

## Oxford Energy Comment November 2012

### Europe's misshapen market: Why progress towards a single energy market is proving uneven

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Integration, for most of the European Union's existence, has been an uphill struggle and, right now in the energy sector, there is a real possibility of a slide backwards. This was the main thrust of the communication published on November 15 by the European Commission<sup>1</sup>. It warned governments of the EU-27 to implement existing legislation, and "to move away from, and resist calls for, inward-looking or nationally inspired policies...which even threaten to unravel the progress we have made on the way to the internal energy market".

The spectre haunting the Commission these days is that faster-than-expected national promotion of intermittent renewable energy is panicking governments into developing national back-up capacity schemes for these renewables. The combination of these national renewable and capacity markets would effectively shut off countries' energy sectors from each other, and negate all the plodding work of building cross-border interconnectors, agreeing pan-European network codes schemes and coupling power markets.

This concern of the Commission not to let short-term national measures spoil the long-term EU project is understandable. It has just launched a consultation on "security of supply in electricity, generation adequacy and the internal energy market". Energy Commissioner Gunter Oettinger has said the consultation will help him produce, by June 2013, guidelines for national capacity schemes that are compatible with the single market. Yet it is clear the main guideline will be that governments, in the words of the Commission communication, "should seek cross-border solutions to any [generation investment] problems they find before planning to intervene" in their national markets.

This is fine in theory, but not in practice. Cross-border solutions in the form of high voltage transmission pylons can take up to 10 years to gain planning permission and to get built, while the installation of some renewable, such as solar photovoltaic (PV)

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<sup>1</sup> COM (2012) 663 page 2.



arrays, can take a matter of months. If infrastructure cannot, because of the difficulty of winning social acceptance, be speeded up to match the growth in renewables, then what about slowing the growth in renewables down? Several EU governments have done this with solar PV, partly to save money on solar subsidies and partly to reflect delays in grid building. But it is hard to imagine Brussels calling for a general EU-wide slowdown in the growth in renewables, even if it had the power (the running of renewable schemes and subsidies is in national hands). One could only imagine Brussels seeking to moderate renewables growth if it were in the context of the Emission Trading System (ETS) being turned rapidly into an effective instrument to encourage low carbon energy. There is no such prospect. A day before the Commission issued its energy market communication, it formally proposed delaying the auction of 900 million allowances until some time after 2016 in the hope of propping up the price of allowances. But delaying is not the same as cancelling allowances, which could form part of a structural solution to the chronic over-supply of allowances. This last measure was one of several structural solutions listed by the Commission for “debate” and then eventually for “consultation”, but there was no word about “proposal”, let alone “decision”. Therefore, with other options closed off, the Commission has to come back to the challenge of making national renewable and capacity schemes EU-friendly.

### **Renewables – the national v. European tension.**

In contrast to traditional energy sources like oil and gas, renewables have become semi-Europeanised. Promotion of them is a declared EU aim, as part of the fight against climate change, and though member states have differing national renewable targets, these targets are decided upon in an EU context and as part of an EU policy. However, renewables are part of a country’s energy mix – its choice of energy fuels and sources - which is formally still a national prerogative. Moreover, national renewable programmes and subsidy schemes long pre-date EU involvement in renewables; for instance, Denmark’s renewable scheme dates back to the late 1970s, two decades before Brussels began to try to develop an EU policy on renewables.

The reason why member states have differing renewable targets is that they have different natural endowments (sources of hydro or exposure to sun and wind), different levels of wealth (renewables currently cost more than fossil fuels), and different levels of clean energy ambition (though this is not part of the official equation for calculating targets). Because governments have different targets, they insist they need to have control over the subsidy schemes to meet these targets.

In the face of the attachment to national subsidy schemes on the part of governments, their national renewable energy lobbies and their supporters in the European Parliament, the Commission confined itself to trying to reduce the differences in subsidy levels by encouraging cross-border trade in renewable energy or certificates of renewable energy. Twice (in 2001 and 2007) it proposed pan-EU trading of green energy certificates, and twice it was rebuffed by the Council of Ministers and the European Parliament, which have regarded cross-border trading as EU harmonisation-by-the-backdoor (which it could be). At present the only cross-border trading of renewables officially recognised and encouraged is between consenting governments in order to meet their targets.



However, some shift towards common EU guidelines for national renewable subsidy schemes might now find support from some governments, if they felt such guidelines would save them, or their consumers, money. As the deployment of renewables surges ahead, so the cost of renewable subsidies has soared in many countries. A 47 per cent increase in the renewable surcharge on German consumers' electricity bills in 2013 will take the subsidy in that country alone to EUR 20bn next year. (Other non-support costs of renewables include balancing costs, and constraint payments, particularly for energy islands like the UK, which cannot so easily export excess wind power to neighbours. The UK paid out £300m in constraint payments in 2011–12. A far bigger non-subsidy cost of renewables is building new infrastructure, most of which relates to renewables).

Though chastened by past rebuffs on EU-wide renewable trading, the Commission has promised next year to come up with EU-wide guidelines on how to structure and manage national renewable schemes. These guidelines might try to establish what is the lowest level of national subsidy a country can get away with paying - given its physical endowment, capital and administrative costs relative to the other EU-26 or at least its neighbours – while still attracting enough investment to meet its national renewable targets. One idea, bruited in Brussels, is to work out a common methodology to establish what the basic costs of renewable technologies are, and then set these costs as the parameters for national subsidy instruments, especially feed-in tariffs. Not all countries would adopt the same level of subsidy, but groups of similar neighbours – perhaps the regional country groupings that have already coupled their power trading markets – might. Extremes would persist, but the remaining differences in levels of renewable support would reflect no more than the relative costs of doing business in various member states. So, notwithstanding that it has more sun, Greece might actually have to pay higher solar subsidies than Germany, but this would be due to real factors such as having a higher country risk, higher cost of capital and higher administrative costs than Germany. Another factor bringing down the cost of renewable subsidies might be better management – enshrined in an EU guideline on ‘best practice’ - of national renewable schemes. The essence of this would be more stability and transparency in the reviews of subsidy rates; opinion surveys show that investors will settle for a lower rate of return from those countries that have, or are perceived to have, stable subsidy regimes.

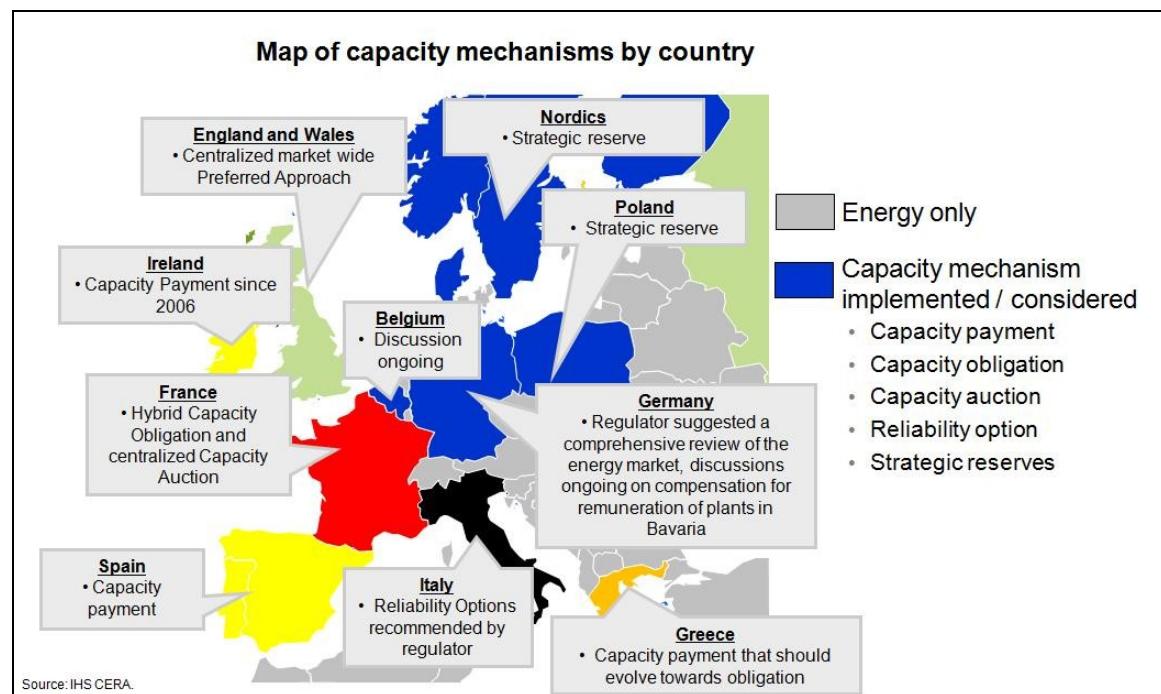
While national targets and national subsidies for renewables tend to fragment a part of Europe's electricity supply along national lines, intermittent renewables (that is, solar and wind power, but not biomass and hydro) are a disruptive force in any market, not just Europe's market. Intermittent renewable power tends to get called on first to meet demand. This is not just on account of EU rules which say renewables must have “priority dispatch” because the timing of their generation is in the hands of nature, not man, and cannot be stored. Grid controllers will always call on intermittent renewables first, because solar and wind power (hydro, too, but it has more limited growth potential) have close to zero operating costs. As these renewables grow in volume, they are progressively pushing coal, gas and nuclear out of the market. This in turn steadily weakens the business case for any new investment in these

conventional energy sources, which will still be needed as back-up but not necessarily produce and earn money in the usual way. So the issue arises of how to reward companies and investors for maintaining generation capacity that is always ready but mostly idle.

### **Back-up capacity – the national v. European tension.**

So far the capacity issue has been a fuss about nothing. The lights have not gone out across Europe. Any black-outs have been the result of technical failure of infrastructure, a tree falling on a transmission line, not a shortage of back-up generation capacity. Many EU countries still have a surplus of generation capacity left over from the pre-liberalisation era when vertically integrated companies or monopolies tended to gold plate a system whose costs they knew they could always pass on to captive customers. The European Network of Transmission System Operators for Electricity (ENTSO-E) has a good bird's-eye view of the whole European electricity system, and it believes that, Europe-wide, there is adequate generation capacity for the next decade.

However, it admits that its assessment does not focus on the flexibility of the system, of the ability of conventional steam or gas fired turbines to ramp up and down in response to large and rapid swings in variable wind and solar generation. No one really knows this yet. Moreover, the problem is pressing in certain countries. It is worst in the UK, not because of renewables expansion, but because the failure of its coal operators to comply with new pollution controls and the decrepitude of most of its current reactors means that it will lose 12 GW of coal generation by 2016 and 7 GW of nuclear capacity by 2020.



Source: IHS CERA 2012



So some governments have already taken measures to ensure adequate generation. Sweden and Finland pay generators to maintain a strategic reserve. Germany, which still has considerable spare capacity despite its 2011 closure of seven reactors, is planning to do something similar to keep older plants available for grid stability. The European Commission is more worried about the impact of the wider European market of more complex schemes planned by the UK, France and Italy that would run a capacity market alongside their regular energy market. The Commission is concerned that member states may be using “very conservative assumptions or even discounting the potential for cross-border solutions to generation adequacy issues”<sup>2</sup>, and so are drawing up capacity back-up plans on a purely national basis. The UK energy department has so far made no mention of any foreign participation in its planned capacity market, but this is not surprising because it has given no details yet about this market. But France has put enabling legislation in place for a capacity market, and it is a country with more cross-border interconnections than the UK. The French energy regulator has said that “at this stage the conditions are not right to have capacity from outside France” in the French scheme<sup>3</sup>, though it foresees there could be a gradual opening up to include foreign generators.

The Commission’s initial view, set out in its consultation document, is that any national capacity scheme should be open to power generators in other member states provided they have a grid link to the member state in question, as well as avoiding any distortion to trading, pricing, location of investment or barrier to the participation of those able to supply demand reduction and energy efficiency solutions.

Does Brussels have any power to enforce its views on member states? The Commission suggests that a capacity mechanism could be considered a “public service obligation” if it requires companies to provide or pay for generation capacity beyond that which would be normal in their commercial self-interest. The Commission goes on to caution governments that EU case law requires them to show that any public service obligations they introduce are “necessary, proportionate and transitional in nature”<sup>4</sup>. In practice, would Brussels dare take a government to court for the failure of its capacity scheme to embrace foreign suppliers? This would be most unlikely in present circumstances, given the snail’s pace of inter-connector building and the current frail state of European political solidarity. Forcing countries to rely on foreigners to prevent their lights going out would not go down well with any country’s public opinion.

### **A more immediate priority – deregulating energy prices.**

The most startling aspect of the Commission’s progress report on the internal energy market was the revelation that no fewer than 18 of the EU’s 27 member states still regulate end-user prices, especially in electricity and especially for householders and small businesses. Not only is this persistence of price regulation bizarre in a market that is supposed to be ‘liberalised’ after three large packages of legislation in 1996–8,

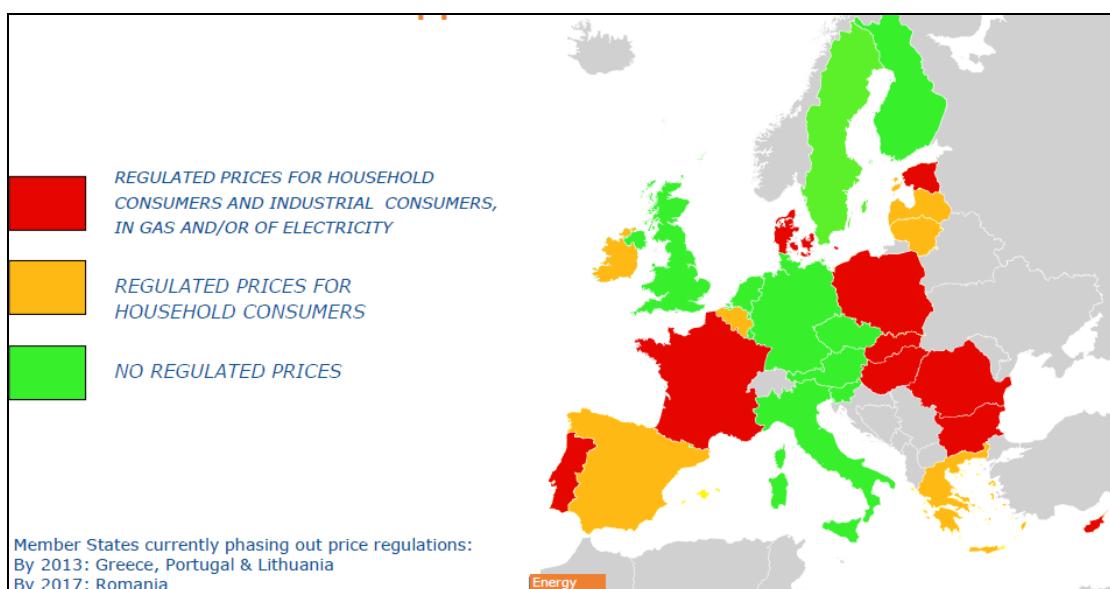
<sup>2</sup> Consultation document 15/11/2012 page 6-7.

<sup>3</sup> Deliberation de la Commission de regulation de l’énergie du 29 mars 2012, page 5.

<sup>4</sup> Consultation document page 11.

2003 and 2009. It is also of direct relevance to the issue of new generation capacity. Regulated prices are perceived by investors as the classic indicator of the sort of political interference that stifles their desire to invest, especially in conventional back-up capacity. For a gas plant owner, it is bad enough to have fewer hours in which your gas plant is called on to run; it is worse if, during those ‘fewer hours’, a limit is placed on the prices your gas plant can earn. Moreover, price regulation, if it is designed to shelter consumers or taxpayers from the true production cost of energy, never fulfils this aim over the long term. Tariff deficits build up, which consumers and/or taxpayers have to pay in the end; currently Spain is the worst case, with its EUR 24bn energy tariff deficit.

“We need to get to grips with regulated prices”, Energy Commissioner Oettinger said recently<sup>5</sup>. But the Commission has not done so. While governments pay lip service to the need to phase out price controls, they drag their feet in practice. Europe’s energy regulators, who have to carry out any price regulation that their governments impose, coyly captured the dichotomy in a report earlier this year. “Member countries are more and more determined to abandon regulated prices in the near future....but relatively few countries have formulated concrete plans to do so”<sup>6</sup>.



Source: European Commission, 15/11/2012.

The Commission has opened a number of infringement cases against governments for regulating prices. Price controls are hard to phase out. EU case law does allow price controls if they can be shown to be proportionate and in the general economic interest. But it is more important for the Commission to do legal battle over these regulated retail prices than over capacity plans.

<sup>5</sup> Press conference 15/11/2012.

<sup>6</sup> CEER review of the 3<sup>rd</sup> package, January 2012.



## Conclusion.

Europe's energy market is developing in a crooked manner at present, with national initiatives and schemes proceeding faster than integrationist work. This is not the result of any plot to re-nationalise energy policy in Europe. Indeed EU energy policy does not seem to be suffering from any of the centrifugal strains caused by the eurozone crisis, and the surge of euro-scepticism in Britain. Energy presents common problems for all member states today. Bigger EU states are naturally more likely than smaller states to ignore the increase in cross-border energy trade and interconnections that undermine the point of planning security of supply on a national basis. But the outliers of the past no longer go their own way. France knows there is no longer any such thing as cheap nuclear power. Britain is today a fossil fuel importer like the rest. Germany now appears to realise last year's decision to renounce nuclear power without consulting any of its neighbours about the consequences was a mistake, and that its energy transformation can only succeed within a comparable EU transformation.

Rather, the fact of national initiatives outpacing European ones simply reflects renewable energy (a national responsibility) outpacing cross-border infrastructure (an international responsibility). The knock-on effect of this surge in intermittent green electricity has been to increase governments' anxiety about security of electricity supply. This sensitive area is one where governments still tend to think nationally. The Commission is right to remind them of the damage national capacity schemes could do to the European market – both to its geographic dimension, and to its free play of supply and demand. Subsidies tend to wall off renewable electricity from the rest of the free market in wholesale power, and subsidies could do the same for conventional back-up capacity.

Yet it is possible that the Commission, or its energy directorate, is too fixed in its traditional mindset of perfecting cross-border links and competition, and too slow to face up to the ugly fact that dealing with the “market failure” of climate change will inevitably do some damage to the architecture of the free market. Why has it been slow to face this fact? One reason is that national politicians have to “carry the can” if the lights go out in their country. Brussels gets blamed for many things in Europe, but not, in the first instance, for black-outs. It is national politicians who, in the first instance, have to think about security of supply.

However, if Brussels does not like the idea of state-directed investment – which is what the underwriting of back-up capacity amounts to – then let it do more to encourage market-rewarded investment. The Commission called its communication: “Making the internal energy market work”. But this market cannot work as long as two-thirds of EU states still fix retail prices. De-regulating these prices should be an immediate priority.