

State of the Canadian Transmission Pipeline Industry

June 20, 2011



Canadian Energy
Pipeline Association

Association canadienne
de pipelines d'énergie

Outline

- About CEPA
- Pipeline infrastructure in North America
- Our key issues and priorities
 - Pipeline safety
 - Damage prevention
 - Market access
 - National energy strategy

About CEPA

- Transport 97% of the crude oil and natural gas produced in Canada to markets across North America
- Operate over 100,000 kilometres of pipeline in Canada and the United States
- CEPA members expect to invest in multi-billion dollar expansion projects in the next 15 years

CEPA Members





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CEPA MEMBERS – LIQUID PIPELINES

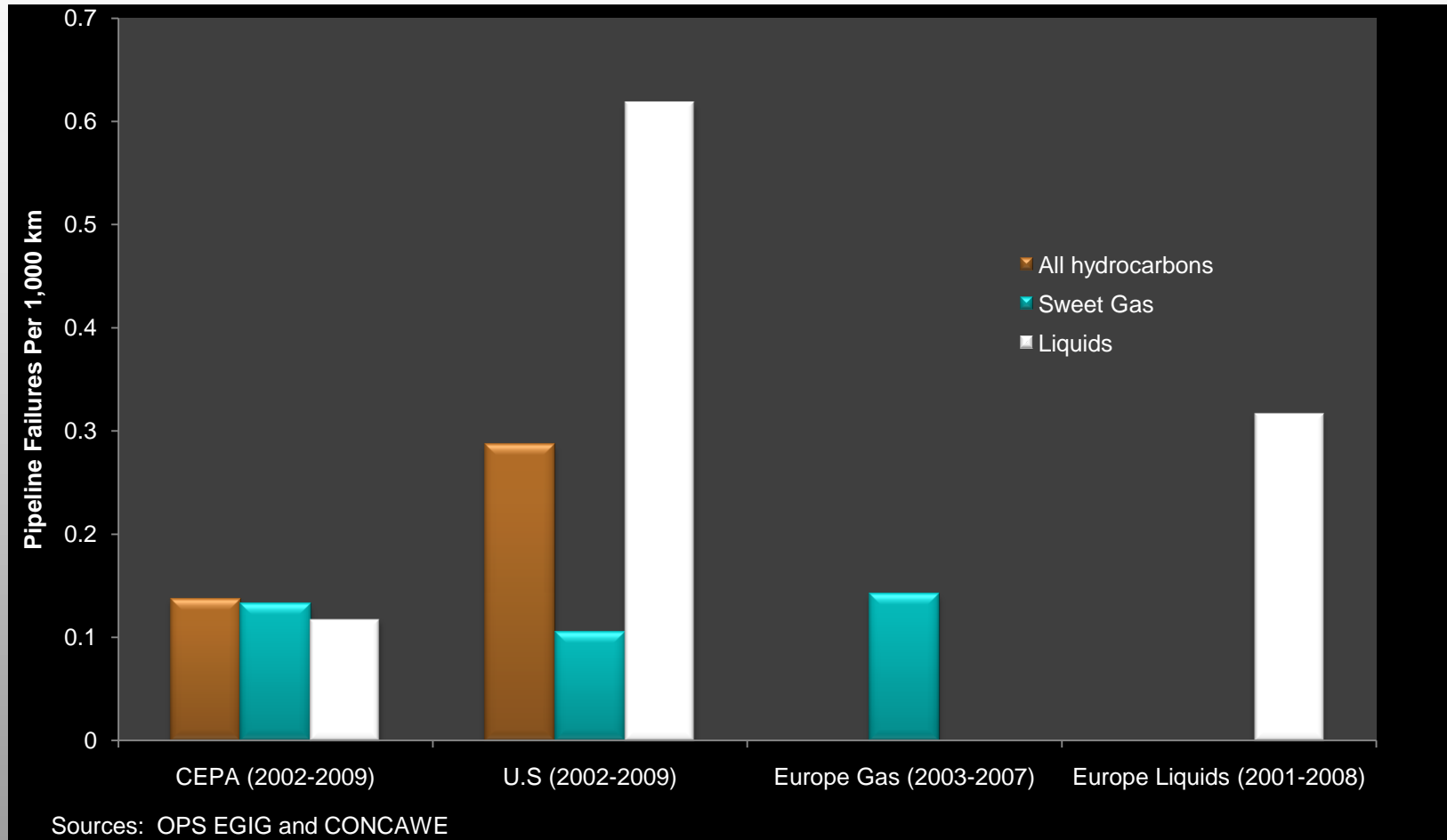


- ★ LNG Terminal
- Non-member pipelines
- Sedimentary Basin

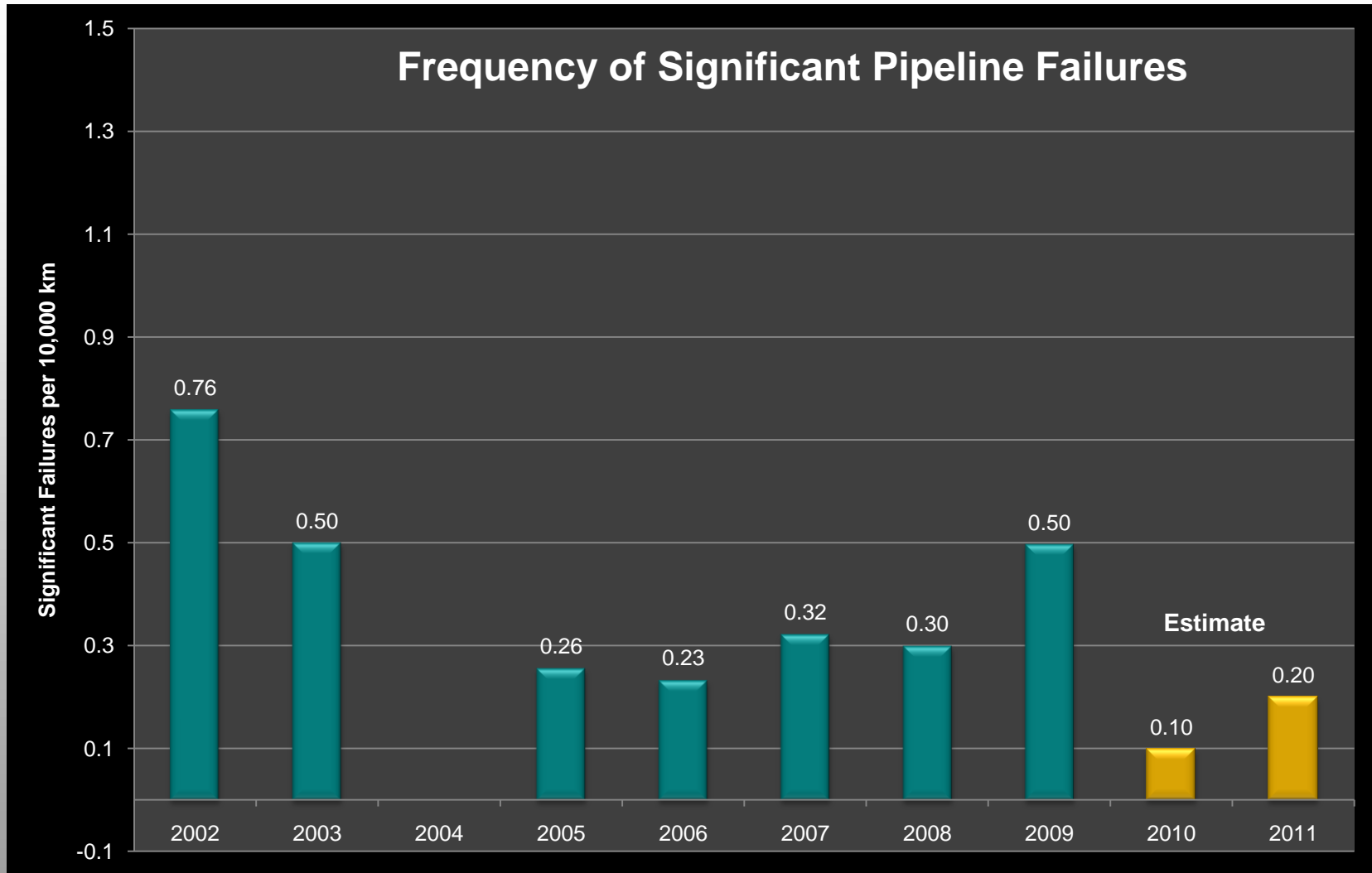
Safe and Efficient Energy Highways

- Move 1.2 billion barrels of crude and refined products and 5.5 trillion cubic feet of natural gas each year
- Pipeline are underground and safe
- Ruptures on pipelines are rare
 - Between 2002 and 2009
 - Ruptures on federally regulated pipelines averaged slightly more than one per year; a **decline of 55%** from the previous eight years
 - Average annual volume released from liquids pipelines was just two litres for every million litres transported ... **99.9998%** of the product was transported safely

Canadian Industry World-Class Safety Record



Significant Failures Remain Low



Pipeline Monitoring and Maintenance

■ Monitoring

- 24/7 monitoring at remote control centres using sophisticated computerized sensing and control systems
- Equipped with automated leak detection alarms and shut-down devices
- Regular visual surveys of pipelines by aerial and ground patrols
- Sophisticated “in-line” inspection tools (pigs) inspect the inside of pipes to identify changes

■ Maintenance

- Preventative maintenance programs including constant pipeline excavations and repairs

Video of Inspection Tool

Key industry initiatives to ensure safety

- Committed to a safety culture
- Development of Integrity First program
- Apply effective management systems
- Damage prevention advocacy
- Converge on industry leading practices
- Develop and deploy appropriate advanced technology
- Advance national standards



External Damage: Growing Safety Risk

- Activity within close proximity to pipeline poses greatest risk to public safety
 - External interference was the cause of six failure incidents and 40 damage incidents (no release of service fluid) on CEPA pipelines during the period 2002-2009
 - External interference was the fourth most common cause of failures
 - All CEPA external interference failures during the period 2002-2009 were caused by third parties
- Increased public education is essential
- In spite of regular surveillance, not all activities on the ground can be controlled by pipeline operators

Damage Prevention

- Three key advocacy areas:
 - Establishment of a 3 digit call number across Canada
 - Introduce mandatory one-call across Canada
 - Introduce financial penalties for parties undertaking un-authorized digging on or near pipelines

Market Access

Pipeline Development Issues

- Development of new pipeline assets is critical to open new markets for Canadian oil and gas
- New natural gas supply needs to be connected to existing pipeline systems
- The industry makes, and must continue to make, huge investments in pipelines to provide cost competitive infrastructure

Infrastructure = Choice & Responsiveness = Energy Security

Market Access

- For the Canadian pipeline industry to continue to thrive, it needs access to existing and new markets
 - Canada is the number one supplier of oil and natural gas to the U.S. and must remain so
 - Canada is the ideal energy partner for the US:
 - ▶ business friendly, politically stable and has abundant source of energy
 - ▶ strong, transparent regulation
 - ▶ CEPA member safety track record is second to none
 - Access to the Asian Pacific market is a key strategic outlet

CEPA MEMBERS | PROPOSED AND UNDER CONSTRUCTION PROJECTS

Energy Infrastructure Investment Forecast

\$26 trillion USD – Global Energy Sector, next 20 years (IEA, 2009)

ALASKA PIPELINE
(Multiple Member Proposals)

MACKENZIE VALLEY PIPELINE
(Trans Canada)

NIPISI PIPELINE PROJECT
(Pembina)

GATEWAY
(Enbridge)

TMX
(Kinder Morgan)

SASKATCHEWAN SYSTEM CAPACITY EXPANSION
(Enbridge)

PALOMAR GAS TRANSMISSION PROJECT
(Trans Canada)

NORTH DAKOTA SYSTEM EXPANSION
(Enbridge)

RABASKA
(Gaz Metro & Enbridge)

KEYSTONE XL
(Trans Canada)

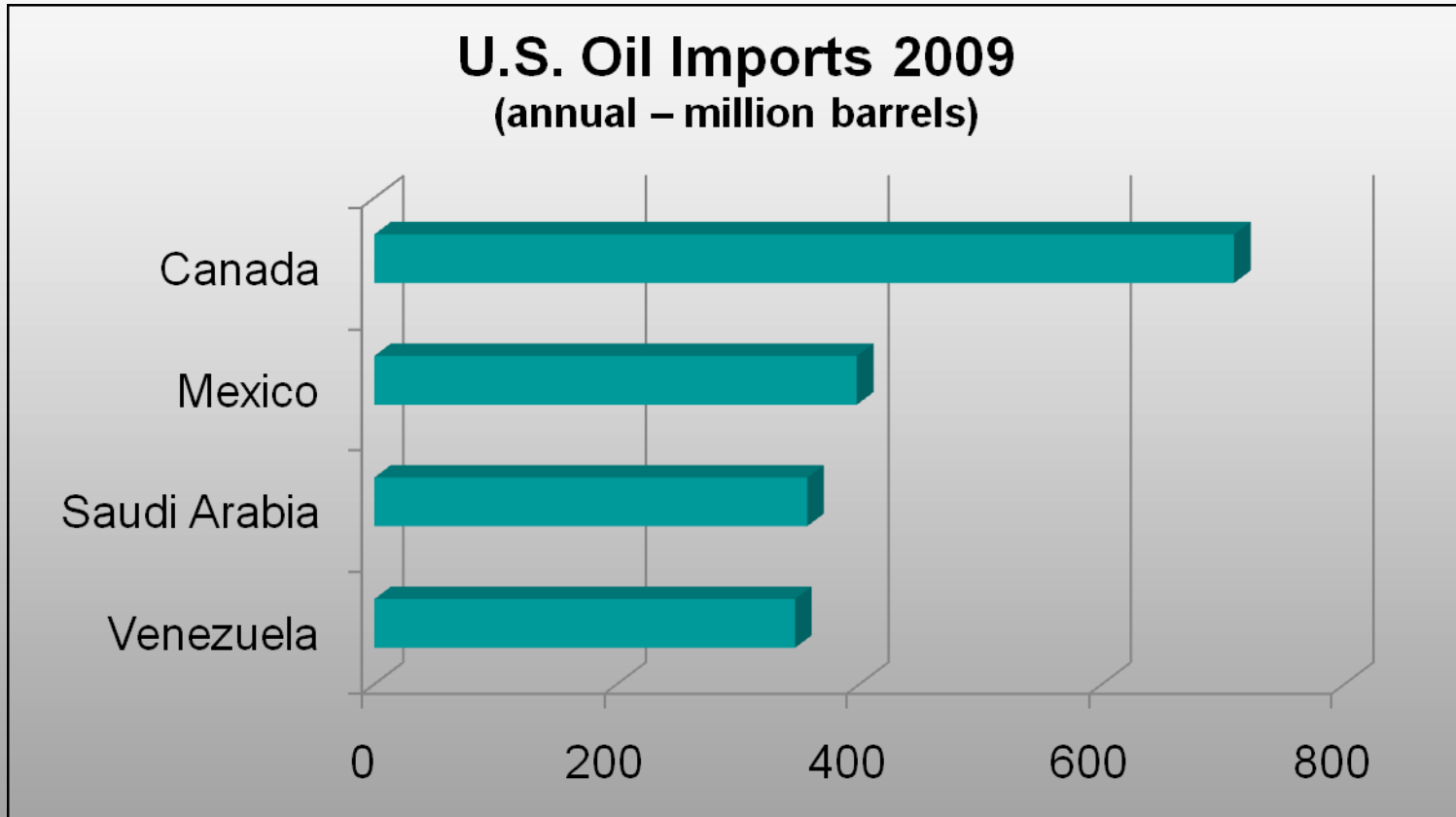
ENERGIA COSTA AZUL
(Trans Canada)

ENBRIDGE MONARCH

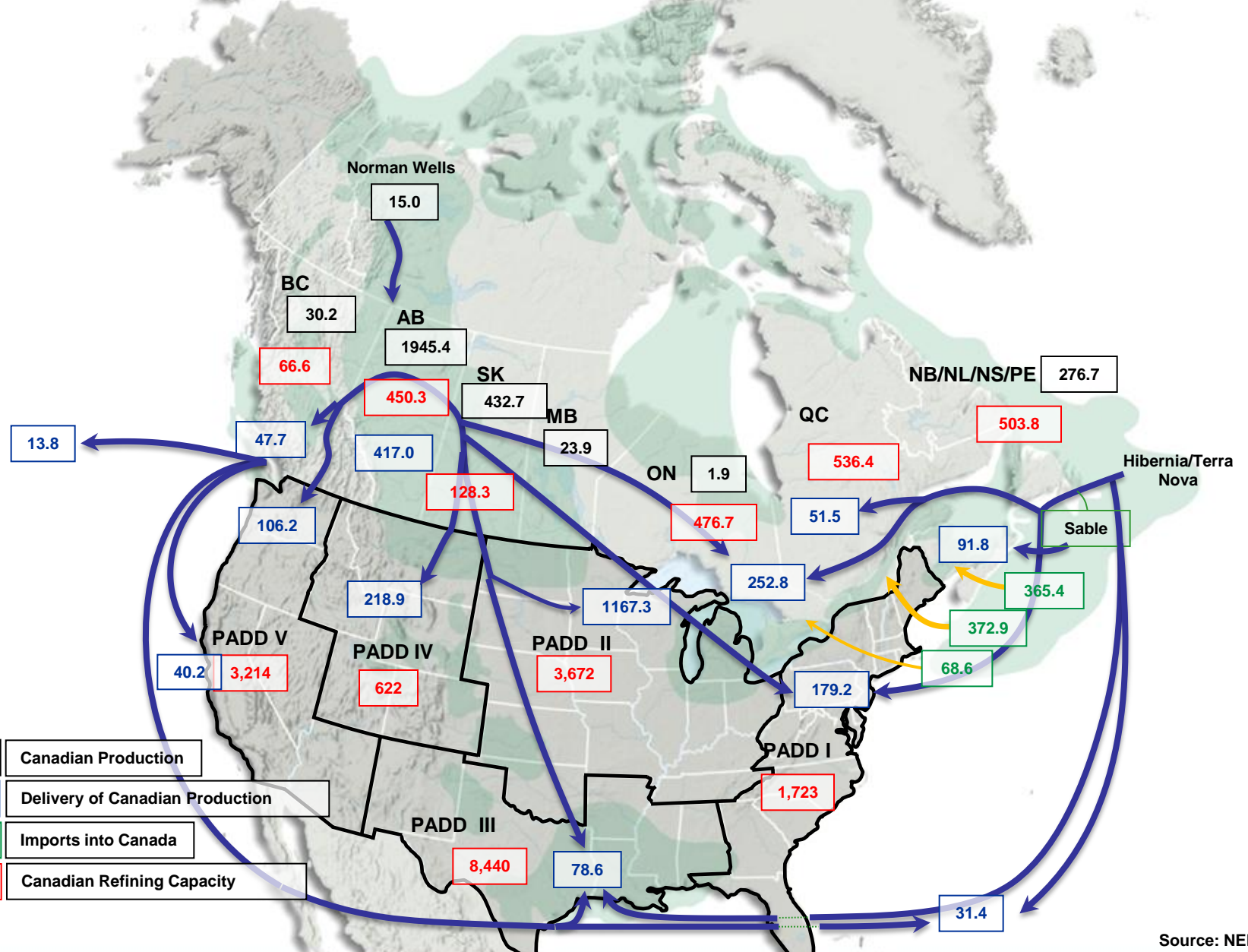
KEYSTONE XL
(Trans Canada)

- ★ LNG Terminal
- Liquid Pipeline
- Gas Pipeline
- Sedimentary Basin
- ✂ Under Construction

Pipelines: Delivering a Safe Source of Energy to the United States



Source US Dept of Energy

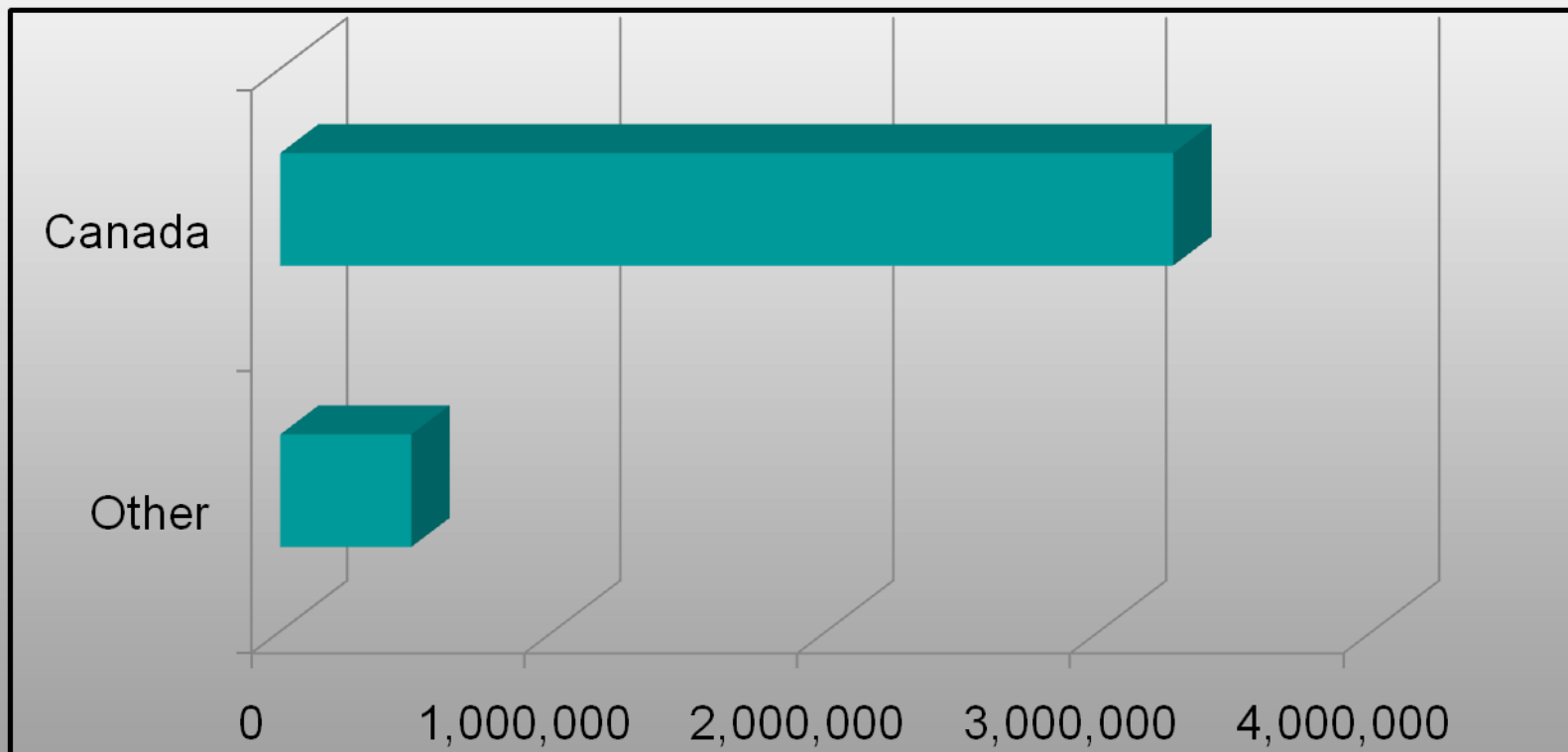


October 2010

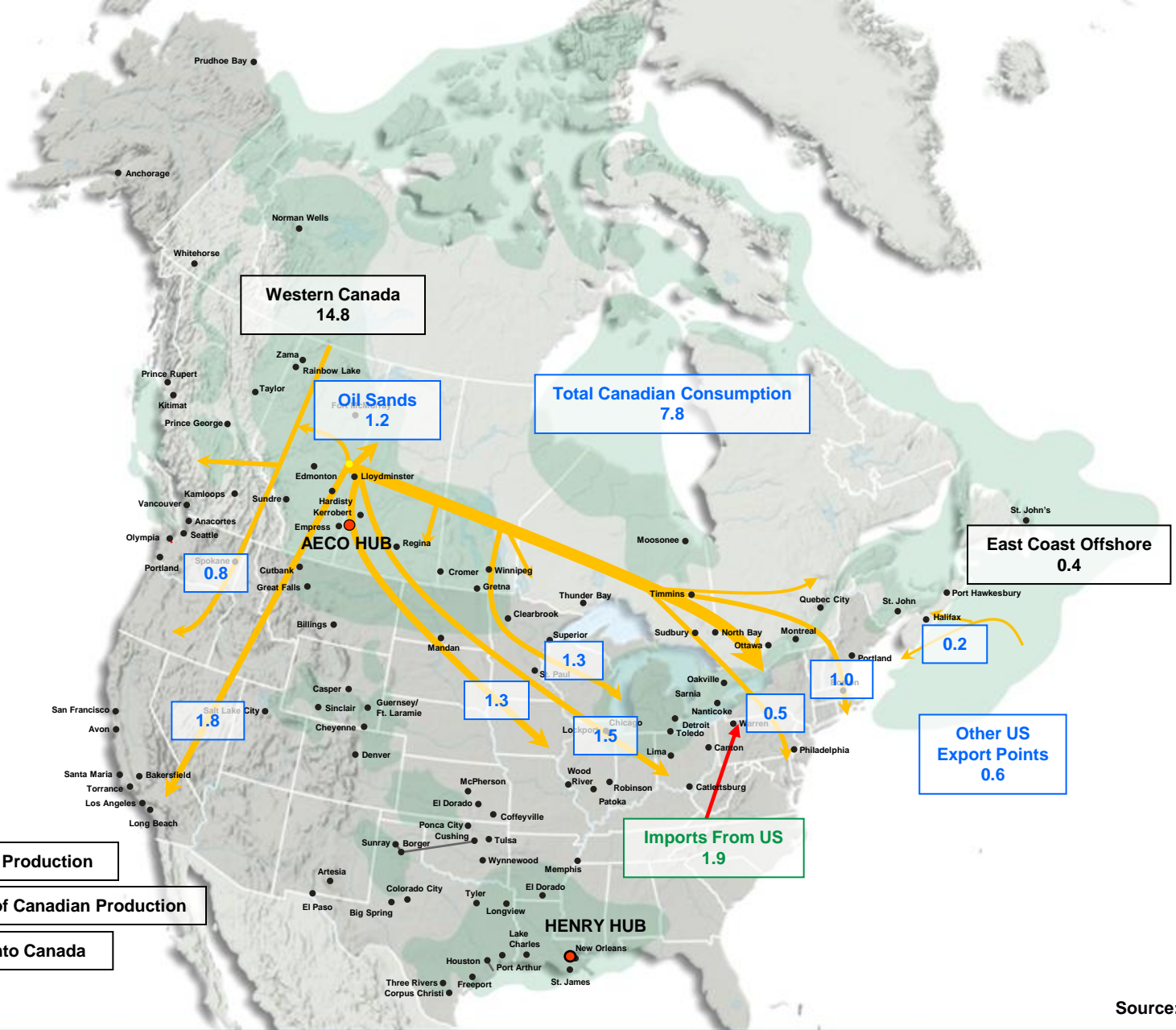
Source: NEB

Pipelines: Delivering a Safe Source of Energy to the United States

U.S. Natural Gas Imports 2009
(annual - million cubic feet)



Source: US Dept. of Energy



Legend

- 14.8 Canadian Production
- ➔ 1.8 Delivery of Canadian Production
- ➔ 1.9 Imports into Canada

October 2010

Source: NEB

The Opportunity

- Canada's pipeline industry can be a key element in employment and GDP recovery
- Bringing new projects online near term =
 - Lower costs for big projects
 - Support for key industries
- Private sector projects bring a multiplier effect throughout the economy
- Investments made now ensure infrastructure is in place when investment reoccurs

The Regulatory Imperative

Regulatory framework must deliver:

- Coordination between and within governments, including
 - One project, one assessment consolidation for new projects
 - Coordination of agencies and departments to eliminate duplication, streamline requirements, and share knowledge and expertise
- Timely and effective processes
- Balanced decision making, integrating environment and economy
 - Using facts and expert decision making throughout the life of federally regulated facilities
- Clear accountability and transparency of government
- Effective Crown Consultation
 - Fully addressed across departments and jurisdictions
 - Separates assessment from economic negotiations

Our Asks

- Projects that are determined to be in the public interest must proceed responsibly
 - Focus on outcomes
- Cost of those projects is managed so as not to burden Canadian consumers and investors with unnecessary cost
 - Balance is needed to both protect the Environment and the Economy while meeting Energy needs (EEE)
- Development timelines are predictable and review processes are effective and efficient
 - Invest in things that matter, not in things that don't, and know the difference

National Energy Strategy

National Energy Strategy

- CEPA fully supports the development of a national energy strategy for the following reasons:
 - Energy is a strategic asset
 - Our energy sources need to receive the best value possible in an increasingly competitive global energy market
 - The strategy needs to support the underlying attribute of the Canadian economy that we are a trading nation
 - Need to balance economic, environmental and social expectations of Canadians
 - Innovation, regulation, GHG emission reduction strategies and energy efficiency are key components to Canadian know-how

Other Key Issues

- Aging infrastructure
 - Pipeline abandonment
- Project development costs
- Technological advances
- Rail vs. pipeline

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