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Public intervention in the energy transition: A legal and economic perspective on state aid policy

Conference report

Joint Conference organised by the Energy Union Law Area of the Florence School of Regulation (EUI), the Chaire European Electricity Markets (CEEM) and the Governance and Regulation Chair

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DEBATE

Conference organised in cooperation with the **Energy Union Law Area of the Florence School of Regulation (EUI)** and the **Chaire European Electricity Markets (CEEM)**

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Public Intervention in the Energy Transition: A Legal and Economic Perspective on State Aid Policy

Joint Conference organized by the Energy Union Law Area of the Florence School of Regulation (EUI), the Chaire European Electricity Markets (CEEM) and the Governance and Regulation Chair

EU State aid regulations have long played a key part in shaping energy markets, extending their reach to such areas as clean energy, capacity mechanisms and support to R&D innovation as well as the technologies themselves. Having become streamlined and easier to apply over time for users, they are now faced with new challenges: effectively addressing and accounting for a panel of players that has grown to include varying sizes, profiles and vocations; and successfully interacting or co-existing with other policies, tools and instruments, aimed at purposes just as acute.

Recent Trends and Key Issues for State Aid in EU Energy Markets

Céline Gauer
DG Competition, European Commission

A landscape marked by recent crisis

Ten years ago, the European Union rolled out two highly ambitious policies: the liberalisation of the energy markets overall and the electricity market.

Due to the economic crisis and stagnation that ensued, energy demand fell and resulted in a crisis of energy markets, characterised by: the explosive combination of high energy prices on the retail market alongside very low wholesale market prices; growing difficulties in guaranteeing security of supply and a threat to decarbonisation due to its perceived costs.

To the above challenges, the States chose to respond in accordance with their own traditions and convictions. They are united in one respect, however: energy and the environment now account for an average of 46% of their expenditure and are amongst the two budget lines and policy experiencing the sharpest growth.

The primary focuses of public intervention today

Renewable energies

Since 2008, renewable energies gained a place of favour, for their small-scale, green and public-friendly profile. As such they were encouraged at every bend of the road, policy-makers being certain that their cost would then drop in proportion with their spread. That wager proved astute to a certain extent, as the 20% target will be met, and costs have decreased thanks in particular to the remarkable pace of innovation.

However, renewables have also had to struggle through a number of challenges. The first is that of increasing budgets. In Germany, half the electricity bills borne by households goes toward supporting renewable energies. Businesses, too, have been asked to accept a burden unimaginable even ten years ago.

The second difficulty came in the form of market distortions. Initially dwarfed by incumbent technologies, renewables were easily “generated and forgotten”. As they came to account for a large share of consumption, however, their non-integration into the market did prove a problem, leading in extreme cases to negative prices. In essence, State money was during some hours subsidising a destruction of value. Lastly, as all of these measures were developed within national frameworks by Member States aiming to achieve their own domestic targets, the risk for market integration was seen as significant.

Finally, in some member States, the inability of electricity grids to accommodate large volumes of renewables led to the curtailment of interconnectors and to discrimination across Member States.

Against this background, the new State Aid guidelines adopted in 2014 pursued two main objectives: to ensure renewable energies were less distortive; and to enable them to be more affordable. The first aim was achieved by calling upon the budding entities to become full-fledged energy market players, not content to work their innovative infrastructures, but also to be able to market their products, unearth customers on the market, respond to energy prices and balance their need. Today, in nearly all Member States, the responsibility balancing targets and market participation goals have been in large reached, what's more, via clear, notified and well-designed mechanisms.

The second aim, that of affordability, was accomplished through calls for tender, relying on the principle of competition as an effective price-trimmer. Over the past two years, the average supply price has dropped significantly, thanks indeed to the effects of competition, but also to the drop in the cost of technologies and capital. Moreover, the call for tender mechanism makes it possible to ensure that power generators do not hold on to the savings earned for themselves, but indeed pass them on to consumers.

Capacity mechanisms

The drop in wholesale prices triggered concern that investments needed to guarantee security of supply (new capacity, refurbishment of ageing capacity, compliance with ever-tighter standards, and maintenance of capacity online) would no longer be undertaken by utilities.

To address this concern, a number of Member States set up capacity mechanisms, focusing most of the time on power generation, and often forgetting the potential role of demand-side response and interconnectors. Many also tended to overlook such aspects as competitive process or non-distortion, resulting in a very costly and uncoordinated system.

Deeming it essential to bring clarity to this picture, the Commission chose to respond with the first and still only enquiry in the field of State aid, and identified no less than 35 mechanisms across the European Union. Reviewing these in detail for market-distorting effects, it produced a schematic process for developing sound State aid *ex ante*, in four stages: establishing the actuality of need, after market reform and based on economic adequacy assessments and reliability standards; selecting an appropriate capacity mechanism for the time-frame and geographic scope involved; ensuring proportionality, primarily through a competitive price setting; and protecting trade and competition by including all technologies opening measures across borders.

This report, available for viewing, now needs to be implemented, Germany, Ireland, Italy, France and Belgium already presenting cases for this.

Nuclear power

Nuclear power has been enjoying renewed interest by Member States, although some have made it clear that it will not be any part of their energy mix.

In the face of infrastructure ageing, the only two options available – extending lifetime extension or new build – have recently not be possible without State intervention. While the Commission cannot influence the decision to proceed with such intervention, it is empowered to ensure that State action does not spend excessive taxpayer funds nor create excessive competition distortions. It also investigates to ensure there is cost transparency, taking into account all costs: marginal, variable, fixed, cost of waste, and cost of insurance.

On smaller markets, opening up an additional +/- 1,000 MW in power, at very low marginal costs, profoundly distorts the market. The same results from extending lifetime by granting State guarantees to incumbents. The Commission is thus taking action to ensure that the electricity does not remain with the incumbents, but is put on the markets, creating liquidity, lowering barriers to entry for the retail market and allowing competition to extend to the retail market.

Where waste is concerned, the polluter pays principle applies, as in any sector. As far as potential nuclear accidents, nuclear operators must ensure themselves and bear the cost of such insurance. Member States may only intervene to cover residual risks such as the possible increase of storage costs in several hundreds of years, and against the payment of a sufficient premium. In all these cases, the main objective of the Commission is to ensure that nuclear costs are made transparent and can be compared with the costs of other generation technologies, including renewable technologies.

State aid rules has indeed become relevant for energy markets and enabling significant progress toward greater transparency, cost-effectiveness and competition.

Debate with the floor

What avenues would you like to see explored in research?

Céline Gauer

I would recommend research on the effects of liberalisation for consumers, the results of which would likely speak much more compellingly than the economic theory used to date. Our respective countries, each at varying stages along the way toward liberalisation, would offer an excellent observation ground.

A quantitative analysis of the effects of capacity mechanisms on electricity markets would also be of great value, both within national boundaries and in a cross-border context, between countries having adopted different systems.

Lastly, I would like to know what the Commission can do proactively to foster more creative, innovative solutions in and around decentralised generation, in particular when it comes to storage.

The guidelines on energy efficiency do not appear to have been very effective: the public authorities all appear to be avoiding notification, while the EC's Energy Efficiency Financial Institution Group has listed public aid as one of the leading barriers to further developing energy efficiency in Europe. Are you studying that connection, before possibly reviewing the guidelines?

Céline Gauer

State aid is always a convenient scapegoat, but in this case, has been proved effective by evidence. The DG receives dozens of notices on French renewable energies alone, and approves them quickly when they are correctly substantiated. The relevant lack of energy efficiency measures is due to the low incentive provided by the financial equation in energy efficiency, not to state aid control.

As to revising the guidelines, it is far too early to envision that process, with only one to two years' data on which to rely. The Commission nonetheless welcomes any opportunity to discuss with players on the ground.

Jan Horst Keppler

The exemptions considered for energy sector players are economically indefensible: they boil down to mechanism incentivising players to come out and gain recognition as "large energy consumers".

It is also surprising to see the importance which the Commission grants to market share as an indicator of a monopoly situation, when the energy sector is home to very few transactions, and deals in a good that is almost impossible to differentiate. Other parameters would be more deserving of attention.

As to the effects of liberalisation on consumers, the first data from the United States appears to show that tariffs are lowest in those states where no steps have been taken toward liberalisation, even though other factors, such as economic growth or the contribution of other energies also play their part.

Lastly, has it been proven that decentralised solutions are the best?

Céline Gauer

The financing mechanism framework, to which exemptions belong, is an entirely different one from that of environmental tax. Companies that fund energy efficiency are already incentivised to do so, by their sheer size. According to the traditional tenets, any mechanism that might release a company from paying any part of its operating costs is to be prohibited. However, in the context of renewable energies and later CHPs, the policies underpinning them are so costly that there is a real risk of Member States' turning away from application, on the assertion that they would otherwise be signing a death warrant for many members of their business community.

In the United States, the situation is entirely different, the cost of those policies being trivial. In that sense, the significant disadvantage of which our European companies complain in global competition is very real. Any support which we might be able to secure for energy transition policy in Europe would fall to pieces if we implied to the Member States that the price to pay would be massive offshoring. Consequently, while the economic theory applied can be criticised, support for climate policy hangs in the balance.

For the time being, the Commission has chosen intervention as a means of harmonising the measures in place between Member States. Does this imply that Parliaments should be left free to define financing mechanisms at will?

As to market share, it is indeed not an irrefutable indicator on its own: companies with a relatively low market share may have sufficient market power to be considered dominant for antitrust purposes.

Lastly, there was no intention to present decentralised power generation as inherently more attractive, only as an avenue which we have not sufficiently surveyed. It would be a shame to miss out on that opportunity.

Session 1: The intersection of State aid control, energy policy and industrial policy in the energy transition

Introduction: The Interplay of Energy Policy and Industrial Policy in the Energy Transition

Patrice Geoffron
Paris-Dauphine University

The gradual shift from coal energy to oil and onto gas energy will have taken over one century, a timespan which no one can spare in the present transition. If the Paris Agreement is implemented, it will turn the world's macro-economic model on end in two decades' time, precluding the creation of GDP through activity that constantly increases CO2 emissions.

Yet the differences between world regions are not only in their approach to energy; their social and economic organisational models are entirely different. Is an energy transition culminating in a world of smart globalised super-metropolises – with the corresponding energy efficiency, urban planning, mobility – an attainable goal? In terms of energy mechanics, it will not rely on an adoption of low-carbon technologies alone: it will imply changes in dependencies between importers and exporters, of gas and oil, and between the major world players.

On the global map, the European Union, destined to be increasingly dependent, will aim to import less in volume terms and to improve its energy efficiency. With China and India aiming in the same direction, they will be competitors to Europe; only the United States is unexpectedly headed toward a position as net gas exporter and net oil importer, with mechanical impacts on gas import and energy security overall. By 2030, Europe will produce less gas than it does today.

Implementing and dealing with the interplay between energy policy and industrial policy would be one means of speeding up selection within an extraordinarily rich portfolio, including onshore wind, PPV, even CCS (insistently promoted by the United States). Still to be determined is which attractive emerging technology will find its way forward in Europe and warrant the massification it needs to compete successfully at the international level. Another challenge will lie in reaching the point of convergence between energy technologies and non-energy technologies, i.e., ITCs, artificial intelligence, blockchains, etc., for application along the energy value chain.

Over the last ten years, Asia has resolutely held all positions in the world's top ten solar panel manufacturers. In wind turbine manufacturing, where Europe occupied four out of the top five positions in 2008, it has now relinquished the top position to a Chinese player, one of five in the top 10. A similar shift has been taking place in patent registration.

According to the International Energy Agency, in fact, China could soon be producing 20 to 50% of the diverse low-carbon energy technologies used across the world. Would,

for Europe, importing both photovoltaic solar panels and EV batteries from China be the most efficient way of being in line with its targets for 2050? Such perspective should be discussed by creating an area for industrial policy strategy. It will, in any case, be able to rely on China's commitment to the low carbon transition, given the air quality issues that country is facing and the apocalyptic scenarios it knows will await, if it fails to take action.

Europe, which crafted the 20-20-20 objective 10 years ago and provided much of the inspiration and long-term vision for the COP21 agreement, now needs to follow those principles up with socio-economic actions capable of buttressing them. This can include a stress test of its ability to secure patents, jobs and value-added as it prepares for the fierce competition that will play out in the low-carbon arena. While China rides ahead on new technologies and the US develops its unique power in IT and big data, Europe's masterstroke could prove its ability to integrate the many urban, industrial and energy challenges into complex yet fluid and dynamic responses, of which Amsterdam and Barcelona, to name only those, are an illustration.

Debate with the floor

Can Europe compete against the United States on the latter's prized playing field: the IT energy sector?

Patrice Geoffron

The main competitors on new IT technologies are unquestionably not European. While it is not inevitable that data will replace kilowatt-hours as the main unit of measure in energy, their importance should be taken into account in defining public aid law so as to enhance our range of tools.

A Legal Perspective on State Aid Control, Energy Policy, and Industrial Policy

Pablo Ibanez Colomo
London School of Economics

With the boundary between energy policy and industrial policy now blurred, it has become difficult and possibly less meaningful to claim that State aid is being used as the instrument of one or the other. More enlightening are surely the implications of the latter from a legal perspective.

Any discussion of the interaction between State aid, energy policy and industrial policy will necessarily point up the differences between the players involved: the leading figure in implementing the policy or law, the nature of the competences involved, their mode of execution (in conjunction with other players, horizontally or vertically).

The Treaty on the Functioning of the European Union places the European Commission at the centre, giving it the power to examine State aid with the internal market and control the implementation of this policy. Concurrently, the competences it grants on State aid are horizontal: without meaningful boundaries on the nature of the activity. Yet between industrial policy and energy policy, the balances, respective scopes of application and competence sharing are different. Some areas overlap legitimately, albeit creating tensions in so doing. It is not unusual to hear claims that State aid law is going too far in energy policy, when the boundary as to what can and should be achieved by State aid is not so easily drawn. If there is an issue, it will be a matter of State aid law interpretation, rather than an instance of overstepping of boundaries.

In the instruments proposed as well, State aid law and the EU's energy policy overlap more than one may think, even though the first intrinsically defines itself on a case-by-case basis and the second globally. The decisions adopted in individual cases have a precedent-setting effect, building into a corpus that is just as valuable and informative as sector enquiry or block exemption regulations and guidelines. That which each instrument can accomplish will depend on the triggers needed to apply it. With the evolution of EU State aid law, the pre-conditions for intervention – and in particular the involvement of State resources – have been progressively eroded. This is illustrated by such recent cases as PreussenElektra, Essent/Vent de colère, and Germany vs. the European Commission.

The question as to interplay between State aid control, energy policy and industrial policy remains open for exploration.

Debate with the floor

The diverging opinions on PreussenElektra and, subsequently, Essent/Vent de colère do not necessarily reflect a change in approach, but merely a difference in the level of control of each company.

Pablo Ibanez Colomo

The question indeed remains open, and proves a fruitful topic of discussion in the University lecture context. From the strictly legal standpoint, it can be emphasised that PreussenElektra has never been repudiated.

Jan Horst Keppler

Non-specialists are often told that the European Commission in fact has very few powers when it comes to defining energy policy, which instead is said to be the result of competition regulation.

Pablo Ibanez Colomo

That type of view is often put forward to imply that a State has not applied the European Union's rules in a legitimate manner. That being said, it is true that the energy sector's current rules were in large part structured by the Union's anti-competition rulings (approximately 40%).

It's electrifying! State Aid and e-Mobility

Vincent Verouden
E.CA Economics

The "greening" of power generation is not only a powerful means of reducing carbon emissions; it opens the door to greening in mobility, the source of approx. 25% of the emissions recorded today and thus a major source of potential further progress. In this context, a number of recent cases of the European Commission on State aid provided in support of electric vehicles, e.g. for EV charging infrastructures, the purchase of EV cars and for other purposes, take on a new dimension.

The 300 million euro support measure notified by Germany for the construction of an entire network of EV charging stations was not characterised as aid by the German government, as it would be open to all potential actors wishing to operate such stations. Interestingly, the Commission left the question open as to whether the measure would constitute aid or not and swiftly proceeded to the analysis of whether the aid could be deemed "compatible" with the Treaty. In its compatibility assessment, the Commission considered that the market exemplified a classic market failure, namely a "chicken and egg" problem: the lack of EV infrastructures being likely to slow down sales for electric vehicles, while the low number of such vehicles may also be the very reason behind the low number of charging stations. Somewhat, surprisingly, however, the Commission did not refer to the impact on hydrogen vehicles (arguably another potential source of decarbonisation), neither in its state aid analysis nor in the compatibility assessment.

Previously, the Netherlands' funding for a similar project (notified in 2015) was treated as State aid in that it openly went toward the operators of a single industry (EV cars). However, despite this conclusion, the project was deemed "compatible" with the Treaty to the same extent as the German project, having fulfilled the so-called balancing test: it was deemed in the common interest; it was well designed, with a call for tender mechanism awarding the contract to the lowest bidder or that offering the best value; and distortions of competition and the effect on trade were sufficiently limited, so that the overall balance was positive.

The public aid offered in various forms in Norway – exemption from VAT, exemption from vehicle registration fees, or free access to bus lanes or ferry services for electric vehicle users – illustrates another shading. While beneficial to a broad user population, the EFTA Surveillance Authority found the measure to selectively favour a specific group of beneficiaries, namely electric vehicle manufacturers, and it was thus deemed selective. Yet there too, it was able to fulfil the compatibility conditions (balancing test), for it offered a solution to a problem of serious consequence for society, namely pollution and the state of the environment.

Echoing the revolutionary Lenin (with a slight twist), "the future is renewable power and the electrification of the whole country!"

Debate with the floor

Is it likely that the Commission's decisions lead to a harmonisation of approaches in the different member states?

Vincent Verouden

To some extent this is indeed likely. It is also not unlikely that the Commission will decide, in the medium term, to integrate new cases into the block exemption mechanism, as a result of which an alignment process would automatically be triggered. Even so, member states remain free to experiment with different aid measures (and notify these).

Leigh Hancher

Can it be concluded from your presentation that by leaving out certain technologies (e.g. hydrogen vehicles), the support measure on EVs has not withstood the test of neutrality?

Vincent Verouden

That is indeed one possibility. It may also be that these other technologies were considered too remote in terms of technological development and thereby not able to fulfill yet the Commission's current aims.

Céline Gauer

The guidelines do state that, to whatever extent possible, tenders should be technology-neutral. At the same time, it is also important that they function. Offshore wind, for instance, for the time being is too expensive to compete with onshore wind. It is for this reason that there are more technology-specific than technology-neutral tenders.

State Aid Control, Security of Supply and the Role of Capacity Mechanisms

Fabien Roques
Paris-Dauphine University

Guillaume Dezobry
Amiens University; FIDAL

Background to the role of state aid in capacity mechanisms

The integration of the wholesale electricity markets is seen as one of the European Commission's paramount achievements in energy sector intervention, enabling up to 1 billion euros in savings per year. Its subsequent work to enable cross-border balancing and reinforce demand-side response, are expected to yield comparable efficiency gains. Yet all of these can be said to belong to only an initial class of measures aimed at driving greater electricity market integration, namely the static measures with a given generation mix, while the new measures – fostering investment in power generation in a coordinated way across borders in order to maintain security of supply, to coordinate investments in the networks and generation facilities, and to optimise EU RES deployment thanks to cross-border cooperation – are part of a dynamic impetus.

Until 2006, security of electricity supply was considered a national remit. It was only after a series of incidents bringing out the interdependence of the national grids that the need to address these questions at the European level became clear. The European Union responded by adopting a number of legislative texts and guidelines on security of supply, which did not establish any obligations. in recent years, a growing number of member states have implemented some form of capacity mechanism in order to maintain security of supply, raising questions regarding the state aid compliance of these schemes.

The European Commission launched a state aid inquiry and introduced state aid guidelines on capacity mechanisms. In 2016 the Commission presented its Clean Energy Package, including proposals for the electricity market and risk preparedness.

An economist approach to state aid compliance for capacity mechanisms

An economist will tend to approach State aid using a cost-benefit approach. Intervention on electricity markets can be a means of making up for market failures, provided action is taken in parallel to remove their causes. However, a market perfectly designed by the regulator is also seen as not necessarily capable of providing the degree of security of supply which policy makers may require by law. Externalities may also come into play, security of supply sharing some characteristics with public goods.

As to missing markets, the problem they raise will be of growing acuity in the future, with the growth of renewable energies: the value of electricity depends on the point at which it is exchanged, the term of the contracts, and the respective places of

production and consumption, as energy is not a storable good.

Could a more systematic approach to assessing State aid for security of supply and capacity mechanisms be on the horizon? This question raises the issue of compliance cost: the regulatory uncertainties created as States devise their responses can prove a barrier to investments, possibly creating further need for State aid. A streamlined or expedited process could prove beneficial in this response.

Going forward, new challenges are likely to emerge in the state aid scrutiny of capacity mechanisms. To date, few cases have raised the issue of the market impact of ancillary services design and procurement needed for network stability, which could raise issues not captured by current adequacy assessments and which could be a reason for intervention. Lastly, the issues that typically arise on capital markets (risk aversion, imperfections in the risk pricing mechanism and market cycles) are all present in the energy context as well.

Key issues for research

According to the approach currently in place, responsibilities are divided up between the country, the TSO, the EC and ENTSOE, on each of the assessment criteria taken into account to grant State aid for capacity mechanisms. When it comes to the need for intervention, the Country sets the target reliability level, the TSO collects data and performs the adequacy outlook, the Commission reviews the outlook and raises questions on it, then decides on the need for intervention or suitability of other measures. In a recent development, ENTSOE is becoming involved on two fronts: coordinating the modelling approach; and taking into account cross-border effects.

Even if a standardised approach were to be designed, it would necessarily have to provide room for local-level tailoring, to take into specificities, if only the detailed engineering knowledge of networks. Yet to create even the basic framework and harmonise the core assumptions underlying the adequacy outlooks, a transparent and comprehensive registry of data on power plants and demand response would need to be developed. Could the new regional centres play a part in enabling cross-border capacity and/or fostering balance between regions receiving differing levels of national aid?

On appropriateness and proportionality, which form the second criterion, the country takes charge of high-level design in the capacity mechanism, the TSO attends to detailed design and calibration needs, and the Commission provides guidelines on design both generally and in detail. Is some degree of harmonisation needed in the design of these mechanisms? Could the underlying security of supply criteria be harmonised? Can common certification and verification procedures for plants be defined?

Where the third and final criterion is concerned, absence of distortion of competition, there is a need for coordination of both market power mitigation approaches and monitoring. One key issue not addressed by the Clean Energy Package lies in the creation of operational rules and clarification of responsibilities in joint scarcity event situations. How can national responsibilities and instruments be aligned, incentivised and held accountable, if the intermediary regional level is created?

Debate with the floor

Céline Gauer

The overlapping or interplay between regulation and competition is undoubtable and substantive, including State aid and anti-trust – and is to be welcomed. These are complementary instruments that mutually inform one another and create virtuous synergies between themselves. That being said, a player cannot be content to be strictly in compliance with the regulatory provisions; other measures will be needed to abide by those specifically governing competition as well.

Similarly, it is not enough to strictly delineate the powers of the Council, Commission, Parliament, States, etc. In order for that framework to be strong, there must also be recognition and understanding of the areas between them that can accommodate flexibility and indeed interplay, for intelligent decision enforcement and directive drafting. This is one reason for which it would make no sense to integrate State aid into the Clean Energy packet.

As to relying on State aid control as a means of enforcing regulations, that is a tricky, even dangerous wager. While the Commission's role is indeed to protect competition, it must ensure that it does not step into serve that responsibility without overstepping into other areas, such as environmental affairs, which could be seen as an abuse of power.

Where does ARENH stand currently?

Céline Gauer

France's mechanism for Regulated Access to Legacy Nuclear Power was instituted in 2010 to give the sector's competitors access to nuclear power at cost price. In the absence of a new methodology submitted by France and approved by the Commission, the price will remain at 42 euros per MWh.

Session 2: From Centralised to Decentralised Energy Production? Future Issues for State Aid in the Energy Transition

State Aid and the Role of Network Operators in Delivering New Energy Service and Data Management

Olivier Fréget
Fréget Tasso de Panafieu

A new ecosystem is emerging on the retail market, in which the smart grid could well prove to be the gateway between monopoly and competition, and possibly even the eagerly-awaited disruptive factor that will enable liberalisation to fully materialise.

More than metering activities, they will open up a number of new services, among which the following categories: provision and procurement of flexibility services, infrastructure provision for electrical vehicles, energy-efficiency services, ownership and management of metering equipment, and data handling. In all these areas, but especially in the last, it will be important to watch the States' course of action, as they shape the new markets. Mis-regulation would prevent the new convergence and leave many of the benefits of liberalisation unrealised.

For the time being, no enactments or regulations set out any obligations in relation to State aid or define the role of the DSO in the new landscape, compared to other players active in the competitive world. The legislation's neutrality should make sure that the split between monopoly and competition is well defined and leaves enough room for innovative and competitive services to emerge. Currently (in France), it leaves the smart metre, that potential gateway between the supplier and the DSO, undefined. Yet the smart metre was financed not by the market, but in part by public intervention.

The case for a monopolistic system is very narrow: should its parameters be allowed to determine competition downstream? Would it not be preferable to shape the current separation between distribution and other activities in a way that gives competition some influence? The decisions of anti-trust authorities have tended, in similar circumstances, to under-enforce rather that over-enforce competition rules. The aim being to achieve an ecosystem that bridges communication and energy services, it is important to take action early, not waiting for a hypothetical decision from the said authorities once the outlines of the future markets have been irreversibly shaped. The lines should be drawn *ex ante*, letting competition develop downstream and allowing DSO involvement only within the limits of supply; data use and services directed at consumers should constitute another realm.

Debate with the floor

Fabien Roques

Do you know of precedents in Europe in which potential monopoly has been taken up differently?

Olivier Fréget

This area is still quite new and moreover blurred by multiple data privacy issues, which have inexplicably proved more acute in this context than in that of telecommunications.

Vincent Verouden

It is possible to draw a comparison with the state aid approach in support of the roll-out of broadband infrastructure. At the time, the decision has been made to limit the subsidisation to the basic (passive) infrastructure, i.e., ducts, cabinets and "dark fibre", and to require – in return for the public support – open access under fair and non-discriminatory conditions to all operators who request it.

Olivier Fréget

It depends on which "black fibre" you refer to. When we talk about black fibre in France, it is worth noting that the transport networks in black fibre were initially funded solely by private money. For instance, Cegetel was digging in along the railway lines and LD Com along the navigation channels, both installing their "black fibres" in competition and reselling it to other players. Even now, replacing the copper lines by fibre is mainly financed by private money. It is only in less dense areas where public money is injected. This is a model we should be looking into, being extremely cautious about the level of (and the reasons for) granting public subsidies, lest we cause certain opportunities for competition to close, especially downstream at the level of services offered.

Challenges and Opportunities for Decentralised Energy Production in the State Aid Framework: View from a Public Interest Lawyer

Maria Kleis-Walravens
ClientEarth

State aid is a policy tool. It can be approved in all cases where the Commission feels that the market has failed to deliver a "well-defined objective of common interest". Moreover, the guidelines are not a legally-binding document, except with respect to the European Commission and, by extension, the Member States. As such, they have a tremendous impact on what can be achieved on the energy markets and would gain from being born of a process that is far more democratic and participatory.

In the instance of the energy transition, the common objectives include: bringing about greenhouse gas reductions; increasing the share of renewables; providing for energy security; structuring a competitive, affordable, sustainable energy market; and applying the "Efficiency First" principle. The latter, a new addition, invites players to consider whether they have gone to all possible lengths to ensure efficiency before considering new initiatives. A decentralised energy system would respond to all these challenges, whether through decentralised production or demand management.

The EEAG guidelines, in contrast, appear less conducive to their attainment. First of all, they in effect make it more difficult for smaller cooperatives producing renewable energies to take part in bidding processes, even though these are precisely a source of considerable promise for this market. It can also be noted that they aim for "production" adequacy, rather than "resource" adequacy, and thus do not address important potential energy sources such as demand-side solutions and energy efficiency. The absence of the Efficiency First principle could also be used by States as grounds for curbing their aid, or granting it differently.

The Winter Package remedies that gap. It furthermore aims at "resource adequacy", even paving the way for a harmonised approach to this at the European Union level. It is to be hoped that all of these provisions will endure through the negotiation process now underway in Brussels, fascinating in and of itself. It remains to be seen, in particular, how the landscape for renewable energies will be arranged: funded almost entirely by State aid, they are nonetheless subject to cross-border cooperation and balancing requirements.

Looking ahead to the EEAG 2020 guidelines, one can hope for an alignment on European Union energy policy, with a better harmonised resource adequacy assessment methodology and a framework more favourable to renewable energies, in particular those produced by smaller players.

Debate with the floor

Fabien Roques

To my knowledge, resource adequacy assessment methodologies do take into account demand-side response. Does your criticism aim at the actual modalities by which they are factored in?

Maria Kleis-Walravens

The guidelines provide for assessment at two stages, the first pertaining to the role of demand-side response in the capacity mechanism. Ultimately, they give central importance to power generation. An improvement can be noted over these past few years, in part thanks to the sector enquiry incorporated into the Winter Package, which will hopefully find its way into the 2020 guidelines as well.

Concluding Keynote Speech

Leigh Hancher
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Many in the Anglo-American world, most prominently Bernard Stiglitz and Paul Krugman, see anti-trust law and competition law as a means of fighting inequalities in the future. Is their role as a State aid control mechanism, as the European vision would have it, so much more founded? Should State aid legislation be first and foremost a facilitator to the energy transition, when both are a means to an end?

Another important structural consideration to keep in mind is the profoundly changing nature of demand today: will energy supply start to behave like major retail, aiming to induce or trigger demand which consumers would not otherwise express? Will energy regulators make less effort to shore up small generators in the same way that competition authorities have decreased their protection for lesser retailers in the face of hypermarkets or major corporations? Fossil energies, it should be kept in mind, continue to enjoy significant aid in various forms, even after 75 years of policy purportedly aimed at scaling back the support it receives. Spain has just enshrined in law the impossibility of energy sector operations without coal-powered plants, while at the Commission level, a decision has just been made to provide re-training to coal players.

Given the uncertain scope of State aid rules, the use of guidelines that are binding only on the Commission, and the enduring option for players in a monopoly position to shape and reshape their offers enjoying the luxury of trial and error, the regulatory road toward a low-carbon future will require patience and flexibility.

To wit, the recent Clean Energy package does not usher in many obvious improvements, does not set targets and provides no detailed description as to how a local energy ecosystem should come into being, even as traditional players watchfully guard the pieces of the market pie which they see as exposed to loss and so many areas of uncertainty remain. The playing rules are becoming imbalanced, but in what direction? Should access to smart metres, exemption from distribution priority rules, new balancing responsibilities and negative price authorisations be seen as State aid, and if not, how should they be qualified? How should the opening of EV charging stations by a TSO be considered? Should VAT rules apply when surplus electricity is sold by a solar power generator to the grid, even in negligible quantities?

The potential application of envisioned rules is already holding many players back in their investment decisions. The environment is in fact so jittery that some see sufficient benefit in initiating legal proceedings against others for non-lawful competition, not so much in the hopes of being awarded compensation, as to send a signal about the many obstacles ahead for those lurking in hesitation.

The energy transition will require more clarity than the overly flexible and unpredictable State aid law or the flawed Clean Energy packet can provide. The issues outlined today will not disappear on their own, with time, and are stirring great concern, to the point of delaying the market's development. It is through much more groundwork and fundamental research that the foundations for a firm, stable path forward will be laid.

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