



2008 Ethanol Logistics Conference
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Terminal & Pipeline Biofuels Infrastructure Development

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Kinder Morgan Footprint

Y Largest independent transporter of petroleum products in the U.S.

λ Transport more than 2 million barrels per day

Y 2nd largest transporter of natural gas in U.S. (a)

λ Approximately 22,000 miles of interstate / intrastate pipeline

Y Largest transporter of CO₂ in U.S.

λ Transport over 1 Bcf/d

Y 2nd largest oil producer in Texas

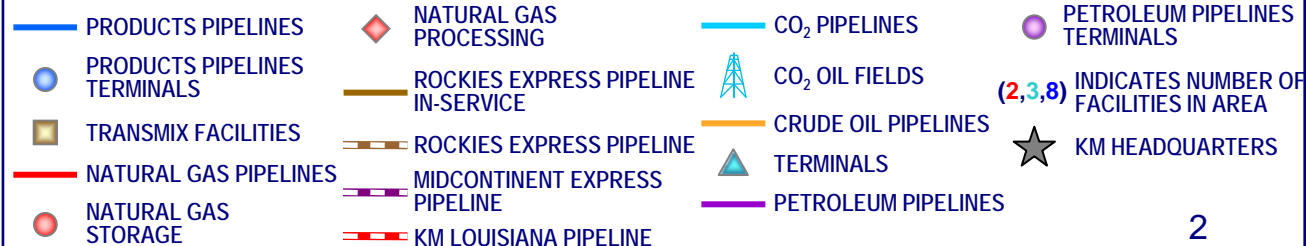
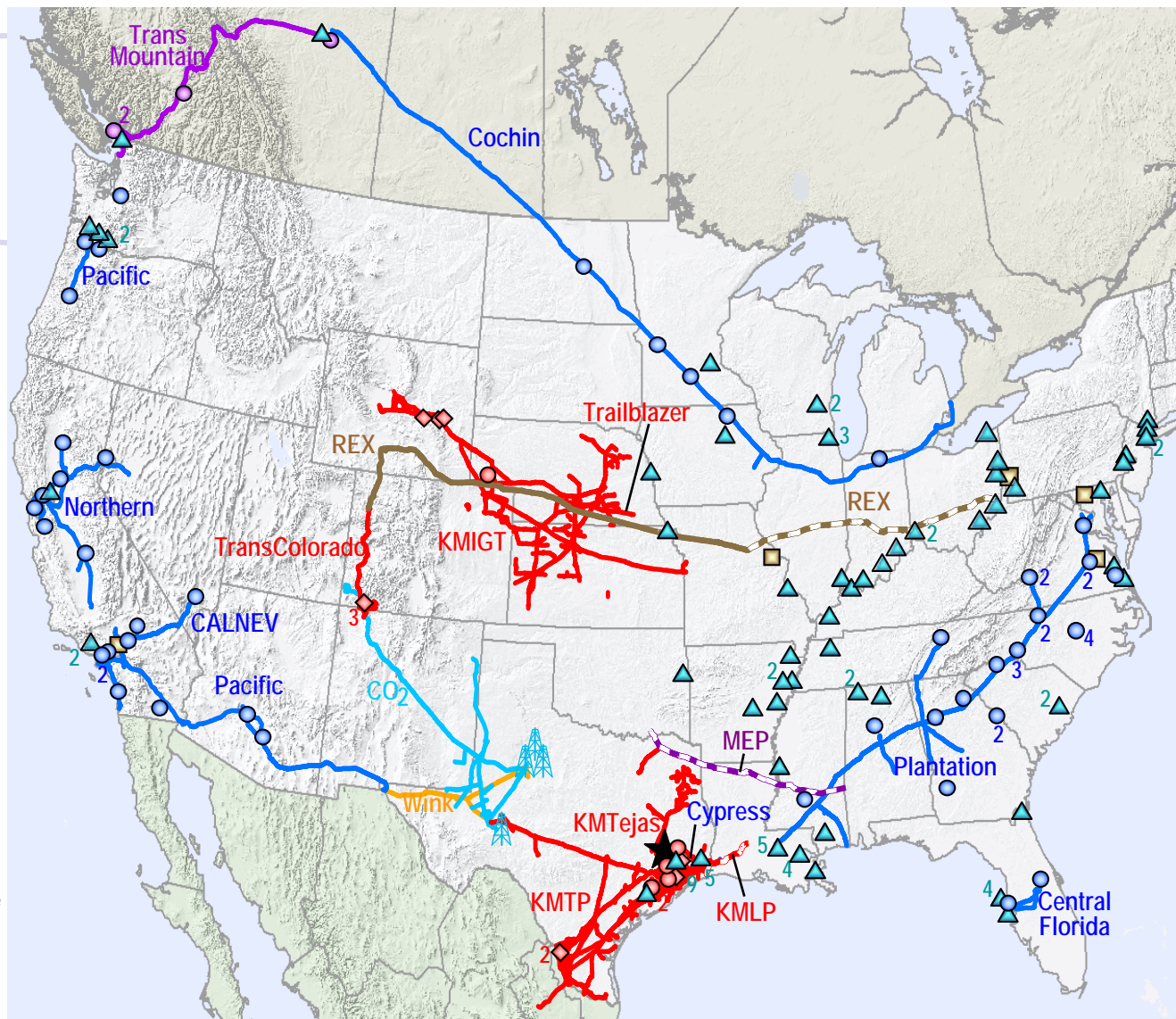
λ Produce ~55,000 Bbl/d of crude

Y Largest independent terminal operator in U.S.

λ ~103 million barrels of liquids capacity

λ Handle 87 million tons of dry bulk products

• Largest U.S. handler of petcoke



(a) Includes NGPL.

Biofuels-related Company Highlights

Products Pipelines

- All West Coast system terminals are ethanol capable
 - expanding facilities to increase capabilities from 5.7% blends to E10
- Central Florida Pipeline ethanol storage and handling expansion completed April '08, currently handling ~ 25% of all ethanol blended in Florida
- Rapidly expanding ethanol blending capabilities in the Southeast U.S. along primary pipeline delivery systems
- Test batch of ethanol in the Central Florida Pipeline system scheduled for Sep. '08

Natural Gas Pipelines

- Expansion underway to add system capacity to deliver natural gas to ethanol production facilities in Northeast NE

Terminals

- An approximate 50/50 split between Liquids & Dry Bulk facilities
- since 2005 have added one million barrels of ethanol storage at key renewable handling facilities in Chicago (Argo), New Jersey and Houston
- Green Earth Biodiesel refinery constructed at our Houston terminal – in production since July 2007

Kinder Morgan Biodiesel

Break-bulk, Storage and Handling

KM Galena Park, TX

- *Green Earth biodiesel production facility*
- 86 million gallons per year capacity -- continual production since July '07

Storage, Handling, Export:

- NY, Chicago, Houston, Philadelphia

Storage, Handling, Import:

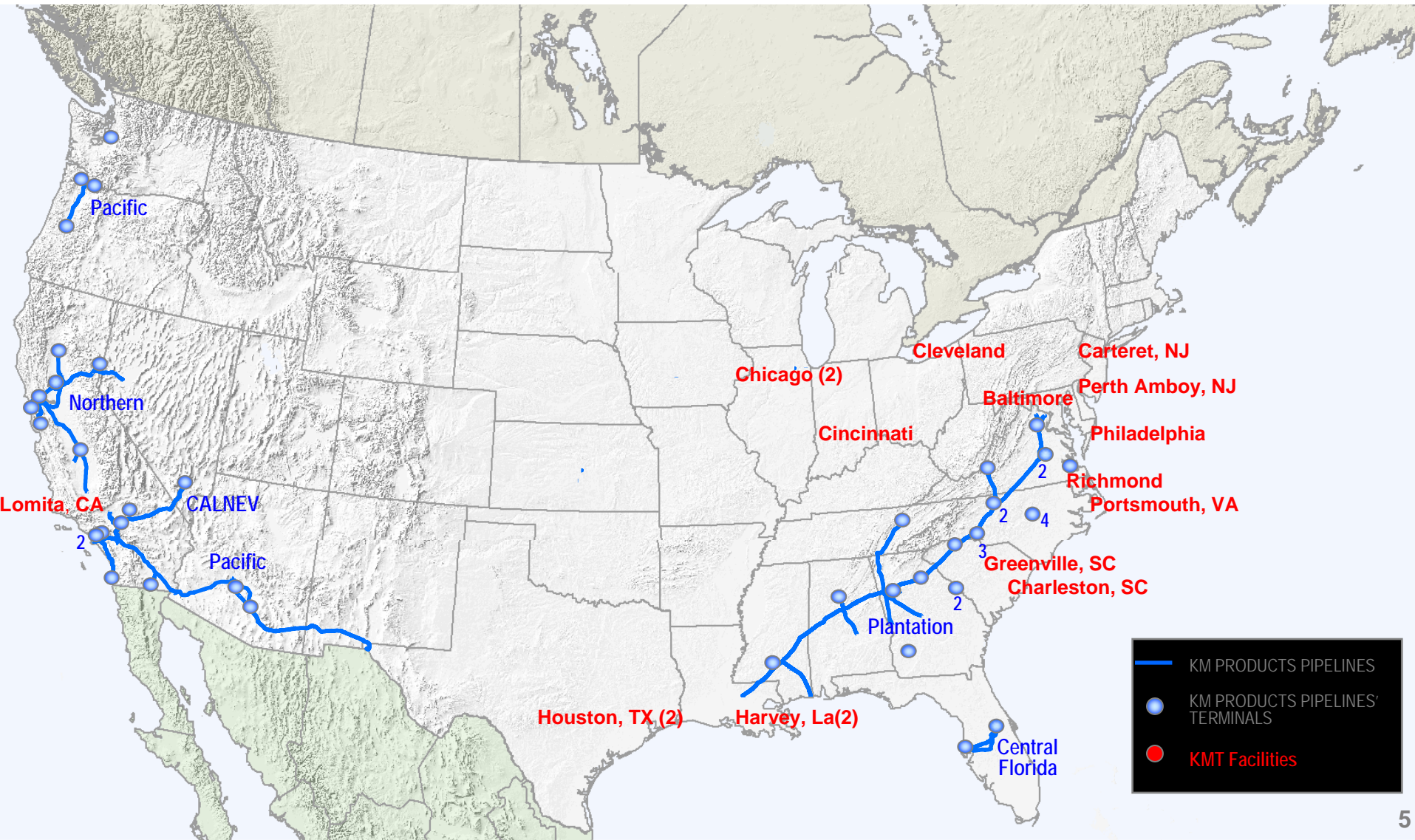
- Tampa, FL

Pipeline Application:

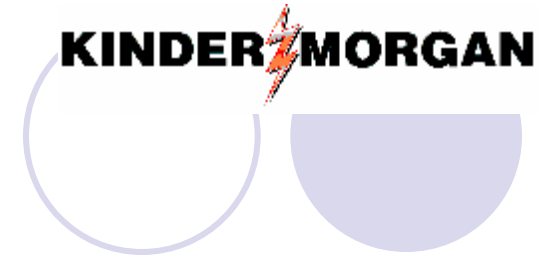
- Currently evaluating pipeline test applications and procedures based on a high level of customer support



Ethanol-capable assets: *KM Products Pipelines and KM Terminals*



Central Florida Pipeline *Ethanol Shipment Plan*



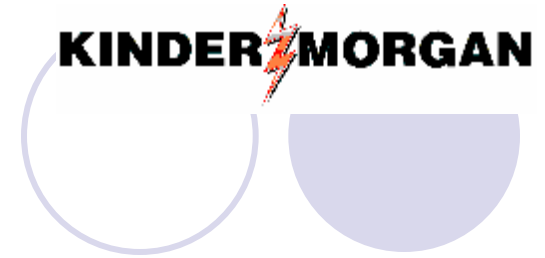
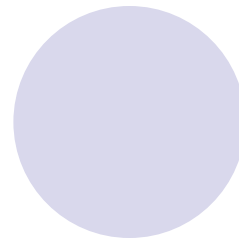
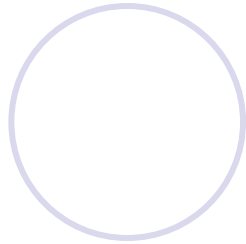
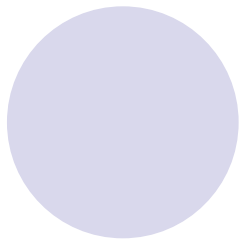
- λ **Batch ethanol on 16” dedicated gasoline line**
- λ **Technical considerations**
 - λ Pipeline and Facility Integrity
 - λ Maintain product quality (gasoline and ethanol)
- λ **Regulatory Interaction – PHMSA (DOT) fully engaged in process**
- λ **Process Schedule**
 - λ Incompatible Parts Replacement, Cleaning, Testing, Commercial Application
- λ **If successful, we will apply ‘lessons learned’ to NEXT Kinder Morgan pipeline system opportunity**

Pipeline Prep Plan

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1. Materials replacement:

- Component replacement to be completed in stages during periodic shutdowns
- Meter prover seals, pump main seals, and flexatalic spiral wound stainless gaskets will be replaced
 - Pump impeller metallurgy, main line block valves, and o-rings in most instruments are compatible



2. Pipeline Chemical Cleaning:

- A typical gasoline batch propels the “pig train”
- Final stage of the cleaning train will contain inhibitor to precondition the steel
- Cleaning chemicals and waste will be captured and disposed of at an approved site



Batch Testing

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- Once cleaning process is complete, test(s) will be run with straight ethanol batches
- A typical gasoline batch will lead and follow test batch
- Test will provide product for detailed evaluation and blending with gasoline

