



Canadian
Electricity
Association

Association
canadienne
de l'électricité



Electric industry leaders, representing utilities providing the majority of the world's electricity, met in Kyoto, Japan on April 12-13. The meeting gathered executives from the major electric industry associations at the **2010 International Electricity Summit**. The industry associations included the Edison Electric Institute of the United States, Eurelectric, the Federation of Electric Power Companies of Japan, the Canadian Electricity Association and the Energy Supply Association of Australia.

Electric Industry Leaders Affirm Common Goal of Creating a Low-Carbon Future

Kyoto, Japan, (April 13, 2010) -- Electric industry leaders from the world's largest economies today affirmed a common goal of achieving a low-carbon future and called attention to the leadership of the industry in addressing climate change, noting that:

- Electricity is key to implementing solutions to climate change.
- Electricity is key to a sustainable future.
- Electricity is key to achieving greater energy efficiency.
- Electricity is key to economic growth and job creation.

Five major industry associations agreed to urge governments to implement consistent energy, environmental and economic policies to encourage investment in advanced technologies to transform the production, delivery and use of electricity. Aggressive deployment of advanced technologies is necessary to meet carbon emission reduction goals of 60 to 80 percent by 2050.

The leaders, based on their joint "Roadmap for a Low-Carbon Power Sector by 2050," set an industry goal of developing national or regional emission reduction trajectories toward a low-carbon future. Further, these emission reduction trajectories will be based on a common measure of carbon emission intensity and include suggestions for appropriate policies and measures for each economy within governmental requirements.

Supportive, transparent and stable governmental policies are necessary for long-term planning by the industry and to encourage the significant investments needed for energy efficiency, power delivery system expansion and improvement, grid integration of renewable energy; deployment of clean coal and carbon capture and storage technologies; as well as construction of a new generation of emission-free nuclear power and hydro-electric plants.

Electricity remains the backbone of the world's largest economies. Affordably priced and reliable electricity is essential for economic growth. The increasing cost of providing electricity is an important concern in all economies and policy makers should exercise care to avoid imposing higher costs on customers that can dampen economic growth while meeting energy and environmental goals.

Electricity leaders represented by the five associations identified seven major areas of agreement on which to work together with their governments:

Role of electric power industry in encouraging a shift to a low-carbon society:

1. Electricity plays an essential role in modern society, bringing benefits and progress in various fields, including medicine, transportation, manufacturing and communication technologies. For all human activities, electric power is vital for economic growth and quality of life. In recognizing the importance of electricity, the industry leaders believe that it is a key part of the solution to climate change. To simultaneously achieve energy security, economy and environment goals, continuous efforts to facilitate a shift to a low-carbon society through advanced power technologies are needed.

Supply-side initiatives for reducing CO₂ emissions:

2. To maintain a stable and secure supply of electricity and to make significant emissions reductions in the power sector, it is imperative that all energy supply options be kept available. The optimum mix of generation resources in each country or region should be determined according to specific circumstances including geography, power system configuration, feasibility and public acceptance. To ensure that the growing demand for electricity is met in a secure manner, the electric power industry will need to make major investments in generation, transmission and distribution over the next decades. A stable long-term investment climate is crucial for the electric power industry to deliver this future low-carbon energy system.

Renewable energy:

The electric power industry is expanding the use of renewables as demand is growing for CO₂-free energy sources. Much of this growth is in response to specific government incentives. These are valuable and necessary; however, care must be taken by policy makers to provide transparency to customers of the subsidies used to expand renewable

energy and the higher costs which can be associated with them. The industry needs governments to streamline processes and support for the siting and construction of needed transmission facilities to use these resources, as well as establishing the recovery of additional investments and costs from all stakeholders.

Nuclear power:

For many economies, nuclear power is a key part of the solution to both energy security and climate change. In order to promote the use of nuclear power, policy makers and the electric industry must strive to enhance public understanding of the benefits of nuclear power including supply stability, economic efficiency and a lack of CO₂ emissions, while ensuring safety.

Thermal power generation:

For reasons of fuel supply diversity, economic efficiency and energy security, fossil-fired generation will remain an indispensable part of a well-balanced and diverse supply of power resources. The latest advanced clean generating technologies should be used wherever possible and the demonstration of carbon capture and storage technology should be accelerated.

Power transmission and distribution networks:

To ensure a stable and efficient electricity system, policy makers and the industry must work to maintain and strengthen the transmission and distribution systems with adequate investments. Configuration of smart grid systems with advanced control features is needed for major interconnections of renewable power sources to be accommodated and to enable consumers to take an active role in electricity consumption decisions depending on the respective situations.

Demand-side initiatives for higher energy efficiency:

3. Improving energy efficiency is an important strategy for mitigating climate change. To address this challenge, greater use of high efficiency, end-use consumer technologies (e.g. high-efficiency heat pump technology) should play a major role. These technologies are properly considered renewable resources by many governments. Consumer education, improved building standards and supportive regulations are required to unlock the potential benefits available. Depending on the regional configuration of power systems and the supply-demand situation, the expansion of smart grid technology will support these opportunities.

4. Greater electrification using highly efficient appliances and systems in the residential, commercial and industrial sectors, and innovative plug-in electric hybrid vehicles and electric vehicles in the transportation sector will greatly reduce CO₂ emissions from society as a whole while improving standards of living and reducing dependence on insecure supplies of oil.

Solving climate change:

5. Climate strategies must be compatible with the market economy, deliver timely and economically efficient greenhouse gas reductions and establish an adequate long-term carbon reduction value that is moderate, does not harm local economies, provides a smooth transition for existing infrastructure and stimulates future investments in zero-emission and low-carbon technologies. Each national government should design its climate strategies with a realistic view of technological development, cost-effectiveness, cost sharing, compatibility with other national policies, and appropriate time frames for broad deployment. It is vital that effective economic safety valves, including mechanisms such as offsets to achieve emission reductions, are incorporated in these strategies to limit the potential negative impacts of low-carbon policies on employment and economic growth.

6. The development of advanced and innovative technologies is crucial for achieving significant CO₂ emission reductions in the long term. Since many countries recognize the need to continue using coal because of energy security concerns, it is important to develop advanced clean coal plants [e.g., *Integrated Gasification Combined Cycle (IGCC)*, *Ultra Super Critical (USC)*] and *Carbon Capture and Storage (CCS)* and to expedite the demonstration of commercial technologies. Certain stages of the development and demonstration of such technologies will need to be led by initiatives from national governments with the support and involvement of the industry.

Global efforts of the electric power industry:

7. Carbon emissions, per unit of economic output, have gradually been decreasing in advanced countries, but it will take much time and significant investment in new nuclear power plants, advanced clean coal plants and renewable energy to replace the vast existing energy systems with the use of advanced technologies.

The global climate change challenge means that developing countries also need to adopt advanced generation technologies at the earliest practical stage. In concert with governmental initiatives, electric power industries in advanced countries can help developing countries reduce CO₂ emissions by sharing experiences and expertise with operating advanced technologies. The International Electricity Partnership (IEP), inaugurated at the International Electricity Summit in October 2008, has produced a roadmap as a global vision to be shared by electric power industries in various countries including developing countries. IEP will serve as the platform for identifying and working together on common challenges toward a low-carbon society.