

**Business Action for Energy | BAE**

# BAE News

**Countdown to CSD 15**

**March 2007**

A joint initiative for UNCSD 14 and 15 by the:

International Chamber of Commerce (ICC) [www.iccwbo.org](http://www.iccwbo.org)  
World Business Council for Sustainable Development (WBCSD) [www.wbcsd.org](http://www.wbcsd.org)  
World Energy Council (WEC) [www.worldenergy.org](http://www.worldenergy.org)



Welcome to the March edition of “BAE News – Countdown to CSD15”, which focuses on the role of business in contributing to technology transfer and highlights some of the key issues from the Intergovernmental Preparatory Meeting (IPM) for CSD15, as well as business input to the draft text prepared by the Chairs. It also provides a brief overview of nuclear and highlights EURELECTRIC’s contribution to sustainable development.

Previous editions have provided an overview of Business Action for Energy, highlighted business and industry’s priorities for action for CSD15, and talked about hydropower, energy efficiency, coal and the International Aluminium Institute’s contribution to sustainable development.

Future editions will address energy options (oil and gas), energy issues (public private partnerships) and the contributions of BAE participants to sustainable development. We will also address BAE plans for participation in CSD15.

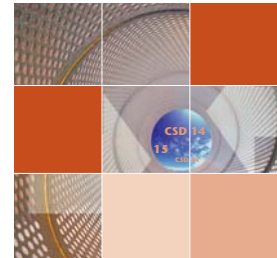
## 1. Technology transfer

Technology development and deployment is integral to achieving many global future energy objectives. A key consideration will be the leveraging of resources and partnerships to develop breakthrough technologies in order to fundamentally change our energy future. This needs to include technologies to reduce the carbon intensity of the energy mix, provide universal access, reduce environmental impacts, improve efficiency and provide reliable infrastructure to underpin development. Business is an important contributor to technology innovation and development and governments can provide support through enabling policies and frameworks. These policies should include developing national research programs targeted at local barrier identification and the recognition and support of opportunities. In addition, policies can include subsidies, tax benefits, workable and effective patent systems and other positive incentives for research and development (R&D).

National technology development strategies must cover fundamental research as well as emerging and near-commercial areas in order to ensure a pipeline of new technologies. For technologies of global importance,

international programs should be considered. It is also critical that technology development programs cover a wide range of technology options given the plethora of national and local conditions, resources and policies. Business could be a partner in global initiatives such as FutureGen, where public and private sector participants are jointly funding and guiding the research.

The transfer of technologies is a complex process, has many considerations, and should be closely linked with capacity building, particularly in developing countries. In order to accelerate the development or transfer of technologies, a series of large-scale R&D efforts may be required, as well as pilot programs in key countries in both the developed and developing world. Business has a key role to play in the transfer of technologies as many companies have a global reach through markets or supply chains. Thus business can partner with governments and civil society to expand the global and local dissemination of appropriate technologies as well as the identification and removal of barriers. Key to this is the provision of services, skills and associated technologies to operate and maintain new technologies in order to ensure their long-term sustainability.



## 2. Outcomes from the IPM (26 Feb – 2 Mar 2007)

- Focus on fossil fuels, specifically oil and gas. Many delegates highlighted the fact that fossil fuels will remain in the energy mix for the foreseeable future.
- Key energy issues highlighted the need to promote energy access (reliable and affordable energy services), improve energy efficiency, enhance energy financing and investment, the development and transfer of cleaner and advanced energy technologies and the various types of energy sources (many countries highlighted the importance of renewables).
- The G77 and China highlighted that the development of advanced and cleaner fossil fuels needs to be enhanced, especially since fossil fuels will continue to have a dominant role in the energy mix.
- The EU proposed a “basket” of voluntary commitments as a non-negotiated outcome of CSD15, with states submitting their national objectives on energy, energy efficiency and renewable energy.

Business and Industry comments on the Chairs’ Draft text:

- Need for an introduction to highlight:
  - ✓ The four thematic areas that are interwoven and

require integrated, balanced and cooperative solutions involving governments, business and civil society.

- ✓ Actions to address the four themes will be most effective when enabling framework conditions are in place.

- All energy sources should be considered, assessed on their merits and attributes, recognizing issues, barriers and opportunities for each. The critical role of current and future more efficient, lower carbon, lower emissions and advanced technologies, pertaining to all forms of energy.
- Energy efficiency should be addressed in all sectors.
- Overall, business hopes the text will evolve to:
  - ✓ Reflect a prioritized, integrated set of action-oriented recommendations;
  - ✓ Describe how the momentum on these four issues will be maintained and continued beyond CSD15.
- Business and industry look forward to a CSD15 session that takes advantage of the diverse expertise here in delegations and major groups, identifies synergies for action and partnerships and includes opportunities for more interactive discussions.

## 3. Technology focus – Nuclear

Compiled by The World Nuclear Association

Nuclear power currently supplies 16% of the world’s electricity. National governments on every continent are supporting an increased contribution from nuclear power to world energy needs. Thirty nuclear power plants are currently under construction, and the list of 130+ proposed reactors is rapidly expanding. Numerous developing countries have announced plans or intentions to build nuclear power plants, and at the same time several developed countries have reversed their earlier phase-out policies.

Nuclear power is an emissions-free source of base-load electricity. With more than 60 years of operating experience and an unparalleled safety record, it is a mature and proven technology. A clean and reliable supply of electricity makes an excellent and vital backbone for a power system that is to enable extensive use of intermittent renewable energy sources.

One benefit of nuclear power is the low impact of volatile fuel prices on production costs. This in turn enables stable



electricity prices, something that clearly can be seen when looking at France – with 80% of power supply from nuclear reactors – compared to other major European countries.



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Abundant uranium deposits can be found all around the world, in a wide range of geological formations – even seawater. Current estimates state there are more than 300 years' worth of uranium supplies for nuclear fuel, but technological advances may well make this number irrelevant. India's program to use thorium, an element that is four times as abundant as uranium, to fuel its reactors is well advanced. Another area with huge potential is fast breeder reactors, a technique that creates more fissile material than it consumes. This technology could create a virtually unlimited fuel supply, and is already included in the long-term energy plans of China, Japan and Russia.

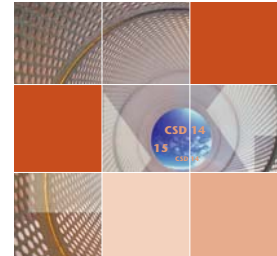
In the near term, the nuclear power industry is preparing a new generation of reactors. Simpler, standardized designs will expedite licensing and reduce the time and cost of construction - even while maintaining the highest standards of protection against accidents, earthquakes or terrorist attacks. Advanced reactors will also cost even less to operate and produce less waste. A key innovation will be the incorporation of "inherent" or "passive" safety features - the use of natural physical principles instead of pumps and motors. At the same time, there are now technical solutions available for the long-term storage of used nuclear fuel. Several countries have well developed programs in this field.

Beyond producing clean electricity, the energy from nuclear power could be used to distil salt water on a massive scale. Nuclear powered desalination plants would help to meet the shortage of fresh water that could afflict more than half the world's people by 2025. Kazakhstan already has a pilot plant, and Pakistan announced plans to build one earlier this year. Another application of nuclear energy with great potential is hydrogen production, where either electricity or high-temperature steam can be used to extract hydrogen from water.

The nuclear industry, governments and UN bodies are involved in several global partnerships. Generation IV and ITER are large international research projects that look at the next generation of nuclear power plants and fusion technology, respectively. The World Nuclear University (WNU) is an initiative from industry and governments to meet the increased global demand for a skilled professional workforce in nuclear science and technology. The WNU is also a registered Partnership for Sustainable Development with the United Nations Commission on Sustainable Development.

Article compiled by the World Nuclear Association. Further information can be found at [www.world-nuclear.org](http://www.world-nuclear.org)





## 4. EURELECTRIC – A new path to secure, competitive energy in a carbon-constrained world



Electricity has the potential to contribute substantially to the three main pillars of European energy policy: it holds the key to substantial reductions in greenhouse gas (GHG) emissions at reasonable cost to the economy, while at the same time helping to reduce oil and gas dependency. This conclusion emerges from a yearlong project designed to gain a clear view of the role electricity will play in helping to meet these energy challenges. The project's results, unveiled on 22 March by the Union of the Electricity Industry – EURELECTRIC, point the way to a new path for energy policy in the coming decades. In the light of these results, the European electricity industry is making a firm commitment to take action towards a low-carbon energy system by mid-century and has joined with its counterparts on other continents to issue a statement addressing the key issues around climate change and energy.

The project was carried out in cooperation with several external partners, academic teams and industry bodies. It investigated the impact of different demand-side and supply-side policies and technologies through quantitative modeling and scenario building up to 2050. Four scenarios were investigated: the *Baseline* scenario, based on current policies; an *Efficiency & RES* scenario, which centers on energy efficiency and renewables; a *Supply* scenario which foresees a nuclear renaissance and use of carbon capture and storage (CCS) technology; and a *Role of Electricity* scenario, which envisages the use of all options towards a low-carbon energy system – energy efficiency, renewables, nuclear energy and CCS. The scenario exploits the synergy between low-carbon electricity supply and efficient electro-technologies, including in areas traditionally limited to direct combustion of oil and gas – namely road transport (through the introduction of plug-in hybrid cars) and heating & cooling (through heat pumps).

The project's results highlight that the *Baseline* scenario is unsustainable, both in terms of GHG emissions and gas and oil import dependency. They show that only a European energy policy based strongly on demand-side energy

efficiency, active development of all low-carbon supply sources and active exploitation of the synergy between low-carbon electricity supply and efficient electro-technologies will ensure the transition to a low-carbon economy while contributing to both the security of Europe's energy supply and the competitiveness of the economy.

In order to seize this opportunity, a clear energy policy pathway must be implemented without delay. This *new path* energy policy must be built around six keystones, which must be developed in parallel so as to untie the knot of supply security, climate change and economic competitiveness:

- Unleash the potential of energy efficiency
- Develop a low-carbon electricity system by using all available options
- Develop intelligent electrification of the economy
- Create a consistent deployment strategy
- Develop a least-cost, market-oriented approach
- Pursue global cooperation on global issues

EURELECTRIC recognizes climate change as a “serious global environmental, economic and social challenge”, which requires an urgent response from policy-makers, businesses and society. It expresses the industry's commitment to energy efficiency and its determination to strive to move to a low-carbon portfolio of generation plants by mid-century. The parallel statement drawn up jointly with the US, Canadian, Japanese and Australian electricity associations stresses the need to keep all energy options open in the drive to a low-carbon energy system.

Article compiled by John Scowcroft – Head of the Environment and Sustainable Development Unit at EURELECTRIC. Further information can be found at [www.eurelectric.org](http://www.eurelectric.org)