

The Impact of Climate Change Policy on the Canadian Energy Sector

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By Tony Peluso and Ian Hayhow
Energy Policy Branch



Natural Resources
Canada

Ressources naturelles
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Outline of Presentation

1. Background
2. Policy Setting
3. Modelling Structure
4. Results
5. Conclusion



1. Background

- Energy prices of 2010US\$ 26/bbl in 2010 for WTI, 2010US\$ 2.21/MCF at US border in 2010
- “Kyoto Forever” World
- Two international permit prices: 2000CDN\$ 10 and \$50
- BAU Energy and Emissions



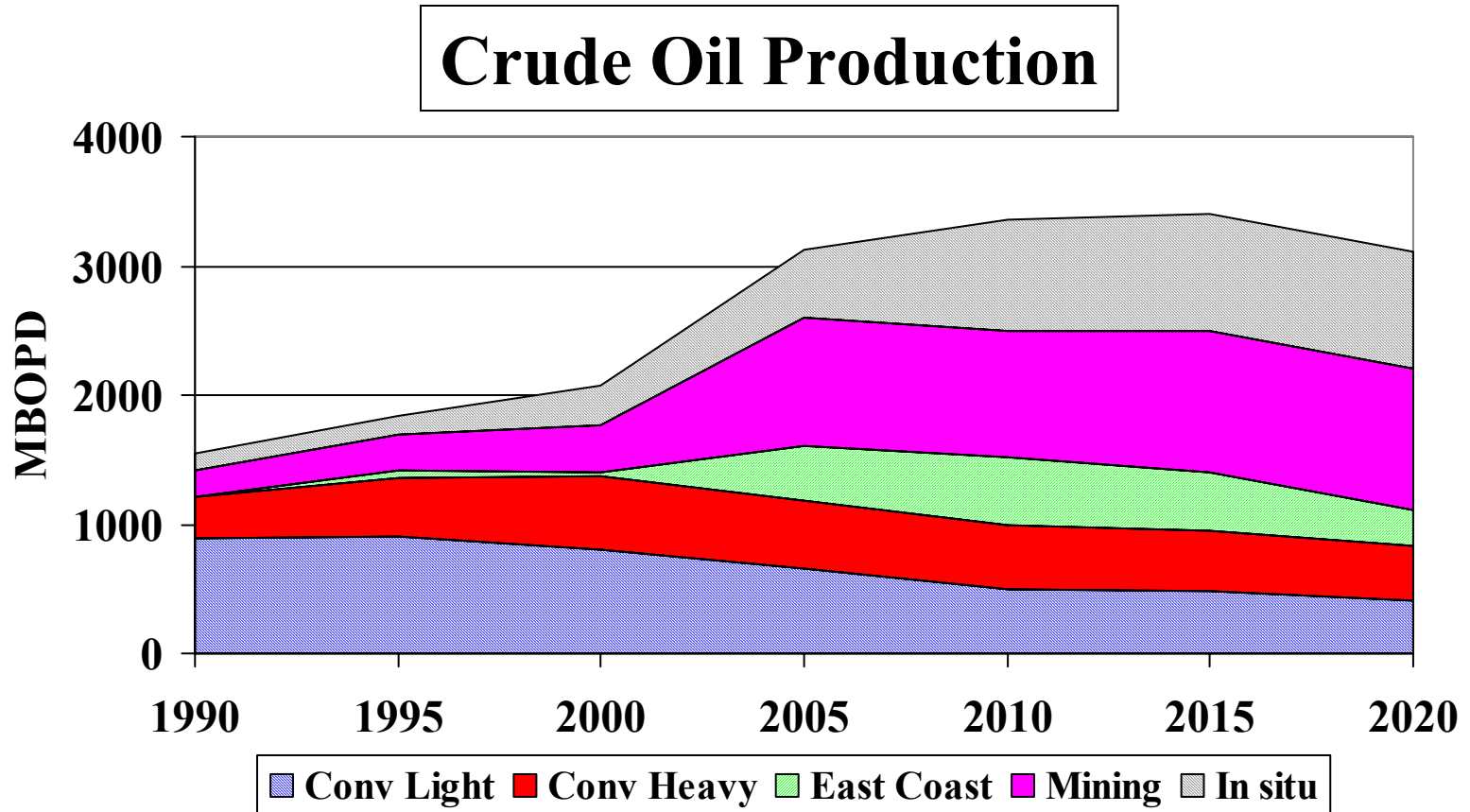
1. Background

Primary Energy Demand 2010

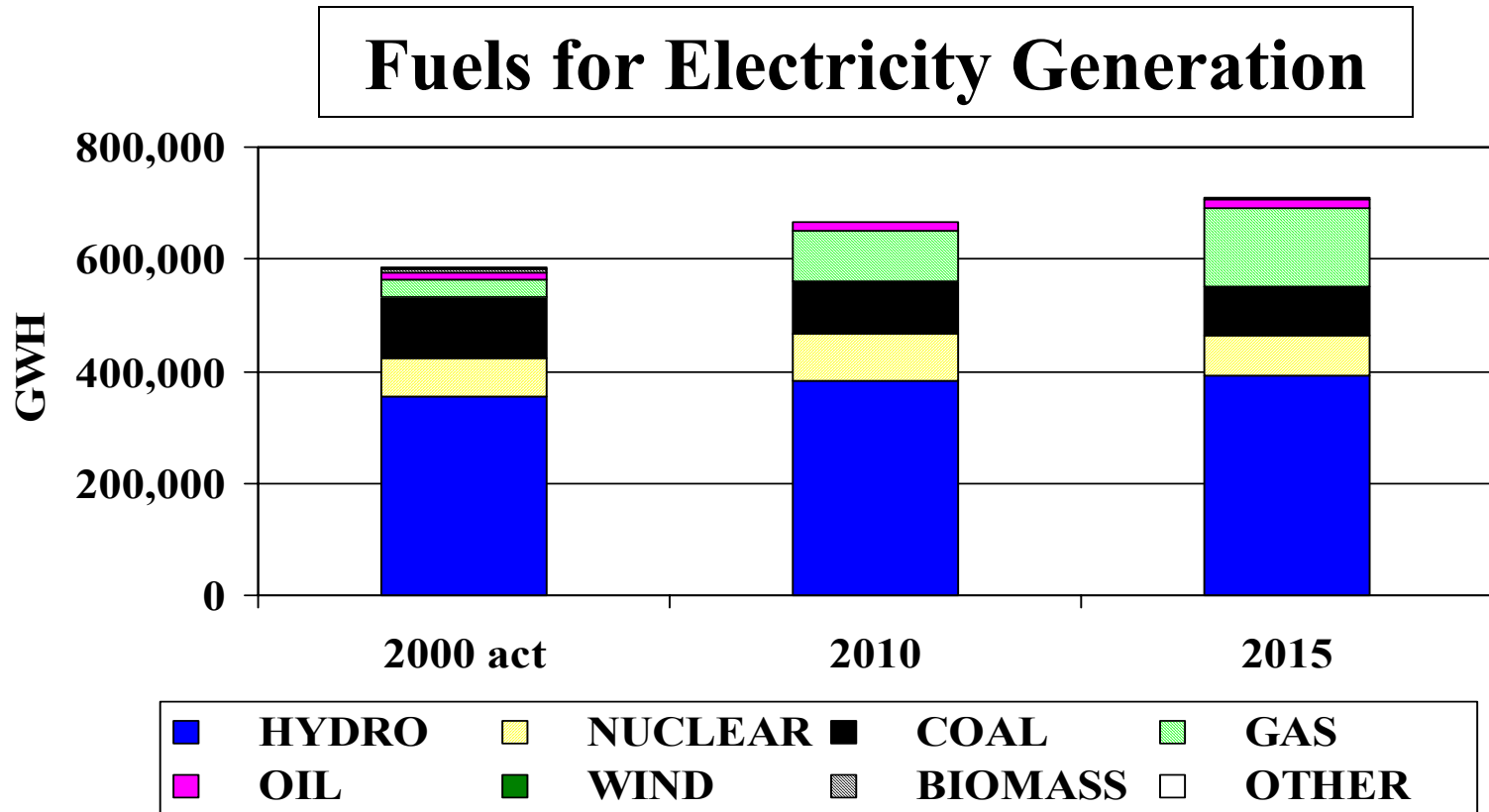
<i>Fuel</i>	<i>Demand (PJ)</i>
Coal	1,200
Oil	4,500
Nuclear	900
Hydro	1,500
Natural Gas	4,200
Other (Renewables)	700
Total	13,000



1. Background

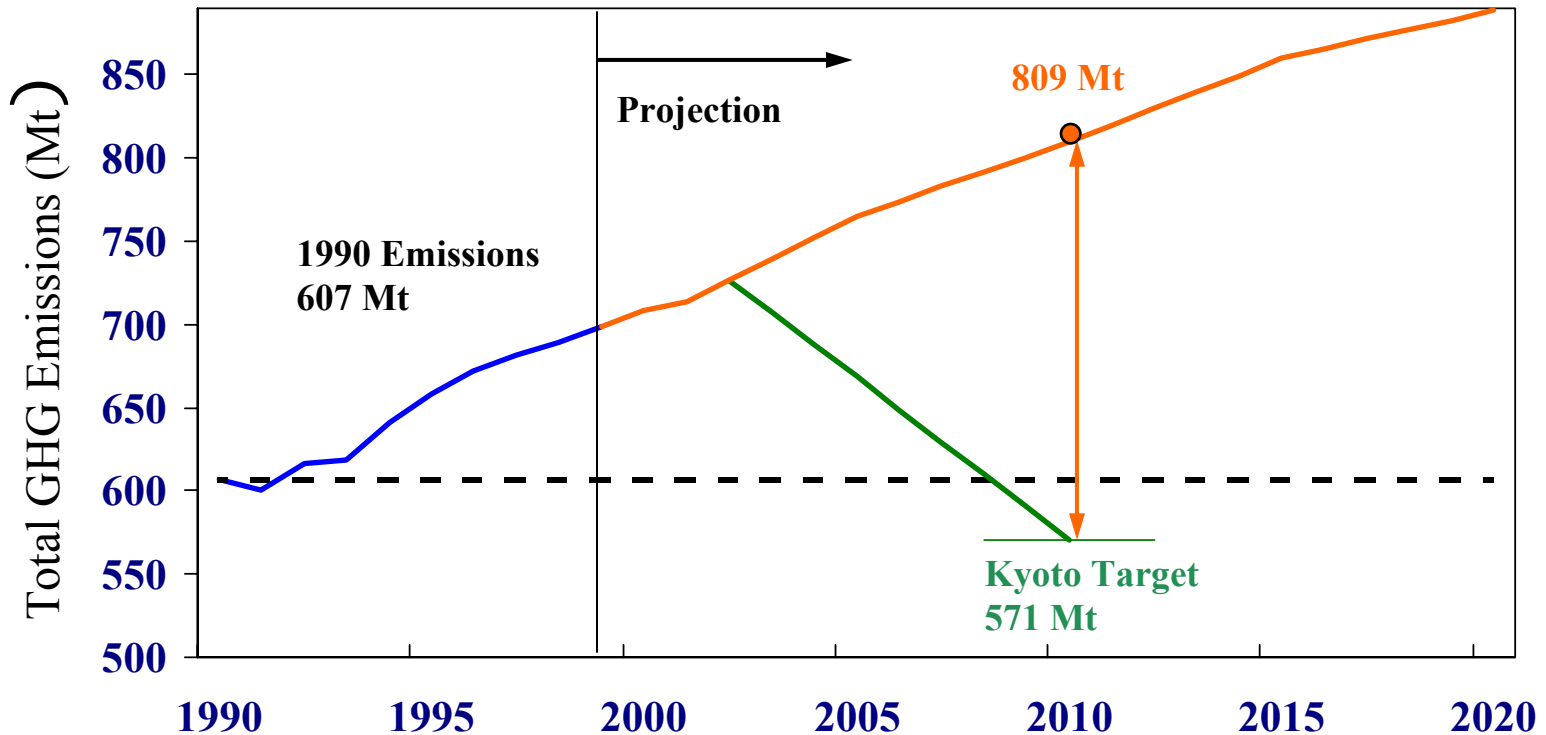


1. Background



1. Background

Projected GHG Emissions



2. Policy Setting

Two Policy Packages:

- Broad-as-Practical: Full-cost permit purchase, with potential down-stream incidence
- Large Final Emitters: Intensity-based, gratis allocation



2. Policy Setting

Large Final Emitters package addresses two policy issues:

- Competitiveness issues
- Equity issues

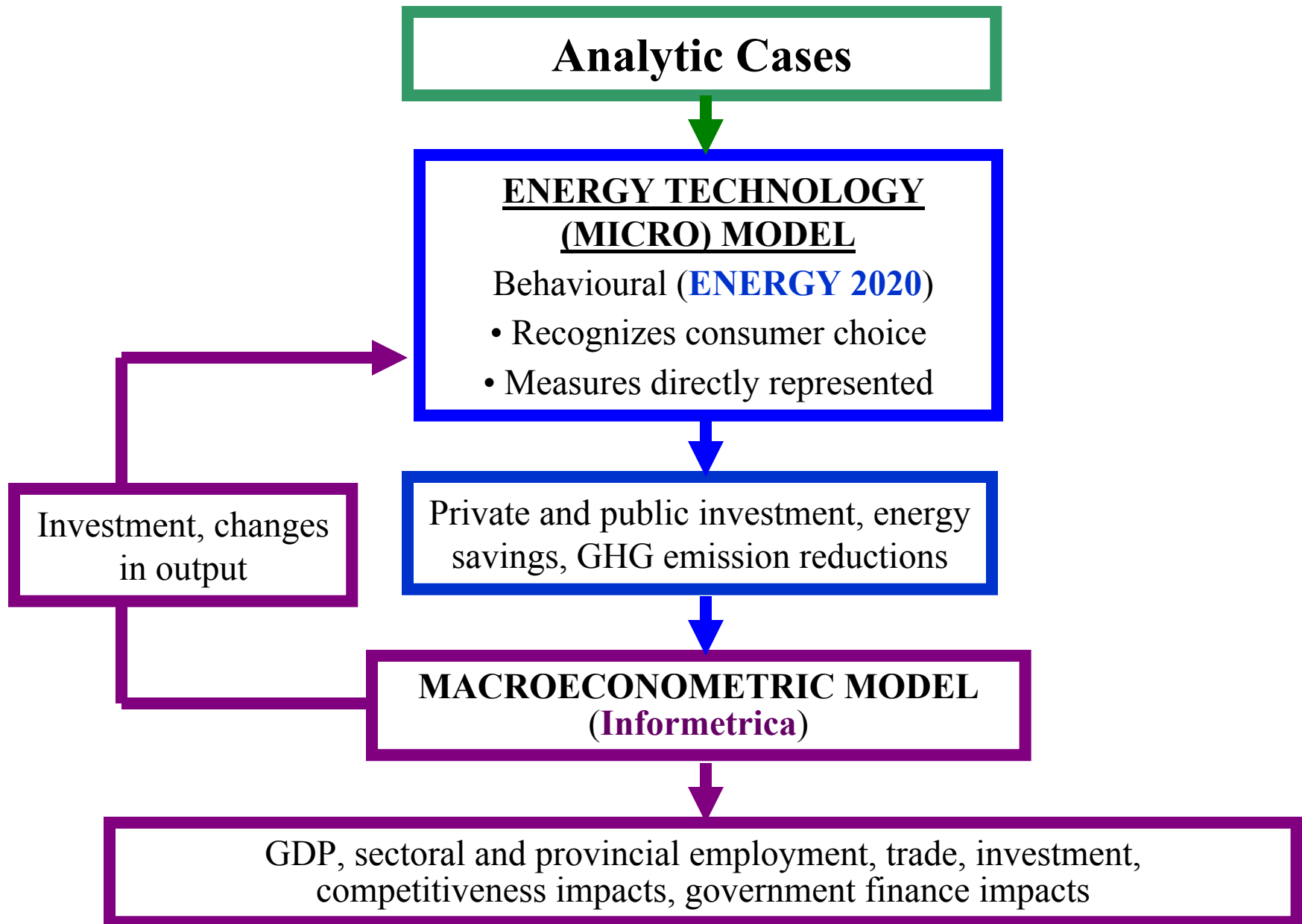


2. Policy Setting

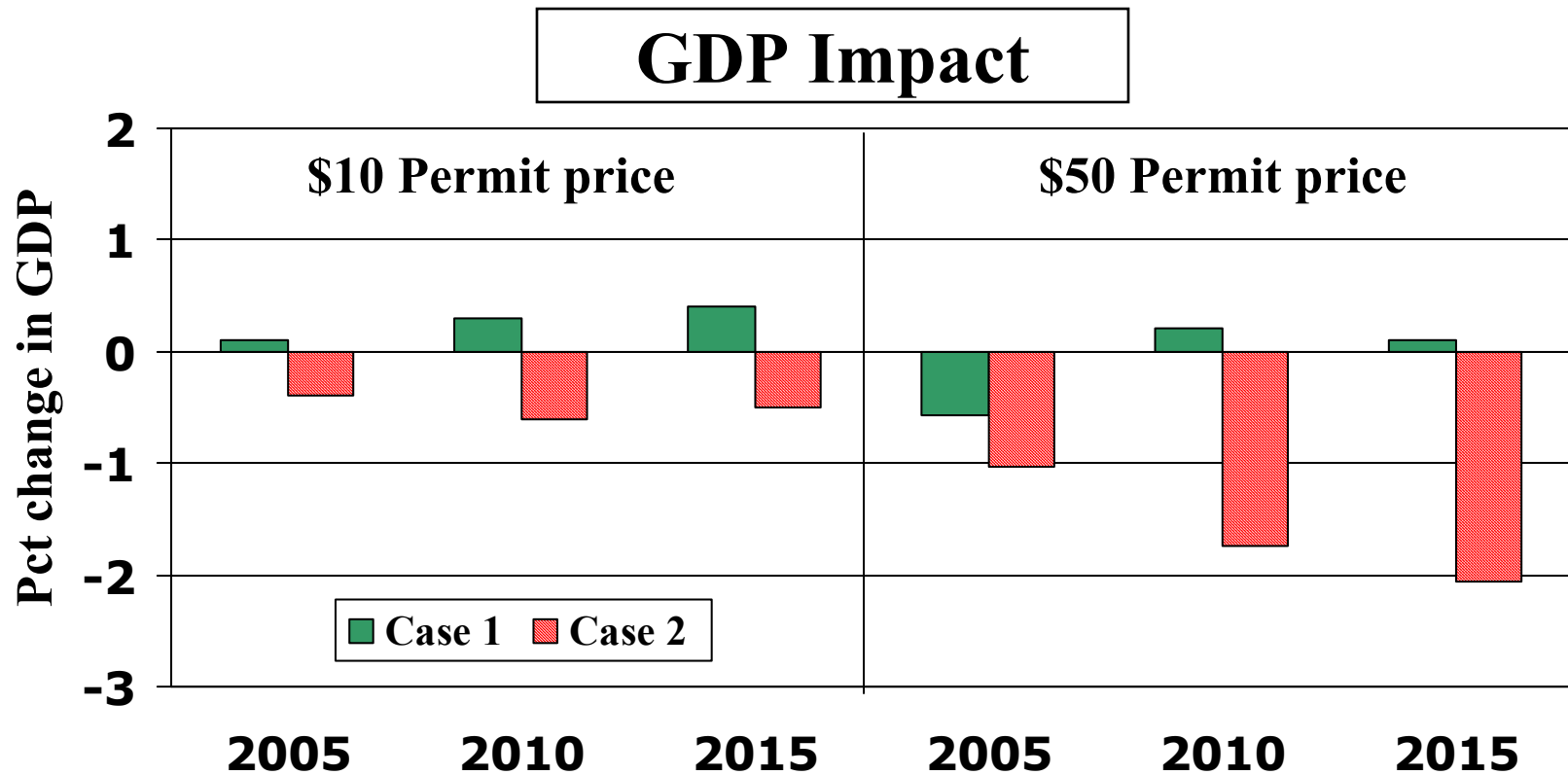
- Difference in coverage between permit trading systems
- Both packages had targetted measures, more extensive for LFE package
- Both packages assumed constant federal balances, by adjusting personal income taxes
- 2 policy packages X 2 permit prices = 4 scenarios



3. The Modelling Structure

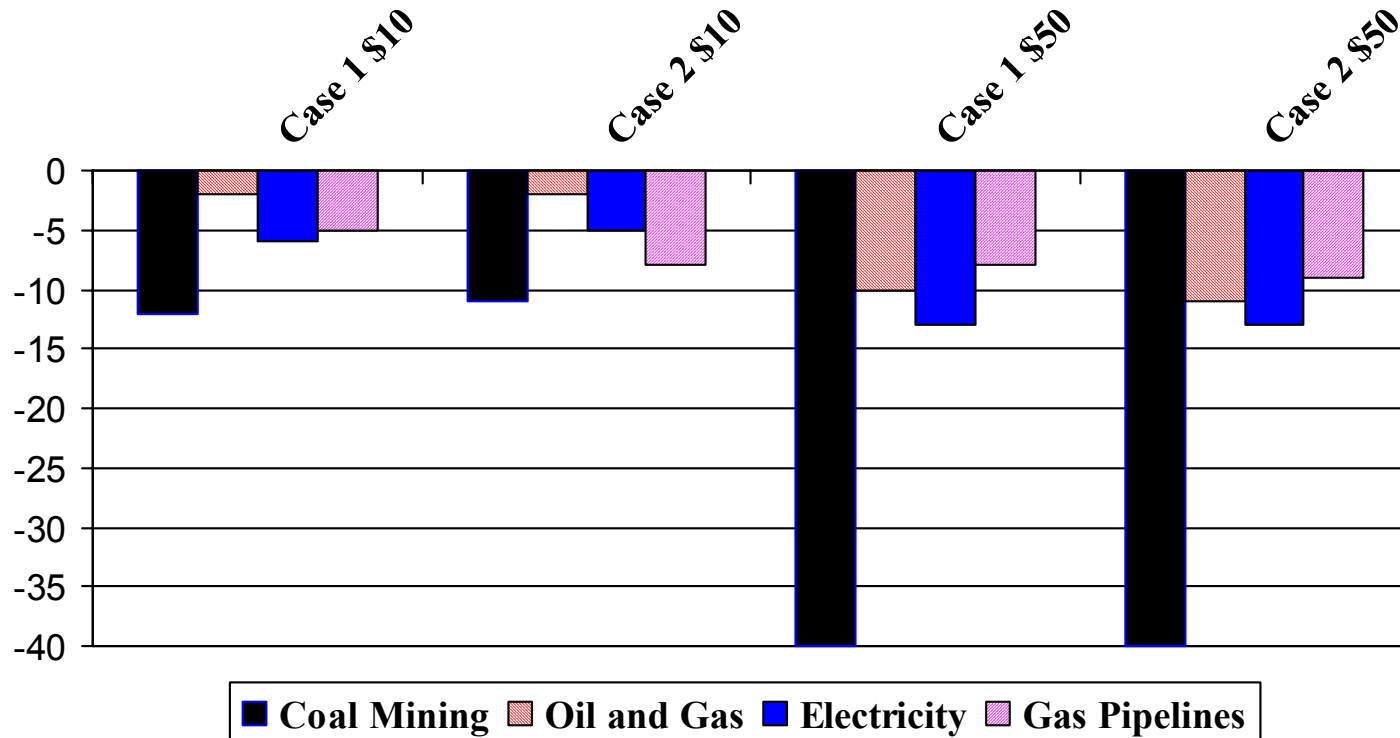


4. Results



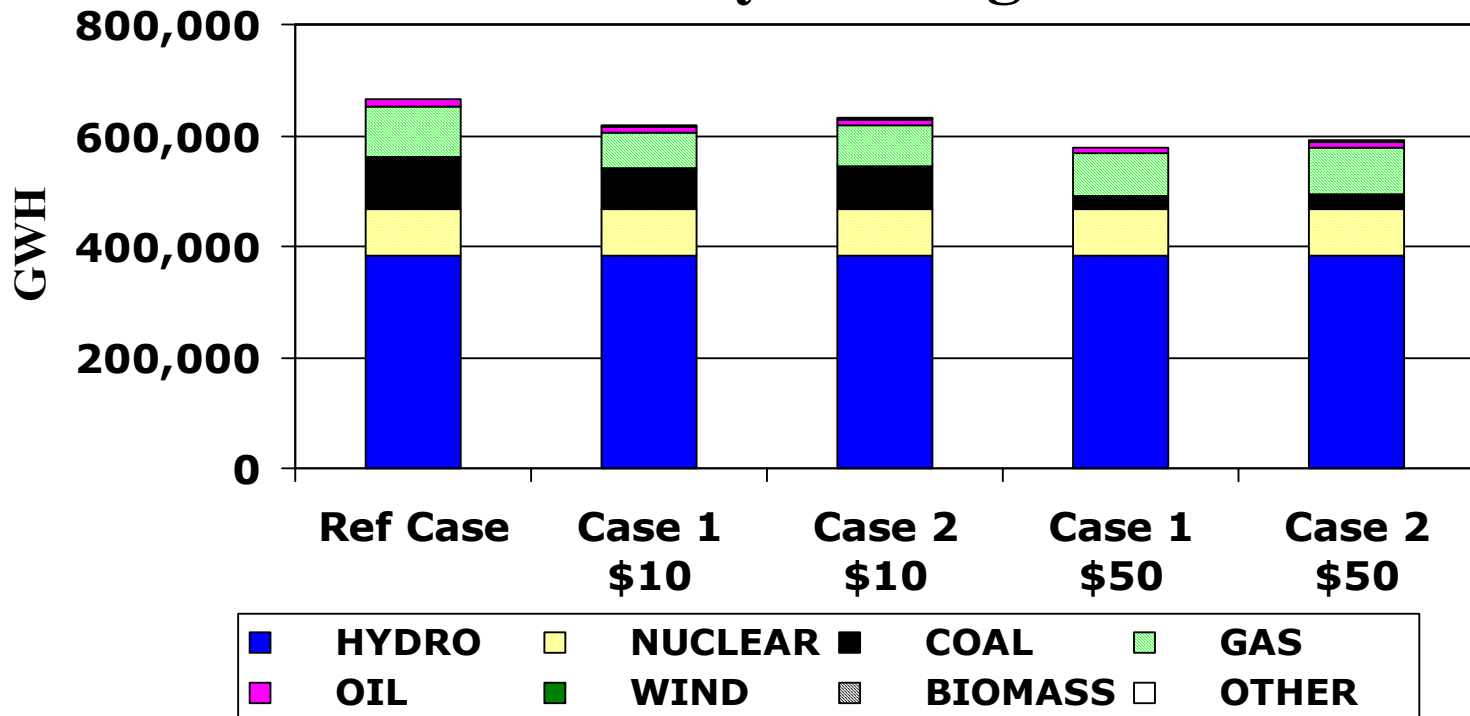
4. Results

Energy Producers: Change to Output 2010



4. Results

Electricity Generation in 2010: Fuels Before & After Policy Packages



4. Results

Percent Changes to Ontario's Energy Prices 2010

<i>Fuel</i>	<i>\$10 permit price</i>		<i>\$50 permit price</i>	
	<i>Case 1</i>	<i>Case 2</i>	<i>Case 1</i>	<i>Case 2</i>
Residential electricity	9	2	18	4
Natural gas	6	1	29	6
Gasoline	2	0	9	2
Coal	13	3	63	13



5. Conclusion

Difficult to reconcile “efficiency” and equity



tpeluso@nrcan.gc.ca



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