

**PGNiG position on 'Strategy for long-term EU greenhouse gas emissions reductions'.**

**1) Air quality improvement**

PGNiG welcomes the possibility to respond to the European Commission's 'Strategy for long-term EU greenhouse gas emissions reductions'. Integrated approach is essential to achieve ambitious EU climate targets, however in our view both should be taken into account – GHG emission reductions, as well as air quality improvement.

We are of the opinion that it is crucial to ensure protection from adverse impacts on environment and risks to human health. According to European Environment Agency report<sup>1</sup>, PM<sub>2.5</sub> concentrations in 2014 were responsible for about 428 000 premature deaths originating from long-term exposure in Europe. The estimated impacts on the population in European countries of exposure to NO<sub>2</sub> concentrations in 2014 were around 78 000 premature deaths.

PGNiG strongly supports efforts to improve air quality and to consequently reduce number of premature deaths in Europe caused by poor air quality. Currently PGNiG is inter alia modernizing one of CHP plants – a new CCGT plant is being built in Warsaw metropolitan area. The unit's technical parameters will meet the requirements of the Industrial Emissions Directive (IED) and the BAT (Best Available Techniques) standards. The project will contribute to GHG emissions reductions, but first of all to improvement of air quality. As mentioned, poor air quality is responsible for hundreds of thousands of premature deaths in Europe.

Moreover PGNiG promotes actively alternative fuelled vehicles (especially CNG and LNG). LNG/CNG in comparison to conventional vehicle fuel has a lower environmental impact. It reduces emission of carbon dioxide, nitrogen oxides, lead, but, most of all, sulphur dioxides and dust. Gas vehicles emit<sup>2</sup> approximately three times less NOx less than gasoline vehicles and particle number emissions of gas vehicles are 15-70 times lower than those of gasoline vehicles.

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<sup>1</sup> Air quality in Europe — 2017 report.

<sup>2</sup> Swiss Federal Laboratories for Materials Science and Technology (Empa) Report N° 5211.01067/1: "CNG mobility - State-of-the-art technology: NFP70 project Renewable Methane for Transport and Mobility Sub-contracting project report 1", pages 16-17.

Therefore, we are of the opinion that 'Strategy for long-term EU greenhouse gas remissions reductions' should take into account efforts to improve air quality and should not disturb already taken measures in this area.

## **2) Energy security and electricity network safety**

Natural gas plays an important role in ensuring EU's energy security. It is low emission fuel, hence it is widely used in European Union to satisfy energy needs. It is used to produce electricity, heat and also as a low-emission fuel for vehicles. According to the 'Third Report on the State of the Energy Union', natural gas share in the EU energy mix amounts to 22%. However some countries have higher share of natural gas in their energy mixes (e.g. Netherlands – 38%, Italy - 36%, UK – 32%). Therefore, considering environmental advantages of natural gas, to ensure energy security in EU, it is essential to take into account specificity of each MS.

The share of renewable energy sources (RES) in electricity sector is increasing in the European Union. However, apart from environmental benefits of RES, its integration into the electricity grid involves some challenges – the main problem is the stability of the electricity system. Electricity market is very specific. In order to ensure network stability, electricity supply and demand have to be balanced at all times. As generation from RES is closely connected with atmospheric conditions (wind and photovoltaic plants) there is either too much produced energy or not enough. Currently there is no economically viable technology to storage excess electricity from RES and use it when needed. Therefore, to avoid energy shortages, RES must be supported by stable generation units. Natural gas fired plants are such units. Moreover, they are very flexible – time required to start-up is quite short, so the generation can be adjusted to the demand very quickly.

Natural gas plays a substantial role in transition towards clean energy, while preserving security and safety of electricity grid. Moreover, gas sector delivers efficient and innovative technologies which can be used for the purpose of energy storage as well as for the new source of clean energy (e.g. power-to-gas, bio-methane and biogases). Therefore, we strongly advise to adjust the 'Strategy for long-term EU greenhouse gas emissions reductions' in the way which takes into account efforts made by gas sector to contribute to this transition.

### **3) Security of supply**

Considering the importance of energy security, there is a need for diversification of supply sources in the EU. For years Poland has depended on supplies of natural gas from a single supply source - Russia. However, due to many disruptions from Russian supplier<sup>3</sup>, Polish government decided to diversify gas supply sources. The LNG terminal in Świnoujście with capacity 5 bcm/year was commissioned in 2015 and has ensured additional deliveries from reliable suppliers (e.g. Qatar, USA, Norway). Currently the work is ongoing on increasing the capacity to 7,5 bcm/year. Moreover, the Baltic Pipe pipeline allowing for additional 10 bcm/year from Norway is supposed to be commissioned in 2022. These investments will ensure 100% of Polish demand for gas from reliable countries. Therefore, we are of the opinion that, 'Strategy for long-term EU greenhouse gas emissions reductions' should take into account efforts to improve security of supply to the EU and should not disturb already taken measures in this area.

### **4) General recommendation**

Natural gas can be a backbone of energy transition towards cleaner future as well as can play vital role in delivering clean energy to Europeans. As there are plenty of gas projects aimed at delivering cost-efficient and immediate contribution to this transition, natural gas should be included to the vision of 'Strategy for long-term EU greenhouse gas emissions reductions'. Particularly, gas can contribute to achievement of ambitious climate and energy objectives by:

- Providing efficient and clean source of electricity and heat for European customers as well as for industry, supporting its competitiveness whilst ensuring that business will contribute to transition.
- Providing support for intermittent RES installation, fostering integration of these plants into European electricity network.
- Delivering efficient and innovative technologies which can be used for the purpose of energy storage as well as for the new source of clean energy (e.g. power-to-gas, bio-methane and biogases).
- Helping other industries to get involved to energy transition by providing low emission technologies for such sectors as road and maritime transport.

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<sup>3</sup> 7 Disruptions of gas supply to Poland since accession to the EU.