



Unlocking Private Sector Investment in Alternative Fuel Vehicles and Infrastructure



December 18, 2015

NASEO Transportation Committee Call

+ Unlocking Private Sector Financing for Alternative Fuel Vehicles and Infrastructure

A multi-pronged, multi-partner approach



U.S. Department of Energy



With support and expertise from the U.S. Department of Energy's Clean Cities program, the project team:

- Enabled utilities and policy-makers to fund AFV and infrastructure incentives and investments with ratepayer dollars.
- Developed innovative vehicle and infrastructure financing models to make AFVs more accessible to consumers and fleet operators.
- Assisted states in developing comprehensive energy and energy security plans that support public and private sector investment in AFVs and associated infrastructure.
- Supported communications and outreach to Clean Cities Coalitions and other key local stakeholders.



Unlocking Private Sector Financing for Alternative Fuel Vehicles and Fueling Infrastructure

NASEO Transportation Committee

Nick Nigro, Atlas Public Policy

December 18, 2015



Project Overview

- **Partners:** NASEO, C2ES, Transportation Energy Partners, and VEIC collaboration
- **AFV Finance Advisory Group:** Experts on AFVs, infrastructure, and finance to help guide the project
- **Funder:** U.S. Department of Energy's Clean Cities Program
- **Goal:** Develop innovative finance mechanisms to accelerate AFV deployment



Alternative Fuel Vehicle & Fueling Infrastructure Deployment Barriers

Barriers to deployment of electric, natural gas, and hydrogen fuel cell vehicles and fueling infrastructure

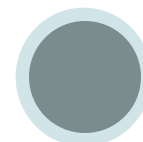
Potential role of private sector financial solutions



Case Studies on Natural Gas Vehicle Fleets and Electric Vehicle Charging

Applying the energy service company model to advance deployment of fleet natural gas vehicles and fueling infrastructure

The role of clean energy banks in increasing private investment in electric vehicle charging infrastructure



Strategic Planning Guides

Electric vehicle charging and natural gas vehicle fleets

Key factors that affect financial performance

Business model application to a particular market

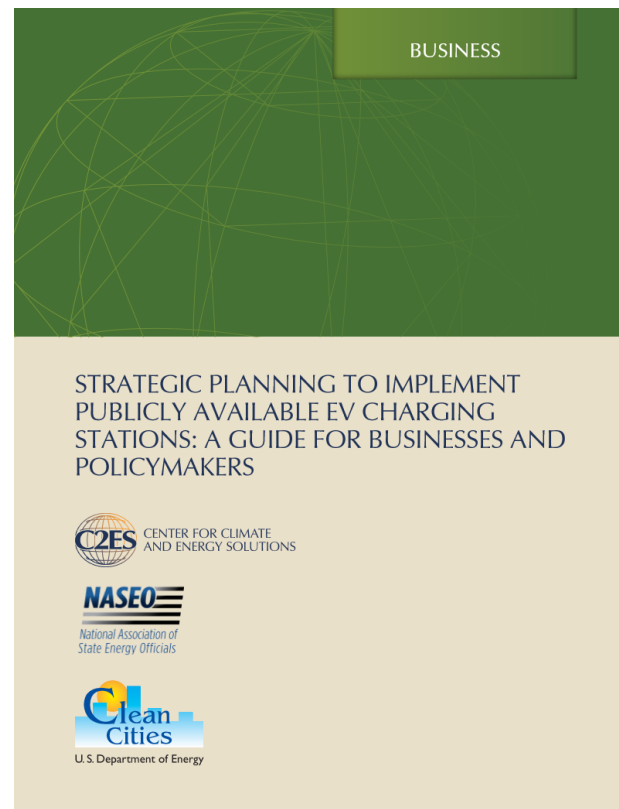
Implementation guidance for policymakers and businesses

Complementary Project for Washington State Legislature: Business Models for Financially Sustainable EV Charging Networks. More info at www.c2es.org/initiatives/afv-finance



EV Charging Guide for Businesses and Policymakers

- Main Takeaway: More private money in charging requires near-term public support
- Key factors for policymakers and businesses
 - Key market factors that affect EV charging financial performance
 - Effects of upfront costs and demand uncertainty on project viability and investor decisions
 - Business models that can improve financial viability of publicly available charging projects
 - Role of government

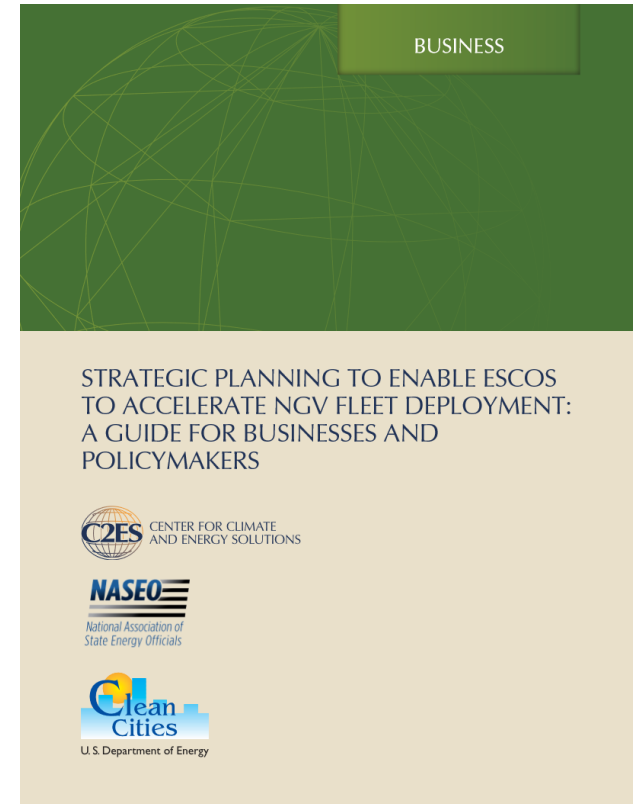


Free to download at
www.naseo.org or www.c2es.org



NGV Fleets Guide for Businesses and Policymakers

- Main Takeaway: Many opportunities exist for applying ESCO-like model in public and private fleets
- Key factors for policymakers and businesses
 - Potential to reduce petroleum use and emissions
 - Key financial performance factors
 - Viable NGV fleet projects
 - Role of energy service provider



Free to download at
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Nick Nigro

nick.nigro@atlaspolicy.com

Technical Reference Manual

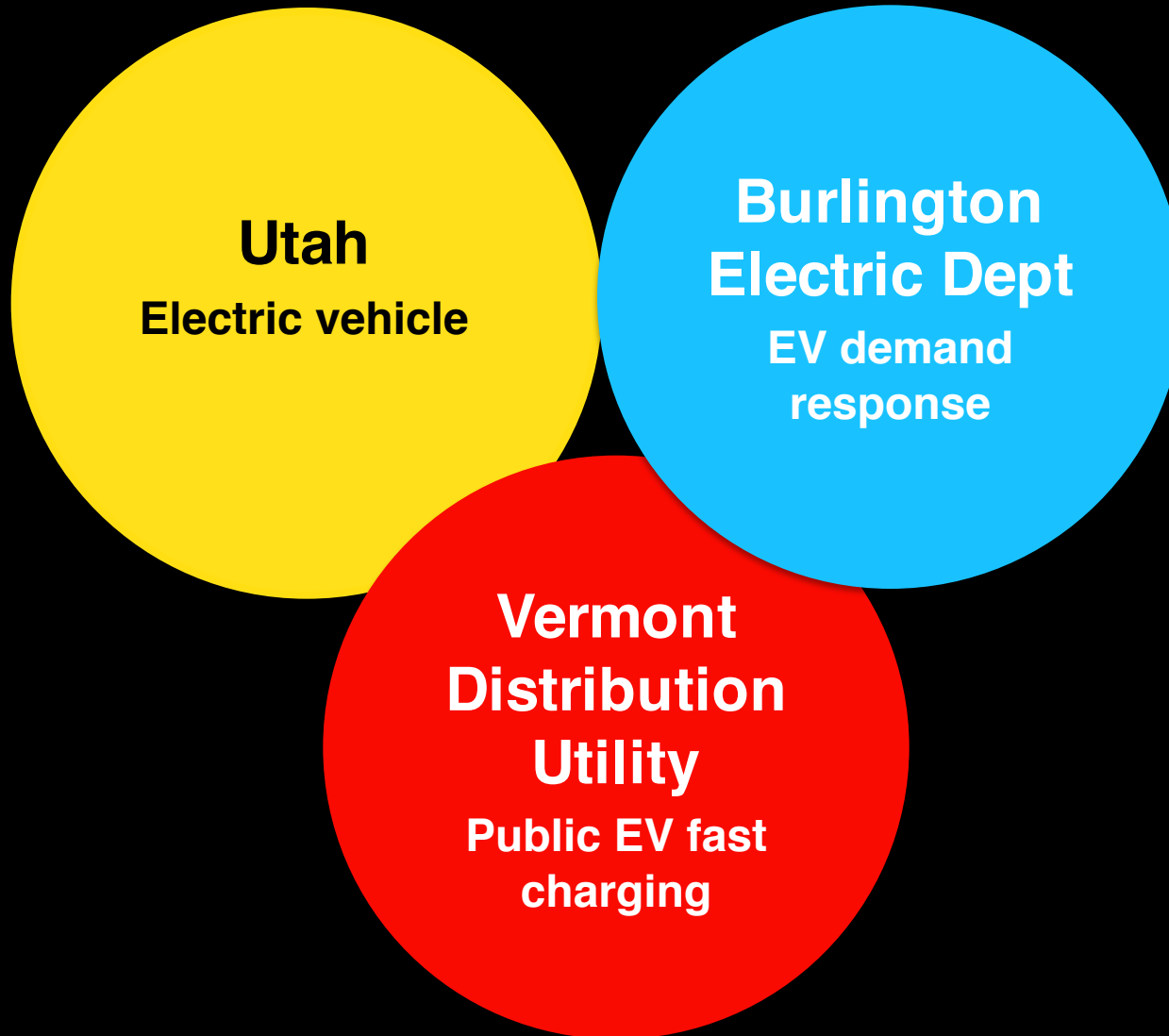
- Characterize efficiency
- Facilitate Least Cost Planning

Transportation TRM Users

- State Energy Offices
- Public Utility Commissions
- Utilities
- Transportation Planning Agencies



Customized TRMs

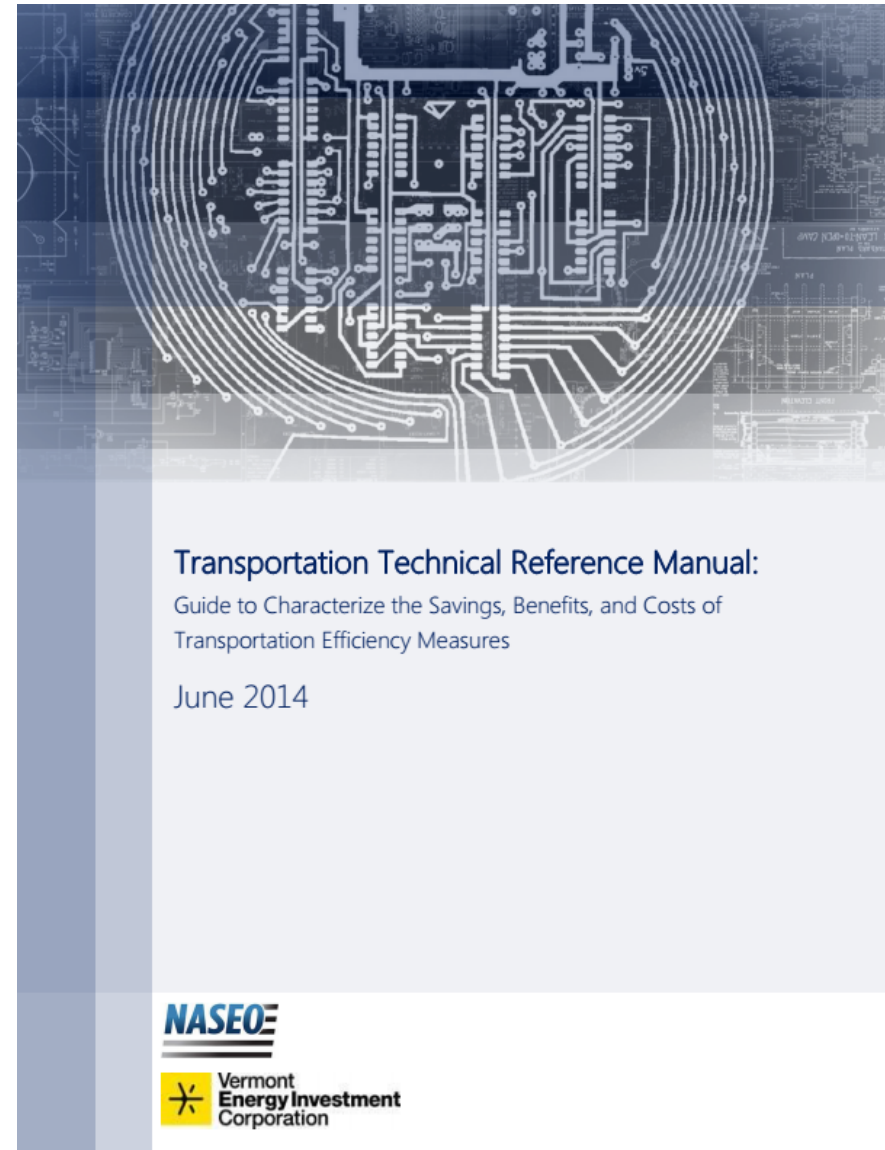




**Vermont
Energy Investment
Corporation**

<https://www.naseo.org/data/sites/1/documents/publications/NASEO-Transportation-Technical%20Reference-Manual.pdf>

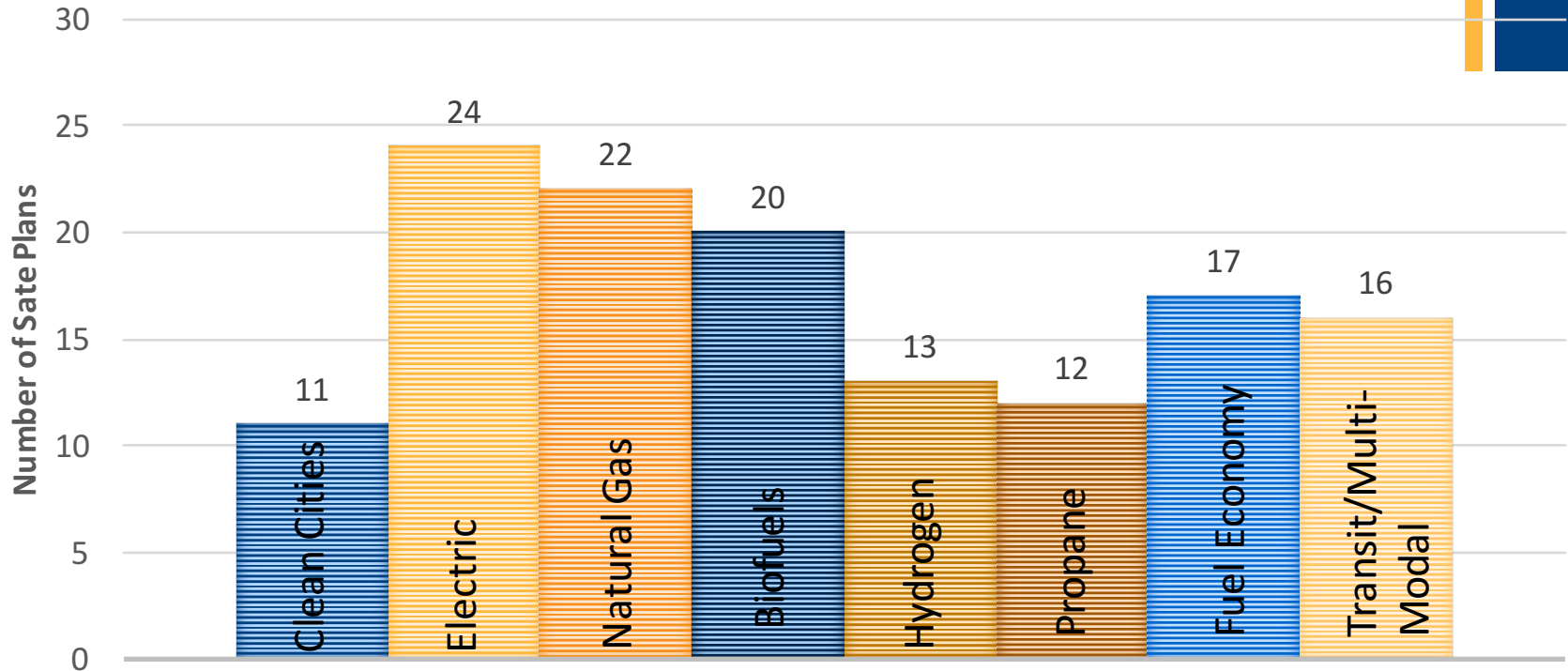
<http://www.veic.org/resource-library/transportation-technical-reference-manual>





Comprehensive Energy Planning

WHAT DO STATE PLANS INCLUDE?



- New webpage on *Transportation Policy and Planning Guidance* describes why and how State Energy Offices are tackling transportation energy use in statewide energy planning.
- <http://naseo.org/transportation-guidance>

+ Energy Assurance Planning



Integrating Alternative Fuel Vehicles in Energy Assurance Planning:
Information, Examples, and Data Resources to Guide States



National Association of State Energy Officials
2107 Wilson Boulevard, Suite 850
Arlington, Virginia 22201
www.naseo.org

November 2015

- Discusses opportunities and potential challenges surrounding the deployment of AFVs in emergency fleets and the data and information needs for a more robust inclusion of alternative fuel vehicles in energy assurance plans.
- Helped build foundation for new Clean Cities project, the Initiative for Resiliency in Energy through Vehicles





Outreach and Events

- Established NASEO Transportation Committee and C2ES AFV Finance Advisory Group
- Presented on project interim findings at 2013 and 2014 TEP Energy Independence Summits as well as various DOE and Affiliate member forums
- Held workshop with Harvard Business School on Innovative Business Models
- Held workshop at AGA headquarters to educate and collect reactions from Clean Cities Coalitions and State Energy Offices on financing models

Transportation Committee

NASEO's Transportation Committee leads the organization's resources, reduce reliance on imported oil, and improve air committee focuses on natural gas, electric and hybrid-electric vehicles and infrastructure. The goal of these efforts is to stimulate transportation-energy business development, environmental

Leadership

Resources

Past Events



Maria Redmond, Chair
Senior Analyst & Program Manager, Transportation Fuels
Wisconsin State Energy Office

