

Who shapes the energy transition? National regulatory styles and societal involvement in renewable energy policy

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Abstract This paper contributes a comparative perspective on societal involvement in the energy transition that considers (i) both the policymaking and the policy implementation stage as well as (ii) contribution opportunities for different types of actors (corporate actors vs. the public). Contrasting the concept of *persistent national regulatory styles* with the concept of a *shift towards new modes of governance and/or participation*, I examine societal involvement in national renewable energy policy following the formulation of the European 20-20-20 targets in Spring of 2007. My main research question is whether the condition of high reform pressure lead to a change in sector-specific regulatory traditions. In a comparative case study, I highlight (1) a corporatist setting with new players (Germany), (2) a large-scale public consultation in the shadow of established interests (France), (3) a liberal approach building on agreements (Netherlands) as well as (4) repeated consultations with paternalistic decision-making (United Kingdom). My results indicate both a persistence of overall regulatory styles as well as limited additions to involved actors and/or utilised formats. Societal involvement in *policymaking* proved rather inconsequential in most cases under study. Regarding societal contributions to *policy implementation*, convergence tendencies towards a two-pronged approach, addressing both corporate actors and the public, were observable despite the persistence of differential regulatory styles.

Keywords Energy transition · Renewable energy policy · Participation · Regulatory style · Modes of governance

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Wer gestaltet die Energiewende? Nationale Regulierungsstile und die gesellschaftliche Einbindung in Erneuerbare-Energien-Politik

Zusammenfassung Dieser Artikel trägt eine vergleichende Perspektive auf die gesellschaftliche Einbindung in die Energiewende bei, die sich auf (i) die Phase des Policymaking und der Policy-Implementation als auch (ii) die Beteiligungsmöglichkeiten verschiedenartiger Akteure (korporative Akteure vs. Öffentlichkeit) bezieht. In der Gegenüberstellung des Konzepts *persistenter nationaler Regulierungsstile* und des Konzepts *neuer Governance- bzw. Partizipationsmodi* wird im Folgenden die gesellschaftliche Einbindung in die Erneuerbare-Energien-Politik im Nachgang der europäischen 20-20-20-Ziele im Frühjahr 2007 beleuchtet. Dabei lautet die zentrale Forschungsfrage, inwieweit hoher Reformdruck einen Wandel sektorspezifischer Regulierungstraditionen hervorgerufen hat. In einer vergleichenden Fallstudie werden folgende Konstellationen betrachtet: (1) ein korporatistisches Setting mit neuen Akteuren (Deutschland), (2) eine großangelegte öffentliche Konsultation im Schatten etablierter Interessen (Frankreich), (3) ein liberaler Ansatz auf Basis von Vereinbarungen (Niederlande) und (4) wiederholte Konsultationen mit paternalistischer Entscheidungsfindung (Vereinigtes Königreich). Im Ergebnis können sowohl eine generelle Persistenz nationaler Regulierungsstile als auch begrenzte Erweiterungen der einbezogenen Akteure und/oder der genutzten Formate festgestellt werden. Die gesellschaftliche Einbindung ins *Policymaking* stellte sich in den meisten der betrachteten Fälle als weitgehend bedeutungslos heraus. Hinsichtlich des gesellschaftlichen Beitrags zur *Policy-Implementation* waren ungeachtet der grundsätzlichen Persistenz unterschiedlicher Regulierungsstile Konvergenztendenzen in Richtung eines zweigleisigen Ansatzes zu beobachten, bei dem sowohl korporative Akteure als auch die Öffentlichkeit adressiert werden.

Schlüsselwörter Energiewende · Erneuerbare Energien · Partizipation · Regulierungsstil · Governance

1 Introduction

Since external pressures like climate change, diminishing fossil fuel reserves and geopolitical challenges to energy security—as well as the European policies in response to these issues—have increasingly required national energy sectors to adapt, the paths and processes of energy transitions have become a growing field of research, including the aspect of societal involvement (e.g. Valkenburg and Cotella 2016; Fraune and Knodt 2017; Holstenkamp and Radtke 2018). In this paper, societal involvement in national energy transitions is studied through the lens of national regulatory styles (van Waarden 1995). In a comparative case study of national renewable energy policy, I investigate whether certain national regulatory styles have produced specific patterns of societal involvement and to what extent national regulatory styles have been persistent even under reform pressure. Did historically founded regulatory traditions reproduce established state-society relations, leading to mostly unchanged opportunities of societal involvement? Or have regulatory traditions in-

stead shifted in favour of new modes of governance and participation, reflecting an overarching tendency towards more state-society cooperation and higher citizen involvement?

Different forms of societal involvement can shape the energy sector in various ways. Accordingly, several areas of research can be broadly distinguished. (1) In top-down oriented energy policy analysis, societal involvement is studied particularly in terms of agenda-setting and policymaking, focussing on different institutional settings (e.g. corporatist structures or advisory bodies) that enable certain actors to influence energy policy (e.g. Winkler-Rieder 1997; Uba 2010; Müller and Thurner 2017; Krick 2018). An interesting commonality across different arrangements seems to be the privileged access of economically powerful actors to decision-making arenas (e.g. Brand-Schock 2010; Uba 2010; Sung and Park 2018). (2) With the advance of renewable energy (RE) support policies, societal involvement in the policy implementation phase, i.e. the production and consumption of renewable energy, has been of growing interest to researchers. For instance, contrasting RE support schemes have been assessed in terms of their potential to enable or hinder large parts of society to partake in the energy transition, especially economically (e.g. Lauber and Toke 2005; Woodman and Mitchell 2011). (3) Within multilevel systems, the implementation of energy transition programmes also requires decision-making at lower levels, e.g. the local level. A prime example for this is energy infrastructure planning. Here, societal involvement has been examined with a focus on participation, both formal participation (e.g. public consultation procedures) and informal participation (e.g. local protest movements) and negotiation (e.g. Marg et al. 2013; Brendler et al. 2017; Holtkamp 2018; Fink and Ruffing 2019a; Lennon et al. 2019). (4) In recent years, bottom-up perspectives on the role of society in realising local or regional, i.e. *decentralised* energy transitions have become more prevalent, focussing on initiatives like community energy projects and energy cooperatives as well as the contribution from 'prosumers', studying how local actors are empowered or inhibited by regulatory frameworks (e.g. Moss et al. 2015; Magnani and Osti 2016; Ohlhorst 2018; Wierling et al. 2018). Furthermore, decentralisation tendencies and their long-term implications on the energy system are increasingly discussed in connection to the notion of energy democracy and questions of ownership, suggesting yet another, perhaps more radical, perspective on societal involvement (e.g. Proka et al. 2018; Szulecki 2018; van Veelen 2018; Lowitzsch 2019).

The abovementioned perspectives exemplify different varieties of societal involvement in regulation more generally, from agenda-setting and policymaking to policy implementation and value creation (see also Pollack 2003; Graf et al. 2018; Newig et al. 2018). Generally speaking, societal involvement in regulation can be conceptualised in opposing ways: On the one hand, the concept of *national policy styles* implies that longstanding, historically founded regulatory traditions will result in the continuous reproduction of existing arrangements and path dependencies (van Waarden 1995). From this perspective, it would be expected that reform pressures are integrated into existing governance paradigms and regulatory models. With regards to transformation processes like the energy transition, reforms that affect the opportunities for societal involvement in decision-making and implementation would only be expected within a pre-set frame, while major shifts in regulatory approaches

would be considered highly unlikely. On the other hand, literature on *new modes of governance* long since points to an overarching regulatory shift in which regulation is increasingly cooperative (see Sect. 2.2). Consequently, energy (transition) policy would have to be adjusted to evolving conceptions of statehood and state-society-relations, e.g. by introducing new participation mechanisms, forums for deliberation or other forms of (institutionalised) societal involvement. To assess the relevance of national regulatory legacies in the light of large-scale transformation processes, I focus on a ‘window of pressure’ in which the shift to renewables has been particularly pressing for EU Member States, making a shift in governance modes, and potentially in societal involvement, most likely.

In the mid-2000s, pressures from international climate policy (specifically the Kyoto protocol entering into force), a renewed political awareness for energy security issues (due to the gas dispute between Russia and Ukraine) as well as the seeming stagnation of European integration (manifested in the failed constitutional referenda in France and the Netherlands) all prompted European Heads of State and Government to increase efforts in the field of climate and energy policy (Fischer 2011; Wurzel and Connelly 2011). With the formulation of the 20-20-20 targets in 2007 and the following climate and energy package of 2009, including Renewable Energy Directive (RED) 2009/28/EC, Member States for the first time agreed on binding national targets for renewable energy shares until the year 2020. Additionally, the Commission Decision 2009/548/EC established a template for National Renewable Energy Action Plans (NREAP) to guide Member States’ renewable energy policy. At the same time, Member States retained considerable leeway in selecting RE support schemes as well as other, auxiliary measures to increase their share of renewable energy.

I analyse whether the condition of high reform pressure in the field of renewable energy policy lead to a change in sector-specific regulatory traditions, specifically with regards to societal involvement, highlighting four different cases: (1) a corporatist setting with new players (Germany), (2) a large-scale public consultation in the shadow of established interests (France), (3) a liberal approach building on agreements (Netherlands) as well as (4) habitual consultations with paternalistic decision making (United Kingdom). In the following, I first contrast the theoretical concept of persistent regulatory styles with the idea of new modes of governance. I also briefly discuss new modes of participation, including possible pitfalls of participatory innovations. Based on these approaches, hypotheses on the involvement of societal actors in energy transition regulation are formulated and then tested in a comparative case study. For each case, two distinct phases are examined, (a) the status quo ante, i.e. national regulatory arrangements and practices in renewable energy policy up to 2007, and (b) the adaptation stage, i.e. Member States’ reactions to (renewed) reform pressure, specifically European target formulation.

The empirical findings suggest that both theoretical perspectives regarding the persistence vs. transience of regulatory styles and governance modes have merit. While there have been some adjustments in the modes of governance and/or participatory innovations in three out of four cases under study, their consequence remained rather limited, as they were layered on top of persistent regulatory arrangements. Societal involvement in *policymaking* proved inconsequential in most cases. With

regards to *policy implementation*, convergence tendencies towards a two-pronged approach that addresses both corporate actors and the public, could be observed despite the persistence of differential regulatory styles. Participatory innovations that were supplemented, but did not fit the core regulatory style did not alter the policy trajectory. Overall, these results indicate that new mechanisms for cooperation and/or participation need to be carefully integrated with the dominant regulatory style.

2 Persistent regulatory styles vs. new modes of governance and participation

2.1 Persistent regulatory styles

In his work on the *Persistence of National Policy Styles* and their institutional foundations, van Waarden (1995) posits that throughout the course of their history, especially during state formation, nation states have developed certain sets of characteristics which, taken together, manifest in a particular policy or regulatory style (see also Richardson 1982). More precisely, states show varying regulatory traditions that affect (a) fundamental conceptions of statehood and state-society-relations, (b) logics of regulatory intervention as well as (c) preferences and practices with regards to the rule of law. Despite his acknowledgement of possible sectoral variations within a state, e.g. policy field specific arrangements, van Waarden (1995) ultimately points to a stable national regulatory foundation that is reflected in both political and societal institutions as well as culture. Such institutional and cultural ‘default settings’ form the basis of any subsequent regulatory activities. Under the constraints of limited rationality, e.g. incomplete information or fragmented understandings of causal relationships, policy makers tend to default to certain “task definitions and problem solutions which have proven to draw at least minimally acceptable responses [...] in the past”, resulting in the continuous reproduction of “standard operation procedures” (van Waarden 1995, pp. 334–335). It follows that policy actors pursue a “logic of appropriateness” (March and Olsen 1989) more so than strictly rational choices tailored to each individual policy problem. Overall, van Waarden (1995) addresses six dimensions of a national policy style.¹ For my analysis, I integrated these into three categories that constitute the institutional foundations for societal involvement in regulation: (i) the conception of statehood, which can be categorized as *étatist*, *corporatist* or *liberal-pluralist*, (ii) the positioning of the state vis-à-vis civil society, which manifests in *adversarial*, *paternalistic* or *consensual* state-society-relations, and (iii) the formalisation preference, i.e. *legalism* vs. *pragmatism*, with legalism characterised by universalist law application and pragmatism meaning that state and private actors prefer case-specific solutions and compromise to achieve the desired outcome.

¹ These are: (1) liberal-pluralist versus *étatist* versus corporatist styles, (2) active versus reactive styles, (3) comprehensive versus fragmented or incremental styles, (4) adversarial versus consensual versus paternalistic styles, (5) legalistic versus pragmatic styles, (6) formal versus informal network relations (van Waarden 1995).

2.2 New modes of governance

Turning to the literature on new modes of governance, we first need to address the differentiation between ‘old’ and ‘new’. A general approach to conceptualise different governance modes has been to contrast state *hierarchies* vs. *markets* as organizational structures (Lindblom 1977). Subsequently, sociologists, political scientists and scholars of public administration have identified *networks* as a third modality (Powell 1989; Marsh and Rhodes 1992; Kickert et al. 1997). From a political science perspective, this third mode of governance is insofar “distinct from the hierarchical control model”, as it is “a more cooperative mode where state and non-state actors participate in mixed public-private networks” (Mayntz 2009, p. 13). A shift from hierarchical governance to a more cooperative network governance is understood as a *functional* response to increasing complexities and related coordination challenges (Kooiman 1993). In addition to this, changes in governance modes can further be explained by evolving societal expectations towards the state, which are acknowledged via a higher degree of cooperation (Mayntz 2004, p. 68), indicating a *normative* shift with regards to state-society relations. Contrasting this perspective with the abovementioned concept of stable national regulatory styles, the understanding here is that regulatory or governance modes can be transient, implying the possibility of adjusting existing regulatory approaches to changing regulatory and/or societal demands. With that, an overarching shift in regulation is emphasized, from hierarchical to more cooperative modes, that centre around negotiation between diverse types of actors, in both the formulation and implementation of policies (Mayntz 2004, p. 71). Therefore, we might expect a gradual convergence of regulatory styles towards (i) a more cooperative/corporatist, (ii) a more consensual and perhaps also (iii) a more pragmatic regulatory style, i.e. more flexible regulatory frameworks with greater possibilities of self-regulation.

With energy transitions, we observe a technological as well as a socio-economic transition process that affects political and administrative institutions as well (Benz and Czada 2019). In this context, a shift towards new modes of governance appears most likely. Moreover, in the European multilevel system, both vertical and horizontal processes of Europeanization could further reinforce the transformation of national governance arrangements. From a top-down perspective, European legislation can (1) define an *institutional model* to which national regulatory arrangements have to be adjusted, (2) establish *opportunity structures* which empower certain societal actors by redistributing power and resources, or (3) provide a *normative framing* in favour of certain policy shifts (Knill and Lehmkuhl 2002). Simultaneously, horizontal processes of Europeanization can take place, resulting in policy convergence beyond the EU’s harmonisation attempts (Solorio and Fairbrass 2017; Solorio and Jörgens 2017). In the context of transformation processes like the energy transition, we might expect *policy diffusion* among the Member States, which may relate to ideas, policies or institutions and could have varying underlying reasons, e.g. be rationally or normatively motivated (Börzel and Risse 2012). In the case of renewable energy policy, Member States might, for instance, adopt support mechanisms that have proven effective in other countries (Jacobs 2012; Kitzing et al. 2012; Boasson 2021). With regards to societal involvement, policy convergence in the direction of

increased societal participation might be the result of *normative isomorphism*, overriding possibly conflicting regulatory traditions, because more participation seems the *appropriate* choice (Fink and Ruffing 2015, 2017). With that being said, these expected processes of convergence could also be cut short due to conflicting national path dependencies (Saurer 2019).

2.3 New modes of participation

In recent years, expectations of civil society towards the state and the democratic process have become a major focal point not only for political scientists, but in public debate as well, with citizen participation, public consultation procedures and protest movements as phenomena to be understood and classified (e.g. Marg et al. 2013; Fung 2015; Hornig and Bauer 2016; Holtkamp 2018; Fink and Ruffing 2019a). While the adage of ‘more democracy’ is not necessarily new, novel rifts within state-society-relations seem to arise continuously. Aside from a perceived increase in participation demands, functional issues are believed to be another driver for participatory innovations: “As the tasks of the state have become more complex and the size of polities larger [...], the institutional forms of liberal democracy developed in the nineteenth century—representative democracy plus techno-bureaucratic administration—seem increasingly ill suited [...]” (Fung and Wright 2001, p. 5). The functional necessity of ‘new modes of governance’ is therefore extended to a (functional) need for (specifically) citizen participation. Moreover, from a normative standpoint, increased participation might be necessary to attain “the central ideals of democratic politics”, including the active involvement of citizens in politics, consensus-building based on dialogue and some degree of social justice (Fung and Wright 2001, p. 5). Participatory designs may, however, vary with regard to (a) the scope of participation, (b) the mode of communication and decision, and (c) the extent to which public participation has an actual, substantial impact (Fung 2006; Pogrebinschi 2018). In his retrospective on empirically observed participatory innovations, Fung (2015) notes that these innovations usually develop as ad hoc-reactions to “particular needs and circumstances” and rely on “the political savvy” of a changing set of actors (Fung 2015, p. 518), making participatory innovations unreliable and unsustainable. Citizen participation can also remain very limited in scope, possibly trivial, if the preset agenda is very specific and participants have no real influence over the decision at hand (Bauer 2015; Fung 2015).

Referring back to the concept of persistent regulatory styles, new modes of governance as well as new modes of participation might be more difficult to realise in some regulatory traditions than others. An *étatist*, paternalistic arrangement operates relatively closed off from societal input, specifically when it would challenge the state agenda, so in these settings, the introduction of cooperative or participatory elements seems unlikely and/or problematic. But traditionally corporatist arrangements might also be challenged by rising demands for public participation, as this could disrupt established network structures and power dynamics. Nevertheless, concerns about changing societal demands as well as mimetic isomorphism (DiMaggio and Powell 1983) might still provide the impetus to establish new forms of societal involvement and/or participatory innovations. In the context of energy transitions,

societal involvement could be beneficial in two respects: First, support schemes that encourage societal actors to participate in RE development might produce better target achievement; second, a broader societal involvement in (co-)generation could promote a more favourable public opinion towards the economic benefits of RES and climate action in general (Reiche and Bechberger 2004; EC 2008; Lauber 2011; Wood and Dow 2011). On the other hand, societal involvement might also impede reform processes if societal actors constitute (de facto) veto players (e.g. Brand-Schock 2010; Sung and Park 2018). Therefore, it is important to understand if and how states can adjust regulatory practices to achieve an intended outcome and whether or not the condition of high reform pressure can act as a catalyst in this process.

3 Research design

In the following comparative case study, I investigate the link between national regulatory styles, high reform pressure and societal involvement in energy transitions. Societal involvement is conceptualised with regards to both (a) policymaking and (b) (delegated) policy implementation. It can refer to both (i) policy network interactions with corporatist actors and (ii) public participation. A particular national regulatory style is conceptualised as the independent variable that generally explains the type and degree of societal involvement. This relationship between regulatory style and societal involvement in regulation might, however, be moderated by the condition of high reform pressure, which, following the arguments on the emergence of new modes of governance, would imply a functional and normative push towards higher societal involvement (Fig. 1). Accordingly, the following hypotheses are formulated:

- H_1 : National regulatory styles will persist even under the condition of high reform pressure and thus produce continuous patterns of societal involvement.

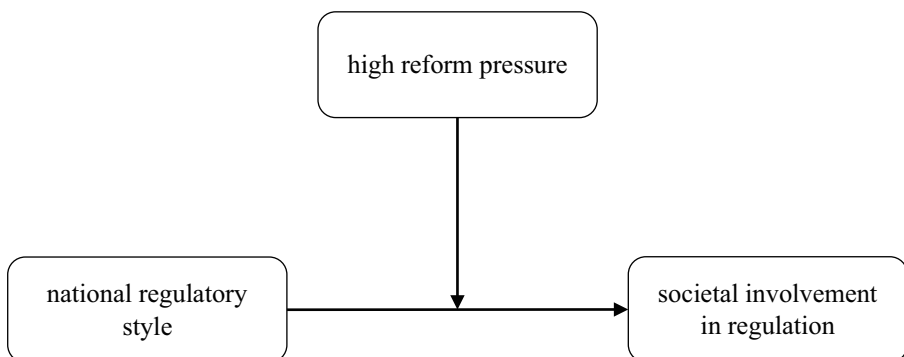


Fig. 1 Possible causal relationship between regulatory style and societal involvement in regulation. (Source: Own illustration)

Table 1 Case selection—national regulatory styles according to van Waarden (1995)

	Germany	France	Netherlands	UK
Conception of statehood	<i>Corporatist</i>	<i>Étatist</i>	<i>Corporatist</i>	<i>Liberal-pluralist</i>
Positioning of the state vis-à-vis civil society	<i>Consensual</i>	<i>Paternalistic</i>	<i>Consensual</i>	<i>Consensual</i>
Formalisation preference	<i>Legalistic</i>	<i>(legalistic)</i>	<i>Pragmatic</i>	<i>Pragmatic</i>

Source: Own illustration

- H₂: National regulatory styles will shift under the condition of high reform pressure, in favour of higher societal involvement.
- H₃: National regulatory styles will persist even under the condition of high reform pressure, but will be supplemented by (mostly inconsequential) participatory innovations.

To diagnose a governance shift, we would need to observe either (a) new and influential *formats* of cooperation, consultation etc., addressing the general public and/or corporate actors, and/or (b) the inclusion of new *actors* in either policymaking and/or policy implementation, that had not been involved previously.

Case selection is based on van Waarden's (1995) categorization, aiming for the highest possible variance with regards to the independent variable (regulatory style), resulting in the selection of Germany, France, the Netherlands and the United Kingdom (Table 1). This allows for the inclusion of three different conceptions of statehood (*corporatist*, *étatist*, *liberal-pluralist*) as well as the distinction between different formalisation preferences (*legalistic* and *pragmatic*).

First, the abovementioned dimensions of regulatory styles were operationalised for the energy sector, drawing on accounts and assessments in energy policy literature (e.g. Bieling et al. 2008; Reiche and Bechberger 2004, 2005; Solorio and Jörgens 2017):

- *Conception of statehood* refers to the state's role in regulating the energy sector. An *étatist* conception of statehood is present whenever the state assumes the leading role in regulating the energy sector, employing a top-down approach. In a *corporatist* setting, state and societal interest organisations share the responsibility of energy sector regulation, which manifests in cooperative policy formulation and delegated implementation. With a *liberal-pluralist* conception of statehood, the state assumes a secondary role in regulating the energy sector, i.e. societal self-regulation is preferred and/or the energy sector is only shaped by market forces.
- *Positioning of the state vis-à-vis civil society* relates to the importance of societal interests and/or interest groups, specifically energy industry interests as well as environmental interest groups. A *paternalistic* stance towards society can be observed whenever societal input is mostly irrelevant for regulation and the state only arbitrarily includes civil society, e.g. through sporadic consultations. In a *consensual* setting, the input of civil society is highly valued and interest groups are actively included in policy formulation and/or implementation on a regular basis; furthermore, a consensual style traditionally relies on persuasion and negotiation.

- *Formalisation of regulation* refers to the legal specification of support mechanisms. With a *legalistic* regulatory style, support mechanisms for renewable energy are legally formalised with high specificity and detail, with the aim of universal rule application. *Pragmatic* regulatory styles rely on a more general framework, leaving significant room for discretion and flexibility. Administrative actors and (local) rule addressees are thus able to find case-specific solutions and/or compromise.

The comparative case study was conducted along two steps; first, central developments in national RE policies were traced with the help of primary sources and secondary literature, starting with the beginning stages of RE support in the respective countries (ca. 1980s) and leading up to the European target formulation of 2007. RE support can generally apply to three sectors: electricity (RES-E), heating/cooling (RES-H) and transport/biofuels (RES-T). Having identified central policies up to 2007, next, respective policy papers, national legislation and passages on energy policy in party manifestos were analysed with regards to regulatory paradigms, problem-solving approaches and instrument preferences, including the role of society in regulation. With this baseline *ex ante*, the European 20-20-20 target formulation was conceptualised as a possible turning point for national RE regulation. In a second step, national reactions to this (renewed) reform pressure were examined, focussing on the period from 2007 to 2010, with 2010 marking the deadline for implementing the EU Renewable Energy Directive 2009/28/EC. All countries under study initiated energy policy reforms in 2007. With the help of a document analysis, that included policy papers and official documentation on societal involvement (e.g. reports from round tables, consultation documents) as well as parliamentary debates, *policymaking* was examined to identify changes in *formats* of societal involvement and/or *actors* involved in high-level decision-making and to assess how this impacted final policy output. For data evaluation, the principles of process tracing were applied, specifically using the variant of the detailed narrative (George and Bennett 2005). Regarding the *policy implementation* stage, resulting national legislation was analysed to determine which societal actors were effectively addressed by the (amended) RE support policies, i.e. what opportunities to (economically) participate in the expansion of renewables had been established. Statements from relevant societal actors and media coverage were drawn on selectively to gain insight on how policy reforms were received. For the time period since 2010, country reports from the International Energy Agency (IEA) were consulted to check for subsequent modifications of support schemes.

4 Analysis and empirical results

4.1 Germany

4.1.1 Setting the stage

In Germany, RE support mechanisms were established as early as 1989, with legally guaranteed feed-in tariffs (FIT) for producers of electricity from renewable energy sources (RES-E). An important driving force for the establishment of FIT had been the lobbying of North German farmers who, based on the example of their Danish colleagues, hoped to generate additional earnings with wind energy plants. After some resistance from the liberal ministry of economics, which attempted a more corporatist solution, a cross-party initiative successfully introduced the *Stromeinspeisungsgesetz* (StrEG) in 1989 (for a more detailed account, see Brand-Schock 2010). This formalised, universalist approach paved the way for a substantial bottom-up development, allowing small, private producers a profitable RES-E generation, thereby making the economic potential of RE accessible to a broader society that already expressed an interest in environmental issues and grassroots action (Mautz et al. 2008). Following this beginning stage of RE support, Germany experienced a boom in wind energy in the 1990s, in the course of which the German RE industry became an important economic player, with several associations lobbying for continued support (e.g. Bundesverband Erneuerbare Energien, Bundesverband Windenergie, Bundesverband Solarwirtschaft). With the change of government in 1998, the power dynamics shifted in favour of RE supporters (Dagger 2009). As the coalition government of Social Democrats (SPD) and Greens undertook an ecological modernisation, including furthering RE expansion as well as energy taxation (SPD and Bündnis 90/Die GRÜNEN 1998), conventional energy industry players tried to torpedo new legislation, particularly the Renewable Energy Law of 2000 (*Erneuerbare-Energien-Gesetz*, EEG), referring (unsuccessfully) to European law on state aid (CJEU C-379/98). Meanwhile, specifically small and medium-sized enterprises benefitted from the RE growth dynamic (Hirschl 2008, p. 189), reinforcing a positive perception of RE development in broader society. So while the political agenda of the red-green coalition ran counter to what established societal actors in the energy sector preferred, other alliances with society were strengthened, especially with RE and environmental organisations (Dagger 2009). Outside of RE policy, the government still maintained corporatist relations to established energy and manufacturing industry actors, which manifested in agreements on nuclear phase-out and emissions reduction (Dryzek et al. 2002; Reiche 2005).

The following coalition government of CDU/CSU and SPD upheld not only the general objective of further RE expansion, but also the support scheme (CDU et al. 2005), although the CDU/CSU previously had not supported the EEG. While the FIT system remained the central support mechanism for RES-E, a shift occurred in the transport sector. After a long phase of tax exemption, a new law (*Biokraftstoffquotengesetz*, BioKraftQuG) was passed in 2006, reintroducing taxation on biofuels and establishing a quota obligation. Despite a broad interest coalition in favour of the previous model, fiscal considerations prevailed, eventually leading to a signifi-

cant downturn in domestic biofuels production (Beneking 2011). Overall, German RE policy has emerged in the broader context of a corporatist-consensual regulatory tradition that built on structured, long-term relationships with established societal actors and was complemented by legally formalised policy solutions. With that being said, there were also instances of a more dominant state stance on certain issues, especially when these were connected to a larger political programme like ecological modernisation or impacted the state budget as directly as a tax exemption on biofuels.

4.1.2 *Adapting to reform pressure*

Shortly after the 20-20-20 targets were agreed upon by the European Council, the German government developed an Integrated Energy and Climate Programme (IECP) (Bundesregierung 2007b), which formed the basis for further legislation, formalising the binding European targets on a national level. The IECP was formulated in a consensual manner, not only in terms of inter-ministerial cooperation but also societal involvement: The already established format of the national energy summit, hosted yearly by the chancellor since 2005, was reiterated, only this time, besides conventional energy industry actors, chancellor Angela Merkel also invited representatives from the RE industry, indicating the sector's ever-growing importance. The energy summit more or less confirmed the government's position on RE expansion as well as respective targets (Bundesregierung 2007a), which points to the state having a more leading role than the cooperative format might suggest. Calibration of the biofuels target was attempted in another corporatist format, a round table on biofuels (BMELV et al. 2007). This proved more cumbersome, until eventually, a political compromise was reached that reflected the position of dominant network actors—specifically the government, the automotive industry and the farmers' association, all in favour of focusing on second generation biofuels while retaining cost-efficient support for first generation biofuels (for a detailed analysis, see Beneking 2011). Overall, Germany's political and legislative reaction to European adaptation pressure was swift and at the same time marked a continuation of both existing regulatory approaches and political objectives. The central FIT support mechanism was only changed with the EEG 2016, which introduced a tender procedure for large-scale generation as an economically more appropriate alternative, given the stable share of RES (see also Leiren and Reimer 2021). Still, the FIT scheme was preserved for small-scale plants, encouraging actor variety and with that, a broader societal involvement in RE development—an objective clearly expressed by the ministry of economics (BMWi 2021).

There are three points to highlight about the German case; first, a continuous preference for corporatist-consensual policymaking, both before and after the (renewed) adaptation pressure of the European target formulation. At the same time, the government played an active, leading role in shaping the energy mix by furthering RE expansion. Second, throughout German RE policy, corporatist settings were adjusted to include and support RE actors. At first, this was primarily grounded in the political preferences of the red-green coalition government, later it reflected changed power dynamics and economic considerations. It follows that corporatist

systems could be adapted, at least to an extent, to fit pressing policy issues. Third, policymaking and implementation followed different logics of societal involvement: In the policymaking stage, specific societal actors participated along designated *corporatist* structures, while the implementation stage, i.e. the practical expansion of RE capacities, was generally open to anyone, as it was set up in a *legalistic* logic, with formalised, universal support schemes that principally allowed anyone interested in renewables a profitable (co-)generation of energy. Therefore, aspects of one and the same regulatory style can manifest in differing types of societal involvement along the stages of the policy cycle.

4.2 France

4.2.1 Setting the stage

A distinctive characteristic of the French energy sector dates back to its nationalisation and the prioritisation of centralised electricity production from nuclear. Consequently, the French state and the nuclear industry formed an interlocked, closed-off policymaking entity. Even after European energy market liberalisation reforms, *Electricité de France* (EdF) remained a de facto state-owned company, with the state holding 85% of shares (Bocquillon and Evrard 2017). Nuclear energy was believed to be a climate-friendly and economically sensible source, so neither political nor dominant industry actors saw a necessity for RES-E generation, regardless of social movements and organised interests (Szarka 2011; Brouard and Guinaudeau 2017). Support for biofuels on the other hand was generally unproblematic and even played into “the Gaullist policy tradition of subsidizing intensive agriculture” (Szarka 2006, p. 634). The state thus readily responded to lobbying efforts by farmers’ association FNSEA (Sénat 1992a, b). Eventually, however, the French electricity sector was put under adaptation pressure: Kyoto protocol obligations spurred the government to intensify its climate policy, including RE expansion (MIES 2000); additionally, forthcoming European Directive 2001/77/EC required active RES-E support to reach a share of 21%. At the request of prime minister Lionel Jospin, Greens politician Yves Cochet compiled a path-breaking report on renewables, in which he strongly argued for the introduction of feed-in tariffs, referring specifically to German success with FIT (Cochet 2000). Following the *Rapport Cochet*, FIT were introduced in the early 2000s. Conflicts with EdF over tariff levels were managed paternalistically, as the government pressured EdF to consent (Szarka 2006). In addition to feed-in tariffs, regulation on tender procedures was updated, thus creating two parallel support schemes: FIT for small-scale generation and tenders for large-scale generation. Furthermore, the tender procedure was connected to a long-term investment plan (*programmation pluriannuelle des investissements*, PPI) that allowed the state to actively steer energy sector development, including EU target achievement, which was formalised by the *Arrêté du 7 mars 2003*.

Up until this point, French (renewable) energy policy provided little opportunity for societal actors (outside of established network actors like EdF or farmers’ association FNSEA) to participate in policymaking. During the 2002 presidential campaign, Jacques Chirac addressed this point by promising a national energy de-

bate—a novelty that “the French electorate had not seen in three decades of pro-nuclear policy” (Szarka 2006, p. 633). Subsequently, in 2003, embarking on a strategic energy policy realignment, the government organised a *débat national* in preparation of an upcoming energy framework law. In five cities around the country, seven public expert colloquia took place, with several hundred participants in total; topics included new challenges to energy policy, ways to improve private and commercial consumption, the role of renewables (complementary vs. alternative) and the future of nuclear energy (Leloup 2003, p. 16; Brand-Schock 2010, pp. 220–221; Whiteside et al. 2010, p. 453). At first glance, this might suggest a shift to a more consensual approach, but the format did not allow participants to shape the agenda or to influence final decisions, which was experienced as particularly frustrating by those in favour of transformation—given the unchallengeable position of nuclear, renewable energy proponents still felt marginalised (Szarka 2006; Brand-Schock 2010). Even though there were attempts to provide new modes of societal/public involvement, French energy policy reflected an étatist-paternalistic stance. With that being said, the 2005 energy law still included specific RE expansion targets, which illustrates a preference for legal formalisation, amounting to a total of 10% until 2010, with sectoral targets for electricity, transport and heating (Loi n° 2005-781 du 13 juillet 2005).

4.2.2 Adapting to reform pressure

During the 2007 presidential campaign, environmental issues gained increasing popularity. Conservative candidate Nicolas Sarkozy also embraced a greener image and promised ecological reforms as part of his programme (UMP 2007; Boy 2010). As president, he initiated a large-scale public consultation on environmental and energy policy, the *Grenelle environnement*, which took place in summer and fall of 2007. Compared to the consultation of 2003, this new format seemed like a true departure from previous policy-making (Boy 2010; Whiteside et al. 2010). First, an equal number of representatives from the state, the regions, employers’ and employees’ associations as well as environmental organisations formed six working groups to discuss sustainable development (for a detailed analysis, see Boy 2010). Around 350 participants were included in this stage. Moreover, two public consultation procedures were organised—the first consisted of 18 regional events open to the public (with around 15,000 participants), the second was an online consultation that resulted in 15,000 additional statements (Boy 2010, p. 316). After that, the debate was continued at four public round tables with top-level participants, including the prime minister. Finally, legislation was prepared by specific committees (around thirty in number), with thirty to forty members each, but in contrast to the working groups, committees did not reflect parity, instead, they were dominated by state representatives (45%) and employers’ representatives (25%) (Boy 2010, p. 317). Thus, in the operational phase, power dynamics shifted back to more established actors (for an in-depth analysis of the *Grenelle environnement*, see Boy et al. 2012).

During the debate, traditional conflict patterns and power struggles re-emerged. Environmental organisations like *France Nature Environnement* or *Alliance pour la planète* called for a re-evaluation of nuclear energy, while the ministry of economics

as well as labour unions CFTC and CGT endorsed additional nuclear projects. Similarly, environmental organisations proposed a RES-E target of 30% until 2020, which was opposed by both employers' association MEDEF and labour union CGT. Regarding biofuels, both the renewables association SER and farmers' association FNSEA defended the status quo of tax breaks, whereas environmental organisations as well as labour union CGT tried to limit support for biofuels (for the final report of the working group on climate change and energy, see Jouzel et al. 2007). Overall, positions in the *Grenelle* process were too divergent to reach consensus on substantial action steps. During the round tables, RE policy discussions focussed mainly on the heating and transport sectors (RF 2007), as these were less controversial than electricity. Through consequent legislative acts *Loi Grenelle I* and *Loi Grenelle II*, consultation results were formalised, however, in the course of the legislative process, a conservative majority in parliament introduced additional restrictions for wind energy, to the chagrin of RE proponents (Assemblée Nationale 2010; FNE 2009; FEE 2010a, b; see also SER, quoted by *Le Figaro* 2010). In terms of policy output, the *Grenelle* process did not result in considerable RE policy reforms; the constellation of a large-scale public consultation in the shadow of established interests rather reinforced an ongoing policy trajectory. In the years since, the general regulatory approach of setting RE quotas in the *Programmations pluriannuelles de l'énergie* (PPE) and realising them through large-scale tenders, while also allowing for small-scale production with feed-in tariffs, endured (IEA 2021).

4.3 Netherlands

4.3.1 *Setting the stage*

Since the coalition government of Christian Democrats (CDA) and Liberals (VVD) had pushed for more flexibility and self-regulation in the 1980s, a general tone for environmental policy integration was set that also influenced RE policy (Zito et al. 2003, p. 169). With the Environmental Action Plan (*Milieu Actie Plan*, MAP), subsequent governments employed an instrument built around voluntary agreements with industry actors, specifically energy distributors. This also reflected cross-party consensus on a mainly market-based energy policy, with limited state intervention (CDA 1994; D66 1994; PvdA 1994; VVD 1994). For MAP I (1991–1994), emissions reduction targets were formulated which distributors would achieve through energy efficiency and RE projects, financed by a premium on electricity prices. With MAP II (1994–1997), the government negotiated a non-binding minimum quota of 3% RES-E that distributors had to fulfil until 2000; it was decreased to 2% with the following MAP III (1997–2000) (see also Breukers and Wolsink 2007). The effectiveness of this instrument can be critiqued on two levels: First and foremost, agreed targets were not actually met (van Rooijen and van Wees 2006). Second, in this regulatory setting, distributors effectively acted as gatekeepers who dictated conditions for market entry, thereby impeding attempts by independent actors, like social initiatives, to create RES-E capacities (Agterbosch et al. 2004). Although sustainability had become an explicit objective for the government's energy policy, this did not spur new RE support schemes. Instead, the main focus was put on decreasing

consumption (TK 1995). To this end, an energy tax was introduced in 1996. While this tax also stimulated RES-E demand, supply heavily relied on imports, so there was still no substantial increase in RE capacities in the Netherlands (van Rooijen and van Wees 2006). With EU Directive 2001/77/EC requiring additional efforts to reach a target of 9% RES-E until 2010, the Dutch government tried another approach and introduced a FIT-support scheme in 2003. After the target of 9% RES-E had indeed been realised a few years later, the government saw no need for further support and both the tax exemption for renewables and the feed-in tariffs expired in 2005/2006 (Arentsen 2008).

With regards to biofuels, support for local initiatives, e.g. by boating companies, was granted ad hoc and depended on successful lobbying; a systematic support scheme did not exist (Suurs and Hekkert 2009a). Societal discourse on the matter was dominated by critical actors who opposed biofuels for environmental reasons (Suurs and Hekkert 2009b; Ulmanen et al. 2009). Until EU Directive 2003/30/EC pressured the Netherlands to increase their share of biofuels to 5.75%, the Dutch government mainly reverted to a neutral position, acknowledging biofuel critics while also giving limited support to individual projects. Eventually, to comply with EU requirements, a quota obligation for mineral oil distributors was introduced via ministerial decree (*Besluit biobrandstoffen wegverkeer* 2007). This quota was mainly met by importing biofuels from outside the EU (Farla et al. 2010). In summary, the regulatory paradigm evident in Dutch RE policy reflected a strong preference for market-based as well as cooperative solutions which favoured established corporate actors. The potential of society as a whole was utilized more in terms of its consumption of (imported) renewable energy and less in terms of (co-)generation. On controversial issues like biofuels support, the state took a neutral stance, catering in part to both proponents and critics.

4.3.2 Adapting to reform pressure

In 2007, when European 20-20-20 targets were formulated, national political interests seemed rather aligned. The Dutch coalition government envisioned an energy transition and specified emissions reduction targets as well as a renewables target of 20% until 2020 (CDA et al. 2007, p. 20). This RE target was highly ambitious, as the share of RES so far only amounted to 3%. As part of the government programme, a package of climate and energy policy measures was formulated (*Schoon en zuinig*), addressing the energy, industrial, building and agricultural sector (EZ 2007, p. 34). In November of 2007, this was further specified by a sustainability accord (*Duurzaamheidsakkoord*) that the government signed with corporate actors: industry and employers' association VNO-NCW, small and medium-sized enterprises association MKB-Nederland as well as agricultural and horticultural association LTO Nederland (TK 2007b). While the accord itself contained rather general statements, corporate signatories were instructed to develop further industry specific agreements on energy efficiency, renewable energy and other climate-friendly innovations with their respective member associations. In general, the government aimed to incentivize, support and remove obstacles to an energy transition, but did not believe it to be the state's role to impose regulation on society (VROM 2007, p. 9). With regards

to RE support, the government decided to employ a time-limited feed-in premium (*Stimuleringsregeling Duurzame Energieproductie*, SDE) to stimulate wind energy and biomass expansion, with government funding from 2008 to 2011 (EZ 2007, p. 39; VROM 2007, p. 27).

By now, several parties in parliament were questioning the hands-off approach, especially Greens (*GroenLinks*) and Liberals (*Democraten 66*), who argued that many industry actors did not comply with agreements, but also Christian democratic coalition partner *ChristenUnie*, who called for stronger state regulation (CU 2006, p. 68; TK 2007a). Similarly, the Energy Research Centre of the Netherlands (ECN) stated in its government-commissioned report on the climate and energy package (*Schoon en zuinig*) that too much reliance was placed on voluntary agreements. Furthermore, ECN strongly recommended to secure financing for the feed-in premium beyond 2011, if the government actually intended a share of 20% renewables until 2020 (ECN 2007, 10–11). However, Maria van der Hoeven (CDA), minister for economic affairs, emphasized that “excessive RE support” was to be absolutely avoided. For this reason, she also opposed a (long-term) financing model that would make the feed-in premium part of the electricity bill. Oddly, the minister simultaneously argued for energy generation from coal to secure Dutch energy supply in the light of dwindling gas resources (TK 2007a). All in all, the Dutch model of societal involvement in RE policy still mainly focused on voluntary agreements with industry actors who, judging from the overall outcome throughout the decades, did not feel particularly obliged to meet the agreed targets. Moreover, reliance on corporatist structures limited the opportunity for a broader society to generate energy from RES. Instead of uniting society under the common goal of an energy transition, Dutch consensualism might have actually masked a lack of political commitment (Arentsen 2008, p. 68). Since then, the SDE support scheme was updated in 2011 (SDE+) and 2020 (SDE++). Currently, feed-in premiums are awarded based on yearly auctions. The system is technology-neutral and also includes biofuels (IEA 2020). Additional incentives for small-scale generation have remained quite limited in scope (Rijksoverheid 2010; IEA 2020).

4.4 United Kingdom

4.4.1 Setting the stage

After having been a by-product of the nuclear-focussed *Non-Fossil Fuel Obligation* (NFFO), RES-E support was first formalised with the introduction of a quota system. The government set a yearly, legally binding RES-E quota for electricity suppliers that was verified via certificates (ROC). A target of 10% RES-E until 2010 was set in the first *Renewables Obligation Order* (ROO) in 2002, matching EU requirements (Directive 2001/77/EC). As this support mechanism was designed to stimulate only the most cost-efficient technologies, other RE potential remained largely untapped; moreover, due to a lack of long-term political commitment, the investment climate only allowed established energy industry and financial actors to participate in the RO-system (Lauber and Toke 2005). Consequently, expansion of RE was somewhat disconnected from a broader society. New RE plants were often negatively perceived

by locals (Elliott 2019). Moreover, a general scepticism towards RE expansion as well as the economic potential of climate change action could be observed among UK citizens (EC 2008). Apart from that, the quota model proved ineffective in terms of target achievement. As it was more profitable for companies to pay the buyout cost, intended RE capacities were not realised (Woodman and Mitchell 2011).

In 2003, the government released a new white paper on energy policy, with the main objective of emissions reduction. RE expansion was seen as a means to that end, but the government also did “not rule out the possibility that [...] new nuclear build might be necessary” (DTI 2003, p. 61). Before deciding this, however, the government would organise “the fullest public consultation” (DTI 2003, p. 61). From January to April of 2006, the general public was given the opportunity to make statements based on an energy review published by the government (DTI 2006a). The government also organised stakeholder events with various actors, e.g. unions, industry associations, energy providers and environmental NGOs. Following the consultation procedure, another energy review was issued, announcing that the government would support nuclear new build (DTI 2006b). In turn, Greenpeace took legal action against the decision, “on the ground that the consultation process leading to the decision was procedurally flawed” (EWHC 15.02.2007, Rec. 1). Indeed, the High Court ruled that “the consultation paper [...] was manifestly inadequate” and “the information given to consultees was wholly insufficient to enable them to make ‘an intelligent response’” (EWHC 15.02.2007, Rec. 116). With regards to stakeholder events, the court noted that these did not fully communicate to participants what was actually at stake (EWHC 15.02.2007, Rec. 71). The government was thus forced to later repeat the consultation (see Sect. 4.4.2). Meanwhile, support for biofuels began primarily in reaction to EU Directive 2003/30/EC. Based on the model of the RO-system, a *Renewable Transport Fuel Obligation* (RTFO), directed at fuel suppliers, was prepared in 2004 and realised in 2007. For a lack of domestic capacities, biofuels needed to be imported from outside the UK (Solorio and Fairbrass 2017). In the context of an expressly market liberal approach, British RE policy focused primarily on cost-efficiency, which mainly benefitted established economic actors and large-scale investors. Although market-based solutions were preferred, the state still applied regulatory pressure by mandating binding targets.

4.4.2 Adapting to reform pressure

In May of 2007, the Labour government presented its white paper on *Meeting the Energy Challenge* (DTI 2007). Besides climate change, a crucial challenge was seen in declining reserves of oil and gas that would threaten the UK’s security of supply. The government thus aimed for “diversity and flexibility in the energy mix” and envisioned “a policy framework that opens up the full range of low carbon options”, which would include renewables as well as fossil fuels and nuclear power (DTI 2007, p. 187). Regarding nuclear energy, another consultation was held from May to October of 2007. In reaction to the High Court’s ruling on the 2006 consultation, prime minister Tony Blair had previously commented: “This won’t affect the policy at all” (BBC News 2007). Nonetheless, the government once more consulted representatives from industry associations, NGOs etc., while the public could submit

statements. Overall, similar issues plagued the second procedure, i.e. a questionable information base and a lack of actual decision-making power (Dorfman 2008; Mah and Hills 2014). In 2008, the government then proposed an *Energy Act* that would, inter alia, create the necessary framework for nuclear new build. Due to an expressly market liberal approach, the government still retained a somewhat ambiguous position, arguing that nuclear new build made “commercial sense” and would benefit both the diversity of energy supplies and the emissions reduction objectives, but simultaneously relying fully on a market-driven expansion, stating that “companies will decide whether they wish to invest in new nuclear power, not Ministers” (HC 2008a, Col. 1372–1373).

Turning to RE support, the 2007 white paper contained two important points—the decision to increase the RO to 20% until 2020 and the introduction of *banding*, which meant that various RE technologies would now be grouped according to their market maturity and respectively counted towards one ROC. Previously, 1 MWh of RES-E equalled 1 ROC, irrespective of technology, so this marked a shift from a solely cost-efficient to a more varied, technology-specific approach. Both decisions had already been presented in October of 2006, as part of another public consultation, specifically on the government’s proposal to reform the RO-system (DTI 2006c). Responses were openly available on the DTI’s website, including statements by the Confederation of UK Coal producers, the National Farmers’ Union, the Renewable Energy Association, British Petroleum, Shell, WWF and several others as well as a few private citizens. Established actors like the Association of Electricity Producers (AEP) and the British Wind Energy Association (BWEA) lobbied to keep the status quo (AEP et al. 2007), as they were the main beneficiaries of this system. In parliament, however, cross-party support for FIT had grown since 2006 and was reinvigorated with new energy minister Ed Miliband who was much more favourably inclined than his predecessor (HC 2006, 2007, 2008b). Now, the debate concerned primarily the threshold of 5 MW. MP Alan Simpson (Labour) framed this as a conflict between large-scale, corporate actors and small-scale, grassroots generation, stating that the RO-system had been a “gravy train” for energy companies that “do not want to pay citizens for contributing to a renewable energy future” (HC 2008b, Col. 141–142). In the end, the *Energy Act* provided the framework for both nuclear new build as well as FIT-introduction, maintaining the 5 MW-threshold in favour of small production. While the UK government had habitually employed public consultation procedures even before 2007, societal input did not seem to actually influence decision-making. Overall, the UK maintained its hybrid regulatory style, coupling market-based solutions with paternalistic decision-making. Since then, contracts for difference (CFD) were added as another instrument in 2013, specifically to facilitate large-scale energy production from both renewables and nuclear (IEA 2019).

5 Discussion

5.1 Persistence vs. transience of regulatory styles

Referring back to the theoretical framework, let us first turn to the question of persistence vs. transience. Beginning with Germany, the analysis revealed a preference for corporatist, consensual and legalistic policy solutions that continued as Germany responded to renewed reform pressure in 2007. But over time, the policy network was extended to accommodate new actors from the RE sector. An *existing format* was thus *supplemented by new actors*. In the French energy sector, a generally étatist-paternalistic regulatory style was further reinforced by the close connection between the state and the nuclear industry. However, French presidents started to enable a broad national debate on energy policy since the 2000s. While there was some participatory innovation with the *Grenelle environnement* in 2007, it was still very limited in its effect on decision-making. There was a *new format, but with established actor dominance*. In the Netherlands, the government relied almost exclusively on the cooperation with corporate actors, both in the policymaking and the policy implementation stage. In spite of subpar outcomes, the government upheld this regulatory approach. Even under renewed reform pressure, *existing formats with established actors* prevailed. In the UK, the government held several public consultations, inviting both the general public and corporate actors to make statements, but subsequent policy papers indicated that the government's position was not affected by the input. The eventual FIT-reform, which facilitated a broader societal participation in RE expansion, was possible due to cross-party support in parliament and the appointment of a new energy minister. In this sense, the approach to policy making did not change, but policy implementation was opened up to a *broader set of actors*.

Referring back to the previously formulated hypotheses, H₁ cannot be fully confirmed. Although national regulatory styles generally persisted, even under the condition of high reform pressure, there were some changes in favour of higher societal involvement, regarding new formats of deliberation (France) as well as a broader inclusion of actors in either policy making (Germany) or policy implementation (UK). However, there also remain reservations regarding H₂. While some observations point to governance shifts related to more societal involvement (Table 2), these have been rather limited in scope and/or effect. A more substantial shift away from previously observed regulatory styles, that might have been expected due to high reform pressure in the field of renewable energy policy, was not apparent. In principle, a gradual convergence towards a *common regulatory style* favouring co-

Table 2 Governance shifts related to societal involvement in RE policy (2007–2010)

	Germany	France	Netherlands	UK
Realisation of new <i>formats</i> of cooperation/ consultation	–	(X)	–	–
Inclusion of new <i>actors</i> in policymaking/policy implementation	(X)	–	–	(X)

Source: Own illustration. Brackets indicate a limited shift

operation, consensualism and pragmatism might still be possible long-term. There is also an important conceptual distinction between (a) a *convergence of regulatory styles*, e.g. vis-à-vis societal involvement, in that the cooperation of state and society in regulation is steadily shifting towards a common mode of collaborative governance, and (b) a *convergence of policy instruments*, i.e. RE support schemes that are partially (functionally) aligning. In fact, the countries under study showed a gradual convergence towards a two-pronged approach, in that differing RE support policies were designed to address corporate actors as well as the public, thus including a broader society in the implementation of an energy transition (see also Kitzing et al. 2012). In this regard, growing similarities in policy output might be interpreted as a precursor for more fundamental convergence processes which eventually might affect the deeper layer of regulatory styles. With regards to H₃, the comparative case study indeed revealed a somewhat inconsequential supplementation of traditional regulatory approaches with participatory innovations in both France and the UK. As these innovations were already set in motion pre-2007, one cannot presume that the condition of renewed reform pressure around 2007 has caused these participatory innovations. Similarly, the inclusion of new actors into the policy network in Germany has been an ongoing development since the late 1990s. The impact of a single ‘window of pressure’ on national regulatory styles has been, overall, limited. Nonetheless, policy reforms as a reaction to reform pressures have been set in motion in all four countries under study.

5.2 (Re-)Conceptualising societal involvement: policy stages and actor types

Moving away from the question of persistence vs. transience, let us now contrast the empirically observed patterns of societal involvement (Table 3). In Germany, a limited (i.e. state-lead) involvement of corporate actors in policymaking was coupled with a universalist RE support approach, involving the broader public into RE expansion and thus the policy implementation stage. In France, a limited involvement of both organised/corporate actors as well as the public in policymaking was facilitated through consultation procedures. Regarding policy implementation, the state did not specifically call for societal participation, but the combination of tenders and feed-in tariffs was principally open to the general public and allowed for large-scale project proposals as well as small-scale generation. In the Netherlands, both policymaking and policy implementation were geared towards cooperation with established corporate actors, which was formalised by voluntary agreements. In the

Table 3 Empirically observed patterns of societal involvement in RE policy

	Germany	France	Netherlands	UK
Policy making				
<i>Corporate actors</i>	(X)	(X)	X	(X)
<i>The public</i>	–	(X)	–	(X)
Policy implementation				
<i>Corporate actors</i>	–	–	X	X
<i>The public</i>	X	(X)	–	(X)

Source: Own illustration. Brackets indicate a limited form of involvement

UK, energy policymaking already included public consultations, allowing both organised/corporate actors and the public, albeit very limited, access to decision-making. Policy implementation primarily relied on the cooperation of established corporate actors within a mandatory quota system (while also allowing for buyouts).

As the comparative case study has illustrated, societal involvement can differ between the policymaking vs. the policy implementation stage. In terms of the effectiveness of differing configurations, no inherently superior arrangement for societal involvement emerged in the comparison that might reliably be exported across countries. Regarding policymaking, there was some degree of *corporate actor* involvement in all countries; in France and the UK, this took place in the context of a larger public consultation, but also through informal exchanges. In principle, regulatory cooperation with corporate actors can be consensus-building and thus also benefit long-term social cohesion (Musch 2019). However, the regulatory output hinges on the government's and societal actors' policy preferences and their willingness to change the status quo. Whenever established (corporate) actors lack the incentive to cooperate on regulatory reforms, any compromise will likely result in a lower level of ambition. The active inclusion of new actors as 'challengers' of the status quo already signifies the government's intent to realise a transition (Germany). *Public consultations* did not have a significant impact on decision-making in the cases under study (France, UK). In this sense, previously stated concerns regarding participatory innovations (Sect. 2.3) have proven justified. Furthermore, the addition of more broadly inclusive consultation formats did not help with building a new consensus, but rather reflected pre-existing conflicts between actors (France, UK).

Turning to policy implementation, an overreliance on *corporate actors* has proven problematic in terms of target achievement (Netherlands, UK). In contrast, RE support schemes that reflect a *universalist* approach, i.e. address the public and provide the opportunity for a broader society to partake in (co-)generation, seem advantageous for both the overall RE growth dynamic as well as (indirect) consensus-building on the benefits of an RE expansion (Reiche and Bechberger 2004; Lauber 2011; Wood and Dow 2011). But the success of universalist approaches rests on the specific design of the support scheme (level of support, time-frame etc.) and its overall effect within the economic sector (e.g. facilitating the emergence of a robust RE industry in Germany). Admittedly, a combination of support schemes for large-scale and small-scale production is possible as well, e.g. with tenders addressing established industry and/or corporate actors and feed-in tariffs addressing small-scale producers like local initiatives and individual citizens. As mentioned before, there seems to be a convergence towards such a two-tongued approach among the countries under study (although the Netherlands did not adopt a universalist support system for small-scale generation).

Whether societal involvement actually increases the effectiveness of energy transition governance thus hinges on the exact regulatory configurations, the policy preferences of state and societal actors and the broader (regulatory and economic) context. Providing opportunities of economic participation for different types of actors seems advantageous from a governance and a social cohesion standpoint and can, in principle, be incorporated into varying regulatory traditions, as the case studies have

illustrated. A more elaborate one-size-fits-all solution for societal involvement in the energy transition seems unrealistic, especially considering the relative stability of regulatory styles that restrict the array of available, functioning governance options.

5.3 Limitations and further research

While this comparative case study has provided important insights into the persistence vs. transience of regulatory styles, particularly when it comes to societal involvement in the energy transition, further research is required. An in-depth, systematic analysis of societal involvement in policymaking since 2010 is necessary to assess if and how regulatory styles might be (further) evolving and how subsequent adjustments in supranational regulatory frameworks have affected domestic regulatory options. Additionally, any vertical and/or horizontal differences in state-society cooperation, e.g. between the national and the regional or local level, should be systematically examined. Similarly, adjacent areas of regulation, like infrastructure planning, need to be taken into account. Moreover, the long-term consequences of different RE support configurations on both policy outcome, i.e. the progress made in the transition towards renewables, and social cohesion in the respective countries deserve further study.

6 Conclusion

Comparing RE policy reforms and the opportunities for societal involvement following the European 20-20-20 targets in Germany, France, the Netherlands and the UK, it has become apparent that regulatory persistence and (limited) governance shifts in favour of more societal involvement are not mutually exclusive. The countries under study exhibited relatively stable patterns of societal involvement, which corresponded to more fundamental regulatory paradigms or *national policy styles* (van Waarden 1995), with some additions regarding formats of deliberation (France), the actors involved in policymaking (Germany) or policy implementation (UK). The effect of a single ‘window of pressure’, specifically the European 20-20-20 targets, on national regulatory styles was minor, even though policy reforms were initiated in all countries under study.

Participation mechanisms that were layered on top of established regulatory arrangements, specifically public consultations on energy policymaking, proved rather inconsequential. They had not been clearly and predictably “institutionalized *within* representative systems” (Pogrebinschi 2018, p. 116), nor purposefully integrated with relevant regulatory traditions. This trend of layered participation seems troubling in two regards. First, in terms of functionality, multiple levels of participation within a multilevel governance system already pose a serious coordination challenge, which can, similarly to a joint-decision trap, amount to a ‘participation trap’ that curtails the system’s problem-solving capability (Radtke 2016; Radtke et al. 2018). Any incongruence between established regulatory arrangements and newer participation mechanisms would further exacerbate these functional challenges and, consequently, limit output legitimacy. Secondly, as observed in participation research

(e.g. Fung 2015; Fink and Ruffing 2019b), few participatory innovations actually come with considerable decision-making power, which could eventually even trigger new frustrations. So, perhaps paradoxically, efforts to encourage participation might at worst even negatively impact political engagement and social cohesion. If increased societal involvement, specifically in policymaking, is not to remain meaningless, it must be integrated (a) with more fundamental regulatory arrangements and (b) across the various vertical levels.

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