

# Funding EV Chargers in Nebraska via the Volkswagen Diesel Emissions Environmental Mitigation Trust



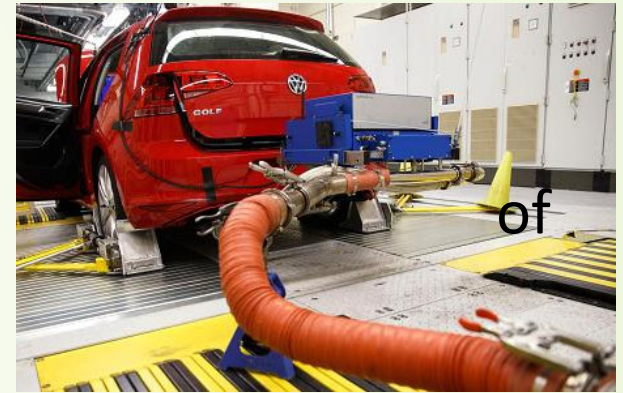
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# VW Trust Funding to Nebraska: \$12.25 million

- ❖ Result of court settlement of VW emissions cheating activities
- ❖ Nebraska allocation based on the number of offending vehicles registered in the state
- ❖ Funds must be used for specified actions to reduce nitrogen oxide emissions
- ❖ NDEQ hopes to expend all funds by the end of 2022
- ❖ NDEQ expects to use 10% of funds for EV Charging Infrastructure



# Mitigation Plan

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- ❖ NDEQ designated by Gov. Ricketts as the lead agency to administer funds
- ❖ Following a public comment period and several public meetings, NDEQ issued a required Mitigation Plan in January 2018
- ❖ Plan outlines types of projects and funds allocated to each
- ❖ Can be modified at the state's discretion by resubmitting to the Trust



# Nebraska's Selected Mitigation Actions



**School Bus Replacements, 25%**  
(~ \$3 million)



**EV Chargers, 10%**  
(~ \$1.2 million)



**Transit Bus Replacements, 10%**  
(~ \$1.2 million)



**DERA: Irrigation engines, CNG Refuse Trucks, 25%**  
(~ \$3 million)

**Administrative Costs, 5%**  
(~ \$0.6 million)

**Eligible Actions Based on Demand, 25%**  
(~ \$3 million)

Local Diesel Trucks

Airport Ground Support Equipment



# EV Charger Basics

Charger Type		Driving Miles per Minute of Charge	Minutes of Charge to Drive 100 miles	Installed Cost of Charger
Level 1: 120 Volt AC		0.1	1080 (18 hours)	\$500 to \$1,000
Level 2: 240 Volt AC		0.4	240 (4 hours)	\$2,000 to \$7,000
DC Fast	50 kW	2.9	35	\$60,000 to \$100,000
DC Fast	150 kW	8.7	12	\$100,000 to \$150,000
DC Fast	350 kW	20.4	5	\$150,000 and up

Source: *Accelerating Electric Vehicle Adoption: A Vision for Minnesota*, 2019.





# Level 2 Chargers

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- ❖ Moderate charging rate (4 to 8 hours for full charge)
- ❖ Suitable for longer dwell-time locations: workplace, shopping center, hotel/motel, single and multi-unit residential, tourist destinations
- ❖ Less expensive to purchase and operate than fast chargers
- ❖ Standard connector used worldwide for all vehicles other than Tesla



# DC Fast Chargers

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- ❖ Rapid charging: full charge in under an hour
- ❖ Suitable for short-dwell time locations: highway convenience-store/truck stop/rest area; charging hub; restaurant & retail stores
- ❖ Much more expensive to purchase, install, and operate than Level 2 chargers
- ❖ Two connector types in use in addition to Tesla connector



# Electric Vehicle Charging Equipment in the VW Trust Agreement

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- ❖ Can fund Level 1, Level 2, and DC Fast chargers in public places, workplaces, and multi-unit dwellings
- ❖ No consumer, single-unit residential chargers
- ❖ Can fund equipment purchase, installation, and charger maintenance
- ❖ Ineligible costs: real-estate purchase/rental, other capital costs, general site maintenance





# Maximum Reimbursements for EV Chargers in the VW Trust Agreement

Available to the Public		Not Available to the Public	
On Government Property	On Private Property	At Workplace	At Multi-Unit Dwelling
100%	80%	60%	60%

Reimbursement percentages under state VW funding programs can be less than these amounts.



# NDEQ Preliminary Funding Considerations

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- ❖ Level 2 and DC Fast Chargers
- ❖ Publicly-available locations and workplace chargers to promote fleet EV adoption
- ❖ Chargers must be networked to provide usage data
- ❖ DC fast chargers must have dual non-Tesla connectors
- ❖ DC fast charging stations must include sufficient electrical infrastructure to allow for future power upgrades and/or installation of an additional charger
- ❖ 50% reimbursement for Level 2; 50 to 80% (?) for DC Fast



# Sample of Other State EV Charging Programs using VW Trust Funds

STATE	FUNDS	FUNDING BREAKDOWN	REIMBURSEMENT	PROGRAM TYPE
Oklahoma	\$3.2 M	75% Highway Corridor DCFC	80%	Competitive
		25% Single Point Locations: L2 & DCFC	80%	Competitive
Minnesota Phase 1	\$1.6 M	90% Highway Corridor DCFC	80%	Competitive
		10% L2: public, workplace, multi-unit	80% public 60% private	Competitive
Pennsylvania Phase 1	\$6 M	50% DCFC in Hwy corridors, destinations, community hubs	75%	Competitive
		50% L2: public, workplace, multi-unit	Govt: 60 to 100% Private: 60 to 80%	1 <sup>st</sup> come, 1 <sup>st</sup> Served



# Questions for Your Input

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What type(s) of chargers would most cost-effectively encourage adoption of EVs in Nebraska?

- ❖ DC fast chargers and hotel/motel Level 2 chargers on highway corridors to allow inter-city travel and address “range anxiety”?
- ❖ Level 2 workplace chargers to encourage fleet conversion to EVs?
- ❖ Community DC fast and Level 2 chargers?
- ❖ Level 2 chargers at retail/commercial locations?



# Questions for Your Input

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Should specific percentages of funds be designated for local Level 2 charging and highway corridor DC fast charging? If so, what percentages?

What reimbursement percentage should be set for DC fast charging projects to make them economically feasible and attractive?

Other considerations?



# NDEQ Tentative Funding Timeline

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- ❖ 5/24/2019 – Release draft funding program proposal for public comment
- ❖ 6/24/2019 – Close of public comment period
- ❖ 8/1/2019 – Public announcement of EV Charging funding program
- ❖ 10/1/2019 – Proposals/applications accepted
- ❖ 12/1/2019 – Proposal application review begins
- ❖ 12/15/2019 – Funding decisions announced





# Questions

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