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A Case to Drive Greener

Category: Technology Advancements

The City of Clearwater/Clearwater Gas System

Population*:* 108,000

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*We would appreciate being considered for an Innovation Award.*



*We would appreciate being considered for a Rapid Fire Session.*

 (A department of the City of Clearwater)

Intent of the project/program/service



During the Fall of 2010, the City of Clearwater embarked upon a challenging community project, titled Clearwater Greenprint that explored ways we can all be involved in creating a sustainable community. The one and a half-year project culminated in a plan that includes 44 strategies to improve the city’s sustainability in eight focus areas. One specific area (*of the eight*) focuses upon Green Energy and Buildings. As such, City leaders applauded the initial concept of constructing a local compressed natural gas (CNG) fueling station to fuel city and private vehicles.

Ultimately, Clearwater’s Greenprint vision encompasses looking for sensible options to advance energy and sustainability, while saving money.

Cost/Savings

The City of Clearwater kicked off one of its greenest construction projects in May 2011 after realizing the huge savings on fuel when using natural gas to fuel city vehicles. With the help of a $450,000 grant from the Florida State Energy Office, Clearwater Gas System, an enterprise department of the City of Clearwater, designed and built the infrastructure to bring the cleanest and most environmentally-friendly motor fuel to the Pinellas County area. After a grueling six month project schedule and a budget of $1.9 million, the City of Clearwater unveiled the area’s first public natural gas vehicle (NGV) filling station, on October 7, 2011.

Each fiscal year, the City of Clearwater makes cutting departmental expenses a priority, including decreasing vehicle transportation fuel costs. One of the first test departments is the city’s fleet of garbage trucks. Currently, 14 city operated garbage trucks are fueled using compressed natural gas (CNG) along with a dozen of gas service trucks and vehicles. City leaders anticipate an overall savings of $15,000 per year/per truck and about $1,500 annually for light/medium duty trucks (based upon annual mileage figures) which is a significant savings. Savings include both fuel and maintenance costs for city vehicles. It is anticipated that, through attrition, service vehicles will be replaced with fuel-efficient CNG vehicles. At current rates, city vehicles fuel at the CNG station at a rate of $1.35 per gallon savings over gasoline versus a rate of $1.99 per gasoline gallon equivalent for private citizens.

Innovation Characteristics

In this difficult time of government revenue reduction, the City of Clearwater is consistently reviewing opportunities to reduce departmental expenses. During a routine review, City government leaders identified the high costs associated with fueling city vehicles. As a result, City leaders pro-actively agreed to invest in building a compressed natural gas (CNG) fueling station.

The CNG construction process clearly demonstrates the importance of key partnerships needed to accomplish an innovative public works project in an urban location. A remarkable amount of coordination was necessary between various public works and governmental entities which included the owner, contractor, utilities, equipment suppliers, and regulators to complete this cutting edge project.

Obstacles

One major obstacle in building the CNG station was the lack of industry knowledge.  Since there were no other CNG stations in Florida (at the time) of our proposed size, it was very difficult to write an RFP that satisfied all of our station requirements, along with interviewing and selecting the appropriate contractor for the project.

Other obstacles included working with building/permitting officials that were not familiar with CNG station construction.  They had many questions about how the equipment worked and various safety issues associated with CNG.

Applicable Results and Real World Practicality

To support the installation of a local CNG facility, City leaders expect the following future results:

* **Reduction of Operating Costs –** the City of Clearwater estimates an overall savings of both fuel and maintenance costs of $15,000 per year/per refuse truck and about $1,500 annually for light/medium duty trucks.
* **Enhance Clearwater’s social and environmental initiative –** with the construction of an NGV fueling station the City of Clearwater can begin working towards obtaining a “gold” Green cities certification.
* **Reduce dependency on foreign oil –** annual petroleum offset of 568,000 gallons per year over the first ten years.
* **Greenhouse gas reduction –** more than 2,200 metric tons (MT) of CO2 will be removed from the atmosphere**.**
* **Improved safety –** natural gas is lighter than air; therefore, if a gas spill occurs, the gas will dissipate into the air which is ideal for the environment.
* **Create jobs –** stationwill support three direct and 15 indirect jobs. In addition, will stimulate the economy via the purchase of NGVs by local fleets and private citizens.

All Cities and Counties should consider converting their fleets to environmentally-friendly and fuel-efficient natural gas. There are about 1,000 publicly-owned natural gas systems across America that is positioned to build their own natural gas fueling stations to support our nation’s efforts to increase our use of natural gas. And, where the governmental entity is served by an investor-owned gas utility, the entities could easily partner to build a natural gas fueling infrastructure and convert existing fleets to utilize America’s most efficient fuel…Natural Gas.

**Consultant Information**

A consultant was not hired for this project. Clearwater Gas System issued an RFP and selected the most qualified contractor to build the station. The project was managed by City and Gas System personnel.

Presentation Style

At minimum our plan is to use Powerpoint, show a fuel-fill video demonstration and also engage the audience (as a group) via a live results survey exercise (incorporate turning point clicker software) to poll audience on their CNG/natural gas knowledge. Presenter will be decked out in a “I’ve Got Gas – Do You” t-shirt. *Note: person(s) with the most correct answers will receive a gas t-shirt.*