Session 1 LCS and the Policy Context

Rapporteur: Stefan Lechtenböhmer

Major findings

• Canada

- ○ Canada is being pushed to do more on climate change and has set up mid and long term targets. However, pushing policy is tough in a federal country with clear political economical problems, and it has been perceived that Canada will not be able to meet its Kyoto target.
- ○ Canada wants to play a positive role in spite of its domestic problems to reach the targets and the prevailing fears of competitiveness problems due to strict GHG reductions.

• Japan

- ○ Japan has set up a plan for the creation of a Low Carbon Society (LCS) which contains a bundle of strategies containing a Technology Roadmap and actions to support other countries.
- ○ The government has committed to come up with a 25% mid term reduction target but possible economic consequences are currently highly debated in Japan.

• Korea

- ○ Green growth is the new paradigm of Korean energy and climate policy with the vision to create a *virtuous (sic)* circle of environment conservation and economic growth.
- ○ Korea wants to be a forerunner in the perceived international race to take over the future green market and has set up three strategies with 10 tasks to achieve a LCS and 100% energy autonomy by 2050.

• US

- ○ The new administration is serious on the climate issue and will come forward with a set of instruments ranging from a cap and trade system over strong regulatory policy towards specific research.
- ○ Climate Change is a technology challenge but available technology, if aggressively utilized, will only bring about 40% of the required CO_2 reduction by 2050; the next generation of low emission/high efficiency technologies needs to be developed and utilized ASAP (might be costly) but current research funding is grossly inadequate.

•EU

- ○ The next European Commission needs to maintain the momentum towards a low emission economy, and in particular towards decarbonising our electricity supply and the transport sector (Barroso).
- ○ The EU Climate and Energy package has shown that economic growth and climate policy go hand-in-hand, i.e., in Europe a low carbon economy is seen as a competitive, knowledge-driven economy.

Main issues discussed

• The relation of long term and mid term target

- ○ Both are seen by all as important but have different relevance.
- ○ Mid term - Here the opinions vary from “very important” to “targets cannot do it alone.”
- ○ Long term - Opinions range from “We need a concrete vision and stable framework.” to “They are only indicative and policy is always short term and incremental.”

• Economic issues of LCS

- ○ Burden vs. chance
- ○ While Canada and Japan are heavily discussing potential economic risks of strong mitigation action the EU strongly hopes to be able to join Copenhagen and Lisbon (i.e. ecology and economy). Korea even more pronounced sees mitigation and green growth as the main future trend. It perceives it as a chance to be among the leaders here and is willing to convert its economy accordingly.
- ○ In the debate, it has been brought up that traditional economic models might not be sufficient to judge on the costs of conversion towards LCS.

• The role of technology

- ○ It was unanimous that new technology is needed for LCS. Japan has set up a Technology roadmap accordingly which consist of new technology and exploiting existing technology. The US has set plans for intensified research. Korea has strong plans for technology development in the energy field plus ideas to convert its industry.
- ○ Opinions have been split on the potential of already existing and low or net negative cost technologies and the need for new technology as well on the future prospects regarding the speed of technology learning.
- ○ This leads to a wide range of perceptions between "a LCS may pay off" and "a LCS might turn out to be extremely costly."

• The role of lifestyle change

- ○ E.g. the US and the EU are highlighting the importance of it.
- ○ Korea has included it as one of its three strategies: improve quality of life and enhance national status.
- ○ Definitely there has to be done more to learn about its potentials and to understand its role and how it can be taken into account appropriately.

Policy relevant questions and items for further activities of LCS-RNet

• General

- ○ Various scientific disciplines need to contribute to low-carbon society research, across natural and social science.
- ○ The LCS-RNet needs to cover both, the next steps as well as the long-term objectives.

• Technology

- ○ Major technology advances are necessary, especially in critical power generation and mobile source sectors; but all promising technologies need to be pursued and focused fundamental research aiming at breakthrough technologies has been highlighted to be important.
- ○ Technology is necessary but not sufficient, aggressive global mitigation commitments are needed.

• Global change

- ○ The move to a low-carbon economy and society requires a fundamental transformation at a global level.
- ○ This requires moving beyond the traditional policy conflicts between economy, environment, energy i.e., to overcome the controversy between environment and economy.
- ○ Transition pathways, consumer behaviour, lifestyle options, etc. should become core research foci for governments.
- ○ This should include reconsidering methodologies of economic cost-benefit analysis, i.e., in order to properly reflect path dependencies and societal change.