

Kyoto: Implications for Utility Regulation

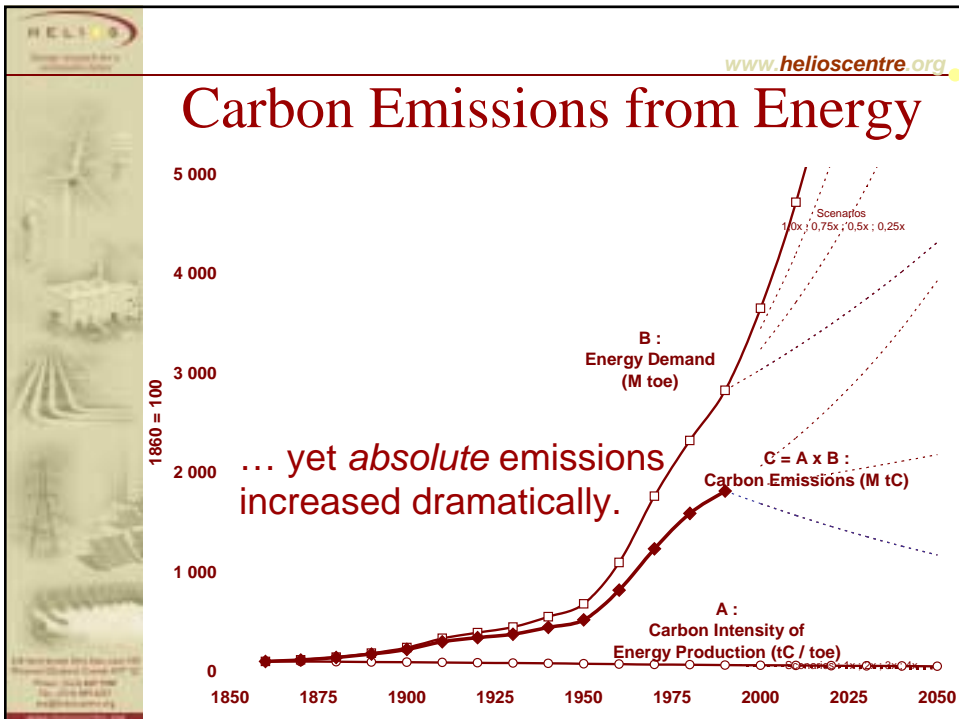
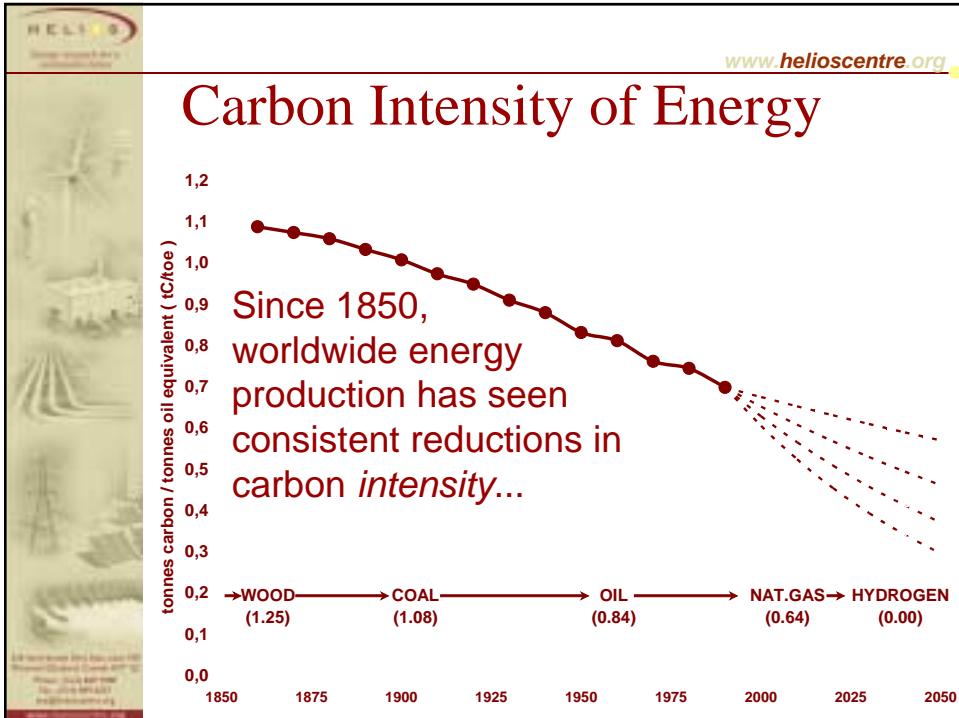
Philippe Dunsky, Executive Director
Helios Centre for Sustainable Energy Strategies

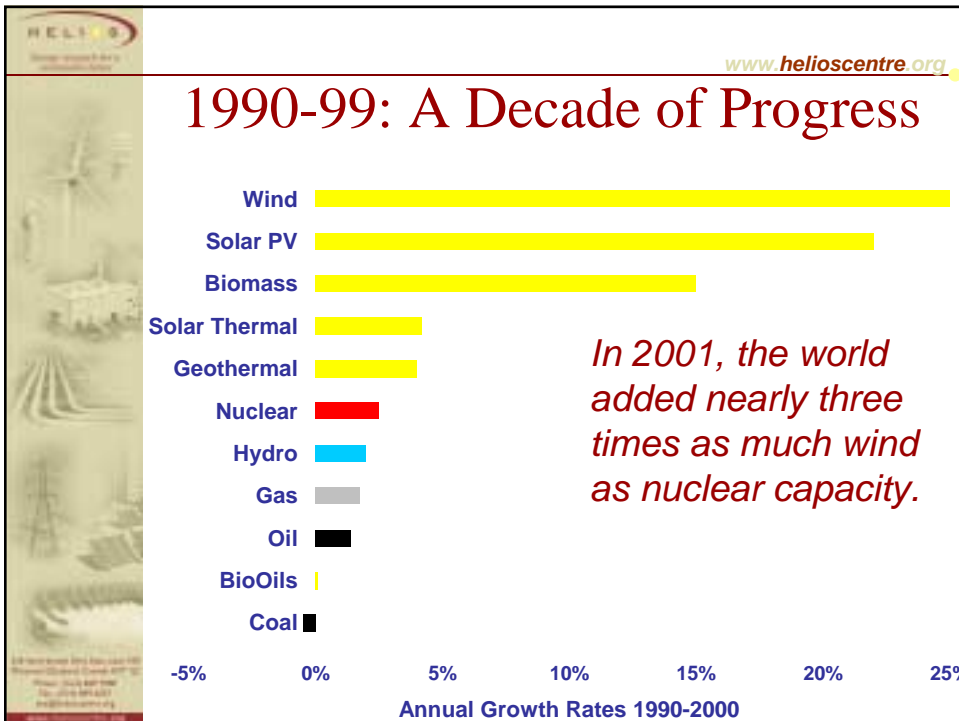
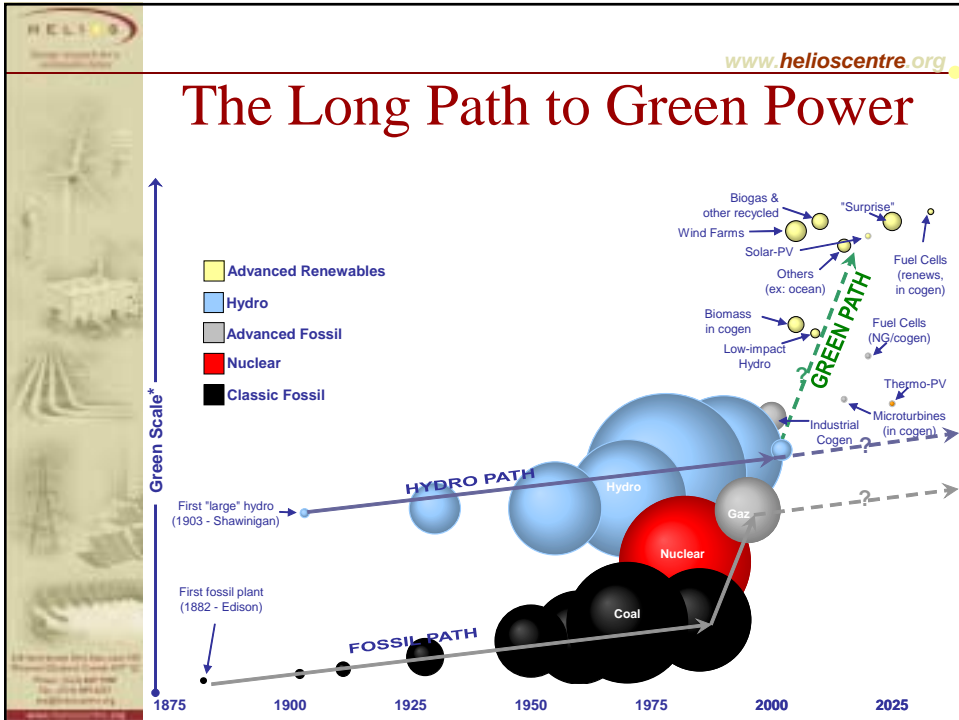
Presentation to the 2003 Educational Conference of the Canadian
Association of Members of Public Utilities Tribunals (CAMPUT)

May 6th, 2003 | Banff, Alberta



Energy and Carbon: A (Western) Historic Perspective





21st Century Challenge

- Perpetuate and further 20th century economic / human progress
- Bring under-developed countries into fold
- **Stop and reverse environmental damage (energy)**
 - > dramatically improve efficiency (G,T,D,C chain)
 - > speed up fuel switching (coal/oil → natgas)
 - > move toward green power

Energy and the Kyoto Protocol



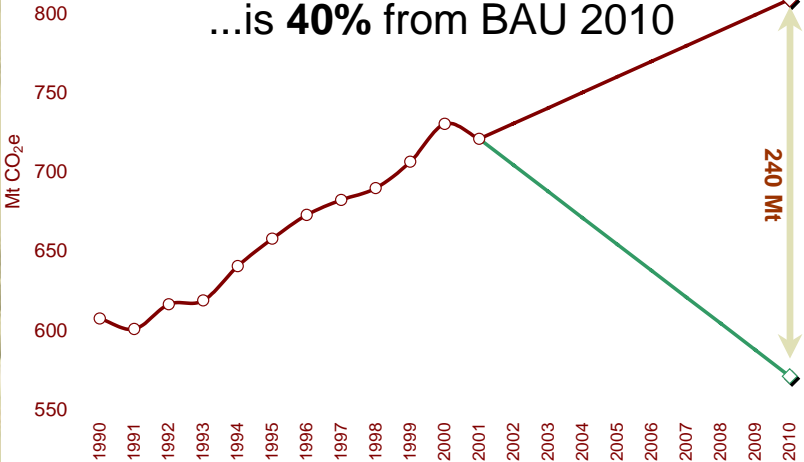
Contemporary Context

- 1896: Arrhenius predicts climate change
- 1992: Rio Earth Summit
 - > Agreement to stabilize emissions at 1990 levels
- 1997: Kyoto Protocol
 - > Annex 1 countries: binding targets
 - > Annex 2 countries: non-binding effort, benefits
 - > Double Trigger: 55 countries & 55% of Annex 1 countries weighted by emissions
- 2001-02: Ratification Begins
 - > U.S. pulls out
 - > EU, Japan, Canada, Annex 2 countries join
 - > >100 countries, ~45% emissions
- 2003: All Hinges on Russia



Canada's Challenge

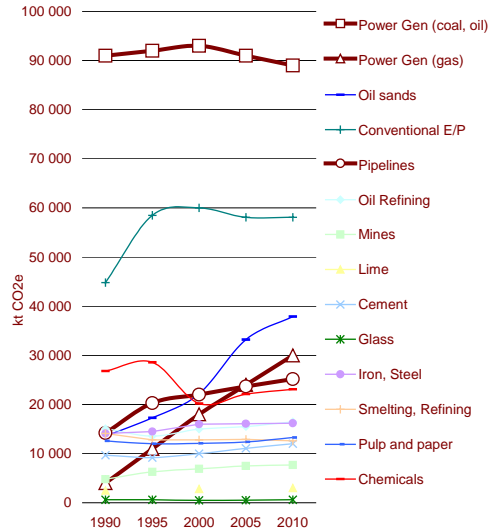
- 6% from 1990 levels...
...is **40%** from BAU 2010



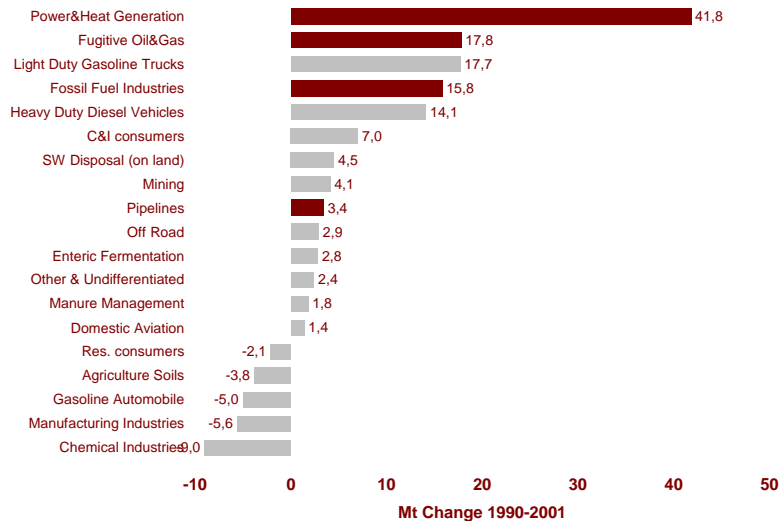


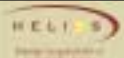
Energy at heart of challenge...

- LIEs worth >300 Mt CO₂e (nearly 50%)
- Coal, oil power plants top list
- Pipelines, gas power plants vie for 3rd (after oil production)




1990-2001 Data Confirmation






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The Challenge for Utility Regulators




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Costs Not (entirely) Exogenous

- Costs
 - > Power purchase premiums, offset projects, efficiency programmes, credit purchases, etc.
- Benefits
 - > Sale of excess credits above cost
- Risks
 - > Round One (2008-12): penalties, taxes, etc.
 - > Round Two (post-2012): tougher reductions
- Unlike tax: utility can minimize costs (or not) through optimal portfolio of options



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Regulatory Issues...

- **Revise broad ratemaking framework**
 - > **DSM signals**
 - cost variance recovery
 - lost revenue (and variance) recovery
 - shareholder incentives
 - for parity with supply investments
 - > **Others**
 - green power
 - fuel switching, etc.
 - > **Beware of COS/ROR & rate cap problems**
 - > *"All ratemaking is incentive ratemaking"*

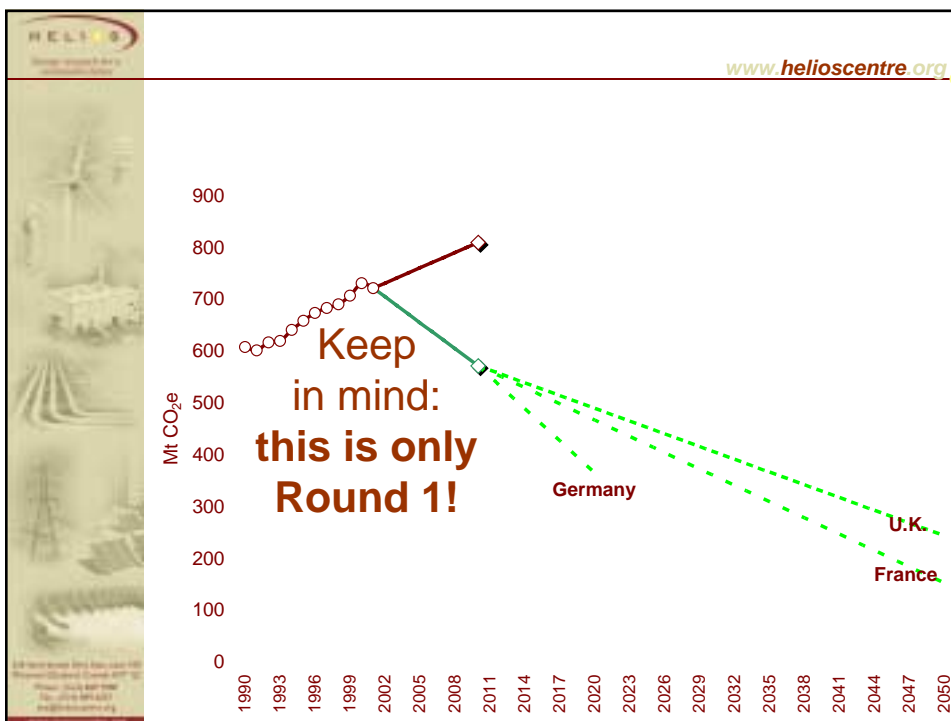


...regulatory issues

- **Cost Recovery: Pass-on vs. Incentives**
 - > **Pass-on approach (like COS/ROR)**
 - Reasonableness; no undue profits
 - Requires strong regulatory oversight, involvement
 - Less flexibility in continuously evolving market
 - > **Incentive-based approach (PBR)**
 - Incentivize minimal cost/risk minimization; max. benefits
 - Encourage flexibility, nimbleness
 - Requires solid knowledge base at outset
 - Concern: too early in game?
 - > **Both can incorporate other goals**
 - Air-quality, diversification, others
- **Other issues**
 - > **Cost allocation, gov't support...**

Kyoto Compliance Plan

- Internal options
 - > Leaks, plant conversions, efficiency upgrades...
- External options
 - > Utility purchase/incentive programs
 - > DSM, green power, fuel switching, offsets
- Identify (& bust) regulatory barriers
 - > Ratemaking inconsistencies
 - > Rate structure disincentives
 - > Interconnection feed-in/sellback rules
- Consider GHG credit markets
 - > Confirm allocation rules
 - > Domestic, CDM, JI, IET markets



The Helios Centre

- Independent, non-profit consultancy
- Mission: help clients achieve environmental objectives efficiently and economically
- Expertise:
 - MARKET FRAMEWORKS
 - > *Utility regulation*
 - > *Competitive markets*
 - > *Policy development*
 - 
 - OPTIONS / ISSUES
 - *DSM/Efficiency*
 - *Green energy*
 - *Kyoto markets*
- Clients: government, NGOs, electric/gas utilities, IPPs, consumer groups, others
- Services: research/analysis, strategic counsel, expert testimony, training, free publications.
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