The Keystone Pipeline Projects: A Multi-Phased Approach

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TransCanada Corporation’s Assets

- **Enterprise value ~$55-billion**
- **North America’s largest natural gas pipeline network**
  - 35,500 miles wholly-owned
  - 7,000 miles partially-owned
  - Average volume of 14 bcf/d
- **North America’s third largest natural gas storage operator**
  - 380 bcf of capacity
- **Canada’s largest private sector power generator**
  - 19 power plants; 10,800MW
- **4,400 talented employees**
  - 7 provinces and 34 states
Keystone Pipeline Projects

- US$14-billion investment
- 1.4 million bbl/d capacity
- More than 1.1 million bbl/d contracted
- Provides significant platform for:
  - Oil sands growth
  - Shale oil growth
  - Connecting to new markets
  - Other transportation services
Keystone XL Pipeline

• 1,179-mile pipeline from Hardisty, AB to Steele City, NE

• Presidential Permit reapplication submitted on May 4, 2012

• TransCanada received Governor of Nebraska approval on January 22, 2013

• Expect Presidential Permit in Q4 2013

• US$5.3-billion investment

• Anticipated in-service 2015
Global Fuel Mix by Decade

Source: 2012 The Outlook for Energy: A View to 2040 provided by Exxon Mobil Corporation
Refining Markets

Source: Canadian Association of Petroleum Producers Forecast Yearly Report – June 2012
Process for Identifying New Projects
Keystone Right-of-Way Before & After

Near David City, Nebraska • Spread 5B Construction
Photo above taken June 15, 2009 Photo below taken August 25, 2010

North of Yankton, South Dakota • Spread 4B Construction
Photo above taken May 27, 2009 Photo below taken August 26, 2010
Commitment to Quality Assurance

- **Design**
- **Construction**
  - Before
  - During
  - After *(Prior to line fill)*
- **Operations**
Keystone Cushing Terminal
Under Construction
Canada’s GHG Emissions In Context

Global Energy Related GHG Emissions by Country

- United States 22%
- China 20%
- Europe 17%
- Eurasia 9%
- Japan 4%
- India 4%
- Canada 2%
- Australia 1%
- Other 21%

Canada’s GHG Emissions by Sector

- Transportation 25%
- Other Industry 14%
- Electricity and Heat/Generation 16%
- Oil Sands 5%
- Agriculture 9%
- Buildings 10%
- Solvent & Waste 4%
- Oil & Gas ex OS 18%


- GHG Emissions from Oil Sands:
  - Less than 0.1% of global GHG emissions
  - 5% of Canada’s GHG emissions
  - GHG intensity reduced by 33% from 1990 to 2007
Comparison of Well-to-Tank and Well-to-Wheels GHG Emissions for Various Crudes

Energy-Intensive Crudes:
(Canadian oil sands, California heavy, Venezuelan heavy, Nigerian)

US Average*:

Source: IHS CERA

*Data Source: US Department of Energy, November 2008, 90513-30
Pipeline Safety in North America

- More than 2 million miles of pipelines in the US enable safe movement of energy products
- Majority of pipelines operate underground, so their role is unnoticed
- Safest and most efficient form of transportation for petroleum products
- Pipeline hazardous materials transportation accidents are low probability
Operational Control Center

- Operational Control Center is monitored 24 hours a day, 365 days a year
- Satellite technology sends data to monitoring center every five seconds from 16,000 data points
- Ability to isolate any section of our Keystone Pipeline Projects and remotely close valves within minutes
- Operational Control Center notifies staff
• Keystone Pipeline Projects will allow the Midwest to quickly, efficiently and cost effectively transport liquid energy to refineries in the Gulf Coast

• Today, the U.S. consumes 15 million barrels of oil and imports eight to nine million barrels, or close to 60 per cent of its needs

• Energy Information Administration (EIA) forecast in 2012 the U.S. will continue to import 7.5 million bbl/d into 2035 to meet its needs

• Oil sands are the only growing supply source with a land-based connection to the U.S. market
Recent Environmental Evaluations

- **January 2013** – The Nebraska Department of Environmental Quality (NDEQ) has reported that…. “there would be minimal environmental impacts in Nebraska.”

- **March 2013** – Department of State reaffirmed in the Supplemental Draft Environmental Impact Statement (SDEIS) that…. “there would be no significant impacts to most resources along the proposed Project route.” It noted that Keystone XL would result in no “substantive change in global GHG emissions.”
Questions
Thank You