

## PANEL SESSION 1: ENERGY AND THE ENVIRONMENT

### SUMMARY REPORT

MODERATOR: H-Holger Rogner

SPEAKERS: Mark Howells, Franklin Osaisai and Hanna Trojanowska

Policy makers face critical choices in reconciling energy, environmental & economic objectives. At the centre are country relevant solutions to the energy-trilemma, i.e., energy security, economic competitiveness and climate change mitigation. This energy-trilemma is compounded in developing countries by rapid growth in energy demand.

Changing outlook for energy supply especially shale oil and gas may change energy pricing, economic competitiveness & geopolitical balances.

No one size fits all - the optimal energy mix and the role of nuclear power are determined by local conditions - there is no silver bullet to reconcile energy and environmental conflicts. Shifting away from or towards nuclear can have significant implications for a country's energy security, electricity prices & climate change objectives. In a resource constrained world, nuclear can be an attractive option.

Nigeria currently grapples with the problem of generating sufficient electricity to meet the needs of its large population and drive its economic development aspirations. The country is preparing for the introduction of nuclear power to provide reliable and cost-effective base load electricity to fuel economic growth and stepped-up energy security.

Poland's long term energy policy promotes energy efficiency improvements, the accelerated use of renewables, the introduction of nuclear power and energy market reform with the objectives to enhance energy security and reduce the environmental footprint of its power industry. This is especially important because Poland's energy sector is heavily dependent on coal and is committed to meeting EU greenhouse gas emissions reduction targets. Nuclear power has among the lowest external costs second only to wind and the largest low-cost supply-side greenhouse gas reduction potential of the country.

The delegate from Malaysia asked whether there a need for cross-border consultations for a country to launch a national nuclear power programme. Ms Trojanowska responded that yes, Poland consulted all ten neighbouring countries which helped improve the country's national justification for introducing the technology.

The delegate from Benin asked whether industrialized countries ought to finance the nuclear option in developing countries by industrialized countries and Ghana asked whether financial mechanisms under the Kyoto Protocol could be used to help finance nuclear power. The panellists responded that revenues must cover costs, and subsidies are a barrier to private sector involvement. Regional partnerships instead of individual country approaches may be one way of sharing the costs. It was also pointed out that there may be more appropriate non-nuclear alternatives in the short-run to meet rising energy demand in smaller countries.

The delegate from the Arab Atomic Energy Agency pointed out that the possibility of regional approaches to nuclear power programmes needs a legal framework for cooperation and sharing of responsibility. Regional approaches enhance trust and transparency among partner countries (checks & balances) which reduces proliferation risks and enhances economics.

The delegate from the Congo asked how to develop national energy strategies and compare alternatives. The panellists responded that the IAEA offers assistance in energy-environment

planning in developing countries aimed at developing technologically-neutral sustainable energy strategies.

Member States should be empowered to conduct comprehensive national energy strategies accounting for national resource endowment, economic, technical and social conditions (all supply and demand options to be included) with specific focus on providing affordable, clean and secure energy services.

In summary, momentum in future nuclear development has shifted to the developing world away from the OECD. No one size fits all - local conditions determine the role of energy in national energy mixes.