

# Ministerial Conference

& the Eighth International Forum on Energy for Sustainable Development



## MINISTERIAL STATEMENT

Access to affordable, reliable,  
sustainable, and modern energy

11-14 June 2017  
Astana, Kazakhstan

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This Ministerial Statement was adopted at the Ministerial Conference “MEETING THE CHALLENGE OF SUSTAINABLE ENERGY” within Eighth International Forum on Energy for Sustainable Development on 11 June 2017 in Astana.

The Statement is a non-binding outcome document based on the ministerial dialogues held to enhance the understanding of sustainable energy and possible policy drivers to achieve a common goal on sustainable energy, promote a policy dialogue and provide awareness-raising of different outcomes that could emerge over time.

The recommendations and solutions from the Ministerial Statement will be further integrated into a “Manifesto of Values of Expo 2017”, which is planned to consolidate proposals of private sector, governments, academia and environmental organizations, business-structures to create a new model of energy.

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# MINISTERIAL STATEMENT

Access to affordable, reliable,  
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Astana, Kazakhstan  
2017

### **Our Pledge**

We, the Energy Ministers, met in Astana, Kazakhstan on 11 June 2017, to explore ways to accelerate the transition to a sustainable energy system. Energy plays a crucial role in global economic growth and underpins all areas of development. We recognize that it is essential for our nations to secure access to affordable, reliable, sustainable, and modern energy and to reduce greenhouse gas emissions from the energy sector for the world to develop sustainably. Improving efficiency and reducing emissions will be essential to meet environmental goals. We commit to those actions described herein that pertain to our national circumstances.

1. We support the development of national sustainable energy action plans aligned with our future energy needs, the 2030 Agenda for Sustainable Development, and the Paris Agreement, including notably agreed significant improvements in energy efficiency, reductions in greenhouse gas emissions from the energy sector, and ensuring energy access for all.
2. We take note of the initiative of Kazakhstan to establish an International centre for green technology and investment "Future Energy" in Astana, financed by the Government of the Republic of Kazakhstan and supported by voluntary extra-budgetary resources and expertise (including from interested organisations of the United Nations system such as UNDP, UNEP, UNIDO, UNECE, and UNESCAP) to support interested countries in the areas of energy market reform, energy efficiency, renewable energy, energy access, energy security, finance and investment, technology, and energy data, indicators and analysis and we recommend it explore collaboration with other respective international organisations and existing technology centers.
3. We support the development and dissemination of internationally recognized minimum energy performance standards in all sectors.
4. We will participate on a voluntary basis in the development of methods for public data collection, and the gathering and dissemination of appropriate data and indicators related to energy for sustainable development.
5. We will participate actively in international dialogue on technology, energy policy, and lessons learned to share best practices.
6. We will promote access to affordable, reliable, sustainable, and modern energy for all.
7. We call on the community of international organisations and other stakeholders involved in energy to coordinate their support for our efforts across the range of activities set forth in this document. We would like to convene again under the auspices of the United Nations to assess the progress on our pledges.

## What is at stake?

### *The Crucial Role of Energy for Sustainable Development*

If the world is to develop sustainably, it will be necessary to ensure access to affordable, reliable, sustainable, and modern energy services while reducing greenhouse gas emissions and the carbon footprint of the energy sector. Energy is a fundamental need as it provides the essential services of cooking, heating, cooling, lighting, mobility, and

operation of appliances, information and communication technology, and machines in every sector of every country to support decent life and work. Energy is used by doctors as they provide healthcare in clinics, it provides lighting for children to study, and when it is unavailable women (most often) are obliged to pass their time gathering wood to burn for cooking (which then degrades indoor air quality). Energy is the golden thread that weaves throughout the 2030 Agenda and is at the core of meeting the world's quality of life aspirations. The challenge is reconciling a tight emissions pathway with these aspirations. The 2030 Agenda represents an imperative for profound and immediate changes in how energy is produced, transformed, traded, and consumed as the energy sector accounts for 60% of total global greenhouse gas emissions. To avoid exceeding the amount of carbon that can be emitted that is consistent with the objectives of the Paris Agreement and to set the stage for future reductions in atmospheric greenhouse gas concentrations, all options for reducing net carbon emissions must be developed and pursued urgently to reduce energy's net carbon intensity.

The rate of improvement in energy efficiency, the deployment of net low carbon energy solutions, and the provision of sustainable access to modern energy services are insufficient. Energy's contribution to the 2030 Agenda will falter in the absence of concrete measures to improve energy productivity, rationalize energy use, optimize energy resources, and deploy both new energy technologies and sustainable energy infrastructure.

#### Goal 7:

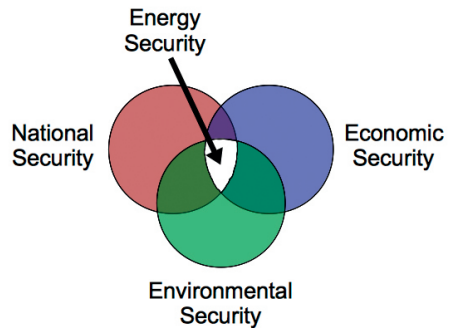
Ensure access to affordable, reliable, sustainable and modern energy for all.



### **Critical Issues Dominate the Energy Agenda**

There is no common understanding of what sustainable energy is or how to attain it. Today’s national energy strategies reflect divergent economic development, resource availability and energy mixes. Each country sets its national energy strategy based on its perspectives on sustainable development, environmental protection, revenue needs, poverty alleviation, climate change mitigation, quality of life, and the like. As a consequence, multiple approaches and outcomes can be found in national plans.

- Energy security concerns impede improvements in technical, environmental, and economic efficiency, often by promoting energy independence instead of more efficient enhanced integration of energy markets.
- Fossil fuels play a significant role in the energy mix. Even under a climate change scenario that meets the target of the Paris Agreement, fossil energy will still represent an important share of the energy mix in 2050 and must be addressed whether through efficiency improvements or through appropriate emissions controls.
- Certain options for improving the overall performance of today’s energy system are excluded for reasons of public perception, politics, imposed market distortions, or legitimate but possibly solvable concerns of health, safety and environment. Meeting the energy requirements of the 2030 Agenda and the Paris Agreement will require addressing the range of obstacles.
- Transforming the energy system will require a shift in policy and regulation to treat energy as a series of services rather than as a series of commodities, but the political, regulatory, and industrial infrastructure of energy is anchored firmly in today’s commodity system. The transformation will need to respect the vital economic interests of producers, consumers, and financiers to be effective.



## What needs to happen?

### *Reshape Policies to Stimulate the Transition to a Sustainable Energy System*

The objectives of energy sustainability are attainable and need not contradict more short-term considerations if the world embarks on a determined, collective effort. Reinventing the energy system to one in which 1) a systems perspective shapes overall policy and 2) the transformation of energy from a series of commodities to a series of services will not be instantaneous and starts with the system that is in place today. Action by international organisations, national governments and regulators, civil society, and private sector investors can accelerate the needed transformation.



***Energy markets should be reformed*** so that energy prices reflect full costs, including emissions, while eliminating market-distorting subsidies throughout the system. The use of energy subsidies could be attenuated by exploring more efficient and effective ways to protect vulnerable groups or to promote new technology. Policy-makers should work to enable a transition from an energy commodity industry to an energy services industry as a means of accelerating the technical, economic, and environmental efficiency of the energy system.

***Energy market reform will not happen unless energy sustainability is assured.*** A full range of normative instruments such as standards and best practice guidance is needed throughout the energy system including development of regional and international norms covering interconnections, interoperability and trading. It will be important to maintain an open dialogue among energy-producing, -transit and -consuming countries on energy security, technology and policy. Achieving greater interconnectivity and mutually beneficial economic interdependence will require investment in energy infrastructure projects to enhance energy efficiency, integrate renewable energy, and optimize energy resource utilization. Encouraging interconnection infrastructure projects among countries with complementary energy resources is a cost-effective way to enhance mutual energy security and energy sustainability.

***Energy efficiency in most countries needs to improve more quickly.*** Improving the efficiency of the economy's energy system is one of the most cost-effective options for delivering on the sustainable development goals,

but much potential remains untapped. Significant potential for improving energy efficiency exists worldwide: policies that artificially lower energy prices encourage wasteful consumption; production and consumption subsidies distort markets; housing stocks are poorly managed; land use management is inefficient; new participants face barriers to entry; there are inadequate norms and standards; and the statistics and information to manage energy use and track progress are incomplete. Also, there is often a lack of public awareness and education about the long-term economic and social benefits of action to improve energy efficiency and industrial productivity.

**Universal access to modern energy services requires mobilizing adequate resources.** Ensuring physical and economic access to quality energy services requires investment throughout the energy value chain, from primary energy development to end use. Enabling investment requires that governments have a long-term vision for providing sustainable energy services, and that they promulgate sustainable policies and regulations that allow producers and consumers to respond to a dynamically changing energy market. Such a vision should be based on a total energy system perspective that includes provision of access to modern energy services for vulnerable groups. It also requires proper integration of the full slate of development goals (e.g., energy, gender, youth, and other vulnerable groups of people; the water-food-energy-ecosystems-health nexus).

**Renewable energy policies need to be redesigned from a systems perspective.** Renewable energy is becoming cost-competitive with conventional energy and has significant potential for further cost reductions. They offer a way to reduce the net carbon intensity of the energy sector, improve energy security, provide energy access economically in remote areas, and encourage economic development. For energy exporting countries, renewable energy can help meet growing domestic energy demand while supporting stronger fiscal and environmental sustainability. Enhancing integration of renewables into the energy mix will be important as future energy systems are optimized both on- and off-grid. However, wider uptake of renewables requires addressing barriers to fair competition vis-à-vis conventional energy technology (without resorting to subsidies), implementing stable long-term energy policy frameworks in a future energy system context, and deploying financial and risk mitigation mechanisms. New solutions are needed to deploy renewable energy in buildings, industry and transport.

**Finance will be critical.** The transformation of the energy system will involve mobilization of significant financial resources. It is also likely to alter the substantial financial flows emanating from today's energy system. It will be neces-



sary to align investment incentives with the objectives of the 2030 agenda in order to improve investor confidence and incite transformational investment.

**The future energy system will need new technology and new skills.** Research and development and commercial introduction of new technology, capital, and management skills are essential to support the needed transitions. It will be important to extend international collaboration on research and development of new technology and exchange lessons learned about large-scale deployment of lower net carbon intensity energy sources.

**Energy indicators for tomorrow.** It will be vitally important to develop further appropriate indicators that show progress on energy for sustainable development in the context of the whole 2030 Agenda and its nexus challenges. Many countries need support to establish energy statistics programmes that monitor and report key energy production and consumption variables, and that are fully integrated into other economic and social national statistical efforts. It will be necessary to enhance international statistics on energy production, trade, and consumption patterns consistent with the desired future energy system and to strengthen the analytical capacity of the different interactions involving energy policy in order to provide innovative sustainable policy approaches to address multidisciplinary energy-related issues.

**National and regional circumstances vary substantially.** While each country will make its respective contributions to the 2030 Agenda and the Paris Agreement, there is no one-size-fits-all solution and each country will choose its approach optimally given its national circumstances.

**Collaboration is essential.** Countries are committed to implementing their respective nationally-determined contribution (NDC) to the Paris Agreement. There is significant value in international cooperation, strategic partnerships and functioning energy markets across regional corridors in the interest of all. Sharing experience and technology and encouraging cross-border investment will accelerate the transformation. Achieving the objectives will be facilitated by closer dialogue and collaboration among governments, the private sector, financiers, and civil society and among the various sectors that will interact to deliver on the 2030 Agenda.





