



Key messages resulting from the Eighth Forum on Energy for Sustainable Development

I. Hard talks-12 June 2017

A. Energy transition and energy security

- The attainment of global sustainable energy targets (Sustainable Development Goal 7 and other energy-related elements of the 2030 Agenda) is not on track.
- Increasing the share of novel energy sources contributes to increasing complexity in grid management, while most utilities still operate along traditional lines. A change from traditional central network management to automated systems that can manage both distributed generation and flexible supply and demand is required, as is investing in education at all levels to build capacity for handling the complexity.
- Remote areas lack attention from central government as enhancing energy access is often accompanied by high initial investment costs, fragmented policies, heavy subsidy dependence, low maintenance of infrastructure, and a dearth of innovative business models.
- Achieving energy security requires a comprehensive approach across different sectors, including the environment. Given climate change's impacts on water management, reducing emissions remains a critical objective. In addition, there are a number of new risks emerging from the energy transition.

B. Interplay of renewable energy and fossil fuels

- Natural gas and renewable energy have witnessed significant growth in recent years and are considered key elements in the transition to a cleaner and more secure energy future. However, much of the current discourse considers each in isolation or concentrates on the competitive impacts of one on the other.
- A holistic approach should be adopted to ensure sustainable energy future and reconciliation of tight emissions pathways through exploring synergies and partnerships between renewable energy and natural gas in terms of technology, policies, market structure, and best practices.
- The need for dialogue with involvement of all stakeholders from natural gas and renewable energy industries, financial institutions, government and private sector. The United Nations is the right platform to initiate such dialogue with an objective to ensure sustainable energy future.

II. Track I: Renewable Energy

A. Renewable energy deployment

- Energy supplied by renewable energy is associated with many benefits, including reduced health and climate impacts, economic development, synergies with water and food supply, remote energy access, and the like). Considerations regarding renewable energy should evolve from a narrow view on costs to a broader reflection about its wider benefits for society and its contribution to quality of life.
- Despite comprising over 300 million inhabitants and representing 4.9% of the world's GDP, 17 UNECE countries in South-Eastern Europe, Eastern Europe, the Caucasus and Central Asia accounted for only 0.2%, or USD 0.4 billion, of global renewable energy investments in 2015. Attracting investment is a major challenge for these countries, despite existing support schemes and policies for renewable energy.
- Increasing the share of renewable energy in the energy mix requires involvement of both the private and public sectors in developing and financing projects, development of policy, normative, regulatory and institutional frameworks to create a suitable environment, promote economic investments, and development of capacities and skills at national level to identify, develop and implement projects. This is even more important in the aforementioned regions.

B. Financing Renewable Energy

- Increasing the share of renewable energy in the energy mix requires the following conditions: Involving the private sector in developing and financing renewable energy projects; developing policy, regulatory and institutional frameworks that promote investments in renewable energy; enhancing dialogue among key public and private renewable energy stakeholders; and developing skills of the public and private sectors at the national level to identify, develop, promote and implement renewable energy investment projects.
- Private developers and investors expressed a need for a clear and stable regulatory framework and better contractual investment terms to effectively develop and realize the growing portfolio of renewable energy project proposals. Innovative financial instruments are needed to alleviate currency depreciation risks, in particular as index-linked feed-in-tariffs are gradually reduced. Local banks need to be involved.
- Such innovative investment instruments (e.g. currency hedging) and specific technical assistance can play a crucial role in supporting the project developers, investors and financial institutions.
- Public finance institutions have an important role in facilitating access to finance at local level and mobilizing private finance through provision of risk mitigation instruments. National and subnational actors can mobilize funds through the issuance of green bonds.

C. Renewable energy in the context of crisis and poverty

- Energy is key for development, for the poorest of the poor, and for refugees and migrants. As it is essential to leave no one behind, it is important to bring renewable energy solutions into humanitarian operations by including them in the planning stages and for the opening of new operations in the future.
- Renewable energy solutions can be economically viable even in harsh conditions and crises. We need sustainable solutions that would attract the private sector to invest in a context that bridges emergency aid with subsequent support and longer-term development. A comprehensive feasibility study is necessary, which should include, in addition to the technical aspects, the social, developmental and environmental aspects of bringing renewable energy solutions to refugee camps and host communities.
- Deploying renewable energy systems must be accompanied by training and capacity building to harness the full potential and ensure sustainability.

III. Track II: Energy efficiency

A. Energy efficiency implementation

- Improving energy efficiency in buildings can make a substantial near-term contribution to both climate change and quality of life. Wide deployment of the Framework Guidelines for Energy Efficiency Standards in Buildings is an important step. Immediate actions include dissemination of the guidelines, education and training, and research and consultation, while engaging all relevant networks and stakeholders.
- A mix of incentives, obligations and awareness raising among stakeholders on both self-financing potential of energy efficiency and its multiple benefits is proposed as the best policy approach.

B. Improving energy efficiency in industry

- Industry is responsible for one third of the global primary energy consumption and CO₂ emissions. The sector will contribute much of the 88% global economic growth expected by 2050. In order to reduce CO₂ emissions it will be important to change the energy mix, but reducing energy consumption will be key. Existing economic technology solutions can reduce energy consumption in industry by 30%. However, even specifically designed policies have not yet managed to overcome barriers.
- Improving energy efficiency has been demonstrated to be cost effective and in line with typical industry investment criteria, but it is still over-reliant on climate change as a driver rather than on a solid business case. There is a need to convince industry of the beneficial role energy efficiency improvements can play within their overall business model.

C. Smart Sustainable Cities

- A growing number of cities are leading by example and setting the pace and scale of action to put the climate on a safe pathway also with the support of Information and Communication Technologies (ICTs), inspiring many other cities to follow suit.
- The concept of Smart Sustainable Cities is a combination of solution-oriented and integrated approaches based on technological innovations, enabling conditions from governments, stakeholders' collaboration and citizens' participation to address the current and future challenges of cities and make them better places to live in. To support the transition to smart, sustainable cities, the use of key performance indicators and the foregoing framework guidelines are critical to analyze the cities' performances, set priorities for change, update and improve existing standards, and increase access to sustainable energy and achieve a better quality of life.

D. Renewable energy and energy efficiency holistic policies

- Renewable energy and energy efficiency policies need to work together to achieve carbon reductions and greater energy security. Effective energy pricing, joint governance, good data and public sector exemplars are important tools for achieving this.

IV. Track III: Modernizing energy industry

A. Role of natural gas

- Natural gas has a role to play in most of the 17 Sustainable Development Goals: fighting poverty, hunger, and climate change, improving water sanitation and heat, and enabling economic and social development and job creation. In the context of job creation, the experiences and skills gained in the today's gas industry could be put to good use in creating the future energy system. This requires a partnership between the gas industry, governments, and other players to sustain the transition to the future energy system.
- Gas is the “best partner” for renewables due to its flexibility, and low capital investment and maintenance requirements. It is also a good solution for transport in large cities as it does not produce particulate matter.
- Switching from coal to natural gas in electricity generation can reduce the carbon intensity of fossil energy and significantly improve air quality in many urban areas, in particular in developing countries, given their rapid rate of urbanization.
- Natural gas can contribute to access to energy, through small scale LNG that can bring energy to remote locations such as small islands or isolated communities.

B. Cleaner electricity

- Fossil energy will remain part of the sustainable energy mix because of its role in providing energy access and economic development. High efficiency, low emission technology (HELE) is an important step on the pathway to zero emissions that can be achieved only with carbon capture use and storage. HELE technology will require policy parity with other low emission technologies.
- Deployment of HELE could be accelerated through finance and technology transfer provided by international organizations and other mechanisms.

C. Methane management

- Coal Mine Methane (CMM) is an under-utilized unconventional energy resource. It offers an immediate and powerful opportunity to mitigate emissions, improve social conditions and generate energy economically. Recovery and use of CMM has multiple benefits such as provisioning of clean and affordable energy, improved safety and productivity of coal mining and reduction of a potent GHG. The carbon footprint of coal mining can be reduced through abatement of methane emissions.
- Development of CMM projects offers an additional source of revenue to assist coal companies in adapting to changing economic and environmental conditions.
- An international centre of excellence (ICE) on CMM has been established in Poland and another is being instituted in China to train professionals and disseminate principles-based best practices to aid in the initiation of CMM projects worldwide.

D. Resource management

- The United Nations Framework Classification for Resources (UNFC) is a decision-making and management tool that can help governments and industry to understand the sustainable development benefits of CMM recovery and use, and increase its adoption and practice around the world.
- UNFC is also a tool for addressing wastes. Waste of all kind (solid municipal wastes, mining wastes, industrial wastes, waste water etc.) is a growing concern worldwide and conversion of waste where possible to an energy resource could alter this dynamic significantly. Social issues and licence to operate concerns can stop or significantly hinder the development of energy from waste projects.
- Financing development (feasibility studies, demonstration/pilot plants) and implementation requires major investment of capital and human resources. UNFC is a tool for identifying potential projects, channelling investments and managing their successful execution.
- There was a call for countries around the world to use UNFC widely for resource management.

E. Modernization of industrial ecosystems

- There is an urgent need to mitigate climate change. 80% of today's energy mix based on fossil fuels. Legacy industries (industrial complexes) using inefficient technologies and processes offer an opportunity to deploy readily available and modern technologies and expertise to mitigate environmental impacts.
- UNECE's groups of experts have joined forces to examine opportunities to concentrate their collective capabilities to this end. The effort includes enhancing energy efficiency and deployment of renewable energy in concert with gas, minimizing waste including of natural gas and coal mine methane. Electricity generation in this process is a key step towards energy for sustainable development.
- The initiative seeks a host country and flagship project to inspire further development.

V. Track IV: Regional cooperation

A. Technology center

- The establishment of an international center for technology and investment could to be a major stepping-stone to attract policy, finance and technology knowledge into the Central Asian region. Global practice shows that sustainability and successful operation of such centres depend on proper and consecutive implementation of the preparatory stage.
- Technologies should be affordable for small and medium businesses, and social development should be a cornerstone of the programme. Technologies should aim at increasing employment, including of people with disabilities.

B. Global Tracking Framework (GTF)

- The Global Tracking Framework is an annual report (biannual until 2017) that measures progress to sustainable energy for all. It is coordinated and produced by the World Bank with support from a number of intergovernmental institutions. In 2017, the report was produced with chapters dedicated to a regional approach and therefore drafted by the five United Nations Regional Commissions. The conclusion is that in 2017 the world is not on track to attain the Sustainable Energy Goals. Action needs to be scaled up and accelerated.
- The Regional Commissions have produced companion reports that explore the key trends in greater depth to explain the results obtained in the main GTF report. The reports also explore alternative data sources and consider alternative indicators. One of the main conclusions of the sessions is that decision-makers will be better informed with a broader range of forward-looking indicators that cut across the 2030 agenda for sustainable development from an energy perspective. Future regional reports in support of the global tracking framework will require further support from donors and participation by countries.

C. Pathways to sustainable energy

- The project is being undertaken in the UNECE region to explore strategic choices whereby countries might attain the objectives of energy for sustainable development. The project recognises that there is not a single pathway to the future energy system as each country has its own starting point and a distinct set of options for how to proceed. The outcome of the project, supported by modelling, will be three-fold: an exploration of strategic options for countries to consider, a high-level political dialogue among countries to explore how, collectively, the objectives of energy for sustainable development might be achieved, and an early warning system of signposts to send an alert if the objectives are not being met.
- The project would be strengthened by wider participation of donors and countries.

D. Special programme for the Economies of Central Asia

- Representatives of SPECA countries presented their implementation of SDGs related to the thematic areas of the Working Group at national and subregional/transboundary levels. In particular, they discussed what is planned by countries and by intergovernmental organisations/partners and how SDGs could be implemented more efficiently through crossborder/subregional cooperation.
- The Secretariats of ESCAP and UNECE presented the results of programme implementation in the area of water-energy-environment in 2016-2017 and possible areas of work for 2018-2019. Opportunities for cooperation in the SPECA region to support the implementation of the Sustainable Development Goals were presented by international organisations such as CAREC, ICSD, International Water Assessment Centre, UNEP and national experts.