# TRANSITIONING TO ELECTRIC VEHICLES

Promoting EV Adoption and Deploying Charging Stations

#### **Facilitators:**

Mike Hunninghake, Environmental Finance Center Jeff King, Metropolitan Washington Council of Governments





## Benefits of Accelerated Electric Vehicle (EV) Deployment



- Reduces greenhouse gas emissions.
- Reduces smog and particulate air pollution.

Environmental Benefit

- Positive impact on air quality and public health
- Reduces rates of respiratory incidents (asthma).

Human Health Benefit

- Saves money on maintenance and fuel costs.
- •Can reduce the cost of EV technology.
- •Can catalyze economic growth.
- Money saved at the gas pump is spent on the other goods and services which adds stimulus to state incomes, employment, and real wages.
- Could create 2x as many new jobs as the number that will be transitioned away from in the fossil fuel vehicle market market.

### Economic Benefit





Approximately over the 12-year life of a typical transit bus, by replacing a single diesel bus with a battery electric bus can save over 2.5 million pounds of carbon emissions.



## Snapshot of Efforts in the County

- Participant of the Maryland Energy Administration Smart Energy Communities program, the County has committed to reducing transportation petroleum consumption by 20% by 2030.
- Promotes Pepco and BGE rebate pilot to help offset the cost of EV Charging Station for both homes and multifamily properties.
- Evaluated County vehicle fleet through a COG electrification and efficiency improvements assessment in 2015.
- Enacted Green Fleet Policy to further promote the purchase of clean and efficient vehicles, fleet petroleum reduction plan, and completion of an EV infrastructure plan for county fleet.
- Office of Central Service(OCS) has purchased liquefied petroleum gas (LPG) powered vehicle innovative XL hybrid vehicles.
- Department of Public Works and Transportation(DPW&T) is modernizing The Bus fleet:
  - In 2021, DPW&T plans to install four electric charging stations and purchase four battery electric buses.
  - Maryland Volkswagen Mitigation Plan awarded DPW&T funding to replace six diesel trucks with electric trucks.

# Change is Happening

- Global sales of electric vehicles (EVs)in 2020 increased by 39% to 3.1 million units by Feb 8, 2021 (Canalys).
- Per U.S. Department of Labor, jobs for automotive service technicians and mechanics will increase by 6% between 2016 and 2026 translating into 47,600 new jobs in addition to job openings created by retiring technicians.
- U.S. Energy and Employment Report estimated in 2019. more than 250,000 American workers employed in the manufacture, sale, repair and maintenance of electric, hybrid, and hydrogen fuel-cell vehicles.
- An \$80,000 Per Year Job of the Future: EV Charging Station Technician as middle-class jobs that don't require a college degree.

Andrea Crooms Acting Directo





Prince George's Community College Sustainable Energy and Workforce Development Program

- •ASE L3 Hybrid/Electric Vehicle Specialist Licensing Preparation
- •Maryland Home Improvement Contractor License Exam Preparation
- •NCCER Weatherization Technician
- •NCCER Introduction to Solar Photovoltaics
- •BPI Building Analyst
- •BPI Envelope Professional

Sustainable Energy and Workforce Development Program Requirements
Prince George's County Resident
Possess a high school diploma, GED
Relevant industry experience



## Preliminary Electric Vehicle (EV) Action Recommendations

- Support accelerated deployment of EV vehicles for the community, while also leading by example by transitioning the county fleet, buses, etc.
- Support EV charging infrastructure deployment on county properties.
- Support EV charging infrastructure deployment on new and existing multi-family housing and commercial properties.

What does a successful Prince George's County Electric Vechicle program look like?

- WHO?
- WHAT?
- WHEN?
- WHERE?
- HOW?





## What could an EV program in Prince George's County look like?

- E.g., No new gas stations, an EV charger at every gas station, rebates for purchasing an EV
- I would like ev station at every school
- In addition to EVs, more bikes and walkability is key, +transit
- Need to support folks who live in Multi-family
- New multi-focus agency in the County, Need new electric BRT system, All major arterials, leadership and funds.
- Advocate for MD to join TCI funds
- Design innovation, small loop electric bus
- Electric school buses

Andrea Crooms Acting Direct

• Require rideshare to electrify fleet - Electric rideshare to support electrician apprenticeships, IBEW



### **Challenges**

- E.g., might take too long to charge
- Up front cost Green Bank program, long term financing at low rates
- Be proactive on effective bans on EVs (Florida ban on municipal renewable purchases?)
- Companies that do EV Charging the vendor ecosystem, how standardize?
- Affordability
- Drivers who switch back to ICE
- Range anxiety

## **Opportunities**

- E.g., new workforce development and highskilled jobs
- Work with Pepco/BGE to help modernize grid
- Address old housing stock (noted Greenbelt)
- Public libraries and muni buildings
- Standardize how to interact with the EVSE Integrated System



#### Who benefits?

- People who need to travel a lot.
- All who breathe the air
- Low-income residents

## Who is burdened or left out?

- Pedestrian risk from EV, quiet
- Cycling/walking/transit users

#### How do we ensure equitable outcomes?

- E.g., Prioritize projects, promotion of opportunities, or technical support in lowincome communities
- Use social media platforms
- *Provide sustainable transportation options*
- More rebates and reduced utility costs
- Job training by technical and community colleges
- Prepare housing to be EV Ready
- Use of public ROW dual-purpose street light poles



What does success in the County look like in the next 3-5 years?

- Research and Data Needs
- Policy/Ordinance Changes
- Residential Outreach Efforts
- Monitoring and Evaluation

- EV Charges as common as gas stations
- All buses from gas to electric school and transit
- EV Rideshare Fleets
- 2 Electric BRT bus lines
- Policy that all govt vehicles, including police vehicles
- Trade-in program for ICE EV for Clunkers
- Clearinghouse Support Office, where get info, EV Buyers COOPs
- Report on DPIE improvement on Evs processes



Apply to be a County Climate Action Resident Expert

• <u>https://forms.gle/z92cx7LLrYTmNLN17</u>

Visit the DMV Climate Partners Website

• <u>https://climatepartners.org</u>

Learn More About Upcoming Meetings

• mypgc.us/climateactionplan

Explore the County CAP Virtual House

• <u>https://bit.ly/2S7PgEQ</u>

Provide Comments and Feedback

• https://bit.ly/3vBKqNJ







2. TRANSITIONING TO ELECTRIC VEHICLES CHAT TEXT	
19:15:47	From 📝 Co-Facilitator: Jeff King, COG : Hi Everyone. My name is Jeff King, I run the Climate Energy and Air
	program at the Metropolitan Washington Council of Governments.
19:17:03	From Anthony Field - CCAN : Anthony w/ Chesapeake Climate Action Network. I will likely be moving to
	PGCo from MoCo and have 2 Teslas so this stands out to me. Plus CCAN has an interest in this issue as well
19:18:29	From Joseph Jakuta - Mount Rainier : Joseph Jakuta resident of Mount Rainier and am very psyched for a
	future with high quality electric buses for their air quality, equity, and land use benefits
19:19:25	From Cheryl Cort, Coalition for Smarter Growth : Hi - I'm Cheryl Cort with Coalition for Smarter Growth
	focused on smart growth/transportation climate solutions, working on using vehicle miles traveled (VMT)
	as key CO2 emissions metric.
19:21:09	From Maurice Harris : I'm on board with EV's and want to purchase one soon. I just want to know how to
	engage my HOA (Forestville Park HOA townhomes) on allowing residents to install a charging station either
10.24.20	in my yard or on the curb in front of my two assigned parking spackes which the HOA owns the sidewalk.
19:24:38	From Steve Skolnik, Greenbelt Green Team : Electric school buses!
19:24:52	From Kate Robb (she/her) : I agree about multimodal infrastructure that is connected, safe and affordable.
19:24:58 19:26:00	From Jabari Woodberry- Vehicles : yes i agree^
19:26:00	From Steve Skolnik, Greenbelt Green Team : Follow California require Uber and Lyft to increase use of EV's - this moves EV access into lower economic classes, also a highly desired outcome.
19:27:24	From Cheryl Cort, Coalition for Smarter Growth : Along with EVs, we need to direct housing (including
13.27.24	affordable housing) & jobs to transit, improve walk/bike infrastructure, avoid growth in areas not well
	served by transit, where more vehicle trips and vehicle miles traveled per household are generated.
19:27:37	From Steve Skolnik, Greenbelt Green Team : Simplify/improve/expedite DPIE processing of EV
	infrastructure projects.
19:27:56	From Nathan Caudill : ^
19:29:13	From Joe Ralbovsky : Hi - Joe R, Greenbelt Resident.
	- Second Steve's Point on E-School Buses.
	- Would add that PG County should pass resolution on being open to major EV manufacturer locating here
19:29:21	From Cheryl Cort, Coalition for Smarter Growth : Set reduced vehicle miles traveled per capita as goal.
19:29:58	From Kate Robb (she/her) : Challenges- affordability
19:30:20	From 📝 Co-Facilitator: Jeff King, COG : COG is going to try to have a regional learning session on electric
	school buses in the Fall. Lots of interest in what Montgomery County is doing in this area.
19:31:41	From Anthony Field - CCAN : EV charging at all government buildings
19:31:53	From Anthony Field - CCAN : public libraries, rec centers, etc
19:32:06	From Cheryl Cort, Coalition for Smarter Growth : Add EV charging facilities in new multifamily housing.
19:32:34	From Anthony Field - CCAN : and mandate all apartments, living communities etc
19:33:34	From Anthony Field - CCAN : Encourage utilities to introduce reduced rates for EV charging. some places
40.00.40	lower costs by a percentage or just every night while ppl charge
19:33:43	From Joseph Jakuta - Mount Rainier : We also need to avoid this:
10.24.40	https://insideevs.com/news/505232/study-evs-california-return-ice/
19:34:48	From Anthony Field - CCAN : Every gas station should be required to have EV chargers!!
19:35:11	From Anthony Field - CCAN : Agreed, Steve
19:35:27	From Anthony Field - CCAN : reliability, cost, and charging speeds are all different
19:36:34	From Anthony Field - CCAN : low-income, traditionally majority- minority communities do not get EV infrastrucuture
19:36:37	From Anthony Field - CCAN : this cannot be the case

19:38:13	From Joseph Jakuta - Mount Rainier : Getting hit by electric cars still hurts/kills and highways still divid communities
19:38:53	From Cheryl Cort, Coalition for Smarter Growth : Since 10% of PGC households don't own cars, goal should not be that everyone drives, but that we all have more sustainable transportation choices including zero emissions travel like bike, walk, and low emissions via transit.
19:39:13	From Anthony Field - CCAN : introduce incentives and gov education programs
19:39:26	From Anthony Field - CCAN : more rebates, reduced utility costs for charging
19:40:34	From Cheryl Cort, Coalition for Smarter Growth : If personal vehicle travel increases, could further slow buses on Count roads, disadvantaging lower income bus riders and those not driving.
19:40:40	From Steve Skolnik, Greenbelt Green Team : Lots of work for electricians, benefiting working class folks
19:40:44	From Kate Robb (she/her) : Have a set percentage/ number of funding and equipment in communities that have been marginalized
19:41:05	From Joe Ralbovsky : Would emphasize implementation - putting Level 2 Chargers in the ground where it makes sense
19:41:09	From Joe Ralbovsky : Everything else is secondary
19:41:19	From Anthony Field - CCAN : that effects renters extensively
19:41:32	From Cheryl Cort, Coalition for Smarter Growth : Where street parking is shared, avoid capping housing options due to limited parking.
19:41:38	From james lawson : Who benefits from electric cars 1. Upper income families with disposable income. 2. two and 3 car families 3. Families with garages who can install charging stations
19:43:11	From Kate Robb (she/her) : Yes, continually ask, who has not been heard from and how can we center equity in this work?
19:43:15	From Anthony Field - CCAN : incentives for USED EV purchases
19:43:22	From Nathan Caudill : Individuals/groups who get a charging station installed should feel like the process was easy
19:43:23	From Anthony Field - CCAN : not just new