# UPS Ontario - Las Vegas LNG Corridor Extension Project: Bridging the Gap

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South Coast Air Quality Management District

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Project ID # ARRAVT047

# Overview

**Target:** Complete LNG Fueling Corridor across Southwestern U.S. from Southern California to Utah (700 mile link on the nation's most heavily traveled goods movement truck routes) through the construction of a publicly accessible LNG fuel station in Las Vegas, Nevada. UPS will also deploy 48 heavy-duty LNG vehicles.

## Timeline

- September 2009
- December 2013

## Budget

- Total project funding
  - DOE share: $5,591,610
  - Contractor share: $6,268,223

## Barriers & Standard Risks

- Delays in NEPA approval
- Unknown land contamination/clean up requirements at project site
- Delays in gaining access to electric utilities
- Delays, interruption and/or price escalation of fuel station equipment
- Construction delays due to weather or labor issues

## Partners

- Project lead: SCAQMD
- Project partners: United Parcel Service, Eastern Sierra Regional Clean Cities Coalition, Southern California Clean Cities Coalition

# Objectives

- Construct publicly accessible LNG station in Las Vegas
- Deploy 48 heavy-duty Kenworth T800 Class 8 LNG trucks: 16 in Ontario, CA and 32 in Las Vegas
- Support primary fueling for the 48 above trucks and secondary fueling for other regional LNG fleet operators at the publicly accessible stations
- Extend award winning Interstate Clean Transportation Corridor (ICTC) throughout Western U.S., creating multi-state link in nation's first natural gas fueling corridor
- Promote the publicly accessible Las Vegas station to help support LNG-powered interstate goods movement operations originating in Long Beach and Los Angeles through to Salt Lake City

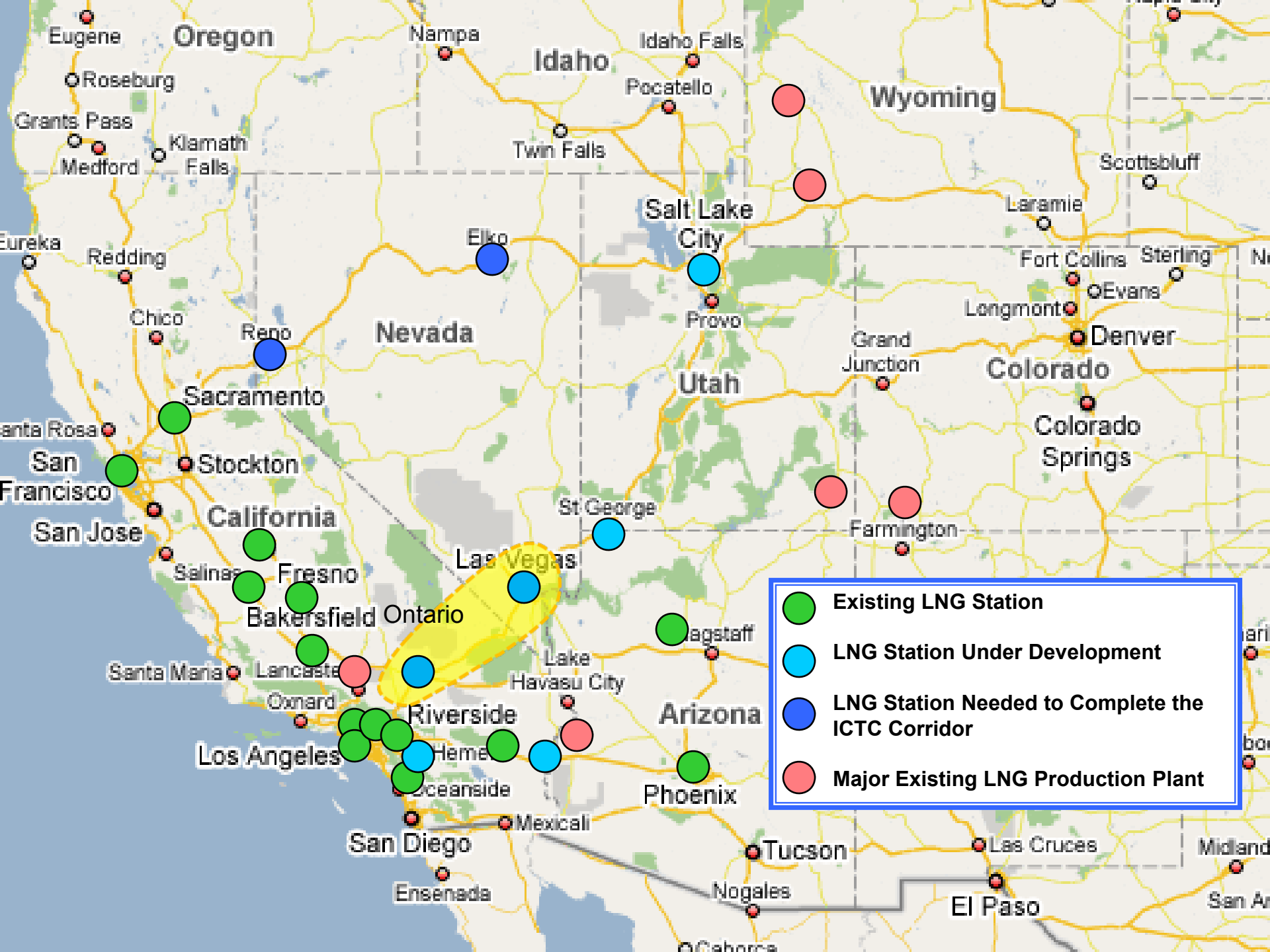
- Replace fuel intensive heavy-duty diesel trucks with clean-burning domestically-fueled alternative fuel trucks
- Serve as model for other heavy-duty truck fleets on how to successfully implement advanced technology alternative fuel programs in large-scale commercial fleet operations

# Project Relevance

- UPS' Ontario-Las Vegas Corridor project will displace over 1.25 million gallons diesel annually
- Reduce emissions by 83.23 tons of NOx, 1.07 tons of PM, and 236 tons of GHG annually
- Creation of the first multi-state, publicly accessible LNG refueling corridor supporting delivery operations from the Port of Long Beach to Salt Lake City
- Allows for market expansion of alternative fuels
- Demonstrate alternative fuel use in focused heavy-duty applications
- JOB CREATION: This project contributes to the retention and/or creation of 58 domestic green jobs

| JOBS CREATION SUMMARY | |
|---|---|
| **Sector** | **# of Jobs** |
| Construction (Fueling Stations/Facility Upgrades) | 43 |
| Manufacturing/Service Support | 6.6 |
| Jobs Retained via Capital Reinvestment | 8.5 |
| **TOTAL** | **58.1** |

- This project offers DOE an exceptional opportunity to immediately implement a significant petroleum reducing option that will create and preserve vital green manufacturing jobs throughout the United States
- **RISK MANAGEMENT:** Station construction and truck deployment are relatively straight forward, and project partners have strong background in similar project implementation


Existing LNG Station
LNG Station Under Development
LNG Station Needed to Complete the ICTC Corridor
Major Existing LNG Production Plant
Oregon
Idaho
Wyoming
Nevada
Utah
Colorado
California
Arizona
Eugene
Roseburg
Grants Pass
Medford
Klamath Falls
Nampa
Idaho Falls
Pocatello
Twin Falls
Scottsbluff
Laramie
Fort Collins
Sterling
Evans
Longmont
Denver
Colorado Springs
Grand Junction
Farmington
Salt Lake City
Provo
Elko
Eureka
Redding
Chico
Reno
Sacramento
Santa Rosa
San Francisco
Stockton
San Jose
Salinas
Fresno
Bakersfield
Ontario
Las Vegas
St George
Flagstaff
Lake Havasu City
Santa Maria
Lancaster
Oxnard
Riverside
Los Angeles
Temecula
Oceanside
Mexicali
San Diego
Ensenada
Phoenix
Tucson
Las Cruces
Nogales
El Paso
Midland

# Implementation Approach

**STATION APPROACH**

- Station to have 30,000 gallons of LNG storage and 3 dispensers
- UPS has selected the station constructor and secured the land for the site
- The station is located at the corner of George Crockett and Gillespie in Las Vegas, NV
- UPS is currently in contract negotiations with Clean Energy Fuels for station construction
- Clean Energy has already ordered long lead-time equipment including the LNG storage tank and associated pumps. Clean Energy also maintains a supply of ancillary equipment that will prevent any delays after receiving necessary building permits
- Permitting process straight forward – LNG stations do not require air quality permits aside from load-bearing capacity requirements, have no soil, groundwater, or other considerations

**TRUCK DEPLOYMENT APPROACH**

- Deploy 48 Kenworth T800 LNG heavy-duty class-8 trucks
- Ontario truck specifications and final pricing provided, order is pending

# Environmental Approach

**PERMITING & NEPA STATUS**

- Communication with City of Las Vegas regarding permitting and approvals of the site in process. A conditional use permit application is being prepared. Town Board meeting is May 18th and permit hearing is expected on June 1st

**SAFETY**

- Team assembled for project has been directly involved in over half of all LNG fuel station projects in U.S.
- Intimate familiarity with applicable codes and standards and solid safety record

# Milestones

| PROJECT MILESTONE | ORIGINAL TIMELINE | STATUS | REVISED TARGETED COMPLETION DATE |
|---|---|---|---|
| Project Kickoff Mtg. to identify permitting & other construction needs | Q3 2009 | Complete | - |
| Select site for station | Q4 2009 | Complete – purchase agreement in process | - |
| Issue P.O for 16 LNG vehicles in Ontario | Q4 2009 | Specifications Complete | May 2010 |
| Submit National Environmental Study (Minimal Impacts) and Preliminary Environmental Studies Form (Programmatic Categorical Exemption expected) | Q2 2010 | In Process: Permit hearing expected on June 1st | June 2010 |
| Finalize project station plans and specifications | Q4 2009 | Complete | - |
| Issue RFP for station contractor, receive bids | Q1 2010 | Complete | - |
| Award contract to turnkey station developer and execute contract | Q1 2010 | Contract in process with Clean Energy Fuels | May 2010 |
| Obtain necessary permits | Q2 2010 | In Process | June 2010 |
| Order LNG station equipment | Q2 2010 | In Process: Initial equipment ordered | June 2010 |
| Delivery of first LNG vehicles | Q2 2010 | - | Q3 2010 |
| Installation of LNG station equipment | Q4 2010 | - | Q4 2010 |
| Issue P.O for 32 LNG vehicles in Las Vegas | Q3 2010 | - | Q3 2010 |
| LNG station system start up and test | Q1 2011 | - | Q1 2011 |
| Delivery of first Las Vegas LNG vehicle | Q1 2011 | - | Q1 2011 |
| Mechanic Training for LNG maintenance | Q1 2011 | - | Q1 2011 |
| Training and handoff of LNG station to station operator | Q1 2011 | - | Q1 2011 |
| LNG Fueling Training for UPS drivers | Q1 2011 | - | Q1 2011 |
| LNG station Grand Opening event | Q2 2011 | - | Q2 2011 |
| Report to AQMD on final station construction and project accomplishments | Q2 2011 | - | Q2 2011 |
| Final Project Report at end of contract | Q4 2013 | - | Q4 2013 |

# Status Decisions

- Site property selected after city-wide search
- Station contractor selected: Clean Energy Fuels
- Decisions regarding station specifications, capacity and technology complete

# Technical Accomplishments & Progress

- Site for station was selected after city-wide search
- Permits in process with the City of Las Vegas
- Equipment (including LNG storage tanks and associated pumps) ordered is approximately $250,000
- Clean Energy also maintains a supply of ancillary equipment that will prevent any delays after receiving necessary building permits
- Time spent on the project for real estate, permitting, project management, and engineering services is on the order of 200 hours
- Truck specifications and final pricing complete

## Take Home Messages:

- Project is moving forward successfully as planned
- Workload expected to increase once permit is secured

# Collaborations / Partnerships

- South Coast Air Quality Management District:  Contract Lead, local government agency, coordinates reporting and contracting with the DOE
- United Parcel Service: Prime contractor, manages project implementation, station construction and truck deployment and operation
- Southern California Clean Cities Coalition
- Eastern Sierra Regional Clean Cities Coalition
- Clean Energy Fuels: Sub-contractor, private contractor selected to permit and build the LNG station
- Daimler Trucks North America: Truck manufacturer selected for heavy-duty truck deployment project
- Interstate Clean Transportation Corridor: Project support, as needed; provides technical and public outreach support to drive awareness of the corridor expansion progress and fleet opportunities

# Future Work & Goals for 2010

- Permit process is underway, expect approval process to be complete by Q3 2010
- All trucks to be ordered on schedule by Q3 2010
- Preliminary station equipment ordered including the LNG Storage tank and associated
- Station installation will begin once permits are secured by Q4 2010

# Summary

- Project implementation moving forward with no significant delays
- Station site and contractor selected
- Station permits are in process and expected to be complete by Q3 2010
- Preliminary station equipment on order (including LNG storage tank and associated pumps)
- Ancillary equipment on-hand to prevent delays due to contracting holdups
- Truck specifications and final pricing complete and order to be placed upon infrastructure advancements
- Project team well-seasoned in similar infrastructure and truck deployment projects nationwide