

S A N B A G - R y d e r

Natural Gas Vehicle Project

a U.S. DOE Clean Cities & California Energy Commission Project

The SANBAG Ryder Natural Gas Vehicle Project Merit Review and Peer Evaluation Meeting

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Project ID: ARRAVT044

This presentation does not contain any proprietary, confidential, or otherwise restricted information

Overview

TIMELINE

- **Project Start Date:** December 23, 2009
- **Project End Date:** December 22, 2013
- **Percent Completed:** 25 percent

BUDGET

- **Total Project Funding:** \$36.3 million
- **DOE Share:** \$9,950,708



American Recovery and Reinvestment Act of 2009 (ARRA) through the U.S. Department of Energy's (DOE) Alternative Fuel and Advanced Technology Vehicles Pilot Program

- **CEC Share:** \$9,258,708



California Energy Commission (CEC) Assembly Bill 118 Alternative and Renewable Fuel & Vehicle Technology Program.

- **Ryder System, Inc. Share:** 17.06 million



BARRIERS

- Loss of initial fleet partner
- Procurement flow down provisions
- Synchronization of grant requirements between multiple funding partners

PARTNERS

- U.S. Department of Energy (DOE)
- California Energy Commission (CEC)
- San Bernardino Associated Governments (SANBAG)
- Ryder System, Inc. (Ryder)
- Southern California Associated Governments (SCAG)
- Gladstein, Neandross and Associates (GNA)

Relevance

Project Objectives

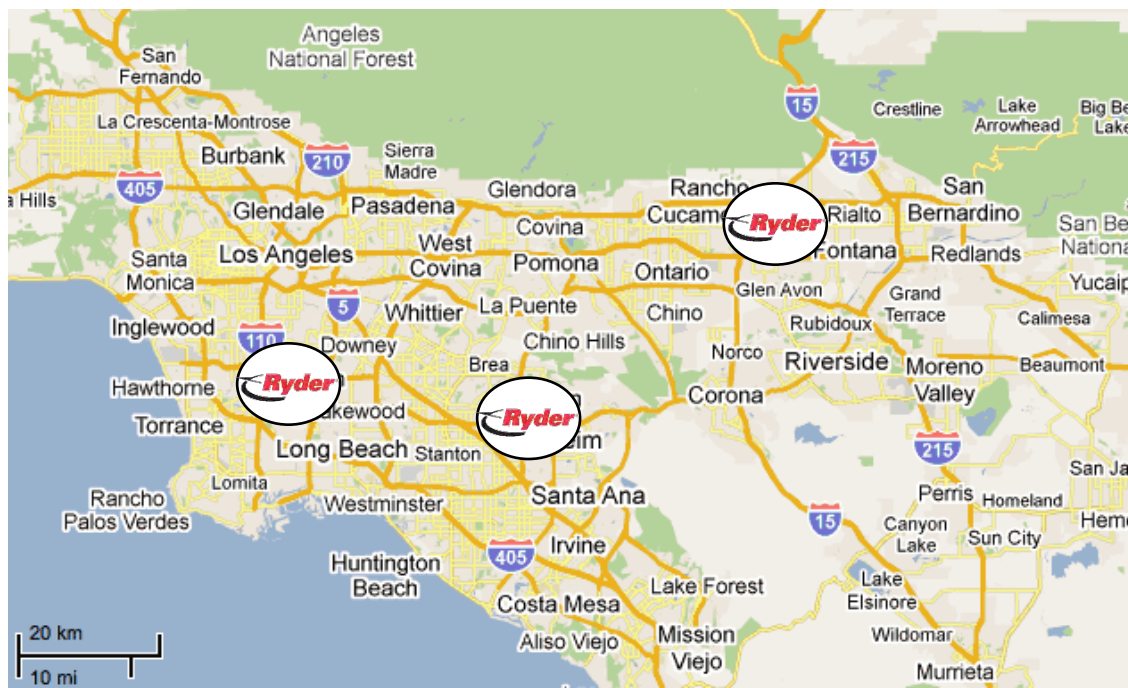
1. Increase the use of **alternative fueled vehicles** and advanced technology vehicles as a means to **reduce U.S. dependence on imported petroleum, increase fuel economy and improve emissions.**
2. Install **infrastructure that supports alternative fuel** and advanced technology vehicles.
3. Ensure that vehicles capable of using alternative fuel **do so to the greatest extent possible.**
4. Provide **appropriate training** for individuals associated with this project and in the larger community about the benefits of alternative fuel and advanced technology vehicles and provide them with **strategies that will help them to maximize these benefits.**
5. Collect **data on the success** of the project through collection of vehicle, infrastructure and training information.

As part of the **American Recovery and Reinvestment Act (ARRA)**, this project will lead to the accelerated implementation of clean alternative fuel vehicles, more than 400 green jobs, and the reduction of petroleum demand from the U.S. transportation sector.

Relevance

Project Objectives (cont.)

- Public-private partnership to purchase and deploy approximately 202 heavy-duty natural gas powered trucks;
- Construction of two public access natural gas refueling stations in Orange and Fontana;
- Three maintenance shop upgrades for NGV repair in Orange, Fontana and Rancho Dominguez.



This project will:

- Displace 1.51 million gallons of diesel fuel use with 100% domestically produced low carbon natural gas
- Use nearly 3.0 million gallons of domestically produced low carbon LNG
- Reduce 9.2 million pounds (4,194 metric tons) of GHG emissions annually
- Reduce 131 tons of NOx reductions annually
- Completely eliminate 2.65 tons of diesel PM emissions from local neighborhood

Relevance

Addressing Barriers

- Loss of initial fleet partner
 - The loss of the initial fleet partners was a challenge, as resources were spent securing the initial partner. Now that we have Ryder, however, the project has gained speed and traction and we are confident in its success.
- Procurement flow down provisions
 - SANBAG and GNA's close involvement in helping Ryder fulfill the design-bid-build procurement procedures has helped to overcome this barrier, as Ryder would not normally go through such provisions.
- Synchronization of grant requirements between multiple funding partners
 - Careful planning and organization was accomplished between funding partners to strategically segregate the scope of work and base Ryder's contract requirements on the strictest of reporting requirements of both.

Milestones

➤ The SANBAG Ryder NGV Project milestones are as follows:

PROJECT MILESTONE		START DATE	DATE COMPLETE	STATUS
PHASE I	T1: Contract Execution (SANBAG and Ryder)	August 4, 2010	August 11, 2010	Complete
	T2: NG Truck Order / Deployment (70 units) T2: Year 2 NG Truck Order/Deployment (132 units)	October 11, 2010 January 1, 2011	December 31, 2010 September 30, 2011	Order Complete. Deployment in progress.
PHASE II	T3: Driver & Mechanic Training	September 31, 2010	January 28, 2011	In progress.
	T4: LNG/LCNG Fuel Station Vendor Selection	October 28, 2010	December 15, 2010	In Progress.
	T5: LNG/LCNG Fuel Station Permitting, NEPA/CEQA	March 30, 2011	August 1, 2011	In progress.
	T6: LNG/LCNG Station Construction - LNG/LCNG Station Equipment Ordered - Site Work / Civil Improvement - LNG/LCNG Station Equipment Delivered - LNG/LCNG Station Equipment Installed	March 15, 2011 May 30, 2011 June 1, 2011 July 1, 2011	May 30, 2011 September 1, 2011 September 31, 2011 January 31, 2012	In progress.
	T7: LNG/LCNG Fuel Station Ribbon Cutting	March 30, 2012	April 30, 2012	In progress.
PHASE III	T8: Operations, Management and Reporting	June 2012	December 22, 2014	In progress.

Approach

Task 1: Project Management and Planning

Subtask 1.1 Revise PMP to include details from the negotiation process with the US DOE.

Subtask 1.2 Conduct a project kick-off meeting with all partner.

Subtask 1.3 Finalize subcontract agreements with project partners.

Task 2: Vehicle Deployment

Subtask 2.1: Complete Vehicle NEPA process.

Subtask 2.2: Finalize specifications for LNG trucks.

Subtask 2.3: Place purchase order for trucks.

Subtask 2.4: Application of appropriate signage to vehicles.

Subtask 2.5: Deploy the balance of vehicles after Application of appropriate signage.

Task 3: Infrastructure Development

Subtask 3.1: Complete Infrastructure NEPA process and obtain necessary permits.

Subtask 3.2: Complete actions necessary to begin construction of station and retrofit of maintenance facilities.

Subtask 3.3: Install Fueling Infrastructure.

Subtask 3.4: Application of appropriate signage to fueling infrastructure.

Subtask 3.5: Application of appropriate signage to fueling infrastructure stating that it is part of a US DOE Clean Cities Award.

Subtask 3.6: Final start-up and commissioning 18 to 24 months from contract signing.

Subtask 3.7: Hold Ribbon-Cutting Ceremony.

Approach

Task 4: Training Development & Delivery

Subtask 4.1 Identify LNG specific training.

Subtask 4.2: Develop comprehensive training program.

Subtask 4.3: Implement training programs.

Subtask 4.4: Perform on-going identification of additional training needs and hold follow-up training, as necessary.

Task 5: Outreach/Marketing

Subtask 5.1: Provide a plan for project marketing/outreach.

Subtask 5.2: Execution of project marketing/outreach plan.

Subtask 5.3: Documentation of all marketing/outreach conducted.

Task 6: Documentation and Reporting

Subtask 6.1: Monitor performance of vehicles for a period of 24 months after deployment.

Subtask 6.2: Monitor performance of infrastructure for a period of 24 months after deployment.

Subtask 6.3: Document all training provided.

Subtask 6.4: Document all marketing/outreach conducted.

Subtask 6.5: Document Clean Cities involvement in project.

Subtask 6.6: Annual reporting of fleet data to local Clean Cities coalition for inclusion in the DOE Annual Survey.

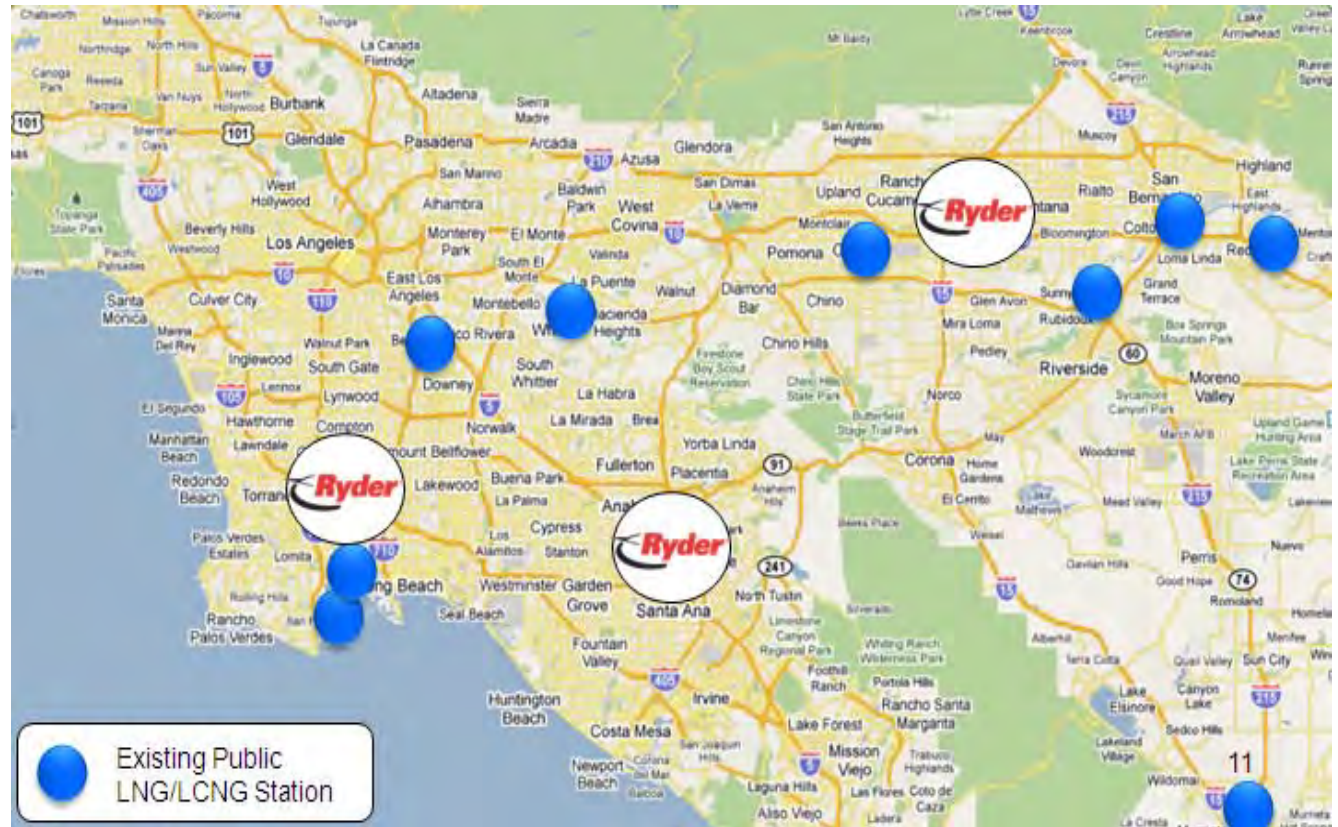
Subtask 6.7: Participate in DOE- or Industry-sponsored merit reviews, peer exchanges, conferences, etc. to provide project updates/lessons learned to ensure that the information and knowledge gained by project participants is shared.

Approach

- This is the first and also the largest natural gas truck deployment in commercial leasing and rental operations.
- This project will provide natural gas refueling infrastructure in critical gaps that currently exist.

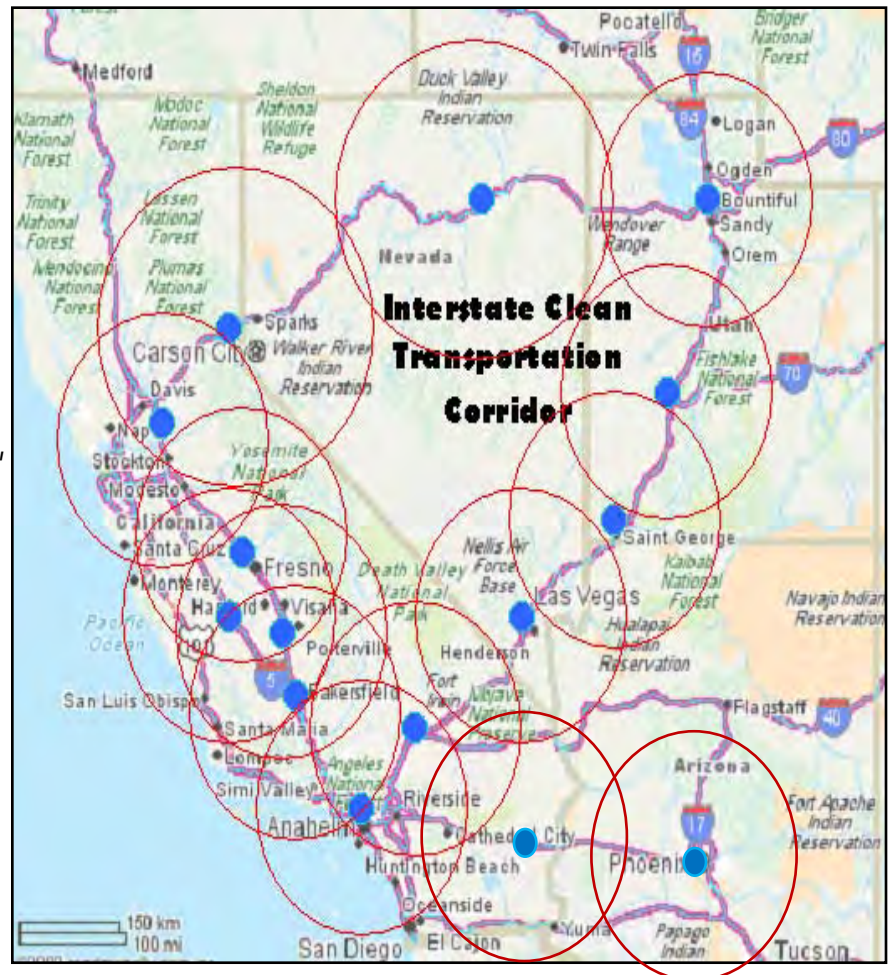
- Ryder labels show the locations of the construct two publicly accessible LNG/LCNG stations and facility modifications.

- Blue dots show existing public access LNG and LNG/LCNG stations in the region.



Approach

- Ryder's public access stations will also provide **critical public access infrastructure** as part of the Interstate Clean Transportation Corridor (ICTC).
- The ICTC is a planned network of alternative fuel dispensing stations along key roadways.
- It is the first economically sustainable and most successful planned clean fuel corridor of its kind in the nation.
- The ICTC is a great example of where SANBAG, DOE, CEC, and GNA have been working in partnership over the years to develop exactly these kinds of projects.
- We have a great track record working together and with other public agencies who have served as Steering Committee members.
- We expect this Ryder project will be another success.



Approach

Environmental and Safety Plans and NEPA Status

- SANBAG has received NEPA clearance for this project for both the Rancho Dominguez and Orange locations.
- One of the project locations was recently changed to Fontana, and as a result we are currently in the process of reapplying for NEPA clearance.

Keys to Success

- GNA-SANBAG-CEC-DOE have a long history of success working together on similar projects (ICTC)
- The Ryder project is technically and economically feasible
- The Ryder project is a true public/private partnership
- There is constant communication among the team via weekly conference calls and email and phone in-between
- Ryder's status as 'best in the business' and their access to 1,200 customers will magnify the penetration and impact of the project
- 1,200 customers in SoCal: potential for NGV truck proliferation
- Ryder's purchasing power can influence OEM product development

Technical Accomplishments and Progress

Contractual Agreements

- Sub-Recipient Agreements signed.
- Vehicle Purchase Cost-Share Partner Agreements signed with Ryder.

NEPA Review Completion

- NEPA documentation approved for Rancho Dominguez and Orange Ryder sites.
- NEPA documentation in progress for the recently acquired Fontana site.

Vehicle Orders Placed

- Purchase order placed for 202 natural gas (CNG and LNG) Freightliner and Peterbilt vehicles.

Fueling Site Preparation

- Rancho Dominguez facility modifications in progress as of March 2011
- Orange and Fontana station and facility modification bid documents in progress.

Marketing/Outreach

- Project partners have finalized marketing plan, internal talking points and branding.
- A website has been created to showcase the successes of the project: www.theNGVproject.com
- Several project partners have been release by project partners with noteworthy press coverage.

Technical Accomplishments and Progress

- The SANBAG Ryder NGV Project has experienced multiple successes thus far, despite its relatively young age (less than 1% of our funding has been expended to date). We have completed:
 - The purchase order for all 202 natural gas vehicles was released by Ryder in December 2010, making it the largest single purchase order for heavy-duty natural gas trucks to date.
 - A general contractor was chosen for the Rancho Dominguez facility modifications, and construction began in March 2011.
- This project will create and sustain more than 400 clean technology jobs as a result of ARRA funding in regions of the country hardest hit from the current economic downturn

Summary: The SANBAG Ryder NGV Project is on track with its milestones, and has already completed several goals successfully, despite the relatively little time the project has been underway. It will create and sustain 400+ jobs due to ARRA funding. The purchase order is a huge accomplishment, given the large number of heavy-duty trucks that will now enter the market.

Technical Accomplishments and Progress

- The SANBAG Ryder NGV Project partners have a number of events planned for the future months and years to celebrate the successes of this project.
- The following events are tentatively planned for 2011, and we are currently finalizing the exact dates:
 - Fuel Station Groundbreaking – Summer 2011
 - Ribbon Cutting – Summer 2011

Summary: Several events will be held to commemorate the various milestones involved in the SANBAG/Ryder project, including at least two in 2011.

Collaborations/Partnerships

- The SANBAG/Ryder Natural gas truck project was only made possible as a result of public-private partnership from numerous sources. The project was spearheaded by SANBAG, which received funding from the US Department of Energy and its Clean Cities program, as well as California Energy Commission.
- SANBAG's partner, Ryder System Inc., has demonstrated a commitment to implementing alternative fuel and clean technology vehicles into its fleet. This project will be noted in history as the first large-scale natural gas truck deployment in a commercial truck renting and leasing operation.

Collaborations/Partnerships



The Department of Energy provided \$9,950,708 of grant funding from the Alternative Fuel and Advanced Vehicle Pilot Program to fund the SANBAG/Ryder Natural Gas Truck Project.



The Energy Commission awarded \$9,258,708 of AB 118 Alternative and Renewable Fuel and Vehicle Technology Program funding for this project.



San Bernardino Associated Governments, known as SANBAG, is responsible for cooperative regional planning and advancement in efficient multi-modal transportation systems countywide, serving the 1.9 million residents of San Bernardino County. SANBAG applied for and was awarded the funding used in this project in August 2009.



Ryder System, Inc. is a FORTUNE 500 provider of leading-edge commercial transportation, logistics and supply chain management solutions. Ryder will purchase and deploy approximately 202 heavy-duty natural gas powered trucks for this project, as well as provide training to those driving the Ryder natural gas vehicles.

Collaborations/Partnerships



The Southern California Association of Governments (SCAG) will provide outreach and marketing support for the SANBAG/Ryder natural gas truck project. SCAG is the nation's largest metropolitan planning organization, representing six counties, 190 cities and more than 19 million residents.



Gladstein, Neandross and Associates is an environmental consulting firm that is widely recognized throughout the United States for its expertise on air quality issues, alternative fuel vehicles and infrastructure and energy projects. GNA began working on the initiative before it was awarded ARRA funds, providing grant writing and proposal assistance and coordinating the involvement of the fleets as project partners.

Future Work

Many accomplishments are expected and many milestones will be reached in the remainder of 2011, including the following:

- 202 heavy-duty natural gas vehicles will be deployed
- Rancho Dominguez facility modifications will be completed
- Contractors will be selected and construction will begin at the Orange and Fontana sites for station construction and facility modifications
- Ribbon cutting and ground breaking ceremonies will be held
- Media outreach and marketing activities will be ramped up as accomplishments are completed.



Summary

- **Relevance:** The SANBAG Ryder Natural Gas Vehicle Project is the nation's most groundbreaking and innovative heavy-duty natural gas truck project to date. The project will fill critical gaps in current natural gas refueling infrastructure.
- **Approach:** SANBAG entered into an agreement with commercial transportation and logistics provider Ryder Systems, Inc., and other project partners to purchase and deploy approximately 202 heavy-duty natural gas powered trucks.
- The project also includes:
 - Construction of two public access natural gas refueling stations;
 - Three maintenance shop upgrades for NGV repair; and
 - Maintenance, personnel and customer training for NGVs.
- **Technical Accomplishments:** This project will displace 1.51 million gallons of diesel fuel use with 100% domestically produced low carbon natural gas, use nearly 3.0 million gallons of domestically produced low carbon LNG, reduce 9.2 million pounds (4,194 metric tons) of GHG emissions annually, reduce 131 tons of NOx reductions annually, and completely eliminate 2.65 tons of diesel PM emissions from local neighborhoods. The SANBAG Ryder Natural Gas Vehicle Project will create and sustain more than 400 United States jobs.
- **Collaboration/Partners:** DOE, CEC, SANBAG, Ryder, SCAG, Clean Cities, GNA
- **Future Work:** Many project milestones will be accomplished in 2011, including deployment of the NG vehicles, station and facility modification construction.