



# Transportation – Electrified!

Track 1: Sustainable Transportation



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# Panelists

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## **Adam Thada**

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## **Aaron Sawatsky-Kingsley**

The City of Goshen, Dept. of Environmental Resilience  
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## **Shawn Seals**

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*sseals@idem.in.gov*



# Workplace Charging at The Center at Donaldson

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ADAM THADA

DIRECTOR OF ECOLOGICAL  
RELATIONSHIPS

OCT. 26 2021

[ATHADA@POORHANDMAIDS.ORG](mailto:ATHADA@POORHANDMAIDS.ORG)

BLOG: [ECOLOGY.PHJC.ORG](http://ECOLOGY.PHJC.ORG)





# 2017 Level 2 Install

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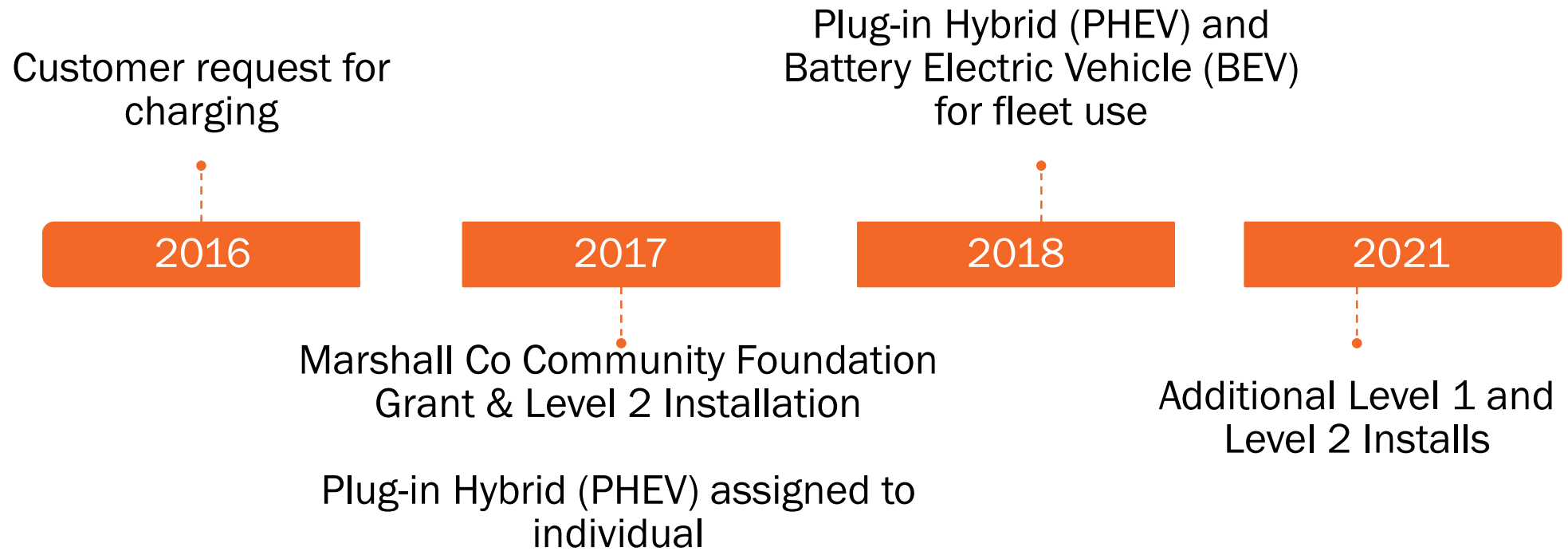
- \* used pre-existing conduit
- \* 2 plugs dynamically sharing one circuit
- \* available for fleet, public, and employee use





# Timeline

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# Design Considerations

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- \*Incremental development (respond & anticipate)
- \*One input, multiple yields
- \*Low-hanging fruit
- \*Be flexible





# The Numbers

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## Cost:

- > 2017 Level 2 installation (2 plugs) \$5,000
- > 2021 Level 2 installation (1 plug) \$3,000
- > 2021 Level 1 installation (1 plug) \$500

## Total energy delivered:

~10,500 kWh, or ~37,000 electric miles

Paired with solar energy projects



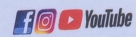




**THE CENTER  
Donaldson**

*Adam Thada*  
Director, Ecological Relationships

Box 1, Donaldson IN 46513  
Union Rd., Plymouth IN 46563  
adnids.org



Blog at [ecology.phjc.org](http://ecology.phjc.org)

Our first Bolt!

Please email about your  
experience. Thanks for  
charging!

- Adam





# EVs and EV Infrastructure in Goshen



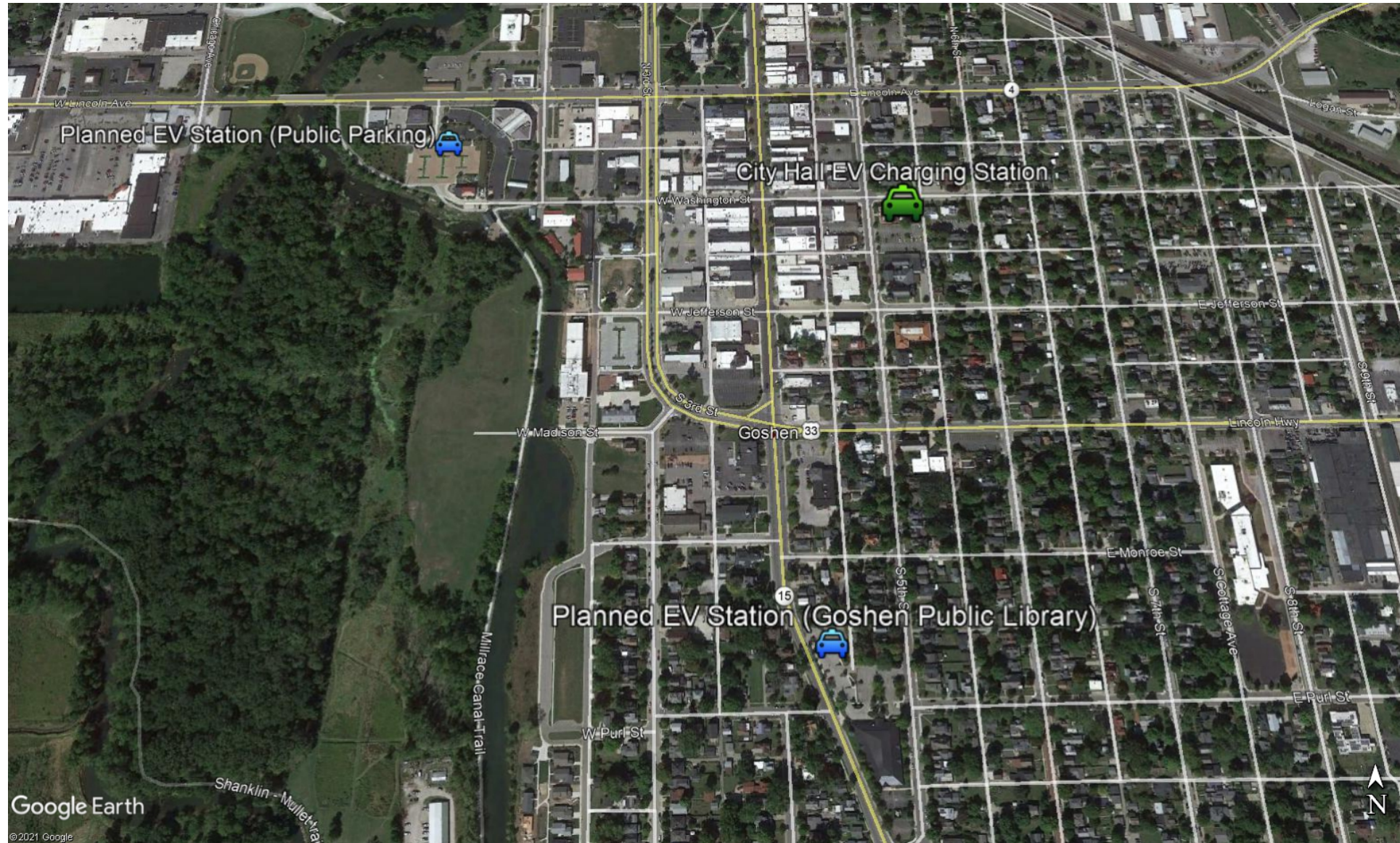


# Goshen City Hall EV Charging Station





# Planned Sites for EV Stations in Downtown Goshen





# New Charging Station at Goshen Public Library



# Background

4/30/19



Mayor's Environmental Advisory Committee created. The Common Council and Mayor Stutsman passed Resolution 2019-19 to “**create and implement a Climate Action Plan by 2021.**”

November `19



The City of Goshen Department Heads and the Mayor create the **Dept. of Environmental Resilience** with the first project being **to pioneer Resolution 2019-19.**

2020-2021



The City of Goshen Dept. of Environmental Resilience drafted **local government Climate Action Plan**, adopted by Goshen Common Council, July, 2021.



# Environmental Justice = Social Justice and vice versa

How can we provide equitable eco-benefits for everyone?



# Indiana's DieselWise Indiana and Volkswagen Environmental Mitigation Trust Programs

*Shawn M. Seals*

*DieselWise Indiana and*

*Indiana VW Mitigation Trust Programs Administrator*

**Transportation - Electrified**

**October 26, 2021**



# EV Charging Equipment and Allocations

Total of \$6,150,000 made available for EV charging across Indiana (maximum allowed by VW consent decree)

- \$615,000 (10%) dedicated to Level 2 (L2) charging equipment
  - Typically charges 80 miles of range in 210 minutes
- \$5,535,000 (90%) dedicated to Direct-Current Fast Charging (DC Fast) equipment
  - Typically charges 80 miles of range in 30 minutes

## L2 Applications and Awards

- 17 applications for 111 locations across Indiana
- 15 applications for 55 locations directly from site hosts or sponsors
- 2 applications for 56 locations from applicants for sites also included in their respective DC Fast applications

Total Project Cost	Total VW Requests	Average Cost per Location	Total Cost-Share from Applicants
\$2,546,136	\$978,000	\$8,811	\$1,568,136

- IDEM awarded the 15 local site hosts resulting in 55 L2 charging stations across the state
- Indiana is investing \$502,000 in L2 chargers across Indiana
- The potential uses of the remaining \$113,000 are still be considered



## Address

- L2 Charging Station (55)
- Highways
- City/Town

### Notes:

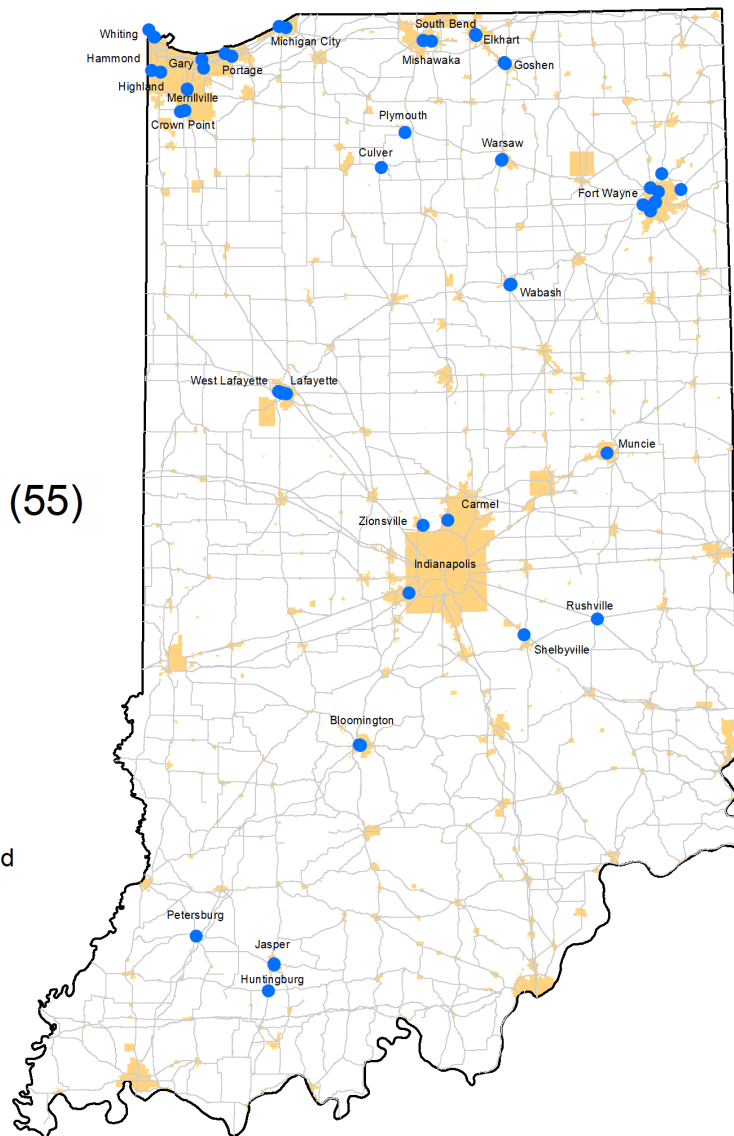
This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.

**Mapped By:** C. Mitchell,  
Office of Air Quality

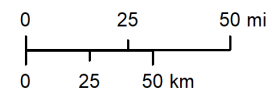
**Date:** 11/13/2020

**Map Projection:** UTM Zone 16 N

**Map Datum:** NAD83



## Volkswagen L2 Charging Station Applications



# DC Fast Proposals and Recommendation

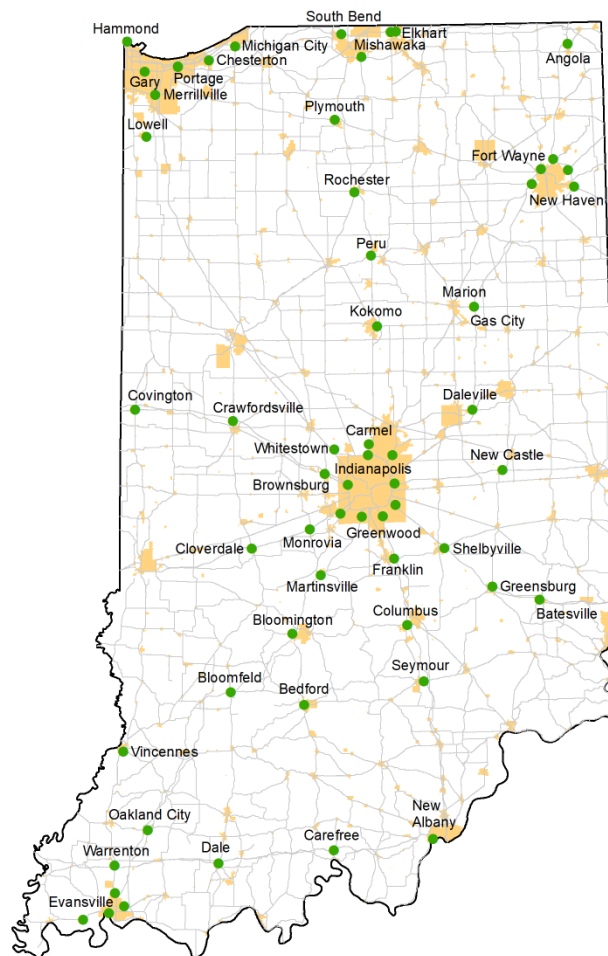
- 28 applications for 176 locations across Indiana
- 24 applications for 35 locations came directly from site hosts or local sponsors
- 4 applications for 141 locations that represent a holistic statewide approach for implementation

Total Project Costs	Total VW Requests	Average Cost per Location	Total Cost-Share from Applicants
\$34,119,695	\$22,638,765	\$128,629	\$11,480,930

- IDEM awarded the Indiana Utility Group's collaborative effort from eight utilities the DC Fast charging station program
- Indiana is investing \$5,535,000 in at least 61 DC Fast stations will be installed across Indiana
- Funding Agreements for this program are currently being developed



## Proposed Indiana DC Fast Charging Locations by the Indiana Utility Group (IUG) (May 2021)



- Electric Vehicle Charging Locations
- Highways
- City/Town

0 25 50 mi  
0 25 50 km



Notes: This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.  
Mapped By: C. Mitchell, Office of Air Quality Date: 05/26/2021 Map Projection: UTM Zone 16 N Map Datum: NAD83

# REV Midwest

- Grew out of the efforts of the Midcontinent Transportation Electrification Collaborative (IDEM is an original member)
- Bipartisan support from Indiana, Illinois, Wisconsin, Minnesota, and Michigan
- Focused on a cooperative effort to work with industry professionals in the development of a transportation network that will meet the demands of electric vehicles now and into the future
- As the Crossroads of America, Indiana will play a significant role in supporting the Midwest's development of a sustainable electric vehicle infrastructure for light-duty, medium-duty, and heavy-duty vehicles



## For More Information



**Indiana Volkswagen Mitigation Trust Program website:**

[www.idem.IN.gov/airquality/2712.htm](http://www.idem.IN.gov/airquality/2712.htm)

**DieselWise Indiana website:**

[www.idem.IN.gov/airquality/2561.htm](http://www.idem.IN.gov/airquality/2561.htm)



**For program assistance:**

Shawn Seals

DieselWise Indiana and Volkswagen Mitigation Trust

Programs Administrator

IDEM – Office of Air Quality

(317) 233-0425

[SSeals@idem.IN.gov](mailto:SSeals@idem.IN.gov)



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# Incentives & Funding: How to Pay for a Cleaner Fleet

Track 1: Sustainable Transportation



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# Panelists



## **Ryan Lisek**

South Shore Clean Cities

*rlisek@legacyenv.com*



## **Shawn Seals**

Indiana Department of Environmental Management

*sseals@idem.in.gov*



## **Bill Tokash**

Indiana Michigan Power



# South Shore Clean Cities

Clean Fuels, Clean Air... Clean Cities



N O R T H E R N   I N D I A N A

# Northern IN Green Fleet Program

- What are your Goals?
- Emission Baseline
- TCO
- Infrastructure
- Equipment Availability
- Local Utilities
- Vendors
- Demonstration
- Successful Coordination
- Recognition





# Current/Upcoming Opportunities

- EPA School Bus Rebate – Due 11/5/21
- Indiana Department of Environmental Management
- IN Office of Energy Development
- Department of Energy
- U.S. Department of Agriculture
- Federal Opportunities – Infrastructure Bill



**Start Planning and Researching in order to be Prepared!**

# Contact South Shore Clean Cities!



Ryan Lisek  
Project Manager  
219-644-3690  
[rlisek@southshorecleancities.org](mailto:rlisek@southshorecleancities.org)  
[www.southshorecleancities.org](http://www.southshorecleancities.org)

10115 Ravenwood Drive, Suite B  
St. John, IN 46373



# I&M's Indiana PEV Charging Incentives<sup>1</sup>

- I&M has incentives for C&I workplace and fleet customers and multi-unit dwelling (MUD) property owners planning to install PEV chargers
- I&M will provide a rebate of \$250 for each newly installed PEV charging port<sup>2,3</sup> if customers:
  - Can supply the new PEV charging stations from their existing, behind the meter tariffed service, or
  - Qualify for new power service from I&M to supply the new PEV charging stations under I&M's standard revenue credit analysis<sup>4</sup> terms
- I&M can also provide new power service to the charging stations under an extended, 5-year revenue credit analysis for those customers that cannot meet our standard revenue credit analysis terms

<sup>1</sup> See [Charging at Work in Indiana](#) for the I&M incentive application link

<sup>2</sup> Excludes GS tariff customers using on average 4,500-kWh/mo or less over the past 12-months eligible for a \$500 incentive for submetered off peak charging discounts

<sup>3</sup> For 240 volt wiring and/or Level 2 EV chargers

<sup>4</sup> I&M's standard Contribution In Aid of Construction (CIAC) revenue credit calculations are used by I&M to determine when we install new service based on anticipated revenue

# I&M's Indiana PEV Charging Incentives<sup>1</sup>

- [Indiana Link](#) to I&M incentive application for commercial and industrial fleet and workplace (employee) charging in Indiana
- [Michigan Link](#) The key differences in Michigan are that I&M can pay a rebate of up to \$2,500 per each PEV charging port and we can also suspend our standard revenue credit analysis for new service.
- The South Shore Clean Cities Coalition posted a [short video summary](#) of I&M's residential and commercial industrial EV incentive programs from their recent virtual conference, which is a great resource.
- I&M welcome the chance to discuss the details of proposed PEV chargers and our commercial industrial incentives in Indiana and Michigan. Please call William Tokash at (630) 815-3442 or email at [wjtokash@aep.com](mailto:wjtokash@aep.com)





# Indiana's DieselWise Indiana and Volkswagen Environmental Mitigation Trust Programs

*Shawn M. Seals*

*DieselWise Indiana and*

*Indiana VW Mitigation Trust Programs Administrator*

**Sustainable Solutions Incentives and Funding**

**October 26, 2021**

# DieselWise Indiana Snapshot

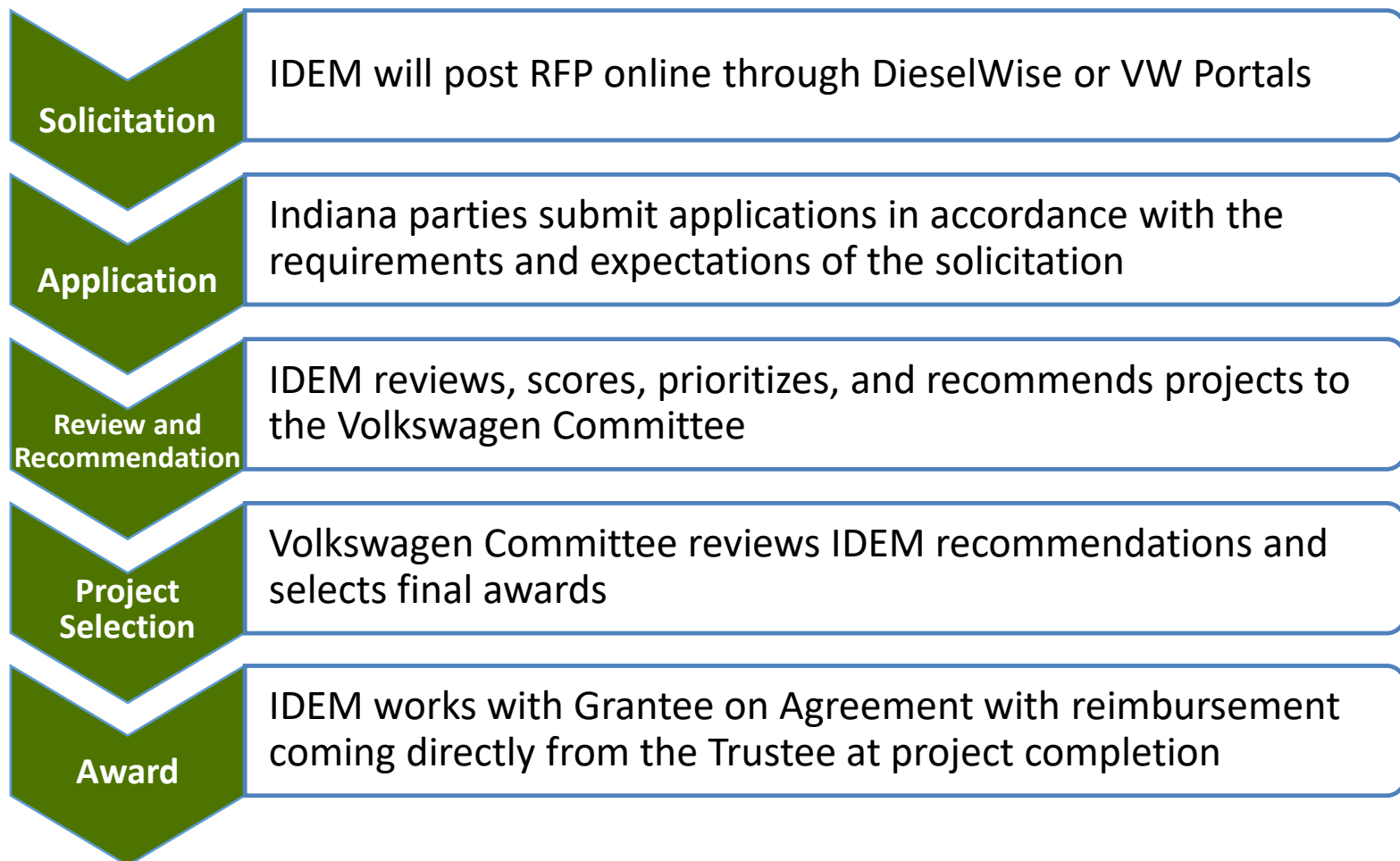
- Indiana's intentional efforts to reduce diesel emissions started in Northwest Indiana in 1996 due to the impact of heavy-duty diesel engines on air quality in this highly sensitive area
- After several years of good work in Northwest Indiana, the DieselWise Indiana was initiated to take the lessons learned in "The Region" across the rest of the state in 2000
- Projects shortlist:
  - Diesel to Propane school bus replacements
  - Diesel to CNG refuse haulers
  - School bus heaters and auxiliary power units
  - Low rolling resistance tires and truck and trailer aerodynamic improvements
  - Marine engine replacements
  - Switcher locomotive to 'slug unit' conversion
  - Switcher locomotive to diesel-electric hybrid conversion (before it was cool)
  - Switcher locomotives replaced with railcar movers (electric and diesel)
- Total vehicles funded: Nearly 3,500
- Total project costs: Roughly \$29,000,000
- Total Indiana VW award support: Over \$13,000,000 (without VW funding)



# VW Onroad and Nonroad and DERA Option Snapshot

- 62 projects awarded
  - Six electric school bus projects: three complete and three on schedule
  - 23 nonelectric school bus projects: 17 complete and six on schedule (five diesel, 17 propane)
  - 16 nonroad equipment and vehicles: five complete and 11 on schedule (seven diesel, one CNG, seven electric, one diesel-hydraulic hybrid)
  - Five transit bus projects: one complete and four on schedule (two CNG, three electric)
    - CNG project is complete
    - Electric projects progressing, but delayed
  - Eight short haul/drayage projects: five complete and three on schedule (four diesel, three CNG, one electric)
  - Four refuse hauler projects: one complete, one terminated by Grantee and two on schedule (All CNG)
- Total vehicles funded: 331
- Total project costs: \$75,102,755
- Total Indiana VW award support: \$20,330,393

# Project Application, Prioritization and Selection Process



## 2021 and 2022 Schedule of Milestones

Milestone	Estimated Completion
Round 3 DERA Option RFP posted (60 days)	October 2021
Round 3 DERA Option RFP deadline	December 2021
Round 3 DERA Option awards announced	January/February 2022
Targeted Round 4 RFP for remaining VW funds recommendation	August 2022



## For More Information



**Indiana Volkswagen Mitigation Trust Program website:**

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## Shawn Seals

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*sseals@idem.in.gov*



# Propane, CNG, & Electric: Fleets Make the Switch

Track 1: Sustainable Transportation





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# Panelists



## **Amy Hill**

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## **Amy Rosa**

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## **Nathan Oliver**

Monroe County Community School Corporation  
*noliver@mccsc.edu*



# SUSTAINABLE SOLUTIONS CONFERENCE

“PROPANE, CNG & ELECTRIC –  
FLEETS MAKE THE SWITCH”

- Opened 1<sup>st</sup> LEED Platinum Transit Facility in 2010
- Long-term commitment to sustainability and use of alternative fuels
- Aging fleet of diesel fixed route buses – anticipated replacing 10 buses
- Decision to pursue CNG





# New Flyer Xcelior

2014 – 16 buses

2015 – 3 buses

2017 – 3 buses

2021 – 9 buses

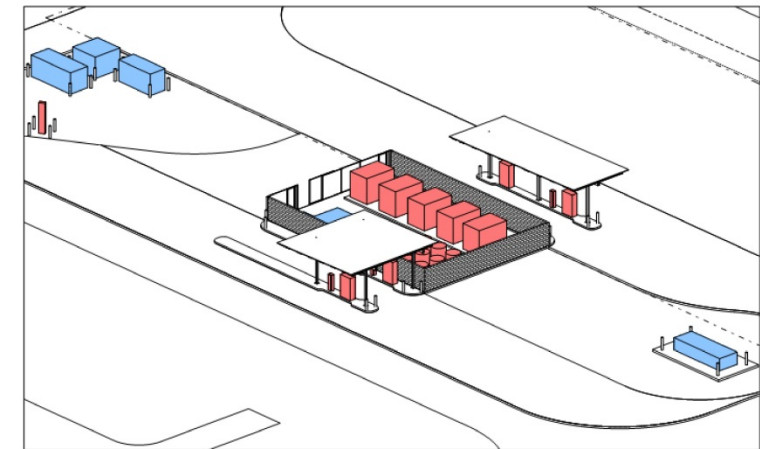
2022 – 8 buses

**12 additional eligible for replacement**



# Transpo CNG Fueling Center

- Opened in March 2016
- **Funded by:**
  - U.S. Department of Energy Grant
  - Federal Transit Administration Grant
  - DieselWise Indiana Grant
  - City of South Bend
- **In partnership with:**
  - City of South Bend
  - MACOG
  - South Shore Clean Cities
  - Trillium



Rendering shows all equipment

# COST SAVINGS

## FUEL SAVINGS



**Annual Fuel Savings - \$7,500 per bus**

### Cost per Service Mile

- \$0.62 Gillig (Diesel)
- \$0.35 New Flyer (CNG)

**Annual CSM Savings - \$6,750 per bus**

## Annual Parts & Labor Savings

- Estimated \$3,125 per bus

## Estimated Annual Savings

\$17,375 per bus



## MAINTENANCE SAVINGS







# THANK YOU!

AMY HILL

GENERAL MANAGER & CEO

[AHILL@SBTRANSPO.COM](mailto:AHILL@SBTRANSPO.COM)

[SBTRANSPO.COM](http://SBTRANSPO.COM)

# Wa-Nee Propane School Buses

Why Propane, Why Now?



# Making the switch

- ▶ Research
- ▶ Education
- ▶ More research
- ▶ Partnerships
  - ▶ Southshore Clean Cities
  - ▶ Grant funds
  - ▶ Propane Suppliers
  - ▶ Mechanics
  - ▶ Drivers
  - ▶ School Board
  - ▶ MacAllister Transportation - Blue Bird - Rousch
- ▶ Phased implementation - 4 buses each year during the VW Grant Funding



# Propane = lower total cost-of-ownership

Comparable cost at time of purchase

- Substantial grant monies available
- Lower cost of fuel per gallon
- Less maintenance
- Less repair costs
- Fueling station provide through supplier
- Tax rebate on every gallon of fuel

= Lower Cost  
of Ownership



# Easy Sell:

- ▶ Quieter - helps drivers hear students and reduces student noise
- ▶ Cleaner - good for kids and the environment
- ▶ Reliable - less parts to maintain = less down time
- ▶ Cold-blooded: Built for Cold Weather
  - ▶ No DEF (Diesel Exhaust Fluid)
  - ▶ No need to plug in
  - ▶ No need for auxiliary heaters
- ▶ Consistent - very little additional driver training needed

# Electric School Bus Pilot

Monroe County Community School Corporation

Nathan Oliver, Director of Transportation







**First Electric Bus  
Purchased and  
Put Into Service**



## Charging Infrastructure – Proterra 60 kW





## Charging Infrastructure – Proterra





## Charging Infrastructure – ABB, 25 kW





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