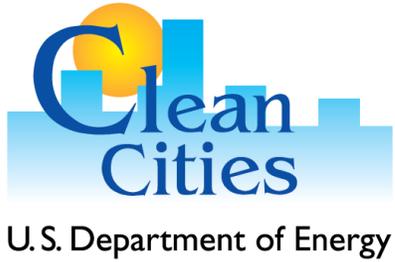


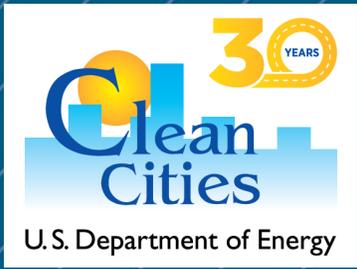
2023 Clean Cities Stakeholder Summit

30 Years of Clean Cities Success: In only 15 minutes?



CLEAN CITIES COALITION NETWORK





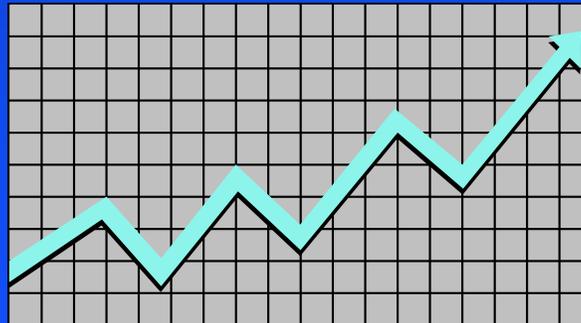


1993-2023



Energy Policy Act of 1992 Alternative Fuel Goals

- **10% U.S. Motor Fuel Consumption to be Alternative Fuels by 2000**
- **30% U.S. Motor Fuel Consumption to be Alternative Fuels by 2010**





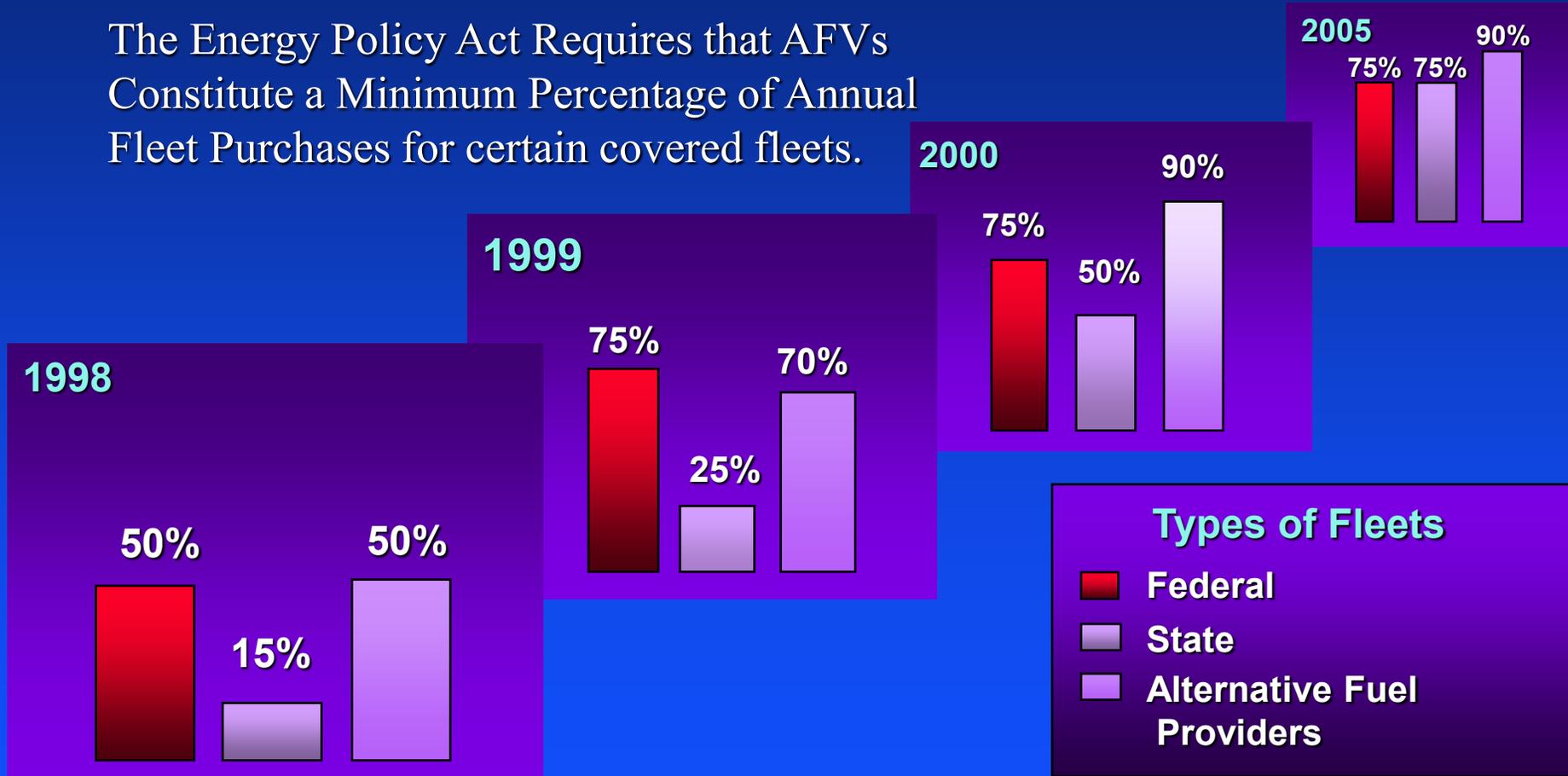
Alternative Fuels Definition Energy Policy Act of 1992

- ❑ Methanol, or Mixtures of 85% or More of Methanol
- ❑ Ethanol, or Mixtures of 85% or More of Ethanol
- ❑ Natural Gas
- ❑ Propane/LPG
- ❑ Electricity
- ❑ Hydrogen
- ❑ Coal-Derived Liquids
- ❑ Fuels Derived From Biological Materials
- ❑ 100% Biodiesel



Legislated Timetable

The Energy Policy Act Requires that AFVs
Constitute a Minimum Percentage of Annual
Fleet Purchases for certain covered fleets.



The AFDC is Born



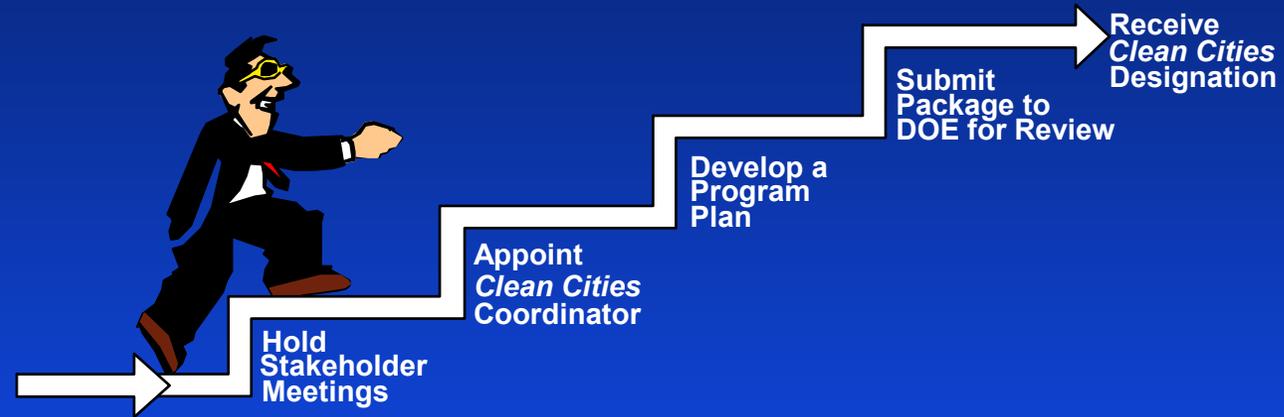


How Do You Join the *Clean Cities Team?*





Clean Cities Steps

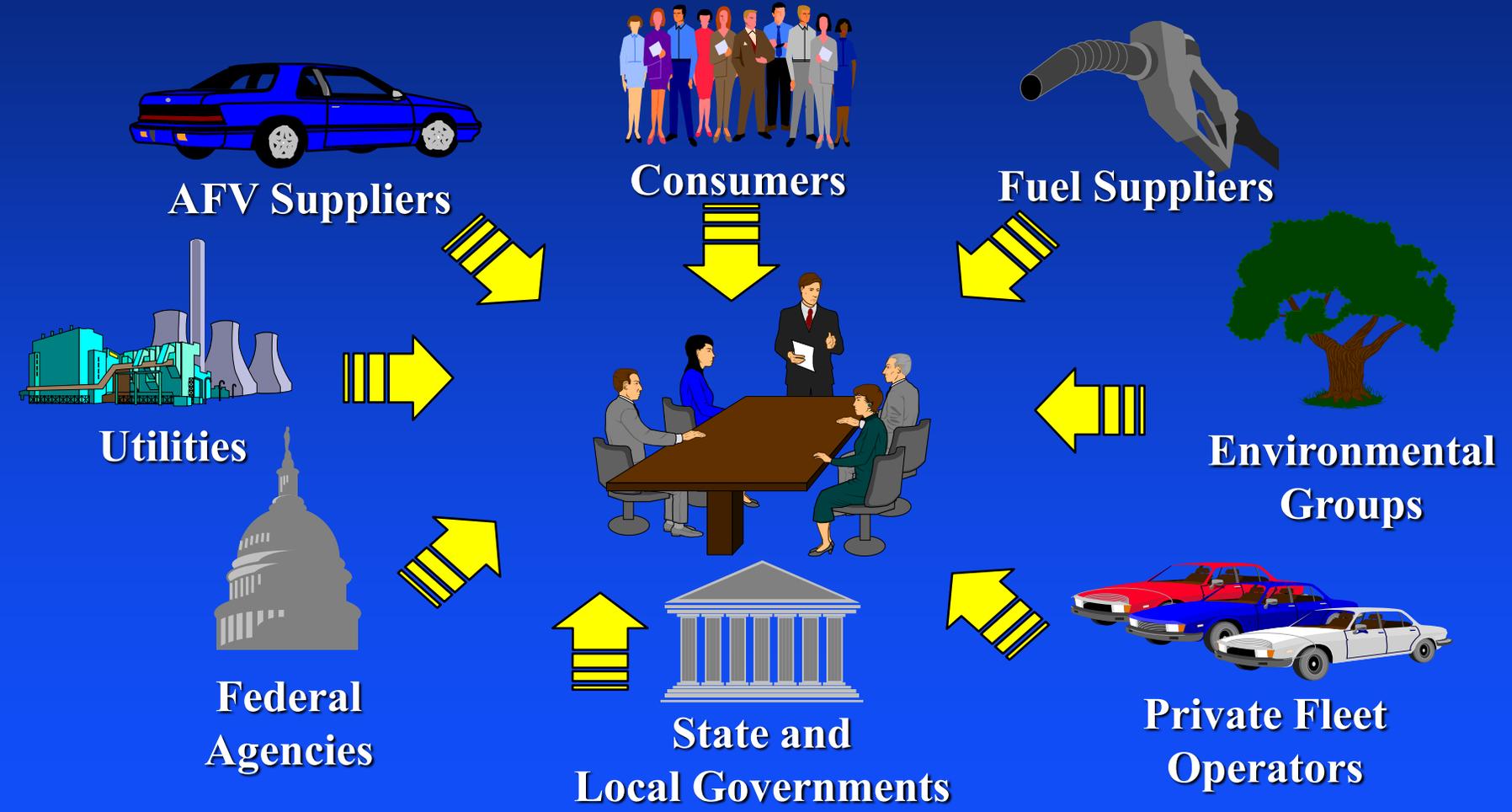


1. Hold Stakeholder Meetings
2. Appoint a Clean Cities Coordinator

3. Develop a Program Plan
4. Submit Package to DOE for Review



Clean Cities Stakeholders





Clean Cities Coordinator

- Serves as Executive Director of Local *Clean Cities* Team.
- Maintains Contact With DOE Regional Support Office.
- Coordinator Could Be:
 - Private Consultant
 - City Staffperson or City Manager
 - Environmental Health Department.

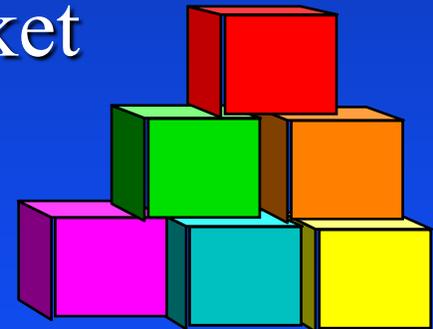




The Program Plan

The Program Plan is an opportunity for a city to create its own local approach to reaching Clean Cities goals.

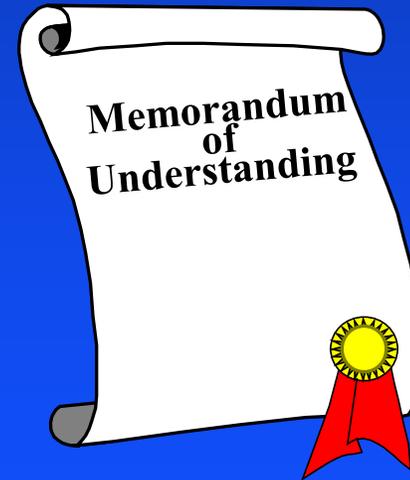
- ❑ Characterize and Quantify Local AFV Market Situation.
- ❑ Set Goals and Objectives.
- ❑ Set Timetables for Achieving Goals.





Clean Cities MOU

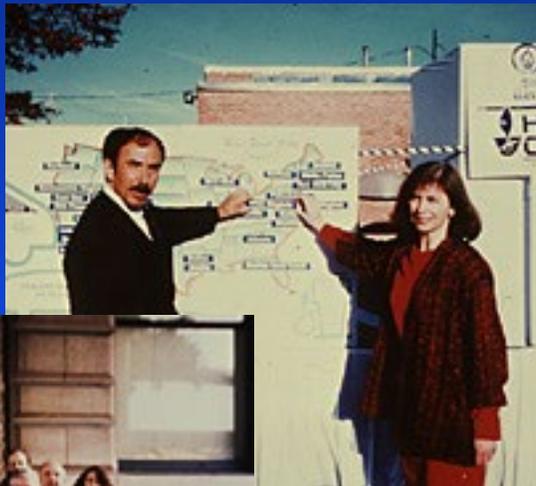
- ❑ Voluntary Commitment to Carry Out the Program Plan
- ❑ Standard MOU will be provided by DOE
- ❑ All *Clean Cities* Team Members Sign
- ❑ Not a Binding Contract





Clean Cities Designation

□ Hold Designation Ceremony





Clean Cities Benefits



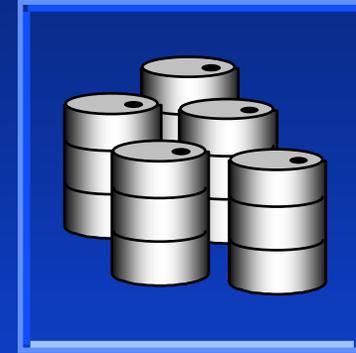
Improve Air Quality



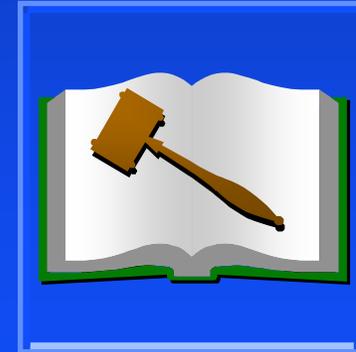
Earn Recognition



**Create New Business/
Economic Opportunities**



Reduce Oil Imports



**Meet Legislated
Requirements**

Early Clean Cities Leaders



Tommy Foltz and Jeff Hardy

Early Clean Cities Leaders



David Rodgers



Tom Gross

Early Clean Cities Leaders



*Christy (Ficker) Cooper
Adrian Farley
Shelley Launey*



Marcy Rood
Clean Cities Deputy Director

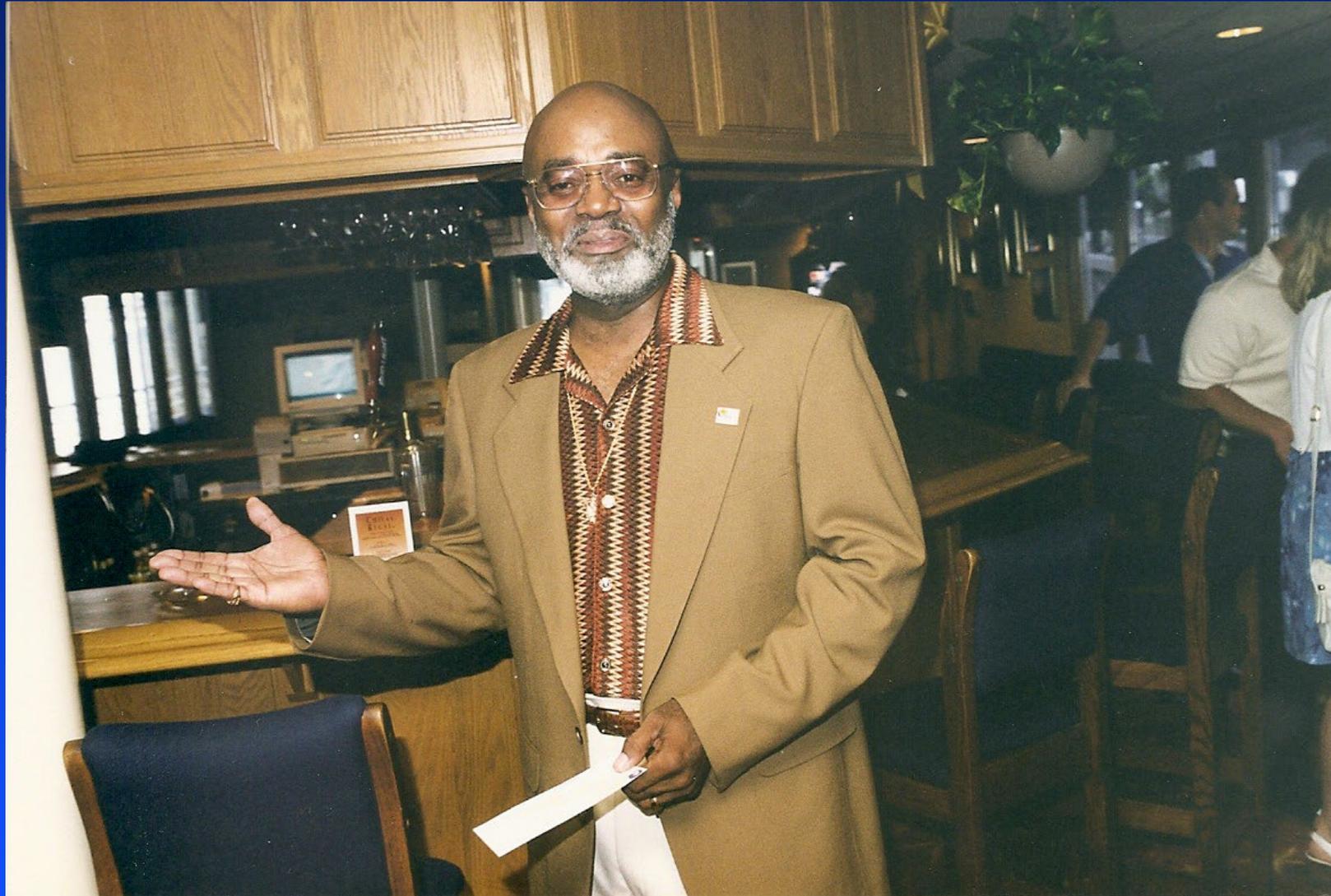


Early Clean Cities Leaders



Clean Cities Program Staff-2001

Early Clean Cities Leaders



Benjamin Watson

Early Clean Cities Leaders



Jim Moore



Barb Wolfe

Early Clean Cities Leaders



1-800-C-C-I-T-I-E-S





Patricia Passarella
DOE Philadelphia Regional office

Early Clean Cities Leaders



“He looks like a future Director”

Advancing the AFV Choice

- DOE is dedicated to helping fleets and the public purchase and utilize alternative fuel vehicles (AFV). Web-based information dissemination techniques are used to educate and inform target audiences.

Some resources include:

- Clean Cities Web Site
- DOE's Office of Transportation Web Site
- AFV Fleet Buyer's Guide
- Alternative Fuels Data Center
- Credits Database
- Advancing the Choice Events



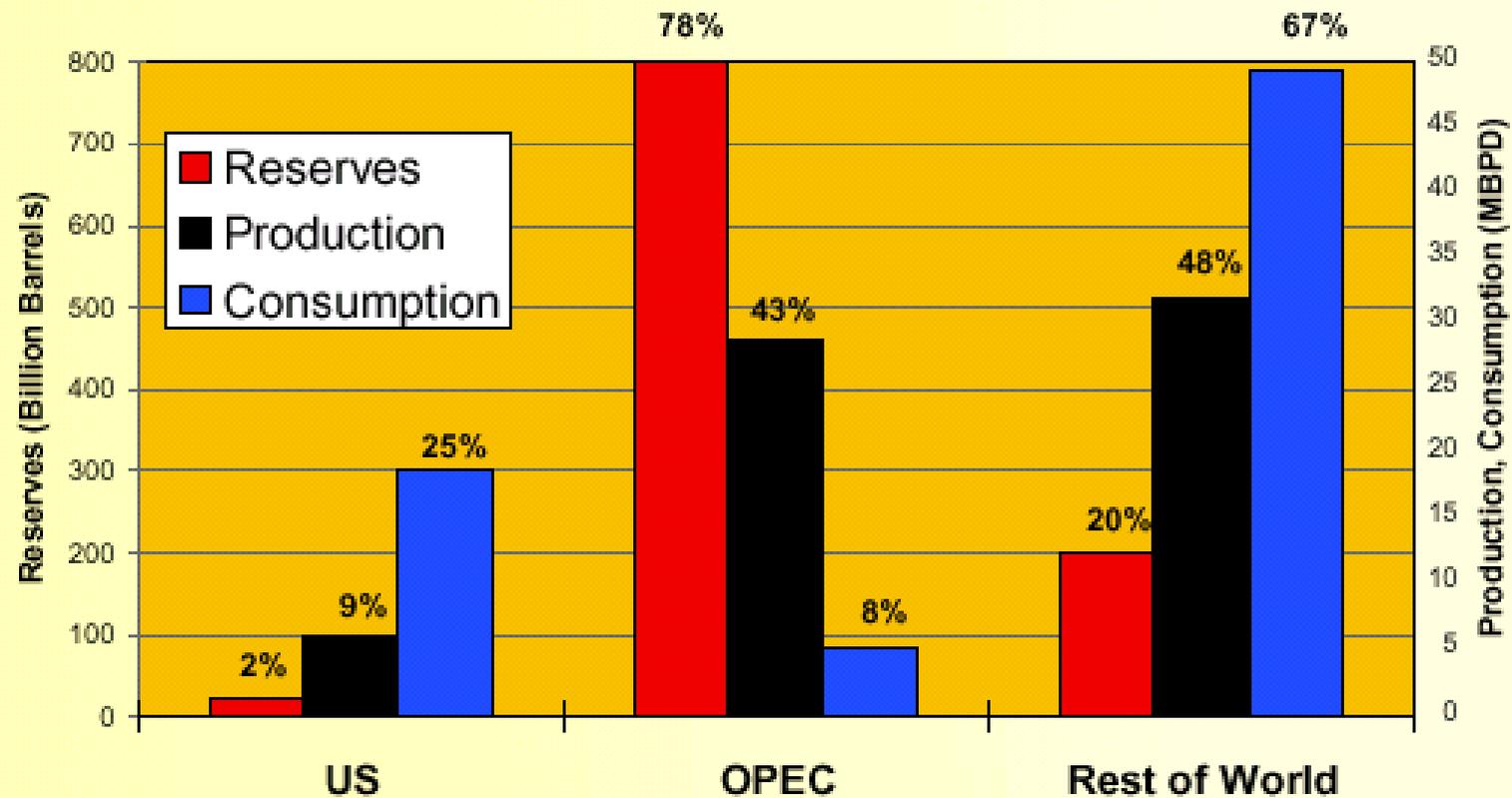
Energy Security Concerns

- ❑ **The U.S. imports more than 50% of its crude oil and is expected to import more than 60% by 2010.**
- ❑ **U.S. Consumers pay foreign countries over two billion dollars a week to satisfy the demand for imported oil.**
- ❑ **Much of our oil is imported from politically unstable areas of the world.**



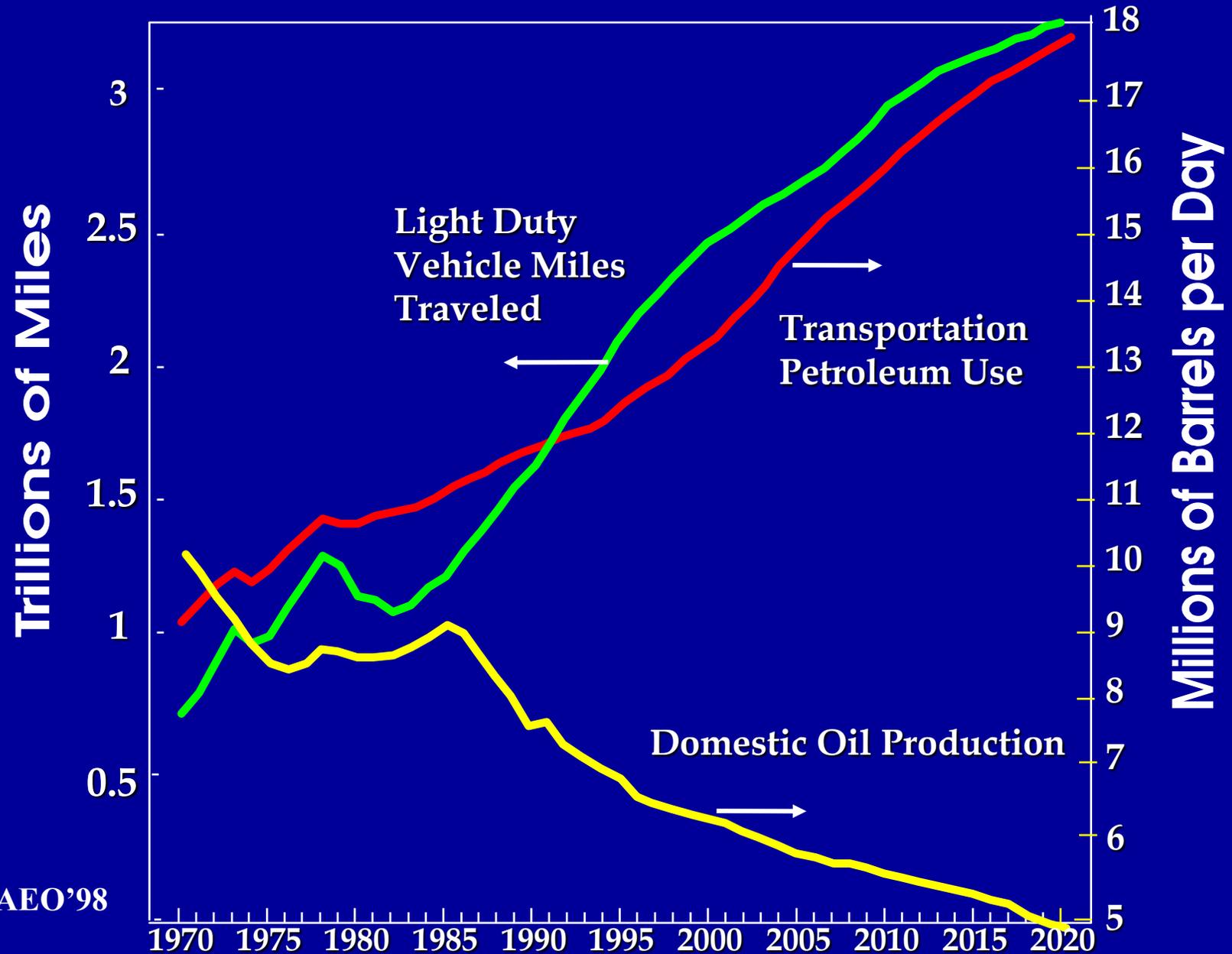


World Oil Reserves are Consolidating in OPEC Nations



Source: DOE/EIA, International Petroleum Statistics Reports, April 1999; DOE/EIA, International Energy Annual 1997, DOE/EIA0219(97), February 1998.

Petroleum Dependence Trends



Source: AEO'98

National Clean Cities Conferences

**2002
National
Clean Cities
Conference**

**Oklahoma
City, OK**

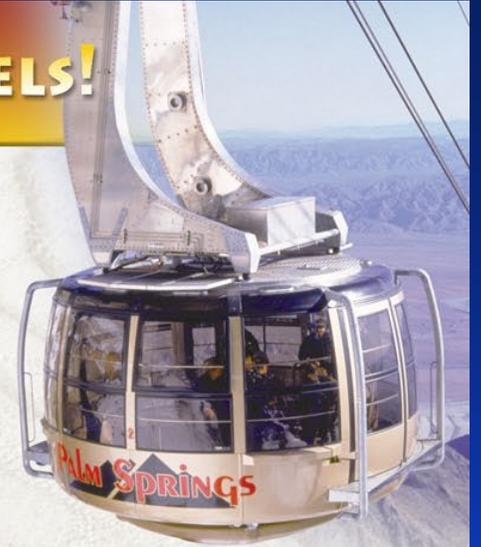




2003 National Clean Cities Conference

Palm Springs, CA

TURN UP THE HEAT FOR ALTERNATIVE FUELS!



Hosted by the U.S. Department of Energy,
Office of Energy Efficiency and Renewable Energy

Local hosts:

Coachella Valley Coalition

Northwest Riverside County Coalition

Bring two new fleet managers

Conference information - www.ccities.doe.gov

Celebrate a Decade of National Clean Cities Conferences



**10th National Clean Cities
Conference and Expo
May 2-5, 2004**





U.S. Department of Energy
Energy Efficiency
and Renewable Energy



2005 National Clean Cities Conference

Palm Springs,
CA

Palm 
Springs
May 1-4, 2005

11th National
Clean Cities
Conference
& Exposition





Sixth National Clean Cities
Stakeholders Conference
and Exposition

San Diego, California
May 7–10, 2000



Natural Gas Rumors True or False?

**We need NG to heat our homes
and to generate electricity. We
don't have enough to fuel
NGVs too!**

FALSE



American Fuels for American Transportation

FreedomCAR & Hydrogen Fuel Initiative

“Hydrogen fuel cells represent one of the most encouraging, innovative technologies of our era. ...And so that's why I'm going to work with the Congress to move this nation forward on hydrogen fuel cell technologies”



*President Bush, February 6, 2003,
Remarks on Energy Independence*

**Fuel Cell Vehicles in the Showroom
and Hydrogen at Fueling Stations by 2020**



Updated Portfolio of Technologies – A Technology Neutral Approach

- Increase use of alternative fuels
- Expand use of blends (e.g., B20, E10, HCNG)
- Accelerate sales of hybrids
- Encourage use of idle reduction technologies
- Promote informed consumer choice on fuel economy



U.S. Department of Energy
Energy Efficiency
and Renewable Energy



Clean
Cities



BEYOND A BILLION

Improving our national economy, our environment,
and our energy security by displacing more
than a billion gallons of petroleum

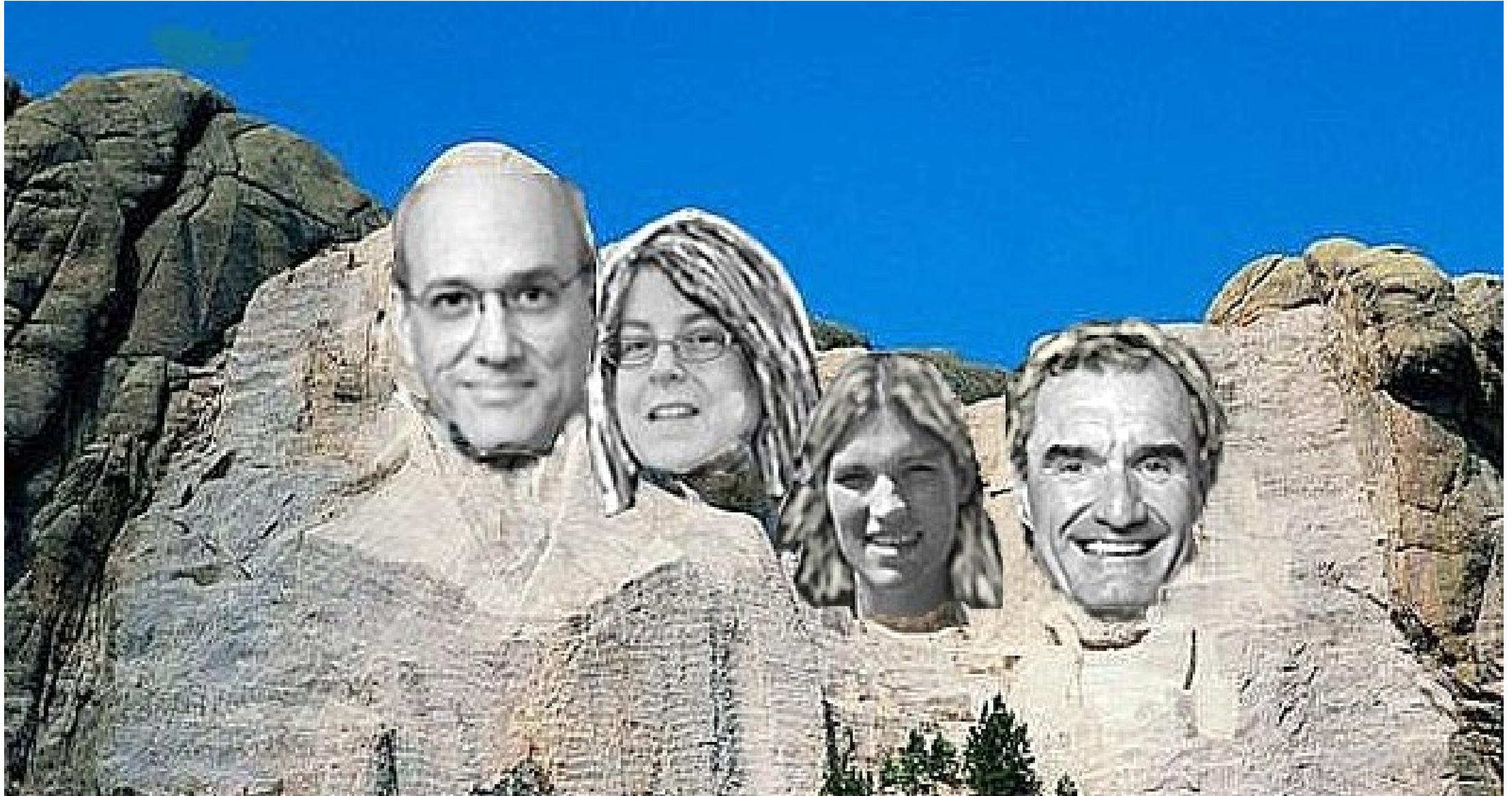
**Nationwide Event to Celebrate
the Clean Cities Program's achievement**

October 14, 2005

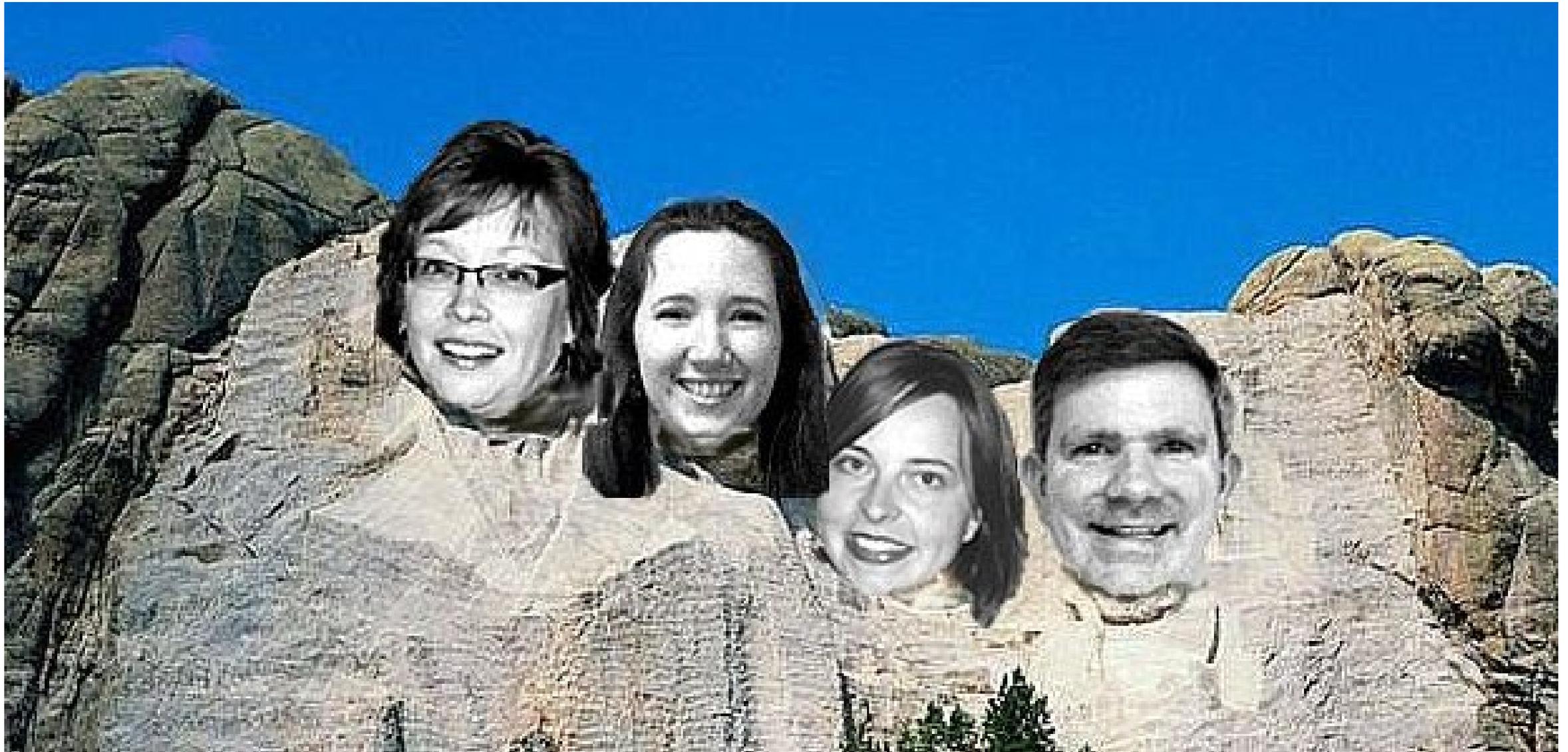
Mammoth Cave National Park- 2007



Mount Rushmore National Memorial- 2010



Mount Rushmore National Memorial- 2010



Rocky Mountain National Park - 2012



MotorWeek—Clean Cities Collaboration

- Began in 2002
- Produced 104 long segments and 210 Clean Cities Success Stories (short form) (as of 2021)
- Featured over 40 coalitions
- Dennis starred in three episodes
- Broadcast on 240 PBS station weekly
- Reaches about 1 million viewers a week

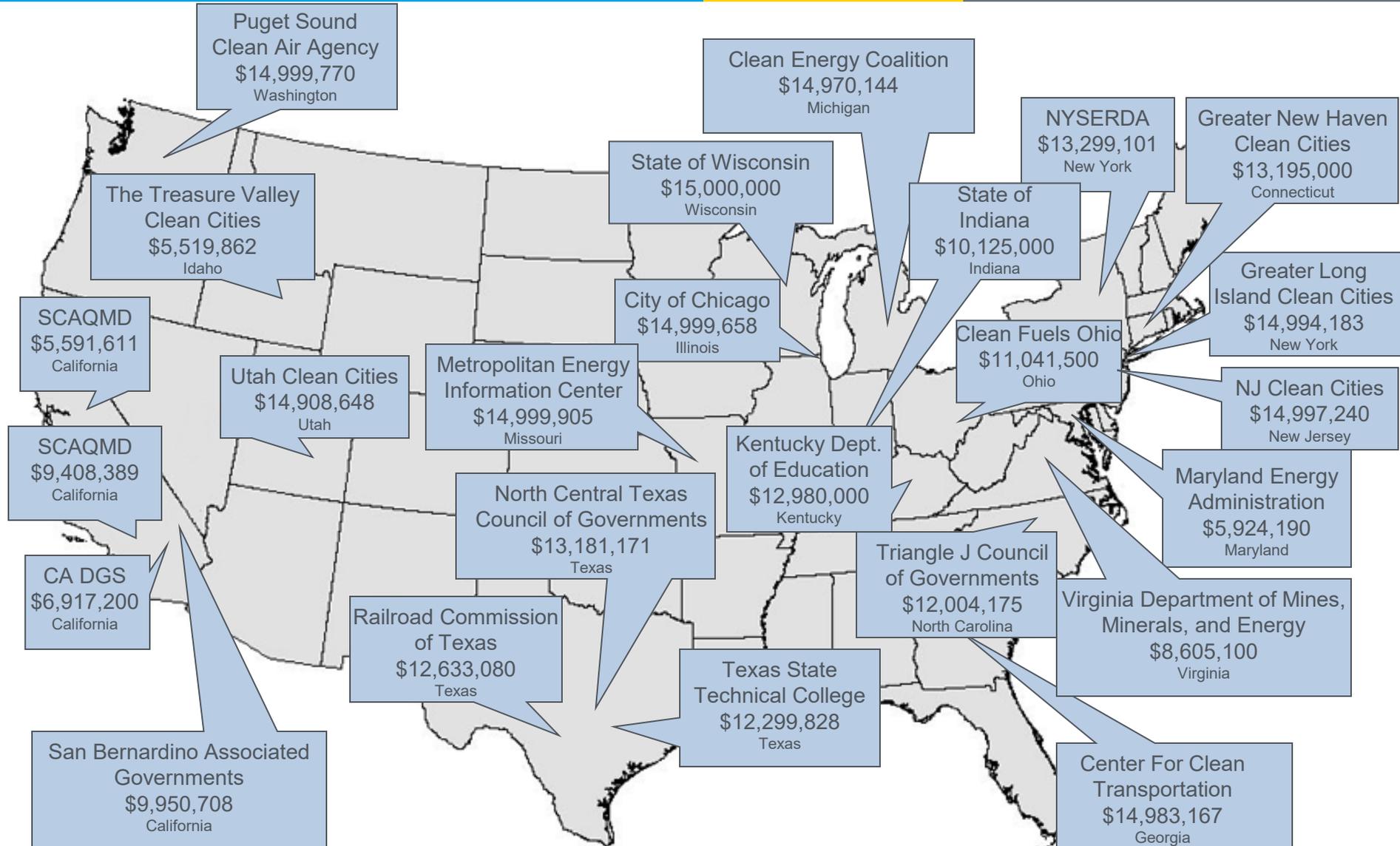


Clean Cities ARRA Projects



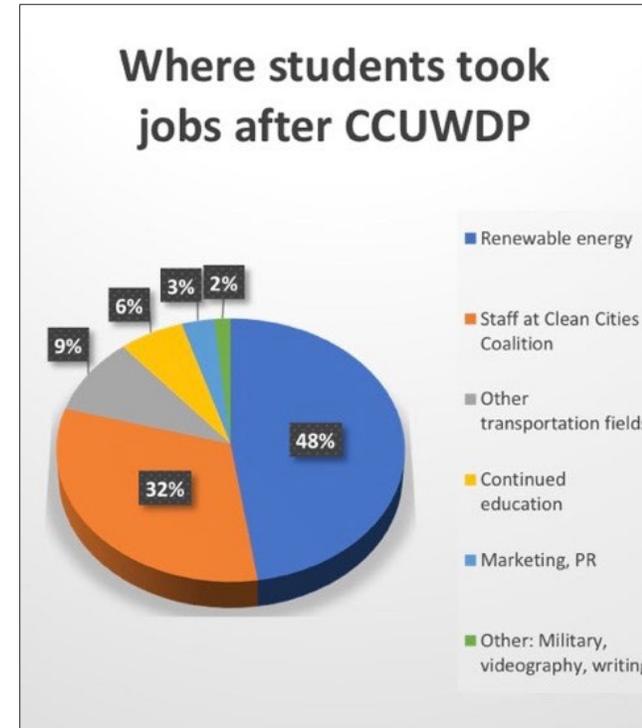
Clean Cities Recovery Act Awards

25 Projects ~\$300M DOE ~\$500M Cost Share



CLEAN CITIES UNIVERSITY WORKFORCE DEVELOPMENT PROGRAM (CCUWDP)

Providing students with valuable experience and coalitions with fresh talent since 2010



April 2011 - President Obama Announces Clean Fleets Partnership with 5 charter partners



Challenge top fleets across the country to adopt alternative fuels and advanced vehicles



May 2013 – Program has grown to 23 National Partners

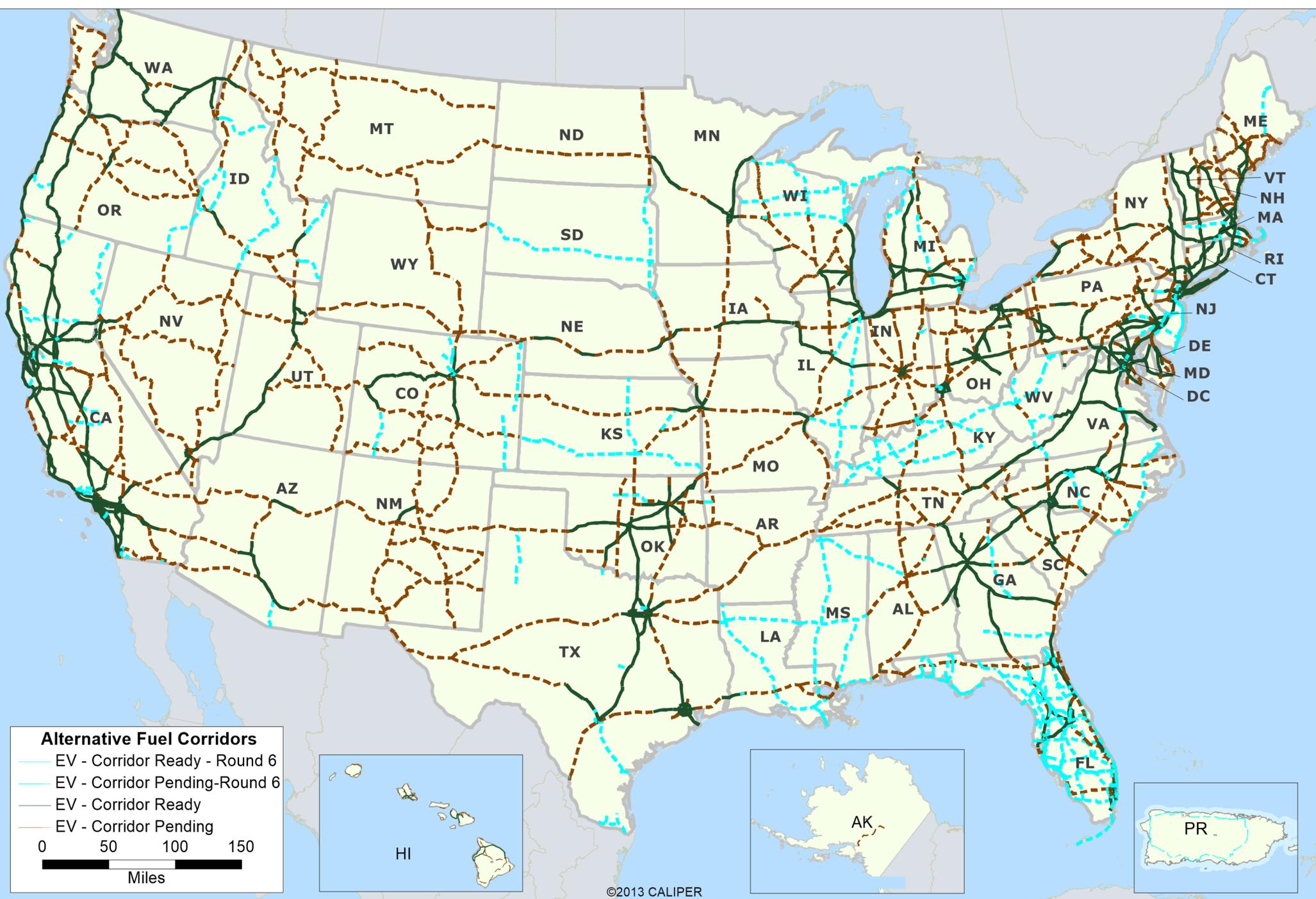


U.S. Department of Energy



BEGIN

ALTERNATIVE
FUELS
CORRIDOR

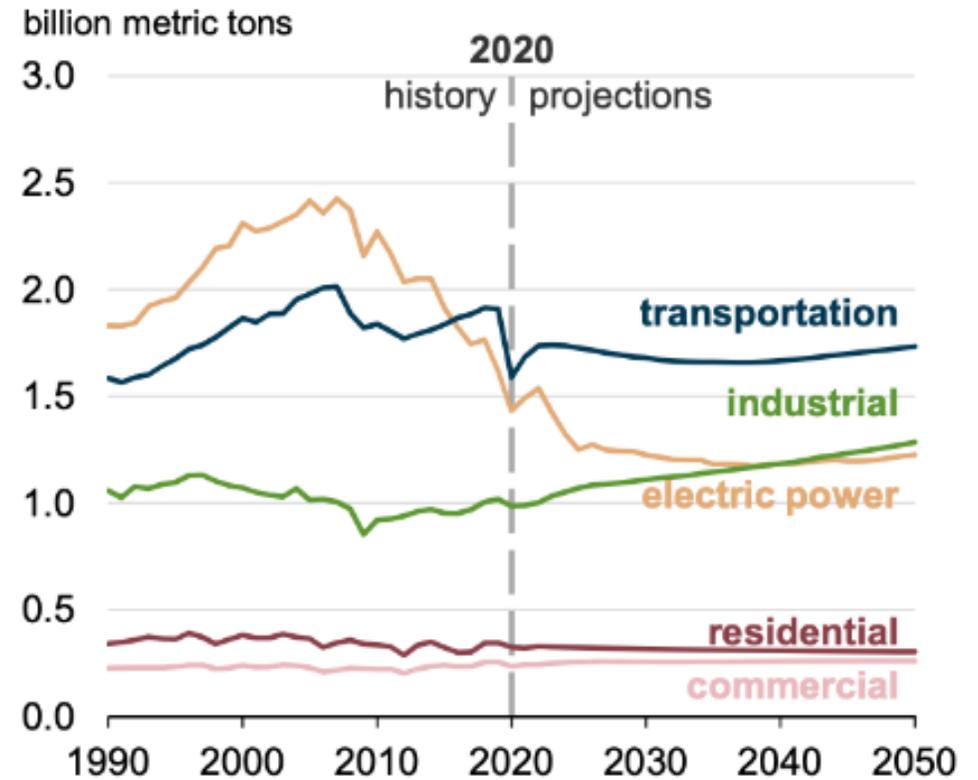


Achieving Net-Zero by 2050 Requires Change from the Status Quo

Incremental change does not get us to net-zero, it **requires coordinated strategy and direction NOW.**

- The magnitude of industrial change and direct consumer touch points with transportation require **market-pull solutions.**
- We must **support demand for growth in mobility options** – fuel switching, and vehicle/system efficiencies must dominate.

Energy-related carbon dioxide emissions by sector
AEO2021 Reference case



Clean Cities Energy and Environmental Justice (EEJ) Initiative



Incorporating community-driven choices improves **equitable access** to advanced transportation.



- EEJ training webinars
- EEJ Deep Dive training in-person workshops with 29 coalitions
- Community Engagement Liaison pilot with 17 coalitions
- Tribes and Transportation workshop
- Community technical assistance pilot with EPA, Joint Office, and coalitions



30 Years of Transportation Progress

Clean Cities is celebrating 30 years of moving our transportation systems into the future through community-driven solutions that advance affordable, efficient, and clean transportation fuels and technologies.

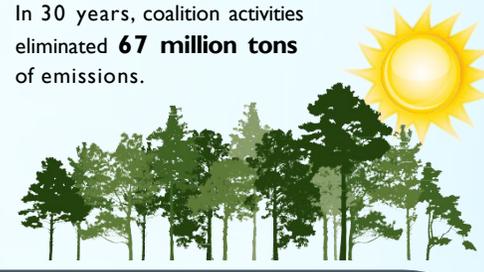
A national network of Clean Cities coalitions **builds local relationships** in communities across the United States.



Coalitions **help businesses and consumers** adopt alternative fuel vehicles and advanced transportation technologies.



In 30 years, coalition activities eliminated **67 million tons** of emissions.



Helping school districts adopt school buses with low or no tailpipe emissions creates **cleaner air** at local schools.

Incorporating community-driven choices improves **equitable access** to advanced transportation.



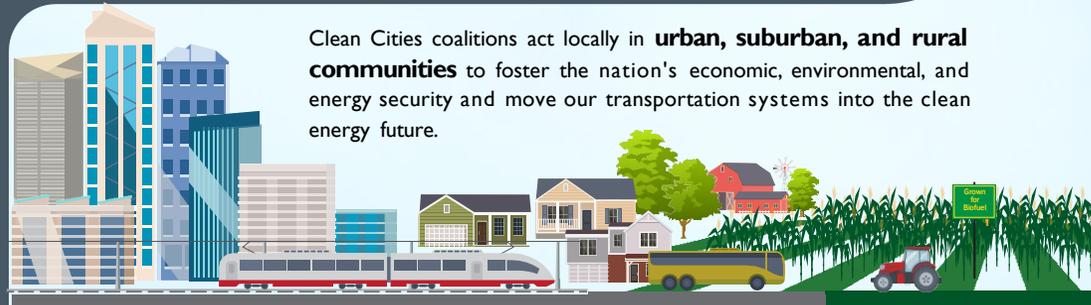
Coalitions tailor projects to unique needs through partnerships with **20,000 stakeholders**.



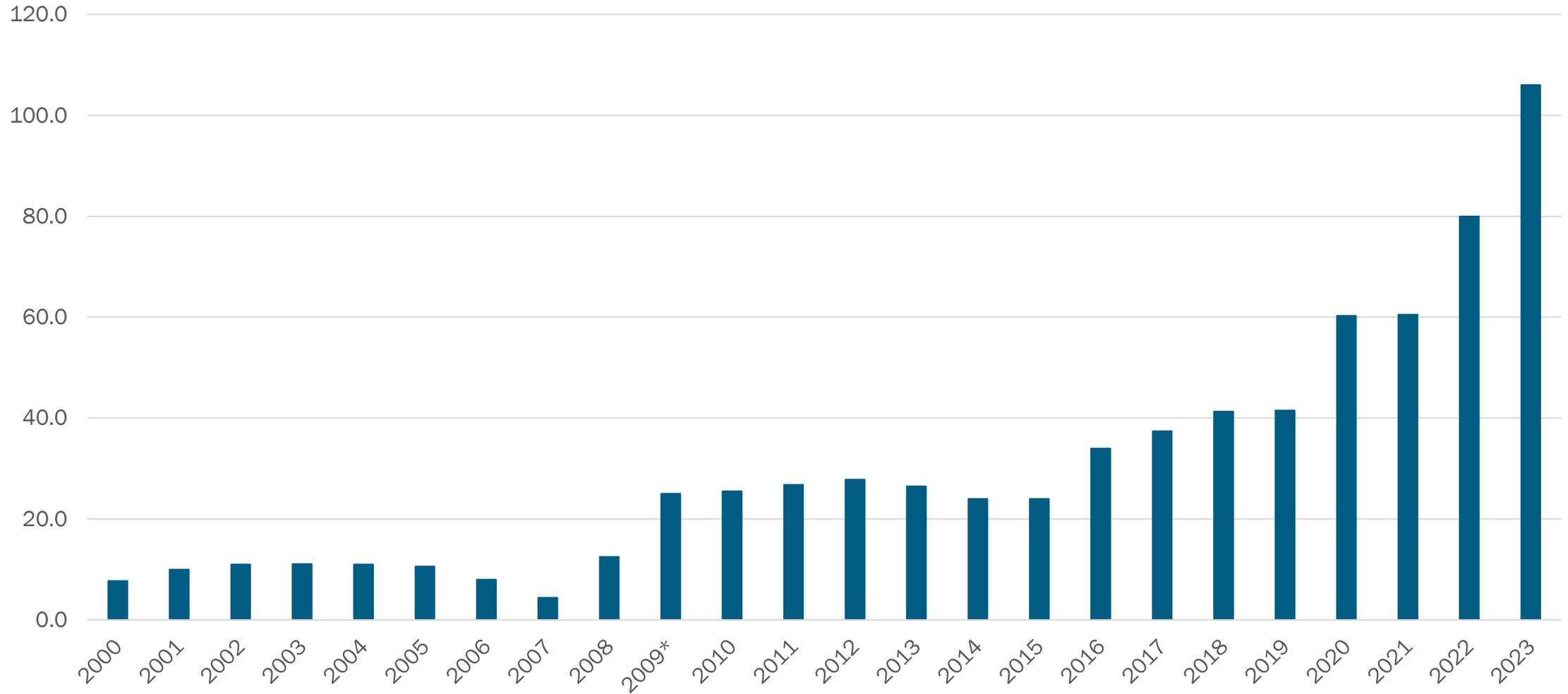
Shared mobility options, including shuttles, buses, e-bikes, and scooters, can **reduce travel costs, energy consumption, and traffic congestion**.



Clean Cities coalitions act locally in **urban, suburban, and rural communities** to foster the nation's economic, environmental, and energy security and move our transportation systems into the clean energy future.



Clean Cities/Technology Integration Program Budget (in \$M)



* In 2009, the budget had an additional \$300M in American Recovery and Reinvestment Act (ARRA) funds.

30 Years of Transportation Progress



2023 Clean Cities Stakeholder Summit

30 Years of Clean Cities Success: the rest of the story



CLEAN CITIES COALITION NETWORK





Clean Cities: A Model of Collaborative Technology Innovation Built Over 30 Years

Paty Romero-Lankao, Nicole Rosner, Lauren Reichelt,
and Joanna Allerhand

National Renewable Energy Laboratory

NREL is a national laboratory of the U.S. Department of Energy
Office of Energy Efficiency & Renewable Energy
Operated by the Alliance for Sustainable Energy, LLC

This report is available at no cost from the National Renewable Energy
Laboratory (NREL) at www.nrel.gov/publications.

Contract No. DE-AC36-08GO28308

Technical Report
NREL/TP-5400-85510
April 2023

Social science analysis to understand Clean Cities long-term success

Challenges to Deploying Technology Innovations



Integrating conflicting sectoral and local interests into national collaborative efforts



Alignment between participants' own goals and overarching, national objectives



Local stakeholders lack authority to initiate collaborative projects



Rules around decision-making power and resources

Collaborative Governance Overcomes Challenges

Collaborative Platform— an “organization with dedicated competences and resources for facilitating the creation, adaptation, and success of multiple or ongoing collaborative projects or networks”.



**With the U.S.
Department of
Energy**



**With national
labs**

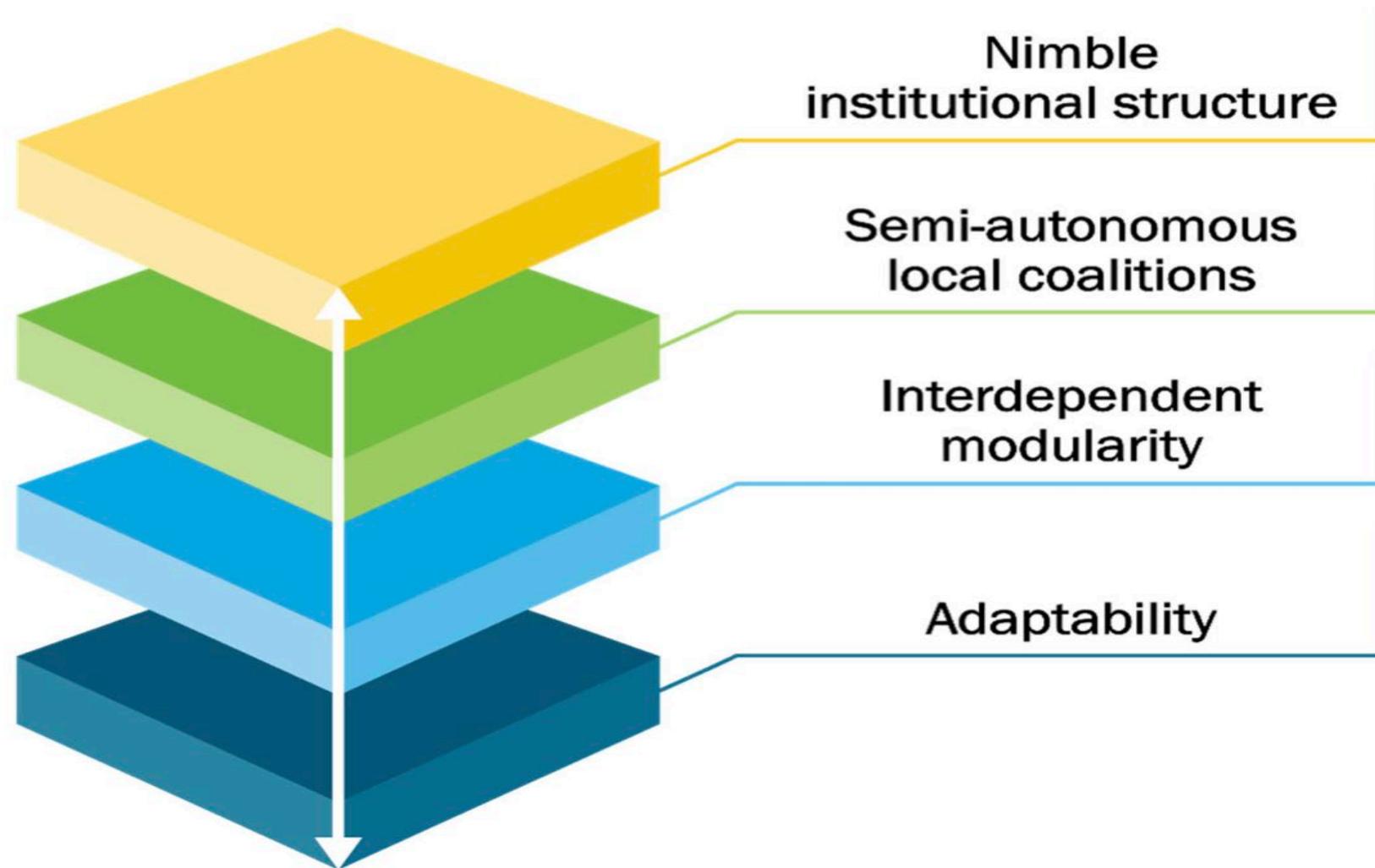


**With a
nationwide
network of Clean
Cities coalitions**



**With local
stakeholders
and partners**

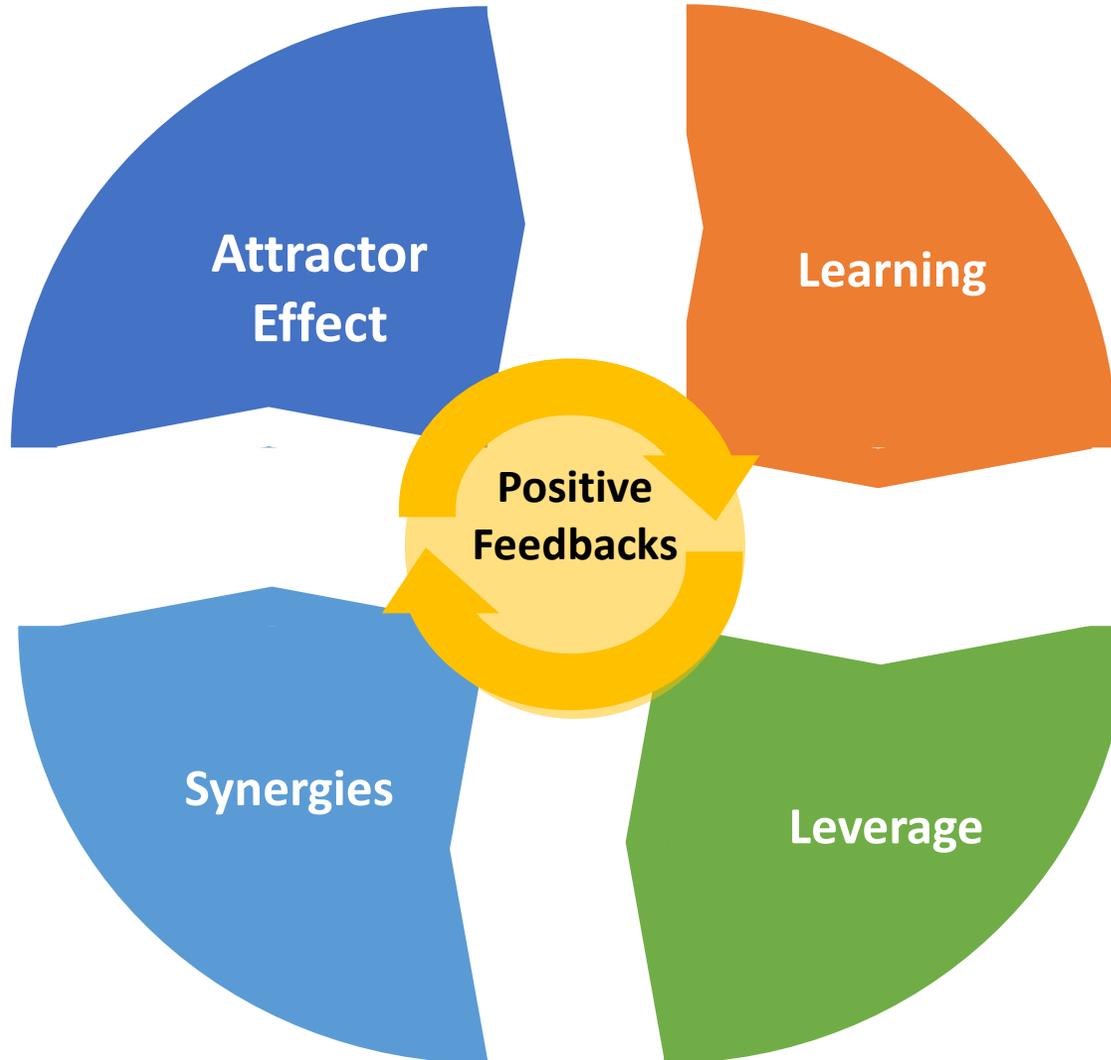
Clean Cities Institutional Attributes



Four Positive Feedbacks

- Success begets success.
- Value-creating collaborations motivate wider participation.

- Catalyzing members' contributions through orchestration
- Finding complementarities with on-going value chain interventions



- Participants benefit from fruitful collaborations.
- Collaborative learning deepens belief in change.

- Generating an impact that is larger than the input
- Exerting an influence disproportionate to one's size

**Clean Cities
Coalition
Network**



Thank you