

*The European Centre for Energy and Resource Security (EUCERS) cordially invites you to the second of a series of five roundtable discussions on "The Changing Political and Economic Dynamics of Global Energy Flows" co-hosted by the Institute for Strategic Dialogue and the Konrad Adenauer Foundation in London*

## **EUCERS/ISD/KAS Energy Talks: Ukraine – Crimea: Is Shale Gas from the U.S. an Alternative?**

### **Background Information**

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As part of this year's Energy-Talks series, the European Centre for Energy and Resource Security (EUCERS) in cooperation with the Konrad Adenauer Foundation (KAS) in London and the Institute for Strategic Dialogue (ISD) under the overall theme of "Changing Political and Economic Dynamics of Global Energy Flows" is holding the second roundtable discussion on 30 April, 2014, on the topic of "Ukraine-Crimea: Is Shale Gas from the U.S. an Alternative?".

While in 2005 the Bush administration actively pursued the construction of multiple liquefied natural gas (LNG) import terminals, these facilities are now being converted for export. This is due to the exponential increase in domestic natural gas production, following what is commonly called the "Shale Revolution", which refers to the extraction of natural gas (and oil) from primarily shale rock formations.<sup>1</sup> By utilising existing horizontal drilling and hydraulic fracturing techniques, the US has been able to increase its overall natural gas output immensely, with shale gas output alone increasing more than six-fold from 1,293 billion cubic feet (bcf) to 7,994 bcf from 2007-11.<sup>2</sup>

With Europe being highly dependent on natural gas imports, and Russia being one of the primary sources, the recent crisis in Ukraine and the annexation of Crimea by the Russian Federation has resulted in fear for higher gas prices in the future, and severe bottlenecks in case of an escalation. Gazprom has already cancelled the discounted prices of natural gas for Ukraine due to an outstanding debt of \$1.7 billion, which has significantly increased gas prices.<sup>3</sup>

The crisis unfolded following demonstrations on the Maidan in Kiev against the anti-European path chosen by the government. President Yanukovich fled to Russia on February 22, and was subsequently impeached by the Ukrainian parliament. While the new interim-government is recognised by the West, Russia continued to consider Yanukovich the legitimate president, and the change of government a "coup d'etat". With the proposal to repeal the law for Russian to be accepted as a regional language, tensions increased especially in Crimea, which consists of a majority of ethnic-Russians. From February 26, pro-Russian forces gradually took control over the peninsula, claiming to defend the Russian population against oppression. This resulted in Western nations – including the EU – imposing economic sanctions on Russia. A referendum held on March 16 indicated that 96% of the population (of an 83% overall turnout) were in favour of joining the Russian Federation. On March 17, the Crimean Parliament declared independence from Ukraine and joined Russia. The referendum, and the consequent secession, was considered unconstitutional by the Ukrainian parliament, and on March 27, the UN General Assembly declared the Moscow-backed referendum of Crimea invalid (100 in favour- 11 against- 58 abstentions). The gradual build-up of Russian troops at the Russian-Ukrainian border have stoked fears of a larger military intervention by Russian forces, despite President Putin's assurances otherwise.

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<sup>1</sup> For more information, see the Shale Revolution section below.

<sup>2</sup> EIA, *U.S. Shale Production 2007-2011*, 2013: [http://www.eia.gov/dnav/ng/ng\\_prod\\_shalegas\\_s1\\_a.htm](http://www.eia.gov/dnav/ng/ng_prod_shalegas_s1_a.htm)

<sup>3</sup> BBC, *Gazprom hikes Ukraine Gas Prices by a Third*, 2014: <http://www.bbc.co.uk/news/business-26831678>

Europe has consequently found itself trapped between the will to act more rigorously against Russian aggression, and its dependence on Russian energy imports for its own energy security. The increase in domestic output in the U.S. has hence triggered hopes for further European import diversification, as well as the potential for a domestic European shale revolution. The latter, however, has so far not taken place due to widespread environmental concerns by the public, little governmental incentives for companies to drill, and an unfavourable land ownership situation. Furthermore, conducted shale explorations, i.e. in Poland have hitherto shown meagre results. Consequently, European hopes lie primarily on natural gas imports from the US. Generally, the amendment to the Natural Gas Act has deemed LNG exports to Free Trade Agreement (FTA)-countries to be in the US' public interest and export applications are to be approved and export initiated in a timely manner. At the same time, export to Non-FTA countries – such as the EU – requires the Department of Energy (DOE) to post "a notice of application in the Federal Registry for comments protests and motions to intervene, and to evaluate the application to make a public interest consistency determination."<sup>4</sup>

President Obama recently stated during his visit to Brussels that "we've already licensed, authorized the export of as much natural gas each day as Europe uses each day. But it's going into the open market; it's not targeted directly."<sup>5</sup> However, looking at the actual numbers, according to the DOE total approved FTA exports are expected to be around 38.51bcf/d, which equals around 393bcm/year. With only seven of the thirty-seven applications for Non-FTA export being approved (at the same time with occasionally lower export amounts), only around 9.3bcf/day – constituting 95bcm/year – will actually be available for the non-FTA market, to which the EU belongs. The yearly natural gas consumption in the EU is around 480bcm. To put this further into perspective, the EU imports around 125bcm of natural gas per year from Russia. Finally, considering the time factor, only one of the seven non-FTA project has received final approval and can be expected to begin exports by late 2015. Other projects – if approved – will only commence exports by 2017, at the earliest.

Since LNG will not be directly targeted for Europe but sold against other regional markets, this further compromises large-scale imports for the EU, as there is no global market for natural gas like for oil. This is due to the high associated costs regarding conversion, transport, and the needed infrastructure and connected capital costs. A recent report on a potential new way of processing natural gas into liquid products could, however, reduce LNG costs in the future and overcome the large differences in regional prices.<sup>6</sup> At the present, the IEA calculated that LNG and its associated costs are just below \$9/MMbtu for Europe and just above \$9/MMbtu for the Asian market. However, with average gas prices in Europe at \$11/MMbtu, and \$16/MMbtu in Asia, chances are that most of the LNG will actually go to the Asian market instead of Europe.<sup>7</sup>

The combination of all these factors has therefore given the negotiations over a North-Atlantic FTA new upwind, which had somewhat slowed down following the NSA revelations. A leaked document of the current negotiations showed that business groups could be empowered in the EU law-making process to effectively co-write legislation with the goal to further deregulate and liberalise the European market, stirring further criticism by some.<sup>8</sup> However, from an energy security perspective, as Obama also stated in his address: "once we have a trade agreement in place, export licenses for projects for liquefied natural gas destined to Europe would be much easier -- something that's obviously relevant in today's geopolitical climate."<sup>9</sup>

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<sup>4</sup> Department of Energy, *Applications Received by DOE/FE to Export Domestically Produced LNG from the Lower 48 States (as of March 24, 2014)*, 2014: <http://energy.gov/sites/prod/files/2014/03/f13/Summary%20of%20LNG%20Export%20Applications.pdf>

<sup>5</sup> Whitehouse, *Press Conference by President Obama, European Council President Van Rompuy, and European Commission President Barroso*, 2014: <http://www.whitehouse.gov/the-press-office/2014/03/26/press-conference-president-obama-european-council-president-van-rompuy-a>

<sup>6</sup> Reuters, *Experts see cheaper, easier way to turn natural gas into fuels*, 2014: <http://www.reuters.com/article/2014/03/13/us-science-naturalgas-idUSBREA2C1TL20140313>

<sup>7</sup> Birol, *World Energy Outlook 2013*, p.13

<sup>8</sup> Corporate Europe Observatory, *Leaked proposal for EU-US trade deal increases business power in decision-making*, 2013: <http://corporateeurope.org/pressreleases/2013/12/leaked-proposal-eu-us-trade-deal-increases-business-power-decision-making>

<sup>9</sup> Whitehouse, *Press Conference by President Obama, European Council President Van Rompuy, and European Commission President Barroso*, 2014: <http://www.whitehouse.gov/the-press-office/2014/03/26/press-conference-president-obama-european-council-president-van-rompuy-a>