Press release

EWI analyses the potential development of gas demand and supply

The lack of consideration of barriers like rebound effects, slow technology adaption rates and acceptance issues in many studies might result in a higher natural gas demand than predicted and increase the gas import share. However, the exploration of unconventional gas sources in Germany is still unlikely due to a lack of social acceptance, current political developments and comparatively high costs. Instead, increasing LNG import capacities might be a more feasible option.

Cologne, 23 May 2019. On behalf of INEOS in Cologne, a large chemical producer and a significant player in the gas market, EWI analysed the potential development of gas demand in case the current level of ambition concerning the expansion of renewable energies and the reduction of energy consumption cannot be increased. The study identifies three key mechanisms for achieving climate targets. First, energy consumption could be decreased by sufficiency and efficiency. Second, electrification of the final energy consumption – either directly (e-mobility or heat pumps) or indirectly (synthetic fuels) – reduces the emission intensity of energy consumption if, third, emission intensity of electricity generation decreases by increasing the share of renewable energies.

In the next step a meta-study of normative scenarios reaching national climate targets is performed. Normative scenarios sketch how a pathway towards a target might look like, assuming all necessary steps could be accomplished. Unfortunately, barriers like rebound effects, slow technology adaption rates and acceptance issues are often neglected. Energy demand could thus be underestimated in normative scenarios. Therefore, a thought experiment on future energy demand is conducted. Main assumptions are a continuation of the historical trend of reducing energy consumption, a limited expansion of renewable energies as well as a coal phase-out in Germany. This would result is a rising demand for natural gas and an increasing import share, since national exploration is declining. Also, the national climate target for 2030 would most likely be missed.

When it comes to commodity procurement options a theoretical alternative to gas imports is the exploration of unconventional gas sources in Germany, as it can currently be observed in the USA. However, the study concludes that the exploration of unconventional gas sources in Germany is unlikely due to environmental risks, public concerns and its geographical location close to cheap and abundant gas reserves. In case a higher diversification of the German gas supply is desired in order to decrease bargaining power of suppliers, increasing LNG import capacities might be a more feasible option than the exploration of unconventional gas sources.

If you have any questions, please contact:

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About EWI:

EWI is a non-profit organization that is dedicated to applied research in energy economics and conducts consulting projects for science, industry, politics and society. With a team of approximately 20 academics, EWI conducts studies on the basis of cutting-edge economic methods and focuses, i.e., on the German and European electricity and gas markets, regulation, market design, decentralized energy supply and reduction of greenhouse gas emissions.
