

South Shore Clean Cities Inc.



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Executive Director



**MACOG Partners for
Clean Air Luncheon**
April 25, 2017

Alternative Fuels and Vehicles

- Biodiesel
- Electricity
- Ethanol (E85)
- Hydrogen
- Natural gas
- Propane



Fuel Blends

- Biodiesel/diesel blends (B2, B5, B20)
- Ethanol/gasoline blends (E10)
- Hydrogen/natural gas blends (HCNG)

Hybrids

- Light- and heavy-duty HEVs
- PHEVs

Fuel Economy

- Fuel efficiency
- Behavioral changes
- Vehicle maintenance initiatives
- Vehicle miles traveled (VMT)

Idle Reduction

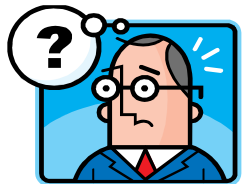
- Heavy-duty trucks
- School buses
- Truck stop electrification
- Diesel Emission Reductions



Local Community/Coalition Support: DOE helps convene key community and business leaders to develop and implement projects, leverage resources, and address local barriers



Public Information, Outreach, and Education: DOE-developed tools help consumers save money on fuel cost and help fleets understand their options for cost-effective alternatives to gasoline and diesel fuel



Technical & Problem-Solving Assistance: DOE experts help local leaders address permitting and safety issues, technology shortfalls, and other project implementation barriers



Competitively-Awarded Financial Assistance: Federal cost-share encourages initial private sector match and long-term investment

Local Community /Coalition Support: Develop/Strengthen Local Markets



- Identification of potential fleet and funding partners
- Connecting fleets with fuel providers and industry partners, promoting INDIANA.
- Facilitating infrastructure development projects
- Training and information
- Technical assistance
- Education and outreach to decision-makers, fleets, and the public
- Coordination with key community and business leaders
- Collecting data and tracking progress

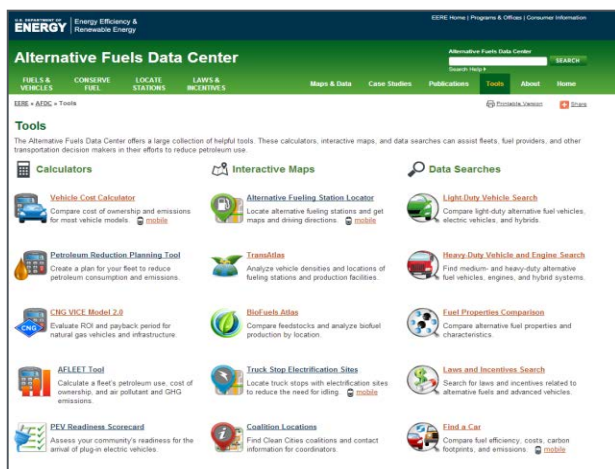


There is a massive wave of changes hitting our transportation system that have the potential to “radically reshape the transportation energy footprint of the nation”



Future
???

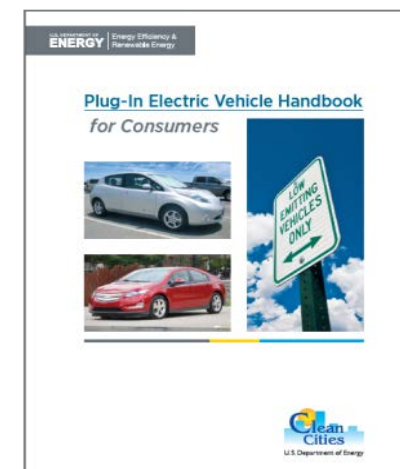
- Non-biased source of VT data and information
- Fuel Economy Guide (FE.gov), Alt-Fuel Data Center (AFDC)
- On-line tools and cost calculators, other web resources
- Fact Sheets, publications, handbooks, success stories
- Technical Response Service and Hotline
- Public workshops, webinars, industry technical conferences



Online Tools



Technical Response Service



Publications

- Capture lessons learned and develop best practices
- Technical forums and user groups and national partnerships
- Address unforeseen permitting and safety issues
- Identify chronic vehicle or infrastructure field problems
- Incident investigations (technology failures)



Model EVSE Permit

Application for Installation of Electric Vehicle Charging Equipment

NOTICE: The system must be installed in compliance with the National Electric Code® (NFPA 70, Article 625 Electric Vehicle Charging System or applicable electrical code currently adopted and enforced within the jurisdiction of installation. All associated work with circuits, electrical service and meters shall be completed in compliance with NFPA 70, national electric code, or applicable electrical code currently adopted and enforced within the jurisdiction of installation.

Section 1: Permit Applicant Information

Name:		
Installation Street Address (P.O. box not acceptable):	Contact Person:	Phone Number:
City:	County:	State: ZIP Code:
Owner Name:	Street Address:	Phone Number:
City:	State:	ZIP Code:
Subscriber's Name/Company:	Street Address:	Phone Number:
City:	State:	ZIP Code:
General description of equipment to be installed:		

Section 2: Permit Code Information

Requirements for wiring a charging station are taken directly out of the 2011 edition of the National Electrical Code® (NEC) (NFPA 70, Article 625 Electric Vehicle Charging System). This article does not provide all of the information necessary for the installation of electric vehicle charging equipment. Please refer to the current edition of the electrical code adopted by the local jurisdiction for additional installation requirements. Reference to the 2011 NEC may be made at www.nfpa.org/70.

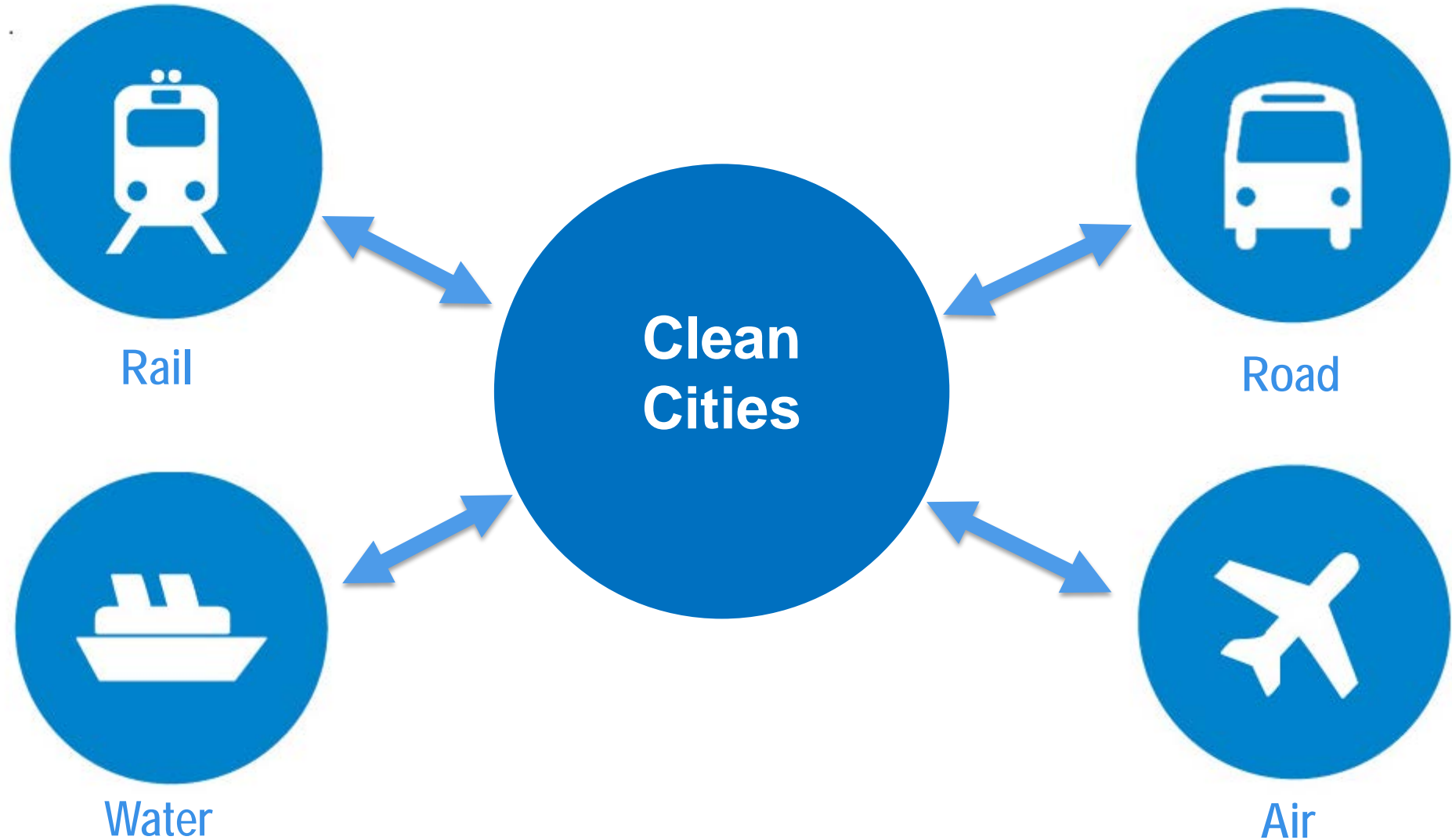
NEC Chapter or Article	DESCRIPTION
Chapter 2 and 3	Branch Circuit A new electrical box added on a branch circuit shall comply with NFPA 70 National Electrical Code® Chapter 2 Wiring and Protection and Chapter 3 Wiring Methods and Materials and all administrative requirements of the NEC or the electrical code in effect in the jurisdiction.
625.4	VOLTAGES Unless otherwise specified, the nominal ac system voltages of 120, 120/240, 208Y/120, 240, 480Y/277, 480, 600Y/347, and 600 Volts shall be used to supply equipment.
625.5	LISTED OR LABELED All electrical materials, devices, fittings, and associated equipment shall be listed or labeled.

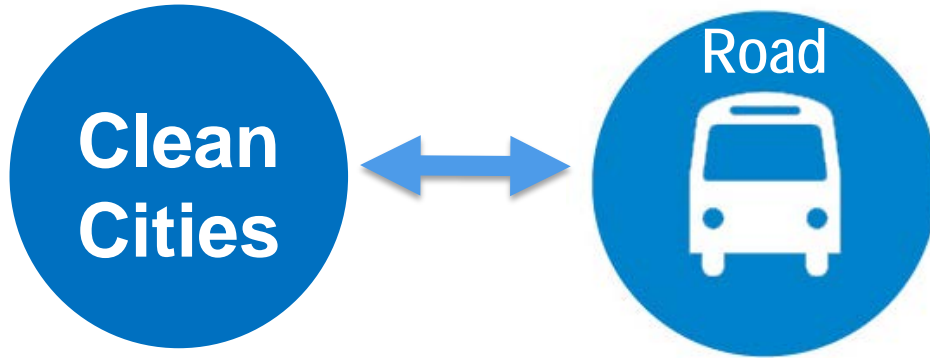
Partnership



U. S. Department of Energy

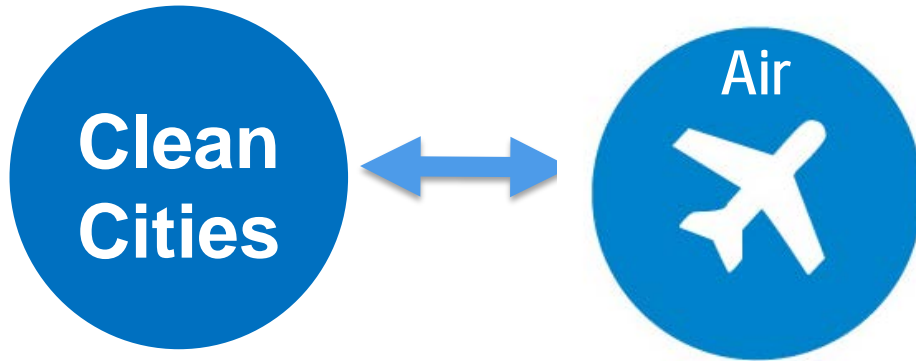
Clean Cities Stakeholders Facilitate Alt Fuels Deployment Across Multiple Modes





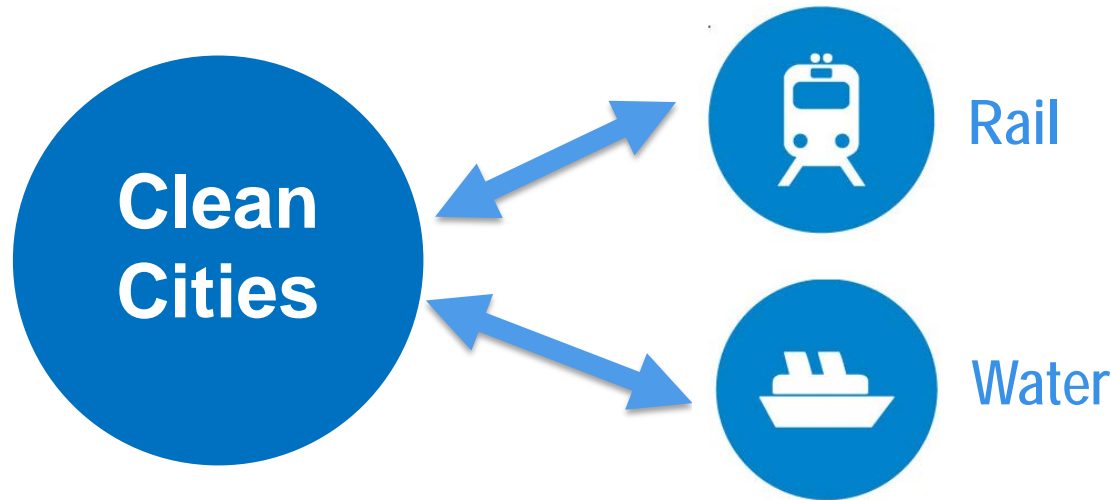
Clean Cities supports vehicle deployment & fueling infrastructure development:

- **Transit**
- **Long haul/regional haul/delivery**
- **Government**
- **Anchor fleets: Refuse, taxis**
- **General public passenger vehicles: EV & E85, propane, CNG**
- **Identification of funding sources: DOE, DOT CMAQ, EPA, state, etc.**



Clean Cities supports vehicle deployment & fueling infrastructure development:

- Ground support equipment
- Airport ground fleet/circulator buses
- Passenger shuttles/taxi
- Identification of funding sources: DOE, FAA VALE, EPA, state, etc.



Clean Cities stakeholders support various deployment projects:

- **CNG/LNG/biodiesel use in locomotives**
- **LNG use in ships**
- **Idle reduction/shorepower**
- **Ports: Various technologies being deployed**
- **Identification of funding sources: DOE, CMAQ, MARAD, EPA, state, etc.**

- SSCC worked with our partners to bring over \$10 million in grant funding in 2016.
- Our goal is to have each and every community and business GREEN.
- **Education:** We are the resource for GREEN!
- **Collaboration:** working with ALL to assist in moving green and reducing carbon footprint.
- **Celebration:** Finding organizations/individuals doing things right.
- Green Radio Network: AM 1420/AM 1060 every Wed. and Sat.

LET US BE YOUR RESOURCE!

- Green Fleet: Opportunities for grants/greening of fleets throughout Northern Indiana (we need you to sign up!).
- Midwest Drives: Opportunity for business or government entity to test an alternative fueled vehicle. Sign up today!
- Midwest Evolve: Three-year electric vehicle/charging initiative
- Michigan to Montana (M2M): I-94/I-80 Corridor
- Lake Michigan Consortium: May 18, 2017
- NISSAN LEAF Program Incentive thru June 30th

GRANTS/PROJECTS PENDING

- ELECTRIFY AMERICA: VW ZERO EMISSION VEHICLES
- AIM – ALL IN MIDWEST: (Submitted March 24, 2017)

- Analysis & planning
- Taxes & grants/incentives
- Market research
- New vehicle/new technology identification
- Policies and procedure development
- Demonstrations for members
- Economic development
- Mechanic training
- Financing opportunities
- Specification development
- GREEN: SOLAR/WIND/RENEWABLES/BUSINESS ENERGY



- RSC CADER Program: Spencer County/Evansville = \$240k
- HOOSIER HOMEGROWN FUEL BLENDER PUMP GRANT = \$145k
- USDOT: Advanced Technologies & Congestion Grant: Due June 12, 2017 = \$60 million
- U.S. EPA DERA: Grant due June 20, 2017 = Max Grant \$1.3 million
- VW SETTLEMENT = \$41 million, fall 2017
- MACOG GREEN FLEET





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Clean Cities Website: www.Southshorecleancities.org

Alternative Fuels and Advanced Vehicles Data Center: www.afdc.energy.gov

Fuel Economy: www.fueleconomy.gov



U. S. Department of Energy



N O R T H E R N I N D I A N A