POLICY WATCH:

Energy security vs climate policy

Reducing dependence on Russian gas imports and increasing energy efficiency will have ramifications for Europe's climate policy, explains **Sonja van Renssen**.

The number one political priority in the European energy and climate space today is energy security. The Ukraine crisis comes as policymakers in the European Union (EU) are trying to craft a new climate and energy policy for 2030. This will address the mandatory pillars of sustainability, competitiveness and security of supply. But if the environment dominated negotiations on the EU's first climate and energy package back in 2008 (ref. 1) and industrial competitiveness took over during the economic crisis, energy security is squarely in the driving seat now. What are the implications for climate change?

Energy efficiency has catapulted back up the political agenda. "Now more than ever, energy efficiency needs to be our first response to energy import dependence," said EU Energy Commissioner Günther Oettinger in May when he unveiled a new *European Energy Security Strategy*[2]. Every extra 1% of energy savings should cut EU gas imports by 2.6%, the European Commission calculates. As a consequence, at their last meeting in Brussels before the summer break, on 23 July, all 28 EU commissioners agreed to an energy efficiency target for 2030 of using 30% less energy than projected by models under 'business as usual'[3].

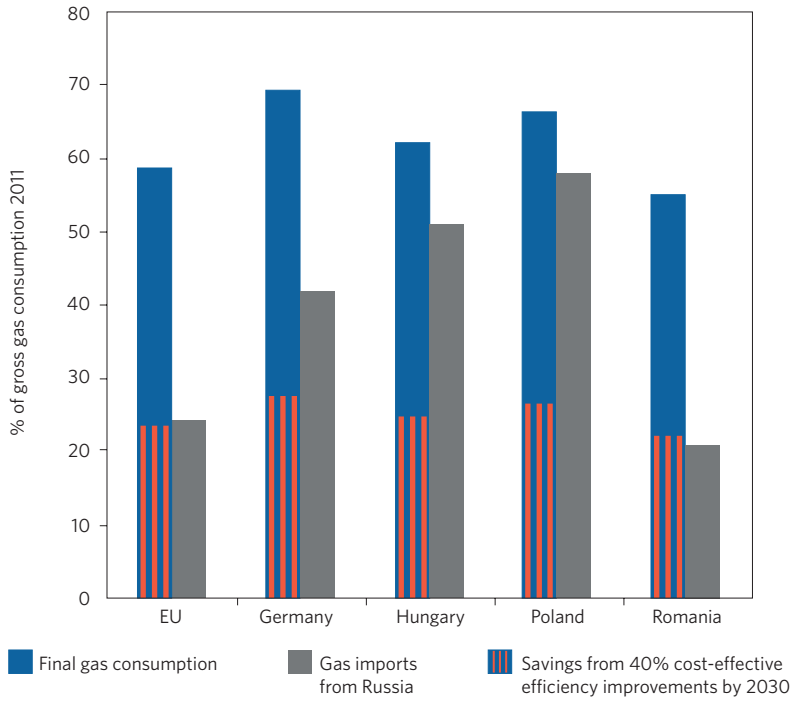

Figure 1 | Final gas consumption, savings and Russian imports in 2011. Some of those European countries that are most dependent on Russian gas also have the biggest potential for energy efficiency improvements. Efficiency advocates want Europe to adopt a 40% energy efficiency target for 2030. They point to analysis by the Fraunhofer Institute in Germany, which suggests that this is achievable, based on a bottom-up calculation of potential savings per economic sector. The savings would be cost-effective because they would deliver net financial benefits to investors over their lifetime, as well as macroeconomic and societal co-benefits. A 40% efficiency improvement would cut greenhouse-gas emissions by 44–49%. For now however, the European Commission has proposed a 30% target, to be discussed by heads of state and government in October 2014. This would reduce gas imports by just over one-fifth and greenhouse gases by 40%, the commission calculates. Figure © Stefan Scheuer Consulting (based on Eurostat).

It is being billed as the missing leg of the 2030 climate and energy package, which until now consisted of proposals for a 40% greenhouse-gas emissions reduction target and a 27% renewables target[4]. All three targets are set to be endorsed by European leaders at a summit in Brussels on 23–24 October 2014. After which, the old commission will end its five-year mandate and hand over to a fresh set of hands to do the difficult job of a legislative follow up.

More efficiency is good news for climate change because it means that less energy needs to be produced in the first place — and because most of our energy still comes from fossil fuels (renewables are forecast to account for 21% of final EU energy consumption in 2020), this means fewer greenhouse-gas emissions. "A 30% energy savings target for 2030 … is of course very good news for the climate," said EU Climate Commissioner Connie Hedegaard on 23 July. But her department was not always keen on an ambitious efficiency target because of fears that it could further drag down the carbon price in the EU's flagship climate policy, the EU Emissions Trading Scheme (ETS).

The commission calculates that a 30% energy efficiency target would result in a carbon price of €25 a tonne in 2030, instead of €40 a tonne if there was just a greenhouse-gas emissions reduction target[5]. This is because new efficiency measures could add to the existing surplus of carbon allowances built up during the economic crisis. To avoid this, the commission proposes a 'market stability reserve' that would mandate officials to add or remove allowances from the system relative to the total number in circulation, according to pre-set rules[6]. EU ETS advocates, such as the gas lobby, want the reserve to be up and running before 2020, but this will be a very difficult negotiation for policymakers.

Lifting the carbon price is crucial to the EU's efforts to phase out coal for both climate and health reasons. "As long as the

economics are as they are, with coal the cheaper commodity and a very low CO_2 price, gas cannot compete with coal," says Beate Raabe, Secretary General of Eurogas, representing the European gas industry. After positioning itself as a key player in Europe's transition to a decarbonized energy system — gas produces half as much carbon as coal, and gas plants are typically more flexible, making them a natural partner to variable renewables — the gas industry is now suffering from the Ukraine crisis.

EU policymakers want to both reduce Europe's dependency on gas and get the industry to invest. Raabe warns: "If the goal is to reduce gas demand, investors will not put money in gas infrastructure and we will not reach our climate goals in the most cost-effective manner." In its *European Energy Security Strategy*, the commission encourages a switch to alternative fuels for heating, in particular. But it also identifies 33 key infrastructure projects, 27 of them for gas (for example, new pipelines), which need investment. The idea of cheap US shale gas flowing across the Atlantic meanwhile is a fantasy — gas will flow to whoever is prepared to pay most and that is clearly Asia (led by post-Fukushima Japan and smoggy China). "Will the price in Europe be attractive enough for it to come here [in future]?" asks Raabe. Which politician is prepared to suggest energy prices should go up?

With gas in difficulty, coal has reared its head, most recently as part of a new UK security of supply project, which seeks to ensure that there is always enough electricity available, even at peak times[7]. This has attracted the ire of UK-based think tank E3G, which believes the plans could run counter to EU internal market rules by offering subsidies to existing coal plants for mandatory air pollution upgrades. EU law only allows subsidies for upgrades that go beyond legal requirements[8]. This comes as UK-based non-governmental organization Sandbag released a report showing that coal emissions rose by 6% from 2010 to 2013, even as power demand fell and there was huge investment in renewables[9]. At the same time, the UK is underplaying consumption-based solutions to security of supply, such as demand response, says Jessica Stromback, Executive Director of the Smart Energy Demand Coalition. "If you do not own generation assets, you cannot now compete on an equal footing," she says of the UK's proposed plans.

What worries these stakeholders most is that this decision on the UK market sets a precedent. It is the first time the commission has assessed a national capacity market against new EU state aid guidelines that took effect on 1 July 2014[10]. The next countries expected to submit capacity markets for approval are Germany, France and Poland — and Poland's vision for an 'Energy Union' for Europe includes leaving every country free to burn what they want, including coal, for energy security purposes[11].

Yet energy efficiency is our 'first fuel', maintains the International Energy Agency. And it is exactly some of those countries that are most reliant on Russian gas imports — including Poland — that have the greatest potential for energy efficiency gains (Fig. 1). "They want to keep the energy security and 2030 agendas separate [however] because then they can get a larger financial settlement [for each]," explains Ingrid Holmes, Associate Director at E3G. But energy efficiency clearly links the climate and energy, and security of supply agendas[12], and could create the political space for a climate deal. What it comes down to is money: in return for signing up to targets, countries like Poland want help with investments.

If efficiency is the first line of defence, renewables are a longer-term solution: "Clean coal and shale gas will cost more [than renewables] in the long-term, unless we throw our climate targets out of the window," says Bas Eickhout, a recently re-elected Dutch Green MEP. Renewables are 96% indigenous (the other 4% are biomass). But like efficiency, they require investment. "The carbon market is not designed to drive investment in renewables, it's designed to make emissions more expensive," says Rémi Gruet, Policy Director at Ocean Energy Europe, which represents the fledgling wave and tidal power industry in Europe. The renewables sector still needs subsidies for demonstration projects and deployment.

Renewables will only improve security of supply however, if there is matching investment in the grid. Without it, they would do the opposite. "Renewables development is the major driver for grid development until 2030," says the European association of high-voltage-network operators ENTSO-E in a new network development plan out to 2030 released for public consultation on 10 July 2014[13]. Renewables are not located in the same places as traditional electricity generators and, being variable, need a 'smart' grid that can also adjust demand to meet supply. The 120 interconnections and grid upgrades foreseen will contribute directly to about one-fifth of the CO_2 decrease foreseen for 2030, ENTSO-E says. A more interconnected network will in any case contribute to security of electricity supply in the face of possible gas disruptions.

The energy security agenda is shaping EU climate and energy policy. Efficiency is back and it's not an easy priority for politicians. "They have the feeling that by insulating houses, they are not impressing Putin," says Eickhout. Yet a push on the demand side from now to 2030 could cut Russian gas imports by half compared with business-as-usual, calculates Holmes — and save on emissions if efficiency and renewables are the alternatives. Energy security has revealed a harsh truth: "We are unable to deliver satisfactory sanctions [against Russia] because of our energy dependency," in the words of Holmes. It gives Brussels a new *raison d'être*. But in responding to one crisis it must be careful not to create another: energy security must join, not replace, competitiveness and climate change at the top of the agenda. ❐

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