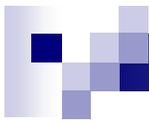


Directing human creative and
financial resources towards
technology
development and innovation

George Weyerhaeuser Jr.

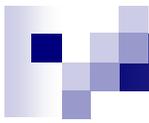
UNFCCC MEDIA TRAINING WORKSHOP

December 9, 2008



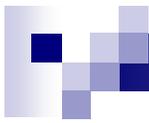
Directing human creative and financial resources towards technology development and innovation

- how governments can shape private research and development
- how you can follow the negotiations



Topics

- Technology- what are we negotiating?
- Frame the debate
- Why is technology so critical?
- What brings the best out of the private sector?



Technology- what are we negotiating?

- Patents across international boundaries
- Licenses to developing world competitors
- Research, develop, demonstrate, & diffuse
- \$
- Complicated, human problem solving



Frame the debate

- Decisions 3&4/CP.13
 - Development and transfer of technologies under the Subsidiary Body for Scientific and Technological Advice and under the Subsidiary Body for Implementation
- *The Conference of the Parties,*
 - *Recalling* chapter 34 of Agenda 21 and the relevant provisions of the programme for the further implementation of Agenda 21 on the transfer of environmentally sound technologies adopted by the United Nations General Assembly at its nineteenth special session,
 - *Recalling* the relevant provisions of the Convention, in particular Article 4, paragraphs 1, 3, 5, 7, 8 and 9, Article 9, paragraph 2(c), Article 11, paragraphs 1 and 5, and Article 12, paragraphs 3 and 4,
 - *Recalling* decisions 4/CP.7, 6/CP.10, 6/CP.11 and 3/CP.12



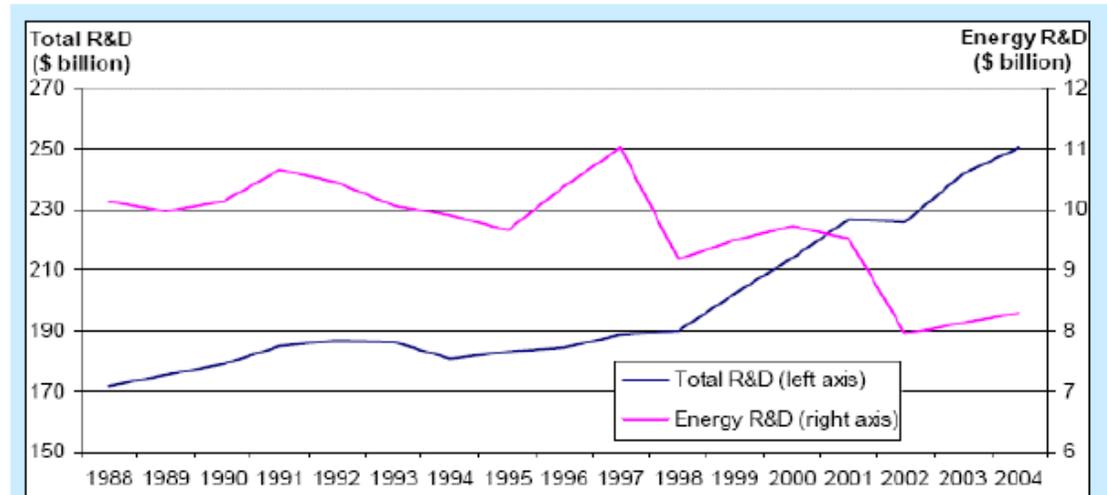
Why is technology so critical?

- The R&D funding trend
- The scale of the required effort
- The reward if we get it right

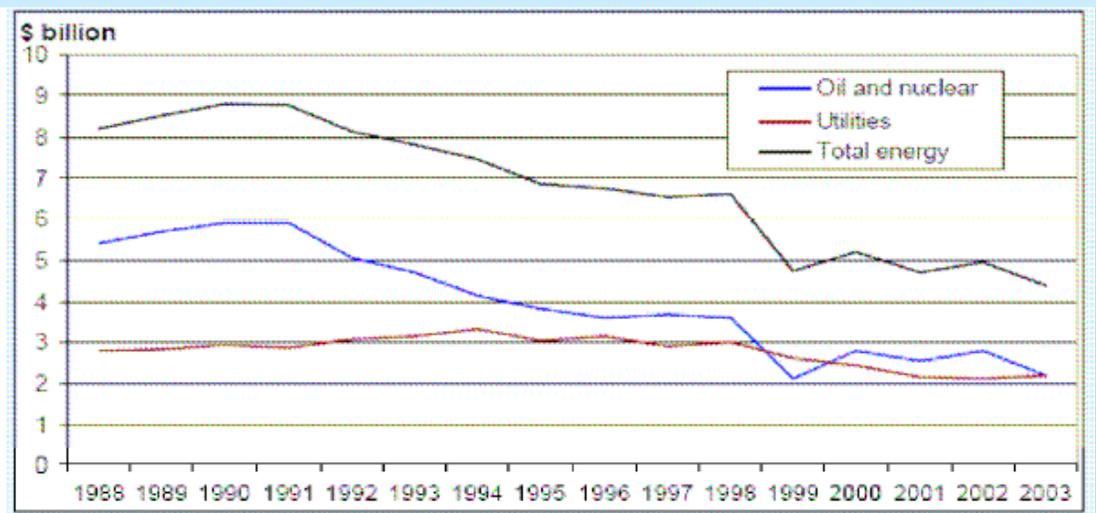
The R&D challenge

R&D spending is decreasing

...in the public sector...
(energy)

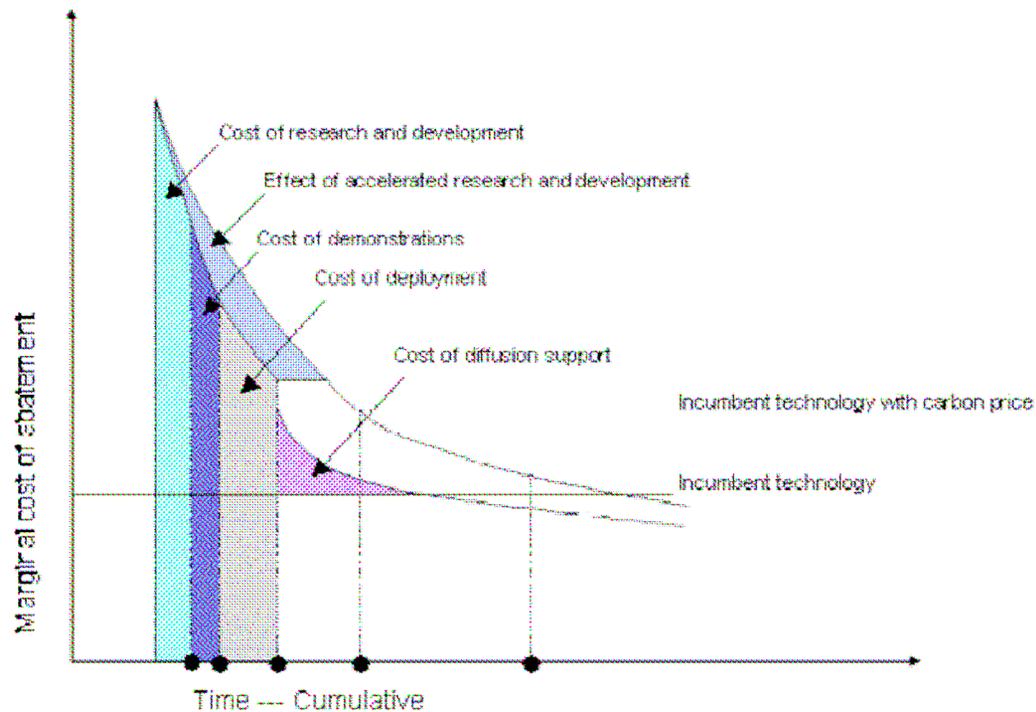


... and private sector



Technology learning curve

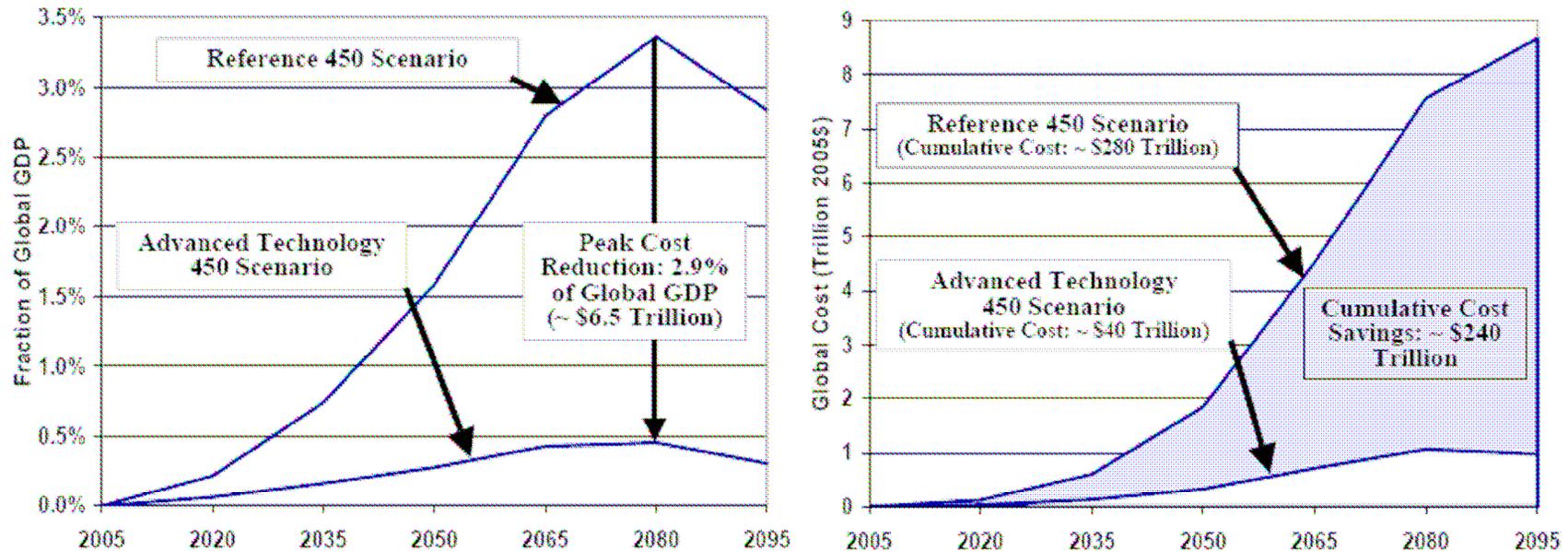
- Technology development cycle: from basic research to a commercial product
- During the demonstration, deployment and diffusion stages of a technology, the unit cost of technology falls due to economies of scale



Significant Costs, But Great Savings Possible with Advanced Technology



Global Cost* of Meeting a 450 ppmv CO₂ Emissions Constraint



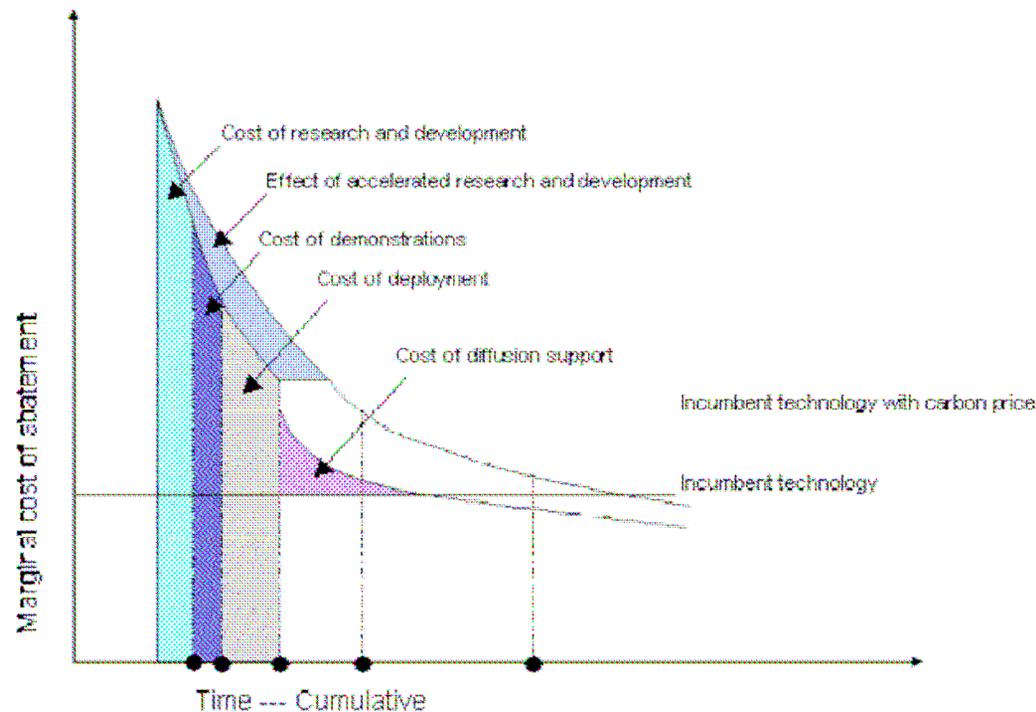
Caution: Results are Optimistic — Actual Costs Could be Much Higher

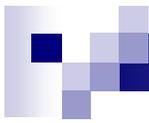
- **Advanced Technology 450 Scenario assumes:**
 - Fully cooperative and economically-efficient global action, starting now, and,
 - All advanced technologies will be available.

*Undiscounted 2005 US\$

Technology learning curve

- Technology development cycle: from basic research to a commercial product
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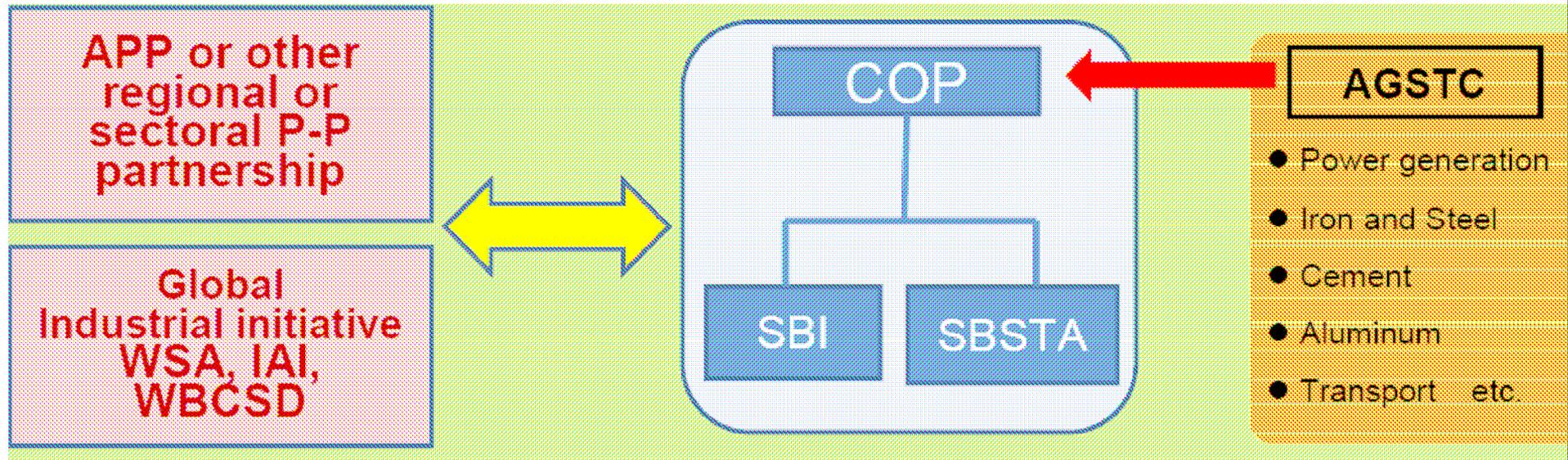


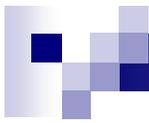
Business answer

- A framework with a long-term global emission reduction pathway supported by realistic and clear intermediate targets
- Commitments from all Parties to take action
- A market-oriented framework
- A framework that enables research, development, demonstration and rapid deployment of clean energy technologies

Advisory Group for Sectoral Tech. Cooperation

- AGSTC can contribute to both transfer and development of **the key technologies**.
 - Consists of **representatives of industrial community** and **experts** (IEA, EGTT., etc) **by each sector**
 - **Analyze the current situation** of development and transfer of the technologies **by each sector**.
 - For development: government R&D budget, international roadmaps for key tech., latest development outcomes, international cooperation activities
 - For transfer: the BAT, the BP, reduction potentials, barriers and solutions
 - **Formulate advice for further actions by each sector** based on the analysis
 - **Regularly report on outcomes to the COP/equivalent body**





Workshop links

- http://unfccc.int/files/kyoto_protocol/application/pdf/g77andchinaaresearch.pdf
- http://unfccc.int/meetings/ad_hoc_working_groups/lca/items/4675.php
- http://unfccc.int/files/kyoto_protocol/application/pdf/usalcaresearch.pdf