Team Kentucky EV Charging Program

Disadvantaged Community Working Group

July 24, 2024

TEAM KENTUCKY TRANSPORTATION CABINET

TEAM KENTUCKY ENERGY AND ENVIRONMENT CABINET

Introductions

Justin Harrod
EV Charging Infrastructure Planning and Deployment Lead
KYTC

Robert Frazier
EV Charging Planning Consultant Team
Project Manager
HDR

Mindy Peterson
EV Charging Communications Consultant Team
Director
Parsons

Agenda

01	02	03	04	05	06
Intros	DAC Working Group Overview	NEVI Formula Program	Team Kentucky's EV Program	Deployment Phases	Outreach & Engagement

DISADVANTAGED COMMUNITY WORKING GROUP OVERVIEW

Key Terms for Discussion

TEAM KENTUCKY TRANSPORTATION CABINET

+ **Equity** = fair and impartial

+ **Environmental Justice (EJ)** = the just treatment and meaningful involvement of all people, regardless of income, race, color, national origin, or disability

+ **Disadvantaged Communities (DACs) =** Communities with EJ concerns, unrepresented or rural groups

+ **Justice40 =** Federal initiative to deliver at least 40% of overall benefits of federal investments in climate and clean energy to DACs

https://www.whitehouse.gov/environmentaljustice/justice40/

Disadvantaged Community Working Group

TEAM KENTUCKY TRANSPORTATION CABINET

+ The purpose of the Disadvantaged Community (DAC) Working Group is to identify local needs, priorities, and concerns in communities statewide.

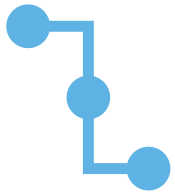
+ Representatives of local, regional, and statewide groups like:
  - Community foundations
  - Service agencies
  - Urban Leagues
  - NAACP chapters
  - Clean Cities Coalitions
  - Ride share groups

We want the EV charging network being built now to serve *all Kentuckians* for many years to come.

DAC Working Group Members

TEAM KENTUCKY TRANSPORTATION CABINET

Discuss issues with the potential to impact low-income, minority, or rural populations



Serve as a liaison between the community organization and the EV Charging Program Team

Share views and identify local concerns in two-way communications with the team

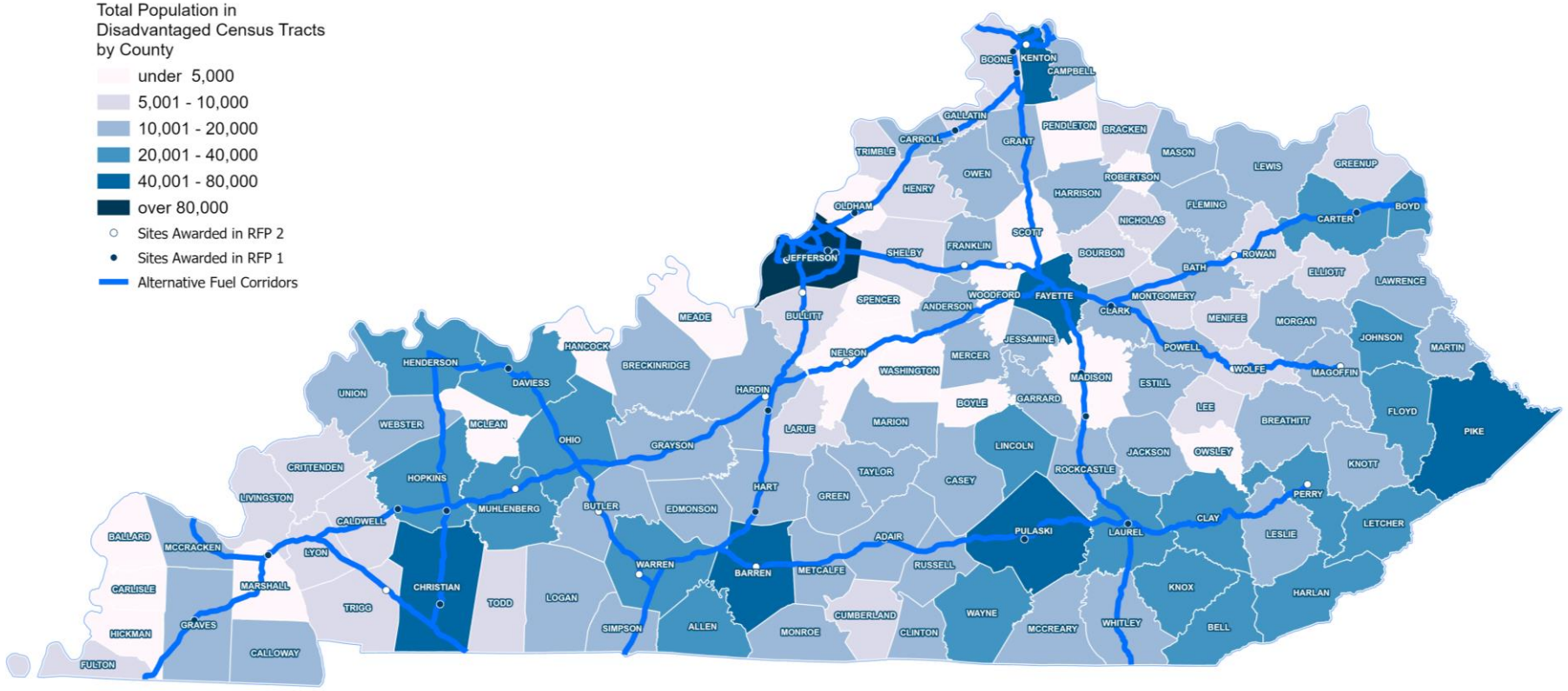
Act as an advisor and share project information with others

DACs and Selected Charging sites in KY

TEAM KENTUCKY TRANSPORTATION CABINET

48% of sites in DACs

90% of sites within 3 miles of a DAC



Ensuring All Voices are Heard

TEAM KENTUCKY TRANSPORTATION CABINET

+ Public outreach and engagement are critical.
+ What we're doing now is preparing us for the next phases of the program, including identifying community charging locations.
+ Short questionnaire will be sent to DAC Working Group invitees.

For Discussion:

- Who should we be talking to?
- What's the best way to make the conversations meaningful?
- What's the best way to share information and progress?
- How can we make this group successful?

EV OVERVIEW

EV Overview – Types of Vehicles

TEAM KENTUCKY TRANSPORTATION CABINET

BEV

Battery Electric Vehicle

- Battery Power Only
- Typical Range 150-400 miles
- Must use charging stations to recharge

PHEV

Plug-In Hybrid Electric Vehicle

- Battery Power and Internal Combustion Engine (ICE)
- Typical Battery Range 20-40 miles
- When battery depleted, ICE kicks in

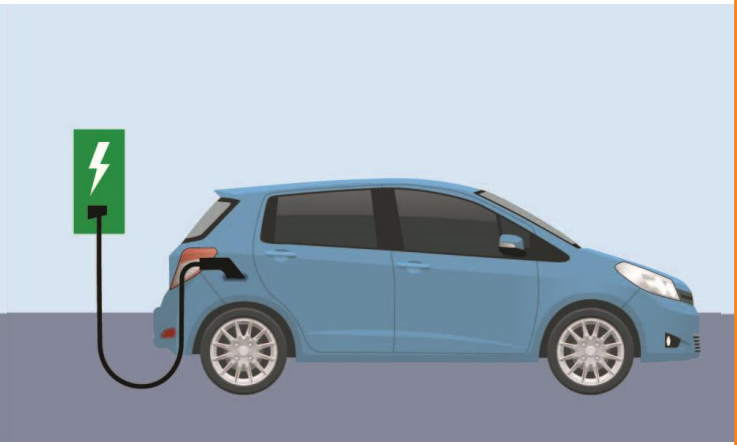
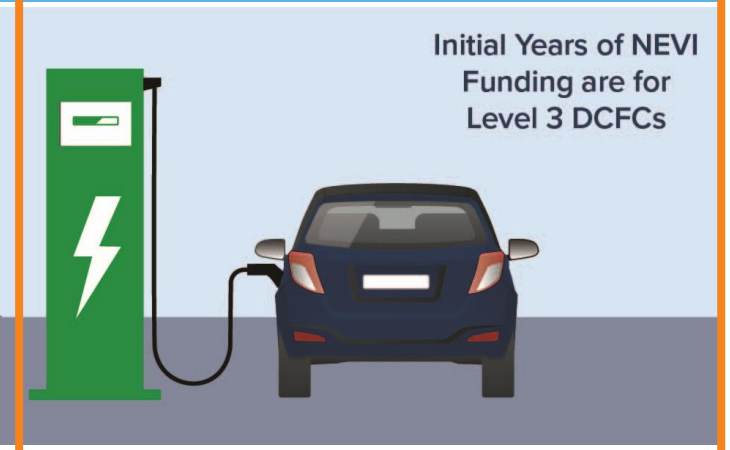
HEV

Hybrid Electric Vehicle

- Internal Combustion Engine (ICE) Only
- Battery Charges by Regenerative Braking or Using Engine as a Generator
- Battery Allows for Smaller Engine and Reduces idling

EV Overview – Types of Plugs

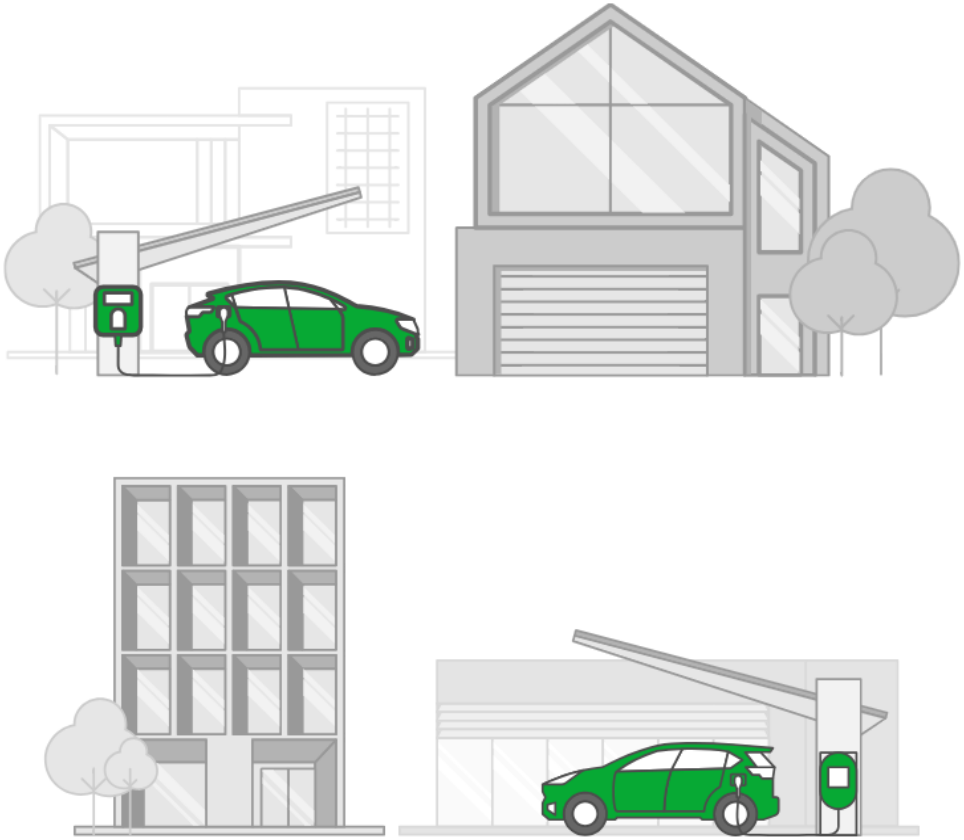
TEAM KENTUCKY TRANSPORTATION CABINET

Level 1	Level 2	Level 3 - DC Fast Charger
		
Level 1 chargers can be used at home with a standard outlet. This is the slowest charging method.	**Level 2 chargers** require more amps and can be wired at home or found around your community.	**Level 3 chargers** are the fastest and can be found along interstates and near populated public areas.
+ 250 Miles in 48-72 Hours	***+ 250 Miles in 10 Hours***	***+ 250 Miles in 30 Min. or less***

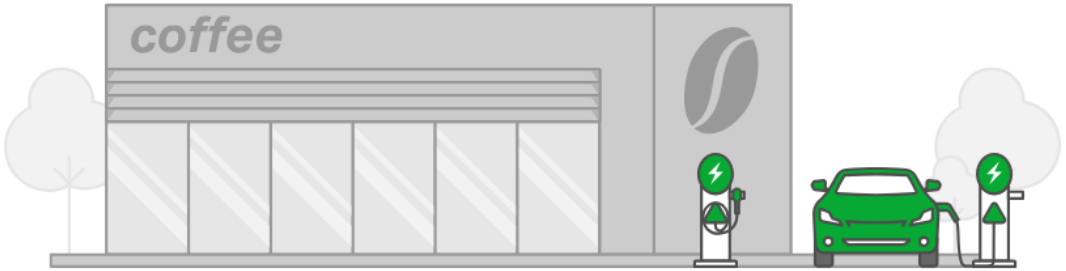
Where Do People Charge?

TEAM KENTUCKY TRANSPORTATION CABINET

85% Charge at Home/Work

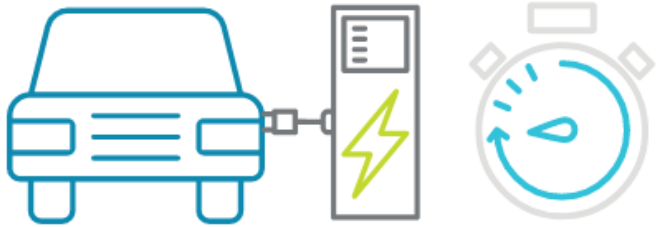


15% Charge Elsewhere



Barriers to EV Adoption

Range Anxiety for Long Trips

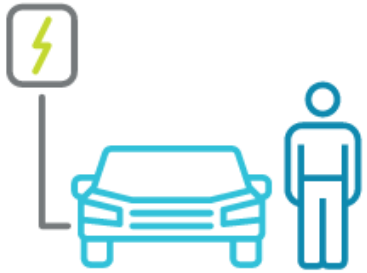


Long Recharging Times

Lack of Charging Infrastructure

Higher Vehicle Costs and Battery Cost

Barriers to EV Infrastructure Deployment



Low Customer Base

Awareness of Charging Locations

EV Charging Speed

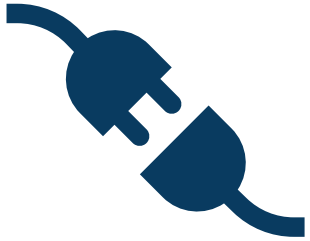
Lack of Utility Infrastructure

Rural/Underserved Infrastructure Gaps

How Much Does an Electric Vehicle Cost?

TEAM KENTUCKY TRANSPORTATION CABINET

- New EVs average around $55,000, compared to other new vehicles at around $47,000, according to Kelly Blue Book data.
  - EV costs are down nearly 11% in 2024 from 2023.
  - Many manufacturers offer sedans, SUVs and trucks in hybrid and fully electric versions.
- Home charging stations can be installed for around $1,000. A tax credit for up to 30% the cost of a Level 2 charger and installation is available.



NEVI FORMULA PROGRAM

Building a National Charging Network

TEAM KENTUCKY TRANSPORTATION CABINET

+ NEVI is the National Electric Vehicle Infrastructure Formula Program
+ Established through the Bipartisan Infrastructure Law (BIL)
+ Funding to states to strategically deploy charging stations
+ Goal is to build an interconnected network
+ Kentucky expected to receive nearly $70 million

Federal Funds for EV Infrastructure

TEAM KENTUCKY TRANSPORTATION CABINET

2021 Infrastructure Investment and Jobs Act (IIJA)

also known as **Bipartisan Infrastructure Law (BIL)**

National Electric Vehicle Infrastructure (NEVI) Program

NEVI Formula Funds

Kentucky's Share - $69.5M
$5.0 Billion Nationally (over 5 years)

NEVI Discretionary Grant Funds

Competitive Grants
$2.5 Billion Available Nationally (over 5 years)

KY: Federal Funds and Schedule

*All numbers in millions

EV Infrastructure Plan Elements	Build-Out AFC Network (Phase 1 - Ongoing)		Other Priority Corridors (Phase 2)	Community Charging (Phase 3)
Fiscal Year	To-Date (FY2022-2024)	FY 2025	FY 2026	Total
Federal Funds Available	$39.9	$14.8	$14.8	$69.5
Federal Funds Awarded	$27.2	-	-	$27.2
Federal Funds Remaining	$12.7	$14.8	$14.8	$42.3

Per FHWA guidance, the Alternative Fuel Corridor (AFC) network must be operational before KYTC may allocate funding to Phases 2 and 3.

NEVI-Funded Fast Charging Stations

TEAM KENTUCKY TRANSPORTATION CABINET

+ KYTC will not own, operate, or maintain stations
+ Industry partners will be responsible for:

Construction/ Installation

Ownership

Operations

Maintenance

Team Kentucky's EV Program

Kentucky's EV Plan Vision

A reliable, accessible, convenient, and affordable EV charging network that supports transportation choices, energy diversification, economic development, and environmental sustainability for all Kentuckians

Kentucky's EV Plan Vision

TEAM KENTUCKY TRANSPORTATION CABINET

GOAL 1	A corridor-based EV charging system that supports interstate and regional travel
GOAL 2	A local EV ecosystem that serves Kentucky's communities and travelers
GOAL 3	A comprehensive system that supports transportation choices for all of Kentucky's residents
GOAL 4	An interconnected, reliable, and resilient vehicle fueling system that can adapt to changes in market conditions and transportation technologies
GOAL 5	A transportation system that reduces tailpipe emissions and promotes clean air in Kentucky

Team Kentucky: Leading the Charge

TEAM KENTUCKY TRANSPORTATION CABINET

+ First EV fast charging station built with NEVI funds to open in Richmond
+ Not only the first federally funded station in KY, but expected to be the first to open in the southeast US
+ 41 additional fast charging stations on the way in KY
+ All located along Kentucky's 11 interstates and 8 parkways

Team Kentucky: Progress to Date

TEAM KENTUCKY TRANSPORTATION CABINET

+ 2 Requests for Proposals (RFPs) and 3 rounds of awards to date
+ 42 fast charging stations from 11 developers approved in KY
+ Totaling $27.2 million in federal formula funds to date
+ Annual Plan update in progress


42 SITES
Follow Our Progress
COVINGTON
LOUISVILLE
LEXINGTON
MOREHEAD
SALYERSVILLE
ELIZABETHTOWN
RICHMOND
LONDON
PADUCAH
MAYFIELD
BOWLING GREEN
ABP
BGP
MTP
WKP
PEN
CBE
HRP
71
75
65
64
69
24
165
Awarded Charging Site
Active Charging Site
Existing Potentially NEVI-Compliant Site
Future NEVI Site
(Awarded by other states)
Alternative Fuel Corridor
Other High Priority EV Corridor
N
0
25
50 miles
TEAM KENTUCKY
TRANSPORTATION CABINET

Kentucky: Leading the EV Charge

TEAM KENTUCKY TRANSPORTATION CABINET

+ Leader in EV manufacturing and EV battery production
+ Two largest economic development projects ever in KY
+ Ford and SK battery park: $5.8 billion investment creating 5,000 jobs in Hardin County
+ AESC battery plant: $2 billion investment creating 2,000 jobs in Warren County

Deployment Phases

Powering the KY EV Charging Program

TEAM KENTUCKY TRANSPORTATION CABINET

	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
EV Infrastructure Plan Elements	Build-Out Interstates and Parkways Phase 1 – Alternative Fuel Corridors (AFCs), ongoing					
					Other Priority Corridors (Phase 2)	
					Community Charging (Phase 3)	

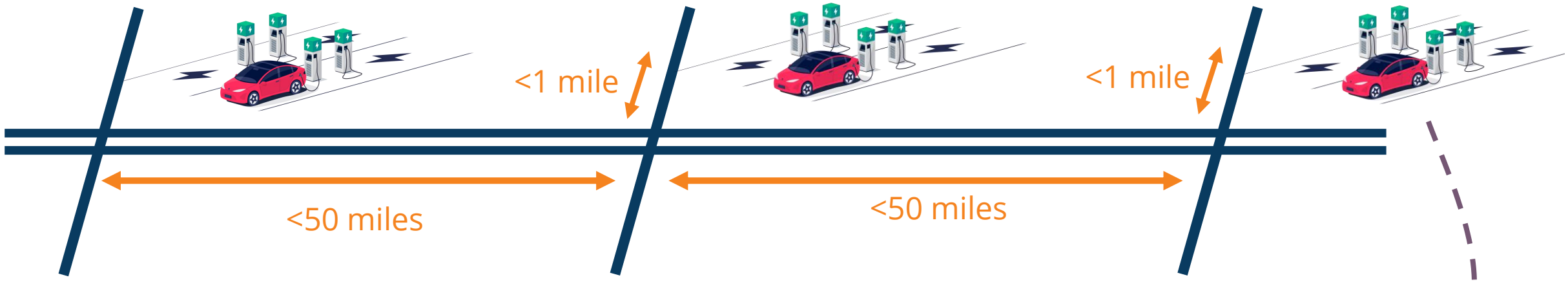
+More flexibility with Phases 2 and 3

- \+ Will need to follow future federal guidance

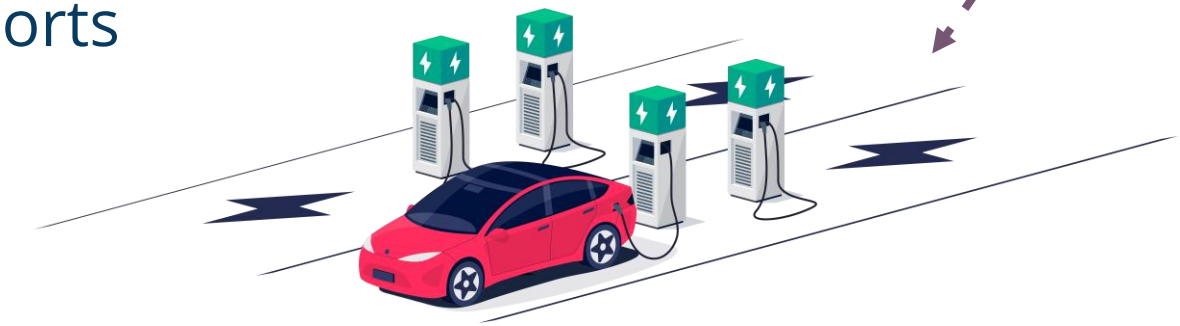
+Public input will be important

Phase 1 – AFC Network

Phase 1 – AFC Network

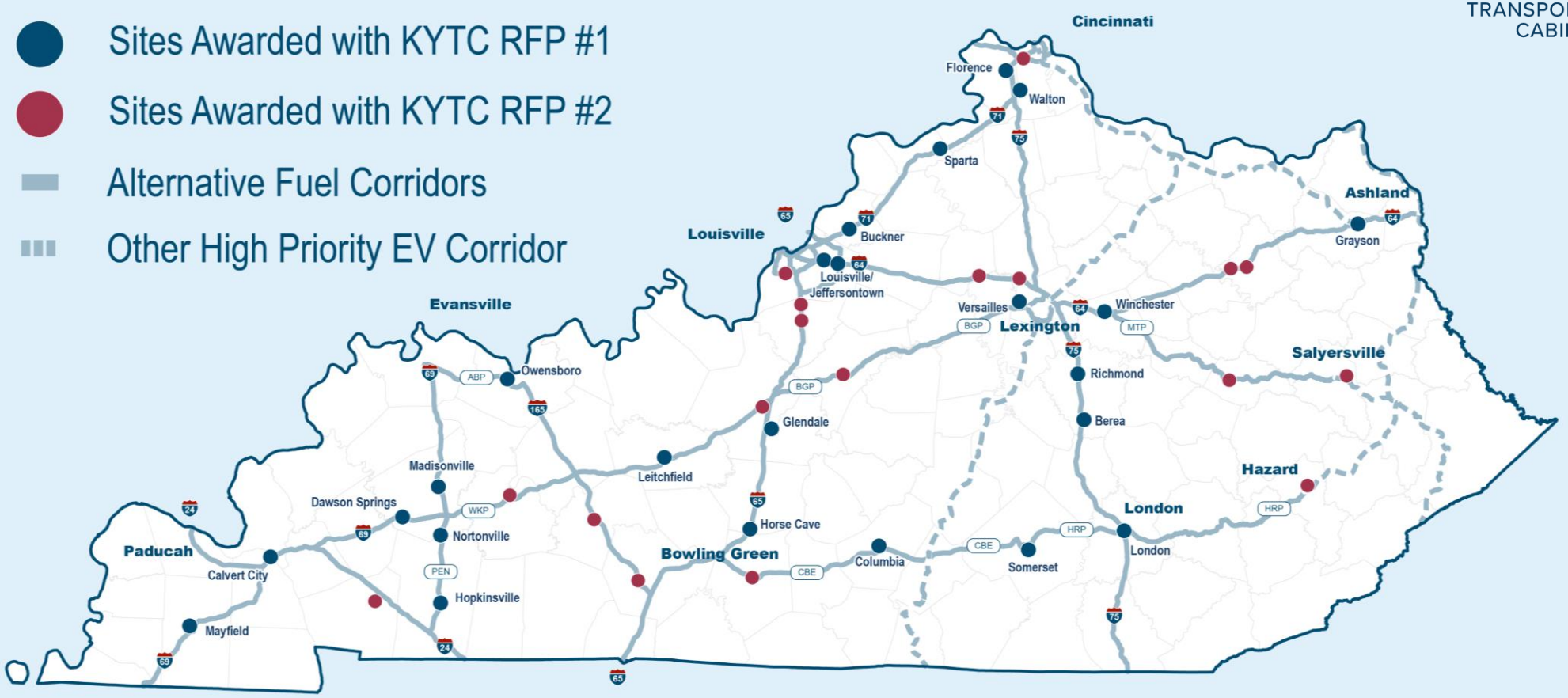


+ Fewer than 50 miles between stations with stations within a mile from the corridor
+ At least 4 150 kW DC Fast Charging ports (600kW total)
+ Open to general public 24/7



RFP 1 and 2 Sites Awarded

TEAM KENTUCKY TRANSPORTATION CABINET



	Submissions Received	Charging Stations	Developers	Federal Funding Allocated (millions)
RFP 1	150	24	7	$15.4
RFP 2	55	18	8	$11.8
Combined	**205**	**42**	**11**	**$27.2**

Phase 2 – Other High Priority Corridors

+ AA Hwy / KY 9
+ US 68
+ US 27
+ US 127
+ US 23
+ KY 80
+ Mtn Pkwy Extension

Phase 2 – Other High Priority Corridors

+ Danville
+ Greenup
+ Jenkins
+ Louisa
+ Maysville
+ Nicholasville
+ Paintsville
+ Paris
+ Pikeville
+ Prestonsburg
+ Vanceburg

Alternative Fuel Corridors

Other High Priority EV Corridors

N

Phase 3 – Community Charging

TEAM KENTUCKY TRANSPORTATION CABINET

Workplace

Retail and Commercial Centers

Multifamily Housing

Rural and Disadvantaged Communities

Fueling Stations

Hotels and Lodging

Public Facilities (libraries, parks, gov. buildings)

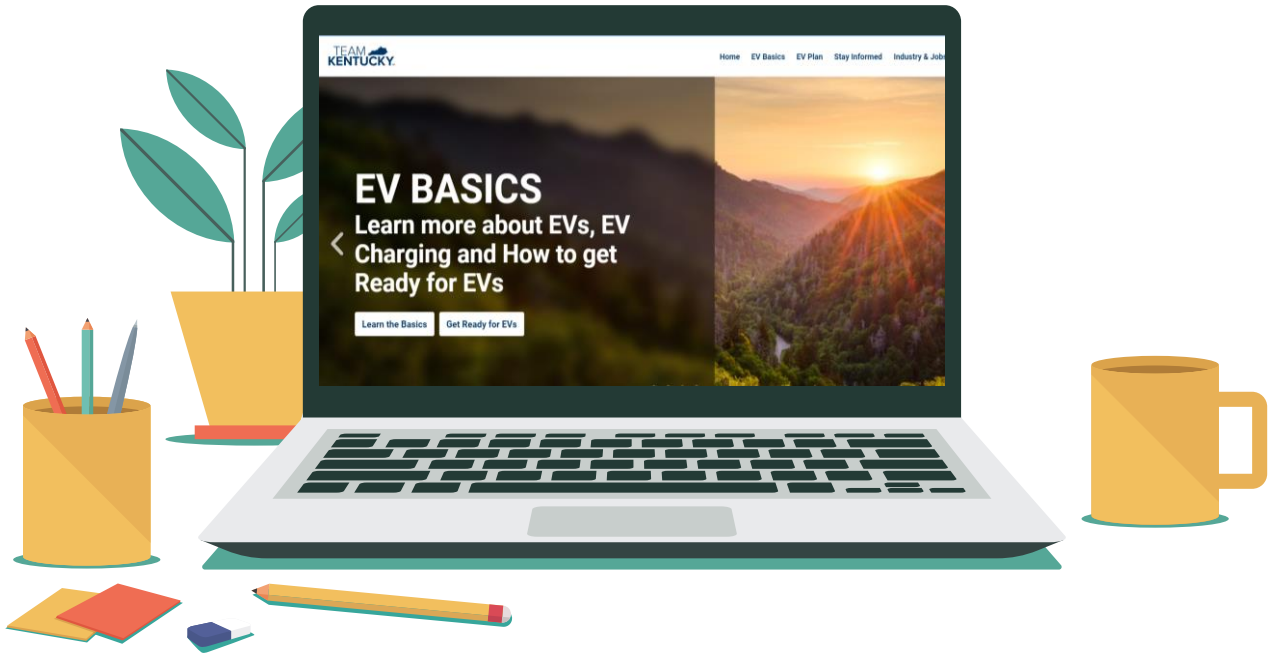
Tourism Destinations

Downtown Centers

Outreach & Engagement

EV Charging Program Engagement

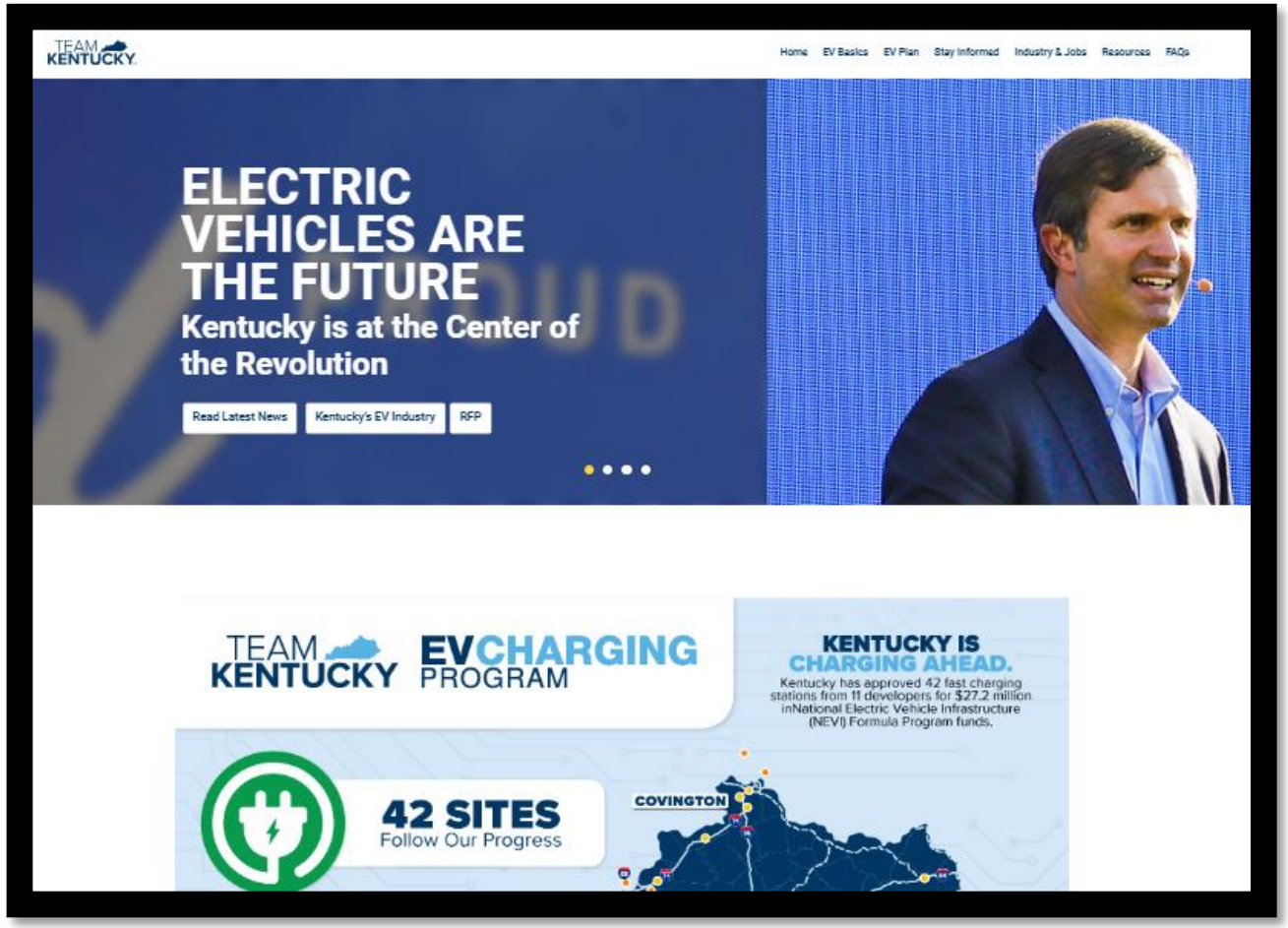
- Four large group virtual meetings in 2024
- In-person meetings are being planned
- Engagement Goals
  - Input on EV program implementation
  - Educate the public about the EV program
  - Provide information about funding opportunities



Outreach and Engagement Tools

TEAM KENTUCKY TRANSPORTATION CABINET

+ EV Kentucky website
+ Stakeholder meetings
+ Public meetings
+ Newsletters
+ Coordination with MPOs and ADDs
+ Speaking engagements
+ Surveys



For More Information

TEAM KENTUCKY TRANSPORTATION CABINET

EV Program Email Address:
EVChargingProgram@ky.gov

Program Website:
EVCharging.KY.gov

Sign up for project updates while on the site.

Wrapping It Up

+ Quarterly virtual meetings expected; next meeting expected in October.
+ Outreach expected to surround public meetings and milestones.
+ Short questionnaire will be sent to DAC Working Group invitees

For Discussion:

- Who should we be talking to?
- What's the best way to make the conversations meaningful?
- What's the best way to share information and progress?
- How can we make this group successful?

Thank You