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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San Bernardino Associated Governments (SANBAG)

May 16, 2012

Governments SANBAG Working Together

Ryder

Project ID: ARRAVT044

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Overview

ARV-09-001 CPR Overview
SANBAG - Ryder
Natural Gas Vehicle Project
a U.S. DOE Clean Cities & California Energy Commission Project

TIMELINE

- **Project Start Date:** December 23, 2009
- **Project End Date:** December 22, 2013
- **Percent Completed:** 50 percent

BARRIERS

- Loss of initial fleet partner
- Procurement flow down provisions
- Synchronization of grant requirements between multiple funding partners
- Vehicle deployments prior to station completion

BUDGET

- **Total Project Funding:** $19.9 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:** $9,308,000

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

- **Ryder System, Inc. Share:** $642,708

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)

** Project Lead*

Relevance

Project Objectives

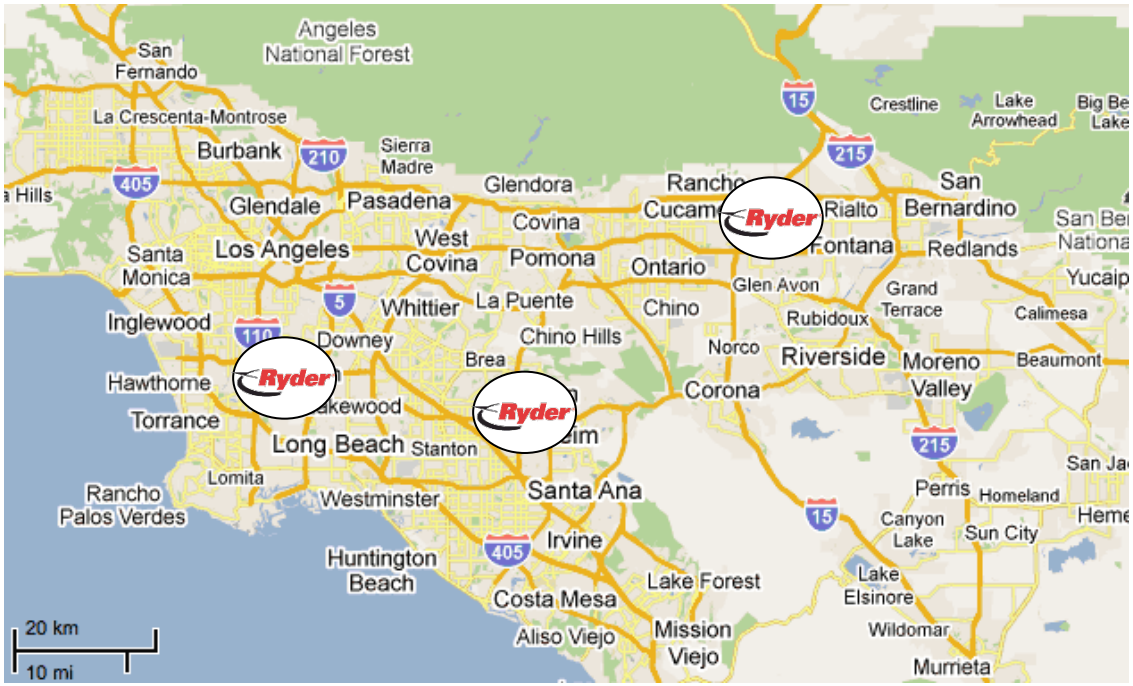
1. Increase the use of **alternative fueled vehicles** and advanced technology vehicles as a means to **reduce U.S. dependence on imported petroleum**, **increase fuel economy** and **improve emissions**.
2. Install **infrastructure that supports alternative fuel** and advanced technology vehicles.
3. 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. In the last year, we have made significant progress in deploying all 202 vehicles, as well as beginning infrastructure construction.
- Procurement flow down provisions
  - SANBAG and GNA's close involvement in helping Ryder fulfill the design-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		STATUS
PHASE I	T1: Contract Execution (SANBAG and Ryder)	Completed by August 2010.
PHASE II	T2: NG Truck Order / Deployment (70 units) T2: Year 2 NG Truck Order/Deployment (132 units)	Completed by December 2011.
	T3: Driver & Mechanic Training	Completed by December 2011.
	T4: LNG/LCNG Fuel Station Vendor Selection	Rancho Dominguez and Orange Complete in 2011. Fontana selection in Q2 2012.
	T5: LNG/LCNG Fuel Station Permitting, NEPA/CEQA	NEPA completed in 2011. Orange planning and permitting approvals in Q2 2012. Fontana planning in Q2 2012 and permitting in Q3 2012.
	T6: LNG/LCNG Station Construction - LNG/LCNG Station Equipment Ordered - Site Work / Civil Improvement - LNG/LCNG Station Equipment Delivered - LNG/LCNG Station Equipment Installed	Orange equipment ordered and delivered with installation by Q4 2012. Fontana equipment to be ordered/delivered Q3 and installed Q4 2012
PHASE III	T7: LNG/LCNG Fuel Station Ribbon Cutting	Anticipated Q1 2013.
	T8: Operations, Management and Reporting	Through Q4 2013.

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.
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.

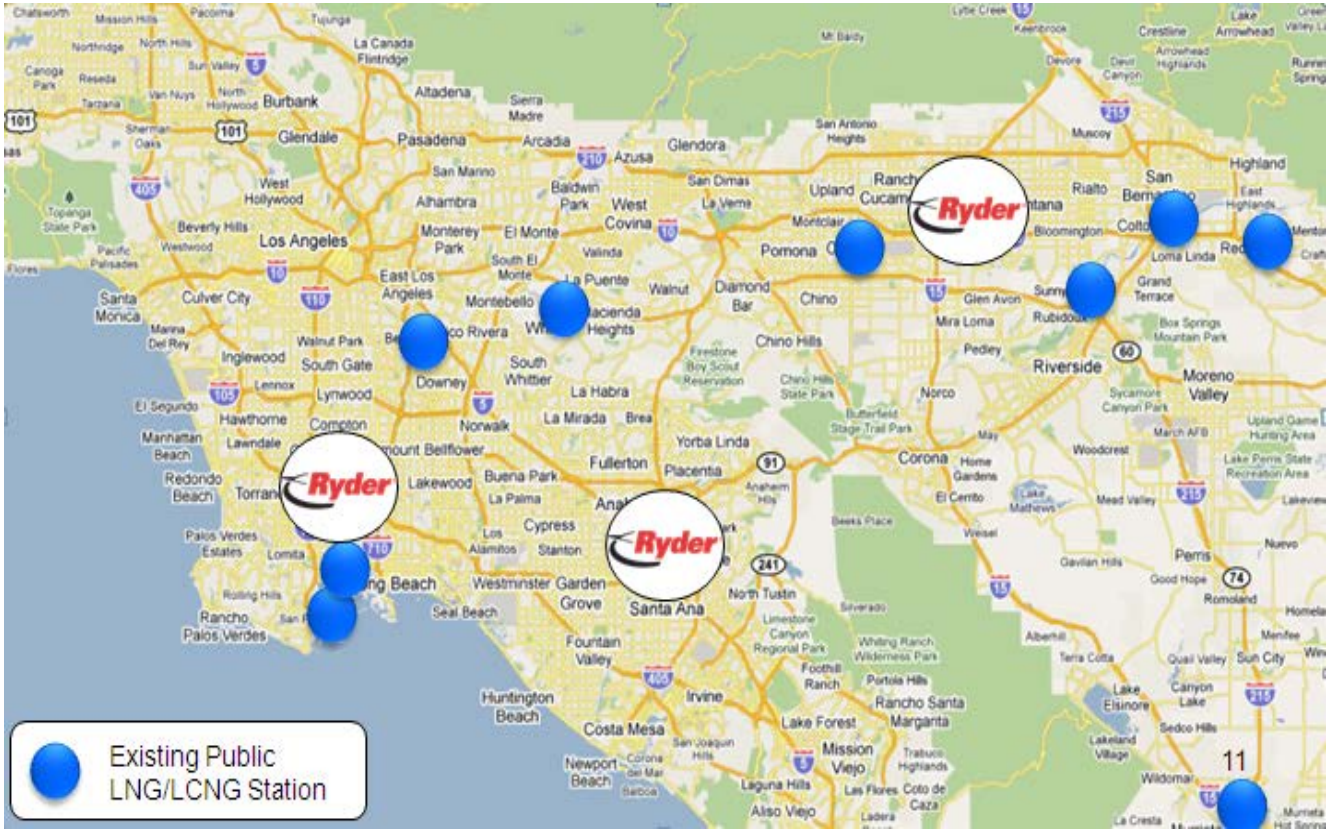
Task 5: Outreach/Marketing
Subtask 5.1: Provide a plan for project marketing/outreach.
Subtask 5.2: Execution of project marketing/outreach plan.
Subtask 5.3: Documentation of all marketing/outreach conducted.

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

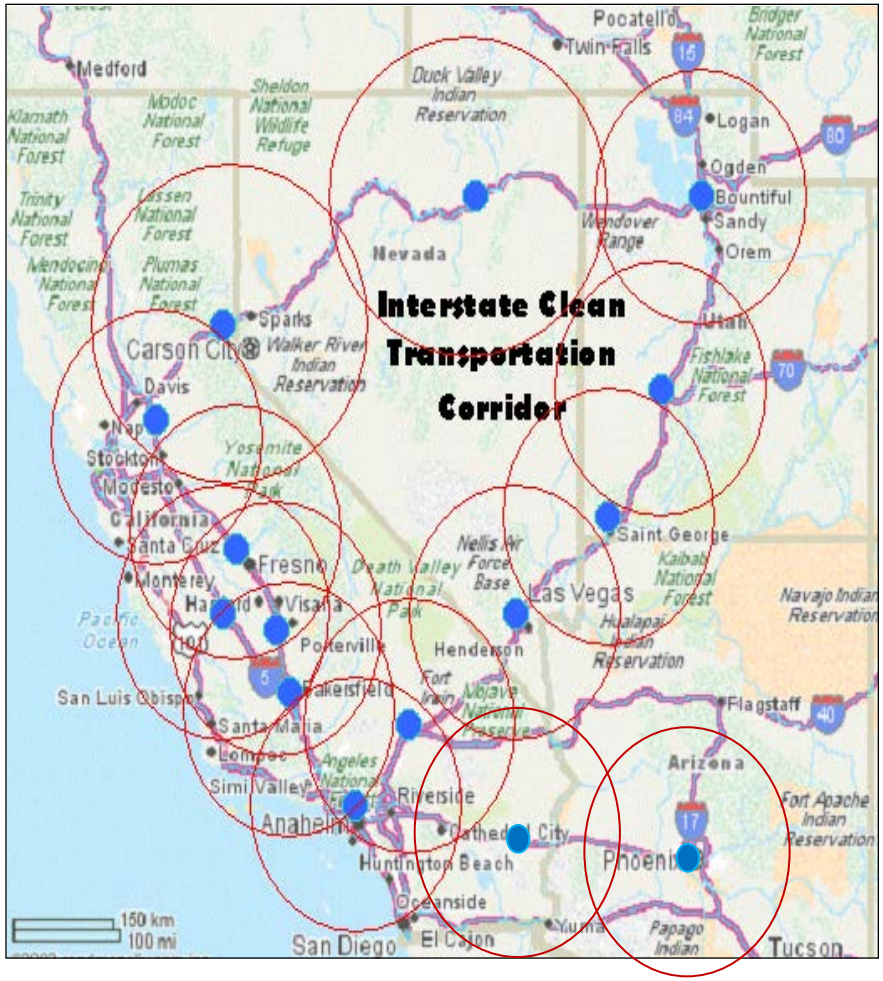
- This is the first and also the largest natural gas truck deployment in commercial leasing and rental operations.
- This project will provide natural gas refueling infrastructure in critical gaps that currently exist.

- 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 Rancho Dominguez, Orange and Fontana locations.
- Site specific safety plans are updated as part of permitting and commissioning.

Keys to Success

- SANBAG-CEC-DOE-ICTC 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, Orange and Fontana Ryder sites.

Vehicle Orders Placed

- Purchase order placed for 202 natural gas (CNG and LNG) Freightliner and Peterbilt vehicles.
- All vehicles delivered prior to December 31, 2011.
- Video training series developed for drivers and fuelers.
- Ryder's unique commercial leasing and rental project allows greater access to big name fleets. The arrangement allows fleets to have a protected initial deployment that can lead to accelerated market penetration.

Customer Summary (as of March 2012):

- **Angelica Textile**
- **Benjamin Moore**
- **Borg Produce Sales**
- **CEVA Logistics – LNG**
- **CVS**
- **Dean Transportation**
- **Fresh and Easy**
- **Greatwide**
- **Kraft**
- **Mohawk Industries**
- **Nasco**
- **Polyair Corporation**
- **South Coast**
- **Staples**
- **United Natural Food**

Technical Accomplishments and Progress

Fueling Site Preparation

- Rancho Dominguez facility modifications completed in May 2011.
- Orange station and facility modifications have hired general contractor. Facility modifications, Draft Mitigated Negative Declaration and civil permitting submittal completed in March 2012.
- Fontana station and facility modifications pending contractor selection. Extensive planning coordination with local permitting agency.

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 announced with noteworthy press coverage. Approximately 60 stories over all types of commercial media and variety of distribution channels including press.
- Greg Swienton, Ryder Systems Chairman and CEO touted energy security, cost effectiveness and technical capabilities of heavy-duty natural gas trucks on Fox News.

Technical Accomplishments and Progress

- The SANBAG Ryder NGV Project has experienced multiple successes and gained significant traction in 2011, including:
  - The deployment of 202 natural gas vehicles by Ryder in 2011, making it the largest single purchase order for heavy-duty natural gas trucks to date.
  - Completion of Rancho Dominguez facility modifications with a ribbon cutting in May 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 economic downturn.

Technical Accomplishments and Progress

- The SANBAG Ryder NGV Project partners have a number of events planned to celebrate the successes of this project.
- The following events are tentatively planned for 2012, and we are currently finalizing the exact dates:
  - Distribution of project materials at the NAFA 2012 Institute & Expo in St. Louis, April 22-24, 2012
  - Presentation at ACT Expo on the success of the NGV Project, May 17, 2012
  - "Clean Cities Radio" segment to be produced and aired from ACT Expo in Long Beach, May 15-17, 2012
  - Distribution of project materials at the 2012 West Coast Collaborative Partners Meeting in Seattle, May 30-31, 2012
  - Ribbon Cutting Ceremony, Fueling Station, Summer 2012
  - Possible presence at "Thunder on the Lot" Car Show, Green Energy, and AFV Cruise in Antelope Valley, June 9-10, 2012

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

SOUTHERN CALIFORNIA ASSOCIATION of GOVERNMENTS

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.

gna GLADSTEIN, NEANDROSS & ASSOCIATES

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 2012, including the following:

- 202 heavy-duty natural gas vehicles will be monitored.
- Construction will begin at the Orange and Fontana sites for station development 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 2012, including monitoring of the NG vehicles, station and facility modification construction.