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**COMMISSION STAFF WORKING DOCUMENT**

**Report on the responses from the non-EU G7 countries and other key third country  
energy partners**

*Accompanying the document*

**COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN  
PARLIAMENT AND THE COUNCIL**

**on the short term resilience of the European gas system  
Preparedness for a possible disruption of supplies from the East during the fall and  
winter of 2014/2015**

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## **1. Consultations with other third countries**

The European Commission invited key third country energy partners to contribute to the EU's Energy Security Stress Test and to provide any observations or suggestions, particularly with respect to the potential flexibility for additional supplies of gas.

These included the non-EU members of the G7 as well as Norway, Switzerland and Turkey.

## **2. G7 context**

Following The Hague Declaration of G7 Leaders of March 24, the Energy Ministers of Canada, France, Germany, Italy, Japan, the United Kingdom, the United States, and the EU Commissioner for Energy, met in Rome on May 5-6 to discuss ways to strengthen collective energy security.

In the statement issued after the Ministerial meeting, Energy Ministers expressed a belief that that a broader energy security strategy is needed to address the larger dimensions of today's globalized energy markets shared among energy consumers, producers and transit countries.

G7 Energy Ministers also agreed to propose four immediate actions for endorsement by G7 Leaders. In addition, Ministers proposed to G7 Leaders to establish a working group to develop comprehensively the Rome G7 Energy Initiative.

During the G7 Summit on 4-5 June 2014 in Brussels, G7 Leaders agreed that under the Rome G7 Energy Initiative, G7 members would identify and implement concrete domestic policies by each government separately and together, to build a more competitive, diversified, resilient and low-carbon energy system. This work would be based on the core principles agreed by G7 Ministers of Energy during the Rome Ministerial meeting. The G7 Leaders endorsed the following four actions proposed by the G7 Energy Ministers during the Rome meeting:

- G7 members would complement the efforts of the European Commission to develop emergency energy plans for winter 2014-2015 at a regional level.
- Working with international organisations such as the International Energy Agency (IEA), the International Renewable Energy Agency, and the international financial institutions, G7 members would supply technical assistance, including leveraging the private sector, and facilitate exchanges with Ukraine and other European countries seeking to develop indigenous hydrocarbon resources and renewable energies, as well as to improve energy efficiency.
- G7 members would conduct assessments of their energy security resilience and enhance their joint efforts, including on critical infrastructure, transit routes, supply chains and transport.

- G7 would ask the IEA, in close cooperation with the European Commission, to present by the end of 2014 options for individual and collective actions of the G7 in the field of gas security.

Following the G7 Rome Energy Ministerial and G7 Summit, in its work on stress tests, the European Commission engaged actively and constructively with G7 members and the IEA. The Commission wrote to the energy ministers of non-EU G7 members and the Executive Director of IEA to inform on the state of play of the European Commission's efforts to develop energy emergency plans for the winter 2014-2015, sharing with the G7 partners the four proposed scenarios.

In multiple G7 and bilateral engagements, Commission services have kept G7 partners informed of the progress of the work and offered the possibility to provide comments and additional suggestions on practical measures that could be taken. In addition to a request to provide an inventory of possible emergency assistance that G7 partners could provide in the case of a serious supply disruption leading to a shortage of gas and/or power, the Commission also welcomed economic modelling assistance that could be provided on the impacts of possible disruptions as regards Contracting Parties and Candidate Countries of the Energy Community. The responses provided by the non-EU G7 members, detailed below, covered issues such as scenario analysis, global LNG flows and capacities and modelling.

### **3. Responses received**

#### ***a) Information received from the United States***

As regards the overall methodology the United States pointed out the need to remain cautious and flexible with the assumptions and the scenarios on which the stress test was conducted, given the uncertainties of the upcoming winter.

The United States pointed out the necessity of cooperation between the EU Member States and the Contracting Parties of the Energy Community, when drawing up national responses.

The United States also pointed out the importance of an early identification of demand side measures, the impact on other energy sectors of fuel switching options and underlined the need for early action regarding in respect to filling gas in the storages.

The US government offered information on the possibilities for mobile power generation capacity and information on the state of play with the planned US LNG export facilities.

#### ***b) Information received from Canada***

Canada provided details about its marketable natural gas resources, and its potential to become a secure and reliable supplier of liquefied natural gas (LNG) to the EU and other global markets. However, Canada's current and near-term ability to contribute LNG supply to the E.U. in the event of a natural gas shortage is limited. Canada does not currently export LNG, nor does it have the infrastructure ready for such exports. While 17 LNG projects are

currently under consideration, including one project on Canada's east coast, most analysts estimate that Canada will only see substantial LNG exports towards the end of the decade given the lead times required to develop necessary export infrastructure. Canada indeed is actively seeking to develop this infrastructure to enable export of LNG over the medium-term.

***c) Information received from Japan***

It is plausible that Japan's demand for LNG, which increased considerably after the Great East Japan Earthquake but then flattened out, would fall in the coming years if increased use of clean coal, progress in energy efficiency, and the gradual restarting of its nuclear power plants were realized. With respect to trade in LNG, Japan recalled destination clauses that many contracts currently have and the current considerable price differential between the Asian and European markets.

Japan recommends:

- to continue and even step up efforts to accelerate global movements to relax destination clauses in LNG contracts.
- to increase the exchanges among consuming countries on emergency preparedness to prevent panic buying on the LNG market that could lead to sharp rises in LNG spot prices in the event of difficulties in certain markets.
- to share its experience with energy conservation in the post-Fukushima context

***d) Information received from Norway***

Norway underlined in its response that decisions on oil and gas production are done by commercial entities, with a firm separation between government administration and commercial activities. Norway highlighted that most of its fields contain both oil and gas, so in the context of sound resource management gas cannot be produced independently from oil. Norway noted that oil and gas companies plan their daily/monthly activities to optimize their production, and therefore it is not possible to give an assessment of gas production on any given day.

Norway indicated that total production for years 2014 and 2015 is estimated respectively at 106 bcm and 105 bcm, but that actual production will depend on a variety of factors. Norway highlighted that during the winter period, the utilization of pipeline is normally close to full capacity.

***e) Information received from Switzerland***

In its reply, Switzerland noted that it has no domestic gas production and that it has a diversified portfolio of suppliers, highlighting that it is fully interconnected with European gas supply system and therefore stressing the importance of the overall European perspective as well as any national measures that are undertaken. Switzerland highlighted the importance of

retrofitting the Transgas pipeline to operate under reverse flow conditions and regretted protracted implementation of the project. Switzerland also recalled the importance of rapidly moving ahead with the Southern Gas Corridor to increase the diversification of gas supplies and stressed the importance of the mutual exchange of information on gas market developments.

***f) Information received from Turkey***

Turkey welcomed the opportunity to be consulted and underlined the importance of continued energy co-operation with the EU on a mutually beneficial basis. Turkey also noted the important energy initiatives that are underway at a regional level contributing to the security of supply of Europe. Turkey's increasing role as a strategic energy partner to the EU was also highlighted.

***g) Information received from IEA***

The European Commission also engaged actively with the IEA on the IEA's work on options for individual and collective actions of the G7 in the field of gas security.

The IEA conducted a study "Europe's gas supply security – the role of LNG". The main conclusions of this study are the following:

"Europe has large underutilised LNG import capacities. While some internal bottlenecks persist, even the existing infrastructure could deliver substantial LNG to the regions that currently rely on Russian gas if, in the event of a disruption, LNG supplies were available.

If, in the case of a pipeline disruption, Europe increased LNG purchases, markets would have to redirect existing supplies, especially from Asia. In recent years, Europe's LNG imports have fallen by half as markets reacted to a sudden demand jump in Asia. Europe replaced LNG imports by switching to coal in the power sector and ramping up pipeline supplies from Russia. Unfortunately, such a cost efficient and scalable fuel switching or alternative supply option does not exist in Asia, so reducing Asian LNG consumption would not be straightforward. No LNG exporter has a Saudi style policy of maintaining a swing production capacity, and high spot prices of the past three years have failed to trigger a meaningful short-term supply upswing.

Asian gas demand is price inelastic, with switching to oil-fired power generation being the only large scale demand response capability. Given the structure of the power systems in the Asian LNG importing countries, their oil switch could supply the LNG quantities that Europe would need in the case of a disruption of Ukrainian transit, but only at very high spot prices. LNG spot markets function with increasing efficiency and, in the case of raising European hub prices, they would be able to readjust without a policy intervention. However, any price cap or administrative regulation would prevent market adjustment.

(...)

On the basis of these assessments we can safely conclude that the only demand response potential in Asia that could reach the magnitude of European spot purchases in a crisis situation is switching to oil, especially in the power generation sectors of Japan, China, and some other ASEAN countries, possibly even in the Middle East. A smaller, but similarly expensive source would be to switch to oil for process heat in industry. As a result, if a European disruption were to increase European prices and narrow the Asia Premium, the volumes redirected to Europe would quickly exceed volumetric flexibility that LNG markets have in the form of supply and upstream upswing and non-oil related demand side response. As a result, just like a minor supply – demand change led to a large price decline in Asia in the first half of 2014, a sudden wave of European buying would quickly drive Asian prices higher. As this would widen the Asia Premium, EU prices would have to rise even higher to narrow it again. Eventually, the price level at which switching to oil in Asia and the Middle East becomes economical would provide a ceiling to Asian spot prices at over USD 20/MBtu. This is actually much higher than the “oil indexed” long-term contract level, since those contracts usually have indexation formulas that blunt the impact of very high oil prices (the S-curve mechanism). The 20 bcm volume that we assumed to be needed could be procured, but European spot prices would need to more than double, to the range of USD 16 – 20/MBtu, an oil switching Asian price level with a narrow Asia Premium. The main components of the incremental supply to Europe would be:

- Incremental LNG supply responding to price signals.
- Turkmen imports to China
- Reduced industrial demand in Japan and Korea
- Switching to coal in China
- Switching to oil in Asia and the Middle East (this last would have to be the largest by far, and would determine the price level required).

Such a massive increase of spot prices in Europe would create massive windfall gains for buyers of existing long-term contracts that are not indexed to spot (including any Russian contract that remains operational) and for upstream assets that sell at spot prices. Importantly, in the past five years, substantial import contracts have been renegotiated to be indexed to spot prices. Those contracts would transfer substantial gains to their respective exporters. Midstream utilities that resort to spot buying but sell at fixed prices – either because of the structure of their retail contracts or because of regulation – would be under severe financial strain."

#### **4. Recommendation**

The Commission will further engage with the key external energy partners, including those with LNG export capacities and potential, also in the context of the G7 and the IEA.