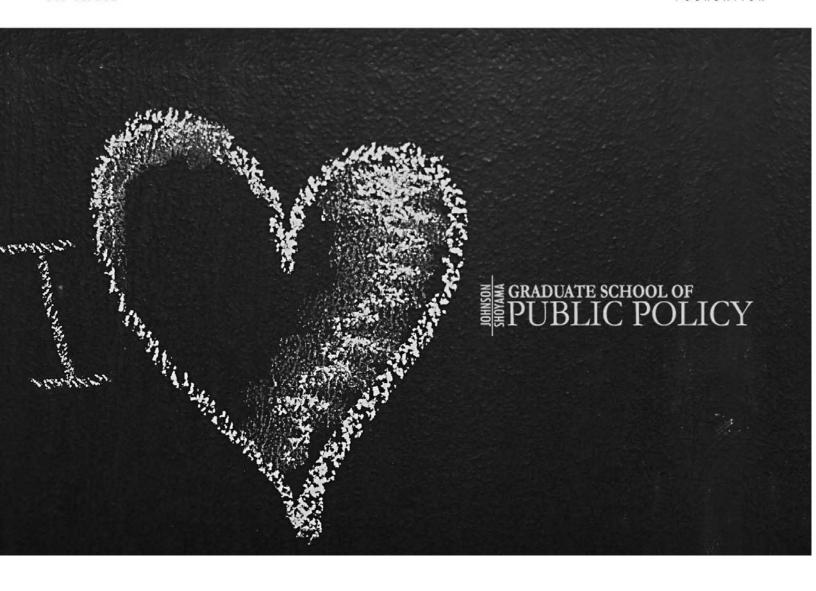


Dylan Jones, President & ŒO Canada West Foundation Presentation for Johnson-Shoyama Graduate School of Public Policy February 7<sup>th</sup>, 2013 | Regina, SK









#### Three Questions That Matter

In western Canada, in the decades ahead...

- 1) How will we generate the wealth we need to prosper?
- 2) Who will share in that wealth and to what degree?
- 3) How will we ensure that wealth translates into true quality of life?



### Today's grand plan...

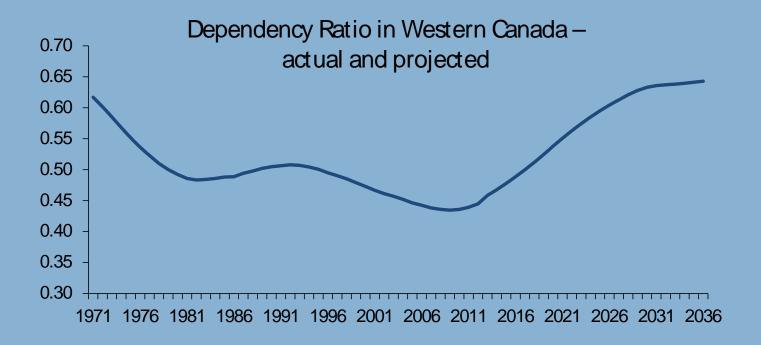
- 1) Context
  - Daunting Demographics
  - · Return of Asia
  - Kyoto Legacy
  - · Resource Ambivalence
- 2) Pipe or Perish
- 3) Discussion



# CONTEXT



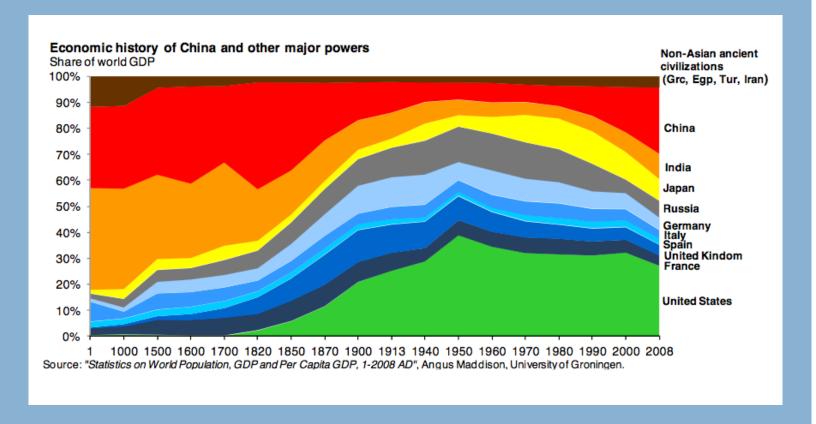
#### Daunting Demographics



Source: CWF calculations using Statistics Canada data.

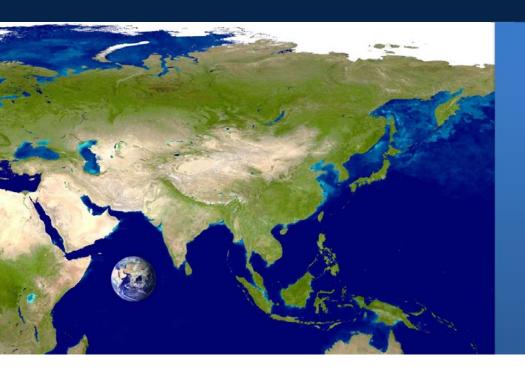


#### Asia isn't emerging, it's returning.





# The rise of developing Asia is an opportunity for the West.

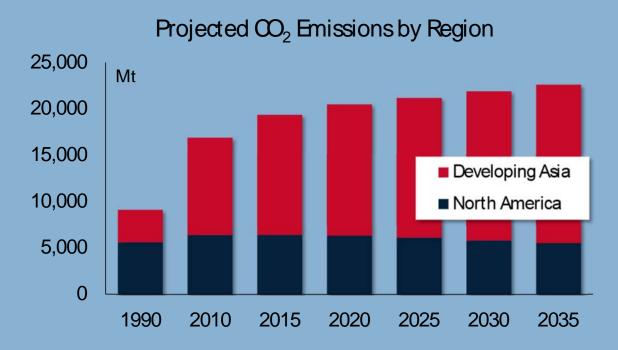


By 2035, China will need to import three times

as much crude oil as western Canada currently produces.



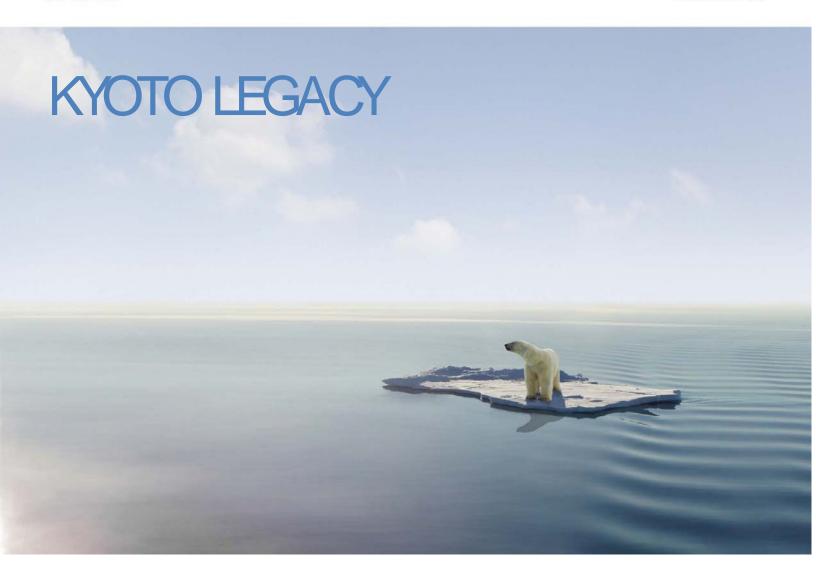
### But..global climate change cannot be solved without addressing emissions growth in Asia.



Source: International Energy Agency

Note: North America includes data for Chile.







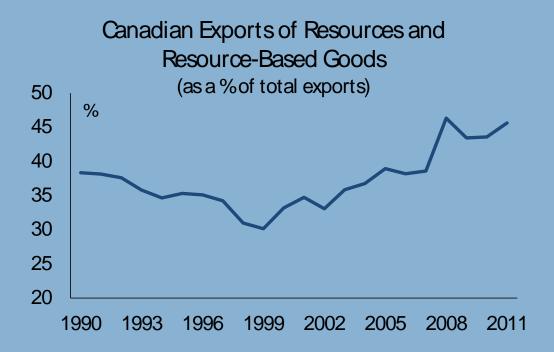
### RESOURCE AMBIVALENCE



Now therefore ye are cursed, and there shall none of you be freed from being bondmen, and hewers of wood and drawers of water for the house of my God. Joshua 9:23 (King James Version)



#### but...



Source: CWF calculations using Statistics Canada data

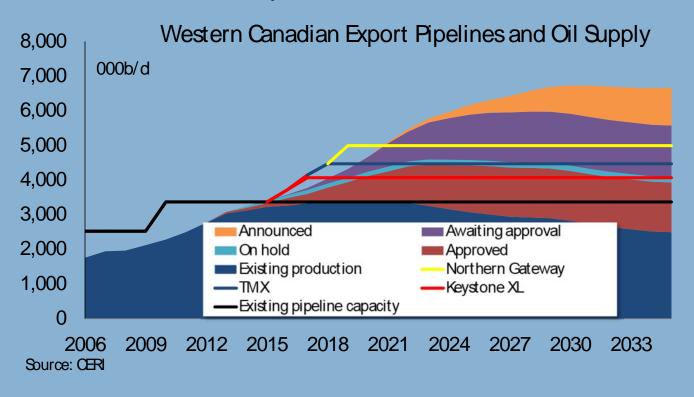


FEBRUARY 2013
MICHAEL HOLDEN, SENIOR ECONOMIST





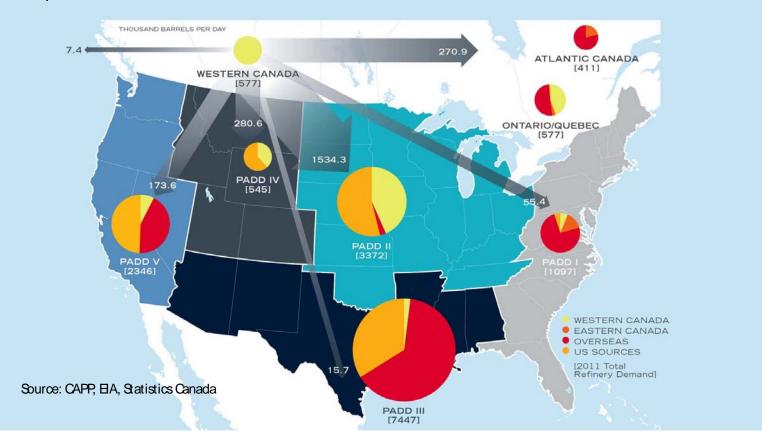
### The Problem: A lack of export pipeline capacity could soon limit crude oil production in the West...





#### ..and our transportation system is ill-suited to current needs.

Disposition of the West's Orude Oil and North American Demand in 2011





## USoil production is booming as shale deposits are developed...





Source: North Dakota State Government



#### ... creating a transportation logiam in the Midwest...

#### Orude Oil Stockpiles at Oushing, Oklahoma

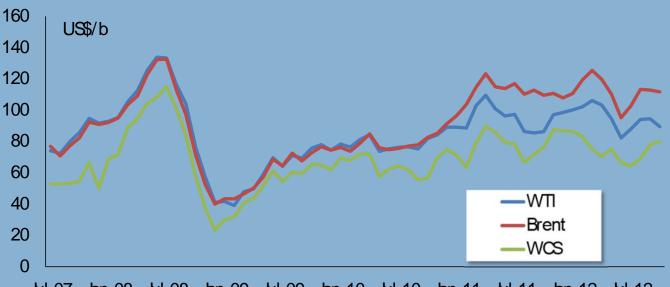


Source: US Energy Information Administration



## ..driving a wedge between North American and overseas crude oil prices.



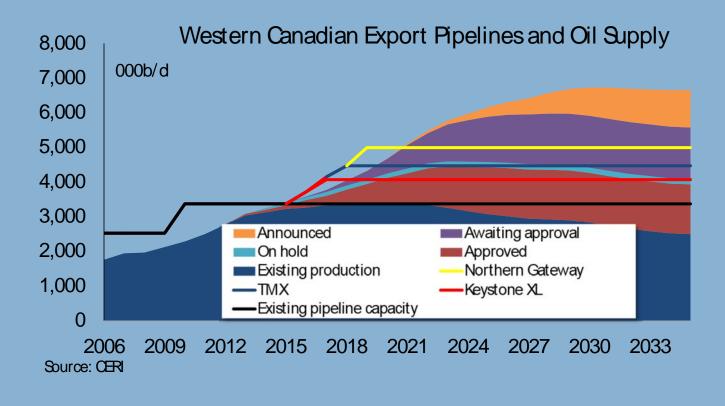


Jul-07 Jan-08 Jul-08 Jan-09 Jul-09 Jan-10 Jul-10 Jan-11 Jul-11 Jan-12 Jul-12

Sources: USEIA, CERI, Canada West Foundation.



### The Consequences: Transportation capacity places a ceiling on oil production in the West...





# ..price differentials cost governments billions in forgone royalties...



Alberta and
Saskatchewan lose
\$6.7 million
per day

in royalty revenues because of oil price differentials.



#### .. and the Canadian economy suffers.

Failure to build three pipeline projects would have profound economic costs:

- \$1.3 trillion in forgone GDP over 25 years
- 7,600 person-years of lost employment
- \$281 billion in government revenues, NOT including royalties.



#### These impacts should not be underestimated...

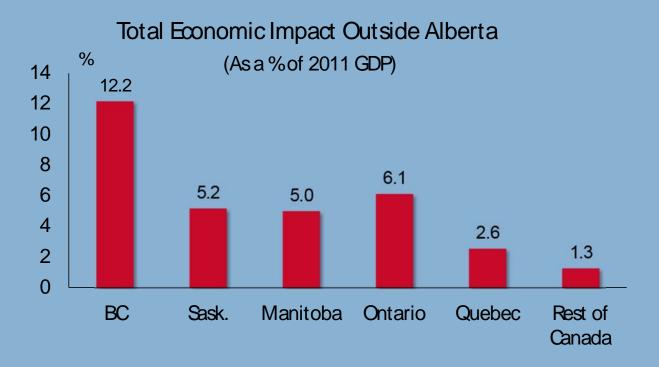
\$1.3 trillion over 25 years is \$52.6 billion per year.

That total is equivalent to:

- 70% of annual economic output in Saskatchewan;
- A royalty and tax holiday for all residents and businesses on the prairies;
- Tuition for 354,000 U of Sundergraduate students each year for 25 years; or
- Building 189 new stadiums for the Roughriders every year.



#### .. and will be felt across the country.



Source: CWF calculations using data from CERI,  ${\bf Statistics}$  Canada.



### THE SOLUTION

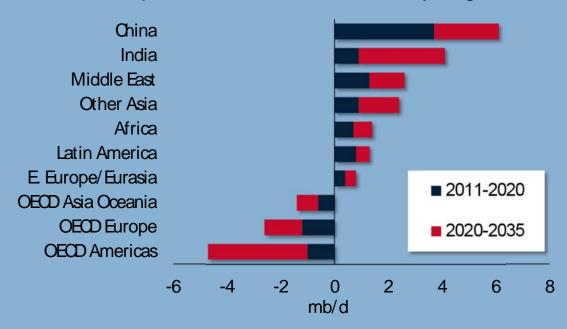
Western Canada needs better access to three key markets:

- · China and elsewhere in developing Asia
- . The USGulf Coast
- · Eastern Canada and the US east coast



## Developing Asian markets will drive global oil demand growth...

#### Projected Oil Demand Growth by Region

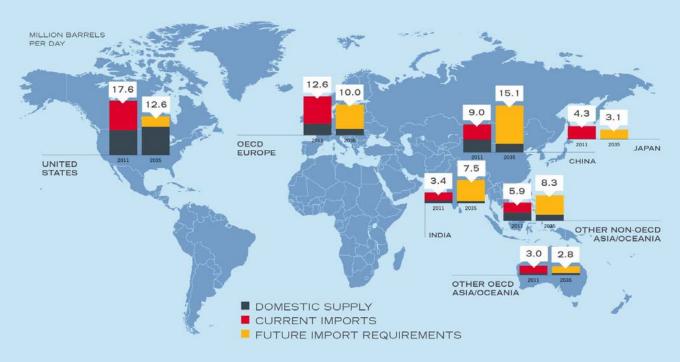


Source: IEA World Energy Outlook 2012



#### ...and net import requirements will soar.

#### Current and Projected Oil Consumption in Major Importing Markets

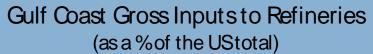


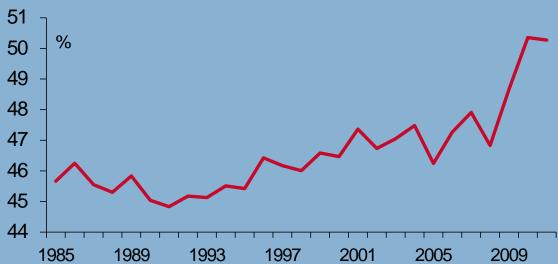
Source: CWF calculations using IEA data.

Note: Projections based on IEA's "New Policies" scenario.



#### Most US refining capacity is in the Gulf Coast region...



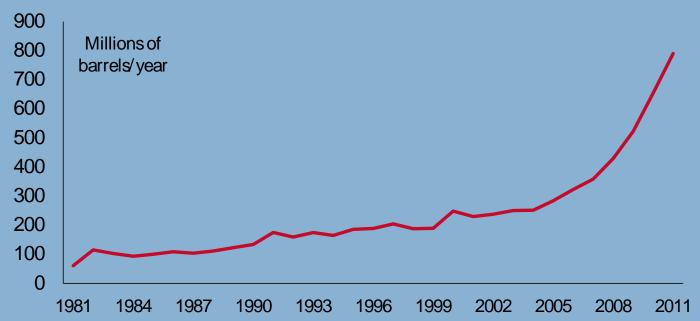


Source: OWF calculations using data from the USBA.



#### .. which has emerged as a major export centre.

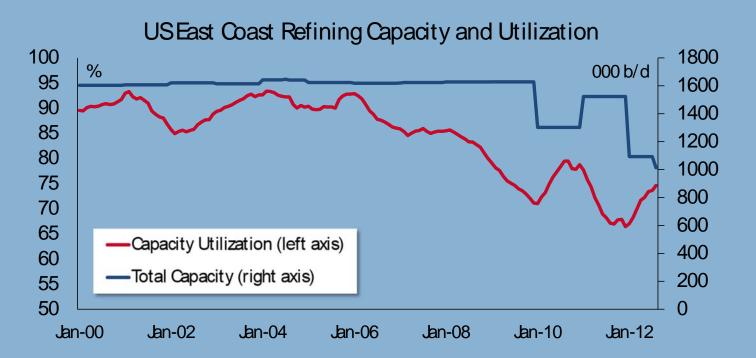




Source: US Energy Information Administration



#### Eastern Canada and the eastern US need the West's oil...



Source: US Energy Information Administration, Canada West Foundation.

Note: Capacity utilization rates are smoothed out using a 12-month moving average.



#### .. creating a win-win scenario across Canada.



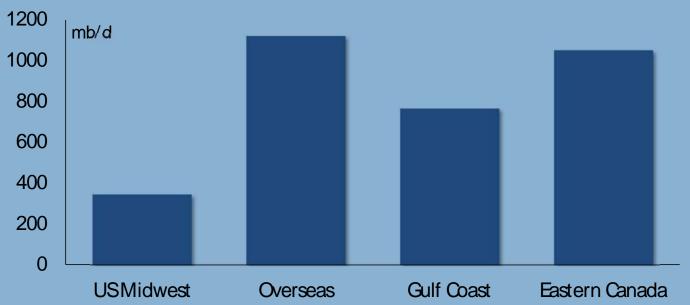
Sending the West's oil to eastern Canada would create "new markets for producers in the west (and) high-paying value-added jobs and lower energy prices in the east."

— Thomas Mulcair



#### Solution: Expanding pipeline capacity.



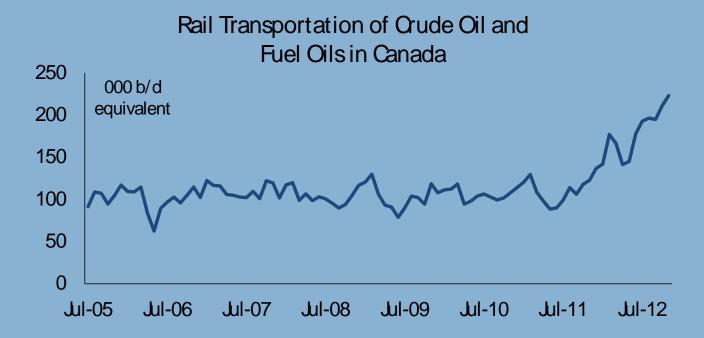


Source: Canada West Foundation using data from CERI and company websites

Note: Data for eastern Canada and the Gulf Coast take the average of a range of expectations on final capacity.



#### Solution: Rail as a transportation option.

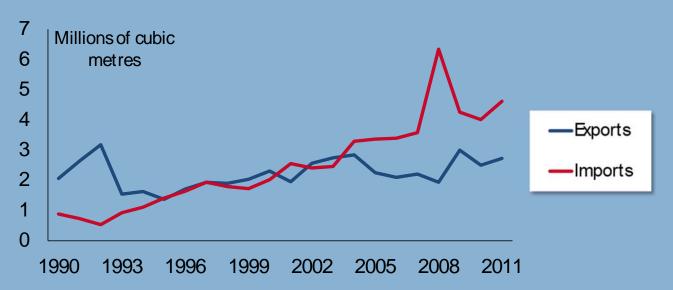


Source: Canada West Foundation using Statistics Canada data.



#### Are refining and upgrading part of the solution?

#### Western Canadian Trade in Refined Petroleum



Source: CWF calculations using Statistics Canada data



#### Are refining and upgrading part of the solution?





Source: US Energy Information Administration



#### Key Findings from Pipe or Perish:

- 1) Western Canada needs the capacity to export to three critical markets:
  - Asia
  - . The USGulf Coast
  - Eastern Canada and the US eastern seaboard
- 2) Building new pipelines is the best long-term transportation solution.
- Market conditions on their own do not support adding refining/upgrading capacity at this time.



# DISCUSSION