Regional cooperation in the context of the new 2030 energy governance

Report commissioned by the European Climate Foundation

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30 January 2015

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Abbreviations

ACER	Agency for the Cooperation of Energy Regulators
BEMIP	Baltic Energy Market Interconnection Plan
CEEE Forum	Central Eastern European Electricity Forum
CEER	Council of European Energy Regulators
ENTSO-E	European Network of Transmission System Operator for Electricity
ERGEG	European Regulators' Group for Electricity and Gas
ETS	Emissions Trading Scheme
GHG	Greenhouse gas
MedReg	Mediterranean Energy Regulators
MoU	Memorandum of Understanding
NRAs	National Regulatory Authorities
NEED	Northern European Energy Dialogue
NordREG	Nordic Energy Regulators
NSCOGI	North Seas Countries' Offshore Grid Initiative
PCIs	Projects of Common Interest
PLEF	Pentalateral Energy Forum
RED	Renewable Energy Directive
RES	Renewable energy sources
RIs	Electricity Regional Initiatives
RSCIs	Regional Security Coordination Initiatives
TSOs	Transmission System Operators
TYNDP	Ten-Year Network Development Plan
V4	Visegrad Group

Executive Summary

In the debates about the new climate and energy framework for 2030 and the proposed Energy Union, the European Commission and the Council call for increased regional cooperation between member states. But what would this regional cooperation look like in practice? What could be its specific contribution to achieving the 2030 targets?

With the aim of contributing to this debate, this exploratory study takes a closer look at the existing institutional landscape for regional cooperation in Europe, focusing on the electricity sector. Based on document analyses, expert interviews and four case studies of the North Seas Counties' Offshore Grid Initiative, the Pentalateral Energy Forum, ENTSO-E's regional groups and the Electricity Regional Initiatives, the study analysis the specific strengths and potential risks of regional cooperation in the context of the 2030 energy and climate targets.

The analysis of the existing landscape shows that a multitude of initiatives for regional cooperation in the energy sector already exists in the EU. There is no uniform format and the delineations vary depending on the mandate, with cooperation being most intense in Northwestern and Northern Europe. Overwhelmingly, the existing institutions work towards the overarching objective of completing the internal electricity market – either by aiming for physical links through interconnections, by ensuring safe operations of the interconnected grid or by focusing on market coupling.

By contrast, regional cooperation focusing explicitly on joint renewable energy projects, shared renewable expansion strategies or other low-carbon projects is currently not a focus. The instrument for cooperation on renewable energy that in theory would be the most potent one – the cooperation mechanisms under the Renewable Energy Directive – has barely been used to date.

Looking forward towards 2030, the existing regional initiatives provide a valuable starting point for addressing the EU's energy policy objectives, but need to be reformed to fully serve the objectives of establishing an effective 2030 governance system and – in the long-run – decarbonising the European power system. If the political will is there, mandates can be adapted. The crucial question is what incentives member states will face for intensifying cooperation on low-carbon energy systems.

The study argues that voluntary regional cooperation alone is unlikely to realign diverging national energy objectives that hindered a consistent EU-28 approach in the first place. While issues related to the integration of *existing* renewable generation into the grid are beginning to shape regional discussions on market coupling and secure grid operation, no comparable 'natural' incentive exists for the cooperation on building *additional* renewable energy capacity. To deliver such incentives, a requirement for all member states to formulate national or regional renewable energy targets for 2030 would be the best option. In addition or as an alternative, the EU could tie financial incentives to successful regional cooperation and provide organisational support.

Moreover, clear political guidance from the Commission and member states could ensure that market coupling progresses in all EU regions and that they reap the full benefits of systematically addressing integration of RES at regional rather than purely at national level. The processes of regional consultation foreseen in the 2030 governance framework offer a valuable opportunity to define the topics for regional cooperation on RES integration and expansion.

1 Introduction

Cooperation between subgroups of member states has a long tradition in the EU. Regional cooperation can reflect historical ties that predate EU membership as for example in Scandinavia or the Benelux countries or it can result from shared geographical features that require joint management as in case of the Alps, the Danube River or the regional seas. In other instances, cooperation between a limited number of countries has served as a means to deepen EU integration in absence of EU-wide consensus. The Euro and the Schengen agreement are cases in point. The cooperation can take many forms and the format might also change over time. For example, the Schengen Agreement started as a treaty between a number of European States, which later on, with the Amsterdam Treaty, was integrated in the main body of European law. This shows that regional cooperation has often served as a precursor for action at EU level – either through gradual accession of member states to the cooperation scheme or because effective regional cooperation inspired national governments to concede additional competences to the EU level.

The European Commission's focus on regional cooperation in its proposal for a new governance mechanism to steer the EU climate and energy policy after 2020 (European Commission 2014) results from a different dynamic. While the 2008 climate and energy package was dominated by strong EU action led by the Commission – with binding EU targets on greenhouse gas (GHG) reduction, renewables being distributed to member states top-down and the EU emissions trading scheme (EU ETS) as a centralised instrument – a substantial number of member states are now demanding greater sovereignty over their national energy policy again (Fischer 2014).[1] The Commission has reacted by proposing targets for energy efficiency and renewable deployment that are binding on EU level only. Member state implementation is to be steered though an iterative governance process, the details of which still need to be worked out.

This shift to more nationalised energy policies arrives at a time when the internal energy market is increasingly becoming a physical and commercial reality. As more electrons travel though interconnectors and price effects ripple through regionally coupled markets, national decisions on the fuel mix have more and more impacts across borders (de Jong and Groot 2013; Piria et al. 2014). The move towards more national flexibility in the implementation of the climate and energy framework is thus at odds with the emerging internal energy market.

Presumably as a means to address this tension, the White Paper on the 2030 framework as well as the European Council Conclusions from October 2014 state that the new governance system should "foster regional cooperation between member states" (European Council 2014, para 6.3). Moreover, national energy plans are to be subject to "consultation with neighbouring countries" (European Commission 2014, p. 13). But the proposals remain vague. What would this form of regional cooperation look like in practice? What could be its specific contribution to achieving the 2030 targets? These questions are currently still under discussion.

[1] The Visegrad group has been most vocal in their request for sovereignty over their energy mix, but some "old" member states like the UK also oppose binding national energy targets.

With the aim of contributing to this debate, this exploratory study takes a closer look at the existing institutional landscape for regional cooperation in Europe. Thereby, it focuses on electricity - for three reasons. First, decarbonising power generation is the most crucial lever for achieving the EU renewable energy target and a key contributor to emission reductions overall. Secondly, due to the technical characteristics of the power system, the positive contribution that cross-border cooperation can make towards achievement of the 2030 targets is greatest in the electricity sector. Finally, the inseparable process of completing the internal energy market has already led to the establishment of several regional institutions, helping to push integration forward. Some of these institutions also explicitly pursue cooperation on renewable energy expansion alongside market integration.

The paper presents four case studies covering the following institutions:

- the Pentalateral Energy Forum (PLEF),
- the North Seas Countries' Offshore Grid Initiative (NSCOGI),
- the European Network of Transmission System Operators for Electricity (ENTSO-E's) regional groups and
- the Electricity Regional Initiatives (RIs).

It argues that voluntary regional cooperation alone is unlikely to realign diverging national energy objectives that hindered a consistent EU-28 approach in the first place. This being said, regional fora can help in identifying cross-border challenges and provide a platform for discussing solutions so as to avoid conflict. Furthermore, illustrating the economic and system stability benefits of regional cooperation in frontrunner regions can be an invitation for others to follow. However, for this mechanism to make a significant contribution towards the achievement of the 2030 energy and climate targets, additional incentives are required. A requirement for all member states to formulate national or regional RES targets would be the best option. In addition, the EU could provide financial incentives and guidance on how to systematically address RES integration and expansion in a regional context.

The paper is structured as follows: In the next section, we present a typology categorising different forms of regional cooperation and how they link to the overarching objectives of EU energy and climate policy, followed by an explanation of the methodology in section 3. Building on the case study results presented in section 4, in section 5 we assess potential future development pathways for the assessed institutions and explore remaining blind spots that might present opportunities for more intense cooperation efforts leading up to 2030. In the conclusion, we summarise recommendations for concrete next steps and point to remaining research needs.

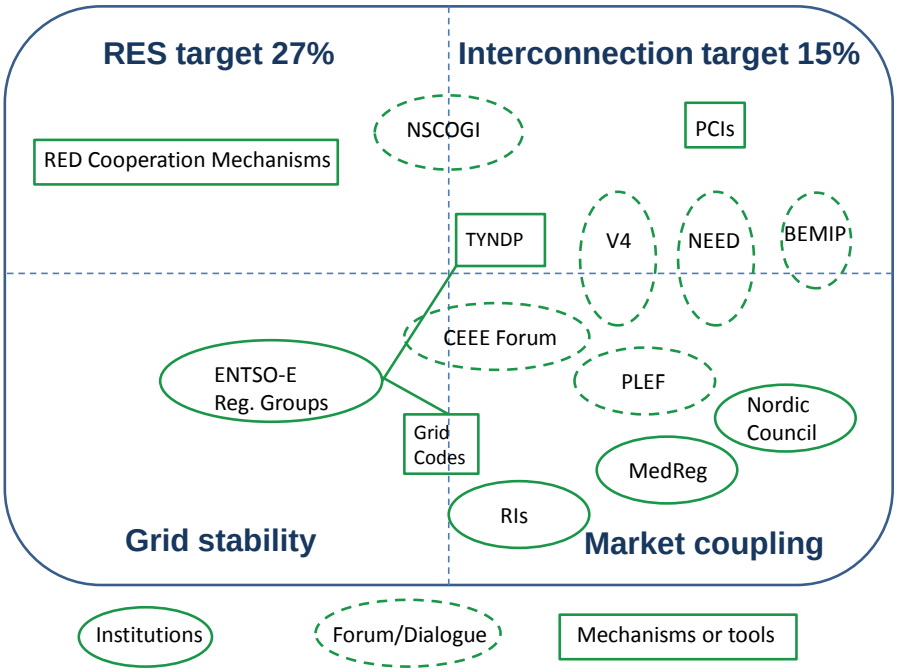
2 Why regional cooperation and what for exactly? – Mapping the existing institutional landscape

Regional cooperation occurs in many different constellations. Due to its focus on the implementation of the 2030 energy and climate framework, this paper specifically looks at forms of collaboration that directly involve governments or administrative bodies of a subgroup of neighbouring EU member states. These collaborations can take various forms, from irregular intergovernmental meetings to full-fledged institutions with a legal mandate. They often involve private actors, particularly grid operators. However, since we focus on

national policy-makers' options for fostering regional cooperation, cooperation that takes place purely between private actors without any regulatory or governmental mandate is not included here.

In order to better understand what role existing initiatives of regional cooperation could potentially play within the 2030 framework, we map them onto the main objectives of EU energy policy that relate to electricity (Figure 1). The first graph's upper quarters show the 2030 framework's headline targets of increasing the share of energy from renewable energy sources (RES) in final energy consumption to 27 % and of securing that cross-border interconnections amount to 15 % of national installed capacity by 2030 (European Council 2014, para 3-4). Both targets are closely related because rising levels of variable renewable energy generation can be integrated at lower costs where interconnected grids provide more flexibility (Hogan and Weston 2014, p. 16, 23-24). The interconnection target's main purpose is to enable a fully integrated internal electricity market in the EU. Physical interconnections allow for coupling of electricity markets through common trading mechanisms and rules. At the same time, cross-border lines increase the need for connected countries to jointly secure the stability of the electricity grid, a task that increases in complexity as the build-up of renewable energy plants progresses. These two objectives are represented in the graph's lower quarters.

Figure 1: Existing institutional landscape in relation to 2030 energy policy objectives



Source: Own representation.

As the analysis shows, current initiatives for regional cooperation focus primarily on interconnection and market coupling and the grid stability questions that come with it. The exception is NSCOGI which aims at facilitating cooperation on offshore wind investment alongside increased interconnection. All other existing regional cooperation schemes in Scandinavia (Nordic Council Energy Working Group), Northern Europe (NEED), Central and Eastern Europe (V4, CEEE Forum), Central and Western Europe (PLEF), around the Baltic Sea (BEMIP) and the Mediterranean (MedReg) focus on creating the basis for regional

market coupling – either by developing common market rules, improving grid interconnection or both. The Projects of Common Interest (PCIs) which list priority cross-border infrastructure projects throughout the EU as well as ENTSO-E's grid codes and its Ten-Year Network Development Plan (TYNDP) also serve these goals. The objective of maintaining grid stability is mainly the task of ENTSO-E's regional groups (see section 4.3. for more detail), but other fora also discuss security-related issues when they arise. By contrast, the only tool that has been specifically created to support joint renewable energy projects – the cooperation mechanisms under the Renewable Energy Directive[2] – has barely been used to date.

This diagnosis does not come as a surprise. The endeavour to create a single market for electricity required cross-border cooperation by the very nature of the project. When after the enactment of the First Electricity Directive in 1996 progress towards integration turned out to be slow, the European Commission argued that the development of regional markets between member states could be a necessary interim stage on the road towards an EU-wide single market (EC 2004, p. 6, Cornwall, 2008, p. 118) and actively promoted regional cooperation.[3] By contrast, renewable energies and the support schemes promoting them could be developed on the national level and initially did not require cooperation with neighbouring countries. Although the Commission repeatedly argued for greater harmonisation, the 2009 Renewable Energy Directive granted Member States autonomy on choosing national approaches to renewable energy promotion. A 2014 ruling by the European Court of Justice in the Ålands case has confirmed the right of each Member State to restrict support schemes to renewable energy plants on its own territory (Ålands Vindkraft AC vs. Energimyndighten, Case C-573/12).

In addition to their objectives, the existing cooperation initiatives also differ in respect to the level of institutionalisation. In the mapping, we differentiate intergovernmental dialogues and fora which represent a more loose form of cooperation from institutions that are characterised by formal mandates, a significant number of permanent staff and often a complex organisational structure. Tools and mechanisms are a separate category referring to functional projects or processes with very specific, but restricted objectives focusing on implementation rather than discussion.

These coarse categories still hide a lot of variety. Figure 2 therefore presents a typology distinguishing existing institutions by origin and intensity of cooperation. The typology builds on the distinction between bottom-up and top-down processes proposed by De Jong and Egenhofer (2014). Top-down processes refer to initiatives that originally derived from deliberations at the pan-European level such as the Regional Initiatives (RIs) of the Council

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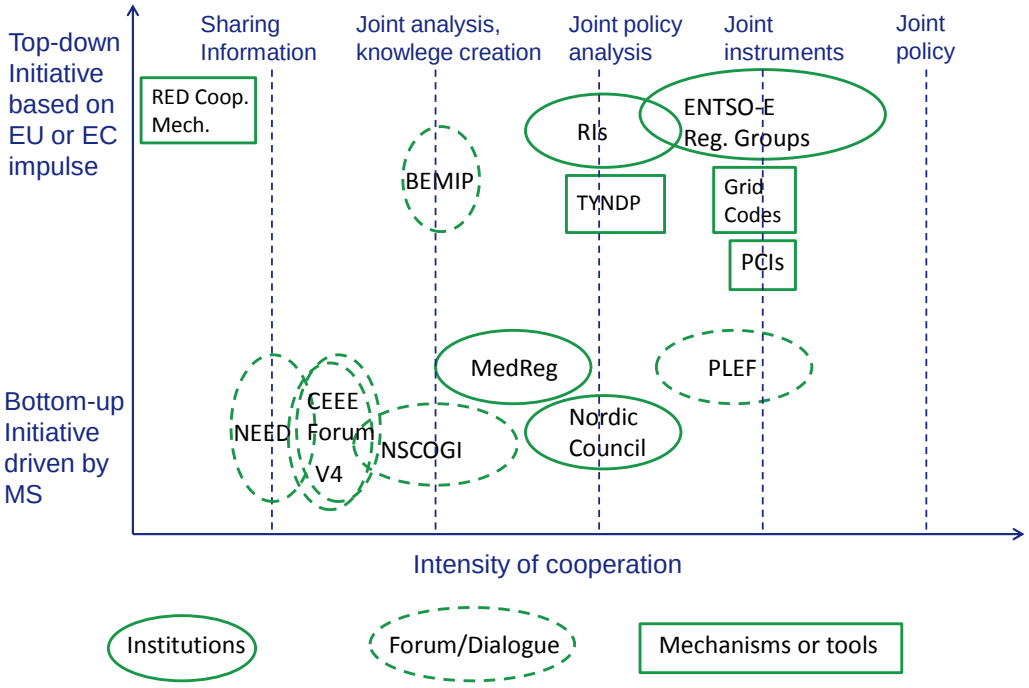
2 The Directive's cooperation mechanisms encompass statistical transfers (2009/28/EC, Art. 6), joint renewable energy projects between member states (Art. 7-8) as well as between member states and third countries (Art 9-10), and joint support schemes (Art. 11). To date, one joint support scheme using tradable green certificates has been established by Sweden and Norway, while discussions about a joint investment project between the UK and Ireland has been pushed back to after 2020. Some member states are considering making use of statistical transfers. However, final agreements are only expected closer to 2020 (Ecofys et al. 2014, Shankleman 2014).

3 The PLEF is one example: The idea of starting with a regional market to move on to a European market was a central motivation for the Benelux countries' original initiative (Interview F. Deloof).

of European Energy Regulators or devices like the Grid Code which serve to implement EU energy market directives and regulations, while bottom-up processes have emerged from multilateral cooperation between Member States. The categories on the horizontal axis, depicting increasing levels of intensity in regional cooperation are adapted from Meulman et al. (2012). The exact position of each single institution in this space can clearly be debated, but the overall picture that emerges is that bottom-up cooperation schemes – the type that the Commission and the Council hope to promote under the new governance mechanism – so far remain at the lower end of the intensity spectrum, whereas institutions with a pan-European mandate (and a legal basis) have led to the creation of joint instruments. The PLEF provides a positive exception given that it has progressed beyond information sharing and joint analysis to create common rules and mechanisms for market coupling in Northwest Europe. The other exception is the set of cooperation mechanisms under the Renewable Energy Directive. In theory, the cooperation mechanisms allow for the most intense type of cooperation: Member States developing joint support schemes. In practice, however, this top-down tool has barely been used to date. There are no joint support schemes and only one joint renewable energy project between Sweden and Norway.

Figure 2: Typology of existing initiatives by origin and intensity of cooperation



Source: Own representation.

The mapping of the existing institutional landscape of regional cooperation in Europe shows a mixed picture. Regional cooperation initiatives exist in almost all parts of the EU – but the intensity of cooperation varies, with top-down initiatives driven by EU regulation typically resulting in a higher intensity of cooperation. With respect to the objectives pursued, the completion of the single market for electricity is the dominant objective so far, with cooperation on renewable energy deployment playing a minor role.

Looking forward towards 2030, this is likely to change. As the regional impacts of the German *Energiewende* already demonstrate, substantial amounts of electricity from

renewable sources fundamentally change market dynamics and the measures required for grid stability and resource adequacy. Evidence suggests that cost-efficient integration of renewable energies is more likely if these questions are dealt with in a regional context. Also, for the sake of stability, deeper cooperation becomes a must once markets with a high number of diverse generators, traders and suppliers are physically fully integrated (Hogan and Weston 2014, Jong and Groot 2013). However, this does not necessarily imply that regional cooperation will also lead to an adequate expansion of renewables in line with the European 27 % target for 2030, which is crucial for the EU's overall objective of decarbonising the economy.

3 Research questions and approach

Against this background, this exploratory study looks at four regional initiatives in more depth with the aim of exploring:

a. the opportunities, risks and challenges of regional cooperation;
b. which actors are involved in order to identify potential need for integrating additional stakeholders;
c. the current and potential future contribution of regional institutions towards reaching the EU's climate and energy goals for 2030 as well as the long-term decarbonisation target for 2050;
d. the development pathway these institutions could take to reap the full potential of cross-border cooperation with respect to the EU 2030 energy and climate goals.

The four cases have been selected so as to look at institutions that are among the most advanced of existing collaborations. The PLEF and NSCOGI represent cases of bottom-up initiatives, with NSCOGI being the only organisation which aims at fostering cooperation specifically on renewable energy as one of its prime objectives. ENTSO-E's regional groups and the Electricity RIs co-ordinated by ACER, on the other hand, are examples of regional cooperations which resulted from top-down impulses. With respect to the overarching objectives identified in Figure 2, the cases represent organisations with a focus on each of the four objectives[4].

The data basis of this study is an extensive literature and document review as well as 7 semi-structured expert interviews with representatives of some of the organisations under assessment as well as involved stakeholders from governments, administration, business and science. The list of interviewees and the interview guide are provided in Annex 1 and 2.

The study also builds on a workshop series conducted by Ecologic Institute in 2014 as German country partner in the North Seas Grid project led by E3G[5]. The workshops

[4] While a number of additional institutions - ex. BEMIP, the Nordic Council and MedReg – were also considered as case studies, the scoping of this exploratory study required limiting the number of case studies being reviewed. However, these case studies may hold valuable additional lessons for regional cooperation that should be further explored. For example, it has been noted that Commission leadership and coordination played a significant role in facilitating regional cooperation in the case of BEMIP (Interview P. Wilczek).

[5] Detailed information is available on E3G's website at: http://www.e3g.org/showcase/North-Seas-Grid/.

convened German experts and stakeholders with the aim of discussing views on and potential ways forwards towards an integrated offshore grid and an effective 2030 energy governance system. Discussions showed that stakeholders preferred existing European and regional fora to be reformed to meet the needs of future governance compared to the creations of new ones[6].

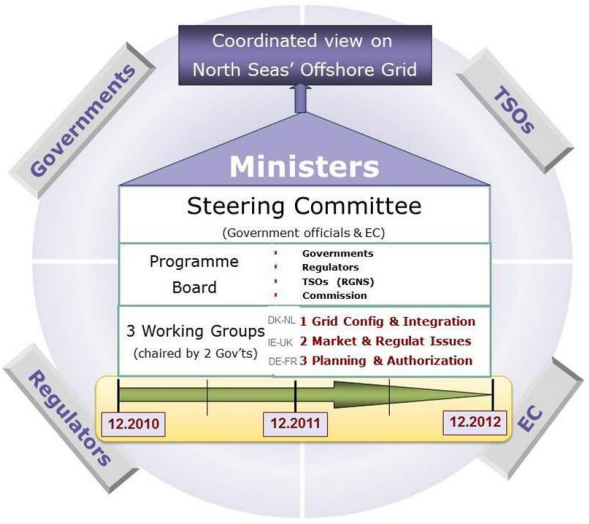
4 Case studies of four existing institutions for regional cooperation

4.1 North Seas Countries' Offshore Grid Initiative (NSCOGI)

NSCOGI is an inter-governmental initiative bringing together the ten North Seas countries[7], as well as Luxembourg and the European Commission. The initiative started with a political declaration in 2009 and aims "to facilitate a coordinated electricity infrastructure development, both offshore and the necessary onshore connections, in view of the large amounts of wind power planned" (NSCOGI 2009, p. 3).

The governance structure of NSCOGI consists of four separate tiers (NSCOGI 2010), including 1) the ministerial level chaired by the participating governments on a rotating basis, 2) a steering committee composed of government officials and EU Commission representatives, 3) a Programme Board consisting of representatives of the Steering Committee as well as ENTSO-E, ACER and the National Regulatory Authorities (NRAs). The Board manages and oversees 4) three working groups (see Figure 3). Each working group is chaired by two governments. Participants come from the above mentioned institutions with the addition of invited experts. To date, their work has mainly focused carrying out shared assessments. NSCOGI is supported by one permanent staff in the Benelux Secretariat.

Figure 3: Organisation chart NSCOGI



Source: Website Benelux Secretariat 2015.

NSCOGI has a broad political mandate. Its Memorandum of Understanding (MoU) refers to the 2020 climate and energy targets and the 2050 energy roadmap. The signatories declare that „they share the common goal of moving to a sustainable low-carbon economy while

6 Detailed information are available on the Ecologic Institute website: http://www.ecologic.eu/10542.

7 Belgium, Denmark, France, Germany, Ireland, the Netherlands Norway, Sweden and the UK.

maintaining security of energy supply most cost-efficiently" and „recognise the potential of renewables in the North Seas in contributing to this goal" (NSCOGI 2010, p. 2).

Inputs developed within NSCOGI include *inter alia* a study on design options for a future North Seas Grid (NSCOGI 2012b), validation of the scenarios used for long-term offshore grid planning, assessment of the costs and benefits of a more integrated approach to offshore grid development and options for future market and regulatory arrangements, in particular for cables serving as both interconnectors and grid links for offshore turbines at the same time (so called hybrid structures) (NSCOGI 2014a, 2014b). Moreover, the transmission system operators (TSOs) for the NSCOGI countries have also worked closely together, both in NSCOGI, as well as in the geographically nearly identical grouping of the ENTSO-E System Development Committee's Regional Group for the North Sea. This close cooperation between TSOs in both settings has allowed them to make a number of improvements underpinning the ENTSO-E Ten Year Network Development Plan (TYNDP), including the use of two bottom-up visions based on national data and two top-down visions based on a European approach, as well as a consistent cost benefit analysis methodological framework, allowing cross-border investment projects to be compared.

Initial findings were reported to the NSCOGI energy ministers at the end of 2012 and concluded that "the current grid will not fulfil the future requirements as countries continue to follow their scheduled paths towards larger capacities of both conventional and renewable energy sources from 2020 to 2030," and that "timely establishment of necessary grid reinforcements is therefore required (NSCOGI 2012a, p. 2)."

Future areas of work will continue to include: 1) grid configuration, e.g. through further improvement of the long term (offshore) grid planning exercises; 2) regulatory and market issues, e.g. impact of national renewable energy support schemes on trading across and investment in hybrid offshore infrastructure, options for long-term transmission rights, priority dispatch and the impact of zero or negative electricity prices on hybrid offshore infrastructure; and 3) planning and authorisations, looking at issues such as reducing the length and complexity of procedures and assisting authorities in taking all necessary steps for efficient and effective cooperation and coordination for projects of common interest (NSCOGI 2014c).

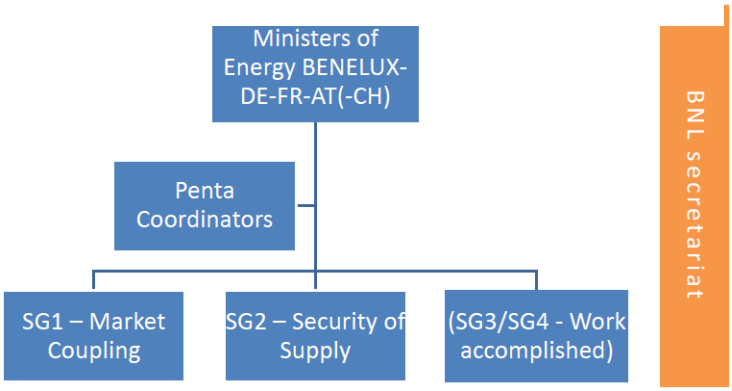
Among the existing fora for regional cooperation, NSCOGI is exceptional in its focus on innovative large-scale projects that combine interconnection and renewable energy expansion. Combining interconnectors and offshore wind turbines is also a rare case where regional cooperation is a prerequisite for a variant of a renewable energy technology to be deployed at all. Since its inception, the initiative has made first steps towards this ambitious vision through joint assessments. To have a concrete impact and potentially becoming a role model for similar cooperations elsewhere, NSCOGI would have to move on to developing concrete regulatory solutions and testing them on the ground through pilot projects. This next step would be significantly more challenging than the previous work as it would affect national regulation and thus would require political momentum from the ministerial level (Interviews J. de Jong and F. Deloof). At the time of writing, such a pilot project is not on the horizon yet. Therefore, it is too early to assess NSCOGI's full impact.

4.2 Pentalateral Energy Forum (PLEF)

The Pentalateral Energy Forum (PLEF) is an intergovernmental initiative consisting of six full members (Austria, Belgium, France, Germany, Luxembourg, and the Netherlands) and Switzerland as an observer country. It aims at enabling electricity market integration in the region and improving security of supply. The main characteristics of the forum are its voluntary nature and the pragmatic approach. It operates within the framework of existing legal and regulatory arrangements and with respect for national fuel mix choices. (Interview F. Deloof). PLEF has been created in 2005 as an intermediate step on the way to a pan-European internal energy market. In the MoU of 2007 and the Political Declaration of 2013, it defines the areas of work where it is committed to such a regional approach. Next to the seven governments, the process also includes high-level representatives of the NRAs, TSOs, power exchanges and the Market Parties Platform, a cooperation of energy industry associations in the Central West European electricity market promoting market integration.

The PLEF has a three-tiered governance structure consisting of 1) the Ministerial Conference, 2) the Coordinators Committee composed of government officials and invited experts when required, and 3) two support groups with representatives of the Ministers and experts from the regulators, TSOs, power exchanges, and other market participants. In addition, ad-hoc groups of experts can be formed (de Jong and Groot 2013). Like NSCOGI, the PLEF is supported by the Benelux Secretariat (PLEF 2013, 8). The energy ministers provide political guidance for the process, while practicalities are discussed by officials, experts and market participants (Meulmann et. al. 2012).

Figure 4: Organisation Chart PLEF



Source Benelux 2012

The initial focus of the PLEF was the "analysis, design and implementation of a flow-based market coupling" between the participating countries by the target year 2009 through the removal of barriers to the regional integration of energy markets and improved security of supply in Central and Western Europe (PLEF 2007, 3). Day-ahead market coupling for the five original penta countries (without Austria which joined only in 2011) was successfully completed in spring 2010 and the PLEF target model for market coupling and explicit auctioning for long-term capacity allocation has emerged as a standard for electricity market integration, now covering large parts of Europe (ACER 2014a). This has been by far the greatest accomplishment of the PLEF thus far. Further results linked to the PLEF include several industrial joint ventures offering cross-border services, such as the Cross-border Allocation Service Company (CASC) and Coreso run by TSOs, and the European Market Coupling Company (EMCC) run by TSOs and power exchanges (de Jong and Groot 2013, 40-41).

Since completing day-ahead market coupling, the PLEF has continued to work on further intensifying market integration and begun to place greater focus on regional security of

supply issues. Participating countries signed a new political declaration in June 2013, renewing PLEF's mandate and adopting a new working programme (PLEF 2013). New tasks include the implementation of implicit flow based market coupling in the region, while ensuring compatibility with wider European integration and building an intra-day market. On security of supply, the PLEF is to continue its work on assessing generation adequacy at the regional level and integrate this with network development planning through exchange of information and common work on assessments. Thus far, however, the discussions have not resulted in a success comparable with that of market coupling.

Researchers identify a number of factors explaining PLEF's successful work (de Jong and Groot 2013, Willems 2012):

- Strong political guidance from energy minister;
- Shared vision of increased regional connection and common market;
- European orientation of the PLEF and its complementarity to other EU initiatives;
- Slender working structures;
- Involvement of technical experts and stakeholders;
- Neutral platform and pragmatic support thought the Benelux secretariat building on the long-standing tradition of regional cooperation in the Benelux countries;
- The groundwork provided though detailed technical discussions by national regulators in the Regional Initiative for Central and Western Europe in which almost all PLEF countries participate (see also section 4.4.).

4.3 ENTSO-E's Regional Groups

ENTSO-E is the child of the Third Internal Energy Market Package of 2009 which required TSOs to found cooperation structures to ensure system stability in the European grid as well as provide the technical basis for market integration (Fischer and Geden, 2013, p. 7). The organisation hosts five different types of regional groupings relating to ENTSO-E's different functions: system operations, systems development and market solutions.

Systems operations denote the real-time operation of the grid which faces additional challenges since the unbundling of utilities in the wake of liberalisation. Operational uncertainties require TSOs to plan and secure certain services, so as to enable themselves to cope, among others, with balancing challenges, voltage variations, restoration planning, and transmission losses. Moreover, TSOs need to jointly deal with grid congestion based on transmission capacity allocation rules and procedures. The ENTSO-E Systems Operations Committee provides proposals for network codes and promotes operational coherence among regions (ENTSO-E website 2015). Regional groups based on synchronous areas[8] ensure compatibility between system operations on the one side and market solutions and system development on the other. Moreover, they address technical and operational aspects

[8] A synchronous area is "an area covered by interconnected TSOs with a common system frequency in a steady-state" (ENTSO-E 2015). As a consequence, a disturbance anywhere within the area will be registered across the entire zone (ENTSO-E 2014a, p. 14).

specific to interconnected system operation[9]. There are five permanent regional groups covering Continental Europe, the Nordic region, the Baltic, Great Britain and Ireland-Northern Ireland[10]. These groups have strict geographic boundaries. According to one interviewee, this can be problematic since the Continental Europe group in particular hosts a large group of 24 countries (21 are EU member states) which operate under very different conditions (Interview K. Staschus).

Reacting to this challenge, TSOs in Continental Europe have proactively pioneered and developed Regional Security Coordination Initiatives (RSCIs). These smaller groups covering parts of Continental Europe (with one initiative also integrating Great Britain) provide an overview of electricity flows in order to better identify and manage potential threats to secure system operations. In their delineations, the RSCIs reflect where the power flows manifest themselves most of the time (Interview K. Staschus). To ensure better coordination between RSCIs a Multilateral Agreement is to be developed in 2015 making participation in RSCIs mandatory for interconnected TSOs. ENTSO-E will provide the platform for the development and implementation. The challenge in determining the optimum number of RSCIs, shows the tension between the objective to cater for regional needs and ensure effective co-ordination between regions in more a centralised approach (ENTSO-E 2014b, p. 5).

In the area of system development, ENTSO-E's main task is to plan and develop a secure, efficient and economic electricity transmission system. The systems development committee is responsible for this. Detailed analysis at the regional level is needed for market and network planning. Studies therefore start with a Europe wide analysis and are subsequently refined in order to end with regional specificities and details (Interview K. Staschus). The main vehicle is the Ten Year Network Development Plan (TYNDP). To carry out this work, ENTSO-E has formed six regional groups to identify and address challenges for grid development and the integration of new generation at a regional level through a structure reflecting regional particularities and needs (ENTSO-E website 2015). The groups cover Continental South West, Continental Central South, Continental South East, Continental Central East, the Baltic and the North Sea.

In addition, Europe has been divided in four larger regional groups to carry out the ranking of candidates for the Projects of Common Interest (PCIs), a list of EU priority infrastructure projects for electricity and gas. These regional groups and the criteria by which they select projects are set out in Regulation EU 347/2013 on guidelines for trans-European energy infrastructure. The four groups are broadly in line with the priority electricity corridors set out in the Regulation. The groups include representatives from member states, the Commission, TSOs, project promoters, and NRAs as well as ACER.

Finally, the ENTSO-E's market team supports TSOs in the development and harmonisation of market rules by developing market-related network codes in cooperation with

9 Regional Group Activities include: Enhancing and developing operational processes; investigation of frequency deviations; enhancement and maintaining of network models, compliance monitoring and enforcement, and integrating internal and interconnecting external systems (ENSTSO-E website 2015: https://www.entsoe.eu/about-entso-e/system-operations/Pages/default.aspx).

10 In addition, there are also two voluntary regional groups covering Northern Europe and the so-called Isolated Systems of Cyprus and Iceland.

stakeholders. As part of this process, it enhances regional cooperation by facilitating information exchange on relevant issues and has formed four Market Committee Regional Groups: Baltic Sea, North-West, South-East and South-West (ENTSO-E website 2015).

From this description of ENTSO-E's regional activities it can be seen that a considerable level of constructive and detailed regional cooperation takes place within the ENTSO-E institutional structure. In addition, TSOs are also active in each of the other regional institutions covered in this report, and a particular strength of ENTSO-E is that much of the regional cooperation between TSOs takes place with minimal involvement of the ENTSO-E secretariat (Interview K. Staschus).

However, Antina Sander from the Renewable Grid Initiative argues that while the structure of regional groups within ENTSO-E reflects the ambition to think beyond national borders, there are still considerable shortcomings with respect to transparency, coherence and comparability of the work of the different groups. For example, according to Sander, the modelling exercises of the regional groups for the TYNDP suffer from inadequate coordination between groups, resulting in divergent models, input assumptions and, therefore, calculation results that are not strictly comparable. Moreover, as shown for the selection process of PCIs, the national interests pooled in the regional groupings are not naturally leading to optimal outcomes from an EU perspective (Sander 2014). According to Konstantin Staschus, another challenge is the balance between regional and centralised co-ordination. Given that European geography does not allow for strict delineation of distinct regions (particularly in Continental Europe), entirely separate regional planning could not be a viable long-term strategy (Interview K. Staschus). Instead, a link between the national, regional and European levels is required, and this link through the Europe-wide TYNDP and some of its studies (especially market studies) covering all Europe-wide regions has been getting strengthened over the biennial TYNDP editions. For the 2016 TYNDP, further improvements in this direction and also in the transparency towards stakeholders are planned.

ENTSO-E has contributed substantially to developing solutions for the challenges to grid development and operations arising from a more interconnected and diverse EU energy system and will continue to do so in the future. Cooperation on a technical level, which focuses on the grid as a central, but not isolated element of the energy system, can however not replace political leadership and guidance on the journey's overall direction (Interview K. Staschus).

4.4 Electricity Regional Initiatives (RIs)

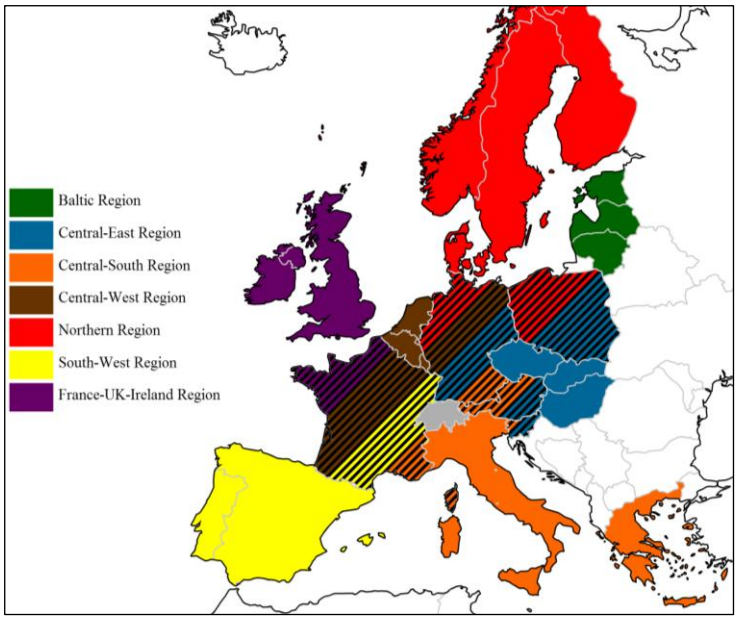
In the spring of 2006, the European Regulators' Group for Electricity and Gas (ERGEG)[11] established regional platforms for gas and electricity with the aim to create regional markets

[11] The European Commission established ERGEG in 2003 as an independent advisory group on electricity and gas in order to facilitate consultation and coordination between the NRAs of the member states, and between NRAs and the European Commission. It comprised the heads of the national authorities. In 2011, ERGEG was dissolved and replaced by ACER (European Commission 2011, p. 15). In contrast to ERGEG, ACER is an official EU Agency and has the

as precursors of a single EU-wide market for electricity (ERGEG, 2006, p. 2). The seven resulting Regional Initiatives for electricity (RIs) bring together NRAs, the European Commission, member states, TSOs, power exchanges, utilities and other relevant stakeholders in order to find and implement regulatory solutions that improve the functioning of their corresponding regional market (ACER 2014c, p. 16). The RIs set their own agenda according to their regional challenges and needs. Thereby each region is a testbed for solutions that - if successful - be exported to other regions.

As Figure 5 shows, the RIs overlap in continental Europe. This overlap is intentional. It ensures that each border is covered in one group (Interview A. Barann). Also, countries that are members of more than one group can ensure that regional solutions are compatible across regions, which gives France and Germany in particular a crucial role for driving harmonisation (European Commission 2010, p. 9, Interview A. Barann.).

Figure 5: Geography of the seven electricity RIs



Source: Own representation.

In 2010 the new European Agency for the Cooperation of Energy Regulators (ACER), which succeeded the ERGEG, was invited to monitor and coordinate the work of the RIs and to secure greater coherence between the individual work programmes (de Jong and Groot 2013). Moreover, the RIs were seen as the "main vehicle for coordinating the practical implementation of the new European cross-border regulatory framework", as well as an important platform for a) identifying best practices, b) providing feedback from the regions on how to improve market integration, c) facilitate the implementation of EU network codes, and d) help to monitor compliance with EU legislation (CEER 2010, p. 6).

Since 2010, ACER identified four cross-regional roadmaps on day-ahead price coupling, cross-border intraday trade, allocation of long-term transmission rights and methods for short-term capacity allocation in a meshed grid (ACER Website 2015). These projects are implemented within a three-tiered governance structure encompassing

- **Regional Coordination Committees** made up of the regions' national regulators;
- **Implementation Groups** which include market participants such as TSOs, power exchanges and interconnector operators, and;

final decision on cross-border projects if the authorities of the respective member states do not reach an agreement (CEER Website 2015; Fischer and Geden 2013, p. 7).

- **Stakeholder Groups** with other key market participants in each region, such as traders, suppliers, customers and electricity generators (ACER Website 2015).

According to ACER, the creation of several regional wholesale markets shows that the RIs' work in conjunction with other regional groups such as the PLEF yields encouraging results. The commitment of all stakeholders, the engagement of Member States governments, and the existence of a common vision for the internal electricity market are seen as critical for these success (ACER 2014b).

However, while the RIs have provided an 'umbrella framework' for the coordination of regional projects towards a single market and each of the regions has produced results, the strongest progress has been seen in those regions where political support for integration is strongest. The Central-West and Northern regions in particular have served as pioneers, testing new solutions for the first time (CEER 2010, Interview A. Barann). However, pioneer models (e.g. for cross-border capacity calculation) cannot always be directly transferred to other regions with different technical and geographical conditions, explaining different levels in progress towards integration (Interview A. Barann).

The next challenge for the RIs is to move from harmonisation of market rules within regions to harmonization across regions, leading to an EU-wide market. The network codes which cover market rules as well as operational questions are a central vehicle in this process (Int. A. Barann).

Thus far, ACER has taken a careful approach to its coordination role, playing the role of the facilitator, as opposed to the driver (Interview P. Wilczek). With the rising need for political guidance to achieve further progress on market integration, ACER is increasingly coming to the boundaries of its regulatory mandate (Interview J. de Jong). Thus, ensuring lasting impact of RIs towards 2030 may require more involvement of governments similar to the process in the PLEF, or enhancing the mandate of ACER (Interview J. de Jong).

With respect to renewable energy, the RIs' activities have so far mainly concentrated on aspects of grid integration insofar as secure operations are concerned. This reflects the focus of the NRA's mandates on the grid.

5 Harnessing the opportunities of regional cooperation for achieving the 2030 energy and climate targets

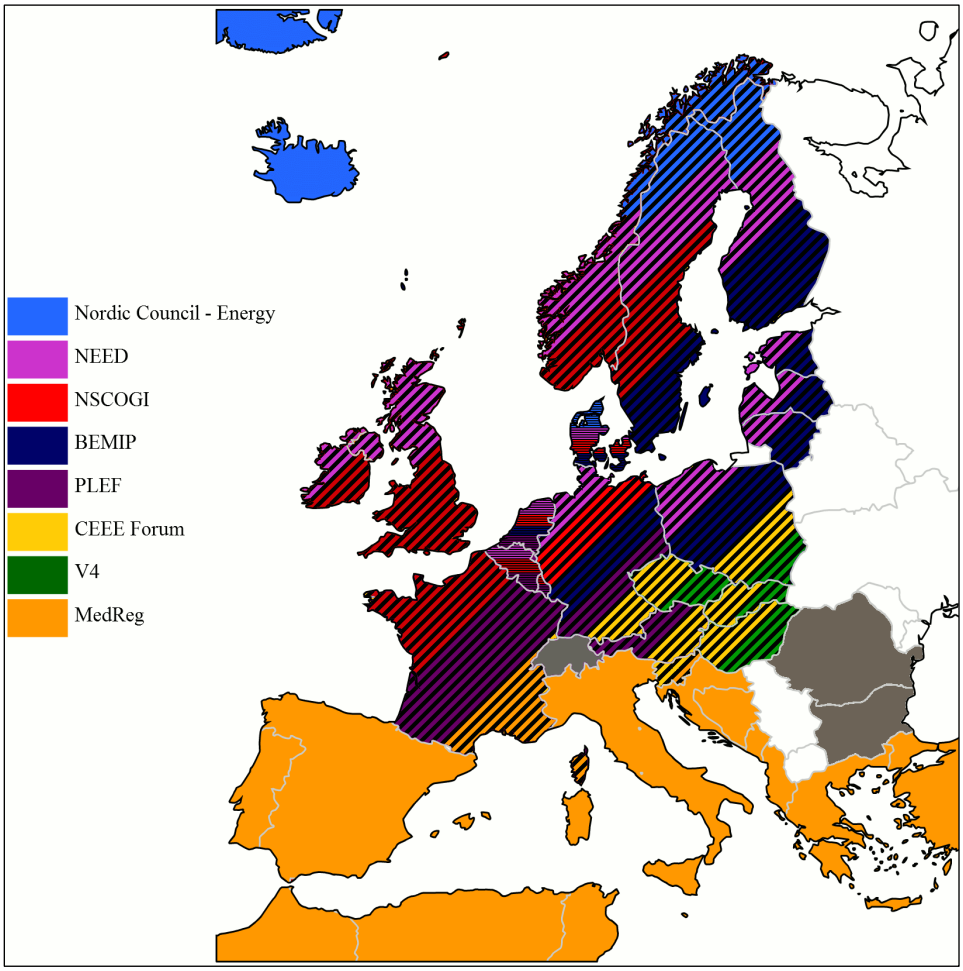
5.1 Lessons from the existing cooperation landscape

The analysis of the existing landscape shows that a multitude of initiatives for regional cooperation in the energy sector already exists in the EU. There is no uniform format and the delineations vary depending on the mandate. Cooperation in fora with government involvement is more intense in some parts of Europe. In particular, Northwest Europe and Scandinavia – both regions with a long tradition of cooperation – have created regional bodies of cooperation that enabled early progress on electricity market integration. In

Continental Europe, where the delineation of regions is less straightforward, countries such as Germany, France and Poland are part of a number of initiatives and groups at the same time (see Figure 6).

By contrast, Bulgaria and Rumania are not formally members of any initiative although they participate in the Visegrad group ad-hoc. Even though it has not been covered in the case studies of this exploratory study, cooperation in the Mediterranean area also appears to be less intense than in the pioneer regions.

Figure 6: Geographical boundaries of regional political fora identified in the study[12]



Source: Own representation.

Overwhelmingly, the existing institutions work towards the overarching objective of completing the internal electricity market – either by aiming for physical links through interconnections, safe operations of the interconnected grid or by focusing on market coupling. The incentive for cooperating is therefore primarily an economic one: connected

12 The map depicts formal membership. While not formal members of the listed fora, Bulgaria and Romania have recently been engaged in an ad-hoc coordination group on climate and energy policy issues with the Visegrad countries known as Visegrad Plus, and Switzerland is involved in a number of European fora, including in the PLEF as an observer country.

markets hold the promise of lowering electricity costs and increasing security of supply. Decarbonisation objectives are an indirect driver in this process as the integration of renewable electricity raises new questions for the market design as well as for safe operations of a European grid. However, regional cooperation focusing explicitly on joint RES projects, shared RES expansion strategies or other low-Carbon projects is currently not a focus of the assessed initiatives.

The instrument for cooperation on renewable energy that in theory would be the most potent one – the cooperation mechanisms under the Renewable Energy Directive – has barely been used to date. According to a recent mid-term evaluation of the Directive, the limited use may reflect (CE Delft et al., in press):

- Member states' preference to achieve the 2020 renewable energy targets through domestic action which allows to retain any economic benefits in the country;
- Technical barriers, particularly limited interconnection capacity, and legal barriers;
- Uncertainty about costs and benefits;
- Uncertainty about the policy framework past 2020 which is particularly relevant for joint projects with long lead times.

The only cooperation initiative that encompasses collaboration on renewable energy projects among its core objectives, NSCOGI, has produced valuable joint assessments, but to date has not moved on to more intense forms of cooperation in the form of joint projects or even joint support schemes for offshore wind projects.

Based on the case studies and interviews, success factors for tangible outcomes of regional cooperation appear to be:

- Clear political vision guiding the process, i.e. a shared understanding between the involved member states' governments on what the exact objectives of the cooperation are. Regular ministerial meetings as in the case of the PLEF can be a means to deliver this type of guidance.
- Participation of all relevant stakeholders, particularly market participants, to ensure pragmatic and practical solutions.
- Slender working structures.

Compared to policy-making at EU or national level, the specific strength of regional cooperation appears to lie in the ability of the involved actors to co-ordinate more efficiently. Smaller groups allow for swifter decision-making and for finding solutions that are well-tailored to the specific needs of the region. Also, regional fora provide a platform for discussing dissent between neighbouring countries – e.g. how to deal with loop flows – thereby increasing the chance to mitigate potential conflict early on.

Regional cooperation can help to bridge the gap between difficult, lengthy and often rather general consensus at EU level and national decisions taken in isolation (de Jong and Egenhofer 2014, p. 5, 9). In the groups, countries who share certain goals can move forward without being dependent on the consent of less ambitious countries (Interview representative of German government). Unlike in EU policy-making, governments can directly implement decisions once they reached consensus in intergovernmental fora like PLEF and NSCOGI. Means of implementation include guidance for NRAs, pressure on TSOs or national legislation (Interview P. Wilczek). Thereby, the groups can serve as laboratories for EU-wide solutions as it has been the case with the pioneer implementation of day-ahead market

coupling by the PLEF (Interview representative of German government). The regional approach is thus especially suited for new type of challenges which require the testing of innovative solutions, before successful ones can be rolled out to the rest of Europe.

On the flipside, regional solutions can increase the risk of fragmentation if the regions simultaneously develop incompatible or incongruent solutions (European Commission 2010, p. 3, de Jong and Egenhofer 2014, p. 5). Regional grid planning that is not adequately informed by EU level interests would be an example. Another risk of voluntary regional cooperation is the tendency to exclude contentious issues from the mandate. As a result, difficult issues such as harmonisation of capacity mechanisms might not be adequately dealt with in a setting of regional cooperation (Interview representative of German government). Finally, lack of transparency is a risk that needs to be adequately addressed in all cooperation fora reviewed here.

5.2 Looking forward towards 2030

When looking forward towards 2030, interviewees identified a number of open tasks with respect to the completion of the internal electricity market, for example coupling of intra-day trading and balancing markets, data exchange on power flows, and regional assessment of resource adequacy (Interviews with P. Wilczek, K. Staschus). Thereby, the integration of the existing stock of renewable energy plants already is and will even further influence all of the issues mentioned above. In a more connected grid regional consideration of integration measures not only promises cost savings compared to a national approach (Hogan and Weston 2014, de Jong and Egenhofer 2014), but also are a sheer necessity given that electrons do not stop at the border. Therefore, with the increasing interconnection capacity technical and commercial issues linked to the integration of diverse renewable energy plant will almost automatically push on the to-do list of regional cooperation. Overall, these challenges are increasingly recognised and actors have started addressing them, in particular through the harmonisation of market rules and safety standards through the grid codes (e.g. ENTSO-E 2014b).

By contrast, no comparable 'natural' incentive exists for the cooperation on building additional renewable energy capacity[13] in order to reach the EU's 2030 renewable energy target or for cooperation on any other measures to jointly reach the GHG reduction targets. The reason is that the main driver for existing collaboration on RES – to the extent that it exists at all – is the interest to reach national renewable energy targets at the lowest costs (CE Delft et al., in press). Without national targets after 2020, this driver will cease to exist. Those governments that continue to actively promote RES expansion will be under pressure to prove the value added of regional approaches compared to purely national schemes that

[13] Held et al. 2014 estimate that between 2020 and 2030 1,300 to 1,600 TWh of additional energy from renewable sources will have to be deployed in the power, transport and heating sectors to reach the EU 2030 target of 27 %. The exact amount depends on development of final energy demand. The estimate included the replacement of renewable energy plants that will be decommissioned between 2020 and 2030. For comparison, in the decade between 2010 and 2020 the required gross increase amounts to just over 1,400 TWh. How much of this increase will fall onto the power sector, will depend on the role of biofuels after 2020.

channel economic benefits to national actors. Anecdotal evidence suggests that the wish to keep positive economic effects on jobs and the manufacturing industry in the country was one of several reasons why the UK-Ireland cooperation on a joint wind energy project did not bear fruits (Shankleman 2014). Whereas de Jong and Egenhofer (2014, p. 10) see "enhancing economies of scale and efficiency in encouraging new investments in RES generation" as one potential benefit for countries who pool their efforts for RES expansion, the current experience seems to suggest that domestic job creation and growth impulses will be the more convincing arguments when governments need to justify continued support for renewable energy in a climate of EU-wide roll-back.

Thus, in the absence of national RES targets, regional cooperation on RES capacity built-up (e.g. in form of joint projects or harmonised support schemes) is likely to be limited if no other external incentives come into play (Interview P. Wilczek).

5.3 What this analysis means for potential next steps

The interviews and the literature studied here suggest that the existing regional initiatives provide a valuable starting point for addressing the EU's energy policy objectives, but need to be reformed to fully serve the objectives of establishing an effective 2030 governance system and – in the long-run – decarbonising the European power system.

First, with respect to geographical coverage there is room to intensify government-led cooperation in some regions, e.g. on the Iberian Peninsula, between Germany, Poland and the Czech Republic and in Southeastern Europe. The analysis also shows that the existing initiatives do not provide a blueprint map for dividing the EU top-down into a set of clear cut regions, e.g. for the purpose of asking these regions to define regional renewable energy strategies and targets.

Looking at the issues covered in each scheme, the pragmatic approach of regional groups appears to be sufficiently flexible to be able to adapt to changing objectives in their mandate, institutional set-up, as well as geographical delineation, as ENTSO-E in particular has shown in the past. If the political will is there, mandates could be extended to include cooperation on RES and even low-carbon strategies more broadly. However, regional cooperation is unlikely to realign diverging national energy objectives that hindered a consistent EU-28 approach in the first place. Its success will depend on the political and economic incentives facing Member State governments.

With respect to addressing the consequences of existing renewable built-up in the management of a shared grid and coupled electricity markets, the incentives are fairly obvious and promising first steps indicate that the existing fora are increasingly addressing the challenges. Nonetheless, clear political guidance from the Commission and member states could ensure that market coupling progresses in all EU regions. Also, EU-level institutions and national governments should reshape the groups' mandates so as to ensure that EU regions reap the full benefits of addressing issues facilitating the system integration of RES at regional rather than purely at national level. Topics for regional discussion and coordination include e.g. resource adequacy, balancing, back-up capacity, grid planning methodology, demand response, technical standards, and potentially also capacity remuneration. By coordinating, regions can take full advantage of regional primary resource

advantages, regional weather diversity and thus reduce required back-up capacity (Interview K. Staschus, Andoura and Vinois 2015, p. 110).

The Commission has in important role in supporting and coordinating this process. It can ensure participation of all member states, and address concerns over transparency and consistency of approaches across regions. Moreover, the Commission could strengthen ACER's and ENTSO-E's mandate in systematically addressing all challenges arising from RES integration (Andoura and Vinois 2015, p. 108f.). Finally, the design of the governance framework itself offers an opportunity to reshape and strengthen regional cooperation on RES integration. According to the Council Conclusions, the national energy plans will be subject to regional cooperation. This opens a window of opportunity for the Commission to define topics for these regional consultations in the guidance that they prepare, building on the list mentioned above.

With respect to cooperation on supporting *additional* RES capacity, some form of national benchmark or projection would provide the best basis for meaningful regional cooperation to emerge, since it would create an incentive to reach the benchmark at lowest costs. It would also create political continuity and thereby provide a more solid ground for ambitious projects with longer-term perspective such as the North Seas offshore grid. Since the European Council ruled out binding national targets, a pledge-and-review system similar to the process under the current energy efficiency target would be the preferable second-best option. The process should have a legislative basis to be laid down in an amended Renewable Energy Directive to ensure the framework is credible for market participants who seek investor security (Wyns et al. 2014).[14]

An interesting addition would be to allow groups of countries to voluntarily determine regional targets instead of or in addition to national targets (Interview F. Deloof, Held et al. 2014, p. 8), potentially by combining interconnection and RES targets or even determining joint energy efficiency targets. The advantage would be that neighbouring member states or any plurilateral group of ambitious member states could coordinate their ambition from the onset, search for low-cost potentials in the region as a whole and integrate the projected RES built-up with grid planning. Going even further, they could also cooperate when designing support schemes, particularly when shifting from feed-in-tariffs to tendering. Given the complexity that such a negotiation process would entail, all will again depend on the incentive structure. Even in frontrunner groups, regional targets are relatively unlikely to emerge if RES targets or benchmark are entirely voluntary and complete opt-out is an accepted option. To circumvent this problem, the European Commission could distribute RES targets to regions top-down (Held et al. 2014, p. 6). This option is however likely to face similar opposition as a break-down to member states. Also, the existing regional cooperation schemes have not established a prefixed delineation of appropriate regions (with the exception of geographically imposed groupings like Scandinavia or the UK and Ireland). Moreover, regionally defined targets of any form might lead to new challenges with respect to enforceability in case of under-achievement.

[14] In its recent non-paper on the "Energy Union", the German government argued for an adjusted legal framework, while the UK and the Czech Republic demand a non-legislative approach based on informal and bilateral discussions between member states and the Commission.

If no form of benchmarks is within political reach, a suitable positive incentive for regional cooperation on RES would be financial support (Interview J. de Jong). Obviously, this option would also be an appropriate *addition* to benchmarks, projections or targets. Financial support could come in form of grants or access to loans for joint projects (Wyns et al. 2014, p. 42) or by enabling easier access to structural funds (Interview J. Muth). In addition, the Commission could provide organisational support, guidance, best-practice exchange and capacity building and it could show case success stories.

In the absence of targets or benchmarks of any kind, regional cooperation on RES will be limited to 'coalitions of the willing'. The most likely candidates are those countries in Scandinavia and Northwest Europe whose governments and populations support ambitious RES policies irrespective of EU targets. However, in such a scenario, these cooperation efforts would only provide a role model for other regions in the EU if they could demonstrate that cooperation can lower the overall costs of developing and running a low-carbon power system compared to the status quo (not compared to reaching RES targets nationally, since that would no longer be the benchmark if full opt-out is not sanctioned).

One avenue towards this aim may be to move away from a debate about RES-specific support schemes to discussions about a reformed electricity market design in a setting of cross-border market coupling that allows the most advanced RES technologies to compete on a level playing field. If cost-competitiveness of RES improves as projected, the required levels of support will continue to decrease significantly after 2020 (Held et al. 2014, p. 4f.). Yet, even with competitive levelised costs per kWh support schemes will only become dispensable if the wholesale market is designed in way that allows RES technologies to refinance their capital costs through electricity sales. In addition, the market would need to incentivise necessary investments in flexibility to accommodate variable RES generation. The discussion on a suitable market design is complex and beyond the scope of this study. It suffices to point out that necessary elements of such a market would include a credible, long-term carbon price rising over time so as to ensure the retirement of excessive fossil fuel capacity over the years, as well as the abolishment of direct and indirect subsidies for incumbent fossil fuel technologies.

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Annex 1: List of interviewees

Name	Affiliation	Position	Date
Jacques de Jong	Clingendael International Energy Programme (CIEP)	Senior Fellow	2.12.2014
Paul Wilczek	European Wind Energy Association (EWEA)	Senior Political Affairs Advisor	3.12.2014
Frederik Deloof	Benelux General Secretariat (supporting NSCOGI and PLEF)	Member of the Market Team	3.12.2014
Konstantin Staschus	Secretariat of the European Network of Transmission System Operators for Electricity (ENTSO-E)	Secretary-General	3.12.2014
Josche Muth	GIZ Brussels	Senior Consultant Energy and Climate	8.12.2014
Anonymus	Federal Government, Germany		9.12.2014
Angelika Barann, Dr. Uwe Kratzsch	Bundesnetzagentur (BNetzA) / Federal Network Agency	Former and current Member, Electricity Regional Initiatives - Coordination Group	26.01.2015

Annex 2: Interview Guide

1. What is your role in the institution or instrument (for PCIs)? (or) What is your background or experience with the institution or instrument (for PCIs)?
2. What are the strengths of the institution or instrument (for PCIs) compared to a more national or pan-european approach? Please provide examples.
3. What are the weaknesses of the institution or instrument (for PCIs) compared to a more national or pan-european approach? Please provide examples.
4. Is the current actor constellation related to the institution or instrument (for PCIs) adequate? Who should be involved in the institutions and/or relevant processes (specify what this is intended to achieve)? Feel free to add concrete examples.
5. What contribution does the institution or instrument (for PCIs) currently make to achieving the EU climate and energy targets for 2030 and 2050 respectively (40% GHG, 27% RES, 27% EE and 15% interconnection)?
    a. Is the institution or instrument (for PCIs) appropriate when we look towards 2030 (energy and climate targets) and 2050 respectively? Should they be strengthened? If so, why? If not, why not?
    b. How can the institution or instrument (for PCIs) be reformed in order to strengthen the role of regional cooperation in achieving the EU climate and energy targets for 2030 (regional cooperation is not a goal in itself)?
    c. Do we need new institutions or instruments? Please explain why and also the specific characteristics you propose.
6. If we take a step back and now look at the broader institutional landscape in which the institution or instrument (for PCIs) is situated and its interactions with other institutions and instruments relevant to the 2030 climate and energy targets, what role does this regional approach play in this broader context?