

In my short address I will take a look at the future of natural gas in the European energy mix, in the context of climate change politics. Two years ago gas was a “forgotten fuel” within the EU energy and climate policy debate.

Much has changed in the meantime. The Fukushima disaster (leading to some changes of attitude towards nuclear power) and the economic downturn (and consequent cutback in support for some types of renewables) brought gas back into the public debate.

Gas is now viewed by many as an essential and unavoidable part of the energy mix, at least for the foreseeable future, though views differ as to whether it is a bridging fuel or a destination fuel. Gazprom believes that that is a destination fuel.

Gas is now explicitly part of the scenario of the EU roadmap 2050 that states that gas will be critical for the transformation of the European energy system.

The European Gas Advocacy Forum (EGAF) – a group of eight major European gas companies including Gazprom – embraces the use of low carbon technologies and, in particular, natural gas as an essential complement to renewable energy sources (RES) technologies to meet the EU’s 2050 CO<sub>2</sub> and sustainable energy needs.

Gazprom supports the European goal of becoming a low carbon society by 2050. By then, the goal is to achieve an 80-95% cut in carbon emissions in comparison to 1990 levels. There is no doubt that such a transition will be costly and that it will require substantial structural changes to the way European society currently functions.

It is feasible for Europe to reach its ambitious 2050 greenhouse gas emission reduction target cheaper, with less risk and fewer implementation challenges compared with estimates in some EU scenarios. Our proposed pathway is one that promotes a reliable and sustainable European energy mix based on cost-effective and technology-neutral CO<sub>2</sub> mitigation solutions, combining secure and affordable access to energy.

Let me share with you results of the research that members of the European Gas Advocacy Forum sponsored.

Let me give you a brief overview of the EGAF studies. In February 2012 we explored alternative pathways to meet the 80% reduction target with the focus on the power sector.

In May 2012 EGAF finalized two studies – one on the residential and another on the transportation sector. We explored pathways to meet the Road Map 2050 90% GHG emission target for the residential sector by means of the Times optimization model to identify the lowest-cost solutions.

In the Transportation study we explored alternative pathways to meet the transportation White paper 60% emission reduction target.

The conclusions are the following. Up to 2030, Europe can meet its CO<sub>2</sub> target with existing, lower cost technologies. Existing natural gas infrastructure can be leveraged to power Europe in a safe and sustainable way. For example, in the **power sector** an 80% CO<sub>2</sub> cut can be achieved by replacing old coal plants with new gas-fired plants. By 2030, total investment cost savings are estimated to reach €250-500bn in comparison to a 60% RES pathway. In the **residential sector**, cost savings in the order of €350-500bn can also be obtained compared to a high electrification pathway by 2030, using a pathway with a more diverse range of technologies that include gas fuelled heat pumps and gas fired Combined Heat and Power (CHP). In the **transportation sector**, an increased reliance on natural gas powered vehicles (particularly an increased use of LNG as bunkering fuel) could also lead to significant savings (in the order of €60-70bn) while still meeting the EU Transport White Paper's 2050 GHG reduction targets. Savings of €70 bn do not look impressive because gas displaces not the extremely expensive RES but only 'moderately' expensive oil products.

With gas acting as the necessary backup in an electricity system made of increasing but intermittent RES technologies, the period up to 2030 would give RES the opportunity to reach maturity and scale competitively, thereby avoiding an aggressive overhaul of wholesale pricing and pressure on consumers. It can also be used to bring other less mature technologies in all sectors, such as carbon capture and storage (CCS) to full maturity and social acceptability. Indeed, in the power sector, natural gas power plants can act as a flexible complement to intermittent RES, especially with CCS technology retrofitted (from 2030) to natural gas power plants to achieve near zero emissions.

For the period 2030-2050, additional cost savings of similar magnitude are possible but more uncertain, as these rely on criteria such as costs and attractiveness of low-/no-carbon technologies such as CCS, nuclear, biomass and renewables at that time. Total savings could be up to 1 trillion Euros by 2030. Are savings of 1 trillion a reasonable sum to take the proposals of EGAF seriously? It is clear that these funds will be allocated one way or another to ease the pain of austerity programs implemented in Greece, Italy and Spain?

The path to 2050 is full of uncertainties and thus requires flexibility in order to integrate the technological and socio-economic changes that will arise. Decisions made today will shape the pattern of energy production and use in 2050, and will determine how smooth or painful the transition to the low carbon economy will be. The “technology-neutral” scenario stands out in this respect. It provides the flexibility allowing the market to identify the most cost-efficient means to reach the 80-95% greenhouse gas (GHG) emissions reduction target by 2050.

Instead of “picking winners” with technology-specific targets, more constructive incentives for abatement can be created, in order to reach the 2050 CO<sub>2</sub> targets, via mechanisms to support the least cost abatement of greenhouse gas emissions, regardless of the technology which achieves it. This approach will leave technological pathways beyond 2030 open, as opposed to locking in expensive and possibly unsuccessful long term solutions now.