Electric Vehicle Charging Station Program
Partner Agreements Between GCRTA and NOACA

Operational Planning & Infrastructure Committee

January 11, 2022
Electric Vehicle Charging Station Program Partner Agreements Between GCRTA and NOACA

- NOACA will manage and fund the procurement and installation of public electrical vehicle chargers as part of regional initiative.
- RTA sites chosen by NOACA: Louis Stokes at Windermere, Brookpark, and Green Road Rapid Stations
- Electric vehicles will charge by plugging in to charger at a parking space
ANNUAL FORECAST

Estimated Number of PEVs in NOACA Region

- Year
  - 2019
  - 2020
  - 2021
  - 2022
  - 2023
  - 2024
  - 2025
  - 2026
  - 2027
  - 2028
  - 2029
  - 2030

- Number of PEVs
  - 0
  - 5,000
  - 10,000
  - 15,000
  - 20,000
  - 25,000
  - 30,000

NOACA Planning for Greater Cleveland
POTENTIAL CHARGING LOCATIONS

LEVEL 2 – ALL TRIPS / EMPLOYMENT AREAS
POTENTIAL CHARGING LOCATIONS

LEVEL 3 – TRIPS BY DESTINATION, BI-DIRECTIONAL TRAFFIC VOLUME

All Household Vehicle Trips by Destination

Daily Bi-Directional Volume 2018
TOTAL DISTRIBUTION SCENARIO

Proposed Workplace (L2) and DC Fast Charging (DCFC) Locations

Gov't Location Type
- DCFC / L2
- DCFC
- L2

County
Employment Center
NOACA EVSE PROGRAM

• NOACA Board committed $3 million in the 2021-2024 TIP for an EV charging station program
• Implement NOACA EV Charging Station siting plan
• Partnership program with local communities and regional agencies
• Improve air quality and create a more sustainable transportation system for northeast Ohio
PROJECT AREA

- 5 Counties
- 40 Communities / Agencies
- 47 Sites
- 125-150 EV ports

Identified EV Station Sites: The Illuminating Company, Ohio Edison, Lorain-Medina Rural Electric, Firelands Electric, Holmes-Wayne Electric, NOACA Counties

EV Alternative Fuel Corridor:
- Corridor Ready
- Corridor Pending
- Other Roadways
- Jurisdiction Boundaries

Map showing 5 counties, 40 communities/agencies, 47 sites, and 125-150 EV ports.
PROGRAM REQUIREMENTS

Eligible Charger Types

Level 2 (2 to 4 dual ports)
- Full charge – 4-6 hours

Level 3 DCFC (1-4 dual port)
- Full charge – 30-60 minutes
PROGRAM REQUIREMENTS

NOACA Led Responsibilities

• 100% of the implementation costs
  • Design and construct
  • 5 year prepaid networking plan – on-going software upgrades, configuration, driver support, fee collection, power management
• Federal project development process:
  • Environmental /Right of Way
  • Design and specifications
  • Procurement
  • Construction Administration
Program Requirements

Partner Led Responsibilities
- Management for the 5 year useful life
- Maintenance
  - General: vandalism, accidents, wear and tear
  - Public access
- Electric Costs
- Fee Structures
- Recoup electric usage/demand
- Maintenance and Reporting
Create a regional program to deploy Level 2 and Direct Current Fast Charging (DCFC) stations across the NOACA region.

- Work Accomplished to Date and Remaining Tasks:
  - Announce Program and Conduct Program Workshop
  - RFP & Contract for Planning Services
  - Finalize Partner Interest for Planned Locations
  - Conduct Partner Site Visits
  - Execute Agreements with Partners
  - Develop Regional Deployment Specs / PS&E
  - Procure & Contract for Construction Services
  - Construction

- Timeline:
  - Dec 2020/Jan 2021: Announce Program and Conduct Program Workshop
  - Mar-Jul 2021: RFP & Contract for Planning Services
  - Jul-Aug 2021: Finalize Partner Interest for Planned Locations
  - Sep-Oct 2021: Conduct Partner Site Visits
  - Oct-Nov 2021: Execute Agreements with Partners
  - Nov 2021/Jan 2022: Develop Regional Deployment Specs / PS&E
  - Feb-Jun 2022: Procure & Contract for Construction Services
  - July 2022-Spring 2022: Construction
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Benefits to RTA

• The market share of private electric vehicles is expected to grow considerably in the next 10 years
• Electric vehicle users will find it more convenient to utilize RTA because they can charge their vehicles while using RTA
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• Electrical cost scenario developed by GCRTA Energy Manager
  • Monthly costs based on peak demand as well as daily usage
  • More cars charging = less cost per car
  • Fast chargers = greater peak demand, more costly
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<table>
<thead>
<tr>
<th>Total Charges per Month</th>
<th>DCFC Fast Charger</th>
<th>Level II Charger</th>
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<tr>
<td></td>
<td>Cost per Car</td>
<td>Cost per Car</td>
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- For comparison Level II charger at Euclid Municipal Court is set at $0.22/kWh, or equivalent $11 user fee assuming 50kWh per full charge.
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Green Road
Preliminary EV Chargers Location

3 Level II ports
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Louis Stokes at Windermere Station Preliminary EV Chargers Location

4 Level II ports
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Brookpark Station
Preliminary EV Chargers Location

2-4 Level II ports

option for 2 DC ports
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• Staff requests that the Operational Planning and Infrastructure Committee recommend Board approval of a resolution authorizing GCRTA to enter into agreements with NOACA for each proposed charging site.
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Questions?