INDOT Electric Vehicle Infrastructure Plan

Utility Coordination Webinar

May 17, 2023

HNTB

INDIANA DEPARTMENT OF TRANSPORTATION
INDOT

Introductions

- Scott Manning, INDOT
  - Deputy Chief of Staff
  - smanning1@indot.in.gov
- Diane Newton, HNTB
  - National Practice Consultant
  - dnewton@hntb.com
- Kaylee May, Greater Indiana Clean Cities Incorporated
  - Development and Communications Manager
  - kaylee@greaterindiana.com

AGENDA

- NEVI Program Overview and Key Requirements
- Location of Candidate Sites
- Indiana's Implementation Timeline
- Utility Provider Involvement
  - Engagement During Plan Development
  - Engagement During Implementation
  - Feedback
- Question and Answer
- Sample Utility Information Forms

NEVI Program and Key Requirements

Key Requirements

- NEVI Program Overview and Goals:
  - 2021 Bipartisan Infrastructure Law (BIL)
  - Goal: create nationwide network of 500,000 EV chargers by 2030
  - Funding:
    - $7.5B ($5B formula, $2.5B discretionary) over 5 years
    - **Indiana = $99,605,738**
- Key Requirements:
  - Every 50 miles along State's interstate highway system, within 1 mile of the Interstate
  - EV charging infrastructure must include at least four 150KW Direct Current (DC) Fast Chargers
  - Rest areas are not eligible locations
  - States are allowed to contract with private entities for installation, operations and maintenance

EV Charging Infrastructure

Level 1 Charging
Approximately 5 miles of range per 1 hour of charging*

J1772 connector

Level 2 Charging
Approximately 25 miles of range per 1 hour of charging†

J1772 connector

Tesla connector

DC Fast Charging
Approximately 100 to 200+ miles of range per 30 minutes of charging‡

CCS connector

CHAdeMO connector

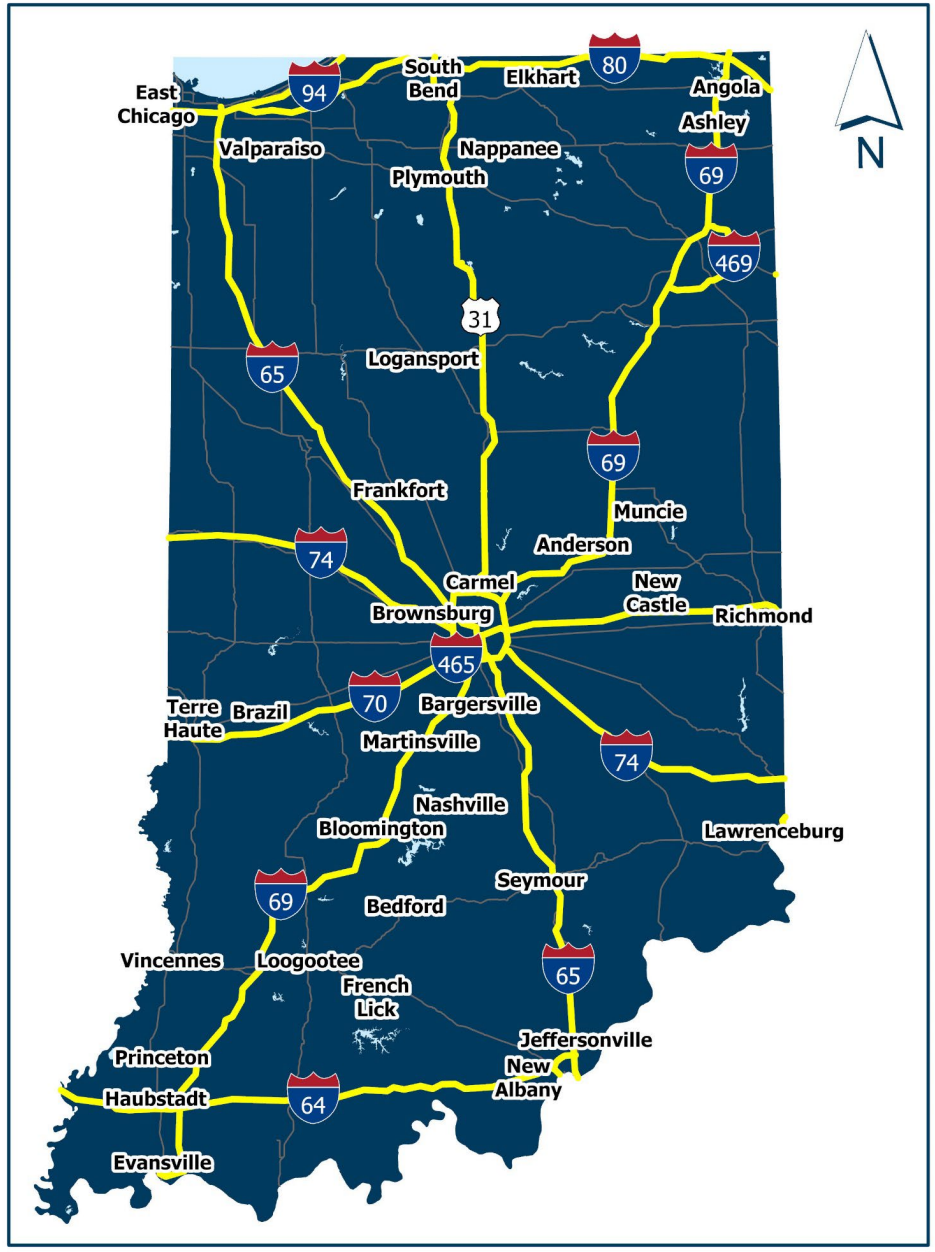
Tesla connector

Time to full charge	20 hours	5-6 hours	20-30 minutes
Use case	Single family home	Work and multi-family	Public charging and retail business

Source: Alternative Fuels Data Center: Developing Infrastructure to Charge Electric Vehicles (energy.gov)

Indiana Alternative Fuel Corridors

- Designated AFCs:
  - All interstates
  - US 31
- Round 6 nominations:
  - I-469
  - I-265
- Round 7 (2023):
  - US 30
  - Others TBD



INDOT's Implementation Approach

- INDOT will not own or operate the EV chargers
- Multiple sites selected through one or more competitive procurement(s)
- Provide industry a clear, competitive, replicable process
- Enable competitive, quals based selection of proposers
- Prioritize sites that are ready
- 80% Funding from NEVI
  20% Funding from Applicant

Indiana EV Implementation Plan: https://www.in.gov/indot/current-programs/innovative-programs/electric-vehicle-charging-infrastructure-network/

Procurement: Evaluation Criteria

Part	Title	Contents	Points
	Administrative	Prequalification	
		Minimum NEVI requirements	
		Financial Viability	
A	Administrative Subtotal		Y/N
	Experience	Experience (past EVSE projects)	75
		Qualifications (list firms, role, key staff)	75
		Project Approach	75
		Project Cost Information	25
B	Experience Subtotal		250
	Site Proposal	Site Information	70
		Site Schematic	20
		Site Readiness	60
		Future Proofing	40
		Equity, Workforce and Economic Development	60
C	Site Proposal Subtotal		250
TOTAL POINTS POSSIBLE			500

Location of Candidate Sites

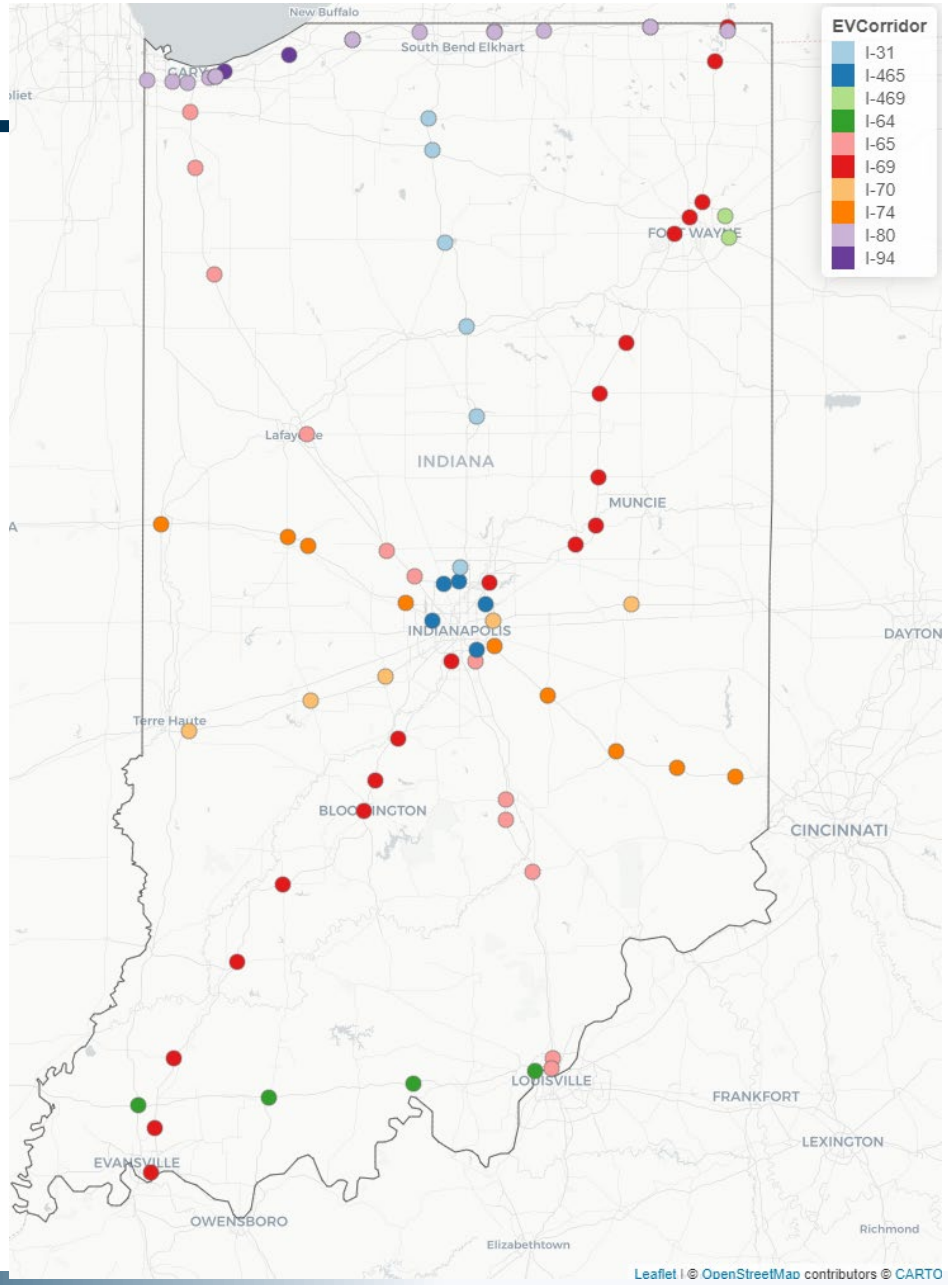
Indiana Candidate Sites

- US 31 – 6 locations
- I-465 – 5 locations
- I-469 – 2 locations
- I-64 – 4 locations
- I-65 – 12 locations
- I-69 – 20 locations
- I-70 – 5 locations
- I-74 – 9 locations
- I-80 – 15 locations
- I-94 – 2 locations

***10 Corridors**

*** 80 Sites**

*** 44 required to fill the 50-mile gaps**



Public comments by site

INDOT NEVI Electric Vehicle Infrastructure Plan

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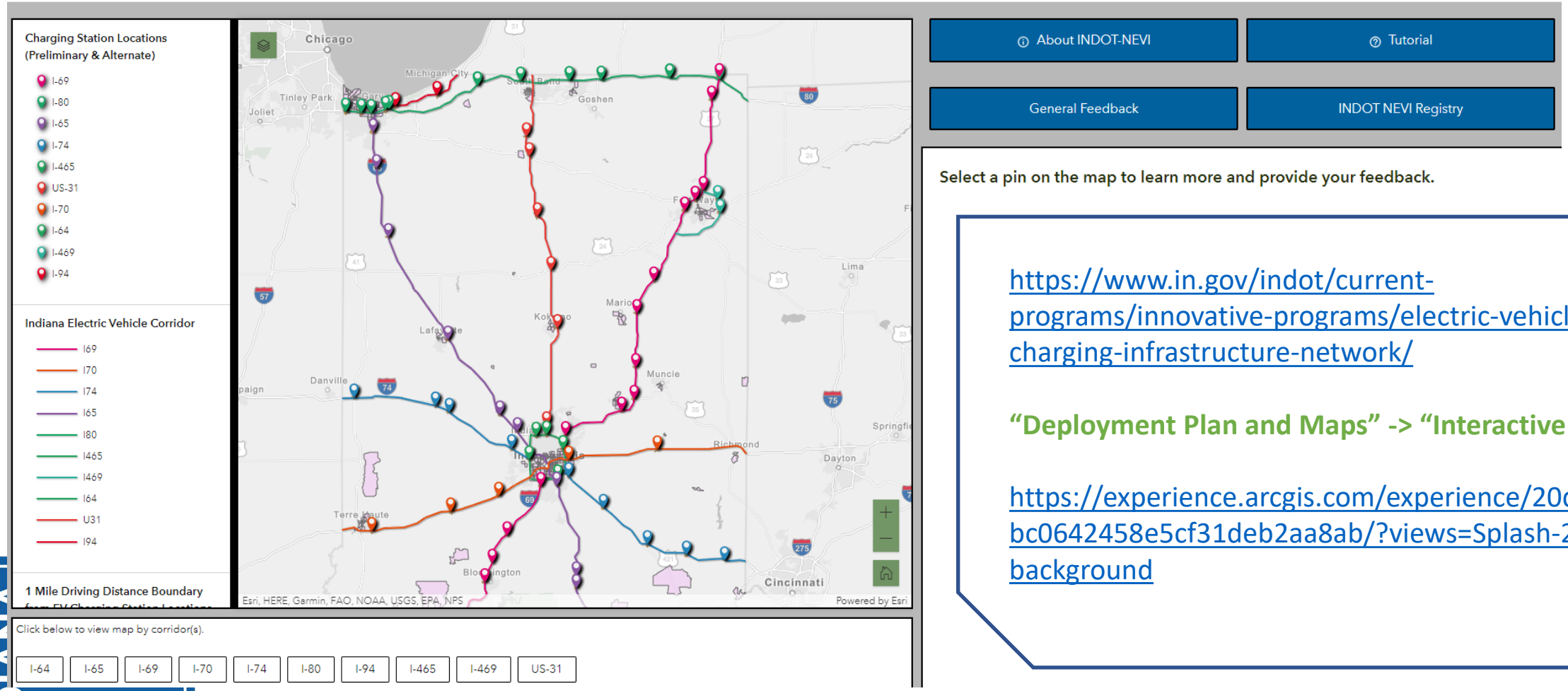
Public Feedback

NEVI Registry



https://www.in.gov/indot/current-programs/innovative-programs/electric-vehicle-charging-infrastructure-network/

“Deployment Plan and Maps” -> “Interactive Map”

https://experience.arcgis.com/experience/20dc3f35bc0642458e5cf31deb2aa8ab/?views=Splash-2---background

Vendor Registry

INDOT NEVI Survey

Name*

Email Address*

Phone Number

( ) -

Add Company Name (Optional)

Please select type of stakeholder*

- EVSE Vendor
- Utility Provider
- Private Site Host
- Public Site Host
- City/Municipality
- MPO
- Other

Please indicate favorability of this interchange*

Strongly disagree | Disagree | Neutral | Agree | Strongly agree

Please indicate interest in this interchange*

Not interested | Neutral | Very interested

General comment

Please leave your comments about this location.

1000

Please check here if you are willing to publicly share your information with other interested parties.

The information shared in the survey above will be included in a publicly accessible document. This will build a vendor registry that encourages networking and collaboration to help facilitate EV infrastructure projects funded under the NEVI program. The registry is a living document that can be used to connect with interested parties ahead of a request for proposal (RFP).

- [ ] Check to share information

Submit

Indiana's Implementation Timeline

Implementation Timeframe

2022-2023

Planning and prioritization of sites

2023-2024

Procurement and contracting

2024-2025

Implementation of sites

Second procurement (if necessary)

2025 -2027

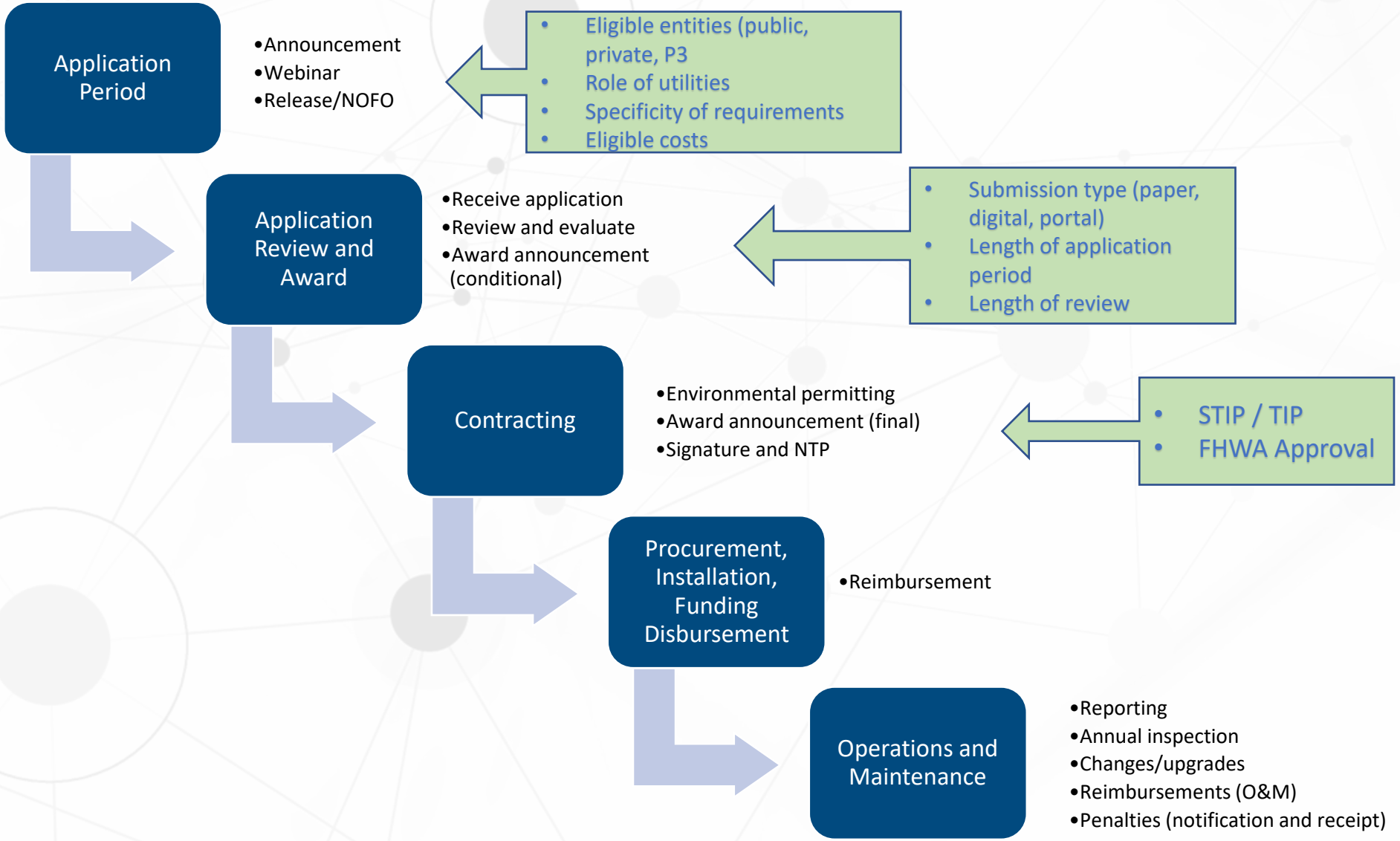
Complete implementation

Operations, maintenance, reporting

Full build out of AFCs

NOTE: TIMEFRAME IS APPROXIMATE

Process: Inputs and Milestones



Near-Term Schedule

- INDOT EV Open House: May 23, 2023 (9 a.m. to 4 p.m.)
  - RSVP by May 10
  - RSVP LINK
- RFP posted for public comment: June 1, 2023
  - Comment period closes: June 16, 2023
- Pre-proposal webinar: June 20, 2023
- RFP Release: July 7, 2023
- Selection: November-December 2023
- Contract: Q1 2024

Join Indiana Department of Transportation, federal and state partners to hear updates on Indiana's National Electric Vehicle Infrastructure (NEVI) plan and learn more about the upcoming Request for Proposals (RFP). More details and an agenda will be available soon. Please RSVP by May 19.

Utility Provider Involvement

Engagement During Plan Development

- Utility questionnaire (INDOT and OED) – May 2022
- In person meetings:
  - 6/2/22: Northern Indiana
  - 6/9/22: Central Indiana
  - 6/14/22: Southern Indiana
- One on one meetings (March - August 2022) – over 70 held
- Virtual public walkthrough of draft plan (7/13/22)

- May 2022 survey of Indiana's utility companies yield four responses.
- Nine providers attended the three in-person meetings. Attendees at these meetings included:
  - Wabash Valley Power Alliance
  - Bartholomew County REMC
  - Fulton County REMC
  - Northeastern REMC
  - NiSource (NIPSCO)
  - Tipmont Wintek REMC
  - Clark County REMC
  - Hoosier Energy
  - Johnson County REMC
- One-on-one meetings, including:
  - Indiana Michigan Power
  - AES Indiana
  - IMPA
  - Duke Energy
- Engagement with utility advocates via in-person and virtual events, including:
  - Citizens Action Coalition (Virtual Open House Webinar and Plan Walk Through Webinar)
  - Indiana Utility Regulatory Commission (Virtual Open House Webinar)
  - Indiana Office of Utility Consumer Councilor (Plan Walk Through Webinar)

Utility Provider Feedback

- Willingness to engage on EV Charging projects:
  - Owning/operating
  - Funding
  - EX. VW DCFC Utility Group Grant project
- Desire for early and frequent engagement on EVSE projects
  - 24 month advance notice desired
- If new lines and equipment are required:
  - If cost exceeds revenue, customer must pay the difference before construction
- Estimated investment of $50-125K to serve 600 kW station
  - Cost may be prohibitive at certain locations
- Most utilities are considering load balancing to encourage charging during off-peak times
  - Metering infrastructure
  - Off-peak pricing offers
- Resiliency efforts:
  - Grid modernization to support load growth and reliability
  - Battery storage
  - Pilots: School bus V2G, off-peak pricing

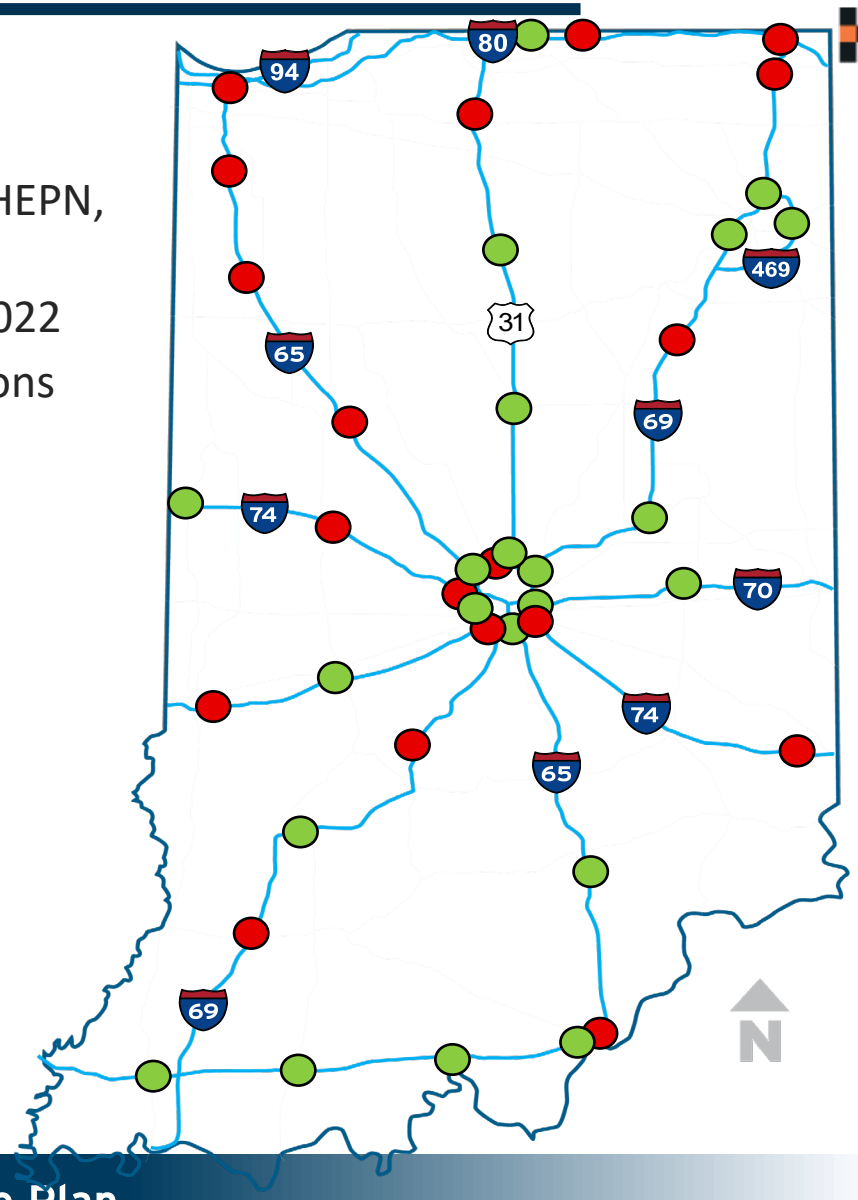
INFORMATION EXCHANGE WITH UTILITIES

- Expected load
- Long term plan
- On peak / off peak charging times
- Staged/all on/all off
- The anticipated use of the installed infrastructure,
- Exact location of proposed stations
- Definite timeline for the EV charger in-service date

Engagement During Implementation

VW Coordination

- Volkswagen DC Fast Charging Project
  - NIPSCO, WVPA, Duke, AES, Centerpoint, AEP, HEPN, CELP
  - Monthly coordination calls since November 2022
  - Discuss project status, best practices and lessons learned
  - Site host agreement process and timing
  - Alignment with NEVI candidate locations

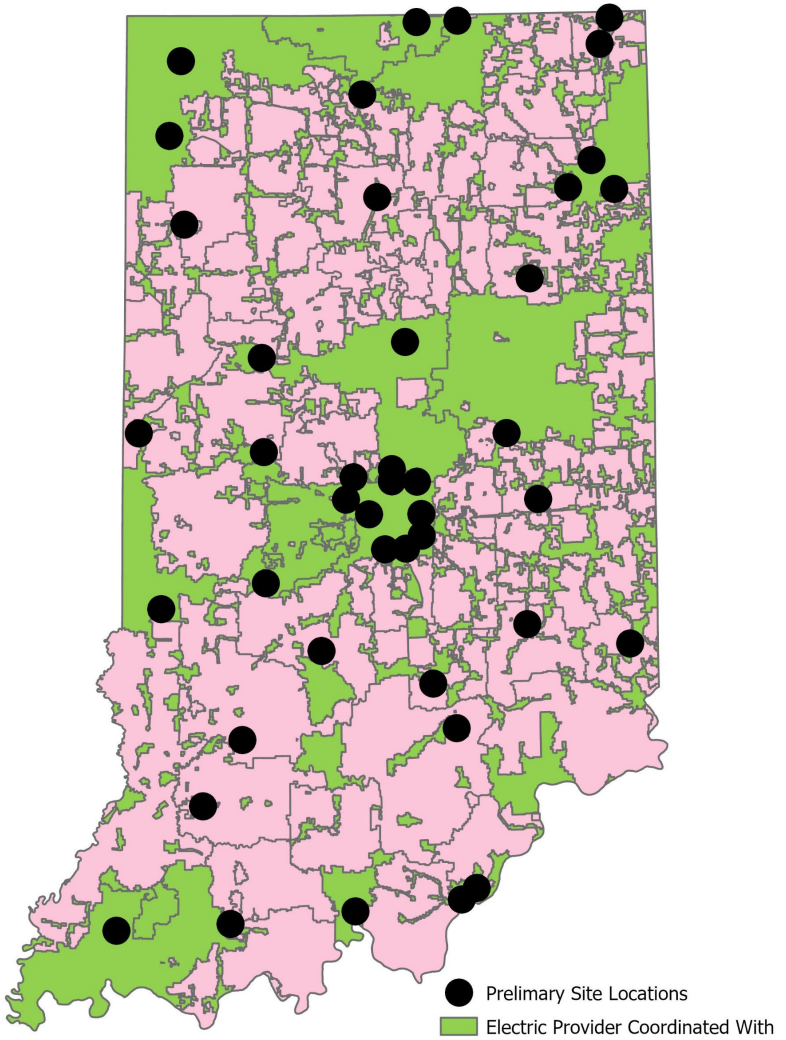


One-on-One Engagement – April 2023

1. City of Lebanon
2. Jasper County REMC
3. Rensselaer Electric
4. Marshall County REMC
5. Darlington Light and Power
6. Anderson Power and Light
7. LaGrange County REMC
8. Washington Light and Power
9. South Central Indiana REMC
10. Northern Indiana Public Service Company
11. Steuben County REMC
12. Southern Indiana REC
13. Jasper County REMC
14. Miami Cass REMC
15. Warren County REMC
16. Hendricks Power Cooperative
17. Spiceland Municipal Utilities
18. Heartland REMC

What we heard

1. Providers were eager to speak about the opportunity to be a part of the EV initiative.
2. 600 kW level 3 charge largely offered in vicinity of exits identified for charging stations.
3. Substations within 1.5 miles of most locations.
4. Interested in development and ownership.
5. 2-year lead time on transformers. Other supply chain issues to meet BABA standards.
6. Pending decisions on involvement until they can provide more detailed information to municipalities, board of directors, CEO's, etc.



Defining the role of utilities

Applicants need to understand **power availability, timing for installation, and installation costs** to prepare applications

Possible large workload to respond to requests

Collaborate to streamline this process

Multiple requests for site

Only one selection per site

Options for Utility Provider Participation

- Low-level Participation
  - Provide information about a site's:
    - Available power
    - Necessary service upgrades
    - Estimated installation costs
- Mid-level Participation
  - Serve as a project partner
  - Coordinate with teams submitting to RFP for site assessments and EVSE placement
- High-level participation
  - Submit a response to the RFP
  - Serve as owner and operator of site(s)
  - Provide match funding (20%)

Q&A

Topics for Discussion

- INDOT Goals:
  - Streamlined process for bidders to engage with utilities
  - Single point of contact
  - Defined response time
- QUESTIONS FOR UTILITIES:
  - Desired level of involvement?
    - Owner, developer, provider
  - What is the best way for potential bidders to engage?
    - Utility Information Form for RFP
  - Is there information that can be shared publicly (non-binding)?
  - What is an appropriate timeframe for response?

Examples

Utility Information Form for RFP

Utility Request Form will establish communication between applicants and the utilities

Form includes basic information from applicants so utilities can determine if proposed sites/energy demands are viable

Successful applicants will have future engagement with utilities

Draft Form – Contact and Location

Applicant	Company Name				
	Contact Name, Address, email, phone				
Site Host	Company Name				
Site Address	Street, City, State, ZIP				
	Coordinates	Latitude		Longitude	

Service Level Requested

Connected Load (kW)		*650 kW for NEVI compliant site with 92% charger efficiency* *Include loads for any buildings, lighting, etc. on the same meter*							
Requested Service (Voltage)		*480V 3PH Typical*							
Requested Panel Size (Amps)		*1000A Typical*							
Power Factor (%)		*95% Typical for DCFC*							
Load Profile	**Time of Day**	**12AM**	**3AM**	**6AM**	**9AM**	**12PM**	**3PM**	**6PM**	**9PM**
	Peak Load (kW)								
Estimated Monthly Energy (kWh)									

Additional Information

Will the EVSE load be added to an existing meter, or will a new account be requested?	*If existing account, provide account number*
Will solar panels and/or a battery energy storage system be installed to reduce or manage peak demand?	*If planned, please provide details (power rating, energy rating, etc.)*
EVSE Site Plan	*Scale site drawing or aerial view of the site showing:* • *Nearest street(s)* • *Location of existing transformer and meter* • *Proposed location of new transformer* • *Proposed location(s) of EVSE*

Potential Cost Information

- Ohio Example

Description	Type/Unit	Qty	Unit Cost	Total Cost
Power Transformer	EACH	1	$3,750	$3,750
Transformer Pad	EACH	1	$1,200	$1,200
Utility Pole	EACH	3	$750	$2,250
Pole Riser	EACH	1	$485	$485
Pole Terminator	EACH	2	$375	$750
3-Phase Primary Line Extension	LFT	275	$36	$9,900
Protection	USD	5000	$1	$5,000
Preliminary Engineering	USD	1	$9,800	$9,800
TOTAL				**$33,235**

Thank you!

HNTB