Electric Vehicle Readiness in the Capital District

CDRPC Planning and Zoning Webinar Series

June 4, 2020


Capital District Clean
Communities Coalition

What is Clean Cities?

Clean Cities advances the energy, economic, and environmental security of the United States by supporting local actions to cut petroleum use in transportation.

- Reduced petroleum consumption
- Reduced greenhouse gas (GHG) emissions
- Reduced dependence on imported petroleum

CAPITAL DISTRICT CLEAN COMMUNITIES

CDTC CAPITAL DISTRICT TRANSPORTATION COMMITTEE

Technical Portfolio

Light-, Medium-, and Heavy-Duty Vehicles


Energy Efficient Mobility Systems and Technologies

Alternative Fuel Infrastructure

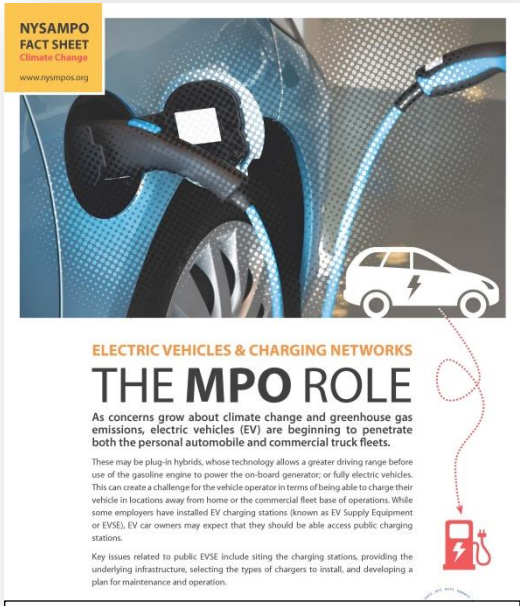
CAPITAL DISTRICT CLEAN COMMUNITIES

CDTC CAPITAL DISTRICT TRANSPORTATION COMMITTEE

Alternative Fuels Planning & Outreach

TCI Northeast EV Network (2012)

Proterra EV Bus Demo (2013)



NYSAMPO CCWG Fact Sheet (2014)

Capital District EV Charging Plan (2016)

EV Truck Voucher Workshop (2013)

EVSE Installer Training (2013)

Zero Emission Vehicle (ZEV) Plan History

Capital District EV Charging Station Plan (2016)

CAPITAL DISTRICT CLEAN COMMUNITIES

CDTC CAPITAL DISTRICT TRANSPORTATION COMMITTEE

Why Update the Plan?

- Document changes in Electric Vehicle Technology and Infrastructure since 2016

- Expand scope to include other Zero Emission Vehicles (ZEV) beyond just Electric Vehicles

CAPITAL DISTRICT CLEAN COMMUNITIES

CDTC CAPITAL DISTRICT TRANSPORTATION COMMITTEE

Zero Emission Vehicle Trends

EV Trends Data Sources

EVs on the Road

- NYS DMV Registration Data
  (January 2020)

EV Charging Stations

- USDOE Alternative Fuels Data Center (AFDC)
  (January 2020)

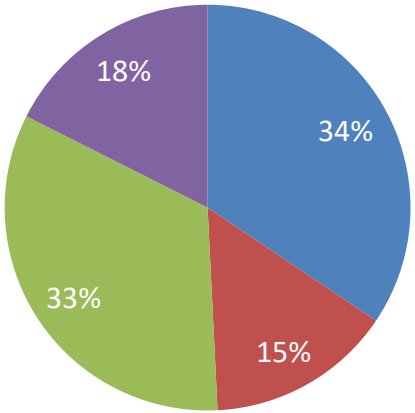
CAPITAL DISTRICT CLEAN COMMUNITIES

CDTC CAPITAL DISTRICT TRANSPORTATION COMMITTEE

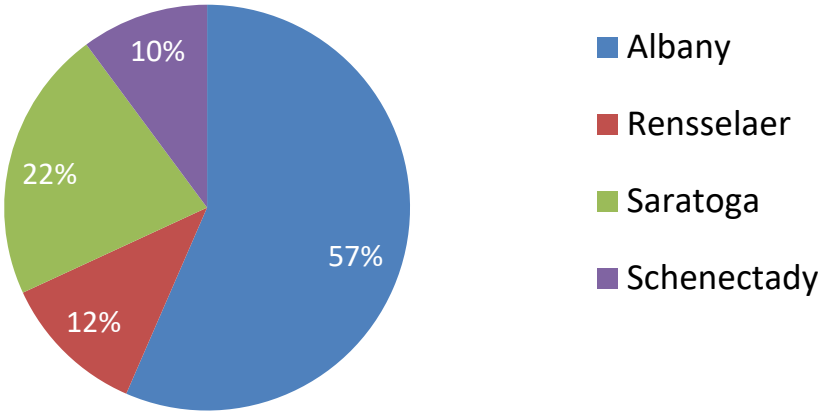
Electric Vehicle Landscape (2016)

- 831 Registered EVs
- 69 Public Level 2 Charging Station Locations

Percent of EVs By County



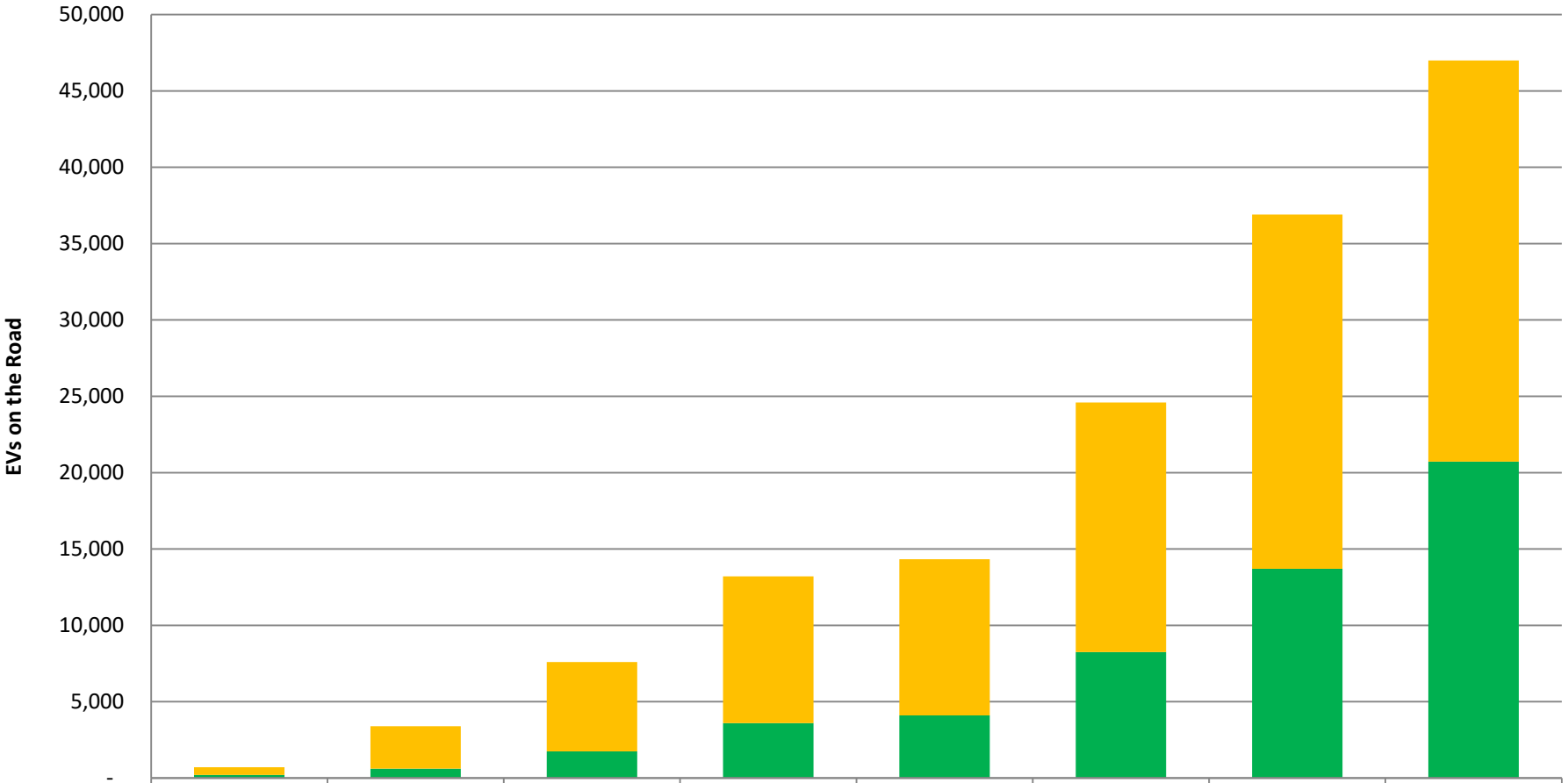
Percent of Public Charging Locations by County



CAPITAL DISTRICT CLEAN COMMUNITIES

CDTC CAPITAL DISTRICT TRANSPORTATION COMMITTEE

EVs on the Road - NYS

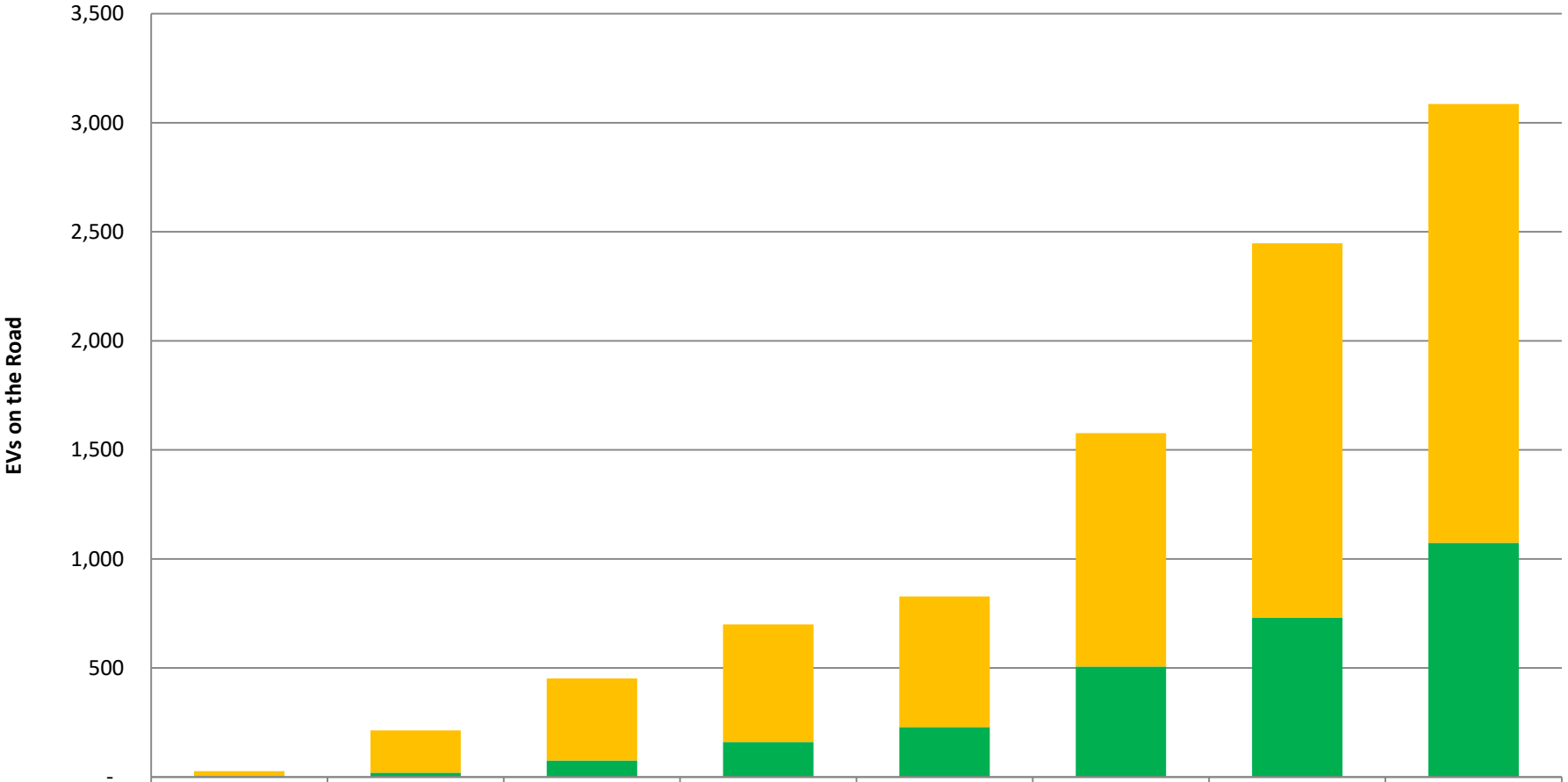


	2012	2013	2014	2015	2016	2017	2018	2019
PHEV/EREV	508	2,775	5,853	9,616	10,232	16,344	23,197	26,271
BEV	204	615	1,747	3,595	4,102	8,253	13,706	20,720

CAPITAL DISTRICT CLEAN COMMUNITIES

CDTC CAPITAL DISTRICT TRANSPORTATION COMMITTEE

EVs on the Road – Capital District

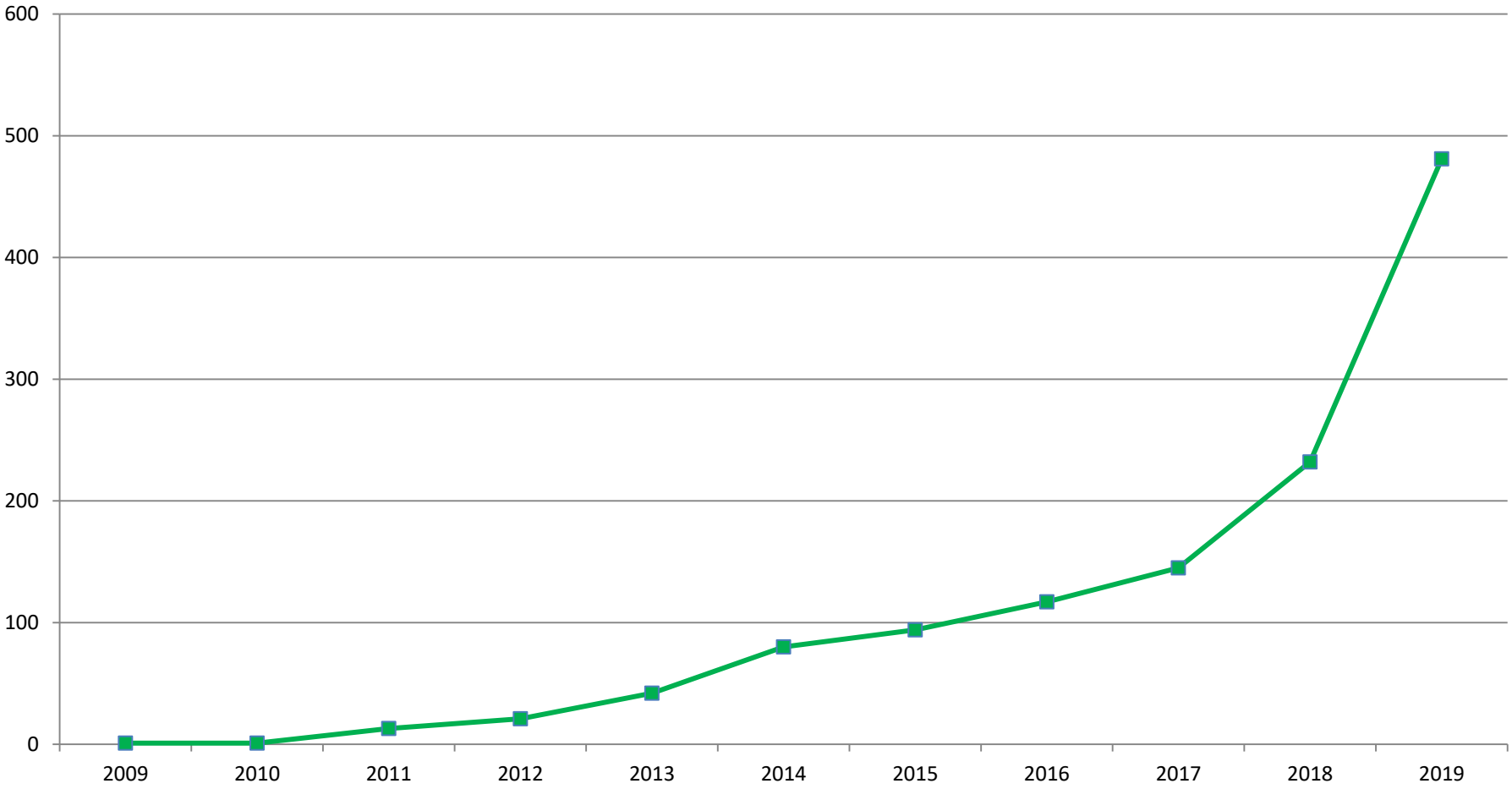


	2012	2013	2014	2015	2016	2017	2018	2019
PHEV/EREV	23	194	376	539	599	1,070	1,717	2,012
BEV	4	20	76	161	229	507	730	1,074

CAPITAL DISTRICT CLEAN COMMUNITIES

CDTC CAPITAL DISTRICT TRANSPORTATION COMMITTEE

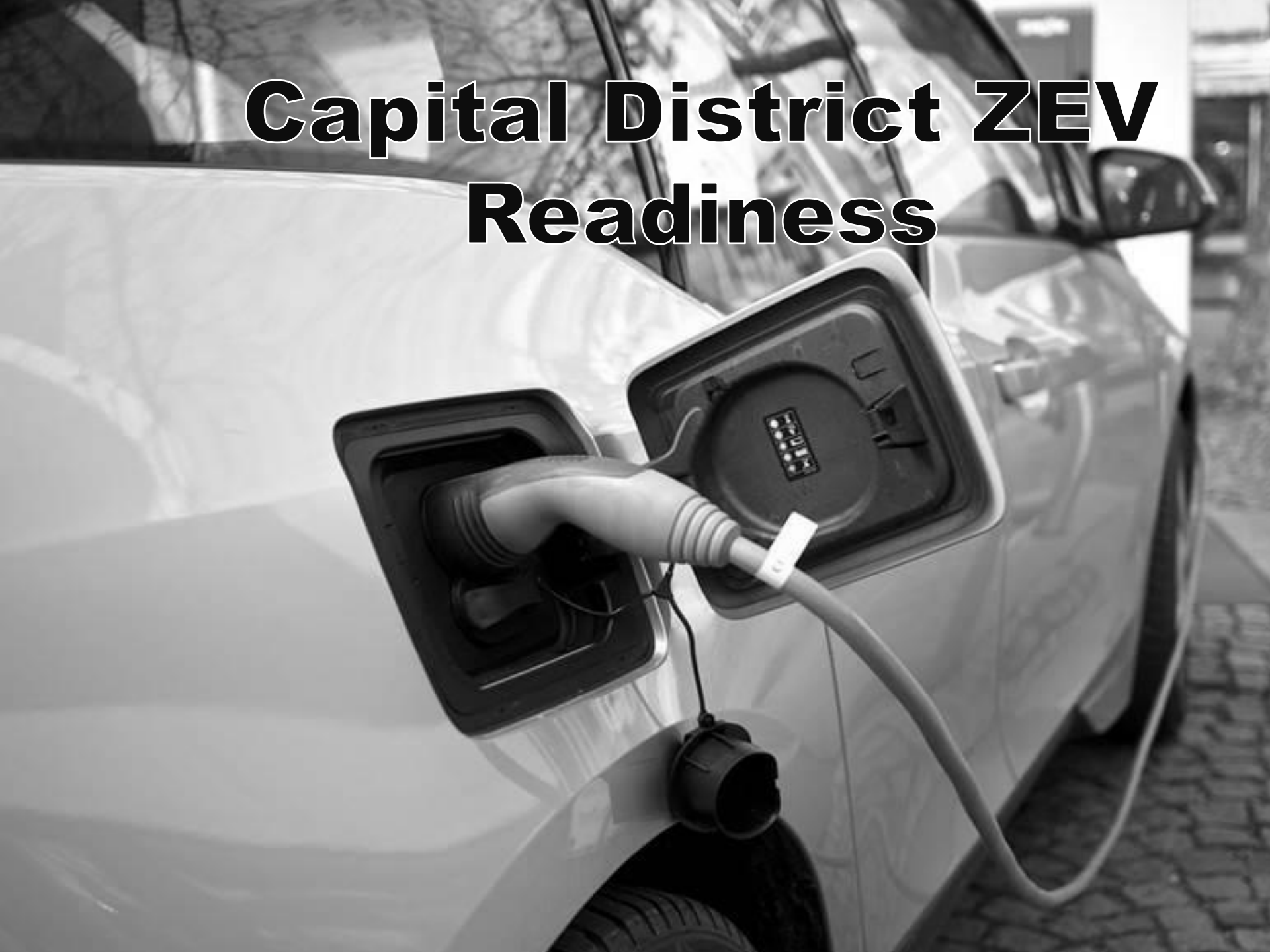
Charging Outlets – Capital District



CAPITAL DISTRICT CLEAN COMMUNITIES

CDTC CAPITAL DISTRICT TRANSPORTATION COMMITTEE

Capital District ZEV Readiness



ZEV Readiness

- Multiple incentive programs for EV purchases and new charging infrastructure
- New York State commitment to cleaner, greener energy
- Commute distances well aligned with existing EV range

CAPITAL DISTRICT CLEAN COMMUNITIES

CDTC CAPITAL DISTRICT TRANSPORTATION COMMITTEE

ZEV Rebates

- Charge NY Drive Clean Rebate
- Federal Electric Vehicle Tax Credit
- Charge Ready NY charging station rebate
- NYS Truck Voucher Incentive Program

CAPITAL DISTRICT CLEAN COMMUNITIES

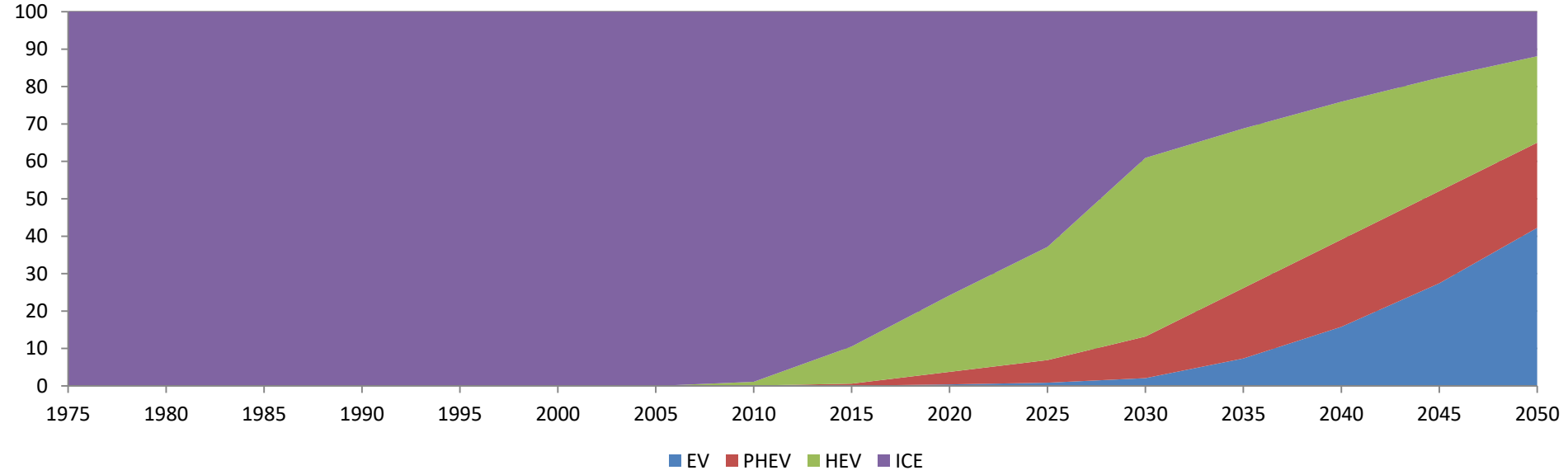
NYS Climate Legislation

- Climate Leadership and Community Protection Act
- 85 % reduction in GHG emissions by 2050 (from 1990 levels)
- 100 % carbon free electricity by 2040

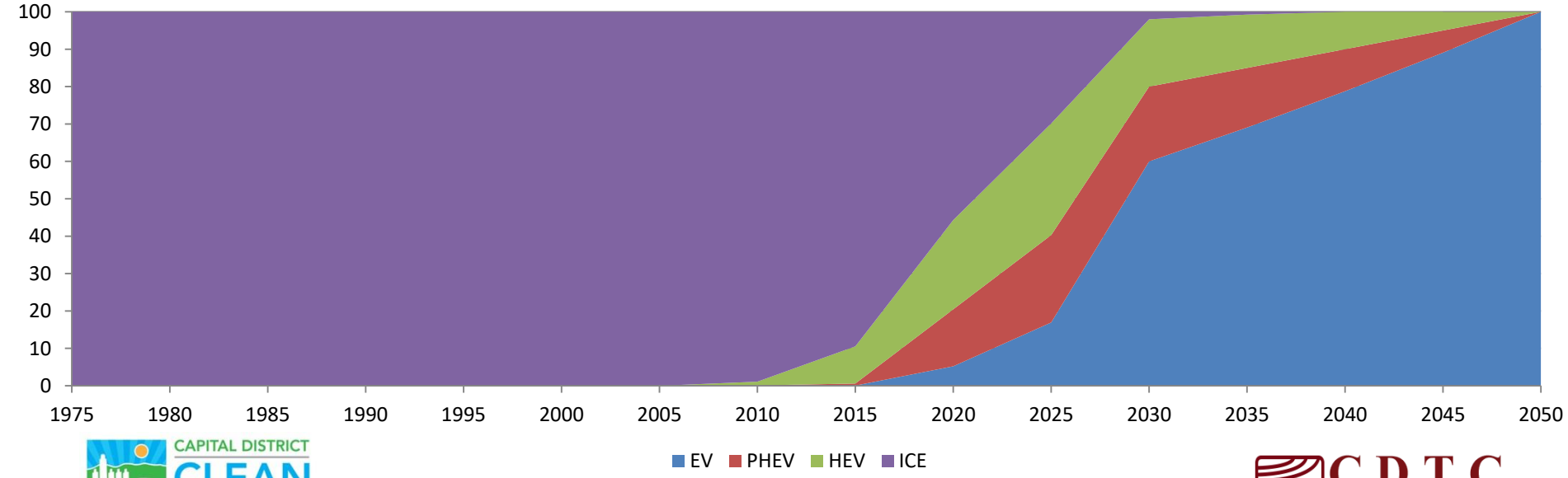
CAPITAL DISTRICT CLEAN COMMUNITIES

CDTC CAPITAL DISTRICT TRANSPORTATION COMMITTEE

Pessimistic EV Market Share Scenario



Optimistic EV Market Share Scenario



CAPITAL DISTRICT CLEAN COMMUNITIES

CDTC CAPITAL DISTRICT TRANSPORTATION COMMITTEE

Regional Commutes

- Average distance traveled in a daily commute to work is approximately 11 miles one way

- 53 models with an all-electric range of 22 miles or greater

Electric Vehicle Models with >= 22 miles of All - Electric Range			
Manufacturer	**BEV Models**	**PHEV Models**	**Total**
Tesla	17		17
Kia	3	2	5
BMW	2	2	4
Ford	2	2	4
Hyundai	2	1	3
Nissan	3		3
Chevrolet	1	1	2
Honda	1	1	2
Jaguar	2		2
smart	2		2
Toyota		2	2
Audi	1		1
BYD Motors	1		1
Chrysler		1	1
Fiat	1		1
Mitsubishi		1	1
Volkswagen	1		1
Volvo		1	1
Total	**39**	**14**	**53**

CAPITAL DISTRICT CLEAN COMMUNITIES

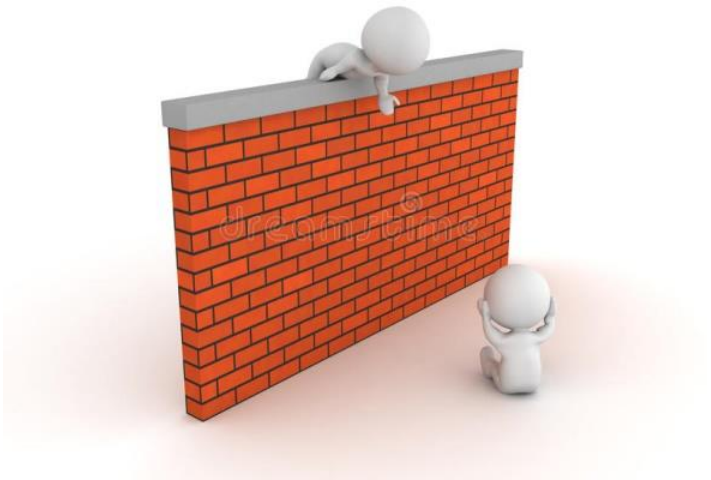
CDTC CAPITAL DISTRICT TRANSPORTATION COMMITTEE

Barriers & Opportunities

EV Barriers & Opportunities

Barriers

- Electricity Demand Charges
- Access to at home charging
- Electric Vehicle Pricing



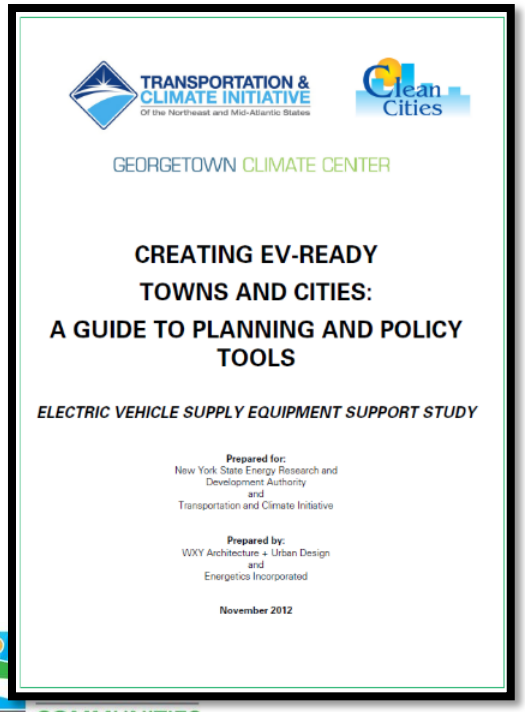
Opportunities

- Municipal EV Readiness Policy
- Elected Officials Outreach and Education
- General Public Outreach and Education

CDTC
CAPITAL DISTRICT TRANSPORTATION COMMITTEE

What's Next?

- Funding the Transition to an Electric School Bus Fleet Webinar: June 23, 2020, 2:00-3:00pm
- Municipal EV Readiness Workshop: Date TBD


TRANSPORTATION & CLIMATE INITIATIVE
Of the Northeast and Mid-Atlantic States

Clean Cities

GEORGETOWN CLIMATE CENTER

CREATING EV-READY TOWNS AND CITIES: A GUIDE TO PLANNING AND POLICY TOOLS

ELECTRIC VEHICLE SUPPLY EQUIPMENT SUPPORT STUDY

Prepared for:
New York State Energy Research and Development Authority
and
Transportation and Climate Initiative

Prepared by:
WXY Architecture + Urban Design
and
Energetics Incorporated

November 2012

COMMUNITIES

CDTC
CAPITAL DISTRICT TRANSPORTATION COMMITTEE

Comments / Questions

View the CDCC ZEV Plan:
https://www.cdtcmpo.org/images/advisorycommittees/smartcomm/CDCC_ZEV_Plan_1-28-20.pdf

Jacob Beeman
Transportation Planner
jbeeman@cdtcmpo.org
518-458-2161

CAPITAL DISTRICT CLEAN COMMUNITIES

CDTC CAPITAL DISTRICT TRANSPORTATION COMMITTEE