



THE POWER OF PEOPLE



Review of Strategic Directive BP-SD-10, Electrification of the Economy

NPPD Board of Directors Meeting
Strategic Session
May 2023

David Rich, Sustainable Energy Manager



Nebraska Public Power District

Always there when you need us

BP-SD-10, Electrification of the Economy

BOARD POLICY
STRATEGIC DIRECTIVE

Policy No. BP-SD-10
Effective Date 12-13-18
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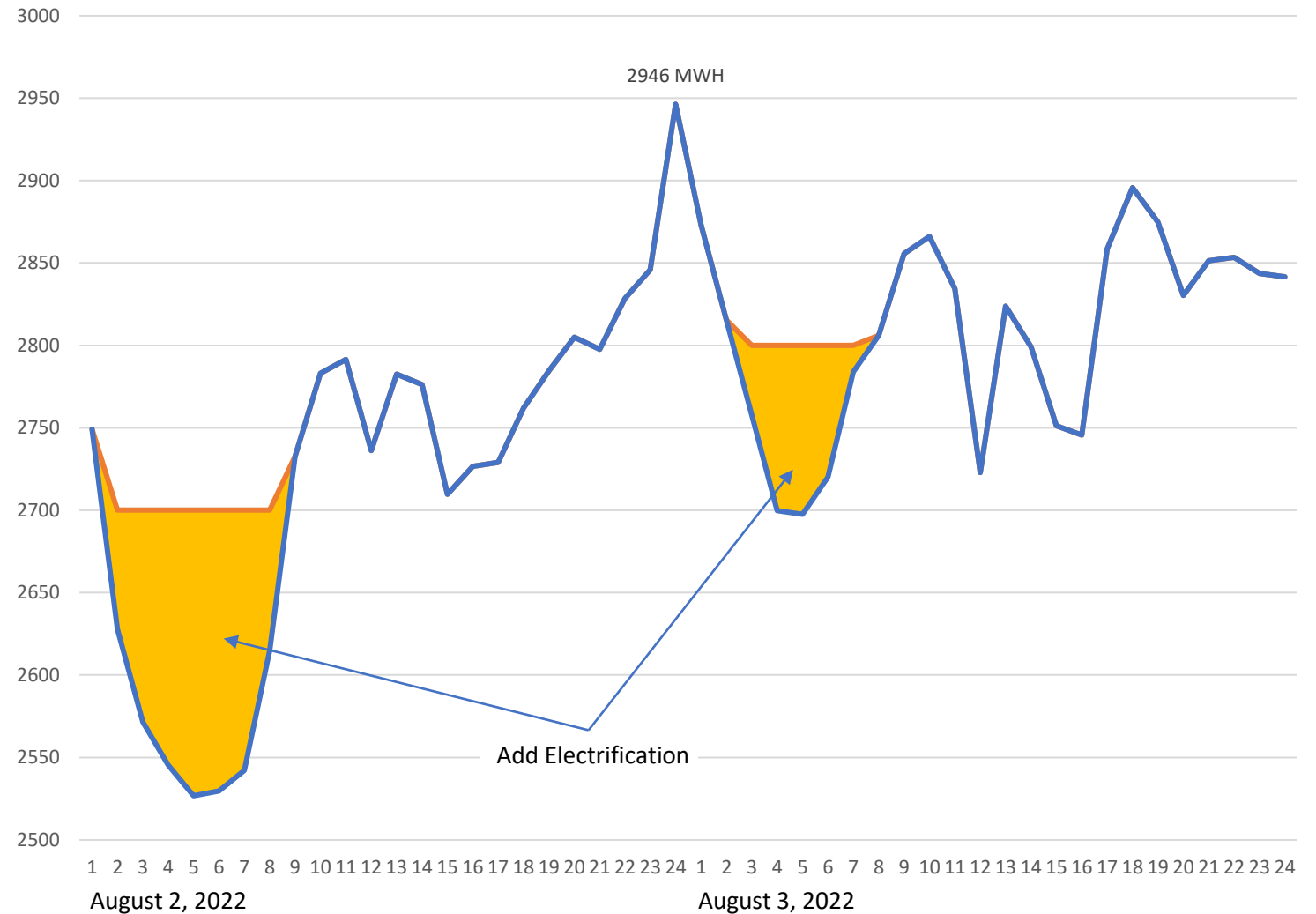
ELECTRIFICATION OF THE ECONOMY

A safe, reliable, economically-competitive, and sustainable electrical grid is the cornerstone of modern society. A large-scale transformation of society and the economy is underway which will result in ever-greater reliance on electrical technologies.

The Board recognizes and encourages the continued electrification of large sectors of the economy such as transportation, industry, and residential heating as key to fulfilling Nebraska Public Power District's (NPPD) vision and mission and be viewed as a leader in Nebraska. NPPD will integrate emerging technologies into its business model, products, and services in a way that balances risk and opportunity to create value for our customers and stakeholders.

Transportation Electrification Goals

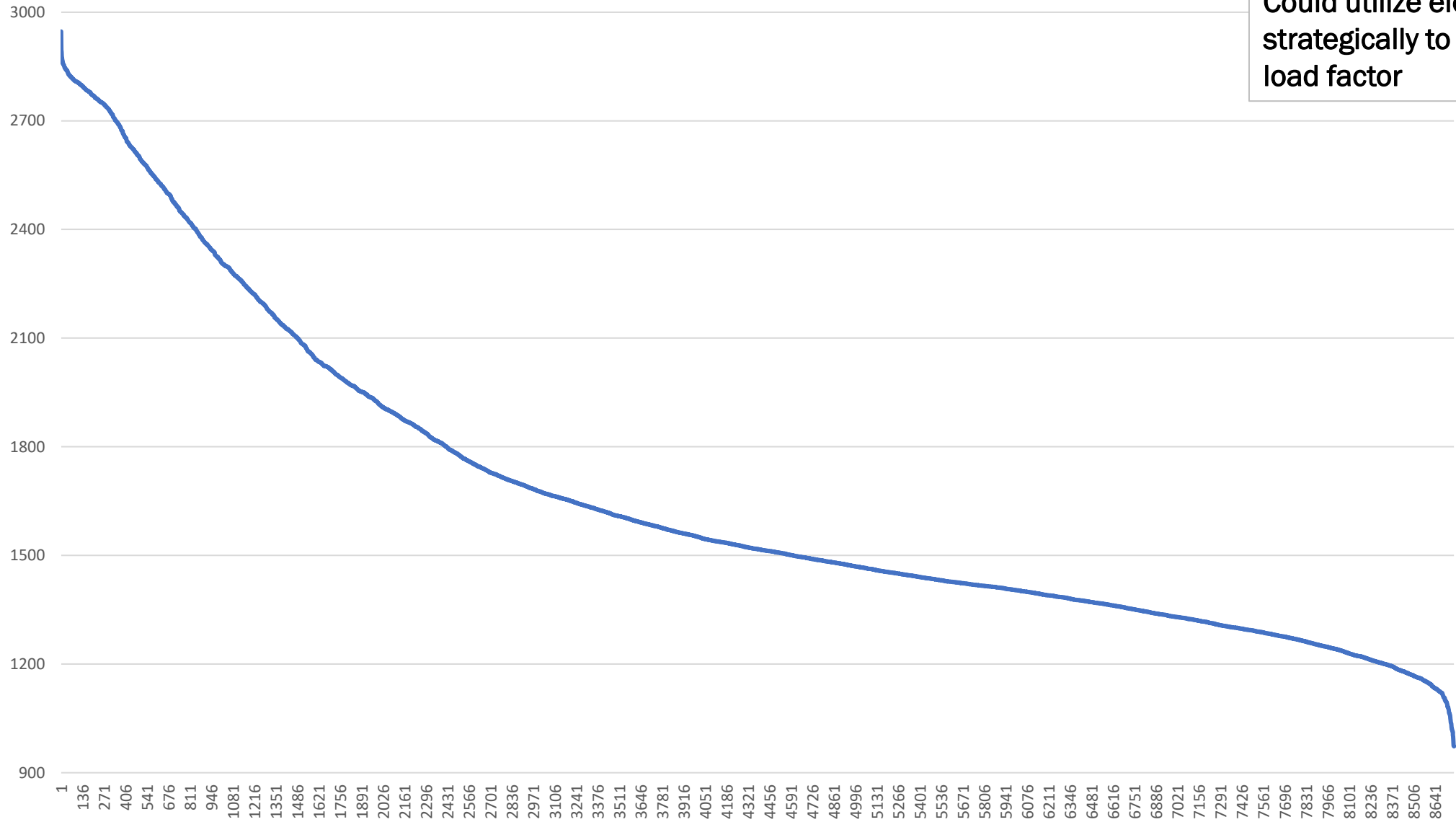
- **Overnight Charging Preferred**
 - ✓ Adds Load off peak
 - ✓ Keeps rates low
 - ✓ Time of Use Rates (TOU) can be designed to promote the usage on these off peak periods



NPPD graph

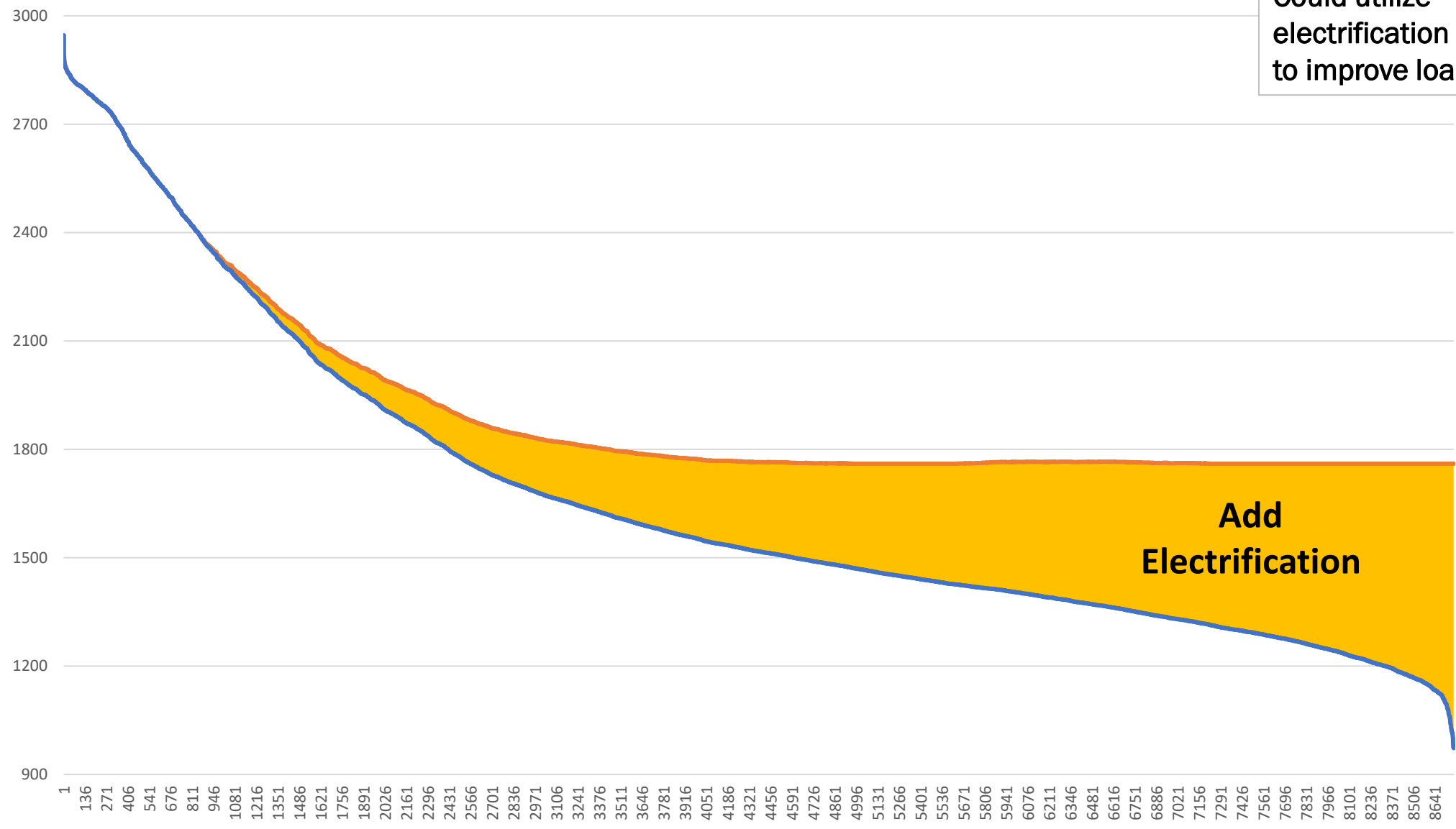
2022 NPPD Load Duration Curve

Could utilize electrification strategically to improve load factor



2022 NPPD Load Duration Curve

Could utilize electrification strategically to improve load factor



EnergyWiseSM Programs: Electrification

Residential

- Battery Electric Vehicles (EVs)
- Level 2 Charging Stations
- Pre-Wiring for Charging Station
- Lawn & Garden (20% mowers)
- Induction Cooking



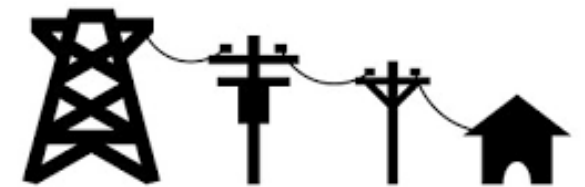
Commercial / Industrial

- Charging Stations
 - Level 2
 - DC Fast Charger (DCFC)
- Pre-Wiring for Chargers



Wholesale Customers

- Battery Electric Vehicles (EVs)
- Charging Stations
 - Level 2
 - DCFC
- EV Promotional Events



ENERGYWISESM
Use less. Spend less. Do more.

www.EnergyWiseNebraska.com

BP-SD-10 Electrification 2020 Investment

EV Program	Number of Incentives	Total Dollars	Grants	NPPD Share
Residential Charging Station	6	\$3,000	\$1,500	\$1,500
Residential Charging Station Pre-Wiring	59	\$13,309	\$5,900	\$7,409
Residential EV and Charging Station	15	\$67,500	\$63,750	\$3,750
Public Charger	2	\$7,933	-	\$7,933
Public Charging Station Conduit	1	\$1,711	-	\$1,711
Wholesale Customer EVs	2	\$32,000	-	\$32,000
Totals	85	\$125,453	\$ 71,150	\$ 54,303

Grants: Nebraska Environmental Trust/Nebraska Community Energy Alliance (NET/NCEA) & Nebraska Department of Environment and Energy (NDEE)

2020 Electrification Program Investments Budget: \$2 Million

BP-SD-10 Electrification 2021 Investment

Program	# of Incentives	Total Dollars	Grants	NPPD Share
Residential Charging Station Pre-Wiring	47	\$16,661	\$4,700	\$11,961
Residential Charging Stations	40	\$20,000	\$8,250	\$11,750
Residential EVs	31	\$124,000	\$100,000	\$24,000
Residential Lawn and Garden	39	\$4,910	\$0	\$4,910
Public Charging Stations	12	\$1,407,086	\$162,321	\$1,244,765
Wholesale Customer EVs	3	\$48,000	\$48,000	\$0
EV Wholesale Advertising	4	\$1,686	\$0	\$1,686
Totals	176	\$1,622,343	\$323,271	\$1,299,072

Grants: NET/NCEA and NDEE

2021 Electrification Program Investments Budget: \$2 Million

BP-SD-10 Electrification 2022 Investment

Program	# of Incentives	Total Dollars	Grants	NPPD Share
Public Charging Station Conduit	1	\$1,000		\$1,000
Public Charging Stations	9	\$195,877	\$74,718	\$121,159
Wholesale Customer EV's	2	\$32,000	\$32,000	
NPPD EV's	3	\$164,559	\$32,000	\$132,559
Residential Charging Station Pre-Wiring	80	\$32,662	\$1,800	\$30,862
Residential Charging Stations	38	\$19,000	\$2,000	\$17,000
Residential EV's	76	\$304,000	\$40,000	\$264,000
Residential Lawn and Garden	279	\$70,828		\$70,828
Residential Induction Cooktop	78	\$32,016		\$32,016
EV Wholesale Advertising	15	\$2,881		\$2,881
Heat Pump Water Heater (pilot program)	20	\$58,957	\$50,000	\$8,957
Totals	581	\$854,823	\$182,518	\$672,305

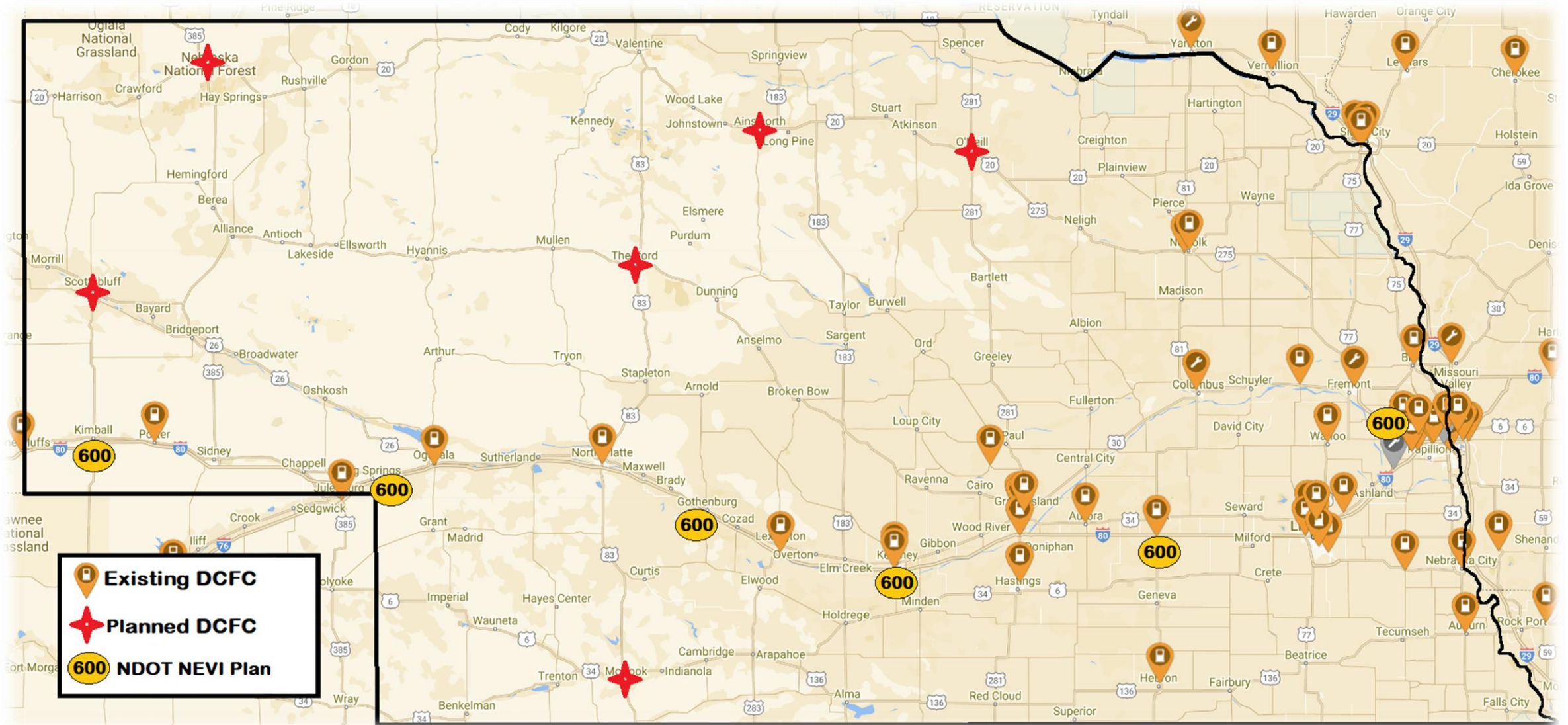
Grants: NET/NCEA, NDEE, and APPA (American Public Power Association) / DEED
(Demonstration of Energy & Efficiency Development)

2022 Electrification Program Investments Budget: \$2 Million

2023 Program Changes

- Lawn and Garden program – added chainsaws, tillers, snow blowers
- Updated EV Commercial Charger incentive from 50% of installed cost to \$200 per kW
- Ended \$4,000 EV incentive
- NPPD will not be purchasing more EVs for Wholesale Customer checkout

BP-SD-10 Electrification-EV Charging Stations



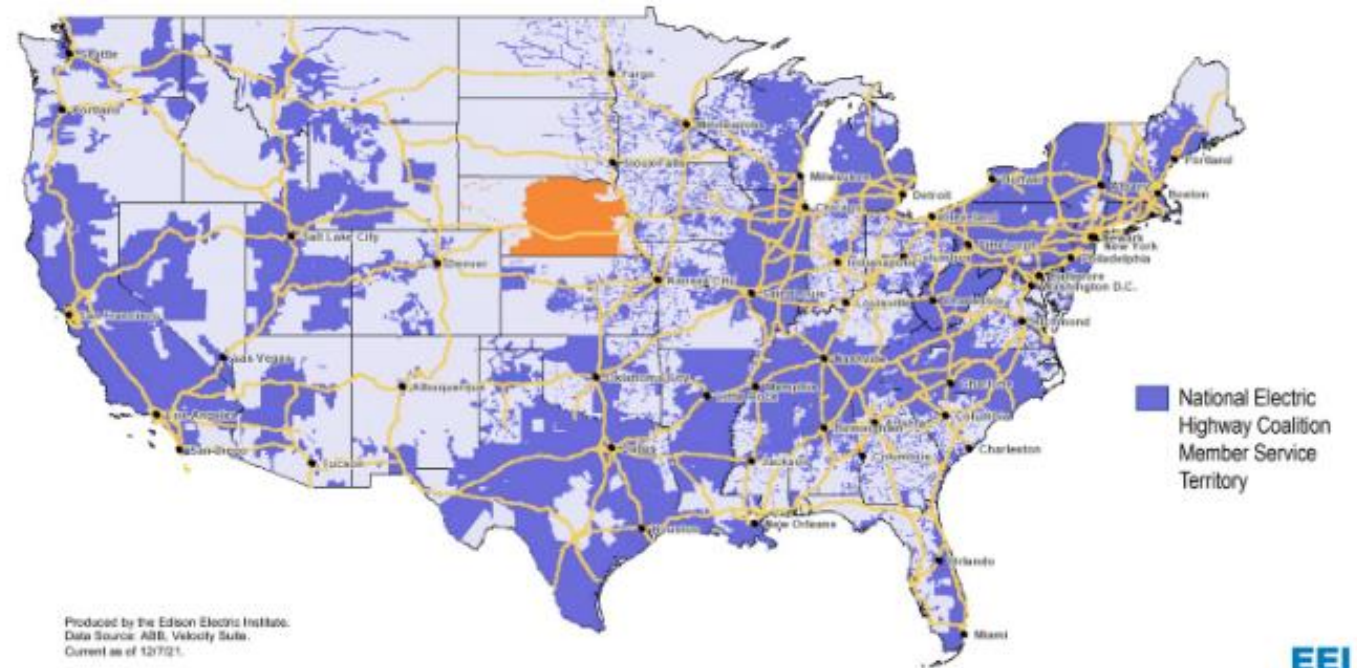
Federal Programs

- **National Electric Vehicle Infrastructure (NEVI) Nebraska Plan**
 - \$6 Million per year for 5 years
 - 20% matching funds for host site/owner, 80% by NEVI program
 - Requirements
 - 4 DCFC stations each capable of 150 kW charging
 - Within 50 Miles of next stations
 - Nebraska locations
 - Kimball, Sidney, Big Springs, Gothenburg, Kearney, York, Omaha
- **Charging and Fueling Infrastructure (CFI) Grant Program**
 - Corridor Program
 - Same requirements as NEVI program
 - Community Program (\$500,000 grant minimum request)
 - 4 EV charging cables (Level 2 minimum = 6 kW, DCFC minimum = 150 kW)
 - 20% matching funds for host site/owner, 80% by CFI program
 - Apply at www.grants.gov

NPPD signs Memorandum of Cooperation with National Electric Highway Coalition

“Our membership in NEHC reaffirms our commitment to support the expansion of the EV charging infrastructure along highways and main thoroughfares across the state,” says NPPD President and CEO Tom Kent. “Most EV owners will charge their vehicles overnight, and that’s very convenient for daily travel, but getting more fast charging stations out in the public along heavily traveled corridors is an important next step to support our customers who are purchasing EVs.”

NEHC is a collaboration of over 60-member electricity providers across the United states



BP-SD-10 Electrification-Education/Awareness

EVs

- 2022 Kia EV6
- 2022 Bolt EUV
- 2022 Ford F-150 Lightning
- 2021 Ford Mustang Mach-E
- 2018 Chevy Bolt



Events

- Husker Harvest Days
- State Fair
- Home shows and community parades

Long Term Checkout Program for Schools

- Exposure to EV Experience for Students and Faculty
- Determine Fuel Savings
- Installation of Level 2 Charger



Electric School Bus Program

- **Six Nebraska schools participating**
 - ✓ Summerland (Elkhorn Rural PPD), Raymond Central (Norris PPD), Hershey (Dawson PPD), McCool Junction (Perennial PPD), Southern (City of Wymore)
 - \$395,000 grant for each school
 - ✓ Hay Springs (NPPD Retail)
 - \$305,000 grant from Bipartisan Infrastructure Law
- **\$20,000 of each grant is designated for charging infrastructure**
- **Bus providers have suggested 60 kW DCFC station (Cost \$100,000+)**
 - ✓ Include charging station into our Non-Profit Commercial Charging Station program
 - Would allow wholesale customer to reimburse 90% of charging station installation costs



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Questions

Stay connected with us.



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