



Alternative Fuel  
Information Series

# Clean Cities International Program

May 2001

U.S. DEPARTMENT of ENERGY  
OFFICE of ENERGY EFFICIENCY and RENEWABLE ENERGY

## Clean Cities Goes International

Modeled after the U.S. Department of Energy's (DOE) Clean Cities Program, Clean Cities International (CCI) aims to facilitate the exchange of information on alternative fuels and on the successful U.S. program to interested countries around the globe. The environmental benefits of using alternative fuels are clear—and all nations can profit from cleaning their air, producing their fuels domestically, and enhancing local economic activity. CCI seeks to use the successful experience in North America to help international communities realize these benefits.

CCI works with foreign governments, industry and non-governmental organizations to help them establish foundations for viable alternative fuel markets. CCI is already partnering with several countries, and more partnerships are on the horizon.

### Background

In the United States, DOE sponsors the Clean Cities Program, designed to encourage the use of alternative fuel vehicles (AFVs) and the development of the supporting infrastructure. By encouraging AFV use, the Clean Cities Program helps to achieve energy security and environmental quality goals on local, national, and international levels. The Clean Cities Program takes a unique, voluntary approach to AFV development, working with coalitions of local stakeholders to help develop local strategies and initiatives to integrate AFVs into the local transportation sector. There are now 80 Clean Cities in the United States.

In 1995, a Hemispheric Energy Symposium was held in Washington, D.C., as a follow up to the Summit of the Americas that took place in Miami, Florida, in December 1994. Both the symposium and the summit addressed the energy-related environmental and economic concerns that face our hemisphere. The symposium was held to begin the implementation process for the agenda items that had resulted from the Summit.

Energy cooperation and sustainable development ranked high on the list of agenda items, and Hemispheric Clean Cities, now known as Clean Cities International, was one of 40 initiatives established. By adopting this initiative, the

### A Tale of Two Cities

As part of the Hemispheric Clean Cities Initiative, DOE offered to share the Clean Cities model with the city of Santiago, Chile. Nestled in the beautiful Chilean mountains, Santiago suffers from serious air quality problems. Santiago was poised to benefit from the model because of its strong economy and because the first natural gas pipeline running from Argentina to Chile was completed in late 1995. In the ensuing years, the Clean Cities Program has sent personnel to Santiago to support the government of Chile in establishing a Clean Cities Coordinator position and coalition with cooperation from U.S. industry (GTI, Thomas Built Buses, Natural Fuels Corporation, and Deere Power Systems).

Santiago's sister city, Chicago, Illinois, has air quality problems of its own. In 1997, Chilean President Frei and Chicago Mayor Richard Daley signed a Memorandum of Understanding agreeing to proactively share information about each city's progress. In 1999, and again in 2001, CCI and GTI sponsored "reverse trade missions" that successfully showcased North American natural gas transit bus and airport technologies to the Chileans. Chilean delegates visited Washington, D.C.; Denver, Colorado; southern California; and Dallas, Texas; observing both production and deployment of AFVs.

As a result of the 1999 reverse trade mission, the Chilean National Environmental Commission (CONAMA, a counterpart to the U.S. EPA), and the Office of the Governor of Santiago implemented a \$1.2 million subsidy (roughly \$24,000 per bus) for the purchase of natural gas buses in 2000. And in January 2000, newly elected Chilean President Ricardo Lagos publicly announced a plan to deploy 4,000 natural gas buses by 2005.

attendees demonstrated their faith in the Clean Cities model by wanting to share it with other countries.

## Plans for the Future

In May 2000, a seminar was held in Santiago, Chile, where representatives of U.S. industry discussed technology issues and marketing opportunities for light-, medium-, and heavy-duty compressed natural gas (CNG) vehicles with the Santiago, Chile, Clean Cities stakeholders, and other government officials. This seminar was a result of the new Chilean natural gas bus subsidy and governmental interest (see box on page 1).

Currently, three border programs—between the cities of El Paso, Texas, and Ciudad Juarez, Mexico; between Detroit, Michigan and Toronto, Canada; and between Grand Forks, North Dakota, and Winnipeg, Canada—are under way. And representatives from DOE and Gas Research Institute, now known as the Gas Technology Institute (GTI), have received inquiries for more information on CCI from representatives in several countries—Argentina, Bangladesh, Brazil, Colombia, Egypt, El Salvador, India, Mexico, Peru, Portugal, Trinidad & Tobago, and Venezuela. Clean Cities staff has also participated in meetings with World Bank staff regarding the merits of AFV technologies and the need for funding projects in developing countries. Because of increased international interest in natural gas bus technologies, in particular, the program is expected to grow steadily in the months and years to come.

CCI has collaborated with the Technology Cooperation Agreement Pilot Project to enable technology transfer in the area of alternative fuels in the international transportation sector. In particular, in September 2000 a U.S. delegation participated in the International Conference on Energy Efficiency In Road Transportation in Rio de Janeiro, Brazil, sponsored by the Organization for the Rational Use of Energy, a division of Petrobras. CCI also sponsors international sessions at the National Clean Cities Conferences. The 6th conference in 2000 included a program on “Clean Cities University: A Worldwide Perspective,” and featured presentations by international representatives on expanding opportunities for the U.S. AFV industry with Mexico and Chile, as well as Clean Cities Corridor projects extending from Monterrey, Mexico, to Winnipeg, Canada. The 7th National Conference in 2001 focused on “Climate Change Knows No Borders,” with discussions centering on global climate change and the contribution alternative fuels and vehicles can play in mitigating greenhouse gases.

Other significant activities for Clean Cities International are noteworthy:

- GTI, National Energy Technology Laboratory, and DOE sponsored a workshop entitled, “Developing Greenhouse Gas Emission Reduction Projects Using Clean Cities Technologies.” A manual on developing greenhouse gas projects using natural gas technologies has since been produced by the National Energy Technology Laboratory.
- Significant discussions surrounding pollution reduction through alternative fuels in transportation have taken place in New Delhi, India, which suffers from extreme health-endangering pollution. The Indian Supreme Court has ruled that all commercial vehicles, including 10,000 buses, be converted to compressed natural gas. CCI coordinated a U.S. delegation to India to participate in its first ever conference on alternative fuels.
- A cooperative project between DOE and U.S. Environmental Protection Agency is underway to develop a ToolKit focused on addressing the questions of:
  1. Air pollution in major cities;
  2. Human health impacts of vehicle related air pollution;
  3. Environmental impacts of vehicle related air pollution;
  4. Global Climate Change and vehicular pollution; and
  5. Global trends in urban transport.
- DOE has also issued grants for the conduct of “reverse trade missions” to increase the partnership opportunities of U.S. industry and promote the more global adoption of alternative fuels and vehicles. A recent reverse trade mission included Chilean government representatives, who are interested in developing a natural gas vehicle program at the Santiago International Airport. The Chilean delegation visited airport operations in Denver and attended the Southeastern Regional Airport Alternative Fuel Vehicles Conference. A reverse trade mission for officials from Monterrey, Mexico is planned for spring 2001.
- Developments and activities in the international arena can be tracked on the newly designed CC International home page sited below.

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For more information, you can

- call the Clean Cities Hotline at 1-800-CCITIES
- visit the Clean Cities Web site at [www.cities.doe.gov](http://www.cities.doe.gov) or [www.cities.doe.gov/international](http://www.cities.doe.gov/international) or
- e-mail the Clean Cities Hotline at [ccities@nrel.gov](mailto:ccities@nrel.gov)

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