



Montreal Strategic Climate Change Workshop

Château Vaudreuil, Montreal, Canada



Clean Energy Investment,
Technology Deployment and
Innovation: New Strategies for
Climate Protection

October 4, 2005

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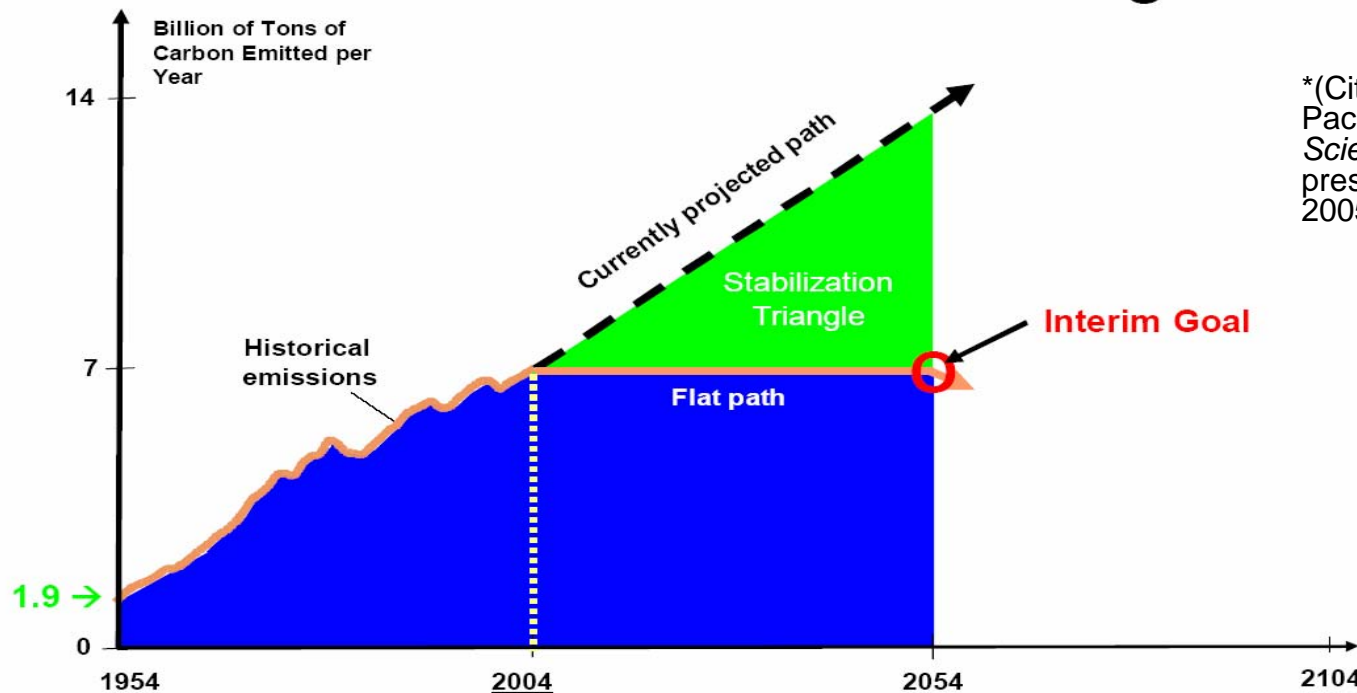
Clean Energy Group

The Basic Problem: Climate Stabilization And Technology Scale

Radical Technology Innovation Required Over Next 50 Years

- Planetary climate stabilization requires replacement of power systems by low-carbon technologies. Any effort to achieve this result will mean an enormous introduction of clean energy bridge technologies*:

The Stabilization Triangle



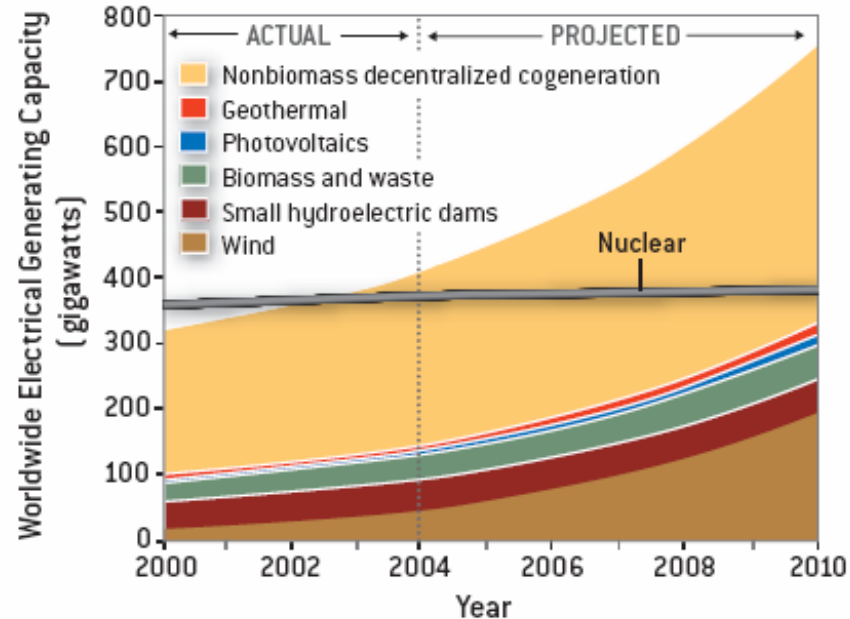
*(Citation and graph from Pacala & Socolow, *Science* 2004, and related presentation, February 2005)



Actual and Projected Output for Clean Generation

From *Scientific American*
September 2005, p. 74.
From the article "More
Profit with Less Carbon" by
Amory Lovins

ELECTRICITY ALTERNATIVES



DECENTRALIZED SOURCES of electricity—cogeneration (the combined production of electricity and heat, typically from natural gas) and renewables (such as solar and wind power)—surpassed nuclear power in global generating capacity in 2002. The annual output of these low- and no-carbon sources will exceed that of nuclear power this year.

To Accelerate Low-Carbon Transition

Long term technology solutions needed

- Radical clean energy technology replacement
- Long term economic strategy needed

New constituencies for climate change

- Private corporate players
- Institutional and other investors
- Public agencies
- More focus at sub-national level

How Do We Get to Scale?

Technology

- Step-change, disruptive technology
- Accelerated commercialization
- Massive deployment
- Innovation and business models

Policy

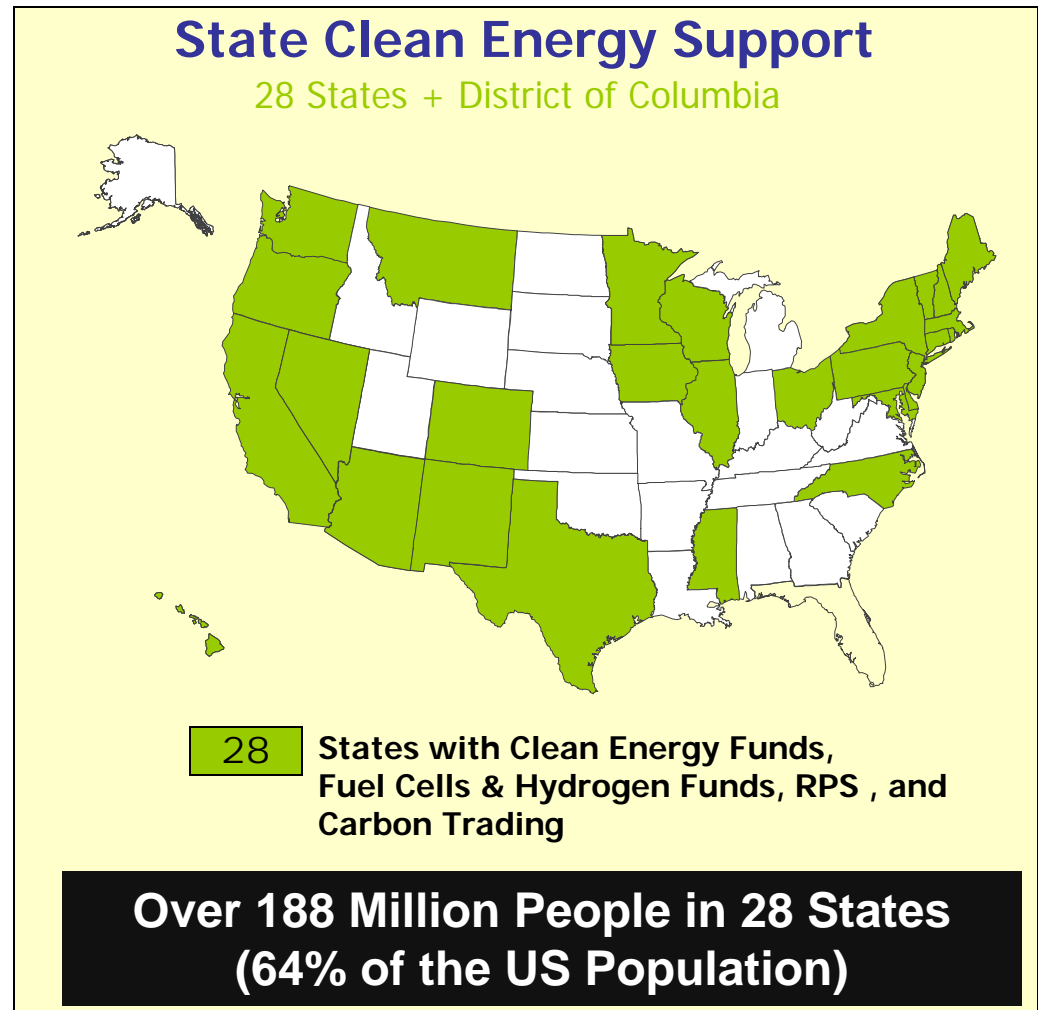
- Cap-and-trade one tool
- Portfolio of options
- Technology agreements

Finance

- New investment vehicles
- Economic development
- Climate capitalism

Sub-National Focus: Success in the States

- Explosion of state action:
1990s - 2004
- Restructuring democratized
energy
- Nonpartisan, experimental,
collaborative
- Economic development role
reasserted
- A trend, not an aberration*
- Similar activity in Provinces,
Länder and Regions



Roundtable Panels and Discussion

Workshop presentations will look at:

- Sub-national models for technology deployment and investment
- Economic development and job creation from clean technologies
- Long-term climate strategies
- Models for climate-technology agreements