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10-13-2009

## Clean Cities Annual Operating Plan 2009: Florida Space Coast Clean Cities Coalition

Florida Solar Energy Center

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### STARS Citation

Florida Solar Energy Center and Young, William, "Clean Cities Annual Operating Plan 2009: Florida Space Coast Clean Cities Coalition" (2009). *FSEC Energy Research Center®*. 336.

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**CLEAN CITIES ANNUAL OPERATING PLAN 2009**

**FLORIDA SPACE COAST CLEAN CITIES COALITION**

FSEC-CR-1828-09

September 29, 2009

Submitted to:

National Energy Technology Laboratory  
U.S. Department of Energy

Submitted by:

Space Coast Clean Cities Coalition  
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**Clean Cities Annual Operating Plan 2009**  
**FLORIDA SPACE COAST CLEAN CITIES COALITION**  
FSEC-CR-1828-09

## **1.0 Coalition Description**

In March, 1997, the Florida Solar Energy Center (FSEC) joined the U.S. Department of Energy (DOE) Clean Cities program to form the Florida Space Coast Clean Cities Coalition in East Central Florida. As part of the fifth largest state in the country in people and vehicles, the area had started to experience air quality problems. Additionally, Florida imports virtually all petroleum fuels.

Originally, nine counties along the east coast formed the Coalition. The area is known as the Space Coast due to its proximity to Kennedy Space Center. The Coalition now consists of 10 counties, as the State is divided into eight Clean Cities regions. Florida Solar Energy Center is located in Cocoa in the approximate center of the coalition area. On October 1, 1999, the expanded Florida Space Coast Clean Cities Coalition was designated and authorized as the 75th Clean Cities Coalition.

## **1.1 Mission and Vision Statement**

As authorized by the Energy Policy Act of 1992, Section 505, the goal of the U.S. DOE's Clean Cities initiative is to decrease the nation's dependence on petroleum in the transportation sector through public/private Clean Cities partnerships by:

- Accelerating the development of a sustainable alternative fuels market
- Accelerating the use of idle reduction technologies
- Accelerating the use of hybrid vehicles
- Increasing the use of alternative fuel blends in petroleum fuels and
- Promoting informed consumer choice on fuel economy.

The mission of the Space Coast Coalition is to be the force behind petroleum displacement activities in East Central Florida. Activities include, but are not limited to:

- Facilitating the sales of alternative fuel vehicles (AFVs), hybrids, alternative fuels/blends and idle reduction technologies
- Organizing and holding Advancing the Choice events
- Developing fund-raising strategies and/or writing grant applications
- Holding public education and outreach campaigns
- Organizing and hosting stakeholder meetings
- Providing project management services to select Clean Cities projects and
- Providing technical assistance and specialized training to early adopters of advanced vehicle technologies.

The vision of the Coalition is to improve the quality of life in East Central Florida through clean and energy efficient alternative fuels for transportation.

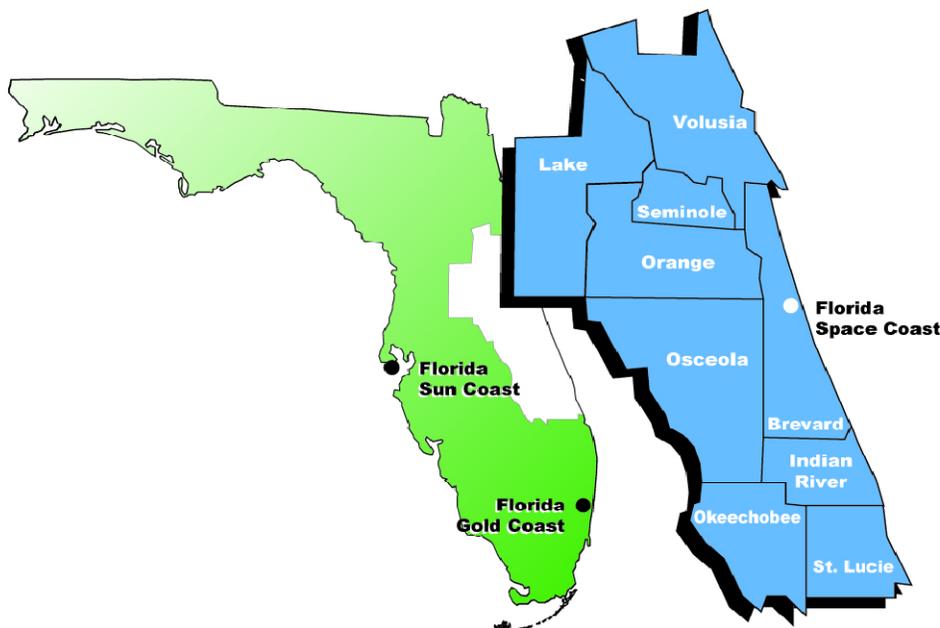
## 1.2 Organizational Structure

The Florida Space Coast Clean Cities Coalition is a 501-3c non-profit corporation within the State of Florida and a member of Transportation Energy Partnership. Space Coast Coalition is administered by the University of Central Florida/Florida Solar Energy Center (FSEC) through the National Energy Technology Laboratory (NETL) for the U.S. Department of Energy Clean Cities Program. Space Coast Coalition has a Memorandum of Understanding with FSEC. The Clean Cities contract is between Research Development Solution (RDS) and the University of Central Florida Office of Research and Commercialization. Therefore, Space Coast Coalition is actually administered by the Florida Solar Energy Center in Cocoa, Florida where the Clean Cities Coordinator is employed.

FSEC is a renewable energy research institute of the State of Florida administered by the University of Central Florida in Orlando, Florida. FSEC is also a Type I non-profit 501-3c institute of the State University System of Florida.

## 1.3 Geographic Area

The Space Coast Coalition is a regional coalition and now consists of ten East Central Florida counties: Brevard, Indian River, Lake, Flagler, Osceola, Okeechobee, Orange, Seminole, St. Lucie and Volusia.



## 1.4 Funding Sources

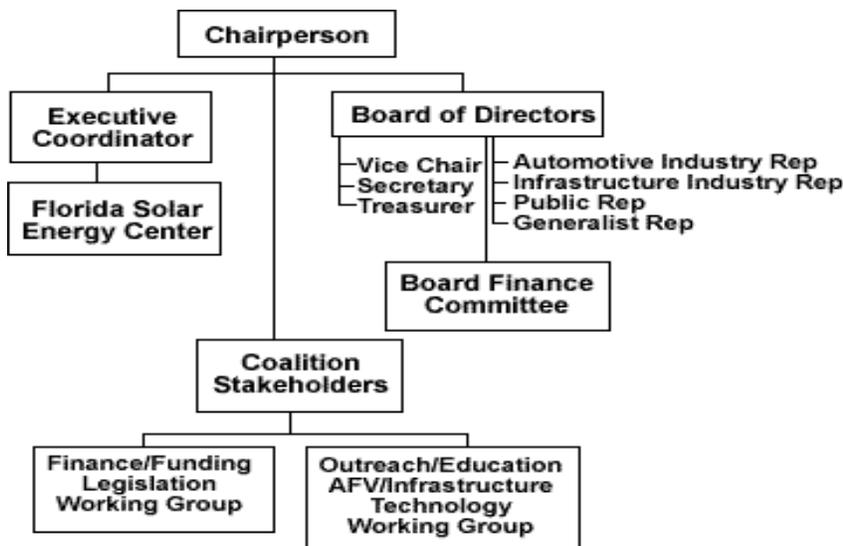
The Coalition has diverse funding sources including grants, dues, contracts and in-kind support. The Coalition started with a grant from the Florida Energy Office and later received grants from the U.S. Department of Energy, through which we are presently funded. Grants have included Federal, State, industry, foundations and private donors ranging from \$1,000 to \$100,000. In-kind support from stakeholders, industry and government provides valuable support in advertizing, printing, equipment, facilities and labor. Additionally, dues are collected annually for each area of interest with Industry, Automotive and Infrastructure, at \$200, Public Agency at \$100, Generalist at \$50 and Friend at \$25.

## 1.5 Coalition Governance Structure

The first Program Plan was submitted on August 8, 1997 and the final version was accepted on July 15, 1999, making Space Coast the 75<sup>th</sup> Coalition. Bylaws for the Coalition were approved December 9, 1999 and the first election of Officers was on February 8, 2000. The Florida Space Coast Clean Cities Coalition is a non-profit corporation of Florida and a member of Transportation Energy Partnership as a 501-3c. The Coalition Board of Directors is divided into four sectors representing different areas of interest in alternative fuel vehicles including:

- automotive industry
- infrastructure industry
- public representative
- general representative.

The Board consists of four elected officers consisting of Chair, Vice-Chair, Treasurer and Secretary, with the Clean Cities Coordinator as the Executive Director reporting to the Chair and U.S. DOE.



## 1.6 Strategic Plan

In 2002, the Coalition developed a Sustainability Plan for the future of the Coalition. The Plan was designed to ensure financial stability and continued viability. It is in need of updating to align with current information. The Department of Energy establishes broad targets for growth in vehicles deployed and infrastructure.

## 2.0 Key Coalition Personnel

The Florida Solar Energy Center provides most of the administration for the Coalition to meet the U.S. Department of Energy National Clean Cities Program requirements, as well as the University of Central Florida. FSEC/UCF and stakeholders of the Coalition assist with the administration of the Coalition and participate in joint activities. Between FSEC, UCF and the Coalition, ten staff employees provide secretarial, accounting, graphics, media and technician support to meet contract objectives.

The following key FSEC and Coalition personnel will be responsible for administrating this program. The Coalition Board of Directors is comprised of 9 members including Chair, Vice-Chair, Secretary and Treasurer that management the Coalition. Additional support is provided by Coalition stakeholders, local government representatives and the automotive industry on an as needed basis.

FSEC Principal Investigator will be Bill Young, who is responsible for oversight of the program serves as Coalition Coordinator. Mr. Young performs the various tasks assigned to the Coordinator in representing the DOE and the local Coalition. He markets AFV technology, provides technology transfer, organizes events and promotes sustainability of the Coalition. The position is part time (20 hours/week). Mr. Young has worked with the Coalition since its inception and has 22 years experience with AFVs, since purchasing his first EV in 1988. He has a BS in Electrical Engineering and has worked for FSEC as a researcher since 1990. He has designed, constructed and tested fueling stations and vehicles. Mr. Young has written over 10 papers and presented at over 20 workshops, including developing and teaching a course on AFVs at Brevard Community College.

Kelly Snavely is a secretary for the Solar Department at FSEC. She has worked on Clean Cities since the Coalition started. Kelly works on Coalition business approximately 3 hours a week. She has an AA in Office Management and performs general office tasks and purchasing activities.

Dianne Wood is the Web master for the Solar Department at FSEC. She has also worked on Clean Cities since the Coalition started. Dianne works on Coalition activities an average of 1 hour a week. She has an AA in Office Management and performs general Web tasks.

Mary Huggins is the Contract Administrator for FSEC and has worked on Clean Cities contracts since the Coalition started. She supports general proposal and contract administration, averaging approximately 2 hours a week. She holds a BS in Environmental Science and MA in Business Management.

John Parker is the Chair of the Board of Directors for the Coalition. John is serving his second term in office and works about 4 hours a week in a non-paid position. He holds a BS in Environmental Science and works for Orange County Department of Environmental Protection.

Eleanor Foerste is the Vice-Chair of the Board of Directors for the Coalition. She is serving her second term in the office and works about 2 hours a week in a non-paid position. She holds a BS in Environmental Science and a Masters of Agriculture degree from the University of Florida. She works for the University of Florida/IFAS Osceola County Extension Office in Kissimmee.

David Baez is the Treasurer of the Board of Directors for the Coalition. He is serving his second term in the office and works about 1 hour a week in a non-paid position. He holds a BS in Environmental Science and works for the Orlando Utilities Commission in Orlando.

Paul Schott is the Secretary of the Board of Directors for the Coalition. He is serving his second term in the office and works about 2 hours a week in a non-paid position. He holds an AS in Environmental Science and is self employed.

Kieta Osteen is a member of the Board of Directors for the Coalition. She is serving her second term in the office and works about .5 hour a week in a non-paid position. She holds a BA in Literature and a MA in Business Management and works for the Brevard Community College in Cocoa.

Jorge Herrea is a member of the Board of Directors for the Coalition. He is serving his first term in the office and works about 2 hours a week in a non-paid position. He holds a BA in History and a Law Degree from University and works for a Nopetro in Atlanta, GA.

David Bruderly is a member of the Board of Directors for the Coalition. He is serving his first term in the office and works about 4 hours a week in a non-paid position. He holds a BS in Mechanical Engineering and works for Wizegas, in Gainesville.

James Mellon is a member of the Board of Directors for the Coalition. He is serving his third term in the office and works about 4 hours a week in a non-paid position. He holds a BS in Mechanical Engineering and works for the General Motors in Orlando.

Larry Wexler is a member of the Board of Directors for the Coalition. He is serving his second term in the office and works about 3 hours a week in a non-paid position. He has a AA in History and works for Greenworks in Orlando.

### **3.0 Current Alternative Fuel and Advanced Vehicle Technology Market Analysis**

The Coalition covers a 10-county area comprising many diverse industries, economies and markets from the Space Program, to farming, to tourism to high-tech industries. There are many opportunities to implement alternative fuel infrastructure and vehicles. There was a major push for alternative fuels when the Coalition started, allowing the Coalition to become well established. In mid-2000, enthusiasm waned when local Governments were not required to meet Federal fleet mandates, which resulted in many vehicles and stations falling into disrepair. With the concerns over higher and unpredictable fuel costs, a resurgence of interest has spurred another expansion into AFV technologies.

There is at least one of each alternative fuel type refueling station with in our Coalition area: ethanol, bio-diesel, natural gas, propane, electric and hydrogen. The Governor directed that all gasoline in Florida use at least 10 percent ethanol, establishing it as a major fuel beyond our Coalition's three E-85 stations. Orange, Seminole, and Lake county school busses are using bio-diesel to reduce emissions exposure. Florida Solar Energy Center has three public electric vehicle charging stations that are grid-tied to a 10 kW photovoltaic system on the roof of their building. Orlando International Airport shuttle busses are using hydrogen as a fuel from their own station in three Ford ICE buses used to shuttle people from parking lots to the airport terminal, as well as B-20 in their diesel facility vehicles. The Central Florida area of the Florida Department of Environment Protection has purchased 24 hybrids and has 2 fuel cell Fords using hydrogen from either of two fueling stations with our Coalition area.

A major adopter in our Coalition area is the Government Services Administration (GSA) in Florida located at Kennedy Space Center. Thousands of vehicles are supplied by GSA and together with a number of contractors at KSC, provide great examples of the use of alternative fuel vehicle fleets and fueling stations. Kennedy Space Center has a natural gas fueling station that has been in operation for about 10 years, due in large part to a dedicated AFV interested fleet manager. The Center has E-85, hydrogen, and bio-diesel fueling stations as well as electric chargers for their NEV fleet.

The Florida Department of Transportation has always been in alignment with Federal vehicle mandates. Highway facilities work depots have their own fueling stations for vehicles that use E-85 and biodiesel blends. Lynx mass transit in Orange County uses B20 in all diesel buses. Many government fleets have their own fueling stations. This practice is mirrored by Florida Power and Light's commercial fleet with over 300 vehicles in our Coalition area using B-20.

There are obstacles to deployment in our Coalition that are very similar to other Coalitions. Fleet receptiveness depends on past experience with AFVs. Newer fleet managers are often more willing to experiment and accept new technologies. Cost is an issue, and some government and corporate entities are required to choose the lowest priced commodity. Acceptance of a partnership with Clean Cities depends largely upon whether fleet management is interested in the guidance we can offer.

The general public is the most challenging to deal with, as some people are environmentally inclined and others are not. The cost of fuel depends on how they perceive issues and value impacts. The biggest hurdle toward acceptance is misunderstanding or lack of education on the issues and available technologies.

The Coalition suffers from the lack of State support. Now that there will be six Coalitions in the state, there will be more competition for funding.

#### **4.0 Goals and Objectives**

The Coalition developed four Goals to meet the mission of the Clean Cities Program in our area.

##### 4.1 Goal

4.1.0 Increase public awareness and understanding of the factors causing air pollution and the benefits and costs of using AFVs.

###### Objective 1.1

Identify and classify public and private vehicle fleets and infrastructure in the Space Coast region.

###### Objective 1.2

Secure local media coverage of alternative fuel developments and Space Coast Clean Cities meetings and activities, including financial incentives.

###### Objective 1.3

Develop and disseminate media and public relations information.

###### Objective 1.4

Develop ongoing public outreach materials including articles in existing FSEC newsletters as well as newsletter, web page, member bulletin and local resource guide and implement marketing strategies. Expand and link to web pages of stakeholders. Include statistical data showing potential reduction of toxic emissions and link to health issues. Approach public television to create program on alternative vehicles. Set target date for media blitz and include newspaper, radio, television and Internet.

###### Objective 1.5

Coordinate and promote local workshops dealing with AFVs and related technology.

###### Objective 1.6

Coordinate and/or assist with special media and educational events including the SunDay Challenge, Junior Solar Sprint, Electric Go Cart Competition, Science Fair, Space Congress and ECO-TREK for people of all ages and experience.

#### Objective 1.7

Design exhibits and displays for use at appropriate events and conferences. Create presentation for use by Coalition members at events or meetings.

#### Objective 1.8

Exhibit and display alternative fuel information at appropriate events.

### 4.2 Goal

2.0 Improve the local air quality by reducing emissions, while enhancing the economic development of AFVs and the related infrastructure and technology.

#### Objective 2.1

Comply with the Clean Air Act Amendments of 1990 (CAAA) and Energy Policy Act of 1992 (EPACT) standards.

#### Objective 2.2

Develop Clean Corridors from Orlando International Airport along the Beeline to the Space Coast beach, port and tourist areas, and along the Space Coast beaches, thereby creating a commuter triangle.

#### Objective 2.3

Develop Clean Corridor linking other coalitions throughout the state.

#### Objective 2.4

Develop a network of refueling stations throughout the Space Coast region.

#### Objective 2.5

Develop and coordinate partnerships with universities, automotive industry and fleet managers in the development of alternative fuel vehicles and infrastructure.

### 4.3 Goal

3.0 Develop related service industries for the development of AFV infrastructure and maintenance of vehicle conversions

#### Objective 3.1

Identify and document technical assistance requirements for fleet managers, mechanics and operators for sale, maintenance, conversions, emissions testing and safety inspection of AFV technologies.

#### Objective 3.2

Develop training programs for fleet managers, mechanics and operators of AFV vehicles and infrastructure related to sale, maintenance, conversions, emissions testing and safety inspection of AFV technologies.

#### Objective 3.3

Reduce initial cost of service personnel and technology support for AFV vehicles and infrastructure for government agencies, utilities, and private industry through partnerships and educational programs.

### 4.4 Goal

4.4.0 Increase the acquisition and utilization of AFVs.

Objective 4.1

Identify private fleets by focusing on DOE's preferred fleet's database and recruiting private fleets to participate in Clean Cities program.

Objective 4.2

Create public awareness of alternative fuel technologies by joining established programs such as the Electric Vehicle Infrastructure Ready Program and other outreach programs.

Objective 4.3

Make available information, tools and resources to facilitate growth and experience of fleet managers and decision makers of public and private fleets in the viable acquisitions of alternative fuel vehicles and infrastructures.

Objective 4.4

Develop and coordinate public and private fleet acquisitions of alternative fuel vehicles and infrastructures through joint implementation projects.

Objective 4.5

Develop and coordinate public and private fleets acquisitions of alternative fuel vehicles and infrastructures through creative funding, loan and cost reduction programs.

## 5.0 Coalition Meeting and Event Plan

The Coalition for the year 2009/2010 planned several events in addition to the regular required Coalition Meetings. One of the new approaches to encourage participation in regular meetings is to move the location of the meeting to tour facilities or to conduct mini-seminars on topics members may find interesting.

<u>Event Name</u>	<u>Target Date</u>	<u>Target Audience</u>	<u>Topic to be Addressed</u>
Quarter 1 Stakeholder Meeting	1-21-09	Stakeholders New Fleets New industries	Regular Coalition Meeting
Quarter 2 Stakeholder Meeting	4-08-09	Stakeholders New Fleets New industries	Regular Coalition Meeting
Special Meeting	5-14-09	Stakeholders	Funding, Grants, Proposals
Quarter 3 Stakeholder Meeting	6-19-09	Stakeholders New Fleets New industries	Regular Coalition Meeting on bylaws, funding and policy and a tour of Climate Change Center
Special Meeting	7-08-09	Stakeholders	Statewide Coalition activities and training
Seminar on EV Charging @ KSC	9-15/16-09	KSC Stakeholders	Electric Vehicle charging applications
Quarter 4 Stakeholder Meeting	9-30-09	Stakeholders New Fleets Industry	Regular Coalition Meeting
Seminar on EV Charging @ FSEC	9-30-09	Stakeholders New Fleets New industries	Electric Vehicle charging applications

## 6.0 Coalition Travel and Training Plan

Travel and training activities the Coalition has participated in to remain informed on key Clean Cities topics.

<u>Conference-meeting Name</u>	<u>Date</u>	<u>Description</u>
Clean Cities Coordinator Meeting	4-19-09	Coordinator Meeting at AFVi Conference in Orlando, FL
Clean Cities Regional Peer Exchange	6-22-09	Peer exchange of information and training for Coordinators in Pittsburgh, PA
Clean Cities Coordinator Retreat	11-5-09	Coordinator retreat for information and training in Gatlinburg, TN

## 7.0 Coalition Data Reporting and Deliverables Plan

Data Reporting and Deliverables for the coalition to DOE for 2009/2010 are listed.

<b>Key Deliverable</b>	<b>Due Date</b>	<b>Description</b>
Coalition Annual Survey Data Collection and Report	1-02-09 to 3-29-09	Collect vehicle and infrastructure data from stakeholders of coalition for Coordinator annual survey and input data. Stakeholder and other fleets and individuals were called, U.S. mailed, faxed and email a survey form as well as web page input form <a href="http://clean-cities.org/inventory/index.htm">http://clean-cities.org/inventory/index.htm</a>
Coalition Web site	1-05-09 to 9-30-09	The Coalition created a web site in 2000 and maintains a list of officers, stakeholders, calendar of event, survey inventory, contract information, links to other valuable sites and proposal information
Conduct Outreach to Fleet	4-10-09	Invitation and participation in AFVi conference in Orlando as well as weekly email on general information
National Clean Cities Web site	4-09-09 6-24-09 9-19-09	Conduct review of DOE Clean Cities website to ensure accurate Coalition information
Alternative Fuel Price Report Quarter 1	1-26-09	Contact fueling station owners and send fuel pricing info to Mike Laughlin
Alternative Fuel Price Report Quarter 2	4-1-09	Contact fueling station owners and send fuel pricing info to Mike Laughlin
Coalition Success Story #1	4-14-09	Submit a description of a recent successful event for EV initiative and Hymotion PHEV
Write and issue Coalition specific newsletter	5-11-09	Write and issue newsletter about coalition activities as part of SE Fuels Fix Newsletter
Special Coalition Support meeting or event	5-14-09	Special Coalition meeting on Funding, Grants, Proposals
Coalition Support Contract Report for Reporting Period #1	5-30-09	Submit invoice and Progress Report for first half of Coalition support contract for year 2009
Coalition Success Story #2	6-01-09	Submit a description of a recent successful event for EV Ready initiative
Special Coalition Support meeting or event	7-08-09	Special Coalition meeting on Statewide Coalition activities and training
Alternative Fuel Price Report Quarter 3	7-15-09	Contact fueling station owners and send fuel pricing info to Mike Laughlin
Write and issue Coalition specific newsletter	8-18-09	Write and issue newsletter about coalition activities as part of SE Fuels Fix Newsletter
Conduct Coalition Support meeting or event	9-15/16-09  9-30-09	Conduct education on infrastructure through Kennedy Space Center EV charging Seminar and FSEC Seminar and tour of EV charging
Conduct Outreach to Fleet	6-18-09	Tour of Orange County Climate Change center
Annual Operating Plan	9-30-09	Developed and reported annual operating plan for the coalition
Coalition Support Contract Report for Final Reporting Period	9-30-09	Submit invoice and Final Progress Report of Coalition support contract for year 2009