

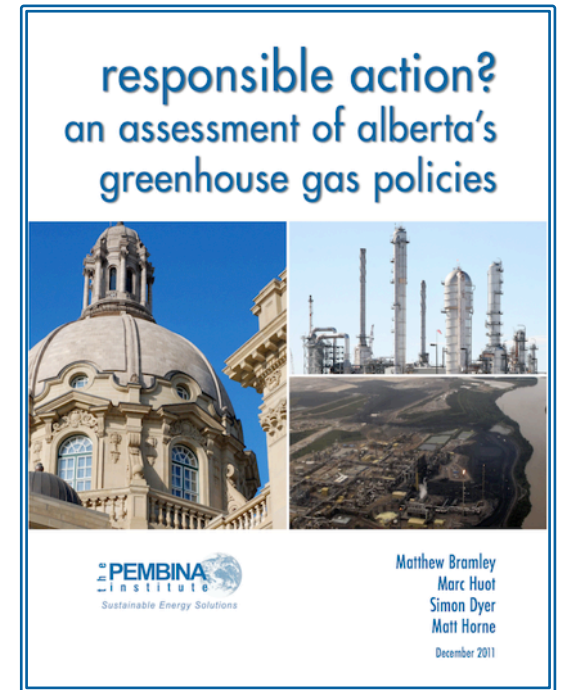
## Media Briefing

# **Responsible Action? An assessment of Alberta's greenhouse gas policies**

Simon Dyer  
December 16, 2011

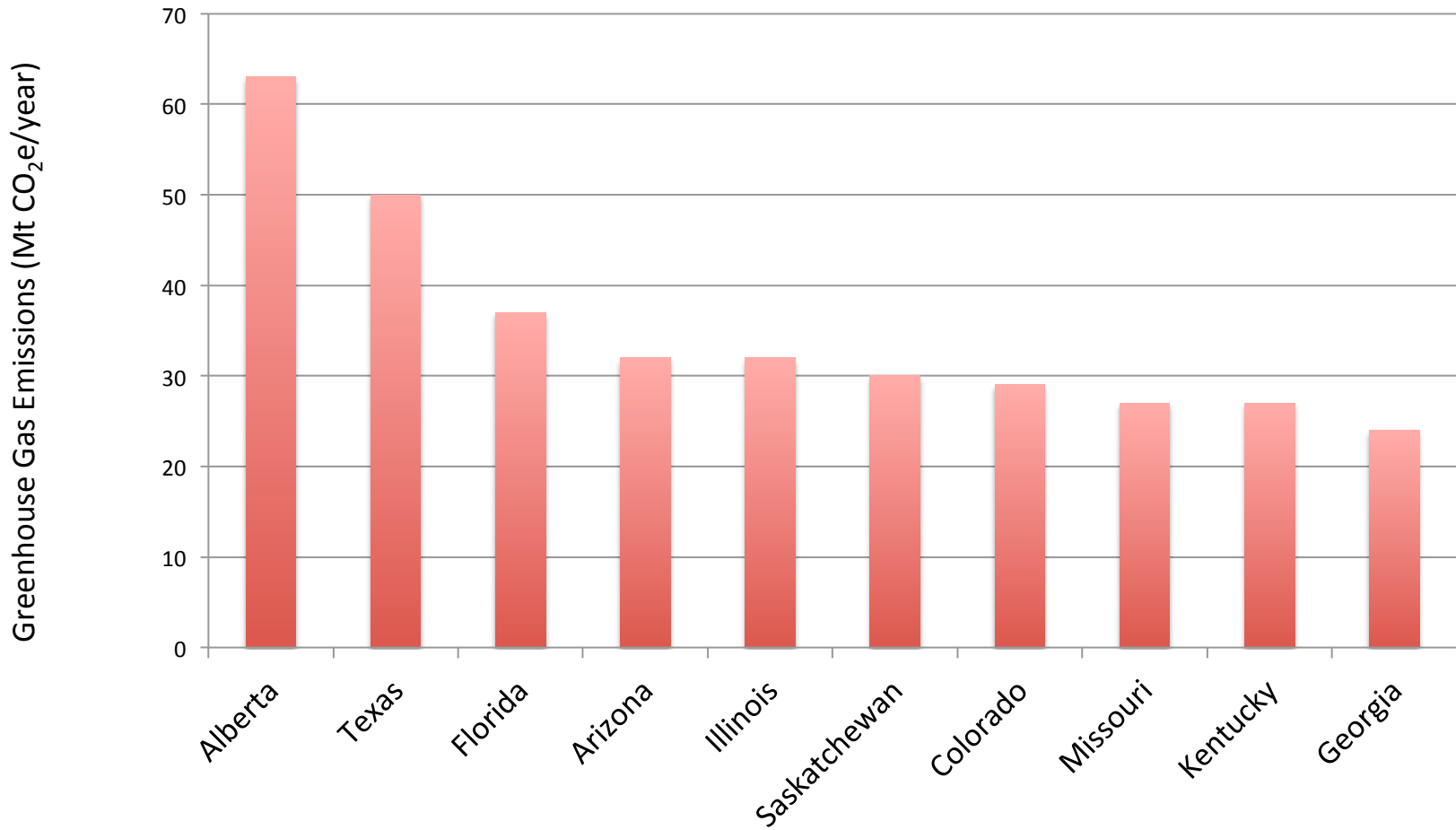
# Overview of the report

- Summary and context of Alberta's GHG policies
- Evaluation of Alberta's policies:
  - Do Alberta's policies enable the province to meet its climate commitments
- Greenhouse gases and the oilsands
  - Significance of oilsands sector for climate policy
  - Opportunities for limiting oilsands emissions
  - Lessons for policy makers
- Alberta's contribution in context
- Recommendations

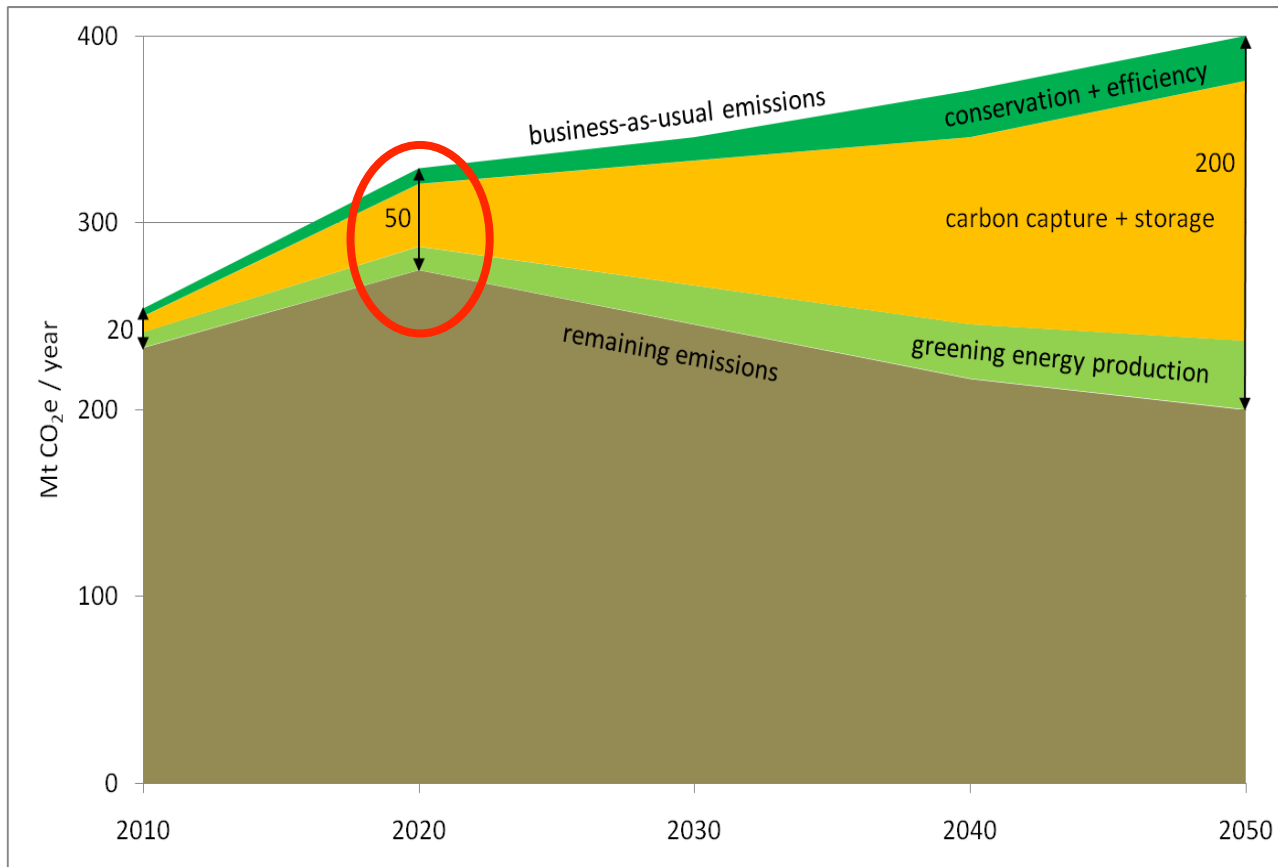


# Why Alberta's emissions matter

Growth in absolute greenhouse gas emissions in top 10 North America Jurisdictions (1990–2009)



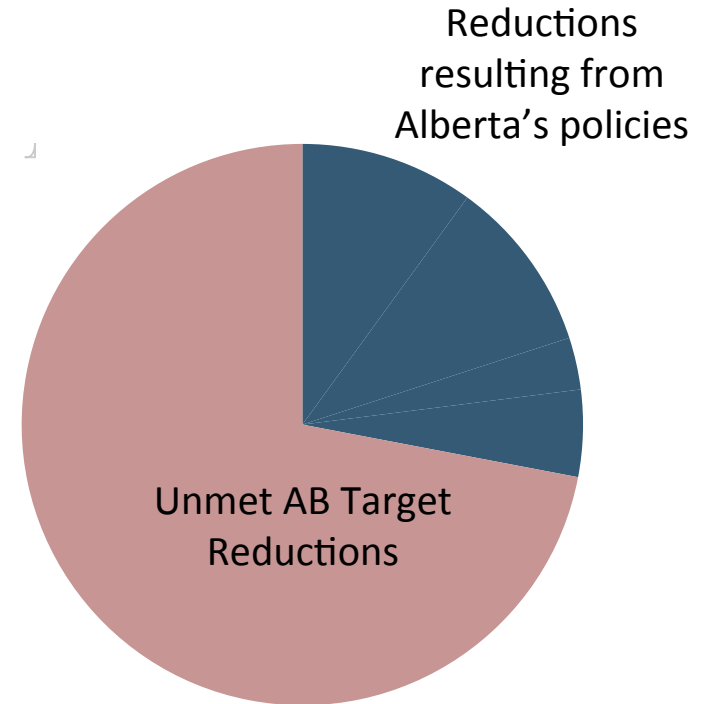
# Alberta's climate targets



- Alberta's 2020 target: 50 Mt below BAU
- Alberta's fair share to meet Canada's target: 83 Mt
- >70% reductions through CCS

# Summary of findings

- Alberta's current GHG policies likely achieve only 1/3 of target reductions
- Emissions set to grow even more rapidly (→ 2020) than climate plan foresees
- Policies fare poorly compared to important criteria, including accountability and good use of public resources



# Summary of findings (cont'd)

- Alberta's carbon price is too low to incent reductions
- No clear roadmap for large-scale deployment of CCS
- No clear plans to increase future stringency or scale of any current GHG policies
- No apparent process to evaluate the overall performance of GHG policies
- No published performance evaluation since current climate plan (early 2008)
- No explanation of how specific policies would deliver targeted reductions

# Evaluation of Alberta's GHG emissions policies



# Alberta's policies

- **Specified Gas Emitters Regulation (SGER)**
- **Carbon Capture and Storage (CCS) Major Initiatives**
- **Climate Change Emissions Management Fund (CCEMF)**
- **Other policies:**
  - Government purchase of green power, micro-generation regulation, Light it Right, Renewable Fuel Standard Regulation, Bioenergy Producer Credit Program, GreenTRIP, Hybrid Taxi, Trucks of Tomorrow, Rebates for energy efficient home upgrades, Initiatives for public buildings, On-Farm Energy Management



# Evaluation criteria

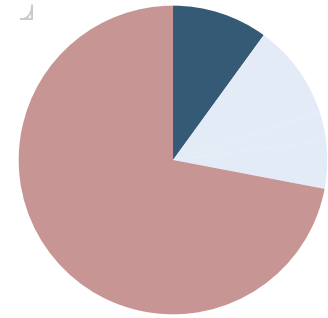
- Effectiveness — near term (2020)
- Effectiveness — longer term (2050)
- Economic efficiency
- Good use of public resources
- Good design
- Accountability and adaptiveness

## Summary of Findings

# GHG reductions from most significant Alberta GHG policies

Policy	Likely reduction in annual emissions in 2020 (Mt CO <sub>2</sub> e) relative to the absence of the policy
SGER	1.5–5
CCS Major Initiatives	1.5–5
CCEMF	0.5–1.5
<b>All Policies</b>	<b>&lt;10–14</b>

# Specified Gas Emitters Regulation (SGER)

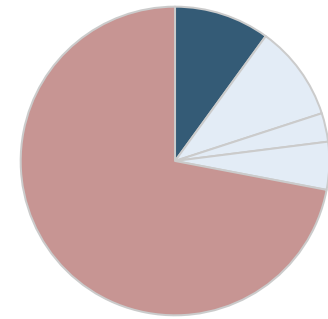


Starting 2007: large emitters required to reduce emissions intensities by up to 12%

Reductions can be achieved by on-site reductions, purchasing offsets, or paying into the CCEMF at \$15 per tonne



# SGER



## Strengths

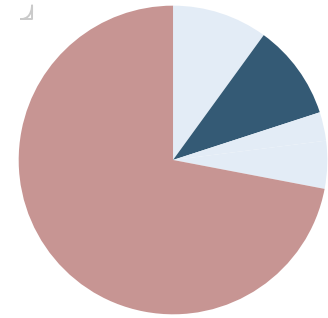
- Pioneering policy: the first in North America to apply a carbon price to all large emitters.
- Large emitters take GHG management more seriously
- Good economic efficiency

The **incentive** to undertake emission reductions by lowering the output of an industrial activity is **at most \$1.80 per tonne** ( $12\% \times \$15$ )

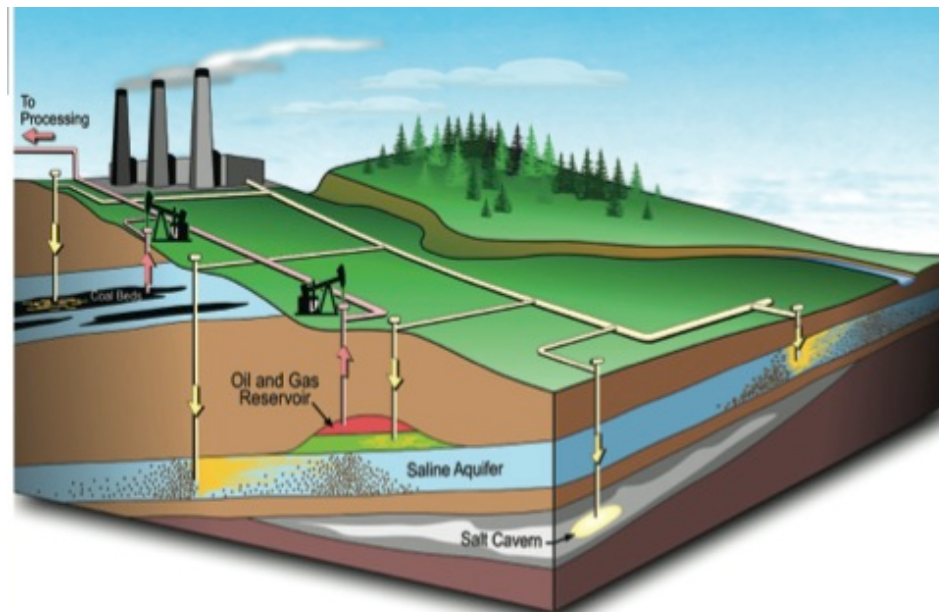
## Weaknesses

- Environmental effectiveness limited by low carbon price
- Only targets 12% of emissions from large emitters
- Exempt: Industrial process emissions, emissions from land disturbance in the oilsands
- >90% of carbon value allocated free of charge
- No carbon price increase foreseen

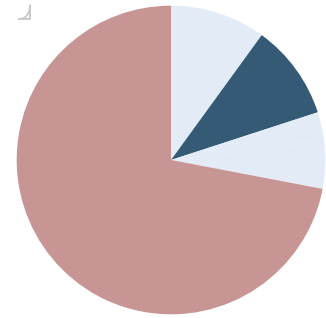
# CCS Major Initiatives



- 2009: four large-scale CCS projects selected to receive \$2 billion over 15 years
- Alberta's climate plan calls for CCS to deliver >30 Mt of the 50 Mt reductions by 2020



# CCS Major Initiatives



## Strengths

- Begins to address the need for large-scale deployment after 2020, by aiming to prove CCS at the commercial scale
- Relatively simple design
- Provide certainty for the selected projects
- Fairly wide consultation through the Alberta CCS Development Council

## Weaknesses

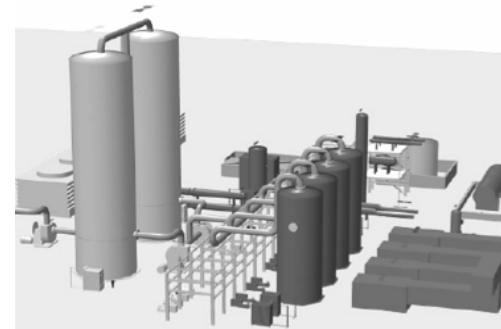
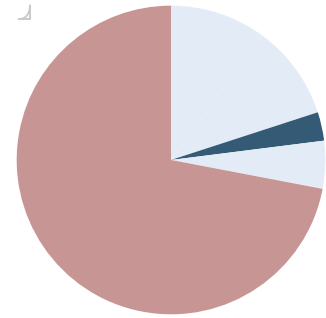
- At most 5 Mt
  - Alberta's climate plan aims for > 30 Mt from CCS by 2020
  - How to scale up CCS in the long term?
- Complex overlap with the SGER via offset credits
- Subsidizes emission reductions costing \$100 per tonne. Why not other, cheaper solutions?

Could achieve the same outcome for less money if the Alberta government were to increase the carbon price, contemplate mandatory CCS, or both.

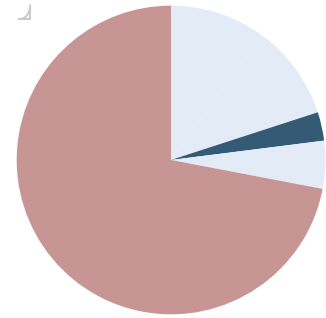
# Climate Change Emissions Management Fund

Payments into the CCEMF (\$15 per tonne) made under the SGER are reinvested in a range of emission reduction projects.

- \$256 million paid into the CCEMF (2007–10)
- \$126 million committed to approved projects



# CCEMF



## Strengths

- Uses carbon pricing proceeds to achieve further emission reductions
- Recognizes the need to aim for relatively near-term emission reductions
- Investing in a fairly full spectrum of technology types

## Weaknesses

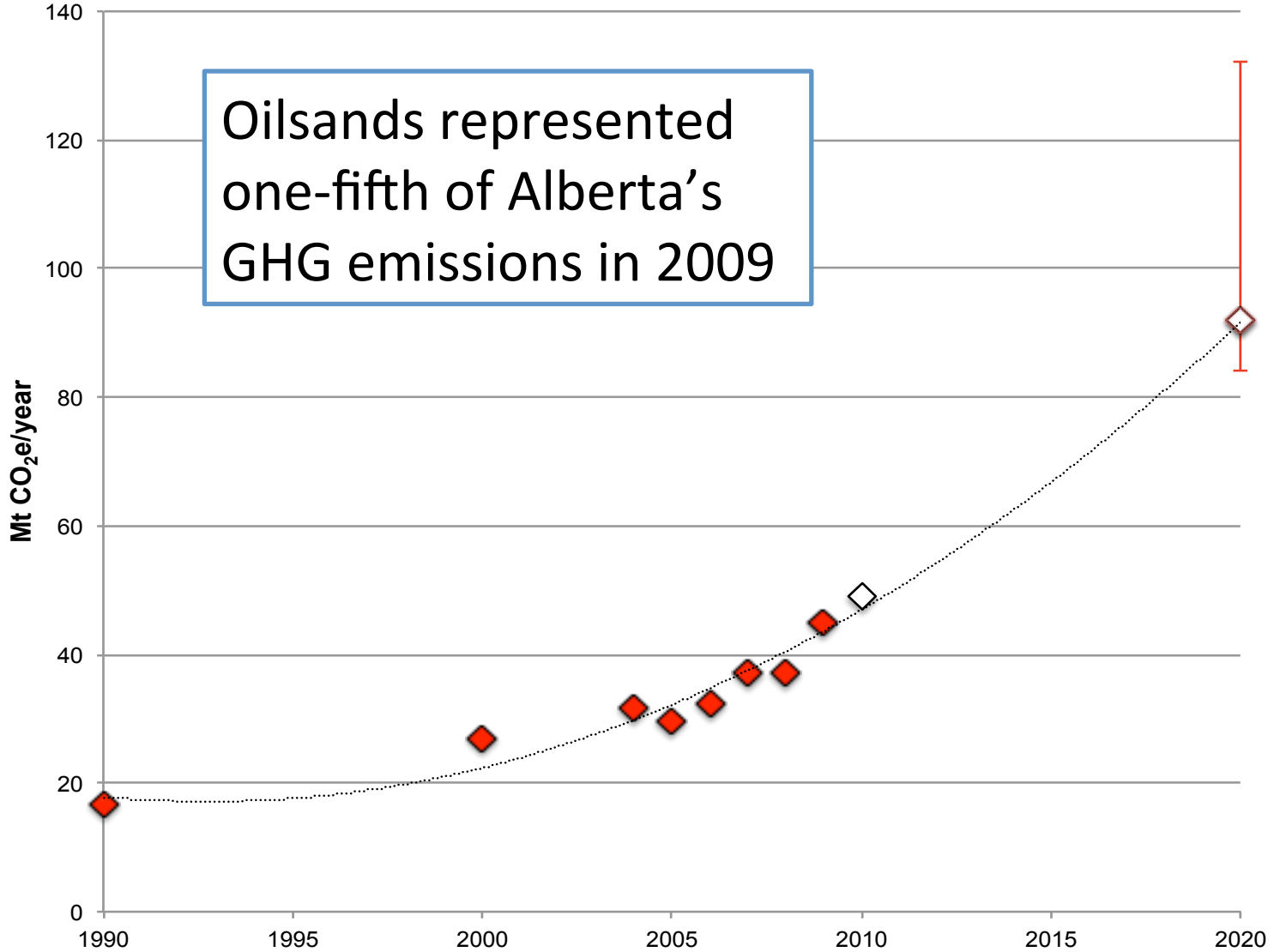
- Important **public** policy directions decided by CCEMC board
  - easily reversed
  - too much leeway for a private organization
- Board composed mostly of large-emitter industry representatives



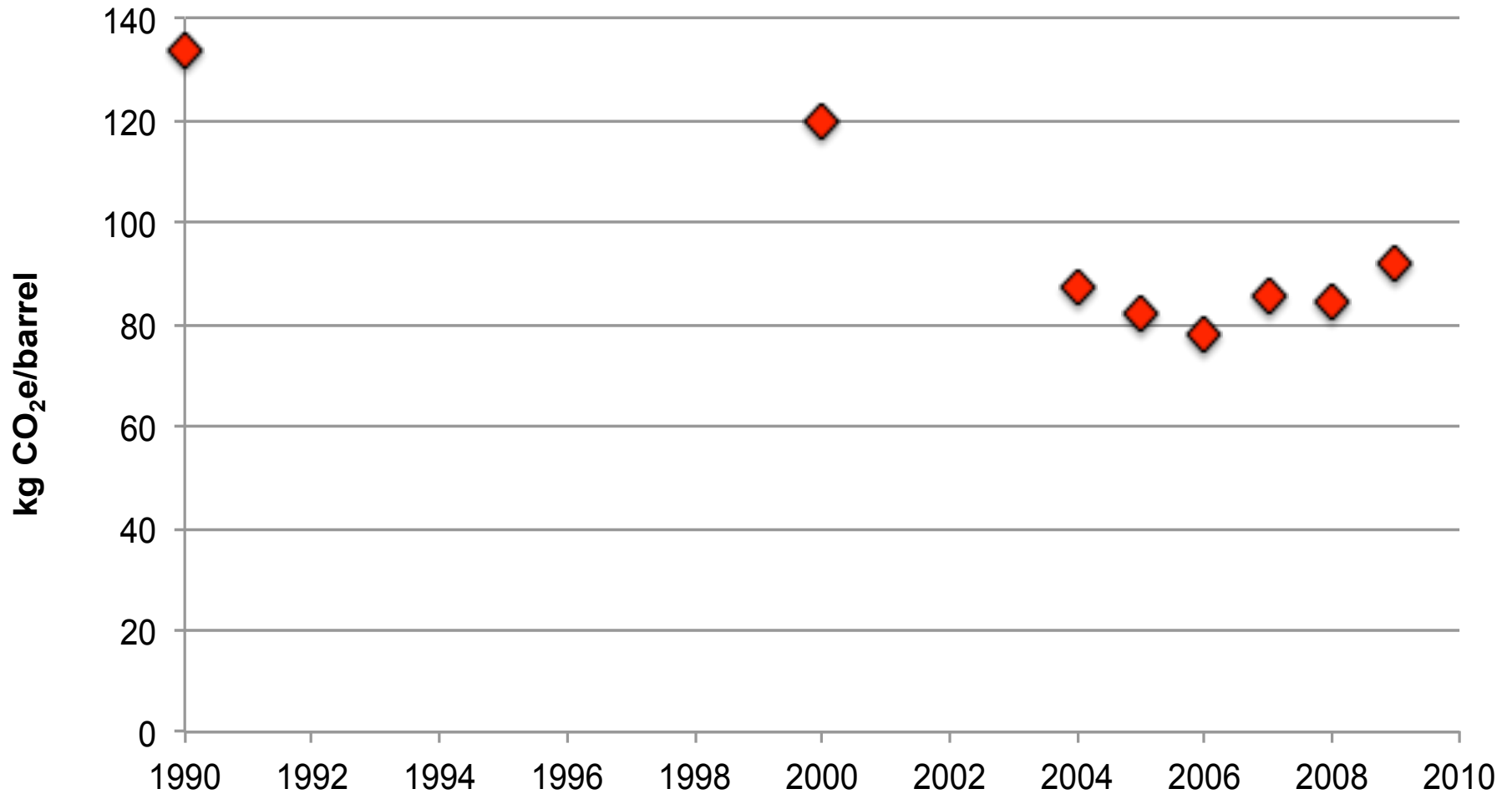
# Significance of oilsands emissions and growth



# Total emissions will double in 10 years

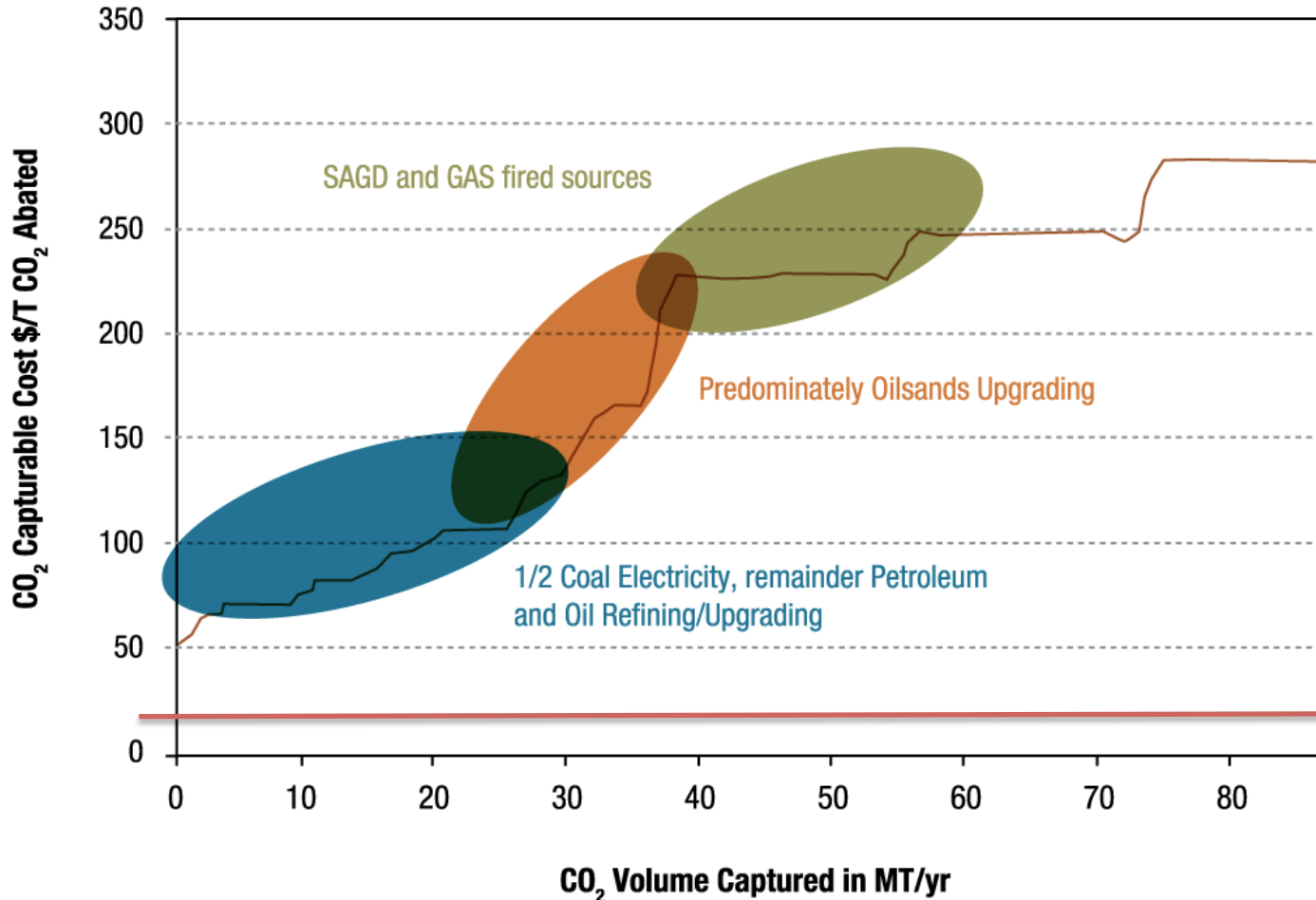


# Oilsands GHG emission intensity



# Oilsands carbon capture costs

Capturable CO<sub>2</sub> Emissions in Alberta (from existing and new large emitters)



**Current price ceiling:**

\$15/tonne

**Cost of CCS:**

\$100-280/tonne

Current carbon ceiling price

# Report recommendations

## responsible action? an assessment of alberta's greenhouse gas policies



**THE PEMBINA**  
Institute   
Sustainable Energy Solutions

Matthew Bramley  
Marc Huot  
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Matt Horne

December 2011

# Recommendations

- 1:** Substantially increase Alberta's ceiling carbon price (initially doubled to \$30 per tonne)
- 2:** Transition Alberta's current partial carbon levy toward pricing every tonne of emissions and eliminating the use of offset credits for compliance.

# Recommendations (con't)

- 3: Implement stringent mandatory greenhouse gas intensity standards for new large industrial facilities
- 4: Moderate the rate of approval and construction of new oilsands facilities to ensure that development stays within clear cumulative environmental limits

# Recommendations (con't)

- 5: Strengthen the CCEMC by adopting enforceable rules to (i) provide clear guidance on the selection and quantification of emission-reduction projects; and (ii) ensure the board has a stronger representation of “clean economy” sectors and independent experts.
- 6: Adopt a clear process for urgently developing, implementing and regularly updating a full plan to meet the province’s GHG targets, as well as for regularly reporting on the implementation of the specific policies in the plan.



# More resources:

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- [simond@pembina.org](mailto:simond@pembina.org)
- [www.pembina.org](http://www.pembina.org)
  
- Alberta's climate plan is available online at:  
<http://environment.alberta.ca/0909.html>