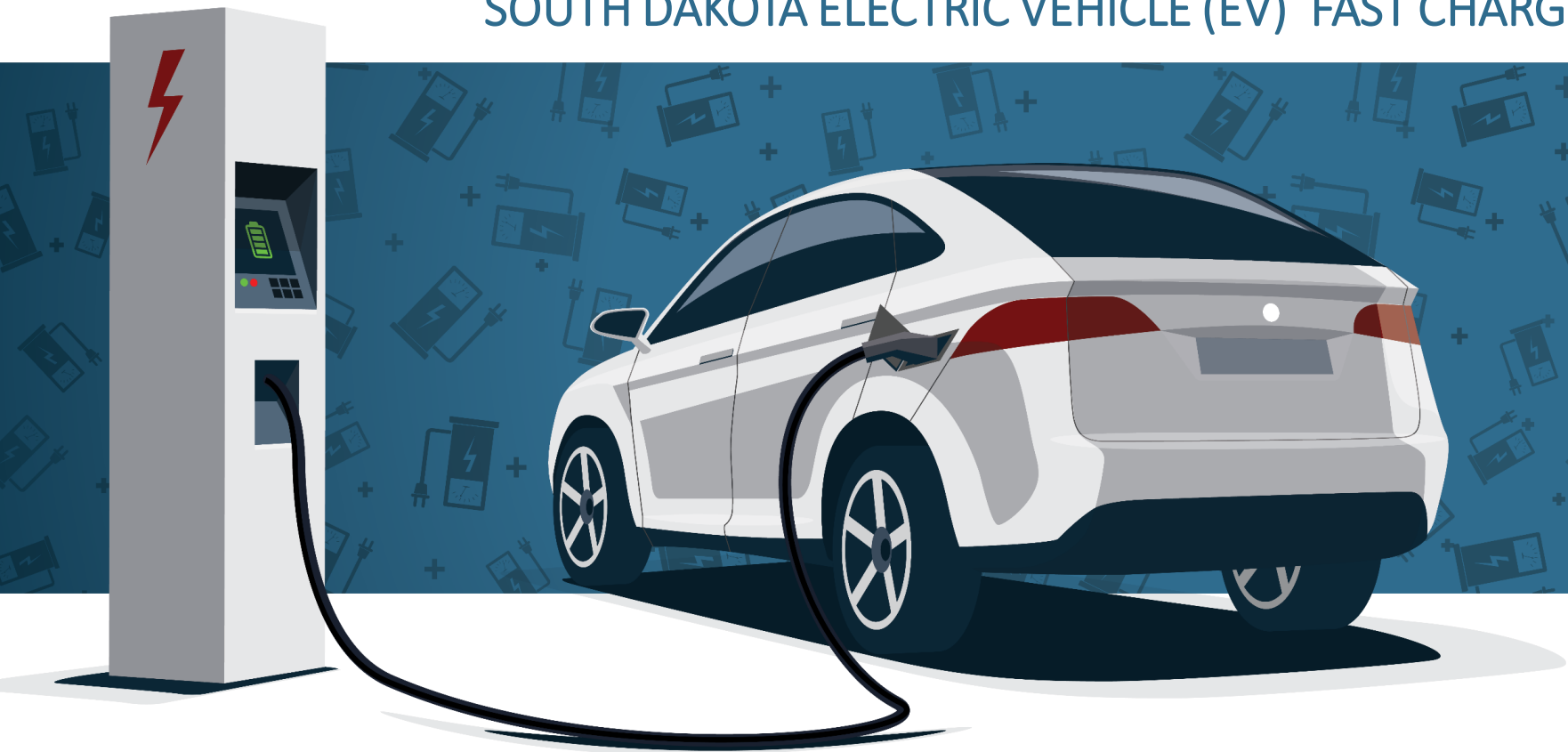



SOUTH DAKOTA ELECTRIC VEHICLE (EV) FAST CHARGING PLAN

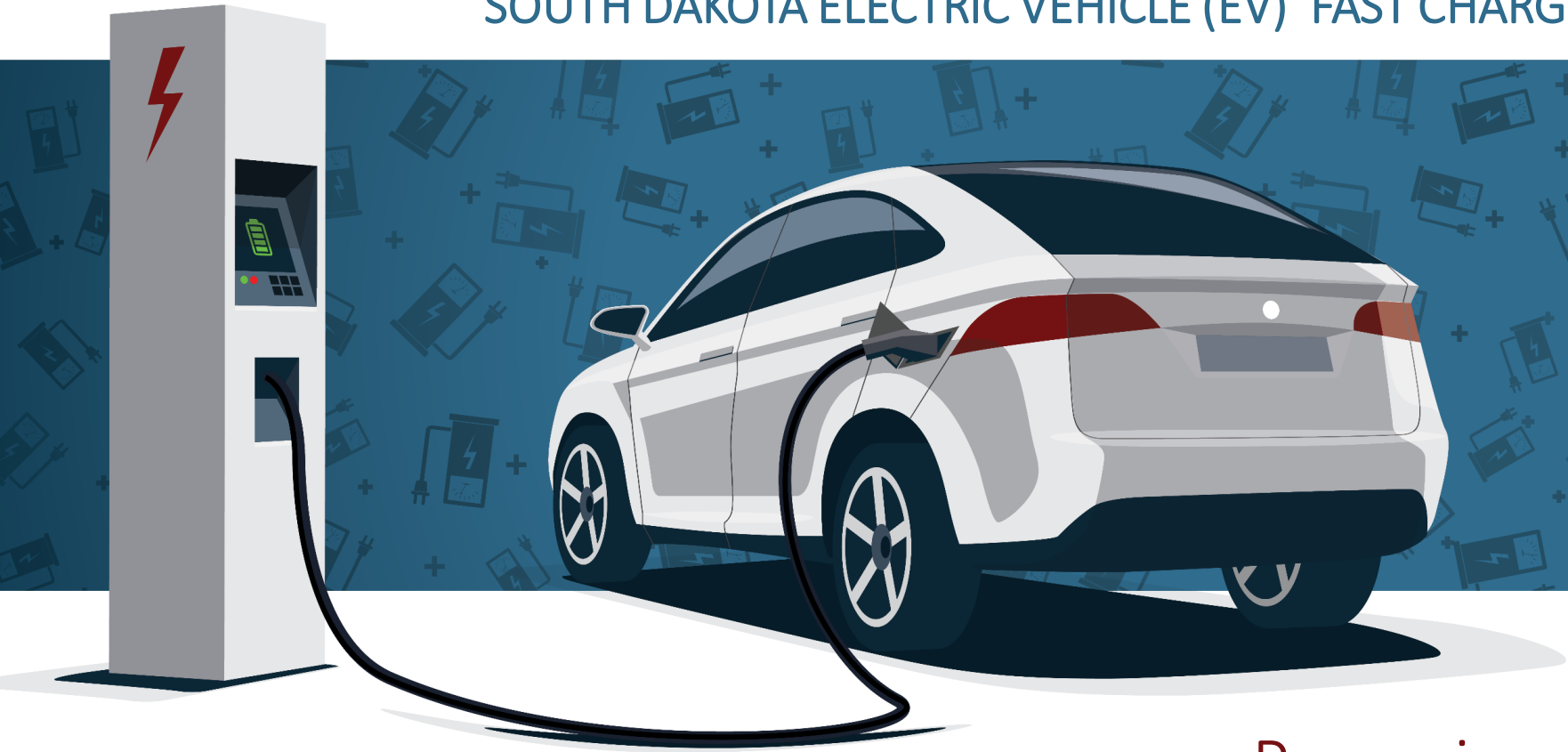


SD 
DOT

The presentation will begin at 5:15

www.sdevplan.com

SOUTH DAKOTA ELECTRIC VEHICLE (EV) FAST CHARGING PLAN



SD 
DOT

Preparing for the future of
Electric Vehicle Fast Charging

WELCOME!

Meeting Agenda



- Why should we plan for Electric Vehicles (EVs)?
- Types of EVs and chargers
- What is the EV Fast Charging Plan?
- What is the National Electric Vehicle Infrastructure (NEVI) Program?
- Existing EVs and chargers in South Dakota
- Next steps



Why are we planning for EVs?

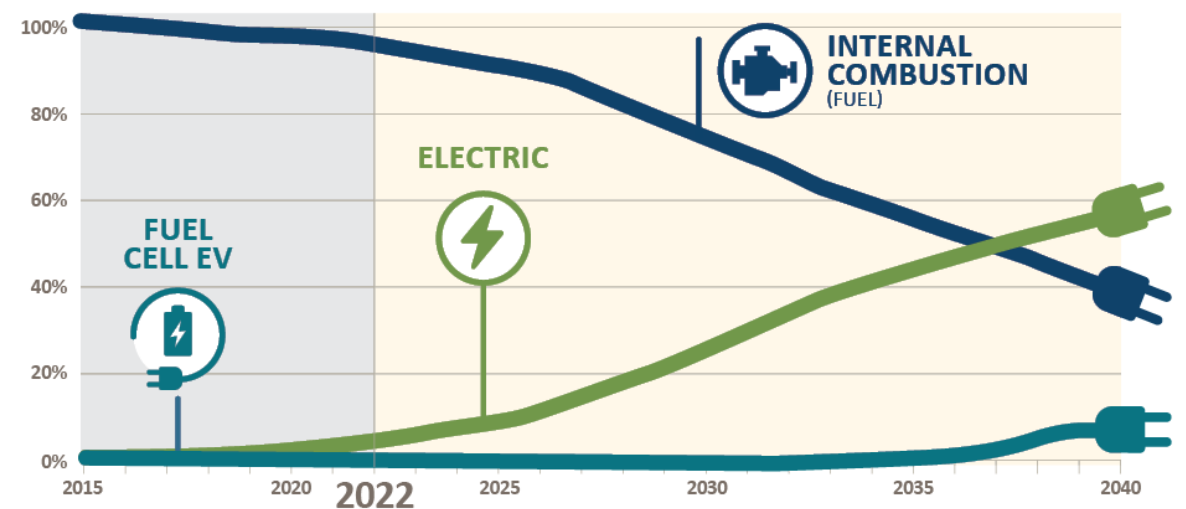
- National automakers are introducing new EV versions of popular vehicles including SUV and light trucks.
- Demand for EVs is anticipated to significantly increase due to next generation vehicles in production.

MFR	EV Goals
Ford	50% of annual vehicle sales EV by 2030
GM	100% of annual vehicle sales EV by 2035
Chrysler	35% EV of annual vehicle sales EV by 2030
Toyota	3.5M EV sales per year (globally) by 2030
Honda	100% EV of annual vehicle sales EV by 2040
VW	55% of annual vehicle sales EV by 2030

US EV Historic and Projected Sales

Pressure is being put on the EV market as consumer demand for EVs increase and the cost of production of batteries decreases.

GLOBAL SHARE OF TOTAL ANNUAL PASSENGER VEHICLE SALES BY DRIVE TRAIN



Types of EVs

Battery Electric Vehicle (BEV)

Battery power only

Supports long-distance travel



BATTERY RANGE: **150-400** MILES

Plug-In Hybrid Electric Vehicle (PHEV)

*Battery power and
internal combustion engine (ICE)*



BATTERY RANGE: **20-40** MILES

Hybrid Electric Vehicle (HEV)

Internal combustion engine only (ICE)

Battery allows for smaller engine, powers auxiliary loads and reduces idling

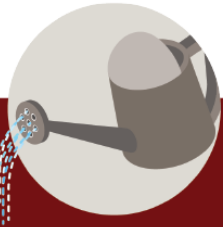


Battery charges by regenerative braking or using engine as a generator

The EV Fast Charging Plan focuses on BEV only.



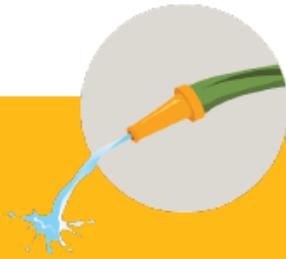
Types of EV Chargers



LEVEL 1 WATERING CAN SPEED

1.3 kW to 2.4 kW using
a Standard Outlet

100 mile range with a
48-72 hour charge time



LEVEL 2 GARDEN HOSE SPEED

3 kW to 19 kW using
a "Dryer Outlet"

100 mile range with a
10 hour charge time




LEVEL 3 (DCFC) FIRE HOSE SPEED

50 kW to 350 kW using an outlet
that cannot be installed in a home

100 mile range with a
30 minute charge time

Most EV chargers currently in South Dakota
are Level 1 and 2 chargers.



This Plan will focus on creating a
network of Level 3 chargers.

What is the EV Fast Charging Plan?

The South Dakota EV Fast Charging Plan will be a framework to guide the creation of a network of EV fast chargers throughout South Dakota that will connect to the national network to provide convenient, reliable, affordable, and accessible charging for all EV drivers.

The Plan will involve:

- Engaging stakeholders and the public.
- Analyzing data and current conditions.
- Studying policy and law related to EVs.
- Providing recommendations for potential deployment of EV infrastructure in South Dakota.



What is the National EV Infrastructure (NEVI) Program?

Given the expected growth in EVs and the need for more charging stations across the country, the Federal government is jump starting the investment in charging infrastructure.

- A new Federal program authorized under the Infrastructure Investment and Jobs Act (IIJA) or the Bipartisan Infrastructure Law (BIL).
- Provides funds to states to install direct current fast chargers (DCFC) along designated corridors.
- \$5 billion allocated to the states with another \$2.5 billion in competitive Federal grants.



NEVI Funds

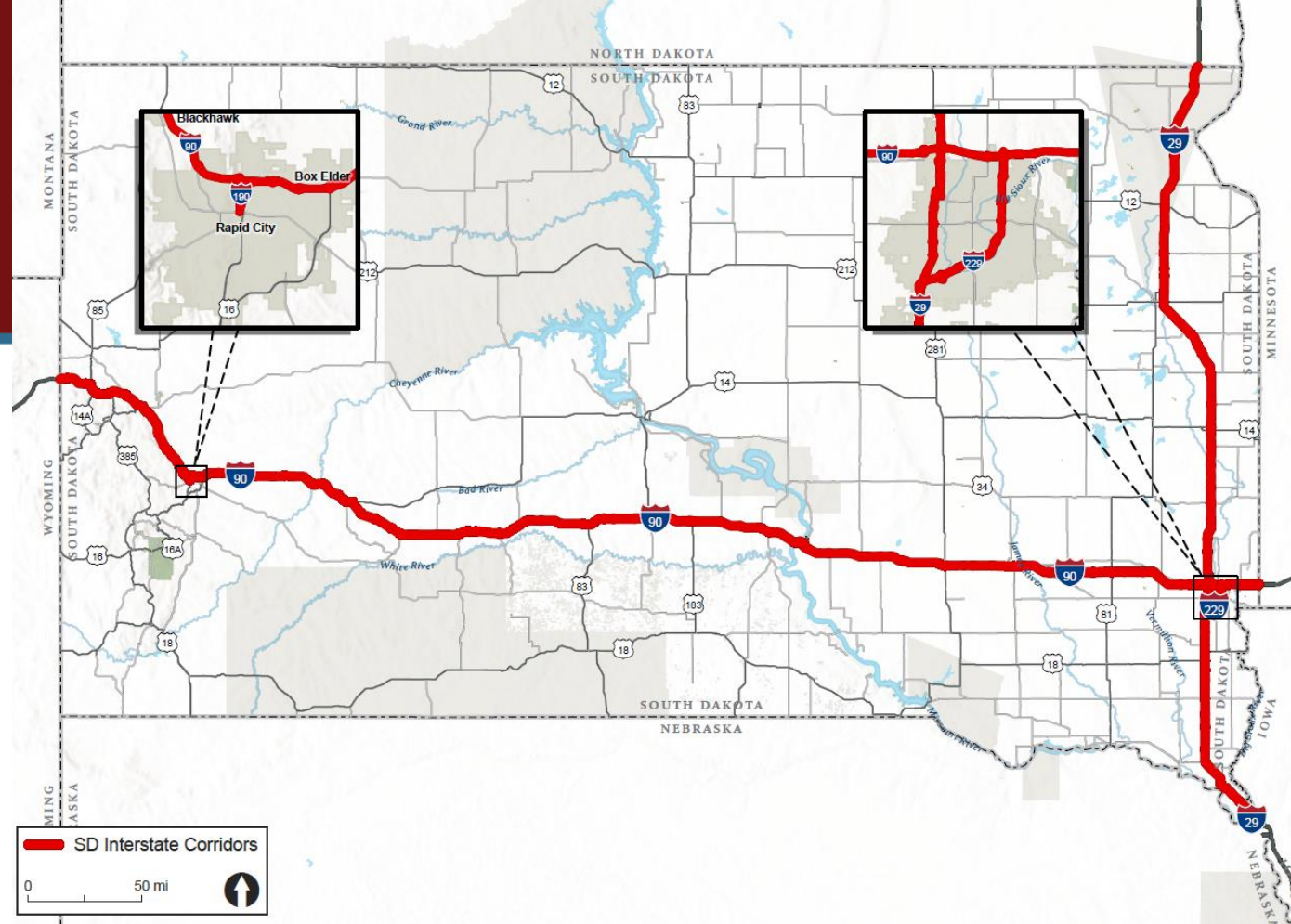
- In Fiscal Year 2022, **\$4 million** in Federal funding is available to South Dakota, with a total of **\$29 million** through Fiscal Year 2026.
- To be eligible for the Federal program, South Dakota will submit the EV Fast Charging Plan by **Aug. 1, 2022**.



NEVI Requirements

Funding must be used to build out Alternative Fuel Corridors (AFCs) first before spent on non-AFC corridors.

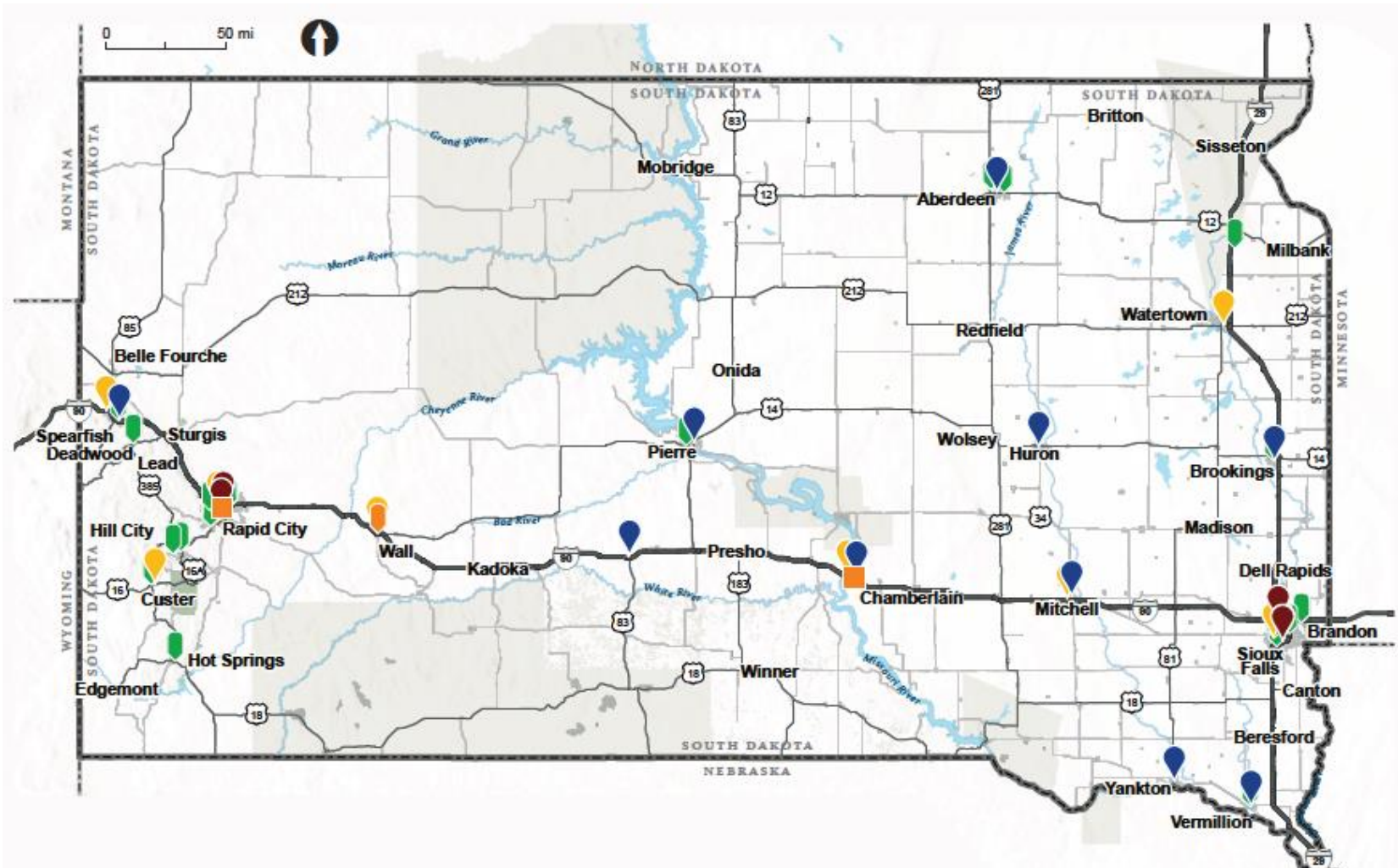
- South Dakota currently has four AFCs: I-90, I-29, I-229, and I-190.
- Once the AFCs are built out, NEVI funding can be used outside of AFC corridors.
- If additional corridors are nominated as AFCs, they must be built out as NEVI-compliant corridors before funding can be used outside of the AFC corridors.



- ✓ Charging infrastructure must be **LEVEL 3 DC Fast-Charging**.
- ✓ Chargers must be located no more than **1 Driving Mile from Alternative Fuel Corridors (AFC)**.
- ✓ Charging stations must be located no more than **50 miles** apart along designated AFCs.



South Dakota's Current EV Charging Locations Map



South Dakota currently has 59 charging locations and only the one in Wall, SD has the ability to meet the NEVI Federal requirements.

Fast Chargers:

- NEVI Compliant (1)
- NEVI Compliant (Planned) (1)
- Not NEVI Compliant (5)
- Vehicle Specific (9)
- VW Mitigation Funded (Planned) (10)

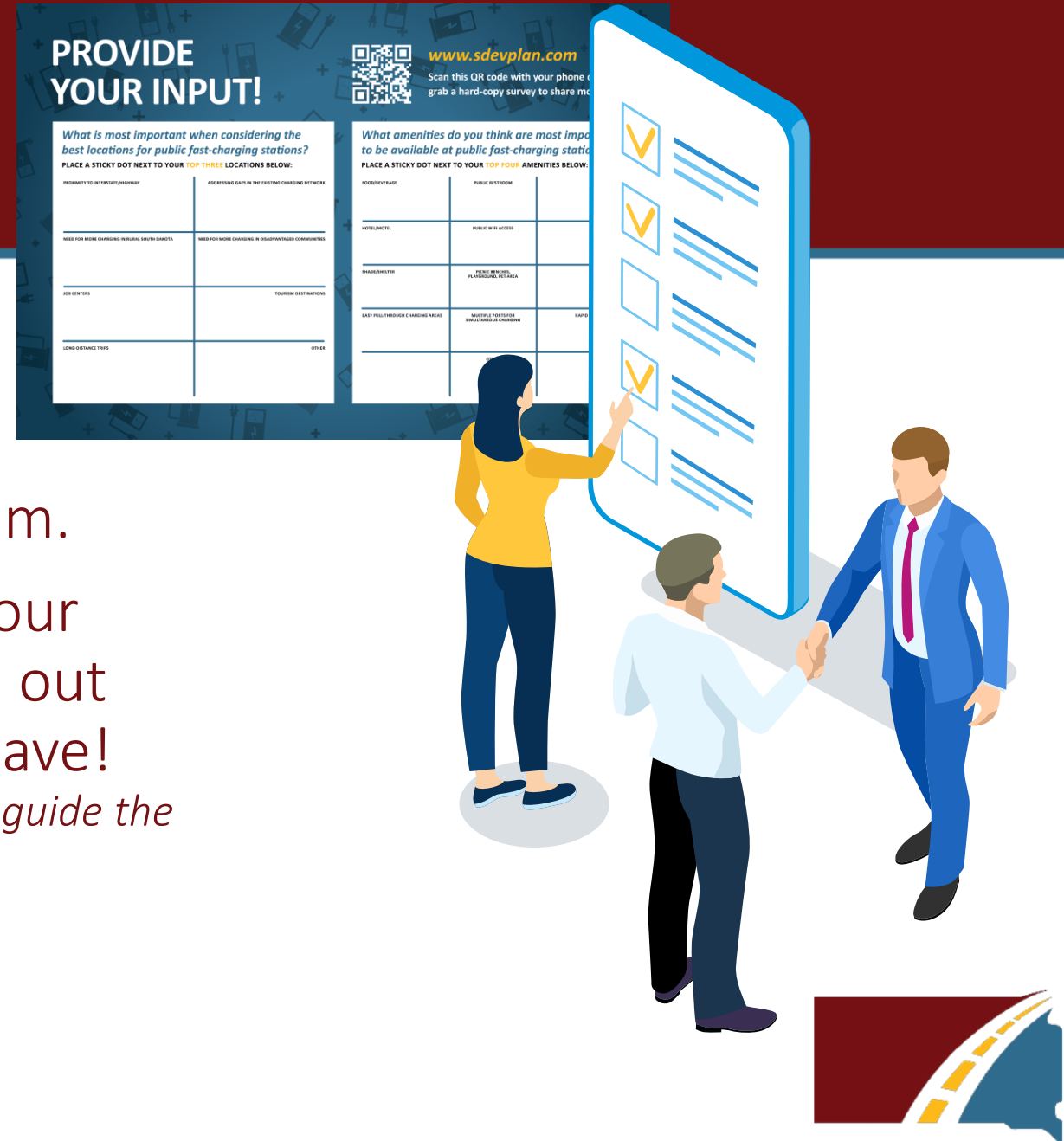
Other:

- Level 2 (44)



We Need Your Input!

- Visit the various stations to learn more and chat with the project team.
- If you haven't already, please take our survey at www.SDevplan.com or fill out the hard-copy survey before you leave!
Your responses to this survey will be used to help guide the development of the Plan.



Questions

What questions
do you have?



Thank You!

Visit www.SDevplan.com
for more information.



**DEPARTMENT OF
TRANSPORTATION**



www.sdevplan.com

Scan this QR code with your phone or grab a hard-copy survey to share more input! The online survey is available between June 21 and July 8, 2022.