT, CO, HI, ME, MD, MA, NJ, NY, NC, OR, PA, RI, VT, and WA
Concluding Thoughts

• Federal **inaction** = continued **uncertainty**
• **States** will continue to **lead** EV policy and funding
• New and increased **EV fees** likely
• **EV-friendly states** will support **VW settlement** awards for EVs and charging
• **EV load management** continues to be the **key** to quicker and lower cost deployment and utility and consumer benefits
Electrification: Some RAP Resources

- *Roadmap for Electric Transportation*

- *Taking First Steps: Insights for States Preparing for Electric Transportation*

- *Beneficial Electrification: Ensuring Electrification in the Public Interest*

- *Beneficial Electrification of Transportation*

- *Getting From Here to There: Regulatory Considerations for Transportation Electrification*

- BLOG: *We All Wish We Were More Flexible: Electrification Load as a Grid Flexibility Resource*
THANK YOU FOR YOUR ATTENTION!

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