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Energy Union: From Idea to Reality

Conference and Expert Workshop on EU Energy Governance Post 2020

17 – 18 June 2015, DIW Berlin

Discussion Summary

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1. The vision behind the Energy Union

In October 2014 the European Council agreed to create a “reliable and transparent governance system (...) to ensure that the EU meets its energy policy goals”. With the announcement of the Energy Union Package in February 2015, the Commission initiated a debate on how to make the European energy sector more secure, sustainable and competitive.

The keyword now is therefore ‘governance’, the scope of which should not be restricted only to the formalized governance mechanism that the 2030 framework for energy and climate promised, and the Energy Union Package tries to bring to life, but also includes informal cooperation between different levels of the policy-making process, namely European, regional, national and sub-national. The role of these different levels of governance has to be better

understood in the context of the political economy of the energy sector and its impact on the European industry.

2. The need for a common vision

Energy Union will not be fully operational without a common, long-term vision. Such a vision is necessary to integrate subnational, national and regional approaches aimed at reaching the Energy Union's targets. It will also allow to harmonize the essential horizontal provisions for ensuring convergence of the bottom-up processes toward reaching the objectives of that Union

For this common vision, a long-term convergence process needs to be taken into account, in which the perspectives of different member states coming from very different starting points are understood and incorporated. This is essential, because the Energy Union will not succeed unless it can generate sufficient "buy-in" and ownership from Member States. For this process it is important to clearly define which elements are essential, and which steps can and need to be taken already at early stages.

There are already important elements of the Energy Union on the ground. Creation of the common internal market, 2020 and 2030 energy and climate targets as well as the decarbonisation goal agreed upon during the G7 summit are such elements. But in some cases a clear articulation of positions, interests and strategies is necessary, especially when policies aiming at achieving one of the goals contradict the other goals. Such prioritization has already taken place at the national levels, with some member states giving priority to decarbonisation, while other to energy security or renewables' development. The situation is further complicated by the different definitions of these goals, e.g. of security of supply or sustainability, among the EU Member States.

A clearer articulation of positions and prioritization at the European level is necessary, to allow inter alia for grid development. While grid integration contributes to the main goals of the European energy policy, the divergent national objectives slow down grid development. The lack of a clear vision of the future of the energy system translates into uncertainty about the criteria to assess benefits of inter-connections. A common vision of the longer term transition would provide more clarity.

Addressing national heterogeneity

While being one of the major European advantages, the diversity of the perspectives and interest in the EU is also one of its main challenges. In different parts of the EU different narratives dominate and resonate among the EU citizens and shape national energy policy. In the face of common challenges a certain level of common rules is essential for an effective action at the European level. But each member state also needs a satisfactory deal, one that can be accepted by its electorate. An example would be to rephrase the energy security debate by adding the aspect of solidarity. Fight against climate change may be complemented by underlining the aspects of industrial policy and technological modernisation and advancement. While it is

difficult to convince those member states that do not have renewable energy industries to agree to ambitious renewable energy targets, openness to new technologies and new, flexible solutions is essential. The challenges they face may be easier to accept if framed in a way that make sense to them. In such cases some other technologies (i.e. district heating, energy efficiency) may be identified and supported financially to help achieving common, European goals.

As important as it is to promote new solutions, it is also essential to provide answers for those that stand to lose something in the context of transformation of our energy system on the way to achieve the 2030 targets. Their perspectives and priorities must be responded to in the complicated task of energy transformation.

Need for long-term goals

Without sustained demand, there will be no investment in R&D and innovation in the new technologies that are necessary to make European energy sector more sustainable, secure and competitive. An essential element in creating stable investment framework is for Member States is concrete and tangible appreciation of the transition pathways towards their long-term goals in different sectors of economy. Also stability in terms of state aid policy is instrumental in creating a favourable framework for innovation. A declining confidence in terms of Europe's ability to shape choices and create stable investment framework has already had negative impact on the investment in renewable energy technologies.

Setting long-term goals and making sure they will be achieved is related to some important questions, especially about the origin, level and the pathways to achieve these targets. One of the proposals is to encourage member states to set ambitious targets themselves while at the same time ensuring that a very strong review process of the national strategy exists to make sure, these goals will be achieved. To ensure investment stability in the long term these goals should refer to relatively distant future (i.e. 2050) but should also allow for deduction of short-term binding targets.

Allowing member states to determine their own targets would increase their ownership and frame these in the national contexts. But there is also the threat that due to differences in prioritization compared to the European level these targets will not be enough to reach common goals. Member states may have an incentive to understate their own potential in contributing to the achievement of the European targets if they will know these targets have a binding character. Therefore complementarily to bottom-up targets definition also a strategy will be needed to fairly distribute the remaining effort. After an agreement has been reached, the Commission could use a scoreboard showing how successful different member states were in achieving their targets, thus increasing soft pressure on the laggards.

Another strategy of defining the goals would be to allow for a mixed goals formulation, i.e. top-down as far as the formulation of the climate and energy policy goals and bottom-up for the renewable energy and other sectoral sub-targets. This strategy has the advantage that it would

build on elements of the governance regime that will be binding, e.g. GHG targets. The Commission could use these targets as a basis for interrogating and monitoring Member States targets on RES and other sectoral goals. But due to the existing limitations resulting from factors like generation adequacy, grid adequacy and grid reliability, the bottom-up targets suggested by the member states and top-down targets proposed by the Commission, would have to be discussed and decided horizontally.

Finally, the existing strategy of defining the targets at the European level based on targets being suggested by the European Commission and then distributed among member states proved difficult but effective in the past, especially in the framework of the 2020 target. In this case trade-offs and synergies between different member states can be used to more significant extent if the infrastructure between them is better developed. Such a package of goals needs to pick out the synergetic elements, like in the case of the provisions for CCS in the 2020 Energy and Climate Package.

3. Regional Cooperation

Regional cooperation, understood as creating sub-groups of geographically clustered member states to work out common problems, has often been a way to work around difficult issues in the case of which agreement between all EU member states would have been difficult or even impossible. At the same time regional clusters are seen as ‘policy laboratories’ for pragmatic solutions which can provide experience and solutions for scale-up in the entire EU 28 (Umpfenbach, Graf, & Bausch, 2015). It is also necessary to keep in mind that regional cooperation cannot replace defining objectives at the European level, but allow achieving European objectives whenever their achievement at the regional level is more effective.

It is becoming increasingly clear that regional cooperation will be an important lever for driving forward the EU’s low-carbon transition. However, number of crucial questions remain about how this is to be made to work in practice. Moreover, although regionalization has enormous potential, it also carries the risk of fragmentation and a mismatch between regional and European goals.

Regional cooperation mechanisms can be classified according to their origin (top-down or bottom-up), cooperation intensity and their primary objectives (Umpfenbach et al., 2015). Experience to date with regional cooperation fora in electricity markets helps to identify some conditions for their success in achieving their goals. This has been determined to a large extent by:

- Existence of strong political guidance concerning the objectives of co-operation;
- Participation of all relevant stakeholders;
- Pragmatic and smooth working structures strongly influence their chance of success in achieving their goals.

The drivers of cooperation in the energy sector

Cooperation either at the European or regional level requires political will. This depends on the acknowledgment member states will not be able to solve the challenges in the energy sector on their own and therefore have to rely on trans-national mechanisms. Even if many analysts take this understanding for granted, policymakers reporting to national constituencies and energy regulators operating in national frames may not fully appreciate the need to cooperate with the other member states and may interpret this cooperation as a threat to their sovereignty. Although 'solidarity' is on everyone's lips, the benefits of cooperation are not always recognized.

The key drivers of energy cooperation in Europe result from pooling different energy sources across the EU. More efficient utilization of the synergies of a larger energy system would decrease the costs of renewables' development and emissions' reduction by flattening the peaks in electricity prices and needs for energy imports. The EU as a whole – from East to West – suffers from import dependency and the key incentive for cooperation, on which the initial idea for an 'Energy Union' was built, is to gradually reduce this dependence, increasing supply security, reducing demand and transforming the system away from the domination of hydrocarbons.

The other driver, linked to existing and future (increasing) deployment of renewables comes from the trans-nationalization of the electricity system and market. Balancing generation and grid adequacy as well as the need for revising the links between energy governance, physical and geographical infrastructure and national sovereignty, becomes the second driver for cooperation. Member States increasingly recognize the importance of these factors as implying a need for cooperation.

For both those challenges creating an Internal Energy market as proposed by the 3rd Energy Package and reinforced by the Energy Union Package is crucial. There are, however, different logics to the common gas market and to the integration of power markets, even if both are necessary.

The benefits of regional cooperation

Apart from the common drivers, there are also differences that should not be overlooked but acknowledged in the Energy Union governance framework. It is important to understand those differences resulting from the varieties in the organization of energy systems, composition of energy mixes, consequences of these mixes, as well as the modes of capitalist economy that vary between member states and influence the way different instruments impact on their performance (Ćetković & Buzogány, 2015). If we look at Europe, we see that only some countries are driving the energy transformation. Cooperation between these frontrunners could offer a number of benefits that should be taken advantage of. The perspective of joining a deeper and mutually beneficial cooperation of some member states may encourage other countries to

increase their efforts in achieving the EU goals. The above described differences between member states may lead some of them to exchange experiences and cooperate in areas specific to these countries, i.e. south European countries should be encouraged to discuss cooperation in all energy forms and potentials, not only fossil fuels, whereas Eastern European countries could cooperate closer to increase the resilience of their energy systems to interruptions of gas imports.

As pointed out earlier, conclusions reached in the framework of a regional cooperation may also have important repercussions for the whole of the EU. A case in point is the Pentilateral Forum, which has an impact on the EU rules concerning grid codes. However it must be kept in mind that some mechanisms developed within the framework of the regional cooperation, i.e. the rules necessary to enhance the efficient use of the system and integration of renewables, agreed among countries with a specific network topology and generation mix may not be suitable for adoption at EU level.

The risks of regional cooperation

Regionalization of the European energy policy also comes with potential costs. The major one is the risk of a multiple speed transformation, which could lead to deep and politically dangerous fragmentation of the energy market. There is also the risk of reinforcing centralized energy structures and incompatible energy systems across the EU (the ‘balkanization’ of energy policy, see: (Szulecki & Westphal, 2014). In some cases integration of countries with high share of coal may lead to higher CO₂ emissions in the short run (Mezősi, Pató, & Szabó, 2015).

Regional co-operation should constitute a building block for integration instead of increasing the risk of fragmentation. Further analysis is needed to identify what enhances the probability of the integration versus fragmentation. One possibility may be to ensure that regions “overlap” so that some common Member States in several fora ensure a degree of harmonisation. At the more extreme end of the spectrum, one can imagine a more formal role for the Commission or another independent authority in overseeing the role of regional cooperation to ensure it does not induce fragmentation on specific critical issues (see below).

Centralization vs. harmonization

As already pointed out, cooperation is not merely about the efficiency and economies of scale. It is a necessity created by external (energy dependency) and internal (processes of energy transformation) challenges. The difficulties in implementing the 3rd Energy Package result mainly from the tension in energy policy making between a European perspective and national sovereignty over energy mixes. While in many ways centralization of energy governance may seem efficient and helpful in advancing cooperation, given the diversity discussed above it may be more practical to in many areas replace it by merely harmonization of national and regional actions. A combination of centralization of governance at the European level complemented by harmonization in the “subsidiary” areas may be a promising way forward.

The key challenge here is creating the right incentives for either of these two. Centralization of the competences for technical issues may help member states to concentrate on finding answers to more general questions. Furthermore, institutions at the European level may help policymakers to think in European terms. Institutions such as ACER and ENTSO have become arenas of institutionalized dialogue. There is an important role to be played by especially ACER in coordinating the EU's energy policy.

Another key question is the scope of the mandate given to the institutions in their respective areas. The mandate for EU institutions to push forward some of the necessary changes to implement an internal market necessary for decarbonization will need to come from Member States. Part of this may come from Member State's 2030 Climate and Energy Strategies. But it is also likely that more ambitious elements need to come from Member States' longer term visions to 2050. To date, the fact that only a handful of Member States have developed such strategies domestically is thus a constraint on regional cooperation.

Regional cooperation at the local level

While it is important to recognize the different dynamics of cooperation at different levels, European governance mechanisms at the international, regional and local levels are closely interdependent. This should be seen as an opportunity to allow tackling concrete projects from different angles – if one approach fails, it is possible to approach it in a different scale and with different stakeholder constellations addressed.

Regional cooperation should not only be limited to clusters of states. Given the nature of dispersed energy systems, local cooperation on climate and energy issues at the level of rural communities and urban areas, cities and municipalities should be promoted. Energy Union should pay much more attention to sub-national regional cooperation across borders. Creation of trans-national associations, such as the Covenant of Mayors, should be facilitated to harmonize the narrative in different member states and create a common, European perspective on the main challenges facing the EU. To avoid fragmentation these associations cannot be like exclusive clubs with murky entry rules and cannot be based only geographical criteria.

Building alliances and incentivizing cooperation of non-state actors across the board will also help to achieve EU goals more effectively. The challenge here is that in some member states these actors are becoming weaker and play a decreasing role in shaping country's energy policy. In those cases joint projects funded by the EU could significantly strengthen their position. Such instruments can include additional incentives for cooperation on joint renewable energy projects, such as financial support tied to regional cooperation as well as organisational support.

European Commissions should further facilitate cooperation between non-state public and private actors based in different member states. At the same time it should not regulate it as it may block effective and innovative channels of cooperation. Furthermore, this would contradict the fundamental principle of subsidiarity. Instead European Commission can create and

strengthen instruments to facilitate this cooperation. Joint Implementation is an existing tool for cross-border co-operation in the energy and climate policy sectors. Experiences should be exploited and the potential for EU-co-operation explored in more detail.

4. Infrastructure: grids, interconnectors, pipelines

The EU wide goals of interconnectivity expansion were set at 10% in 2002. While the 2030 Energy Framework confirmed this target it has also suggested target of 15% interconnectivity by 2030. What are the implications of these targets? How can we reach a political momentum to reach these? How do member states coordinate their policies to advance projects across different regulatory regimes and involve multiple stakeholders?

The problem of interconnectors and – more broadly - infrastructure development is fundamental for the emerging Energy Union as it strongly influences its main goals, such as the creation of an integrated internal energy market, decarbonization of the European economy and increasing energy security of the EU member states. Answering the questions about “where”, “how” and “with what resources” the energy infrastructure will be developed is decisive for the future of the Energy Union.

Determining where and what to build

Understanding the need for expansion of the energy infrastructure, European decision makers have agreed to a list of 248 Projects of Common Interest (PCIs). However, the question remains as to whether this is the right list, how should such projects be selected and keeping in mind the limited resources, which of these PCIs should be prioritized? Building without a clear guidance can lead to unnecessary spending on little used infrastructure elements or dangerous lock-ins which might jeopardize future energy policy transformation goals. But at the same time it needs to be recognized that some uncertainty will remain throughout the technology and energy system transformation, while investment decisions are required.

It has been noted that for the time being most of the European financing goes not to the wider set of electricity infrastructure projects, but for political reasons mostly to gas projects. It is necessary to rationalize the investment in gas infrastructure by moving beyond politics and looking realistically at the possible changes in gas demand across Europe resulting from an increase in energy efficiency and changing energy mix determined by climate policy (See: Selei & Toth, 2015).

It is necessary to understand the possible impacts of the 10% interconnectivity target in electricity on the three tips of the “energy policy triangle”: security of supply, affordability linked to market integration and decarbonization. The 10% target itself can be operationalized in different ways, putting different emphasis on each of these elements. This definition and operationalization influences the ways in which we identify the necessary infrastructure investments. Not only installed capacity, but also the reliability of electricity deliveries (peak load) should be considered (Mezősi et al., 2015).

Connecting regions, crossing borders

The need to develop interconnectors between different member states signals the need for thinking in non-national terms and for a new paradigm in power market integration. The future of the European energy system lies with deeper interconnection between regions. But this requires incentives and regulation for investment.

As an element and enabler of a common energy market, increasing the interconnectivity is also supports further integration and effective use of wind- and solar power and thus can contribute to the decrease of CO₂ emissions. However, the mere existence of interconnectors does not determine how they are used. Therefore the actual impacts on markets and countries should be monitored (Mezősi et al., 2015).

Stronger empowerment of ACER could facilitate the process of Cross-border Cost Allocation Decisions and possibly better represent European interests and guarantee harmonization regardless imbalances in bargaining powers. It could also increase the efficiency of the decision-making process concerning PCIs and guarantee harmonization regardless of bargaining powers imbalances (Fresa, 2015). But ACER's empowerment has to be combined with continuous reflection regarding the necessity of particular investments from the perspective of the overarching long-term targets and in light of possible future scenarios.

Further empowerment of ACER will need to address the lack of funding and staff, opposition from some member states and the limitations resulting from "Meroni doctrine".¹ Thus wherever possible a more decentralized decision-making process is likely to continue.

5. Renewables: combining sustainability with security

Development of renewable energy sources is a decisive factor that can make European energy more sustainable and secure. But taking into consideration the high investment costs, a very important element for the renewable energy investments is the cost of capital. This cost is dependent on a number of factors, including regulatory risk and the presence or lack of investment stability, which in turn are linked to regulation and lack of clear long term goals (see below). The price of renewables also depends critically on the design of remuneration mechanisms and financing arrangements in the countries in which investments take place. Stable regulation and long-term targets would significantly reduce that risk for investments in the supply chain and project pipeline. The design of the remuneration mechanisms that can provide bankable long-term stability for project revenue streams will decrease the costs of renewables development.

The EU's own regulation in different areas needs to be streamlined to facilitate renewables' expansion. An additional challenge for deployment of the new sources of energy are the EU's

¹ European institutions should not provide regulatory agencies with too high margin of discretion to execute their competences.

state aid rules which result in uncertainty on whether policy objectives on RES deployment will be respected. Whereas the former were subject to frequent and sometimes even retroactive changes in some member states, state aid rules are increasingly creating risks for financing of the RES development.

Further, and as signaled already, the electricity market is not keeping pace with the RES deployment, and regulation is not keeping pace with the market. A major paradigm shift in the way the energy, and especially electricity market is organized is necessary.

Transnational energy transformation still not there

While development of renewables increases need for coordination and cooperation, regional initiatives that could facilitate this coordination and cooperation still need to evolve a shared vision based on mutual benefits of cooperation to then make use of existing mechanisms for joint projects (Umpfenbach et al., 2015). While the mere statistical transfers of the renewables targets is possible (Frieden, Tuerk, Dukan, Ortner, & Lilliestam, 2015), it would also need to be integrated into broader policy cooperation strategies to make synergies of cooperation more tangible. There is therefore a need for greater impetus towards regional cooperation to facilitate the implementation of concrete project in renewables. It seems unlikely that the proposed “peer review” process of national climate and energy plans proposed by the European Commission is sufficient to create the intensity of coordination envisaged. Further experiments with joint implementation of renewable energy projects are needed to help provide necessary learning about how this can be further exploited in future.

Combining energy, climate and innovation policy

Several synergies between climate policy and energy policy can be realized by aligning the different goals and means in these two areas. Building on the different paths and strengths of stakeholders can also help achieving these goals. How to pick up synergetic elements?

The policy objective to substitute fossil fuels with renewable generation inherently impacts the supply – demand balance in the electricity market. This is irrespective of the specific policy instrument and its design used to achieve renewables deployment. Hence the current focus of EU policy on harmonizing renewables support mechanisms is misguided and will only have marginal impact on electricity market developments. What matters for the demand-supply balance in the electricity market is the renewables investment volume – and clarity for all participants on this volume can only follow from RE targets.

Growing markets for renewable source of energy, energy efficiency, flexibility and other low carbon technologies are the basis on which companies can decide to innovate and commercialize new technologies. Energy markets need to further evolve to allow for new technologies and business models to access consumers. Thus, energy and climate policy is the basis for effective innovation policy. The diversity of renewables, efficiency potentials and flexibility options

provides opportunities for states to use their different advantages potentially returning to the idea of Strategic Energy Technology plans.

6. Governance: Designing a governance mechanism that brings us there

How can cooperation between EU member states allow them to harmonize their priorities in energy policy? How can the governance mechanism of the Energy Union be designed to strengthen cooperation between its member states and facilitate achievement of the EU goals? Despite decades of integration, national energy goals are still defined according to national, mostly short-term priorities. Whereas at the European level there is an agreement that the energy sector should be based on competitive, secure and increasingly sustainable energy sources, the weight given to each of these elements still differs significantly between different member states. As a result also the national strategies adopted to achieve these goals differ.

A key question for the new governance mechanism is how to ensure systematic progress on each of the EU's energy and climate goals in the period to 2030, while still leaving enough room for the realization of national strategies. Taking into consideration the long-term impact of the investment decisions in the energy sector, it is also necessary to make sure, policies introduced to achieve the 2030 targets are not making it more difficult to achieve the EU's 2050 climate goals, e.g. by achieving limited emissions reduction by replacing coal with gas or more efficient coal fired power plants, but thus making significant emissions in the longer term much more difficult. Finally, it is important to ensure that national plans and reporting on them allows for a clear and integrated overall vision of the national Energy Union strategy. This vision should involve clear high level commitments to implementation on specific targets. At the same time it should also preserve important and valuable details of the EU's existing energy planning and reporting acquis.

National plans: aims, content and structure

The Commission's Energy Union strategy suggested using National Plans as a key element on which the governance mechanism is to be constructed. Their goal should be to increase transparency of short and mid-term energy strategies (i.e. to 2025 and 2030) and to allow for monitoring of progress in implementing their core commitments to the 2030 Framework/Energy Union. They can also be considered a soft way to contribute to convergence of national priorities, while allowing Member States to reflect their national circumstances and priorities within their implementation strategy. A clearer understanding of the national strategies would facilitate coordination between member states. The plans should also seek to streamline and eliminate overlap between existing planning and reporting requirements in different EU legislation (e.g. between the Monitoring Mechanism Regulation, Energy Efficiency and Renewables Directives) and allow for a more complete and integrated vision of the Member States' overall climate and energy strategies, increasing governance efficiency.

The Commission should play a role in determining the requirements of the structure and content of National Plans and to ensure credibility, comparability, transparency, conformity with parallel EU laws and regulations, and internal consistency of Member States' strategies. Moreover, it should seek to ensure that plans are not just box-ticking exercises based on a long list of indicators or projections. Rather, it is essential that plans set concrete commitments in place by Member States and that, while implementation across all of the detailed components of the energy system may vary slightly from the plan, the overall strategic direction that is set is adhered to.

These requirements for national plans should be spelled out explicitly with guidance using predefined methodology, templates and key structurally important indicators on which Member States would be required to elaborate their strategies to implement the Energy Union's 5 pillars. Clear, transparent and well-structured plans based on a limited set of quantitative indicators are essential to facilitate this process and also to facilitate the peer review in which member states horizontally discuss their plans.

These National Plans need to be credible and genuinely allow Member State buy-in and commitment. It is also necessary to encourage Member States to be open about the areas of possible conflicting goals or trade-offs between different energy goals. This does not mean that they should be able to sacrifice one goal (e.g. decarbonization) for another (e.g. energy security). However, it should allow for the European strategy to be adapted to meeting both objectives within the constraints of national circumstances.

Although member states have already acknowledged in some contexts the need to coordinate main decisions regarding national energy policies, the challenges resulting from different prioritization of the energy policy goals will not be easy to resolve. Peer reviews cannot avoid the issues resulting from different energy mixes. While sovereignty will still ultimately be with the national authorities, exposure to peer review should allow for coordination of EU wide strategies as well as serving as a reality check of proposed measures and transformation pathways.

National plans cannot be merely wish lists, and they should also be firmly anchored in the EU law wherever possible. For example, Member States' GHG targets in the non-ETS sectors are backed by EU law in the form of the Effort Sharing Decision. Similarly, the EU Regulation 994/2010 sets gas security standards such as minimum supply capacity in an n-1 supply cut scenario (when the major energy supply system goes down). One option is therefore to structure national plans around these targets, as these legal obligations could give the Commission more authority in interrogating the implementation of the component parts of the strategy (e.g. renewables, interconnections, energy efficiency,) that arithmetically add up to the legal obligations. More generally, National Plans should not obviate the need for parallel legislation that set minimum standards for Member States, such as the Energy Efficiency Directive.

Furthermore, there are important trade-offs involved in terms of the level of detail included in the National Plans. For these plans to provide clear commitments to a given strategy and for this to be meaningfully monitored and reacted to at the EU's and Member State's level, a short and succinct document based on a limited set of core indicators is required. However, good and transparent planning and reporting for specific sectors of the energy system and effective monitoring of implementation of the respective European legislation also requires more detailed planning reporting. Furthermore, integrating the necessary long-term vision of national low-carbon transitions into national, regional and EU governance of energy and climate policy also requires a component of the national plans that focuses on non-binding national decarbonization strategies to 2050. This suggests that a focus on all-encompassing national plans may be counterproductive. Rather, plans might be best developed in separate chapters or modules that have different obligations and commitments attached to each module.

It remains open as to whether also expected costs and benefits should be reported to rationalize the debate and whether the description of best practices could make the plans better accessible for a wider audience. Some member states may also be advised to add their own indicators depending on the narrative dominating in a given country, i.e. the share of population affected by energy poverty or dependency on energy imports from a particular supplier.

Stakeholder involvement

Although drafting National Plans is the competence of national authorities, more power should also be granted to sub-national players, such as local authorities and local-decision makers. The formulation of the National Plans should also be preceded by a broad stakeholder consultation process. This would facilitate discussion on the energy policy within and between different member states. Furthermore, the review of plans and monitoring their implementation also needs a sectoral and civil society dimensions. In many member states there is only limited independent analysis available on the national energy and climate policy and its implementation progress. Therefore resources for the development of additional capacity would be required particular with subnational actors, such as NGOs and research institutes, i.e. through funding for analysis.

The European Commission can broaden its consultations with different stakeholders, an activity in which it already has experience. However, the Commission has been criticized for the quality of these consultations. Rowe and Frewer (2005) distinguish between pure one-way information from decision-makers to the public, one-way information from the public to decision-makers, and finally, two-way dialogue and negotiations between decision-makers and the public. Such two-way dialogue results in a deeper engagement than one-way dialogues. The breadth of engagement refers to the representativeness of the public taking part in public engagement activities. Both depth and breadth can certainly be improved. To strengthen national representation local communities and civil society actors might require dedicated assistance to broaden the scope of parties included. The Dutch "National Energy Agreement" can be an

example of a national process in that vein which rested on wide consultations as well as setting up an independent body overseeing the process.

Monitoring and benchmarking

Plans have to be evaluated against jointly agreed goals and indicators. A strategy for motivating compliance and action should also be developed, building on benchmarking as well as quantifying costs of inaction. These instruments are already known from the European Semester in the area of economic policy. Again, localization, meaning translating European strategies to regional and national realities, is important here. There is a need to frame both targets and benchmarking in a way understandable in domestic national contexts, in a way that resonates and is accepted as important.

A detail which is important but often overlooked is the independence of analysis. Member states' own forecasts and modelling should be contrasted with independent assessments to alert if some plans are unrealistic in relation to the goals. The Commission and The EU's agencies should work with research institutes and renewable energy associations to get data and to monitor policy, as they can give early feedback on national policy progress through a different channel than member states. Supporting that kind of monitoring will require some additional resources.

The role of the Commission

Independently from final design of the Energy Unions' governance structure, European Commission will remain instrumental and directing the process and providing the guidance, even if the member states will not always agree on Commission's proposals. The Commission will have to focus on the soft skills it has, especially in terms of agenda setting. This agenda setting role will need to build on both elements in the 2030 plans as well as elements of national 2050 strategies. During the negotiations with and between the member states it should also present itself as an independent arbitrator while at the same time underlining the importance of reaching the European targets.

The Commission might also have a role to play in regional projects. A case in point is a new high level co-operation on gas pipelines between South-Eastern member states. Since these countries would like the Commission to play a role in this discussion, it should push this project into the right direction. It is necessary to take a closer look at the experiences the Commission has gathered in managing the EU economic crisis. Especially useful can be the lessons learnt in the framework of the European Semester.

7. Conclusion

The European-wide support for the concept of an Energy Union offers the opportunity to develop and implement a shared European vision, which is required to address the common challenges on secure, competitive and sustainable energy supply. This does require linking the

heterogeneous national circumstances of EU member states today to a common longer term goal, so as to guide investments in innovation, infrastructure and institutions.

Regional cooperation is increasingly seen to provide an opportunity to make such a European vision more tangible. The benefits offered by the cooperation at the European level and the need to compromise for successful European cooperation can often be better understood in cooperation with direct neighbors, and new approaches can be tested. Where harmonization can realize efficiency and security benefits, this may result from spreading best practices, but might in other instances require centralized decisions. Particularly for the energy system that has close physical ties across Europe, it is important to ensure that regional approaches don't result in fragmentation of the operation of the system with risks for security and efficiency. Ultimately the geographical scale at which initiatives are explored and coordinated will need to be tailored to best meet institutional requirements, technology needs, and allow for broader engagement and ownership of society.

Electricity and gas grids are the most visible connection of European energy regions, and with a shift towards renewable electricity generation their importance and benefits are increasing. It is therefore essential where and what to lines to build, and how this is decided. However, the efficient operation of these grids is of equal importance and might face similar challenges in terms of international spill overs that have historically resulted in prioritization of domestic grid expansion.

Renewables are a crucial component of making European energy more sustainable and secure. There are, however, obstacles to their development at many levels. The EU's regulation in different areas needs to be streamlined to facilitate RES expansion. A related problem linked to the status of renewable energy targets is regulatory uncertainty and investment uncertainty, driving the costs of capital and impeding further expansion of the RES sector. The electricity market is not keeping pace with the already occurring renewables deployment, and regulatory measures are also late in coming. Energy markets need to further evolve to allow for new technologies and business models to access consumers thus making energy and climate policy the basis for a wider, effective innovation policy.

Under the theme of governance the approach towards structuring the European energy cooperation is being reviewed. Historically EU objectives focused on initial improvements on energy efficiency, deployment of renewable energy or facilitating more energy trade. To address dependency on energy imports and achievement of climate objectives this process needs to be continued and implies increasing change in the structure of energy demand and fuel use. Thus longer-term coordination and stronger national ownership of the development becomes more important and explains the emphasis on the development and coordination of energy plans. It needs to be better understood how they built on, strengthen and in some instances simplify the existing *acquis communautaire* in the area of energy and climate policy. Therefore as a first step should be to look at what is already in place and what still is necessary to achieve EU's energy

and climate goals. National Plans provide an opportunity to engage wider groups of stakeholders within countries and across sectors. But it will also require independent analytic capacity to develop, assess, and interpret scenarios across EU member states.

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