

G7 Kitakyushu Energy Ministerial Meeting
Kitakyushu Initiative on Energy Security for Global Growth
Joint Statement

We, the Energy Ministers of Canada, France, Germany, Italy, Japan, the United Kingdom, the United States, and the European Commissioner for Climate Action and Energy, met in Kitakyushu on 1-2 May 2016, to discuss developments since the Hamburg meeting held in 2015, against the background of volatile energy prices and the COP21 Paris Agreement. We issue the following joint statement for Leaders' consideration, in view of the G7 Summit to be held in Ise-Shima on 26-27 May 2016.

1. We reaffirm our commitment to the principles and actions set out in the Rome Initiative for Energy Security and the Hamburg Initiative for Sustainable Energy Security. These principles are the foundation of the collective energy security of the G7 countries.
2. We express our condolences over the loss of life and our solidarity with the people affected by the recent devastating earthquakes in Kumamoto and Oita Prefectures in Japan. We affirm that preparedness for natural disasters through resilient energy systems, including electricity, gas and oil, and emergency response for prompt recovery of the systems at the time of disasters are crucial for enhancing energy security.
3. We take note of Kitakyushu's initiatives to engage women and children in discussion of energy challenges, including by supporting the Women's Conference on Energy for the Future of Our Children and the Youth Energy Summit, prior to our gathering.
4. We recognize that energy plays a crucial role in global economic growth. Investment in the energy sector, including quality infrastructure, innovation in renewable energy and other low-carbon technologies as well as energy efficiency help build the economy while decoupling economic growth from carbon emissions. In the face of current energy price levels and volatility, continued investment in secure and sustainable energy supply is essential to mitigate risks to the future growth of the global economy.
5. We commit to continue to take a leading role in enhancing global energy security. Responding to the multiple requirements of energy security, economic efficiency, environment and safety (3E+S) is an ongoing challenge for all countries, be they producer or consumer states, developed or emerging. Well-functioning and transparent markets, diversified energy fuels, sources and routes, enhanced energy efficiency and improved energy system resilience are all necessary for furthering energy security. In the context of the ongoing crisis between Russia and Ukraine, we reiterate that energy should not be used as a means of political coercion, nor as a threat to security. We remain committed to support Ukraine and other countries vulnerable to energy supply disruptions to pursue resilient and fully competitive energy systems.
6. We welcome the adoption of the Paris Agreement by Parties to the United Nations Framework Convention on Climate Change (UNFCCC) at the 21st session of the Conference of the Parties (COP21) including on holding the increase in the global average temperature to well below 2 degrees Celsius above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5 degrees Celsius above pre-industrial levels. We encourage all

Parties, particularly the major emitters, to ratify or otherwise join the Paris Agreement as soon as possible, thereby facilitating its prompt entry into force. We recognize the important role that the energy system has to play in its implementation. We are determined to play our full part in implementing the Paris Agreement and to accelerate our work towards the transition to an energy system that enables a decarbonisation of the global economy. We note the importance of promoting investments toward low-carbon growth, through effective policies and actions including carbon market-based and regulatory instruments. We commit ourselves to formulate and implement strategic measures to develop energy systems that allow for sustainable economic growth alongside deep reductions in greenhouse gas emissions. We also affirm that deployment of clean energy technologies and enhancement of research and development of innovative technologies are crucial for our future.

I. Energy Investment for Global Growth

7. Current energy price levels and volatility hamper investment and add uncertainty to energy markets and the global economy. Promotion of energy efficiency and the deployment of clean energy technologies are critical to achieve a reduction in greenhouse gas emissions, while at the same time fostering economic growth. We affirm the importance of investment in supporting innovative technologies to encourage clean energy and highly energy efficient products, facilities and buildings in all sectors.
8. We also stress the importance of sustained upstream investment, both public and private, for ensuring long-term sustainable energy supplies to support the growth of the global economy. Bridging the existing energy infrastructure gap through quality energy infrastructure investment contributes to promoting strong and balanced growth. We therefore encourage stakeholders globally, including multilateral development banks (MDBs), to facilitate quality energy investments.

II. ENERGY SECURITY

Gas Security

9. The expanding role and globalization of natural gas markets, for both pipeline and liquefied natural gas (LNG), bring new opportunities and challenges. We welcome Japan's Strategy for LNG Market Development, the EU Strategy for LNG and gas storage, and LNG exports from North America and other sources. Enhancing gas supply security requires well-functioning, resilient and interlinked natural gas markets with market-based pricing and with greater transparency, flexibility and liquidity. Relaxing destination clauses in LNG contracts, encouraging market development of price indices reflecting LNG supply and demand, and continued dialogue among stakeholders are crucial to achieve this. We will work to further a strategic view of the LNG supply chain at a global level with comprehensive, quantitative and reliable data, and a good understanding of gas market resilience.
10. Expanding open and resilient gas infrastructure with appropriate legal frameworks is critical to realize transparent, integrated and liberalized gas markets. Facilitating upstream investments and ensuring robust, reliable, secure and sufficient supply chains, while

analyzing relevant costs and benefits, help both to ensure future supply security and to accelerate energy diversification. We stand ready to look at all potential policy options available to help mitigate risks for energy infrastructure projects.

11. We support development of new technologies and expanded uses for natural gas as a less carbon intensive fossil fuel, including in the transportation sector. We emphasize that all production, processing, distribution and use of natural gas should be conducted so as to minimize releases of methane, in light of methane's high potency as a greenhouse gas. In those countries that opt to do so, shale and other unconventional gas should be developed within an adequate regulatory and environmental framework.

Cyber Security

12. Cybersecurity has become a crucial element for guaranteeing security of energy supply. New cyber threats are arising as energy networks are transformed into more digitized, distributed systems. We welcome the success of the G7 energy cybersecurity workshops held in Berlin in November 2015 and in Tokyo in March 2016. We commit ourselves to advancing resilient energy systems including electricity, gas and oil, in order to respond effectively to emerging cyber threats and to maintain critical functions.

Electricity Security

13. Electricity security is an increasingly important aspect of energy security. Electricity is the fastest growing form of energy, and achieving a decarbonisation of the global economy requires rapid and transformative change. We welcome the experts' workshop organized by Germany to discuss strengthening electricity security. We also welcome the report by the International Energy Agency (IEA) on electricity security and the report by the IEA, in close cooperation with the International Renewable Energy Agency (IRENA), on grid integration of variable renewable sources, including its no-regret options.
14. In order to enhance electricity security, while recognizing the diverse nature of electricity markets, we highlight the need for improved market designs and appropriate regulatory frameworks. These frameworks should foster competition; drive renewable including hydro, and other low-carbon generation investments; provide for both long- and short-term system reliability and flexibility to integrate variable renewable energy, including demand response; and help deeper regional market integration. This process could be facilitated through better coordination in setting reliability standards, in conducting adequacy planning and in designing capacity mechanisms.

Support for Ukraine

15. We welcome the substantial energy policy reforms ongoing in Ukraine including market and tariff system reform in the gas and electricity sectors as well as diversification of energy sources and routes. In particular, we welcome the recent announcement by Ukraine of its intention to establish the necessary framework conditions for a comprehensive energy efficiency program targeted at the residential gas-based heat sector. We also welcome Ukraine's implementation of the Extractive Industries Transparency Initiative to improve transparency in the energy sector.

Global Energy Architecture

16. We reaffirm the growing significance of emerging economies in the global energy landscape. We support the IEA's enhanced engagement, including its Association initiative, which is an important step in the long-term process towards deeper and wider-ranging collaboration between the IEA and emerging economies. We also welcome the IEA's efforts to enhance energy security, including broadening its oil security system, through further engagement with non-member countries. G7 countries will continue their national and regional efforts to engage emerging countries to strengthen global energy security.

III. ENERGY SUSTAINABILITY

Innovation and Deployment of Energy Technologies

17. We confirm our intention to enhance cooperation in energy technology innovation, research, development, and deployment, in order to accelerate the urgently required technological progress towards clean energy, including renewables, and to achieve a global and sustainable energy transition. We welcome the international initiatives launched under the Lima Paris Action Agenda.
18. We reiterate our strong support for Mission Innovation (MI), launched at COP21 in Paris, recognizing that accelerating widespread clean energy innovation is: an indispensable part of an effective, long-term global response to our shared climate challenge, necessary for providing affordable and reliable energy for all and for promoting economic growth, and critical for energy security.
19. We acknowledge the importance of deploying clean energy technologies, taking into account public acceptance. Building on the substantive outcome of the first phase of the IEA's Energy Technology Roadmaps programme, which was initiated by the G8 Hokkaido Toyako Leaders Summit in 2008 and resulted in 21 roadmaps, we welcome the launch of the second phase of IEA Technology Roadmaps focusing on viable and high impact technologies, and ask the IEA to report to us on its progress. We call on countries that opt to make use of carbon capture, use and storage to further work on large-scale demonstration projects.

Improving Energy Efficiency

20. We affirm that improving energy efficiency is key to decarbonisation of our economies, enhancing energy security and fostering economic growth and should be regarded as the "first fuel." We aim to strengthen our efforts to further improve energy efficiency and also call on other countries to follow suit.
21. We emphasize the importance of the strong interconnection between, and simultaneous improvement of, energy efficiency and resource efficiency.

Nuclear Energy and Safety - After Fukushima

22. Taking note that the International Atomic Energy Agency (IAEA) has reported on improvements in the situation at Fukushima Daiichi Nuclear Power Station over the past five years, we welcome the steady progress on decommissioning and treatment of contaminated water at the site. We welcome the continuous survey of the radioactive

contamination and air dose rates and the dissemination of scientifically-based information by Japan, and their efforts to proceed in an open and transparent manner in close communication with the international community, towards developing accurate global understanding of the situation in Fukushima.

23. In those countries that opt to use nuclear energy, it substantially contributes to the reduction of future greenhouse gas emissions and works as a base load energy source. In those countries, it is also crucially important to engage the public in science-based dialogue and transparency to inform about policymaking.
24. We reaffirm the vital importance of achieving and maintaining high levels of nuclear safety, security, and non-proliferation, worldwide. There can be no grounds for complacency about nuclear safety in any country. In this regard we welcome the report and the continuing work of the G7 Nuclear Safety and Security Group and the mutual cooperation and information exchange through international organizations such as the IAEA, the Nuclear Energy Agency, and the World Association of Nuclear Operators. In that context, we affirm our commitment to constructive and transparent dialogue among industries and regulators, providing the public with information on their safety measures for all countries worldwide.

We agree to take joint actions, building on the principles and actions agreed in Rome and Hamburg, to strengthen energy security for global growth.

25. We will play a leading role in facilitating investments for secure and sustainable energy, including innovative investment to encourage clean energy technologies, upstream investment, and quality infrastructure investment through the supply chain, in close cooperation with relevant stakeholders to support global growth. In view of the importance of energy-related employment in our economies, we will engage in discussion of issues relating to employment across our energy sectors.
26. We will continue our efforts to improve the functioning and resilience of gas markets. We intend to share experiences and approaches to managing gas emergencies. We ask the IEA to report back to us on its intensified work on gas security, including improving global gas supply and demand data and projections, conducting resiliency assessments and launching its new regular gas market report. We will continue close cooperation on natural gas market security with existing platforms such as the LNG Producer-Consumer Conference in Tokyo in November of this year.
27. We will facilitate cross-regional and cross-sectoral networking on cybersecurity in the energy sector among relevant stakeholders, including national Computer Emergency Response Teams, to facilitate sharing information and knowledge on cyber threats, and support a continuing dialogue on the research and development of new cyber resilience tools and technologies to prepare for these threats. We will conduct a survey of energy sector cybersecurity practices across G7 countries from the perspective of energy security policy with a view to identifying common elements and best practices.
28. We will work on additional vulnerability assessments of our electricity systems. We ask IEA and IRENA to build on their work and to provide further advice in this regard.
29. We strongly urge Ukraine to pursue further ambitious reform of its energy sector, including the adoption of legislation forming an independent energy regulator, and separate

- legislation creating a competitive, transparent energy market. We also call for enhanced cooperation between the Ukrainian national gas transmission system operator and relevant international peers. We endorse the progress report on G7 energy sector support for Ukraine. We will continue close consultations with Ukraine on a roadmap for energy reform, resilience planning, securing its gas supply needs, including by increasing domestic production, and enhancing deployment of energy efficiency policies and technologies.
30. We intend to play a leading role in MI, through increased government investment in clean energy innovation, private sector engagement, and dissemination of our advanced technologies and experiences, working together with other MI members to facilitate, where appropriate, joint research and information sharing.
 31. We will encourage collaboration among relevant research laboratories and institutes to promote the development of innovative clean energy technologies.
 32. We are committed to phasing out inefficient fossil fuel subsidies that encourage wasteful consumption, and encourage all countries to do so by 2025.
 33. We will ambitiously continue our work on energy efficiency, support international cooperation on energy efficiency activities, and increase our energy productivity in all sectors. In this regard, we welcome the progress of the IEA, in close cooperation with the IPEEC, on energy efficiency work at the request of G7 Energy Ministers in Hamburg. We ask the IEA to take forward its work on market-based instruments and other options for improving energy efficiency and to report back to us.
 34. We call upon all countries that opt to use nuclear power to ensure the highest standards of safety, security and non-proliferation, including an independent and effective regulator, and to exchange their expertise and experiences. We also call upon all supplier countries to share all relevant reactor design and safety information transparently, provided in a manner consistent with global export control regimes. We encourage both supplier and destination countries to host safety peer reviews, to share their results, and to implement their recommendations.