

Lessons Learned from APEC Economies that Support Low-Carbon Policies

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Low-carbon lessons can be drawn from a number of places

- ▶ Recent EGNRET studies
- ▶ APEC renewable energy development success stories
- ▶ Economy specific research studies

Successful Business Models for New and Renewable Energy Technologies (New Zealand, 2009)

- ▶ The study presents 16 case studies and examines 25 business models across 3 broad areas:
 - Heat and power production
 - Renewable Fuels (biofuels) production
 - Alternative transport fuels
- ▶ A total of 38 recommendations were made across 6 specific categories
 - The business models employed in each project area were quite different
 - Business models appropriate for introducing a new technology are different from those required to maintain it
 - An unsuccessful business model is one that is unable to adapt to changing commercial conditions
 - Different business models are applicable to large, medium, and small scale projects
 - Emerging new and renewable energy policies in many developing economies offer opportunities for community participation and are small/medium scale businesses for which the models are quite well established



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New and Renewable Energy Technologies in Urban Area in the APEC Region (USA, 2010)

- ▶ The study provide a comprehensive overview of the lessons learned, obstacles, case studies, and a road map to guide future renewable energy systems in urban areas
- ▶ Twelve case studies of successful urban renewable energy applications were developed across the residential, commercial, industrial, and utility sectors
- ▶ Ten steps for advancing renewables in APEC cities were identified
 - Initiate a plan of action: Organize a planning task force and prepare a tailored plan of action based on local needs and conditions
 - Establish rules and regulations: To ensure quality products and services are delivered into the marketplace
 - Lead by action: Invest in renewable energy on public buildings and in day-to-day operations

Renewable energy investment recently led to a new “Wealthiest Man in China”

- ▶ Zhengrong Shi received his Ph.D. in EE from Australia, with a concentration on PV (western education)
- ▶ He started up Suntech Power Holdings Co. in 2001 in Wuxi with the support of the local government (local capital)
- ▶ Suntech’s production was based on a new automated production system imported from Germany (western technology, but Suntech added a cell-based quality control mechanism)
- ▶ In December 2005 he took the company public on the NYSE (western capital market)
- ▶ In January 2006 the company had a market capitalization of \$6 billion and Dr. Shi was recognized as the wealthiest man in China



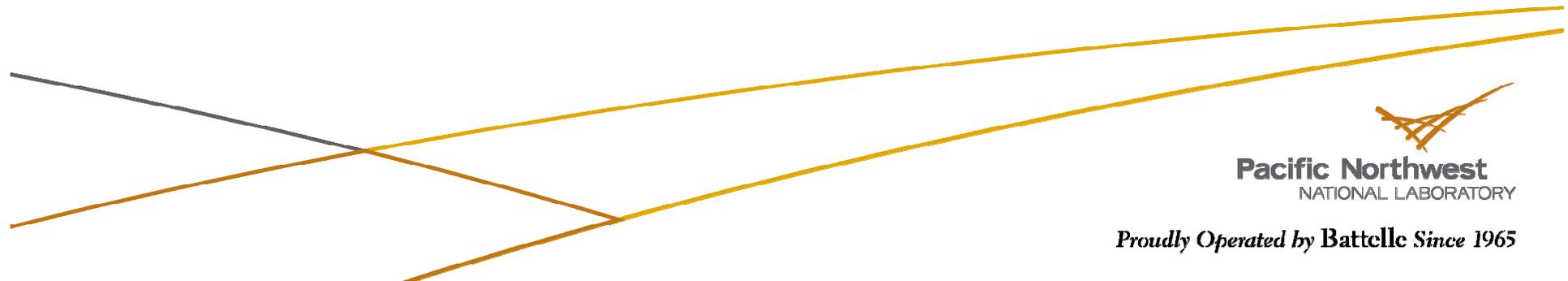
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The promise of new technology

- ▶ It is nice to think that new technology will come to the rescue, but history tells us that technologies are generally developed incrementally over time
- ▶ Successes and failures in high-technology industries were examined for innovation policy that could be applied to climate change. They found that “Despite their portrayal in the press and elsewhere as critical events, ‘radical’ breakthroughs in scientific or technological knowledge generally are less economically significant than the lengthy series of incremental innovations and improvements necessary to arrive at a cost-effective product that is attractive to users”*

*Alic, Mowery and Rubin, *U.S. Technology and Innovation Policies*, Pew Center 2003
<http://www.pewclimate.org>



The role of APEC in building a low-carbon future

- ▶ Information sharing associated with best practices and lessons learned is critical
 - APEC embodies a wide range of economies, based on both level of economic development and geography
 - Biannual meetings enable recommendations and long-term projects to be developed and followed
 - APEC specific project financial support is available
- ▶ The success of the APEC Peer Review on Energy Efficiency (PREE) program shows that there is a role for APEC in moving clean energy policies forward
- ▶ APEC has a unique opportunity to look at all supply and demand-side options
- ▶ APEC could develop a set of guiding principles that support the development of a low-carbon future



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Thank you for your attention!

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