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# Global 'climate-friendly' trade: Canada's chance to clean up

Preliminary results, please do not cite without author's permission

For presentation October 15, 2009

## What is 'clean' or 'climate-friendly' trade?

- Difficult to define and measure
- But broad agreement on core climate-friendly tech
  - Renewable, efficiency, etc
- Our focus: trade that mitigates climate change
- Narrower than all 'green' or 'clean' trade
- World Bank-defined group, matches trade data

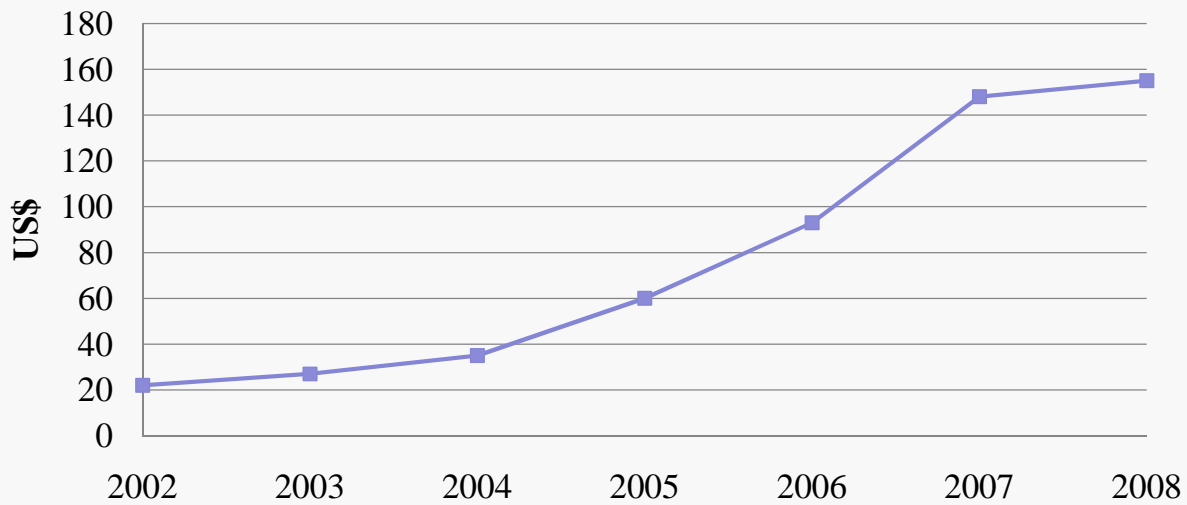


## The stars are (mostly) aligned for 'climate-friendly' trade

- Low-carbon policy shifts in most large economies
- Major environmental problems in developing markets
  - E.g., Chinese looking for economic-energy efficiency payoffs
- Increasing energy and water costs
- Global 'climate change industry' small, but important
  - Estimated at US\$600 billion in 2008 (1% of GDP)
  - Forecast to grow to US\$1 trillion by 2012 (1.2% of GDP)
- Rapid growth in private and public investment



## Rapid growth in new global financing for 'clean' energy



(38% CAGR, 0.25% of global GDP in 2008)

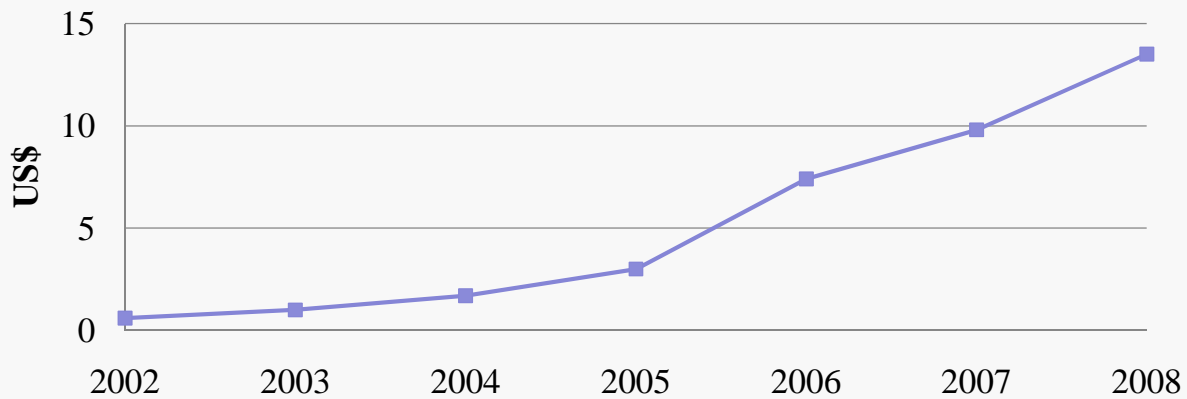
Source: New Energy Finance

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## Rapid growth in clean energy venture capital/ private equity



Source: New Energy Finance

- Clean tech only sector in which majority expect to increase global VC over next 3 yrs (Deloitte)

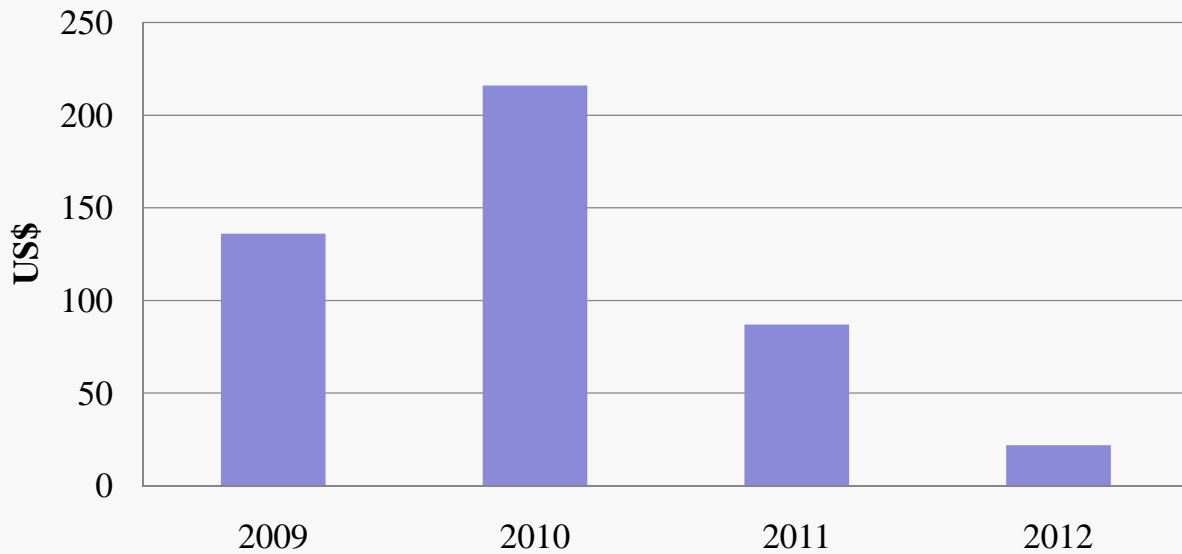
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# US\$500 bn global 'climate-friendly' stimulus (over 15% of total)

Timing of 'climate-friendly' stimulus rollout



Source: HSBC

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## World has a long way to go

- Existing technologies could stabilize GHG emissions
- Trade is one way to spread those technologies
- But need to triple financing of technologies by 2020 to stabilize emissions
- ‘Clean’ still not dominant
- Policy uncertainty
- Buy America, Buy China, tariffs, carbon tariffs, NTBs

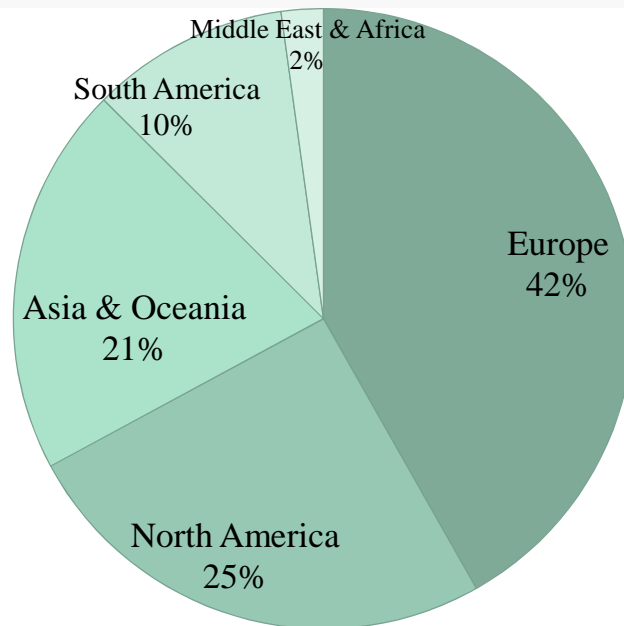


## Canada has a long way to go: Gaps

- Canadian research focused on domestic opportunities
- Not clear that Canadian cos are seizing opportunities
- Canada has weak national supporting policies
- Businesses don't account for environmental externalities
- Canada far from meeting emissions targets



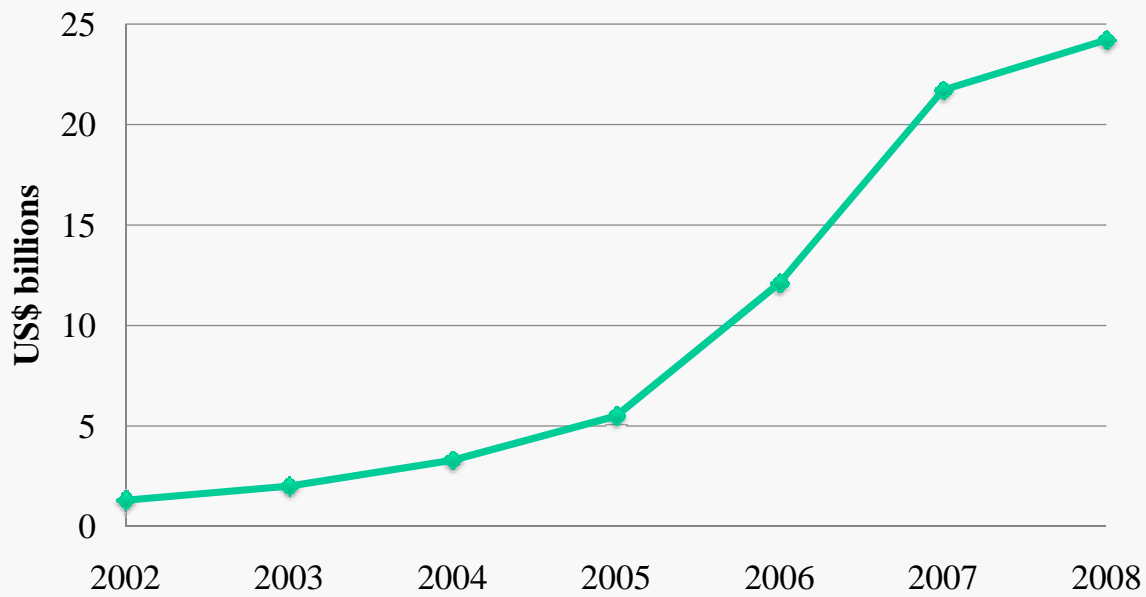
## Who are the main global players? Europe dominates 2008 new clean energy financing



Source: New Energy Finance, UNEP



## New financing for clean energy is growing even faster in Asia



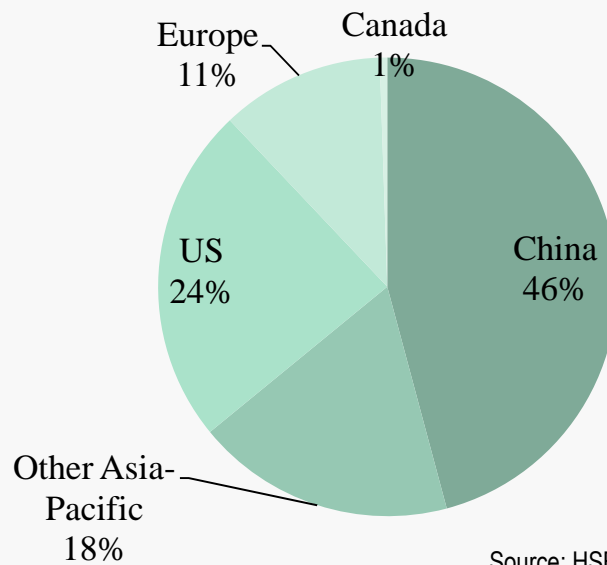
Source: New Energy Finance, UNEP

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## Global climate-friendly stimulus: China, US dominate



Source: HSBC, "Building a Green Recovery"

Most of this is energy efficiency-related



## Climate-friendly trade

- World Bank-selected climate-friendly technologies
  - based on WTO environmental goods list submitted by Canada, others
  - contribute significantly to carbon emission stabilization
  - use known technologies (excludes carbon capture and storage)
  - at Harmonized System 6-digit level (the level of trade negotiations)
  - goods, which also proxy related services
  - examples: clean coal tech, solar driven stoves, thermostats, water-saving showers, energy-saving waste-management tech
  - not a perfect list, but a starting point



## Canada missing out on world climate-friendly trade growth

Climate-friendly trade	2008 \$Billions	Share of world trade	Share of Canadian trade	Canadian annual growth 2002-08 (compound average)	World annual growth 2002-08 (compound average)
Canadian exports	4	2%	1%	0% (-2% in real terms)	10%
Canadian imports	7	3%	2%	11%	10%



## Global carbon disclosure improving, Canada at bottom re seeing opps

Action on climate change	Canada's ranking out of 20 countries
Engaging with policy makers	9
Disclosing emissions	10
Engaged in/ considering emissions trading	10
Board level responsibility	13
Answering carbon disclosure project 2009	15
Seeing physical risk	18
Established emissions reduction/ energy reduction plan	18
Seeing regulatory risks	19
Seeing physical opportunities	19
Externally verifying emissions disclosures	19
Seeing regulatory opportunities	20

Source: Conference Board of Canada, Carbon Disclosure Project

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## But does Canada have areas of comparative advantage?

- Canada has a “revealed comparative advantage” if:
  - higher share of product in Canadian exports to world than share of product in world's exports
- If greater than 1 = revealed comparative advantage
- Gives sense of export competitiveness



## Top 5 areas of revealed comparative advantage, 2008

Climate-friendly technology	RCA	Canada's share of global trade	Total global trade	Global growth, 2002-08 (compound ann. average)	World's top sellers	World's top buyers	Canada's top buyers
<b>1</b> Gas turbines <5000 kW	6.1	20%	\$1 billion	-2%	US Canada UK	US UK Japan	Italy US Germany
<b>2</b> Soil-protecting membranes (for under gas stations, oil refineries)	2.0	7%	\$10 billion	9%	Germany US Italy	US Germany France	US Chile Australia
<b>3</b> Thin sheets, webs, mats, mattresses	1.8	6%	\$0.7 billion	5%	US Belgium Germany	Canada US Brazil	US Belgium UAE

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## Top 5 areas of revealed comparative advantage, 2008

Climate-friendly technology	Canada's RCA	Canada's share of global trade	Total global trade	Global growth, 2002-08 (compound ann. average)	World's top sellers	World's top buyers	Canada's top buyers
4 Towers/masts for wind turbines	1.7	5%	\$3 billion	40%	Denmark China Turkey	US India Nigeria	US Belgium China
5 Gas turbines >5000 kW	1.6	5%	\$4 billion	-4%	US France Italy	UAE South Africa UK	US UK China

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## Global value chains?

- In areas of export competitiveness, also import
  - Could this mean we are integrating into GVCs?
- In areas of export competitiveness, we may have services expertise, potentially investing



## What it means for business

- Time of policy shift, but also uncertainty
- Smart companies will get out ahead of policy makers to
  - Protect brand and reputation
  - Seize huge global opportunities in more welcoming places
- Businesses are
  - Doing a reasonable job of importing technologies
  - But missing out on selling climate-friendly tech globally
  - Likely not taking advantage of investment opportunities (?)



## What it means for business

- At this late stage, must identify
  - Products and services in which already doing well
  - What not to focus on in domestic/global markets
  - Stimulus and other private/public opportunities
  - Opps to sell, invest in and beyond traditional markets
  - Areas of economic-environmental payoffs
  - Where small/large companies can integrate into GVCs
- No need to go domestic before global
- Reevaluate over time – CC may shift comp advantage



## What it means for Canada's policies

- Policy underlies global success in climate-friendly tech
- Missed Canadian opportunities, due to weak policies
- But, with the political will, not too late to capitalize
- Need aggressive domestic policies to provide incentives, remove barriers to climate-friendly production, trade
- Encourage goods, services, imports, exports, investment
- Negotiate to remove global tariffs and NTBs



## Conclusions

- Feasible to halt emissions with existing tech/trade
- Stars aligned globally for climate-friendly trade
- Canada importing its share but...
- ...losing ground and missing out on global growth
- Overall, poorly placed for global low-carbon shift
- Focus on what we do well (some identified here)
- Not too late for aggressive domestic policies
- Feedback welcome



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