

STATE EV POLICY ACCELERATOR: REVING IT UP IN PENNSYLVANIA

Drive Electric PA Coalition Meeting
July 16, 2020



Electrification
Coalition

Electrification Coalition

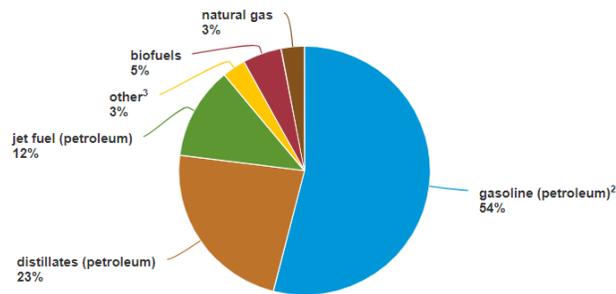
Our Motivation: National & Energy Security

92% of U.S. transportation powered by oil...

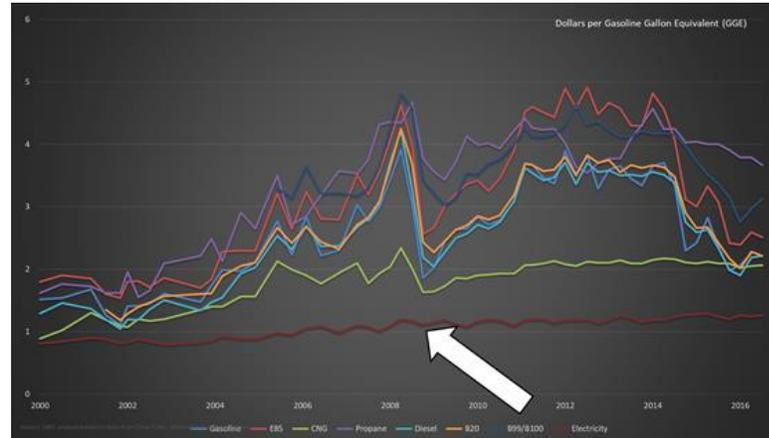
...a resource with volatile prices that the US spends \$80 billion per year to protect...

...that is a leading emissions source

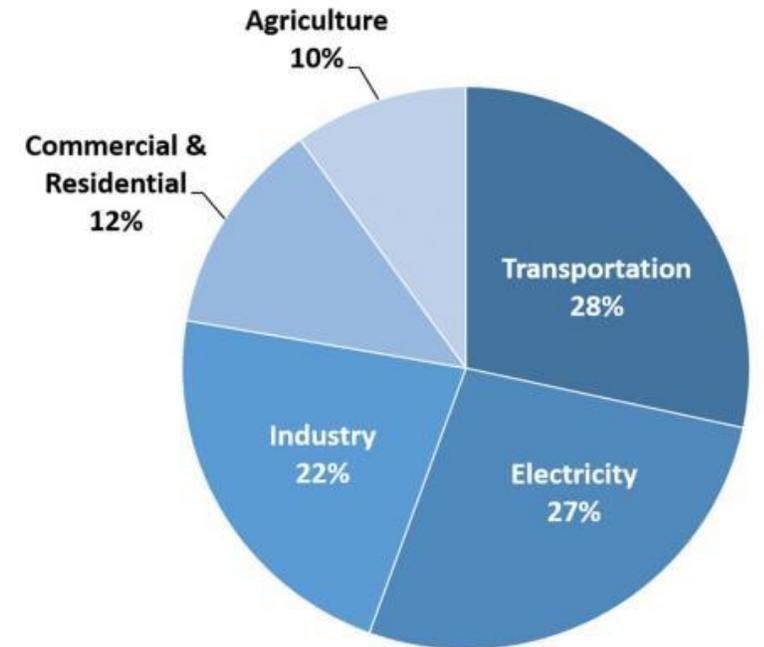
U.S. transportation energy sources/fuels, 2018 ¹



1. Based on energy content



Total U.S. Greenhouse Gas Emissions by Economic Sector in 2018



Source: EIA

**“THIS IS A
NATIONAL
SECURITY
ISSUE FOR
THE UNITED
STATES.”**

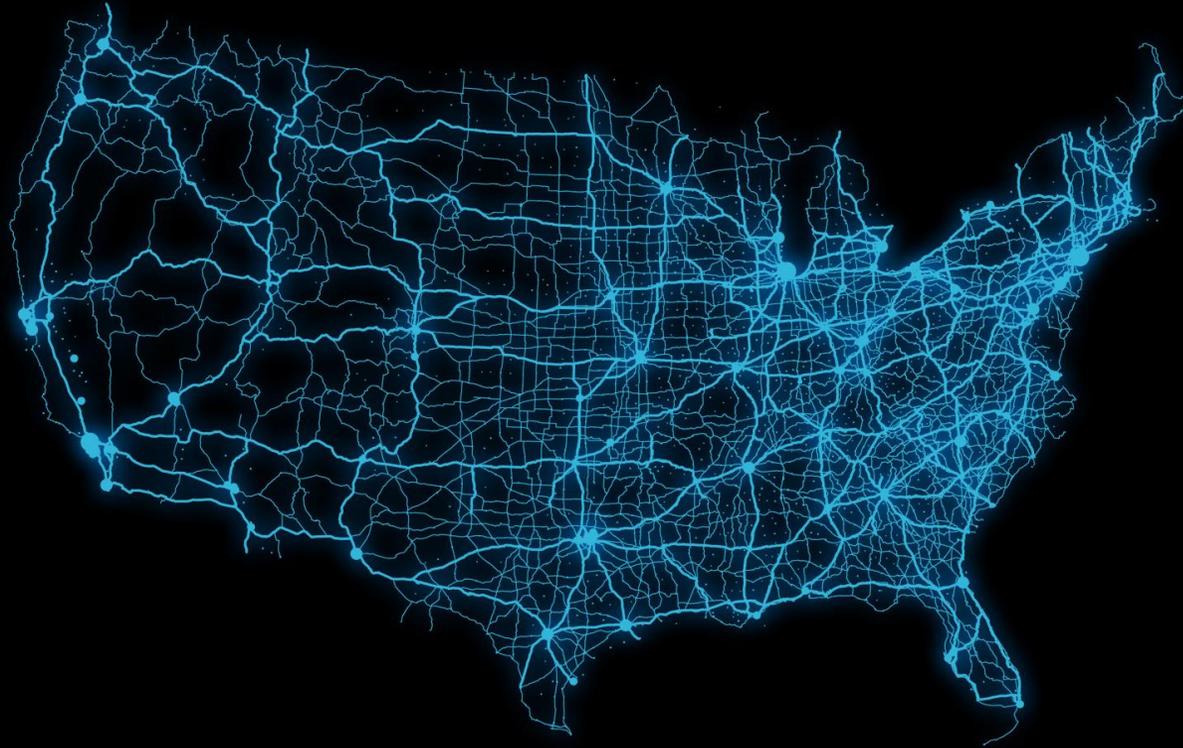
-Admiral Dennis Blair (Ret.),
*Former Director of National Intelligence;
Former Commander in Chief of U.S. Pacific
Command*





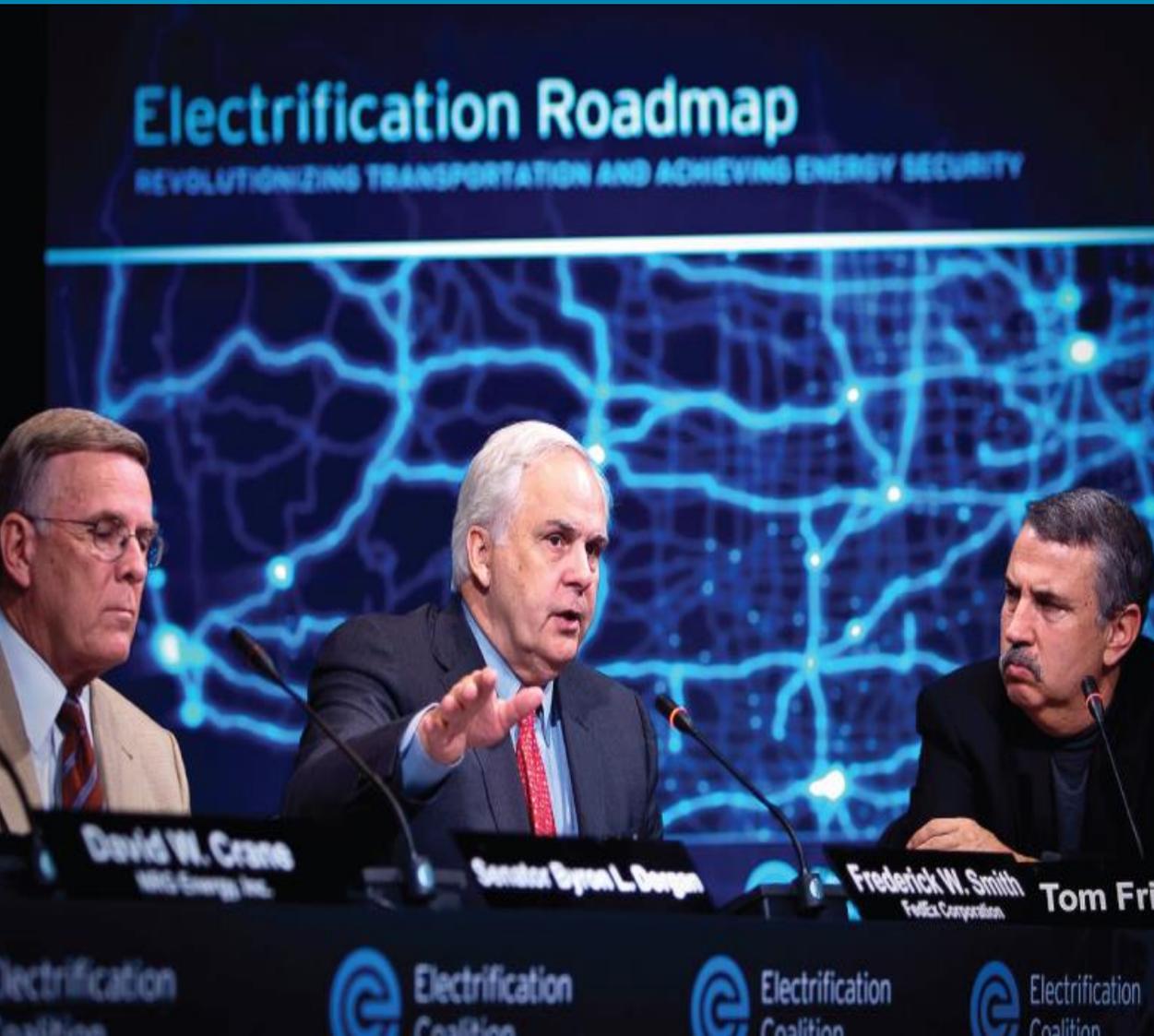
Electrification
Coalition

Getting to Know the Electrification Coalition



Electrification Coalition

Our Strategy



- › Leading research and analyses
- › Building political and ideological support with diverse coalitions/stakeholders
- › Advocacy, education and capacity development
- › Corporate engagement, but not a trade organization
- › On-the-ground deployment of projects to scale

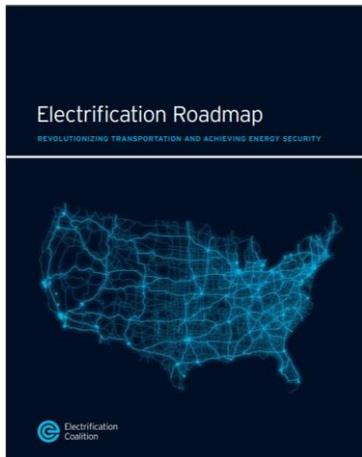
Electrification Coalition

Our Impacts

- Engage directly with cities and state partners to support policies and actions to advance electrification – case studies/peer-to-peer/best practices.
- Utilize national/state/local relationships that can be leveraged to influence programs.
- Expand support and education of EV-friendly policy matrix.
- Create market influence and high profile proof-of-concept programs.
- Expand capacity and technical abilities of partners/stakeholders.

ELECTRIFICATION COALITION

The Electrification Coalition (EC) works to accelerate the adoption of electric vehicles to reduce the national security, economic and environmental threats caused by our nation's oil dependency.



American Cities Climate Challenge



Freight
Electrification
Pilot

State EV Policy
Accelerator

Electrification Coalition

Our Team: Subject Matter Experts Based Across the Country



Ben Prochazka (NC)
National Director

- Has spent a decade leading electrification efforts for the EC



Natalia Swalnick (CA)
*Senior Director
EV Programs*

- Oversees all local Implementation programs



Sue Gander (DC)
*Managing Director
EV Policy*

- Leads local, state, & federal policy support



Andrew Linhardt (DC)
*Program Manager
EV Policy*

- Implements state EV policy program



Matt Stephens-Rich (OH)
Program Manager

- EV Specialist, Smart Columbus



Sarah Reed (CA)
Program Manager

- Supports Climate Mayors EV Purchasing Collaborative



Alissa Burger (PA)
Program Manager

- Supports state policy work & freight program



Aaron Viles (KY)
Program Manager

- Supports state organizing efforts & community work to increase EV adoption



Cher Taylor (DC)
Outreach & Engagement

- Experience in energy access; supports EV Collaborative



Travis Buholtz (GA)
EV Technical Advisor

- Advises ACCC & Freight Electrification



Jared Walker (GA)
Technical Lead

- Technical lead of fleet electrification



Adam Snider (DC)
Communications Specialist

- Provides communications support for all projects and programs



Torin Spencer (FL)
EV Specialist

- Supports fleet electrification in Orlando



Will Drier (CO)
Policy Analyst

- Supports the policy program



Brad Nelson (CO)
Policy Analyst

- Supports the ACCC & policy program



Sarah Fischer (OH)
EV Specialist

- Supports Climate Mayors EV Purchasing Collaborative

Coming Soon

- Program Manager, Bus Electrification
- State Field Organizers

COVID-19: Significant State Impacts

COVID-19 State Budget Shortfalls Could Be Largest on Record

Total shortfall in each fiscal year, in billions of 2020 dollars



* Estimates based on CBPP calculations using Congressional Budget Office and Goldman Sachs unemployment estimates. Does not reflect use of rainy day funds or federal aid already enacted.

Source: CBPP survey of state budget offices (through 2013); CBPP calculations (2020-2022)

- Moody's Analytics: States will face \$158 billion to \$203 billion in "fiscal shock" through fiscal year 2021 due to decreased revenues
- AASHTO: States will lose an average of 30% of transportation revenues through November 2021
 - State DOTs requested \$50B in immediate funding from Congress to offset loss
- CARES Act provides:
 - \$25B to assist public transit agencies
 - \$120B to assist states and municipalities

COVID-19: SAFE/EC RESPONSE



15 recommendations, focused on support for the transportation and energy sectors, to help stimulate the economy and lay the foundation for sustained growth.

Of the recommendations, more than half are directed at measures that will directly support continued electrification of the transportation sector

[Read the full report and watch the press conference at https://secureenergy.org/gama/](https://secureenergy.org/gama/)

- Federal funding for transportation infrastructure projects and to offset transportation revenue losses, while supporting improvements transportation infrastructure during the crisis.
- Accelerating transportation's electrification and ensuring the technology and supply chains are in the U.S. by reforming vehicle tax credits to include all classes and for a nationwide infrastructure.
- Stimulating the auto industry with a trade-in incentive, including a bonus incentive for the alternative fueled vehicles that represent the future of the industry.
- Promoting a U.S.-based supply chain for rare earth elements by chartering a cooperative seeded with \$500 million in capital as 100 percent of all rare earths are currently processed in China.
- Stimulating investments in U.S. manufacturing capacity and creating jobs in building next generation transportation technologies through the Advanced Technology Vehicles Manufacturing Loan Program.
- Support emerging transportation options by providing CARES Act flexibility to support micromobility and TNCs, which can provide less-crowded commuting alternatives.

Electrification Coalition

State EV Policy Accelerator Builds Upon Programs Around the U.S.

State EV Policy Accelerator: Priority States



Powered by Bing
© GeoNames, HERE, MSFT

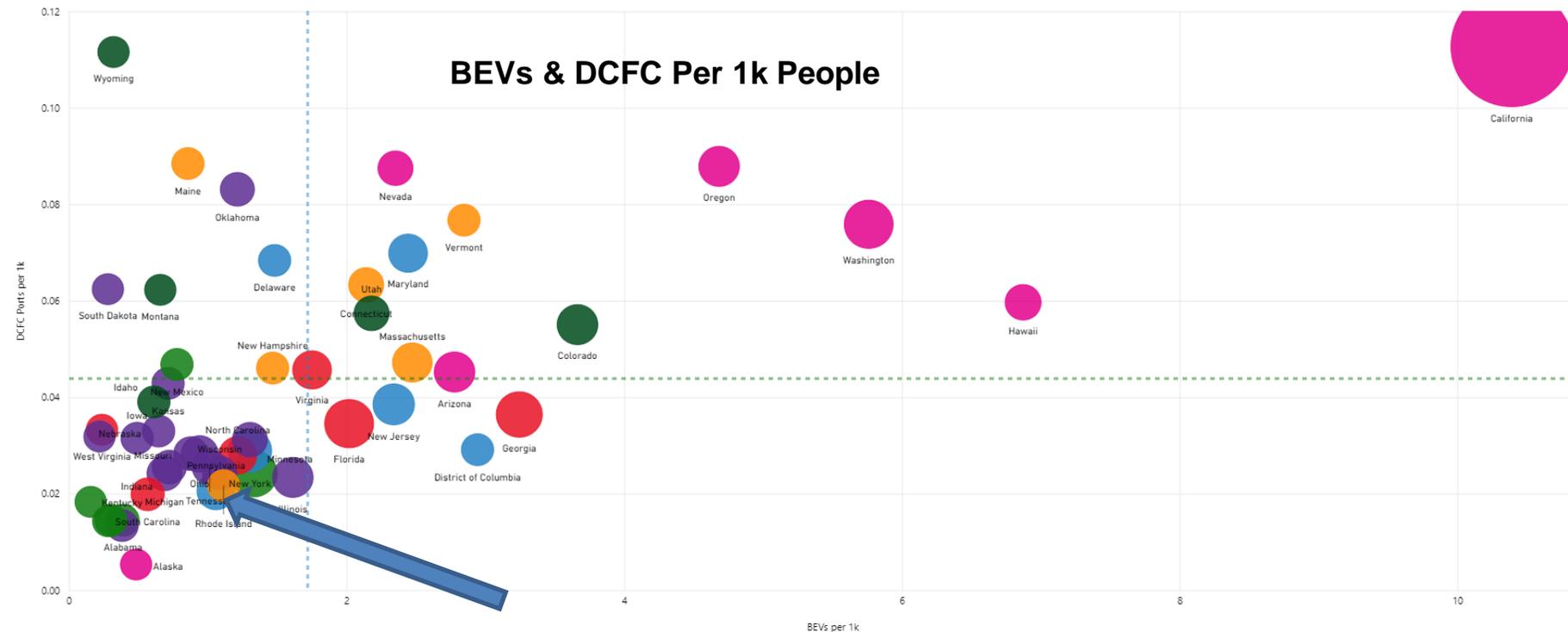
- **State EV Policy Accelerator**
 - MI, NV, NC, PA, VA
- **American Climate Cities Challenge**
 - PA: Pittsburgh and Philadelphia
 - NC : Charlotte
- **Climate Mayors EV Purchasing Collaborative**
 - MI: Ann Arbor, Detroit, Grand Rapids
 - NV: Reno
 - NC: Charlotte, Durham, Greensboro, Orange Co.
 - PA: Pittsburgh, Philadelphia
 - VA: Alexandria, Charlottesville, Newport News
- **EV Community Accelerators**
- **Freight Electrification**

Pennsylvania EV Market in Context

State	EV Sales (2019)	EV Market Share (2019)	BEVs per 1k	DC Ports per 1k	DCFC Ports per 1k BEVs	L2 Ports per 1k EVs
Washington D.C	1,008	4.77%	2.94	0.03	11.43	142.70
Maryland	6,762	2.06%	2.44	0.07	29.07	74.07
Delaware	782	1.65%	1.48	0.07	46.26	45.11
New Jersey	9,638	1.59%	2.34	0.04	16.47	28.00
New York	14,382	1.40%	1.30	0.03	21.96	72.61
Pennsylvania	5,960	0.91%	1.06	0.02	19.60	54.87



[Back to report](#) | BEVs & DC FAST CHARGING PER 1,000 PEOPLE



Pennsylvania:

Light-Duty & Medium/Heavy-Duty Fleet Opportunity

LDVs – What if 100% of Annual LDV Sales Were EVs?

State	Average Annual LDV Sales (Projected: 2020-2030)	CO2 Emissions Reduction (Metric Tons)	Equivalent ICE Vehicles Removed from the Road	Percentage Emission Reduction
PA	701,700	1,360,950	479,900	68%

MD & HD Trucks – What if 100% of Registered Trucks Were EVs?

State	Registered Diesel Trucks (Public & Commercial)	Annual CO2 Reduction: (Metric Tons)	Equivalent ICE Trucks Removed from the Road	Percentage Emission Reduction
PA	2,896,423	47,637,238	1,817,331	63%

Illustrative Scenarios: Applying best available data

*MD & HD Trucks: Registration numbers from 2017 FHWA Data (Assumed 50% of Trucks Diesel Powered)

*GHG Reduction Estimates: Based on current state energy mix

*LDV Annual Sales: Based on average annual LDV sales projections from 2020-2030

Pennsylvania: LD EV Market

Q1 2020:

- EV Sales (BEV & PHEV) = 1,550
- LDV Market Share = 1.37%

2019:

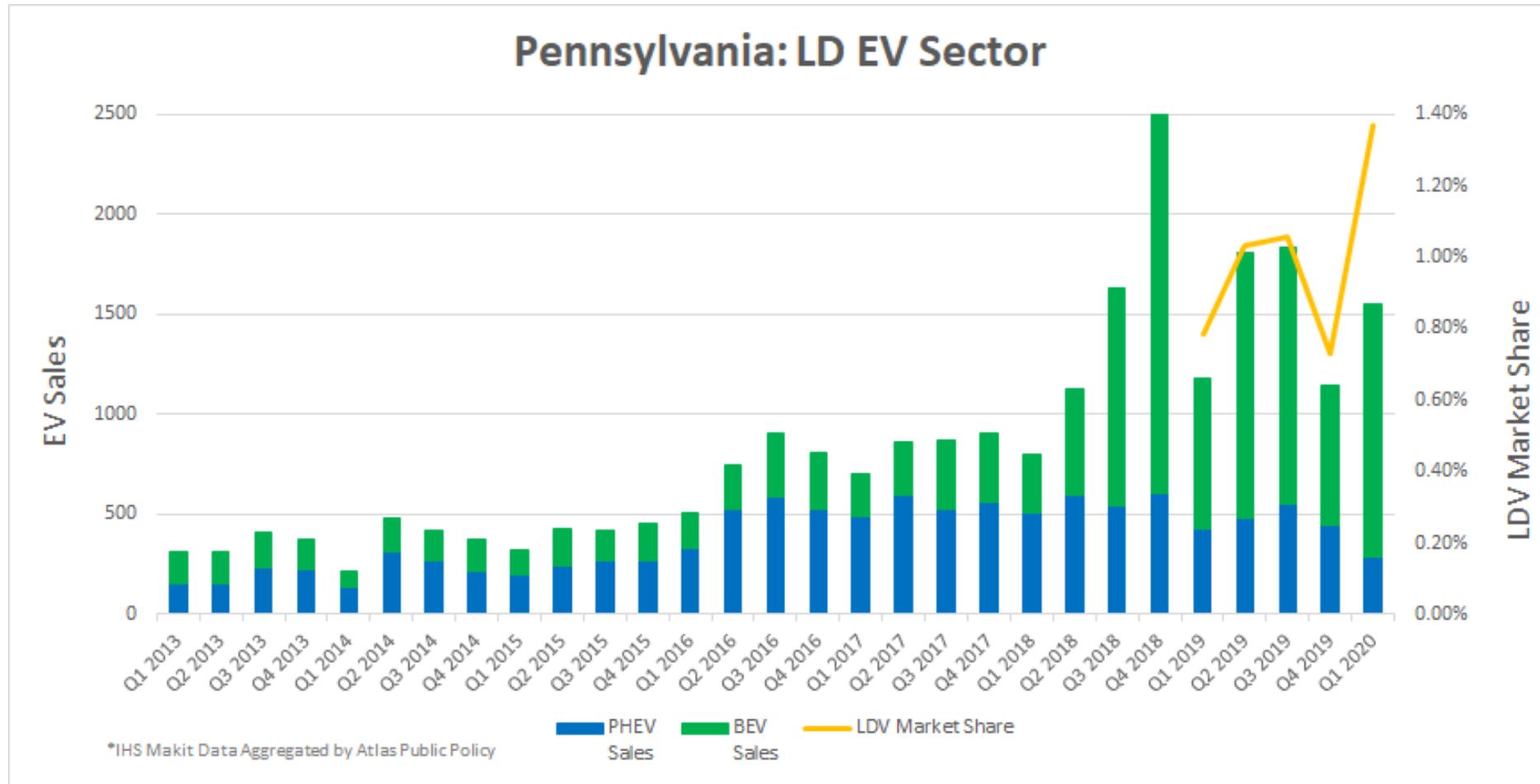
- EV Sales (BEV & PHEV) = 5,959
- LDV Market Share = 0.91%

2013 – 2019:

- EV Sales (BEV & PHEV) = 24,406
- Avg Annual Sales Growth = 31%

Summary

- EV Sales peaked at 2,500 in Q4 of 2018 (Primarily due to phase out of federal subsidies for some manufacturers)
- BEVs proportion of the EV market continues to increase as consumers move away from PHEVs.
- Despite the Covid19, Q1 2020 was the highest first quarter EV sales.



Pennsylvania: Charging Port Deployments

Q1 2020:

Level 2

- Ports = 1,350
- EVs per Charger (BEV & PHEV) = 19

DCFC

- Ports = 255 ports
- BEVs per Charger = 53

2013 – Q1 2020

Level 2

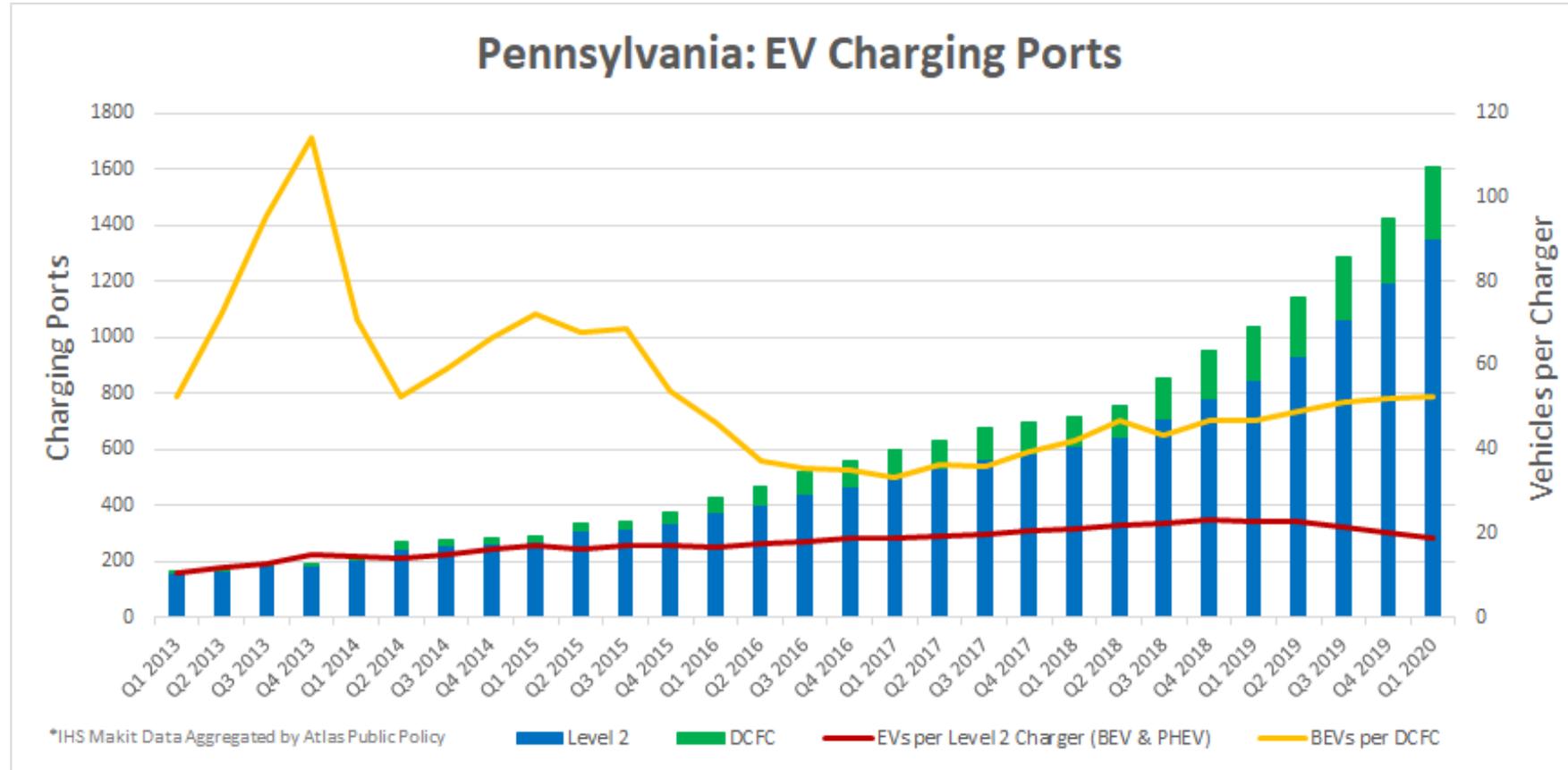
- Quarterly Avg # increase = 43
- Quarterly Avg % increase = 8.11%
- EVs per Charger (BEV & PHEV) = Increased from 10 to 19

DCFC

- Quarterly Avg # Increase = 9
- Quarterly Avg % Increase = 14.44%
- BEVs per Charger = Unchanged at 53

Summary

- Significant # increases in EVSE deployments even as % growth has decreased over time
- ICCT: 25 EVs/BEVs per charger or less to sustainably increase EV market share



Pennsylvania EV Policies to Date

Adopted Policies:

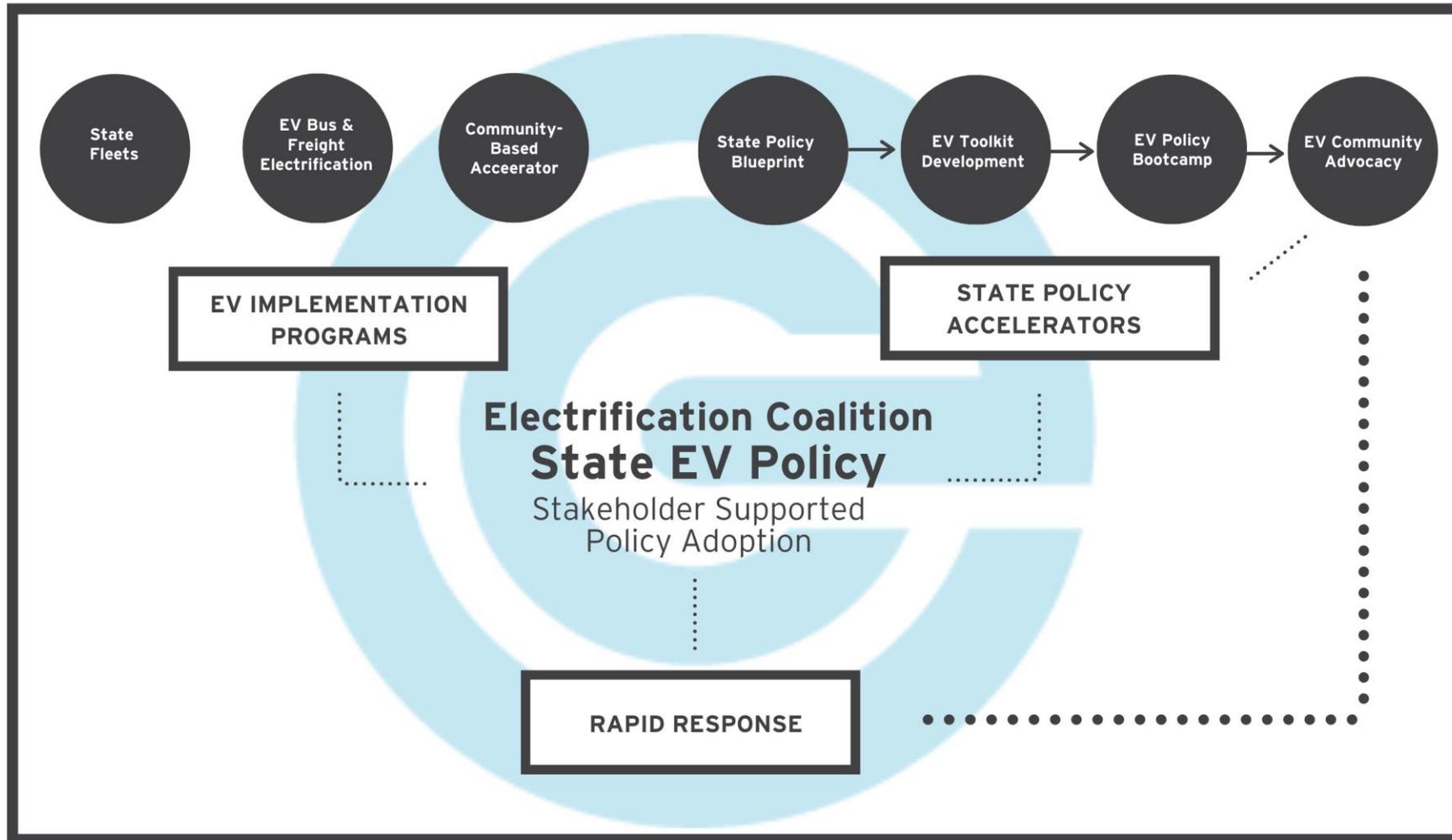
- LDV: Tax Rebate (AFIG Program)
- MD & HD: Purchase Incentive
- MD & HD: EVSE Public Rebate/Grant
- Utility/PUC Authorized to Develop Electrification Plan
- Direct Sale/EV Only OEM Access (Partially Enacted)
- Public EVSE Rebate/Grant
- Workplace EVSE Rebate/Grant
- MD & HD: Gov Fleet Purchase Incentive
- LDV: Gov Fleet Purchase Incentives
- Fleet Mandates
- Executive order on EV Adoptions
- Regional EV Corridor Support (TCI)
- VW EVSE Max (15%)
- Residential EVSE Rebate
- US Climate Alliance
- RGGI (*pending)

Utility Policies:

- Utility Rebate or Discount: EVSE
 - Duquesne Light Company (Commercial – L2)
- Utility Rebate or Discount: EVs
 - PECO
 - Duquesne Light Company

Electrification Coalition

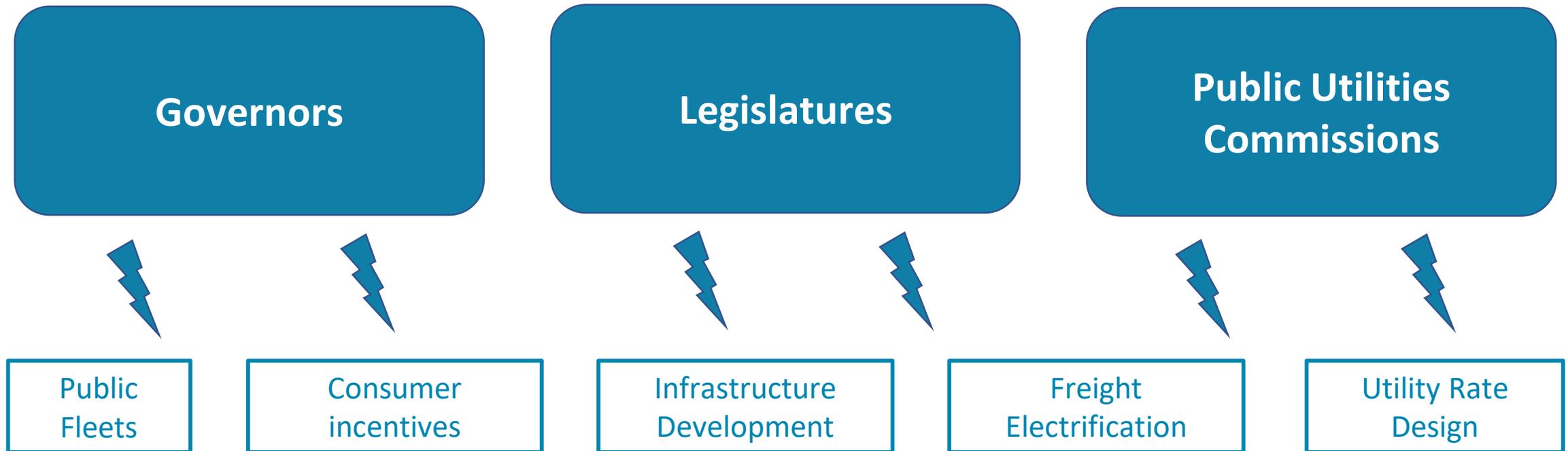
State Policy Accelerator



Electrification Coalition

State EV Policy Accelerator

The EC will be partnering with state leaders to support and create ambitious policy in order to drive all sectors of the EV market.



PA: EC Ideas for Policy Collaboration

- PA EV Roadmap Implementation
- Legislation (SB 596)
- ZEV/LEV support, complementary policies
- MHDEV Opportunities
- Transit/School Bus Electrification
- Possible RGGI funding for Evs
- \$17.7 million VW funds for LDV EVSE
- PUC opportunities on rate design



Pennsylvania Electric Vehicle Policy Bootcamp

August 6, 2020 10 am – 2 pm

Please join the Electrification Coalition (the EC) for a Pennsylvania-specific electric vehicle (EV) Policy Bootcamp to understand the wide ranging benefits of deploying EVs on a mass scale across Pennsylvania, to learn where the market and technology are headed and to hear how you can play a part in the acceleration! This is your chance to hear the latest EV information from leading players at the local, state and national levels.

Registration Link: <https://bit.ly/PAEVcamp>



Electrification Coalition

Changing the Future of Transportation.

Online:

www.electrificationcoalition.org

Contact:

Alissa Burger

Program Manager, Electrification Coalition
aburger@electrificationcoalition.org



1111 19TH STREET NW
SUITE 406
WASHINGTON, DC 20036

TEL: 202-461-2360
FAX: 202-318-8934
ELECTRIFICATIONCOALITION.ORG