



# Local Infrastructure Hub: Module 4: Data-Driven Decision Making

March 14, 2023

## Expected learning outcomes for Module 4

**Upon successful completion of this module, city teams will be able to:**

- ✓ *Locate available **data sources**, identify **specific metrics** that align with grant application **scoring criteria**, and access data to support application development and **improve the likelihood** of winning competitive funds.*
- ✓ *Develop a **community profile** by collecting specific data points made available through customized data platforms and **translating them into narratives** that answer specific questions aligned with the grant scoring criteria.*

## Your hosts today



**Justin Edwards**  
Data Director,  
NLC

- Leads data framework development and analysis for NLC's Institute for Youth, Education and Families
- Has developed customised data frameworks for municipal and regional governments including San Jose, CA; Jackson, MS; and Orange County, CA
- Over 15 years experience bridging US philanthropy, ICT for development, social innovation
- Data-driven storytelling, data analysis and human development research



**Matt Stephens-Rich**  
Director of  
Technical Services,  
Electrification  
Coalition (EC)

- Developed the DRVE Tool to help hundred of fleets analyze their data
- Led EC's engagement in the American Cities Climate Challenge and the Smart Columbus program
- Masters in Public Administration from The Ohio State University
- B.A in Communication from the University of Cincinnati



**Keiona Miller**  
Course  
Deliverer and  
Facilitator, NLC

- Instructor and Director at Jackson State University for 14 years
- Served as Corporate Trainer at WorldCom for 7 Years
- Langevin Trained Trainer
- M.A. in History from Jackson State University



# **Charging and Fueling Scoring Criteria**

## **NOFO is OUT!** <https://www.grants.gov/web/grants/view-opportunity.html?oppld=346798>

CFI Program will include \$700 million (FY 2022 \$300 million and FY 2023 \$400 million).

Applicants must register and use the system to submit applications electronically. Register here in advance: [Grants.gov](https://www.grants.gov).

Both Community Program and Corridor Program projects may cover:

- Development phase activities, including planning, feasibility analysis, revenue forecasting, environmental review, preliminary engineering and design work, and other pre-construction activities
- Acquisition of real property and related construction and reconstruction costs for the installation of publicly accessible charging and fueling infrastructure for vehicles
- Installation of traffic control devices located in the right-of-way to provide directional information to infrastructure acquired, installed, or operated with grant funds
- Contracting with a private entity for operations and maintenance costs of infrastructure directly related to the vehicle charging and fueling
- Propane fueling infrastructure for medium- and heavy-duty vehicles

## Community vs. Corridor Charging Programs

	Corridor Program	Community Program
Funding Eligibility	Minimum \$1M, No Maximum	Minimum \$500,000, Maximum \$15M
Partnerships	Private Entity <i>required</i>	Other public and private entities
Location of Project	<i>As close as possible to Alternative Fuel Corridors (AFC), no greater than one mile in convenient, safe locations.</i>	Any public road or other publicly accessible locations. This includes parks, parking lots, and privately-operating parking facilities.
<b>Applicants are eligible to apply to both.</b> Encouraged to consider scalable projects that can grow/meet minimum requirement standards.		

# Corridor Grant

The following selection considerations will be given only to projects funded under the CFI Corridor Program. Consideration will be given to applications that may:

- Improve AFC networks by converting corridors from corridor-pending to corridor-ready
- Provide infrastructure redundancy to meet excess demand and reduce congestion in existing high traffic locations
- Meet current or future market demands for charging and fueling infrastructure
- Support a competitive market without impairing existing providers
- Improve access in areas where current and future needs are identified
- Enable or increase construction that may not be completed without Federal assistance
- Create charging and fueling infrastructure for medium- and heavy-duty vehicles along the National Highway Freight Network and near intermodal transfer stations

Info here: <https://www.fhwa.dot.gov/environment/cfi/>

# Community Grant

Projects funded under the Community Program will be prioritized within:

- Rural areas
- Low-and moderate-income neighborhoods
- Communities with low ratios of private parking spaces
- Communities with high ratios of multi-unit dwellings

For the Community Program only, eligible projects also include:

- Projects that are expected to reduce greenhouse gas emissions
- Projects that are expected to expand or fill gaps in access to publicly accessible charging and alternative fueling infrastructure
- Projects that may conduct educational and community engagement activities to develop and implement education programs through partnerships with schools, community organizations, and vehicle dealerships to support the use of zero-emission vehicles and associated infrastructure

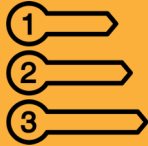
Info here: <https://www.fhwa.dot.gov/environment/cfi/>





# Utilizing Data in Your Application

# Effectively utilizing data is vital to winning federal funding



**Central to  
Administration  
Priorities**

The Biden administration has explicitly prioritized the use of data in its operations and requests from cities/states, especially as an **enabler of incorporating equity** throughout government programs (e.g., in Justice40).



**Improves Grant  
Competitiveness**

Incorporating data describing populations impacted in your community is not only explicitly required in many grant criteria but will also **help develop a persuasive story** about the impact generated by your use of grant funding.



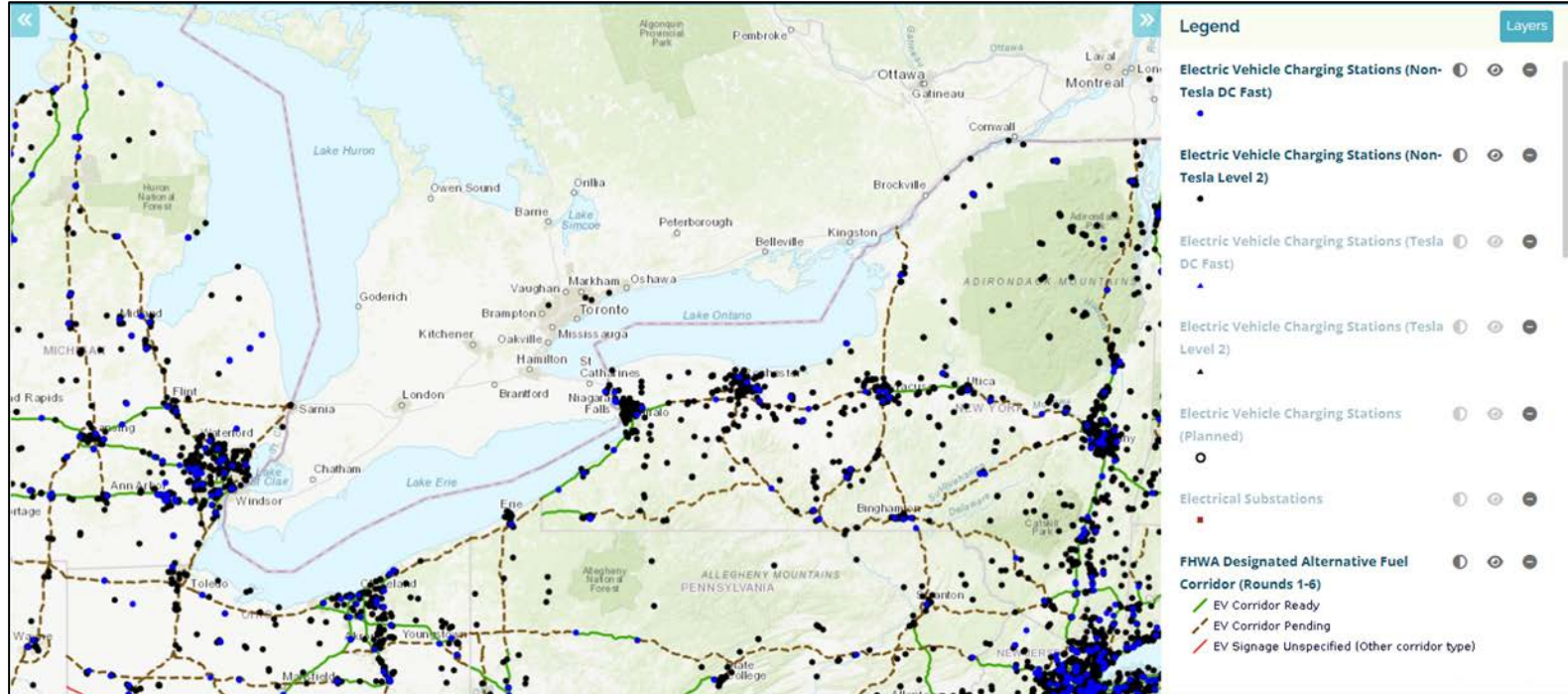
**Identifies  
Community  
Needs**

Data use enables a **rigorous assessment of the needs of underserved populations** and illuminates opportunities for targeted actions that will result in demonstrably improved outcomes for underserved communities.

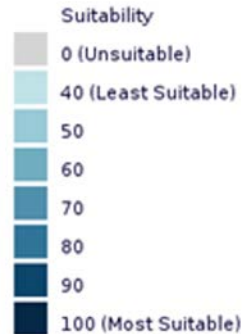
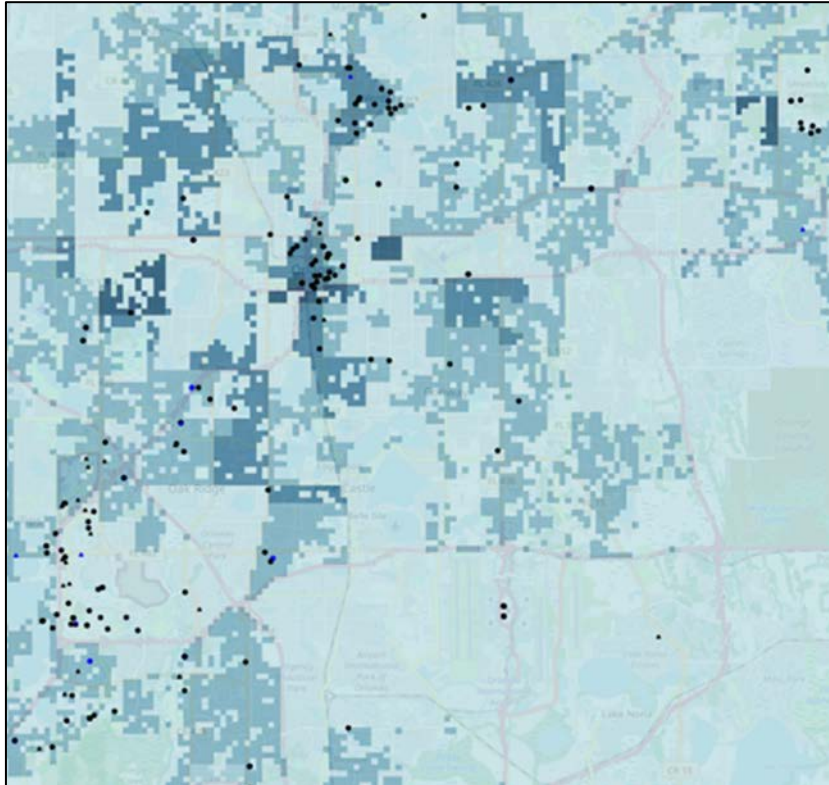


# **Geospatial Energy Mapper (GEM)**

# Identify the Locations of EV Charging and Corridors



# Assess “Charging Gaps” Based on Local Demographics



Parameter	Weight
Electric Vehicle Charger Density - All Level 2 or DC Fast	5
Distance (m) to Substation (All capacities)	1
Housing Density – Large Multi-family	5
Land Cover	1
Percentage of Households Lacking a Vehicle	2
Population Density	5





# **AFLEET (Required for Grant Application)**

# Alternative Fuel Life-Cycle Environmental and Economic Transportation (AFLEET) Tool

## Welcome To AFLEET

The Department of Energy's Technology Integration Program has enlisted the expertise of Argonne to develop a tool to examine both the environmental and economic costs and benefits of alternative fuel and advanced vehicles (AFVs). Argonne developed the Alternative Fuel Life-Cycle Environmental and Economic Transportation (AFLEET) Tool to help stakeholders estimate petroleum use, greenhouse gas (GHG) emissions, air pollutant emissions, and cost of ownership of light-duty and heavy-duty vehicles. AFLEET can be accessed via spreadsheet and online versions. In addition, the ATRAVEL Tool has been built using AFLEET data to examine the costs and benefits of different modes for personal travel.



### AFLEET Tool (xlsx)

The AFLEET spreadsheet provides detailed energy, emission, and cost data for light-duty, heavy-duty, and off-road AFVs. It has the following 5 calculators depending on the user's goals:

- Simple payback
- Total cost of ownership
- Fleet footprint
- Idle reduction
- Electric vehicle charging



### AFLEET Online

AFLEET Online replicates the spreadsheet's Simple Payback Calculator with a user-friendly interface and analyzes the following metrics:

- Petroleum use
- Greenhouse gas emissions
- Air pollutant emissions
- Simple payback



### HDVEC

The Heavy Duty Vehicle Emissions Calculator (HDVEC) is an AFLEET-based online tool that compares NO<sub>x</sub>, PM, GHGs and funding cost-effectiveness of environmental mitigation projects for the following fuel types:

- Diesel
- Electric
- Natural gas
- Propane



### ATRAVEL

The ATRAVEL Tool was developed to estimate costs, travel time, and emissions of private vehicle ownership and other travel modes based on your location and travel patterns, while also providing related travel metrics at both local and regional levels. The travel modes currently included are:

- Private vehicle
- Transit
- Ridehail



### AFLEET CFI

The AFLEET Charging and Fueling Infrastructure (CFI) Emissions Tool estimates GHG and air pollutant emissions for proposals to the FHWA's CFI Discretionary Grant Program for the following fuel types:

- Electric
- Hydrogen
- Natural gas
- Propane



## **Additional Tools**



# Other Helpful Resources



Electric Vehicle Charging Justice40 Map  
Justice40 census tract data overlaid with Alternative Fuel Corridor (AFC) mapping

<https://anl.maps.arcgis.com/apps/webappviewer/index.html?id=33f3e1fc30bf476099923224a1c1b3ee>



Alternative Fuels State Data Center  
Find state-specific info about alternative fuels and advanced vehicles (laws and incentives, fueling stations, fuel prices, etc.)

<https://afdc.energy.gov/>



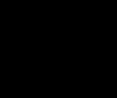
Vehicle Infrastructure Projection Tool (EVI-Pro) Lite  
Estimate how much electric vehicle charging you might need within City region and how it affects your charging load profile

<https://afdc.energy.gov/evi-pro-lite>



EPA Environmental Justice Screen (EJScreen) Tool  
EPA's environmental justice mapping and screening tool.

<https://ejscreen.epa.gov/mapper/>



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