



# 2011 Lake Louise Conference Oil Sands Panel – Is it that Dirty?

## Introduction:

- Jeff Martin – Peters & Co. Limited

## Panel Members:

- Bruce Carson – Canadian School of Energy & Environment
- Howard Lutley – SilverBirch Energy
- Cindy Christopher – Imperial Oil



## Disclosure and Compliance

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**The statements contained herein are based upon information that we believe to be reliable, although we cannot guarantee their accuracy. Our firm or its directors or members of their families may at times have a long or short position in the securities mentioned herein and may make purchases or sales of these securities while this memorandum is in circulation. Peters & Co. Equities Inc., a member of the National Association of Securities Dealers, Inc. and the Securities Investor Protection Corporation, is a wholly-owned subsidiary of Peters & Co. Limited and operates as a broker-dealer in the United States. For more information on our “Disclosure and Compliance” details, please visit our website [www.petersco.com](http://www.petersco.com).**

# Overview and Major Themes

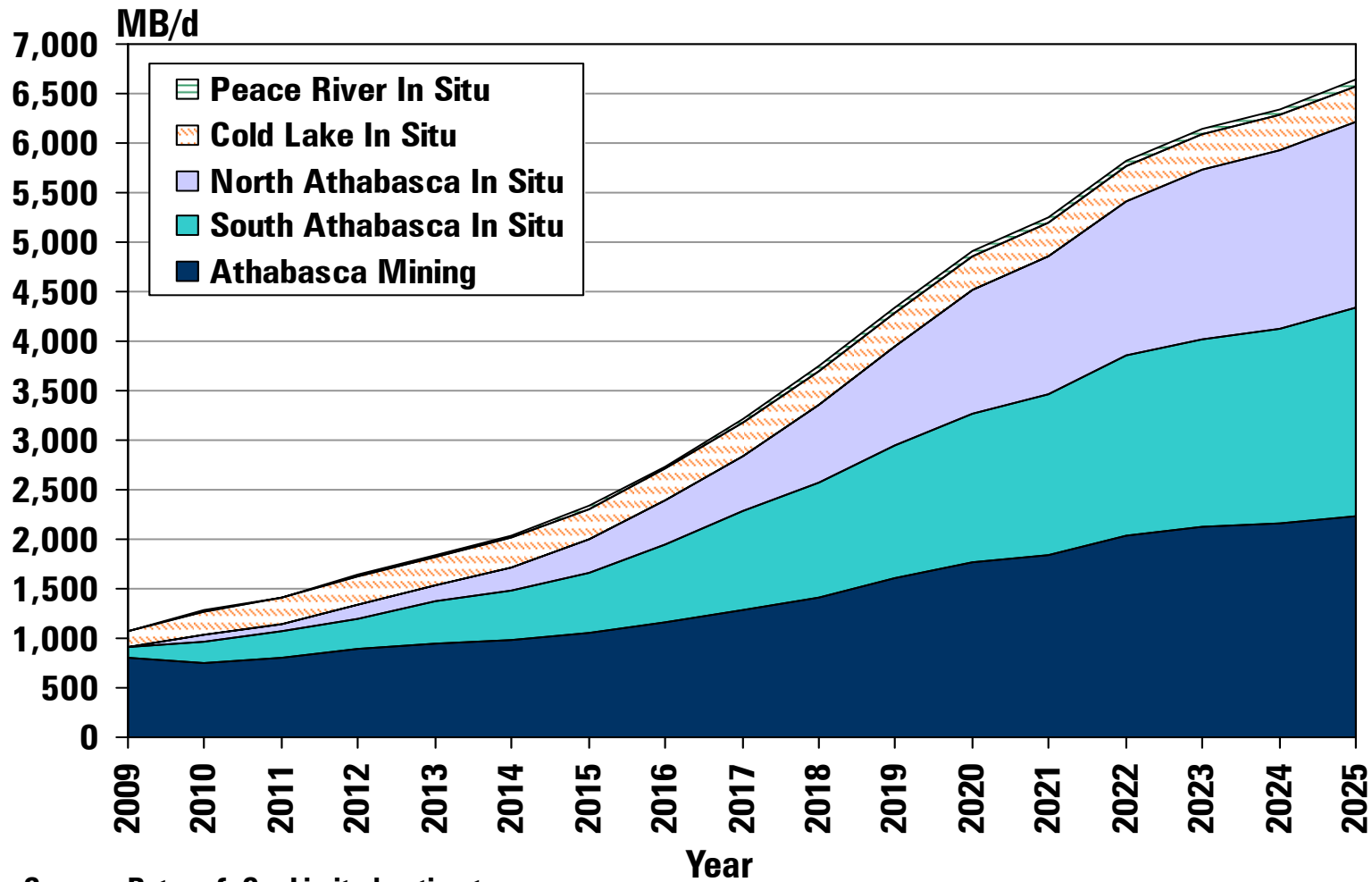
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- **Production from the oil sands set to increase significantly over the next decade**
  - Based on our risked forecast production will increase from ~1.5 MMB/d currently to ~2.0 MMB/d by 2015 and 3.5 MB/d by 2020.
- **High oil prices are required to reach break-even economics**
  - SAGD: US\$50/B
  - Mining (No Upgrading): US\$60/B
  - Mining (With Upgrading): >US\$100/B
- **Capital spending is expected to surpass the previous peak in 2007/2008**
  - We forecast spending will peak at \$22 billion in 2014, 20% higher than the previous peak and compared to \$12 billion in 2009 based on our risked production forecast.
- **Operating costs for mining projects continue to increase**
  - We estimate that Suncor, Syncrude, and Canadian Natural will spend in excess of \$3.0 billion directly related to tailings compliance over the next four years, with additional undisclosed amounts being spent by Shell and Imperial Oil.

# Overview and Major Themes

Production from the oil sands set to increase significantly over the next decade

- Oil sands production forecast – Unrisked

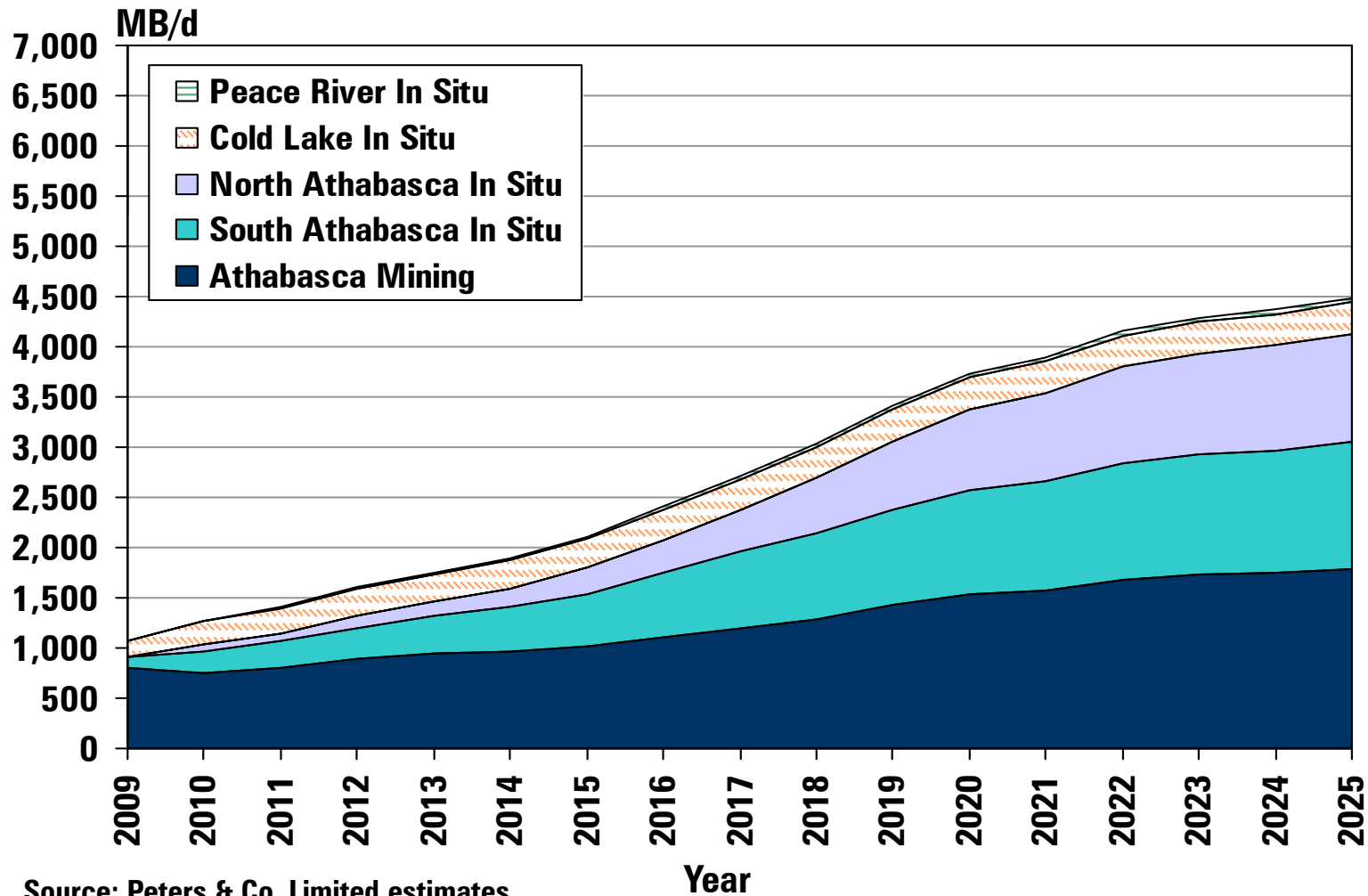


Source: Peters & Co. Limited estimates.

# Overview and Major Themes

Production from the oil sands set to increase significantly over the next decade

- Oil sands production forecast – Risked

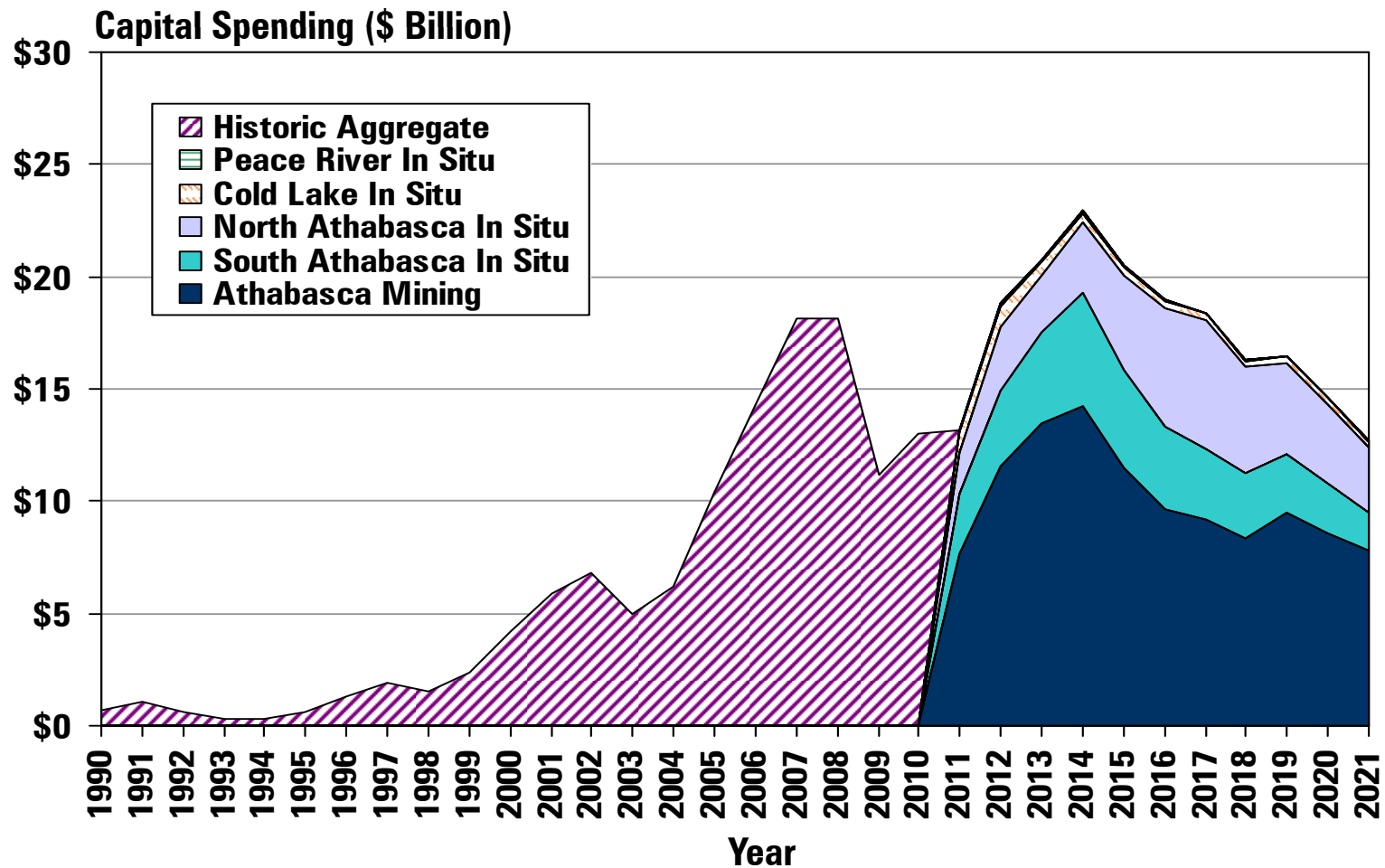


Source: Peters & Co. Limited estimates.

# Overview and Major Themes

## Capital spending expected to surpass previous peak in 2007/2008

- **Capital Spending on New Project Development and Maintenance**

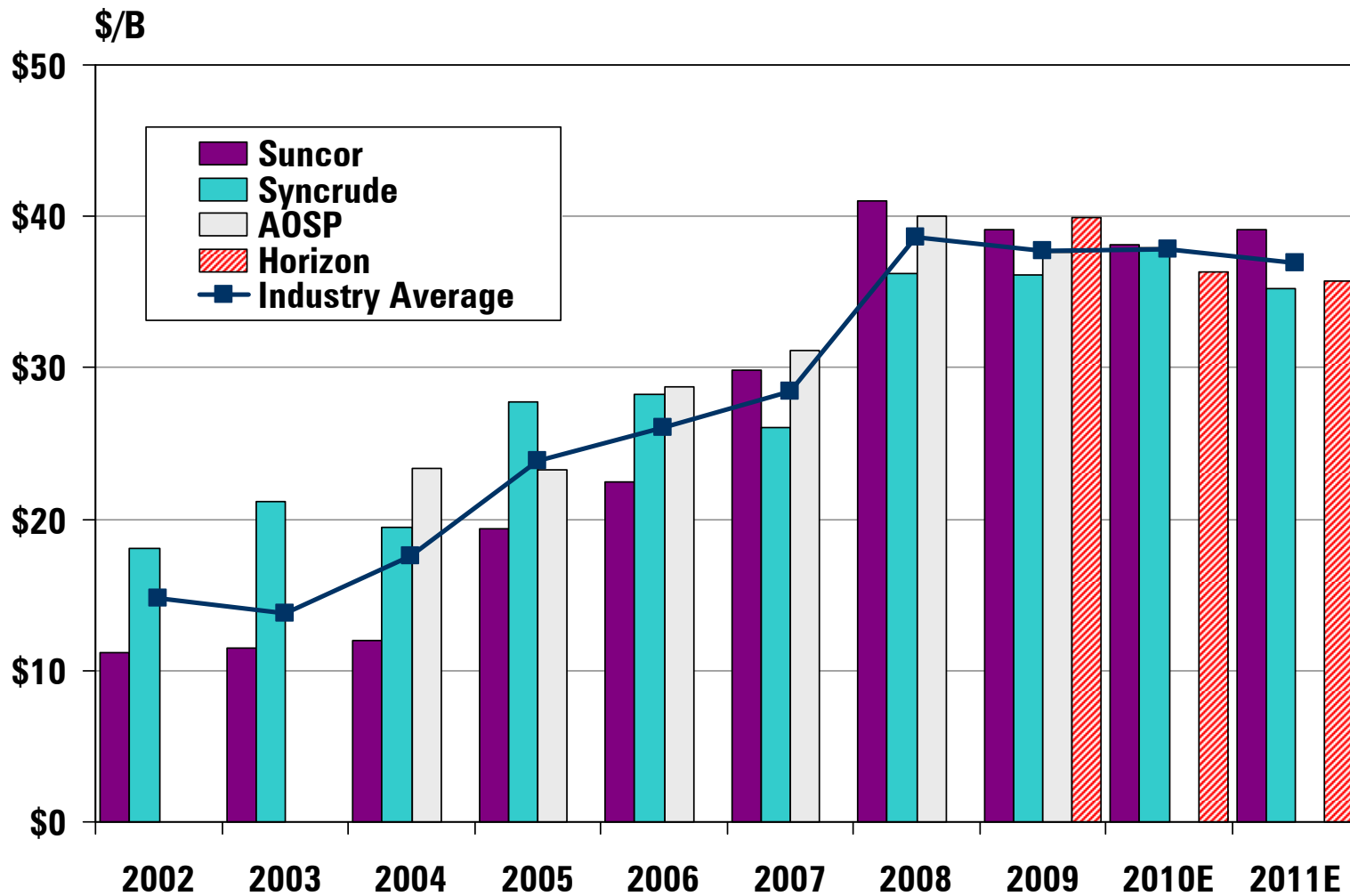


Source: Forecast based on Peters & Co. Limited estimates, historic based on CAPP data.

# Overview and Major Themes

## Operating costs for mining projects continue to increase

### • Cash operating costs by project



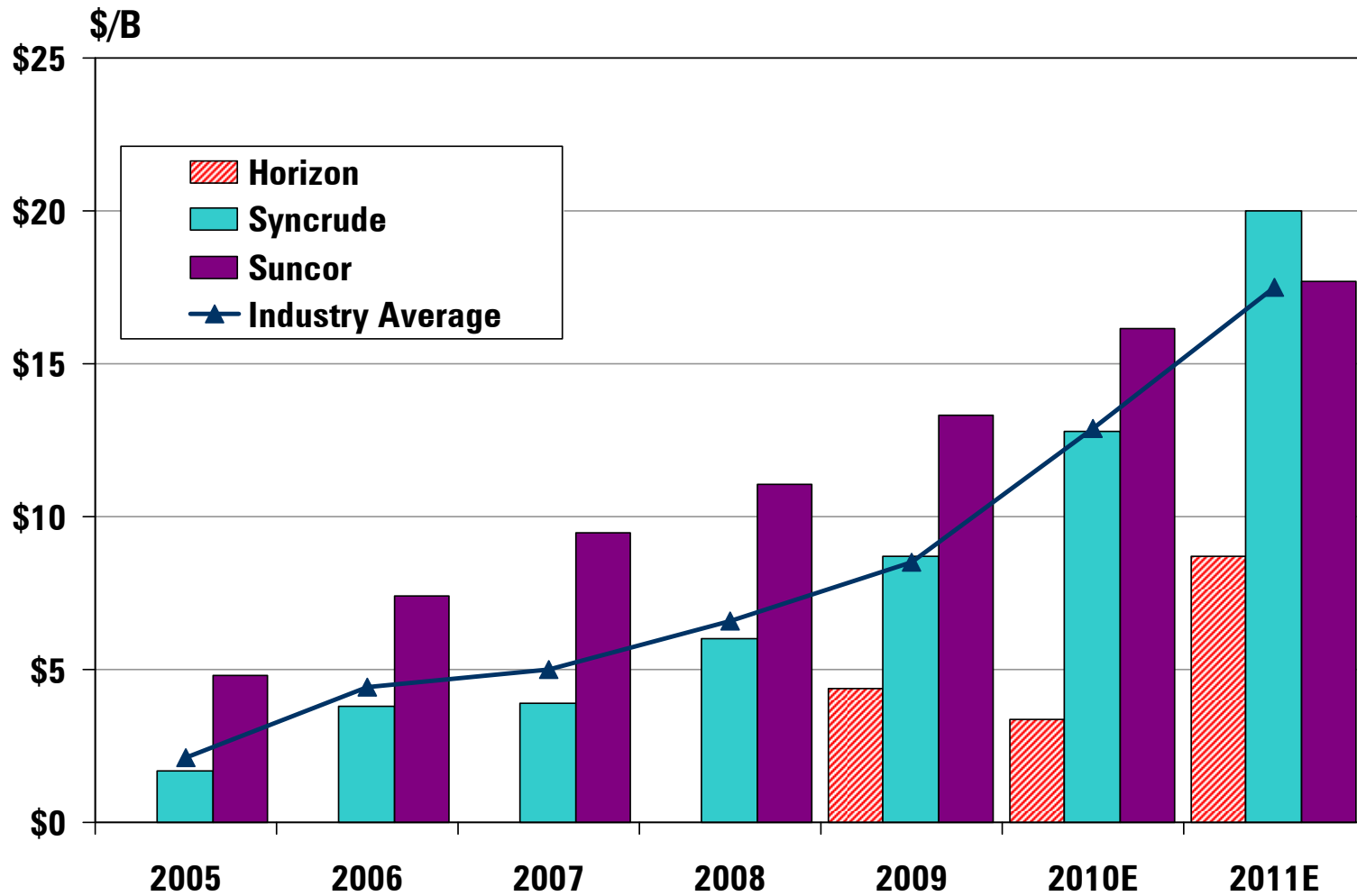
Note: AOSP operating cost data for 2010 and 2011 is not available.

# Overview and Major Themes

## Operating costs for mining projects continue to increase

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### • Maintenance capital by project



Note: Cost per barrel based on design capacity.

## Panel Members

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- **Bruce Carson – Executive Director, Canadian School of Energy & Environment**
  - Canadian Energy Policy
- **Howard Lutley – President & CEO, SilverBirch Energy**
  - Historical Review & New Regulations Regarding Tailings
- **Cindy Christopher – Manager of Environmental Policy and Planning, Imperial Oil**
  - Water Usage and Changes in the Oil Sands