



U. S. Department of Energy

Follow the “*Roadmap*” To Build Your Own Clean City

The *Clean Cities Roadmap* was developed for communities outside of the United States interested in connecting with the growing network of Clean Cities coalitions around the world. These communities can learn from U.S. experiences to develop alternative fuel transportation markets in their country. This *Roadmap* provides a brief background of the Clean Cities program, and explains the recommended steps communities around the world can take to successfully develop alternative fuel markets and build their own Clean Cities coalitions.

Welcome to Clean Cities

The U.S. Department of Energy’s (DOE) Clean Cities Program is based on a unique voluntary, community-based approach to AFV deployment. Clean Cities also works to assist with the development of safe and effective alternative fuel vehicle (AFV) programs throughout the world. While the Clean Cities Program has helped to develop over 88 Clean Cities coalitions in the U.S. including four border programs since 1994, international interest has expanded the successful U.S. program with developing similar public/private sector partnerships and building safe and effective AFV markets.

The Clean Cities program provides a framework for a community’s businesses, government, and other AFV advocates to work as a coalition to build a local alternative fuel market. Clean Cities focuses and coordinates the coalition’s activities by providing a forum to develop strategies and initiatives to increase the number AFVs in the community. Clean Cities programs work with the public and private sectors and individuals to help them establish foundations for alternative fuel markets and encourage others to see AFVs as a viable option to integrate with the mainstream transportation sector. By encouraging AFV use, Clean Cities helps to achieve environmental quality goals and energy security on local, national, and international levels.¹

Successful International Experiences – How Clean Cities Can Help

Clean Cities has shared the model for building coalitions with several countries, including Bangladesh, Brazil, Chile, China, Costa Rica, Egypt, the European Union, Guatemala, India, Mexico, Nepal, Peru, the Philippines, and Trinidad & Tobago. The successful experiences with these countries has lead Clean Cities to develop this *Roadmap* to illustrate the steps international stakeholders can take develop alternative fuel transportation markets in their country, build their own Clean Cities coalition, and connect with the growing network of alternative fuel activists around the world.

The most successful coalitions have driven and motivated stakeholders who independently initiate coalition development and are self-sufficient in coalition funding. The *Roadmap* puts the power in your hands to create a successful coalition! Clean Cities can help in identifying and securing funding from outside DOE sources for AFV program development and technical assistance in the following areas:

- Developing codes and standards
- Educating policy makers

¹ Clean Cities defines alternative fuels as: biodiesel, hydrogen, electricity, liquefied petroleum gas (LPG, propane, or autogas), ethanol, methanol, and natural gas. The U.S. government defines which fuels are considered “alternative fuels” for all U.S. government programs. The inclusions on this list are not at the discretion of the Clean Cities program.

- Assisting with Clean Cities coalition development and stakeholder building
- Assisting with public awareness programs
- Assessing siting of refueling infrastructure
- Developing tax policy and incentive programs
- Developing training programs and facilitating train-the-trainer programs
- Facilitating peer exchange and “lessons learned” opportunities
- Identifying and communicating environmental benefits of AFVs
- Identifying appropriate U.S. AFV and equipment suppliers

Clean Cities has worked to identify multinational donors that may help to fund international AFV development projects. These donors could include:

- African Development Bank
- Asian Development Bank
- Corporacion Andina de Fomento (www.caf.com)
- Inter-American Development Bank
- U.S. Agency for International Development
- U.S. Asian Environmental Partnership
- U.S. Environmental Protection Agency
- U.S. Export Import Bank
- U.S. Trade and Development Agency
- United Nations Development Bank
- United Nations Environmental Program
- World Bank

Roadmap – Six Steps to a Sustainable Alternative Fuel Transportation Market

Clean Cities provides a framework for coalitions to develop a strategic program plan and develop partnerships to expand the local AFV market by encouraging each stakeholder to commit to activities that strengthen the AFV market. The framework includes six steps international communities can take to build their own Clean Cities coalitions, develop AFV markets, and sustain the coalitions. The six steps are:

- Step 1. Form a coalition and hold stakeholder meetings
- Step 2. Appoint a coordinator
- Step 3. Establish stakeholder commitments
- Step 4. Develop a program plan
- Step 5. Officially Launch Coalition
- Step 6. Implement the program plan

Step 1. Form a Coalition and Hold Stakeholder Meetings

Stakeholders are those who are committed to building an AFV market. They are usually businesses and government offices with transportation, energy, and environmental interests. The most effective coalitions maintain a balance of public and private sector stakeholders. Stakeholders typically represent the following businesses and government offices:²

² Appendix A includes a detailed listing of suggested stakeholders.

- Local energy, transportation, and environmental offices
- Locally-based federal agencies
- Public sector fleet managers and operators
- Private sector fleet managers and operators
- Local utilities and fuel suppliers
- Local, national, and international vehicle and equipment companies and local dealers
- Trade associations
- Vehicle technicians
- Vehicle and equipment training institutions, such as universities and vocational educators
- Non governmental organizations (NGOs) and community groups
- Research and development entities, such as high-technology firms, and research centers
- Driver unions

Many successful coalitions include stakeholders that represent niche market fleets. These niche market fleets can present opportunities for smaller pilot projects to test fuels and have a central refueling location. Some niche market fleets include:

- Taxis, transit buses and shuttles
- Local delivery fleets
- School buses
- Airport vehicles
- Government fleets

A coalition is simply a group of stakeholders working together to build the alternative fuel market. Usually, a few stakeholders hold an initial coalition meeting to identify other potential stakeholders. Initial stakeholder meetings are held to understand the stakeholders' perspectives and gather support, identify a coalition coordinator, identify the coalition's goals, form committees, identify stakeholder-specific assignments, and develop a program plan. Stakeholder participation early in the process is essential to developing the local AFV market and ensuring that the coalition becomes sustainable.

Benefits to forming a Clean Cities coalition include: 1) *credibility* by having a diverse group of stakeholders striving for the same goal; 2) *viability* by not being subject to changes in government leadership; 3) *ability* to provide a greater role by being able to educate elected officials; and 4) *reliability* by providing manufacturers and equipment suppliers a commitment that a market will be built. Ultimately, strength in numbers is the key—the more stakeholders involved—the greater the market penetration, the broader the public outreach and support, and the greater chance for long-term sustainability.

Step 2. Appoint a Coordinator

Once the coalition of dedicated stakeholders is formed, their first job is to identify, recruit, and determine how a dedicated professional coordinator will be funded. The coordinator serves as executive director of the coalition. The most successful coordinators are staffed by dedicated, full-time professionals who have access to community decision-makers. Funding the coordinator position is the coalition's responsibility, although Clean Cities may be able to help identify funding donors.

The coalition and coordinator position are usually based at a government agency or stakeholder organization, such as a utility or NGO. Often, that agency or organization funds the coordinator position. If funding a full-time, salaried coordinator is not feasible, excellent staff can sometimes be retained on loan from a stakeholder.

Step 3. Establish Stakeholder Commitments

Individual stakeholders must make specific commitments to the coalition, such as to purchase AFVs, invest in refueling infrastructure, provide AFV maintenance and service, or educate the community and policy makers about alternative fuels and AFVs. In particular, stakeholder commitments to purchase AFVs and invest in infrastructure are crucial to the success of the Clean Cities coalition. The coalition's goals and specific stakeholder commitments are documented as one of the primary sections of the program plan.

Stakeholders can make their commitments formal by signing a Memorandum of Understanding (MOU).³ An MOU is not a binding contract and cannot be used to obligate or commit funds or serve as the basis for the transfer of funds; but it is a symbol of commitment by the coalition stakeholders, such as commitments to purchase AFVs, build infrastructure, and to outline respective responsibilities to carry out the objectives of the Clean Cities coalition.

Step 4. Develop a Program Plan

Once the stakeholders establish the coalition, appoint a coordinator, and make commitments to purchase AFVs and build infrastructure, the coalition and coordinator work together to develop a program plan. The positive experiences of Clean Cities coalitions have determined that a program plan should include:

1. An assessment of the current local AFV market, including a description of alternative fuel activities that have taken place to date; geographic and demographic information; local fuel sources (providers, importers, etc.); current alternative fuel-related laws and regulations; government incentive programs, including tax policies; AFV projects the stakeholders and/or coalition has completed; and the specific assistance (e.g. projects and types of support) that the coalition needs to build the market.
2. The current number of AFVs and refueling sites in the area, and the projected number of AFVs and refueling sites in the area in the next five years. The projections can include specific stakeholder commitments. This information can be included in a table format.
3. The coalition's organizational structure and contact information of stakeholders (i.e., names, addresses, phone numbers, and e-mail addresses). Other coalition contacts can also be included.
4. The coalition's five year specific goals. The coalition's goals should be measurable. Suggested coalition goals include:
 - Adopt safe usage of alternative fuels through certification and inspection programs
 - Train on safe use of alternative fuels (mechanics, drivers, trainers)
 - Develop national codes and standards (for vehicles, maintenance shops, fueling stations, etc.)
 - Increase the number of alternative fuel vehicles
 - Increase the number of alternative fueling stations/recharging facilities
 - Recruit new stakeholders with commitments, including U.S. suppliers
 - Use incentives to increase the use of alternative fuel
 - Communicate Clean Cities/alternative fuel messages to the public
 - Educate policy makers on the advantages of alternative fuels

³ A sample MOU is included in Appendix B.

5. A description of how the coalition will work to reduce local and global emissions, quantify and record emission reductions, and disseminate information on emission reductions to the public and private sectors. Also related to emission reductions, information on improvements made to public health can be included in the program plan.

If desired, the coalition can submit a completed draft program plan to the Clean Cities Deputy Director. Clean Cities experts can review the coalition's program plan and provide feedback on how to ensure the plan's success and offer support for plan implementation.

Send to:
U.S. Department of Energy
1000 Independence Ave, SW
EE-2K
Washington, DC 20585
Email: marcy.rood@ee.doe.gov
Fax: 202-586-1233

Step 5. Officially Launch Coalition

After the program plan is finalized, many coalitions celebrate by hosting a ceremony or event to commemorate and recognize their establishment and accomplishment. Coalitions often choose to host their event in conjunction with another conference or event to maximize attendance and take the opportunity to invite high visibility speakers and participants. Generating press about your coalition is a start to getting the AFV word out!

Celebratory events may be formal or informal. The events typically consist of speeches from invited participants that could include community business and industry leaders, local elected officials, stakeholders, and if available, a U.S. DOE representative. In addition to speakers, attendees typically include government officials, NGO representatives, media representatives, fleet managers, fuel providers, and others to be recruited as coalition stakeholders.

Step 6. Implement the Program Plan

The coalition must continue to meet and work to accomplish the goals outlined in their program plan. Successful coalitions measure their progress to ensure that the program plan is followed. Usually, the coalition will have a special committee responsible for monitoring the program and providing guidance to the stakeholders. When the initial goals are accomplished, the coalition establishes new goals to continue building the alternative fuel market. Remember, the program plan is always growing and evolving, just like the coalition and AFV market. Clean Cities may request program updates, via conference calls or written reports, to monitor the success of the program and offer assistance where it can.

For more information you can:

- Visit the Clean Cities International Activities website at www.eere.energy.gov/cleancities/international
- E-mail the Clean Cities Hotline at hotline@afdc.nrel.gov
- Telephone the Clean Cities Hotline at 1-800-CCITIES

- Contact the Clean Cities Deputy Director:
Ms. Marcy Rood
U.S. Department of Energy
1000 Independence Ave. SW
EE-2K
Washington, DC 20585
Phone: 202-586-8161
Fax: 202-586-1233
E-mail: marcy.rood@ee.doe.gov

Appendix A. Suggested Stakeholders

Stakeholders who could be part of the Coalition:

Federal government

- Energy Ministry
- Environmental Ministry
- Transportation Ministry
- Facilities Management Office (control of fleet vehicles)
- Tariffs Ministry (control over fuel taxes and taxes on imports)

City and state government

- Mayor's Office
- Governor's Office
- Energy Office
- Environmental Office
- Transportation Office
- Facilities Management Office (control of fleet vehicles)
- Education Office (educates the public on a variety of policies)
- City Council

Taxi cab companies and/or union and/or commission

Transit operators and/or authority

School bus operators and/or school administration

Trucking fleets (local delivery)
Multinational companies in the area

Fuel Provider(s)

Local universities or organizations involved in training mechanics/drivers

Environmental organizations, other NGOs

Vehicle manufacturers (depending on targeted fleets)

- Two-stroke conversion engine companies
- Heavy-duty engine manufacturers
- Light-duty alternative fuel vehicles (AFVs)
- Conversion kit manufacturers for light-duty AFVs

Station equipment manufacturers

- Compressors
- Pumps
- Turnkey companies

Appendix B. Sample Memorandum of Understanding

“[Your Coalition Name]” is formally established to develop a local alternative fuel market by creating effective alternative fuel vehicle (AFV) programs and encouraging the use of alternative fuels in the transportation sector to achieve environmental quality goals and energy security.

MEMORANDUM OF UNDERSTANDING

By and Among, “*Signatory Organizations Listed*”

Purpose

The purpose of the Memorandum of Understanding (MOU) among the signatories is to set forth the commitments to meet the goals of the signatories’ national energy policy, purchase AFVs, build infrastructure, and outline respective responsibilities to carry out the objectives of the Clean Cities Program. Signatories under this MOU undertake their best efforts to achieve the specific goals and objectives set forth in the Program Plan.

Coordinator Responsibilities

- Serve as Executive Director of the coalition
- Assist with overall implementation of the Program Plan and development of new goals
- Work with stakeholders and other interested parties to build the local alternative fuel market
- Represent the coalition at local functions
- Assist with recruitment of stakeholders, including U.S. suppliers
- Promote incentives to increase the use of alternative fuels
- Communicate the Clean Cities message to the public
- Educate the community and policy makers on the advantages of AFVs

Stakeholder Responsibilities

- Agree to fulfill voluntary commitments, as stated in the program plan, to purchase AFVs, invest in refueling infrastructure, provide AFV maintenance and service, and educate the community and policy makers about alternative fuels and AFVs
- Assist with overall implementation of the Program Plan and development of new goals
- Work with other interested parties to build the local alternative fuel market
- Represent the coalition at local functions
- Assist with recruitment of stakeholders, including U.S. suppliers
- Promote incentives to increase the use of alternative fuels
- Communicate the Clean Cities message to the public
- Educate the community and policy makers on the advantages of AFVs

By signing this MOU, the Coordinator and Stakeholders agree to put forth their best efforts to achieve the AFV market development goals defined in the Program Plan.

Signatories

Name, Title, Entity

Name, Title, Entity

Name, Title, Entity

Name, Title, Entity