

# Far from completion? Prospects for development of the EU energy market.

**Artur Lorkowski**

Deputy Director of the Department of Economic Policy  
Ministry of Foreign Affairs of Poland<sup>1</sup>

The completion of the internal energy market might be a factor triggering economic growth in the EU, but at the moment it is difficult to see political interest within Europe in exploiting this potential. The political debate on boosting economic growth in the EU revived after the French election which may alter the climate for discussion. This situation might also change due to Germany's decision to phase-out nuclear power, of which the implications for the EU energy market in the medium term have not been fully determined yet. This is because Germany's decision has upset the current balance on the EU electricity, gas and carbon markets. Adjustment processes will cause a new balance to be found, but at the same time they might be a major impetus for political and regulatory measures to be taken to finalise the liberalisation of the energy market in the EU and to strengthen the external dimension of the EU energy policy. The impetus for completion of the internal market will become stronger upon confirmation of significant capacity to produce unconventional gas in Europe.

## Unexploited potential

The EU internal energy market remains an unfinished project, and this is costly for the EU in an economic and political sense. In 2010 the European Commission estimated that full integration of the European energy market could provide an additional 0.6-0.8 percent of the EU GDP, which could be a major source of growth

during the economic crisis.<sup>2</sup> This was confirmed once again by the European Council in March 2012, when it appealed for full implementation of the third liberalisation package recognition of agreed deadlines. More extensive integration of the energy markets would also make it possible to exploit the potential of a market offering access to 500 million European consumers in the shaping of energy relations with external partners.<sup>3</sup>

Serious obstacles have been encountered in the creation of the internal energy market, due to historical conditions. In the past domestic energy companies were dominating, with monopolistic position both in trading and transmission sectors. The internal market was made up of domestic markets that functioned independently, and this – in line with policy at the time – was intended to ensure energy security, meaning the absolute independence of each Member State with regard to energy. Division of the market enabled domestic champions to maximise their income, leading to a hike in prices.

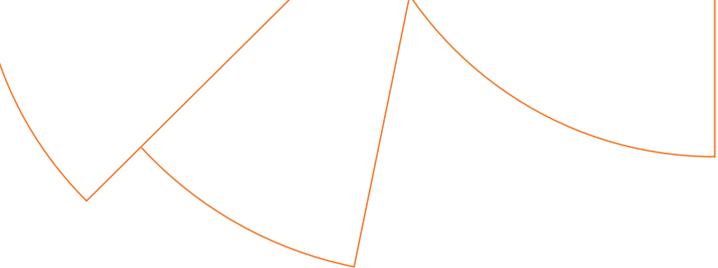
The EU energy market is currently undergoing transition. There is still not just one liquid EU energy market, but 27 domestic markets among which market coupling is limited. This is mainly to inconsistencies in the domestic regulatory systems limiting cross-border trade and thus leading to very little need to expand cross-border interconnections. The lack of cross-border technical transmission capacity is sustaining the current market structure.

<sup>2</sup> Communication from the Commission: EUROPE 2020 A strategy for smart, sustainable and inclusive growth.

<sup>3</sup> Communication from the Commission: On security of energy supply and international cooperation - „The EU Energy Policy: Engaging with Partners beyond Our Borders.”

<sup>1</sup> This paper does not necessarily represent the official opinion or policy of the Ministry of Foreign Affairs of Poland.





The market structure described above has led to a weakening of the position of European companies in relations with external suppliers of energy sources, mainly natural gas. The divided internal market made possible to diversify prices of energy sources. Destination clauses in contracts placed restrictions on trade in gas between Member States. Gas was supplied using pipelines controlled by entities trading in the gas. There were “take or pay” clauses, which shifted the risk in investment in transmission infrastructure to buyers. Also, the price of gas is indexed with the price of crude oil, making competition between gas, oil and coal impossible.

## Difficulty with implementation of the III package

There are no formal barriers to the completion of the European internal energy market. Ensuring the functioning of the internal energy market is an EU energy policy objective provided for in the EU Treaty. At the same time all Treaty-imposed goals are to be achieved “in the context of establishment and functioning of the internal market”.<sup>4</sup> The internal market is therefore at the centre of EU energy policy - as its basic instrument and as the objective in itself.

The milestones of integration of the EU energy market are three liberalisation packages applicable to the electricity and gas market. The last of these was adopted in 2009, as a version that differed considerably from the European Commission original proposal. The so-called third option (ITO), which was introduced at the request of a group of Member States, decreases the level of effort made to bring about full independence of transmission systems operators, if we assess it, in terms of the option of full ownership unbundling between the trade and transmission sectors, as a benchmark. Even in this form however, in practice, implementation of the third package by the Member States is encounter-

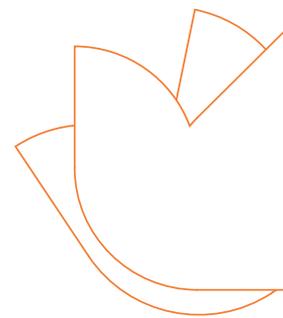
ing setbacks not encountered in other sectors of the economy. For this reason, on 27 February 2012, the European Commission sent 15 reasoned opinions to 8 Member States which almost a year after the third liberalisation package came into effect did not give notification that it had implemented in full.

The delay in implementation was a result firstly of the unwillingness of some Member States to dismantle their energy champions, and in many cases the process of ownership unbundling of the trade and transmission sectors and designation of transmission system operators will be a difficult one. In some Member States there is at times still controversy about ensuring the de facto independence of domestic regulatory authorities and there is opposition to shifting of their powers in the direction of the EU. There is particular controversy surrounding the conditions for functioning of external companies on the European market, resulting in renewed expectations on the part of the EU’s energy partners (for instance Russia) of derogation from the third liberalisation package. On the other hand more EU neighbour - parties to the Treaty establishing the Energy Community - are declaring a readiness to implement the third liberalisation package for the purpose of construction of regional electricity and gas markets with a view to integration with the EU internal market, although in some cases these declarations have not been followed up by the appropriate actions.

## Will the energy market be liquid by 2014?

In the regulatory sense the discussion surrounding the construction of the internal energy market is focused on implementation of the third liberalisation package. Within public debate there is still no careful consideration of whether the third liberalisation package is an adequate instrument for implementation of the guidelines of February 2011 issued by the European Council, which decided that by 2014 regulatory measures will ensure the free flow of gas and electricity through the whole EU, and that after 2015 all of the Member States have to be connected to the European gas and electricity grid. Once the European Commission will publish a report on the functioning of the internal energy

<sup>4</sup> Art. 194 of the Treaty on the Functioning of the European Union states “In the context of the establishment and functioning of the internal market and with regard for the need to preserve and improve the environment, Union policy on energy shall aim, in a spirit of solidarity between Member States, to: (a) ensure the functioning of the energy market; (b) ensure security of energy supply in the Union; (c) promote energy efficiency and energy saving and the development of new and renewable forms of energy; and (d) promote the interconnection of energy networks”.



market there will probably be a debate on whether new initiatives are necessary to go beyond the third liberalisation package, but even today some conclusions can be reached.

It seems that there is an overall compromise in place in the EU that in some cases there are legitimate arguments for providing funding for energy projects from the EU budget, which quite recently was fundamentally opposed by some Member States. In February 2011 the European Council said that “the bulk of the important financing costs for infrastructure investments will have to be delivered by the market, with costs recovered through tariffs. (...) However, some projects that would be justified from a security of supply/solidarity perspective, but are unable to attract enough market-based finance, may require some limited public finance to leverage private funding”.<sup>5</sup> The EU funding for projects (including integration of renewable energy generation) would thereby indirectly lead to the conclusion that even once the third liberalisation package comes into force the market will be dysfunctional because it does not assure funding from tariffs of infrastructure investments vital to ensure free flow of electricity and gas between the 27 Member States. The scale of dysfunction of the market (preventing construction of the infrastructure other than necessary to secure supply and solidarity reaction in crisis situations) can be seen as the investment gap that the European Commission is about to decide to make up by providing EU funding, and not as further measures to deepen the integration of markets.

## New stimuli for further integration

As it has now been recognised that implementation of the third liberalisation package will not eliminate all of the dysfunctions of the market, it should be considered whether in the near future new stimuli should appear that would enable the construction of the internal energy market to be completed by 2014. It seems that Germany’s decision to phase-out nuclear energy might be that stimulus, since as a result of that deci-

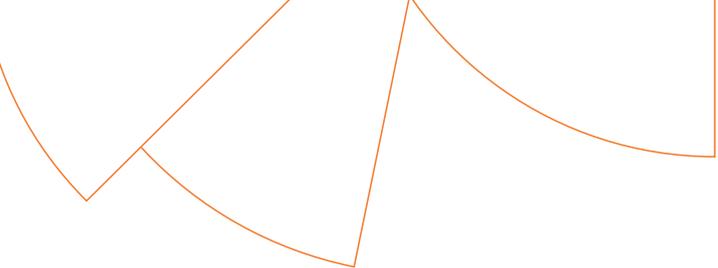
<sup>5</sup> The European Council asked the European Commission at the same time to identify the investment gap and propose a means of filling it. The EC’s proposals were presented in the infrastructure package of 19 October 2011.

sion Germany probably will become a net importer of electricity.<sup>6</sup> Therefore it is worth pointing at a few consequences of that decision and political and regulatory processes, therefore, which that decision might trigger in the European Union’s energy policy.

The theory comes to mind that EU energy policy might develop in the direction of Europeanisation of the German model of energy policy, which – put simply – would mean that a standardised energy mix would be devised for individual Member States and would be approved at EU level along with a set of instruments intended to help to achieve it within the specified timeframe. This approach is nothing new in EU practice, as the climate and energy package adopted in 2008 specifies clearly the percentage of the energy mix of individual Member States that is to be provided by renewable energy in 2020, and through CO<sub>2</sub> emissions trading scheme it is indirectly bringing about a gradual reduction in the level of consumption of high-emission energy sources (coal, lignite) in favor of low-emission sources or technologies (gas, renewable energy, coal with CCS, nuclear energy). The question, whether the top-down model for creation of EU energy policy will be copied remains open.<sup>7</sup> The Energy Roadmap 2050 the European Commission presented scenarios for development of the European Union’s energy mix but the implementation of each of the scenarios (and each of them provides for 30% renewable energy by 2030) will inevitably mean that Member States will be deprived of their right granted by Treaty (art. 194 section 2 of the Treaty on the Functioning of the European Union) to “determine the conditions for exploiting its energy resources, its choice between different energy sources and the general structure of its energy supply”. This can be expected to lead to open debate on division of powers between the EU and Member States. It is highly likely that this debate will confirm the requirement of unanimity to take the decision by the EU, which will at best hinder the adoption by the EU of legal decisions affecting

<sup>6</sup> The largest economy functioning in Central Europe was deprived almost from one day to the next of 8.2 GW of production capacity. Between now and 2022 a further 13.2 GW of its current production capacity in the nuclear power sector will disappear. According to the German government’s predictions this loss will be replenished mainly by way of development of renewable energy, which requires the North-South transmission infrastructure in Germany to be expanded. Generation capacity based on coal and gas will be developed and these will be used at least to meet peak demand for electricity.

<sup>7</sup> It should be noted that Poland vetoed, on 9 March 2012 the low-emission coal Roadmap 2050, providing for further reduction targets by 2020 and establishment of a roadmap for reduction of emissions of 80-95 percent by 2050.



the defining of the energy mix of individual Member States. It seems therefore that the concept of Europeanisation of the German model is very likely to fail.<sup>8</sup>

In areas, in which the EU has established *acquis* and? decisions are adopted by a qualified majority, political processes can be expected of which the tempo will be dictated by the impetus set by the *Energiewende*. However It can be expected that the result of Germany's decision will be an increase in trans-border trade in electricity in the EU, due to increased import demand on the part of Germany, which at the moment is met mainly by nuclear power stations in France and the Czech Republic. The growing market coupling has encountered obstacles, which mean that today there is not just one liquid common market functioning in the EU but 27 separate electricity markets. This is because of regulatory barriers. It cannot be ruled out that Germany will be interested in keeping those barriers in place to ensure competitiveness of renewable energy on its own market, but it will be in the interest of industry, which determines the export strength of the German economy, to ensure access to electricity at prices that ensure that German products are internationally competitive. Therefore, will probably be stimuli for further liberalisation of the internal market, leading to development of the trans-border transmission infrastructure to connect the German market with neighbouring markets.

## Renewable energy

The planned expansion of the renewable energy sector in Germany will mean that the electricity production costs will have to be internalised completely using alternative technologies. There are concerns communicated by stakeholders whether the current EU mechanisms, intended to achieve this goal, function effectively. According to the European Commission estimations the price of emission allowances is currently considerably lower at the moment than was presumed when the climate-energy package was agreed. Subsidies for extraction of fossil fuels were extended. As a result of the Fukushima incident, nuclear safety costs

are rising, but this rise will not lead to mass abandonment of nuclear energy due to economic reasons (until now decisions were mostly politically motivated). On the other hand, domestic support systems for renewable energy are feeling the effects of fiscal consolidation: one after another Member States are reducing the level of funding for renewable energy, which are still not competitive.

In this context note should be taken of the efforts of some actors to revive the European carbon market by removing or withholding a certain volume of the emission allowances from the market. Although an increased demand for CO<sub>2</sub> allowances would curb the carbon price as a result of the use of additional gas volumes in Germany (to a lesser extent coal, because CCS technology will not be commercialised by 2020), these administrative efforts probably will continue due to the political reasons.

The next measure intended to improve the profitability of renewable energy is providing the extra support other than the EU funding for infrastructure projects aimed at linking large renewable energy projects (for example in the North Sea, northern Africa) with electricity consumption centres in Europe. This approach is flawed, not only due to the fact that it is more rational from the security and economic perspective to exploit the European potential of dispersed renewable generation, but above all due to the fact that it is not in line with the principle of the EU energy market. It is not correct to assume that the costs of the extension of the energy infrastructure borne by transmission system operators should in principle be covered by funds other than national tariffs and limited EU funding for projects justified from security of supply/security perspective.

Additionally, the solution might be to introduce a European-wide target for renewable energy (instead of countries' domestic targets), i.e. construction of a European renewable energy market in place of the currently functioning domestic markets. On the one hand, this might help to make the EU renewable energy target in cost-effective way (on conditions that market liquidity investments would be located in places where the marginal cost of renewable energy is the lowest in the whole of the EU) but a natural consequence might be an attempt to spread the cost of implementation of an EU renewable energy target to

<sup>8</sup> Presidency conclusions from 15 June 2012 on communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions -Energy Roadmap 2050.

all consumers of electricity and not only those Member States which are highly ambitious and represents respective potential with regard to the renewable energy sector.

## Gas market

The development of conventional energy sources based on coal and/or gas should be expected to become necessary in Germany.<sup>9</sup> They will support renewable energy to meet peak demand for electricity, and if obstacles are encountered in the plans to develop renewable energy, they will also replace decommissioned nuclear power plants. There will therefore be an increase in demand for gas in Germany, and as a result measures can be expected aimed at stabilising the price at a low level on the EU internal market. The best way to do this is further liberalisation of the market to ensure liquidity. These measures should be accompanied by ensuring level playing field for all companies on the EU gas market, including those based outside of the EU. Derogation from the third liberalisation package, which non-EU companies are requesting, would have the opposite effect. It seems however that at the moment in Germany an alternative is being considered, not of greater liberalisation of the market but of expanding the direct commitment of capital of external gas suppliers (principally Gazprom) in the electricity sector. This scenario is based on assumption of lower prices of gas to be supplied by Gazprom to its own power stations, but at the moment there is no answer to the question of why Gazprom would bear the alternative cost of that solution (the alternative is sale of gas at a higher price to other users).

It is assumed however in both of these scenarios that Germany will be more and more dependent upon gas imports. Assuming that Germany's strategic objective is maintaining the current diversified supply structure, more activity should be expected in the area of external energy policy, including that conducted using instruments offered by the European Union.<sup>10</sup> It can be assumed therefore that measures will be taken to

find new sources of gas, above all from Azerbaijan and from Turkmenistan subsequently. There will probably be a return to the discussion of access to the global LNG market.

At this point the potential role of shale gas in Europe (but also on non-European markets) is worth noting. While new sources of a considerable volume of gas would emerge on the EU internal market<sup>11</sup>, this would boost the processes initiated by the German decision to stop using nuclear power to be taken further. This is because development of the shale gas sector in Europe means that new producers will enter the European gas market. This might require pricing pressure and as a result increase the impetus for liberalisation of the market and expansion of the cross-border transmission infrastructure. In this way the market will become more liquid. Drops in gas prices could – as in the US at the moment – undermine the profitability of investments in alternative energy sources, in particular renewable energy. If the appropriate production potential were confirmed it would be possible to weaken interest in seeking gas outside of the EU, provided that this was justified by price ratios between conventional imported gas and non-conventional gas extracted within the EU.

<sup>9</sup> Due to the fact that commercialisation of CCS technology has been stopped in Germany due to opposition on the part of the Länder it should be assumed that new conventional capabilities will be based on natural gas with lower emissions.

<sup>10</sup> See Council Conclusions on strengthening the external dimension of the EU energy policy.

<sup>11</sup> According to the Polish Geological Institute's report from 23 March 2012 Poland herself has from 346 to 768 bln m<sup>3</sup> of recoverable unconventional gas.



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demosEUROPA  
Centre for European Strategy Foundation

Mokotowska St 23/8  
00-560 Warsaw, Poland

phone: +48 22 401 70 26  
fax: +48 22 401 70 29  
[www.demoseuropa.eu](http://www.demoseuropa.eu)