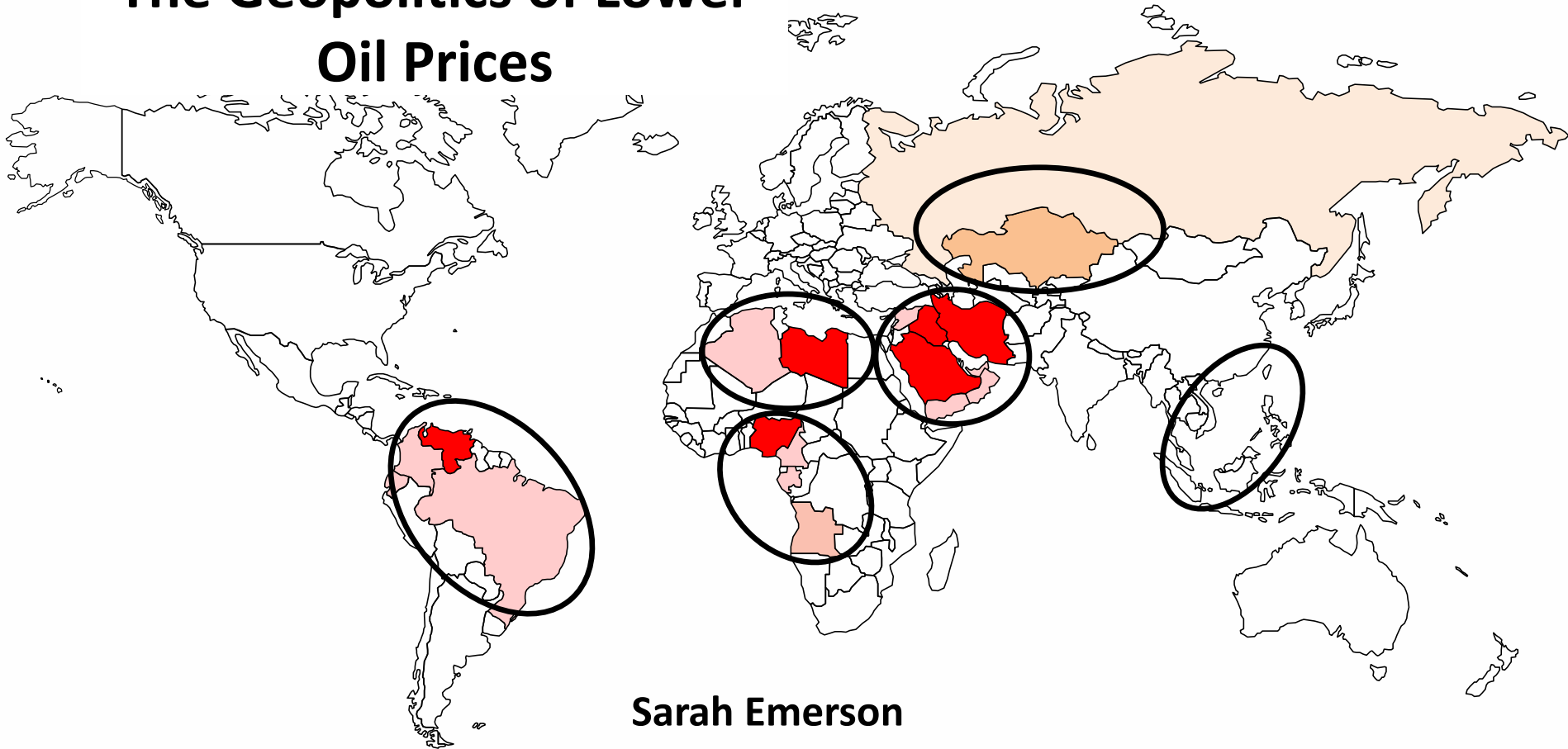
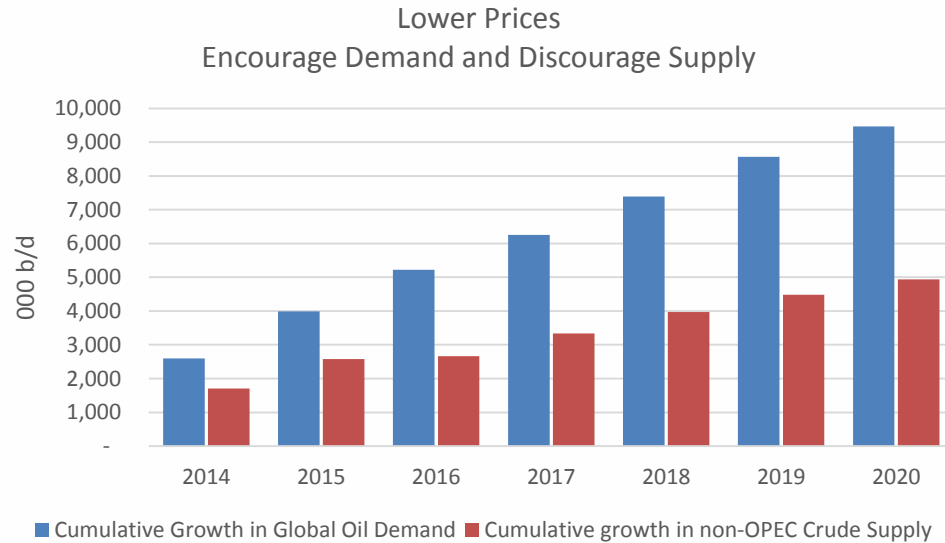


The Geopolitics of Lower Oil Prices



Sarah Emerson
ESAI Energy, LLC
EIA Conference
June 2015

Impact of Lower Oil Prices



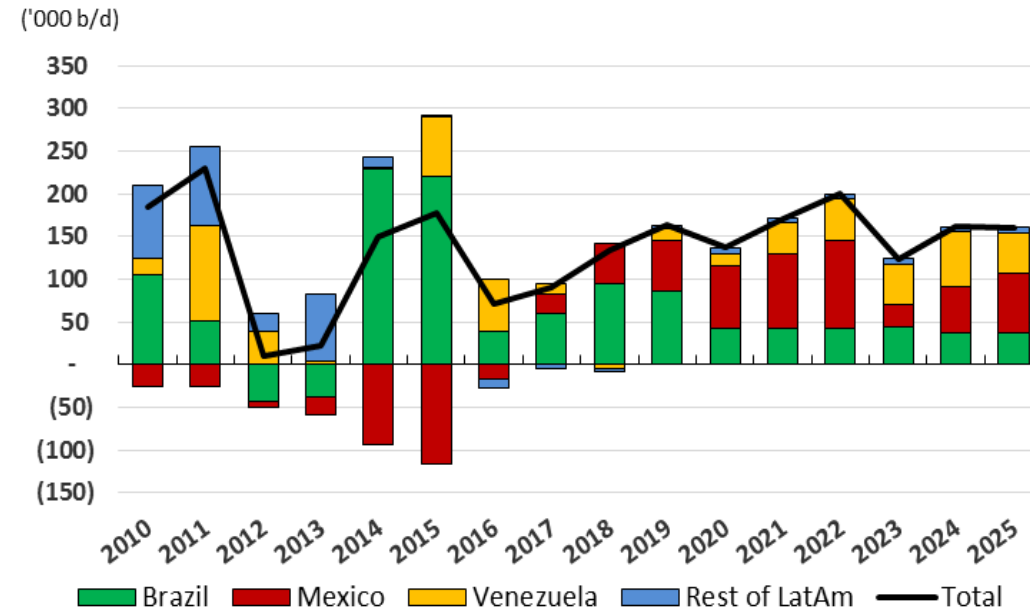
Generally:

- Stimulates Economic Activity in Net Importing Countries
- Hampers Economic Activity Net Exporting Countries

Country Impact may be Offset by:

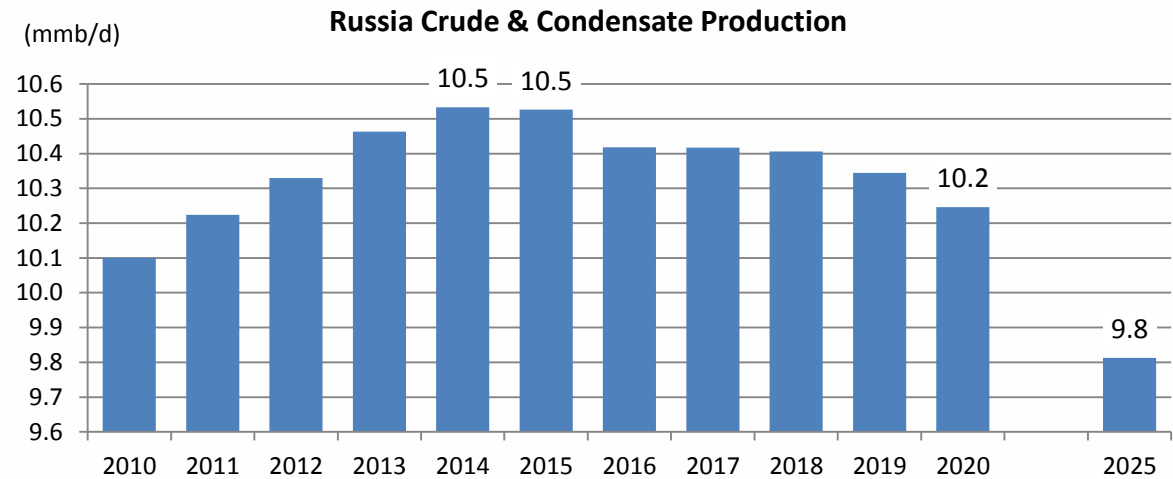
- Importers may also Produce Crude Oil
- Exporters have different fiscal condition
- Strength of Dollar
- Role of Subsidies in domestic market
- Policies Promoting Conservation, Alternatives

Latin America at Risk



- Mexico, Brazil, Colombia production expansion at risk in low price environment
- Venezuela, Ecuador political regimes at risk in a low price environment

Russian Growth Cannot Offset Mature Field Decline



- Sanctions and low oil prices push back time frame for East Siberia and Arctic development
- Meanwhile European Demand is Falling and Russian is Pivoting to Asia

Middle East: Decades of Instability

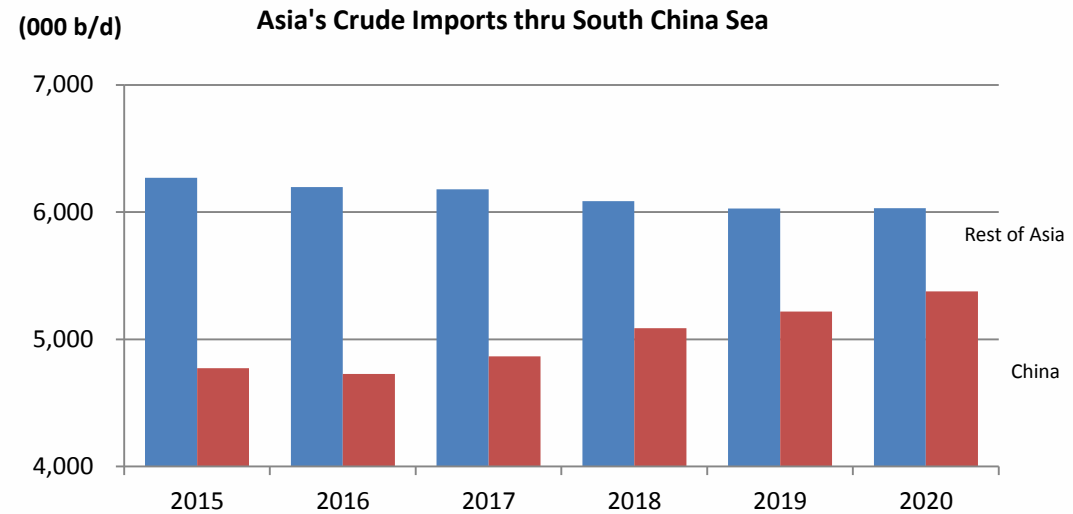


- Iran vs Saudi Arabia
- Shia vs. Sunni
- ISIS vs Governing Regimes
- Civil War in Syria
- Civil War in Yemen

	Capital Reserves \$B	# years of oil export revenues	Oil export revenues per capita \$
Saudi Arabia	714	2.9	8,302
Kuwait	31	0.4	24,566
UAE	76	1.0	8,300
Iran	68	1.7	507
Iraq	63	0.7	2,575

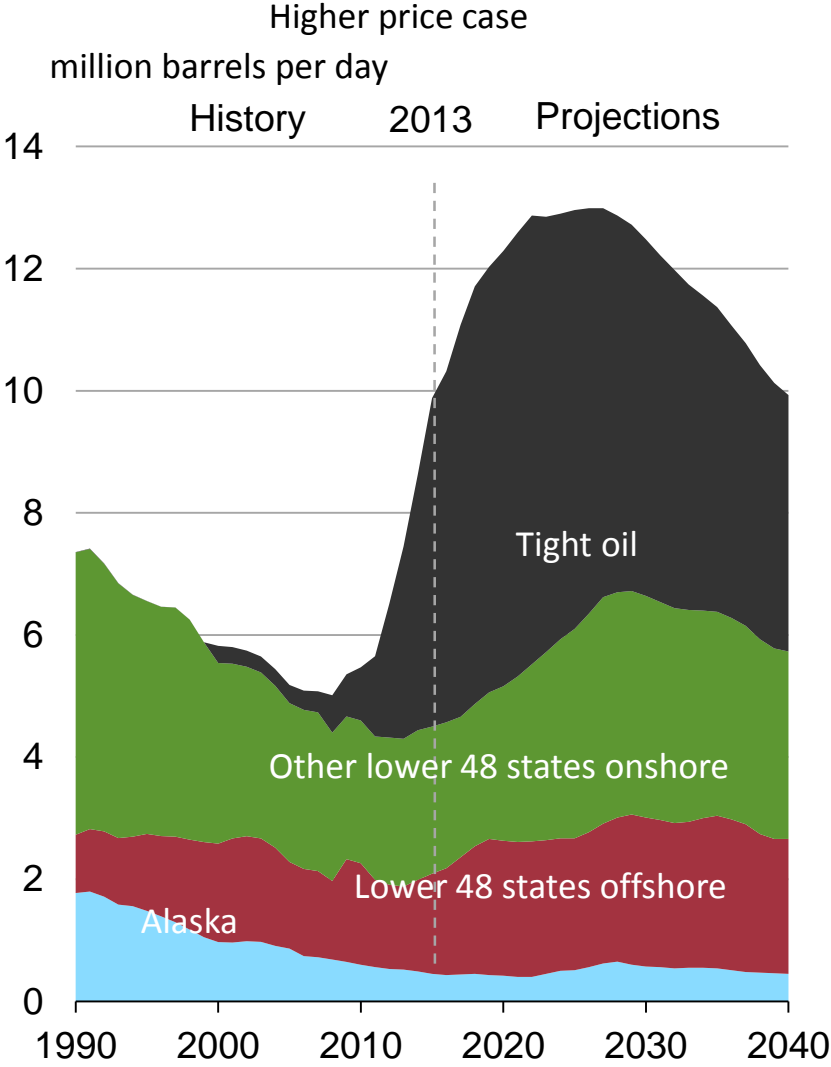
Sources IMF, ESAI

South China Sea: Flashpoint

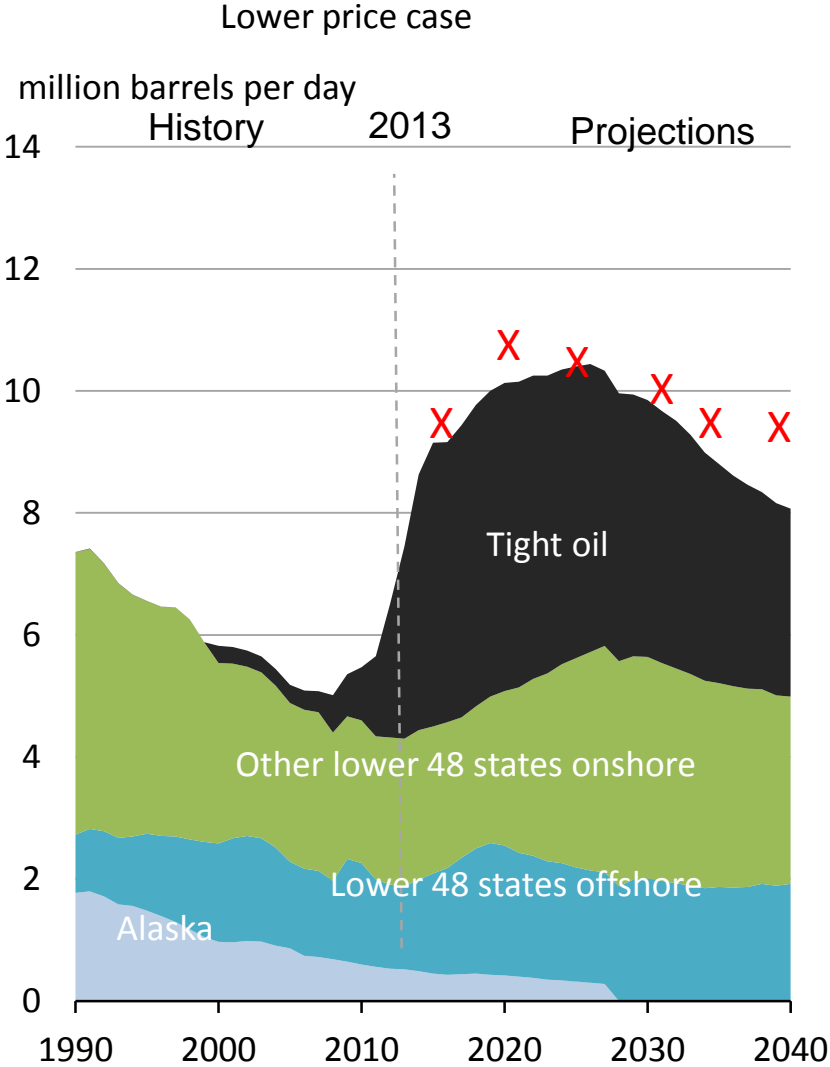


- Potential for Conflict at Sea
- U.S. Migrating from Engagement to Containment

The higher price case results in 2-3 million barrels per day of increased production



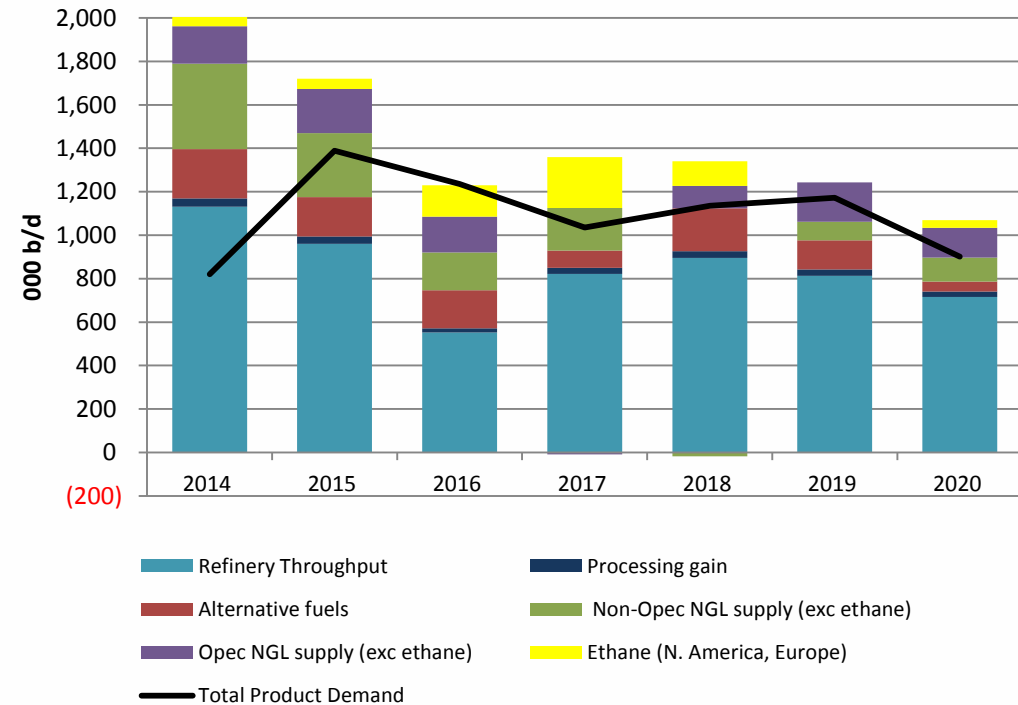
Source: EIA, Annual Energy Outlook 2015



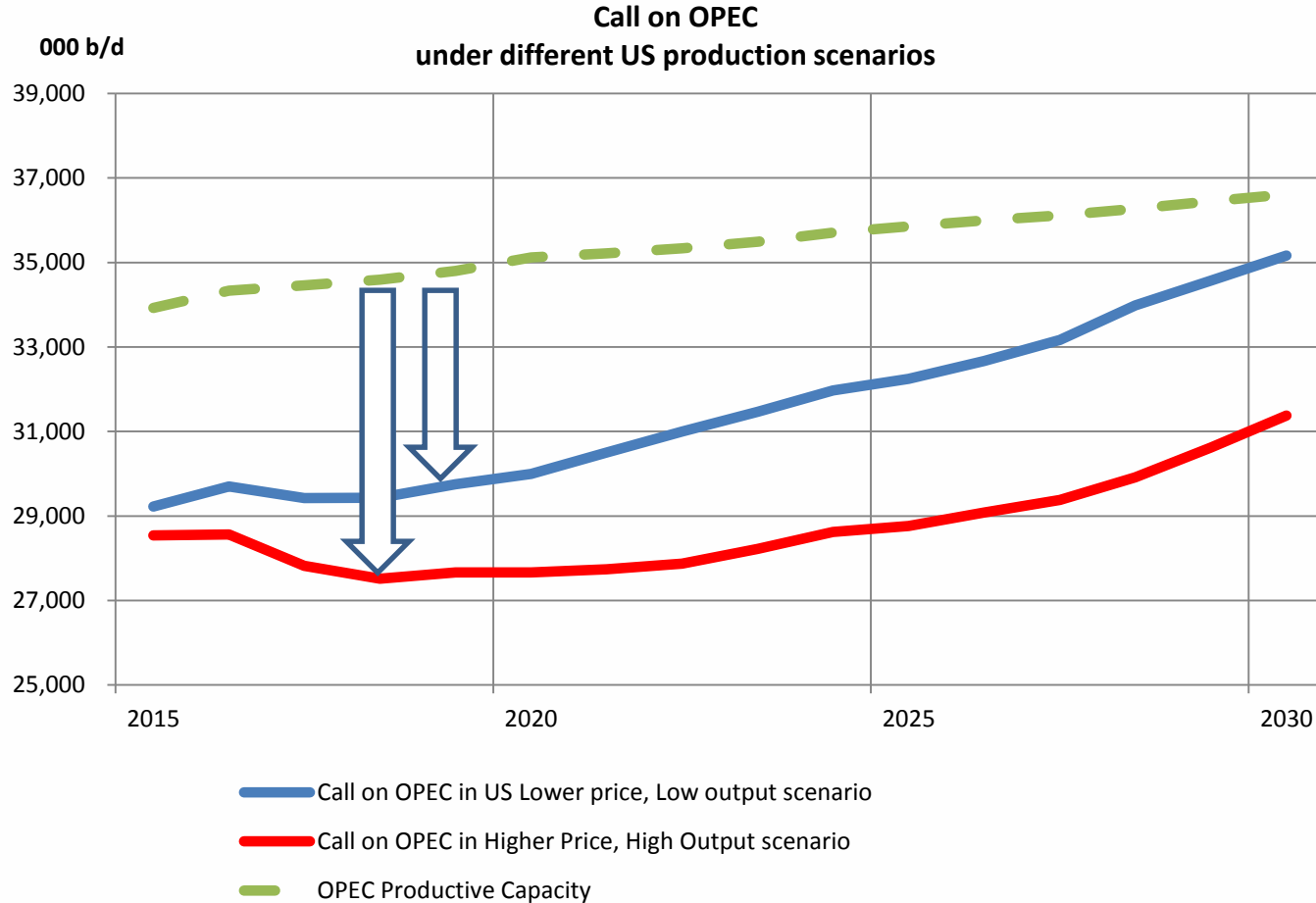
Oil Supply Comes in Many Forms

Global Oil Balance with Outlook to 2020							
	2014	2015	2016	2017	2018	2019	2020
Global Oil Demand							
OECD							
Sub-Total	45.4	45.9	46.0	46.0	46.0	46.0	45.8
NON-OECD							
Sub-Total	46.6	47.6	48.7	49.7	50.9	52.0	53.1
Total	92.0	93.4	94.7	95.7	96.8	98.0	98.9
<i>annual delta (mmb/d)</i>	<i>0.8</i>	<i>1.4</i>	<i>1.2</i>	<i>1.0</i>	<i>1.1</i>	<i>1.2</i>	<i>0.9</i>
Non-OPEC Oil Supply							
Crude and Field Cond.							
OECD	15.9	16.4	16.2	16.4	16.7	17.0	17.3
FSU	13.4	13.5	13.4	13.4	13.4	13.4	13.3
Africa	1.9	1.9	1.9	2.0	2.0	2.0	2.1
Latin America	4.1	4.3	4.3	4.4	4.5	4.5	4.6
Middle East	1.3	1.2	1.2	1.3	1.4	1.4	1.5
China	4.2	4.3	4.3	4.3	4.3	4.4	4.4
Other Asia	3.1	3.1	3.1	3.2	3.2	3.2	3.2
Other non-OPEC	0.1	0.1	0.1	0.2	0.2	0.2	0.2
Other Supply							
Processing Gain	2.7	2.7	2.7	2.8	2.8	2.8	2.9
Non-OPEC NGLs	4.2	4.5	4.6	4.8	4.8	4.9	5.0
Ethane	1.4	1.4	1.6	1.8	1.9	1.9	2.0
NonConv Crude	2.2	2.3	2.4	2.5	2.6	2.7	2.8
NonConv Fuels	2.7	2.8	3.0	3.1	3.3	3.4	3.5
Total	57.1	58.5	59.0	60.1	61.1	61.8	62.5
<i>annual delta (mmb/d)</i>	<i>2.5</i>	<i>1.5</i>	<i>0.4</i>	<i>1.2</i>	<i>1.0</i>	<i>0.8</i>	<i>0.7</i>
OPEC NGLs	5.8	6.0	6.2	6.2	6.3	6.5	6.6
Call on OPEC Crude							
Call on OPEC	29.1	28.9	29.5	29.4	29.5	29.7	29.8
Actual OPEC	30.2	30.7	30.4	30.3	30.4	30.6	30.7
Surplus/Deficit	<i>1.1</i>	<i>1.8</i>	<i>0.9</i>	<i>0.9</i>	<i>0.9</i>	<i>0.9</i>	<i>0.9</i>

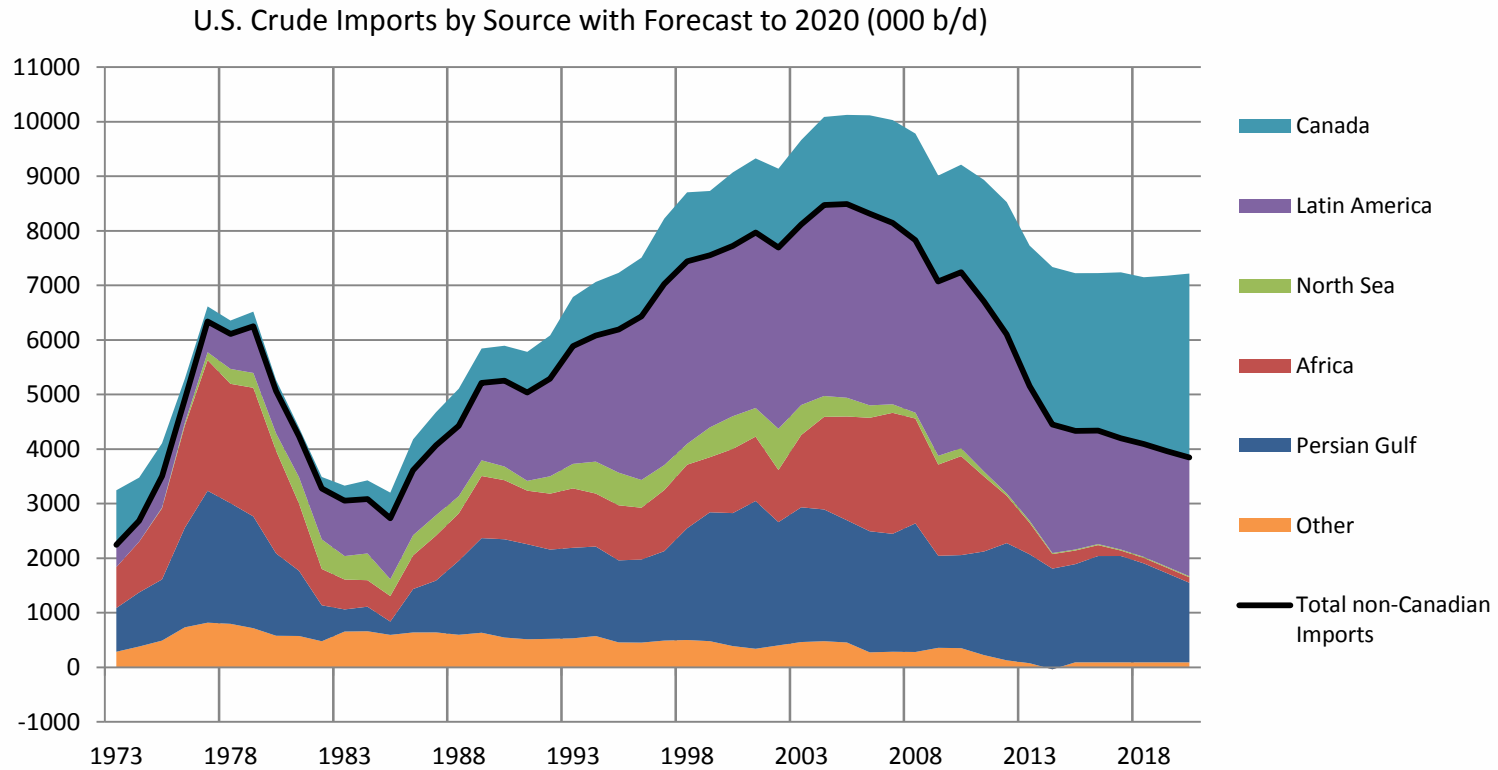
**Sources of Oil Supply in the Global Market
Annual Growth**



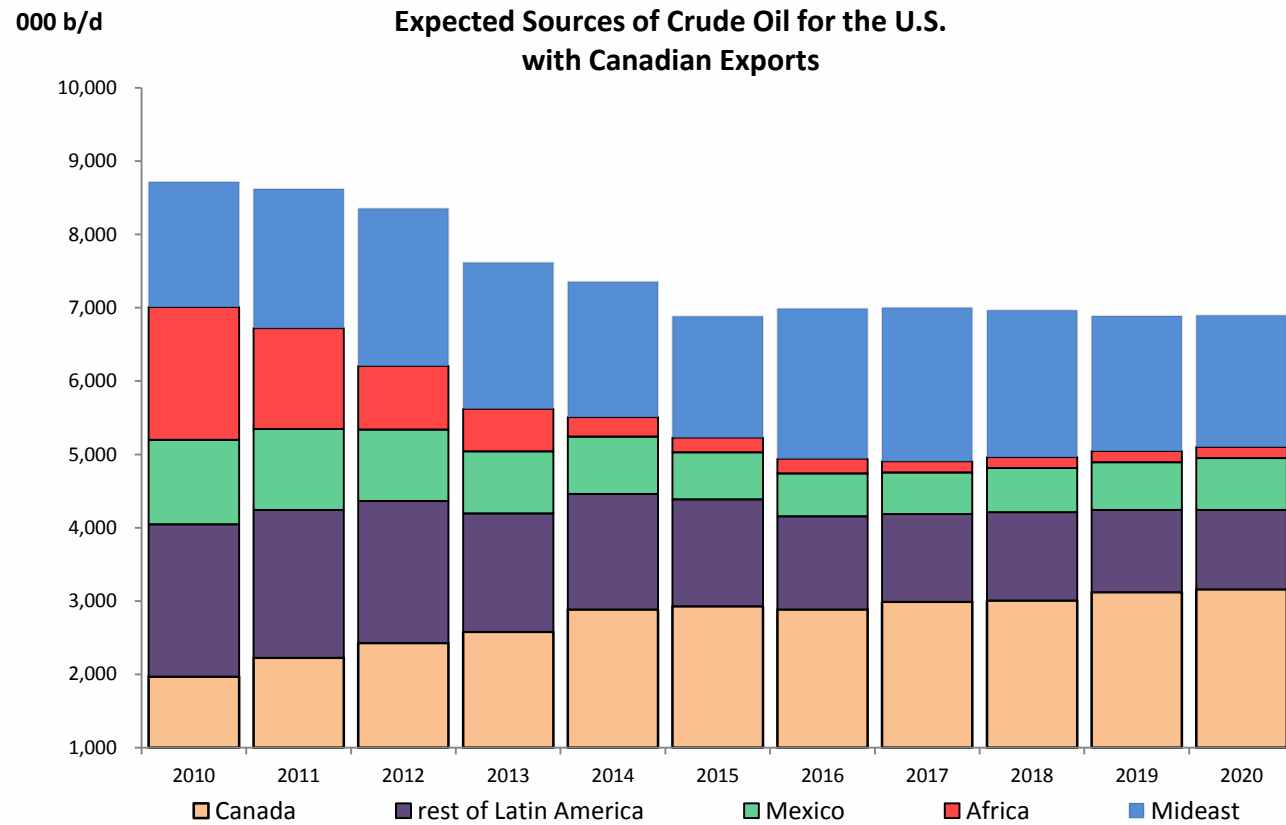
No Room for High Output Scenario



US Remains Dependent on non-Canadian Crude Imports

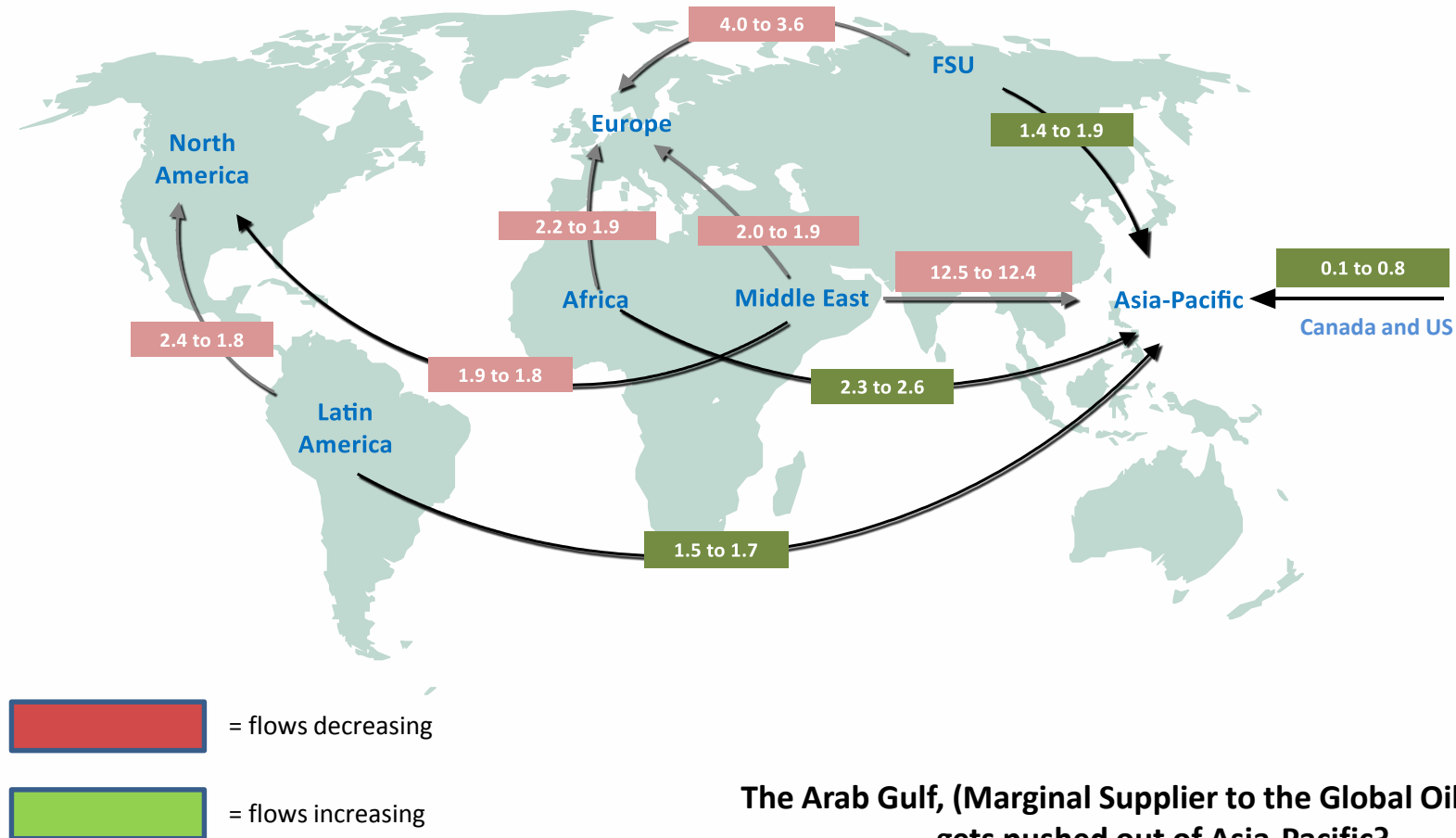


Canada's Trade impacts US Trade

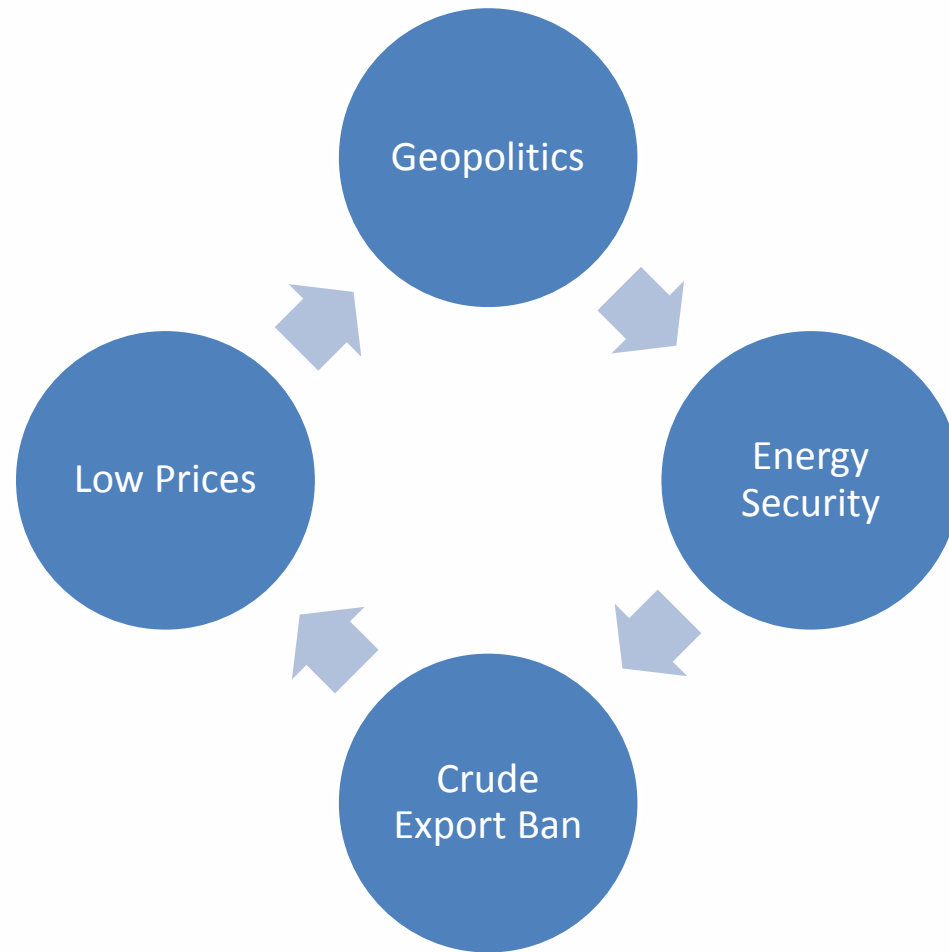


Global Crude Trade Flows are Adjusting

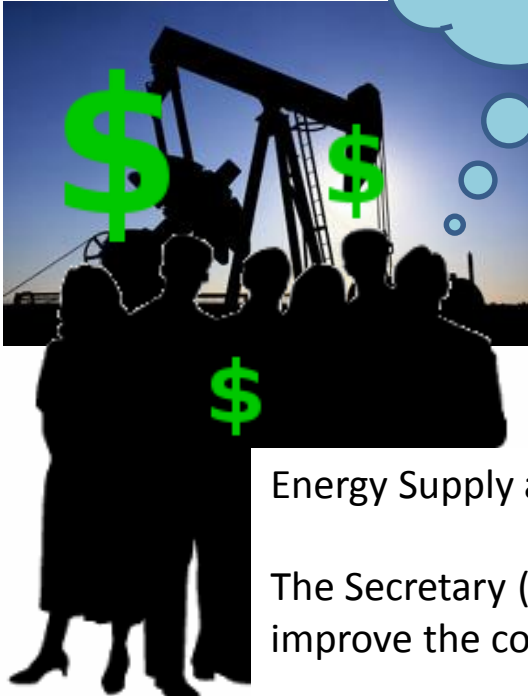
Change in NET Crude Oil Trade Flows
2014 to 2020
million b/d



**The Arab Gulf, (Marginal Supplier to the Global Oil Market)
gets pushed out of Asia-Pacific?**

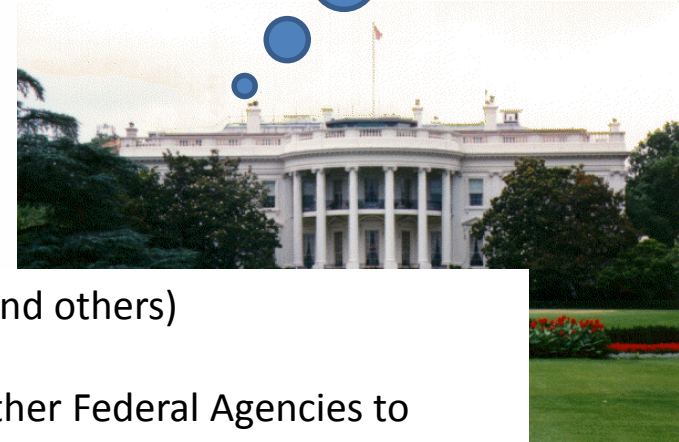


Has this been a Debate?



Unfettered
Markets!
Jobs!!

VS



Sell to Canada,
Export
Condensate,
swap with
Mexico?

Energy Supply and Distribution Act 2015 (Senator Murkowski and others)

The Secretary (of Energy) shall collaborate with the heads of other Federal Agencies to improve the conceptual development of energy security, (and...)

May consult with allies and key trading partners with respect to energy security issues resulting from changes in the energy marketplace

Energy Security: 1980s and Today?

- Market Context in 1987:
- Supply Glut, Low Prices
- US Crude Imports about 30% of oil demand
- OPEC can influence prices with its production policies
- Oil is produced in unstable regions – oil import premium paid by U.S. Consumer
- Significant externalities (environment and military force) not reflected in oil price

February 1987: Factors Affecting Oil and Gas Outlook (NPC)

February 1987: Domestic Petroleum Production and National Security (API)

March 1987: Energy security: A Report to the President (DOE)

Perception in 1987: Imports will grow

Perception in 2015: Imports will fall (but how far and for how long)

Energy Security: 1980s and Today?

Crisis – Supply Disruption – Oil Price Spike

Energy Security: Reduce Vulnerability:
Economic and Political Liability to a Change in Volume or Price of Foreign Supply

Vulnerability



Import Dependence

Assess
Probability of Significant Disruption
And
Probability of Price Spike

Policy Responses in 1980s

Short Term Solutions (Emergency Management)

- Strategic reserve
- Sharing
- Fuel-switching
- Demand management
- Military action

Long-term Solutions (Reducing Vulnerability)

- Conservation
- Alternative Fuels
- Address societal cost of oil use (environment)
- Raise Production, Reduce Consumption
- Identify the import premium that reflects the cost of keeping a military force in the PG region
 - Gasoline, btu tax
 - Import Tariff

Debate on the Import Tariff

Pros

- Discourage Domestic Consumption
- Encourage Domestic Production
- Encourage alternatives or fuel-switching
- Improve Trade Balance
- Transfer Rent from Exporting Countries to U.S.
- Tariff revenues could be used to offset social costs of oil use
- Reduce Need for Military Presence in Persian Gulf

Cons

- Lower GDP by raising cost of fuel
- Drain America First would lead to bigger problems in the future
- Weaken exporting countries, exposing them to instability
- Hurt exporting countries that are allies

Should we Impose an Import Tariff Should we Lift the Export Ban

Pros

- Discourage Domestic ~~Consumption~~ **Advantage for Exporting Products**
- Encourage Domestic Production ✓
- Encourage alternatives or fuel-switching X
- Improve Trade Balance ✓
- Transfer Rent from Exporting Countries to U.S. ✓
- Tariff revenues could be used to offset social costs of oil use X
- Reduce Need for Military Presence in Persian Gulf X
- Help Allies?

Cons

- Lower GDP by raising cost of fuel ?
- Drain America First would lead to bigger problems in the future ✓
- Weaken exporting countries, exposing them to instability ✓
- Hurt exporting countries that are allies ✓
- Increase Need for Military presence in other parts of the World? ✓

Is the U.S More or Less Vulnerable ...if we can Export Crude?

What is in the best of interests of the United States?

Short-Term Considerations in an Emergency

- U.S. producers will directly benefit
- U.S. consumers will confront higher prices
- The President can order U.S. barrels to stay in U.S.
- U.S. purchasing power can secure barrels (at a cost) regardless of trade direction
- Still have SPR and other emergency management

Long-term Considerations with regard to National Security

- Is Job Creation Central to our National Security?
- Is GDP Growth Central to our National Security?
- Is there benefit to a slower development of our own reserves (Should we Drain America First)?
- Are we missing an opportunity to reduce our vulnerability by extending our domestic resource and cutting our imports further and longer?
- Should we consider the associated hazards of oil spills, train derailment, gas flaring, land use?
- How do we compare the benefits to producing sector, refining sector, consuming sector?
- Should the U.S. discourage consumption of oil and/or develop alternatives?
- What are implications for our Climate policy or other environmental objectives?
- What is the impact on the U.S. military role in the world?
 - Are we more likely to be pulled into conflict
 - How will this impact U.S. relationship with China

Thank you

Sarah Emerson

781-245-2036

semerson@esai.com