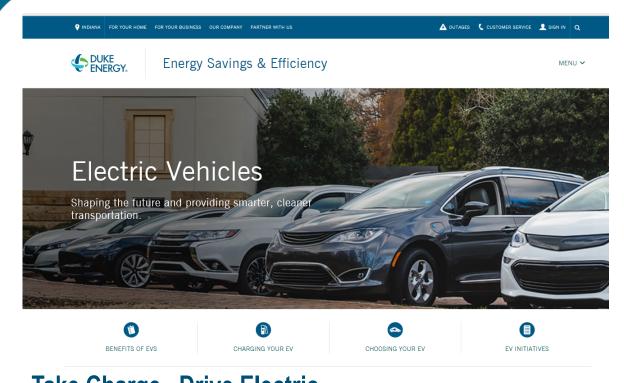


**Electric Vehicle Charging 101** 

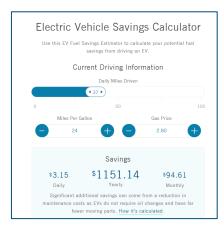
Lisa Poger, NC Electric Transportation Manager



## **Electric Utility Role**



- Inform
- Encourage
- Demonstrate
- Foundational Infrastructure



Take Charge. Drive Electric www.duke-energy.com

## **Electric Vehicle Charging Infrastructure**



Voltage
<b>Typical Charging Loads</b>
Avg. Charging Time
Location
Est. proportion of Charging

Level 1			
120V 1-Ph			
1.5 kW			
6-8 hours			
Home, Workplace			
40%			

## **Society of Automotive Engineers SAE-J1772**





**NEMA 5-15 OUTLET** 

## **Electric Vehicle Charging Infrastructure**



Voltage
<b>Typical Charging Loads</b>
Avg. Charging Time
Location

**Est.** proportion of Charging

Level 2			
208/240V 1-Ph			
3-7 kW			
2-4 hours			
Home, Workplace, Public			
40%			

# Society of Automotive Engineers SAE-J1772









**NEMA 10-30 OUTLET** 

**NEMA 6-20 OUTLET** 

## **Electric Vehicle Charging Infrastructure**



## **DC Fast Charge**

Voltage
Typical Charging Loads
Avg. Charging Time

Location Est. proportion of Charging

480V 3-Ph
50-300 kW
20-30 minutes
Public
20%

#### **SAE Combo**





#### **CHAdeMO**





# **NC Electric Transportation Pilot Program (proposed)**

Customer Segment	Units	Program Details
Charging Management		
Residential Rebate	800	<b>\$1,000 rebate</b> for installation of qualified L2 EVSE with load control capabilities. Duke Energy will provide list of qualifying equipment for consumer choice. Customer will take service on a RES rate and allow load control research.
Fleet Rebate	900	<b>\$2,500 rebate</b> for installation of L2 EVSE behind a separate meter, taking service on a commercial TOU rate. Customer choice of EV charging hardware and no network requirements.

## **Key Takeaways**

- Multiple vehicle models available
- Opportunity to greatly reduce fleet operating and maintenance costs
- Funding opportunities available











