

KINDER MORGAN

CENTRAL FLORIDA PIPELINE ETHANOL PROJECT

- In December 2008, Kinder Morgan began transporting commercial batches of denatured ethanol along with gasoline shipments in its 16-inch Central Florida Pipeline (CFPL) from Tampa to Orlando, making CFPL the first transmarket gasoline pipeline in the United States to do so. The 16-inch pipeline previously only transported regular and premium gasoline.
- Kinder Morgan invested approximately \$10 million to modify the line for ethanol shipments which involved chemically cleaning the pipeline, replacing pipeline equipment that was incompatible with ethanol and expanding storage capacity at its Orlando terminal to handle ethanol shipments.
- Kinder Morgan is responding to customer interest in ethanol blending. Our Florida facilities provide marine and rail access as well as storage tanks that can be quickly modified to ethanol service. The company is looking to add significant storage and offer multiple supply mode capabilities in order to meet our customers' logistics needs in the central Florida market.

Project details

- On Oct. 8, Kinder Morgan transported a test batch of 5,000 barrels of ethanol from its Tampa terminal. The batch arrived to its Orlando terminal on Oct. 9 and test analysis show the product met all blend specifications after the transportation. The company then moved forward with additional modifications to the line and continued to work closely with the Department of Transportation's Pipeline and Hazardous Materials Safety Administration (PHMSA) to share with them lab test results and keep them updated on our pipeline modification progress.
- Kinder Morgan performed extensive lab testing to identify measures that would need to be made to prevent the ethanol from damaging its pipe's steel. Through the testing, Kinder Morgan identified a proprietary additive that prevents the ethanol from damaging the steel. The company also documented all non-steel parts of the pipeline during the lab testing and investigated each non-steel part to assure it's compatibility with ethanol. Incompatible parts the company replaced included seals, gaskets and other components.
- The company also prepped the line for ethanol transportation by utilizing pigs and special cleaning agents to scrub the pipeline clean.

Additional ethanol work

- Kinder Morgan's Products Pipeline segment also has approved over \$90 million in ethanol and biofuel projects including modifications to tanks, truck racks and related infrastructure for new or expanded ethanol and biodiesel service at various terminals in the Southeast and Pacific Northwest. Kinder Morgan offers offloading, storage

and blending of ethanol at its terminals in Florida, Georgia, South Carolina, North Carolina, Virginia, Pennsylvania, New York, Illinois, Tennessee, Mississippi, Louisiana, Texas, California, Nevada, Arizona, Washington and Oregon.

- Kinder Morgan is currently evaluating the Plantation Pipeline for ethanol delivery.

