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Report on the findings of the Energy Community Focus Group

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. Work of the Energy Community

The European Commission invited the Energy Community Contracting Parties (Albania, Bosnia and Herzegovina, Kosovo*[1], the former Yugoslav Republic of Macedonia, Moldova, Montenegro, Serbia and Ukraine) and the candidate country Georgia to participate in the stress test and conduct the analysis on a national level. The Energy Community Secretariat assisted in the preparations of these national analyses as well as in preparing a regional analysis.

The Commission has organized several dedicated telephone conferences for the Contracting Parties and Georgia, and invited them and also the Energy Community Secretariat to conferences organized with the EU Member States. This cooperation was very well perceived by the Contracting Parties and Georgia and it has triggered a number of reactions in identifying the problems that remain in ensuring a better level of preparedness in case of a supply disruption. For example, Serbia and Bosnia and Herzegovina informed Hungary regarding their emergency measures. Unfortunately, this did not develop into a regional approach in preparing a common contingency plan neither between the Contracting Parties nor in cooperation with the EU Member States. Consequently, having regard to the latter, this analysis will focus on the respective national reports, pointing to any coordination undertaken or lack thereof[2].

2. Description of the system

The Contracting Parties were requested to analyze the same scenarios as the EU Member States. However the Contracting Parties are very heterogeneous in respect of the development of the gas markets and infrastructure and therefore the effects of potential gas disruptions vary among them and the scenarios have been modified accordingly. One can divide them in four groups with different results of the stress test:

- Ukraine in a unique situation,
- Bosnia and Herzegovina, the former Yugoslav Republic of Macedonia, Moldova, and Serbia as a group of countries consuming gas and being affected by a disruption in gas supplies,
- Montenegro, Kosovo* and Albania which do not have gas markets and do not have natural gas consumption,

[1] This designation is without prejudice to positions on status, and is in line with UNSCR 1244 and the ICJ Opinion on the Kosovo declaration of independence (hereafter marked "*" in the text of the document).

[2] It should also be noted that there is an on-going debate in the Energy Community on how to better achieve the objectives of the Energy Community. This was discussed in depth at the most recent Ministerial Council meeting on 23rd September when the High Level Reflection Group Report prepared under the chairmanship of Professor Jerzy Buzek MEP was presented. The discussions will continue over the coming year.

- Georgia as candidate country, without direct infrastructure connections with other Contracting Parties.

Ukraine is in a rather unique situation. Since 16 June 2014, Ukraine has been facing a total interruption in the supply of gas from Russia. Therefore, Ukraine faces a different magnitude of challenges compared to other Energy Community countries. As a result, Ukraine limited the stress reports to the immediate situation it faces now, i.e. how to face the total disruption of direct gas supplies from Russia. The simulations are based on various assumptions on the level of gas storages, the availability of gas from the EU suppliers and the winter temperatures. Its highly interconnected system and well developed transmission and storage capacities, and a high share of consumption in the industrial sector, gives Ukraine tools to address challenges of supply disruption in a more differentiated way. In this respect, the Contracting Parties in the Balkans and Moldova need to rely to a greater extent on cooperation with the neighbours.

For **Bosnia and Herzegovina**, the **former Yugoslav Republic of Macedonia**, **Moldova**, and **Serbia**, supplies from Russia are the dominant source of gas and the supply takes place solely through one transit route via Ukraine. National infrastructure capacities are very limited and prevent a flexible flow of gas and diversification of sources. There is only one supply route for Bosnia and Herzegovina and the former Yugoslav Republic of Macedonia, one entry and one exit point without possibilities of reverse flows in Serbia, and a transit route connection with only one country in Moldova[3]. These limited infrastructure options, lack of a regulatory and non-discriminatory market framework that allow the use of the existing infrastructure flexibly, as well as the lack of a developed gas market, results in a situation where any disruption of gas from Russia and/or disruption of gas through Ukraine has a very serious impact including on household consumers, in particular those in Moldova.

In view of the lack of gas in the energy balance of **Montenegro, Kosovo*** and **Albania,** the impact of a gas supply disruption can be only indirect – by an increase in the demand for electricity at a regional level. Contrary to further concerns, in view of the floods in the Balkan states last spring, it seems from the national reports that the electricity sector is likely to fulfill even increased demand related to switching for heating purposes. The power transmission grid is likely to be able to support increased demand both for national consumption and for regional transit (downstream to the southern part of the Balkan peninsula, to Kosovo*, Montenegro, the former Yugoslav Republic of Macedonia, Albania and Greece) provided that there is an electricity surplus in the EU. It is less clear whether enough fuels can be stored to replace gas.

Georgia covers only 9% of its demand from Russia and can flexibly replace this by national measures. Georgia is not connected with any of the Contracting Parties nor EU Member States, which makes its case not directly dependent on the situation of supplies in the EU or the Contracting Parties.

[3] The new interconnector with Romania is not yet used to the full extent

A common characteristic of all Contracting Parties is that, although they are not always connected with each other, each of them is connected at least with one of the EU Member States (with the exception of Georgia). All Contracting Parties have their interconnections with Member States along the same supply routes: one supply route is Ukraine-Slovakia-Hungary, the second one Ukraine-Hungary-Serbia-Bosnia and Herzegovina, and the third one Ukraine-Moldova-Romania-Bulgaria-the former Yugoslav Republic of Macedonia and Bulgaria-Greece-Turkey.

3. Assessment of the Reports

3.1. Ukraine

Ukraine consumes about 50 bcm of gas per year of which production amounts to 21 bcm/year and storage working capacity to 31 bcm. Ukraine has a highly interconnected system and a high share of gas consumption by the industrial sector (ca 50%). In the past two years, Ukraine imported around 30 bcm of gas per year from Russia. Since 16 June 2014, Ukraine has been facing a total interruption in the supply of gas from Russia. The imports were to some extend replaced by imports from the neighboring EU Member States up to 47 mcm per day on interruptible basis. The opening of the new interconnection point between Slovakia and Ukraine enables gas flow to up to 27 mcm/day whereas the entry points from Poland and Hungary amount to a capacity of 4 and 15.9 mcm/day. This technical capacity helps to close the gap between supply and demand, in particular on peak days.

In order to satisfy the demand in the upcoming winter Ukraine plans to increase domestic production and the use of gas from storages (in various scenarios up to 50% - 70% of monthly demand), and through demand side measures. Furthermore, Ukraine will rely on gas imports from EU Member States. Currently, reverse flows from Slovakia and Poland significantly contribute to the security of supply of Ukraine. Filling up of gas storages is a vital measure to prepare for the winter heating season in Ukraine and for maintaining gas transit to the EU at the contractual levels, as the gas from the storages can balance the lower pressure in the pipelines experienced usually during the winter. Ukraine managed to fill the storages at the level just below 17 bcm at the beginning of the heating season – this is ca 1 bcm less as in normal circumstances.

Even in the most optimistic scenario, Ukraine will need not only a minimum level of imports but will also have to take measures on the demand side, in particular to lower peak demand on cold days when transit of gas to the EU could also be affected. Ukraine has also recently announced that it will replace up to 3 bcm of gas by oil for district heating purposes. A more detailed analysis of measures to achieve reduction in consumption in the industrial sectors is ongoing. Ukraine has also established the procedures and emergency plans in case of a need to reduce gas consumption to all customers, including protected households. Important element of the demand response is the possibility to switch district heating plants to fuel oil (this can be done in 11 out of 14 regions), switching in production of electricity to alternative fuels and switching to electricity for heating purposes. The various switching has direct

impacts on supply and demand of electricity. Therefore it is necessary to monitor the stability of the grid, prepare ahead for supply of alternative fuels stocks, such as for heating oil, coal, anthracite and fuel for nuclear power plants, and to ensure back-up capacities for operating of nuclear power plants.

3.2. Bosnia and Herzegovina, the former Yugoslav Republic of Macedonia, Moldova, and Serbia

Bosnia and Herzegovina, the former Yugoslav Republic of Macedonia, Moldova, and Serbia would be among the countries most affected in case of supply disruptions of gas in Europe. This is a returning message of any of the ENTSOG simulations. Within a few days (at most weeks), in all the analyzed scenarios, the availability of gas would be reduced by between 80%-100%, in these countries, with the exception of Serbia.

Domestic production covers in Serbia 1/4 of demand. Another 1/4 of demand can be covered from storage facilities. In Serbia, the gas storages reached a level of almost 500 million cubic meters already in August 2014 which, together with domestic production, would allow for undisturbed supplies to households and some plants producing heat from October until February when the storages start to be depleted.

Those Contracting Parties which lack sufficient storage possibilities to cover the shortfalls raised the issue of the difficulties to find gas storage capacities within the EU and import gas from abroad in case of disruption scenarios. These difficulties include a lack of clear Third Party Access rules (implemented in terms of the 3rd Energy Package) on the interconnection points with the EU Member States, lack of available quantities or discriminatory pricing for the transport of gas from the storages or simply lack of clarity and trust on whether they would be able to use the quantities stored in the storages of the EU Member States and access them in case of a supply crisis.

Since gas storage and domestic production would provide none or only limited relief in the event of supply disruptions, all Contracting Parties analyzed the potential demand side measures to be taken in order to cover for the potential shortages of gas. The biggest potential for such measures is in the former Yugoslav Republic of Macedonia and Bosnia and Herzegovina where households consume only relatively small parts of gas (20%) and demand side measures can take place on the side of the industry. However, a general conclusion can be drawn that the exact potential of such demand side measures is not fully known to the Contracting Parties and regulation of energy prices for industry prevents deployment of market based demand side measures.

An important demand side measure is the possibility of fuel switching from gas to fuel oil for district heating plants (up to 30% of winter daily demand in Serbia and Bosnia and Herzegovina and up to 2/3 in the former Yugoslav Republic of Macedonia) or switching from gas to electricity. For example in Moldova gas is consumed mainly in district heating and by households (76% of total gas consumption) and its power generation is mainly gas fuelled

(80% of electricity production). In view of this situation, i.e. difficulty in reducing gas consumption due to low level of consumption by the industry, Moldova will need to rely on switching to fuel oil for heating and switching electricity production from gas to coal.

Nevertheless fuel switching may not take place in industrial sectors where consumers are not prepared for switching and lack the appropriate equipment. Moreover, as regards fuel switching and switching to electricity, an important logistical problem arises: namely the lack of significant oil stocks for heating purposes (in Serbia, Moldova and Bosnia and Herzegovina) and coal stocks (in Moldova) for electricity production. Some of the Contracting Parties raised the issue of the lack of financial resources to increase the stocks.

National infrastructure capacities are very limited and prevent a flexible flow of gas and diversification of sources. The new interconnector Iasi – Ungheni between Romania and Moldova is not yet used (except only for the Ungheni district (1-3% of the total consumption)) and the interconnector Serbia-Bulgaria did not enter yet in the construction phase. These limited infrastructure options, a regulatory framework that does not allow the use of the existing infrastructure flexibly, as well as the lack of a developed gas market result in a situation where any disruption of gas from Russia and/or disruption of gas through Ukraine has a very serious impact including on household consumers in those Contracting Parties.

4. Recommendations

While the general recommendations made in the Communication are also to be applied for the Contracting Parties in this region, the Commission considers, in the light of the previously discussed results and assessments, the following specific recommendations particularly relevant for the concerned Contracting Parties:

Common recommendations to all Contracting Parties

1. **Full use of infrastructure on market terms.** Although in most of the Contracting Parties the provisions of the second energy package apply, more detailed rules of the 3rd Package will become applicable as of 1 January 2015. Full application of these rules will allow using the capacities of infrastructure to the full extent and flexibly, allowing for diversification of suppliers of gas and for the transport of gas for storages. An important pre-condition to apply the Third Package regime to infrastructure is effective implementation of unbundling. Therefore, the Contracting Parties needs to introduce unbundling as soon as possible.

2. **Deregulation of gas and electricity prices for industry.** When it comes to demand side measures targeting industry and power production, it is crucial to allow that the cheapest alternatives are being deployed first and therefore Contracting Parties need to allow for full market opening at national level for electricity and gas markets for industrial customers.

3. **Examining in more detail the potential of the demand side measures.** The Commission recommends examining in more detail the potential for demand side measures, both for district heating and for industry at the level of individual companies. Such an examination should also include the potential of switching industrial consumers from gas to oil – a topic which has not been explored sufficiently at the company level.

4. **Tackling the logistical problems that may occur in case of fuel switching.** All Contracting Parties pointed to logistical problems that may occur in the event of fuel switching for heat and electricity production. Building up stocks of oil, anthracite and coal is a matter of time (and logistics) but not of a lack of supply – oil, anthracite and coal are abundantly available on world markets. The authorities should therefore urgently address this issue.

5. **Establish convergence of the definition of protected customers.** In order to effectively apply measures on the demand side and prevent free-riding, the Contracting Parties need to define first the level of consumption of protected customers using possibly converging definitions of protected customers. Since the Security of Supply Regulation 994/2010 does not apply in the Energy Community, the Contracting Parties could voluntarily make an attempt to converge these definitions. This would be a building block to transpose the EU *acquis* in the Contracting Parties in the next future.

6. **Application of internal energy market rules on the flow of energy between the EU Member States and the Energy Community Contracting Parties.** Given the limited options to cover potential gas supply disruptions and the lack of mechanisms and developed gas markets allowing self-regulating responses to a sudden drop in the supply of gas from single supply sources, the Contracting Parties are bound to cooperate on a regional basis and negotiate at the level of governments.

   Unfortunately, such cooperation is rather weak, in particular in the Balkan region. This is, to a great extent, a result of the missing dialogue with the EU Member States. Closer cooperation of authorities and the consistent application of the EU's internal market legislation on the borders between the Contracting Parties and the EU Member States are elements that could improve the security of supply in the Contracting Parties and the EU Member States. Positive examples include the solutions found around the reverse flow from Slovakia to Ukraine. However, more can be done, in particular as regards the supply in the Balkan region in particular as regards the use of pipelines between Hungary and Serbia and Romania and Moldova.

   In order to facilitate such cooperation with a formal act, the Commission is issuing, in parallel with this report, a Recommendation to the EU Member States to cooperate with the Contracting Parties in the application of the Third Package and on questions of security of supply. However this needs to be followed by the necessary negotiations that need to take place between the EU Member States and the Contracting Parties in the region on how to use the common infrastructure and on which terms in case of a crisis.

7. **Developing of new infrastructure.** Improving infrastructure and building interconnectors is a long term challenge. The Commission regrets the lack of progress in finalizing projects such as the interconnector between Bulgaria and Serbia and the construction of the Krk LNG terminal in Croatia that would allow for diversification options for the Western Balkan Region. The Commission therefore urges the parties concerned to rapidly address the outstanding hurdles to the realization of these projects.

8. **Increase in the demand for electricity** due to switching for heating purposes, and decrease in electricity generation due to difficulties in supply of coal and heating oil are a likely effect of the analyzed disruption scenarios and lowering of supply of gas. The Commission recommends monitoring of the situation of supply and demand of electricity at a regional and national level closely and take precautionary measures to ensure stability of grid and necessary back-up capacities in particular for nuclear power production.

Bosnia and Herzegovina

1. **Tackle major reforms of gas sector** on national level allowing third party access to all entities and unbundling of operators leading to flexible use of infrastructure by January 2015.

2. **Engage in cooperation with Serbia and Hungary** on drafting and implementation of technical provisions to operate the third party access regime on existing pipelines in a coordinated way. Start consultations in November 2014.

The former Yugoslav Republic of Macedonia

1. **Gas consumption reduction plan**. Due to a limited number of industrial consumers it is feasible to prepare for each individual industrial plant gas consumption reduction plans that could be applied in terms of emergency.

Moldova

1. **Implement the full use of the Romanian-Moldovan Iasi-Ungheni interconnector** project that has been already finalized, but is not yet fully utilized. In the event of a gas supply crisis, the entire infrastructure needs to be fully utilized and therefore the Commission calls upon the respective authorities to address the difficulties preventing full use being made of this interconnector. In particular, they should issue urgently all necessary permits and licenses needed to operate the pipeline and apply non-discriminatory gas tariffs for imports from Romania. Complete these actions by November 2014.

2. **Cooperate with Ukraine and Romania** on conditions on which Ukraine and Romania would be ready to supply Moldova from the main pipeline networks. Request Ukraine regarding conditions to access and use the storage capacity at Bogorodchany in West-Ukraine. Start consultations in November 2014

Serbia

1. **Implement unbundling** and ensure effective third party access to unused capacities on the existing pipelines and the gas storages in line with the detailed provisions of the Third Package by January 2015.

2. **Coordinate with Hungary and Bosnia and Herzegovina** on drafting and implementation of technical provisions to operate the third party access regime in a coordinated way. Start consultations in November 2014.

3. **Take all necessary steps to start the construction of the Bulgaria-Serbia** interconnector to make it operational in 2015.

Ukraine

1. **Find a mutually satisfactory agreement** for the resumption of supply of Russian gas to Ukraine over the winter period on the basis of the proposal for an "interim winter package" which the Commission has made in the ongoing trilateral talks (October 2014).

2. **Urgently increase fuel stocks** (coal, anthracite, heating oil) in the country while exploring all possible means to increase gas supplies from indigenous as well as imports (November 2014).

3. **While developing the National Energy Contingency Plan**, examine in more detail the full potential for demand-side measures as well as fuel switching both for district heating, in the different industrial sectors as well as by households and in the public administration. All means for potential demand reduction should be explored and quantified with the help of experts in the various sectors, at national, local as well as company levels (October 2014).

4. **Review and update all emergency procedures** in the different energy sectors, taking account of the specific threats for the upcoming winter, in line with the recommendations of the National Energy Emergency Plan (October 2014). In particular monitor electricity grid stability and ensure back-up generation in particular necessary for the nuclear power generation.