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Relaunching the Italian energy transition: Are incumbent electric utilities moving from resistance to support?

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ABSTRACT

Incumbents, such as major companies that dominate conventional electricity production, have traditionally been viewed as opponents of energy transition. However, recent scholarship suggests that a more nuanced understanding of their evolving role in energy systems transformation is needed. Drawing on this strand of research, as well as policy literature on business politics, organised interests and lobbying, the paper develops an original analytical framework to trace the changing strategies of these actors in the field of renewable energy policy. This framework highlights the multifaceted role incumbents play as both economic and political agents, and the various resources they can deploy to influence policy development through their business and instrumental activity. The paper applies this framework to the study of Italian renewable energy policy in the electricity sector over a two-decade period (1999–2024). It shows how the positioning of the major companies that dominate national conventional electricity production has changed over time, from resistance to support, and how they have mobilised their various resources to influence Italian renewable energy development. In particular, the paper explains the latest shift in their positioning after 2019 and reflects on the implications of this change for the recent relaunch of the Italian energy transition. This shift reveals a strategic ambivalence: while supporting renewable energy, incumbent electric utilities continue to advocate for maintaining a significant role for natural gas in the country's energy mix.

1. Introduction

The current energy transition – i.e. the shift from fossil fuels to renewables – is a complex and messy business (e.g. [1,2]), involving a reconfiguration of technology, actors' relations and institutions over time. Initially, scholars relegated the role of incumbents – such as fossil fuel companies or large electric utilities – to that of natural opponents of this transformation, contrasting more ambitious renewable energy policies and climate targets (e.g. [3–5]). Attention was therefore focused on niche renewable energy actors and bottom-up dynamics capable of challenging existing fossil fuel regimes and promoting the diffusion of new green technologies. Recently, however, several works have called for a deeper understanding of the positioning of incumbents in the energy transition, which is evolving as we enter a new phase of the

transition process itself (e.g. [6,7]). This paper aims to contribute to this body of literature. Conceptually, it develops an analytical framework that combines the latest scholarship on incumbency and policy studies on business politics and organised interests. This framework is designed to capture the different roles that incumbent electric utilities – i.e. major companies that dominate conventional electricity production [8] – play as economic and political agents, as well as the various resources they can mobilize to either resist or support the energy transition through their business and instrumental activity. Empirically, it applies this analytical framework to the case of Italy by examining its renewable energy policy in the electricity sector over a two-decade period: from the early 2000s to 2024. Italy ranks second in the European Union (EU) in terms of installed renewable capacity (excluding hydro) in the electricity sector, and ninth in the world.¹ However, to the best of our knowledge,

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¹ See IRENA Country Rankings 2024, available at <https://www.irena.org/Data/View-data-by-topic/Capacity-and-Generation/Country-Rankings> (accessed 4 April 2025).

there are no studies investigating the specific role of incumbent electric utilities in the Italian energy transition.

The paper is structured as follows. In [Section 2](#), we present a review of the literature on incumbency in the current phase of the energy transition. We focus on work that has examined business strategies, lobbying and coalition dynamics in this process, particularly in the electricity sector. In [Section 2](#), we also present our analytical framework, and the methods and data used in the research. As mentioned, this framework draws on the latest scholarship on incumbency and the policy literature on business politics and organised interests to offer a fresh perspective on how incumbents mobilize their resources in economic and political arenas to contribute to policy development. In [Sections 3 and 4](#), we apply this framework to the Italian case study. We review the country's renewable energy policy in the electricity sector and assess the role of the major companies that dominate conventional electricity production in this field. Although this empirical analysis covers a long-time span (1999–2024), our main focus is on the post-2019 period ([Section 4](#)), when the Italian energy transition was relaunched after a difficult period of stagnation, amidst a changing role of these incumbent actors. Finally, in [Section 5](#), we reassess our findings and discuss the limitations and potential of our analytical framework. We found that the major companies that dominate conventional electricity production in Italy did indeed change their positioning on the country's energy transition and mobilised their resources – in terms of both business and instrumental activity – to increase their support to the process. However, we also found that their shift is incremental, as thermoelectric capacity remains a core component of their generation portfolio. Moreover, their positioning reveals a form of strategic ambivalence, as they continue to advocate for maintaining a significant role for natural gas in the national electricity mix.

2. Incumbents in the energy transition: roles, resources and activities

2.1. Literature review

Since the early 2010s, the expansion of energy transition studies has highlighted the limitations of the socio-technical systems (STS) approaches that have long dominated the field, both for their excessive focus on novelty and for overlooking the key role of politics and power dynamics in technological transitions (e.g. [\[1,9–11\]](#)). These critiques have been instrumental in paving the way for a fruitful encounter between STS approaches and theories from policy studies and policy processes (e.g. [\[12\]](#)). This has also increased the interest in the role of incumbents in the energy transition. Indeed, due to the excessive focus on novelty, the role of these actors has long been overlooked or extremely simplified, with a general tendency to portray incumbents only as 'villains' who obstruct and slow down the energy transition with their defensive strategies (e.g. [\[3,4,13\]](#)). Recently, however, Turnheim and Sovacool [\[7\]](#) have called for a different approach capable of pluralising perspectives on incumbents: their strategies and positions may change over time, there are differences between incumbents that may influence their different positioning on energy transition policies, and overall, researchers need to consider how these actors can also contribute to the transformation of existing energy systems.

Turnheim and Sovacool's [\[7\]](#) call is particularly relevant in the current acceleration phase of the energy transition. Indeed, whereas in the early phases of this process – i.e. experimentation and take-off (e.g. [\[14\]](#)) – it was easier to identify pro-renewable and more conservative coalitions, usually in the electricity sector composed of large utilities (e.g. [\[4,15,16\]](#)), in the current acceleration phase interests and positions have become more complex and articulated. Markard [\[6\]](#) suggests that the current phase has qualitatively different characteristics from the previous ones: some technologies, especially in the electricity sector such as photovoltaic (PV) and wind, have become more mature and cost-competitive even without public support, others have emerged (e.g.

batteries, storage systems) and the traditional ones are still present. Moreover, as markets and user preferences change, incumbents can no longer ignore some green technologies that challenge their business model without adequate transformation and investment. This is an incentive not only to adjust their business and market strategies, but also to influence policy making through lobbying – not merely to resist the transition, but to actively shape this ongoing and open-ended process (e.g. [\[17\]](#)). Furthermore, as the penetration of renewables accelerates, especially (again) in the electricity sector, the overall readiness of the energy system to integrate these new sources becomes a central concern for policy makers due to its impact on security of supply, prices and system stability [\[6\]](#).

Overall, the latest literature has increasingly acknowledged the evolving and complex role of incumbent actors in the energy transition. This includes both their 'business activities' and their 'socio-political activities' ([\[18\]](#), p. 8). These actors are, at once, key economic agents – seeking profit in the market and equipped with significant organizational, technological and financial resources – and political agents, whose 'political behaviour' is aimed at shaping public policy by adapting their strategies to a changing context ([\[19\]](#), p. 2040). In terms of business activities, research has explored various levels, including organizational and management strategies, technology development, and industry and market strategies [\[20\]](#). In these domains, incumbents can actively contribute to the transition by adjusting their practices and investment patterns [ibidem]. Incumbent electric utilities have often struggled to anticipate the changes required to manage the energy transition, tending to remain anchored to their traditional business models (e.g. [\[21,22\]](#)). For instance, in a survey of more than 3000 utilities worldwide, Alova [\[23\]](#) found that only 10 % prioritized investment in renewable energy capacity over fossil fuel capacity. However, as discussed, ongoing transformations are increasing the pressure on incumbent electric utilities that are unable to adapt to the evolving environment. Likewise, other studies have examined the evolving strategies and positions of incumbents as political agents. For example, Kattirtzi et al. [\[24\]](#) have shown how the UK's big six large utilities changed their strategies during the acceleration phase of the country's energy transition, adapting quickly to the new context and responding to government policies. Lindberg and Kammermann [\[25\]](#), focusing on the EU, have shown that advocacy coalitions in the European electricity sector have changed in the acceleration phase, with incumbent electric utilities also playing an important role as supporters of renewable energy policies. Similarly, Markard et al. [\[26\]](#) and Schmid et al. [\[27\]](#) have shown how traditional green political coalitions have expanded in the acceleration phase to include incumbent utilities in both the Swiss and German electricity sectors. These studies have also highlighted the importance of taking a long-term perspective on renewable energy policy to understand the changing role of incumbents over time. This perspective resonates with recent work on climate policy (e.g. [\[28\]](#)), which has shown how business actors can change their positions over time, from opposition to support, in response to the impact of past policies and market and societal changes. This support can also help shape the transition and avoid more disruptive policies, according to a transition pattern of 'reconfiguration' in which elements and actors of the existing energy system coexist with niche innovations and actors (e.g. [\[29,30\]](#)). Other scholars, however, have recurred to the neo-Gramesian notion of 'trasformismo' (e.g. [\[31,32\]](#)) to highlight how some incumbents, such as the gas industry, act, also through the narrative of natural gas as a 'transition fuel', to maintain the status quo. Still others have emphasized that incumbents may adopt ambivalent or 'double strategies', simultaneously supporting certain transformations while also seeking to protect their established assets ([\[18\]](#), p. 11). Nevertheless, all these developments represent a shift from the more openly confrontational positioning of earlier periods.

2.2. Analytical framework

The recent literature on energy transition has begun to offer a more complex understanding of the role of incumbents in this transformative process. It has also highlighted the importance of taking a long-term perspective to track the changing positions and strategies of these actors. Following Turnheim and Sovacool ([7], p. 182–183), we suggest that another important step in understanding the evolving approach of incumbent actors – such as the major companies dominating conventional electricity production – is to focus on the various types of resources they may deploy to either support or hinder the energy transition. As illustrated, research on incumbents has typically focused on their strategies within either the economic or the political arena, distinguishing between their role as economic and political agents. However, only a limited number of studies have offered a comprehensive account of their activities across both domains (e.g. [20]). In this article, we propose an original analytical framework to capture this duality, map the evolving strategies of incumbent electric utilities, and understand their overall contribution to the energy transition. Our aim is not to explain why their positioning changes over time (e.g. [24,28]), but rather to show how their decisions and specific resources can contribute to either slowing down or supporting the diffusion of renewable energy sources (RES) in the electricity sector.

With regard to the resources that incumbents can mobilize as economic agents, investments play a key role in either supporting or constraining the energy transition (e.g. [19,33]). Their financial capacity is particularly significant in promoting the expansion of renewable energy generation. Moreover, as actors with substantial financial firepower and a strategic position within national energy systems, their business decisions also shape the system’s preparedness to integrate a growing share of renewable energy. In other words, major companies dominating conventional electricity production can speed up (or slow down) the energy transition by increasing (or containing) investment in RES development or in the changes the energy system needs to integrate a growing share of RES (i.e. system preparedness). Of course, investment to support the energy transition can also come from other actors. However, the entry of new large business players into national energy markets is often a costly and time-consuming process, due to both market and non-market barriers within the energy sector (e.g. [34]). This further underscores the crucial role of incumbent business activities in advancing (or hindering) the energy transition.

With regard to the resources that incumbents can deploy as political agents, our starting point for mapping their strategies in the field of renewable energy draws on the traditional policy literature on business politics. This literature has long distinguished between two fundamental sources of power that business actors can mobilize in the political arena: instrumental and structural power (e.g. [35–39]). The former comprises the various resources, unrelated to the core functions of the firms, through which business can exert direct influence on policymaking, such as lobbying activities and organised interests. This influence can be exercised individually by each actor and organisation or, more often, through the formation of political coalitions involving other business actors and organised interests that share the same positioning and views on a particular policy issue (e.g. [9,40–41]). Conversely, structural power is indirect and less visible than instrumental power as it is embedded in institutions and markets [31,32,37]. As highlighted by Culpepper [37] “structural power results from the fact that firms and capital holders control the investment decisions on which the economy depends” (p. 396). This ‘economic privilege’ [35] allows some business actors to (indirectly) shape policy development even without explicit lobbying, because policymakers cannot afford to ignore their position nor risk losing their support if they want their policies to succeed [36,37]. In the energy sector, we can extend this perspective to those business actors that have a privileged position in a country’s energy supply system. Incumbents that dominate electricity production often have such a position – such an *energy privilege* – because they account for

large shares of the national electricity supply. Policymakers pay close attention to the well-being of these actors, which provide many jobs and, in the short term, help ensure the stability and security of the national energy system.

The traditional distinction between instrumental and structural power remains analytically relevant for understanding the various levers incumbents may use to influence policy developments. However, more recent literature on business politics emphasizes that these two dimensions of business power should be examined in conjunction (e.g., [39]). These ‘hybrid’ approaches stress that the effectiveness of instrumental power is significantly enhanced when the business actors deploying it also possess structural power. In addition, recent scholarship has raised important questions about how structural power can be empirically operationalized and observed. Culpepper and Reinke [36] argue that structural power should not be seen as automatic, but rather as a set of resources that must be strategically activated by business actors seeking to enhance their influence on policymaking. Young ([42], p. 447) further proposes shifting the focus from the empirically problematic concept of structural power to that of ‘structural prominence’: a set of measurable attributes that confer a privileged position on certain business actors within a given sector (e.g. firm size, assets). This prominence, however, becomes analytically salient only when assessed in relation to the ‘instrumental activity’ through which these actors seek to influence policy developments ([42], p. 448). This perspective underscores that even structurally prominent business actors – such as incumbent electric utilities – must actively signal their preferences on specific issues to policymakers and engage in lobbying, interest articulation, and coalition-building in order to exert actual influence (e.g., [43]).

Building on this discussion, we identify eight possible basic strategies at the disposal of incumbent electric utilities to resist or support the energy transition through their business activity (as economic agents) and instrumental activity (as political agents) in the field of RES (Table 1). Following Lauber and Sarasini [8], we consider ‘support’ as a ‘proactive mode’ of sustaining the energy transition that sees incumbent electric utilities actively lobbying and forming coalitions with other actors for promoting renewable energy policy as well as increase investments in RES development and system preparedness. Conversely, ‘resistance’ corresponds to what Lauber and Sarasini [8] indicate as ‘opposition’: a ‘reactive mode’ that sees incumbent electric utilities attempting to block or reduce renewable energy policies and limit renewables deployment by containing investments. As our aim is to analyse incumbent electric utilities as a group, we adopt this simple dichotomy – rather than more complex typologies (e.g. [18]) – to trace the evolution of their strategies over time. However, we also consider the potential presence of ambivalent or ‘double strategies’ [18], characterising actors who, while supporting RES development, simultaneously seek to protect their established fossil fuel assets. Despite this potential ambivalence, in Section 5 (Discussion and conclusions) we argue that the shift of incumbents from opponents to supporters can have significant implications for the diffusion RES at the national level.

Table 1
Energy transition strategies of incumbent electric utilities.

	Goals	
	Resist	Support
Instrumental activity (incumbents as political actors)	<ul style="list-style-type: none"> • Lobby against RES • Coalition building to slow-down RES development 	<ul style="list-style-type: none"> • Lobby for promoting RES • Coalition building to speed-up RES development
Business activity (incumbents as economic actors)	<ul style="list-style-type: none"> • Contain investments in RES development • Contain investments in system preparedness 	<ul style="list-style-type: none"> • Increase investments in RES development • Increase investments in system preparedness

Source: Authors’ elaboration.

This shift, however, also suggests that these powerful actors will attempt to shape both the trajectory and the outcomes of the energy transition – as an open-ended process – according to their preferred solutions.

2.3. Data and methods

To demonstrate the usefulness of our analytical framework, in the following sections, we apply it to the Italian RES policy in the electricity sector in the period from 1999 to 2024. During this long period, as for the other member states, this policy evolved within the context of the evolving EU regulatory framework on the matter (e.g. [44,45]). More specifically, however, this long period can be divided into three main phases. The first, from (approximately) the early 2000s to the early 2010s, corresponds to the expansion of the Italian RES policy and the take-off of RES in the country's electricity sector. The second phase, from the early 2010s to 2018, is the period of stagnation of the Italian energy transition, also due to the low support of incumbent electric utilities in the critical period following the economic downturn of the post-2008 crisis, which led to the dismantling of the RES supporting measures adopted in previous years. Finally, the last phase, from 2019 to 2024, is characterised by a relaunching of the Italian energy transition. We show that this third phase also sees a changing position of incumbent electric utilities on Italian RES development, which can help sustaining this relaunching. For each of these three phases we highlight the strategies of incumbent electric utilities based on their business and instrumental activities as illustrated in Table 1. For the first two (longer) phases we will offer a brief account of the main dynamics and trends drawing on a combination of existing research and original data, whereas for the last phase (2019–2024), the focus of this study, we rely on original research and data. These data include parliamentary hearings, newspaper articles, press releases and business organisations' policy documents, which serve for mapping the evolving positioning of incumbent electric utilities on the Italian renewable energy policy as well as their instrumental activity (i.e. lobbying, organised interests and emerging coalitional dynamics). This evidence is complemented by data from primary sources that highlight the structural prominence of these actors in relation to the country's energy supply system. Conversely, to trace changes in investment patterns over time – our proxy for business activity – we compile additional data from primary sources able to capture the actual contribution of incumbent electric utilities on renewable energy capacity and system preparedness at the national level.

3. Twenty years of Italian RES development: from expansion to stagnation (1999–2018)

3.1. Overview of the Italian renewable energy policy: main supporting measures and results

As explained above, the evolution of Italian renewable energy policy in the electricity sector from 1999 to 2018 can be divided into two phases (Table 2). The first phase was characterised by policy expansion and sustained growth of RES, and the second phase instead by policy dismantling and – consequently – a slowdown of the country's energy transition [46–48].

Policy expansion began in 1999 with the introduction of a green certificate scheme [49]. Then, between 2005 and 2007, two new support schemes were implemented: one specifically for PV ('Energy Account', prolonged until 2012 as 'Energy Account' Second, Third and Fourth) and the other for smaller installations that encountered difficulties under the green certificate scheme ('All-Inclusive Tariff') (Table A1). In 2007, the green certificate system was also improved by increasing the duration of the certificates and the generosity of the contribution for RES producers (Table A1). Taken together, these innovations have had a profound impact on the diffusion of RES. Despite unresolved issues related to permitting procedures, Italian renewable energy capacity increased

Table 2

Italian RES policy in the electricity sector from 1999 to 2018: phases, characteristics and role of incumbent electric utilities.

	Phase I (1999–2010)	Phase II (2011–2018)
Policy landscape	Expansion of RES policy Several supporting measures (with generous financial incentives) are implemented for RES deployment	Dismantling of RES policy Several supporting measures implemented in the previous phase are terminated New supporting measures are implemented, but with less generous incentives and more stringent cap (the main goal is to reduce the costs of incentives)
Major trends	After a slow start, since 2007 RES take-off with dramatic growth from 2009 to 2012 Dramatic increase in the overall costs of incentives for RES	Since 2012–13, slow down of RES growth Decrease in the overall costs of incentives for RES
Role of incumbent electric utilities	<i>Business activity:</i> Incumbent electric utilities do not take part in the PV and wind boom <i>Instrumental activity:</i> incumbent electric utilities and their business organisations do not oppose the expansion of RES policy	<i>Business activity:</i> incumbent electric utilities contribution to the Italian RES development continues to be low <i>Instrumental activity:</i> incumbent electric utilities and their business organisations lobby to dismantle the Italian RES policy

Note: please note that the two phases are described highly stylistically to facilitate the comparison among them. For more details see the main text.

Sources: Authors' elaboration.

dramatically between 2008 and 2012 (Fig. 1). This increase was the result of very generous financial incentives granted by the government, in particular under the 'Energy Account' [50,51]. However, with this unprecedented – and unexpected – growth, renewable energy policy began to come under scrutiny. This happened in parallel with the economic downturn that hit the Italian economy in 2011, following the global financial crisis of 2008. Indeed, the combination of generous incentives and problems in the management of the support schemes had led to a dramatic boost, accompanied by a similar increase in the costs of the Italian support schemes: from around EUR 3.6 billion in 2010 to over EUR 14 billion in 2016 [51]. These costs – included in electricity bills – became the target of a political coalition of actors seeking to reverse the previous policy (see below).

The second phase of Italy's renewable energy policy thus began in 2011, when the government led by Mario Monti decided to reduce the incentives for PV and set a stringent annual cap for installed capacity under the Fifth 'Energy Account' (Table A1). Later, in 2012–13, the green certificate system, the 'Energy Account' and the 'All-Inclusive Tariff' were all ended and replaced by a new system (designed by the Ministerial Decree of 6 June 2012) based on a combination of feed-in tariffs and competitive auctions for larger installations (Table A1). To be sure, in this period, the shift towards competitive auctions in the EU countries was also sustained by the European Commission through the reform of its state aid guidelines, which was finalised in 2014 (e.g. [54]). However, the new Italian system provided for less generous financial support and introduced additional administrative procedures to access the incentives (for example a system of 'registers' was introduced for installations below 5 MW). Moreover, in 2014, the Italian government enacted retroactive adjustments to the PV support schemes (Table A1).

The combination of these decisions had a very negative impact on the growth of renewables, which has stalled since 2012–13 (Fig. 1). The new support measures introduced in 2016 – with the Ministerial Decree of 23 June 2016 (Table A1) – did not reverse this trend. As stressed in this decree, issued by the Ministry of Economic Development, the main objective of these measures, which did not cover solar energy, was not to

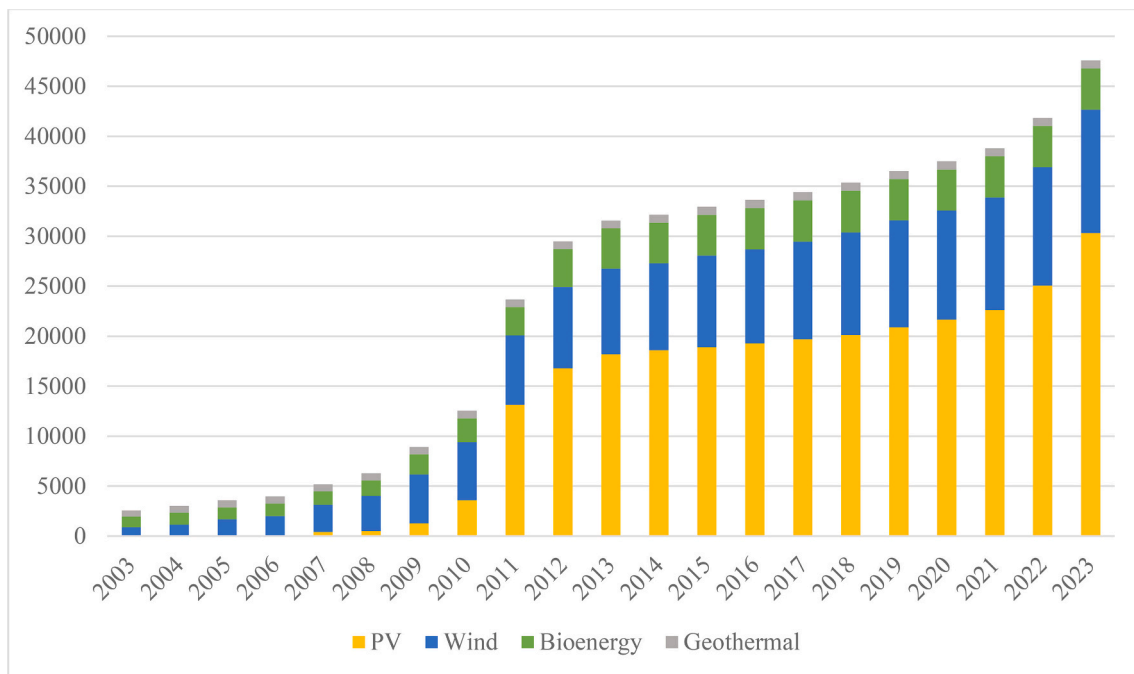


Fig. 1. Renewable energy capacity (excluding hydro) installed in Italy (in MW).

Sources: Authors' elaboration based on GSE [52] and Terna [53]. Note: Hydropower capacity has increased from about 17,000 MW in 2003 to 19,000 MW in 2023.

re-launch renewables but to keep the costs of the Italian support schemes under control. From 2012 to 2016, less than 1000 MW of wind power was allocated through the auctions and registers under the Ministerial Decree of 6 July 2012 (three calls were made, in 2012, 2013 and 2014) [55]. Under the Ministerial Decree of 23 June 2016, only one call for auctions and registers was made, offering around 900 MW of renewable capacity. In total, only 1180 MW were awarded in all auctions from 2012 to 2016, mainly wind (974 MW) and biomass and geothermal energy [56].

3.2. Incumbent electric utilities in the take-off and stagnation of Italian RES development

Following liberalisation and privatisation in the 1990s [57,58], the Italian electricity sector has been dominated by a small group of conventional producers who hold a position of structural prominence within the national electricity sector: ENEL and ENI (the former electricity and gas monopolies, respectively 23 % and 30 % owned by the Italian State) and other large utilities (e.g. Edison, A2A, Iren, ERG, EPH, Sorgenia, Tirreno Power) (Table A2).² These companies supply the majority of the country's electricity and remain primarily focused on fossil fuel-based (thermoelectric) generation (Table A3). ENEL is a partial exception due to its significant hydropower capacity, which is also important for other companies (Table A3). With regard to wind and solar energy, however, these incumbents have played a limited role in the take-off the Italian energy transition (Table A2; see also Table A4). In the early 2000s, these actors contributed to a significant share of the country's wind installed capacity, but later this number rapidly decreased. ENEL's contribution to wind power generation fell from 12.9 % in 2004 to 6.8 % in 2020 (over the same period, installed wind

capacity in Italy increased from 1000 MW to almost 11,000 MW). Edison, which produced around 22 % of Italian wind power in the early 2000s, reduced its share to less than 10 % in 2020 (Table A2). Other large utilities such as ERG and E.On follow a similar trend. And overall, the contribution of incumbents has decreased (or remained constant) during the wind power uptake, while other (smaller) operators provided almost the 70 % of wind power (Table A2).

In the solar sector, the contribution of incumbent electric utilities was even more modest (Table A2). Until 2008 PV capacity was approximately 1500 MW dispersed among several small operators. Although PV capacity increased dramatically in the following years, the role of incumbents in this boom remained marginal. ENEL's contribution to solar power production was 1.2 % in 2012, but it fell to 0.2 % in 2016 and even less in the following years. The contributions of Edison and E.On, which were already very low, have also been further reduced since the beginning of 2010. Italian PV development has been driven by distributed systems and small operators, which in 2016 contributed to 99 % of the electricity generated by this source. Only in the late 2010s did a limited process of concertation take place in the Italian solar industry, driven by the entry into the market of specialised investment funds (e.g. EF Solare Italia, RTR Capital, Sonnedix, Octopus Capital), which acquired and/or developed some utility-scale PV installations. However, small operators still accounted for almost 90 % of PV production in 2020. In that year, ERG was the only incumbent electric utility to be in the top 5 in terms of solar power production (but with only 1.6 %) (Table A2).

Overall, ENEL's installed RES capacity (excluding hydro) increased between 2004 and 2012, but then remained constant until 2019–2020 (Table A4). In 2020, renewable energy (excluding hydro) accounted for 6.1 % of ENEL's total electricity capacity (it was 2.2 % in 2004; Table A3). ENI's renewable capacity has been close to zero for several years (Table A4). Only at the end of the 2010s did this company start to develop renewables in Italy, but only to the extent of 2.3 % of its generation capacity in 2020 (Table A3). Among the other large utilities, Edison stands out, with 10.7 % of its installed capacity covered by RES in 2020 (Table A3). For the others, these figures fluctuate between 3 and 5 % over the same period. The total RES capacity promoted by incumbent

² ENI, ENEL and Edison (controlled by the French company EDF since 2012) are large industrial groups with various activities, including gas exploration and production (ENI, and Edison until 2022) and gas and electricity distribution (ENI, ENEL, Edison). A2A, Iren and Sorgenia are also active in electricity and gas distribution. However, in this paper we only consider the activities and role of all these companies in electricity generation.

electric utilities almost tripled between 2004 and 2012 (from 1176 MW to 3365 MW), while during the stagnation phase (2012–2018) it increased by less than a third (Table A4).

Incumbent electric utilities also showed low business activity in the auction system launched since 2012. In the 2012–2014 auctions (under Ministerial Decree 6 July 2012), ENEL bid only 20 MW and ERG 34 MW (both for onshore wind) [56]. And no incumbents participated in the auctions under Ministerial Decree 23 June 2016 [56].

In sum, only to a limited extent incumbent electric utilities sustained the Italian energy transition through their business activity. Moreover, their role in terms of instrumental activity has also been problematic. In the 2000s, when the first support schemes were enacted by Italian governments, these companies and their main business organisations – i. e. Assoelettrica and Confindustria Energia, which are part of the Confindustria system, the main umbrella organisation representing business interests in Italy – did not lobby against such measures. Renewables were still a small niche market, and their attention was mainly focused on the reforms related to the liberalisation of the electricity sector. Later, however, they adopted a more negative attitude towards renewables. As anticipated, a key factor that slowed down the Italian energy transition was the opposition that renewables faced in the wake of the 2011 economic downturn. At this critical juncture, a political coalition of actors took the lead in lobbying for the dismantling of the Italian renewable energy policy. This coalition was composed of several actors, including incumbent electric utilities, which, alone and/or through their business organisations, opposed the continuation of ambitious measures to accelerate the diffusion of RES in the electricity sector [47] (see also [59,60]). Incumbent electric utilities were still heavily dependent on fossil fuels (Table A3). In addition, the slow recovery from the 2008 economic crisis led to a decline in electricity demand. This drop in demand, together with the increase in RES production, led to overcapacity in conventional thermoelectric plants, causing financial problems to incumbent electric utilities [61], which now perceived RES as a potential threat to their business. To be sure, as in other European countries [62], the dismantling of the Italian renewable energy policy during this period resulted from the interplay of different factors, including the evolving preferences of the government on the issue [47]. In addition, other elements contributed to the stagnation of the Italian energy transition after 2012. In particular, the complexity and length of permitting procedures continued to hamper the development of RES and to reduce the attractiveness of the Italian electricity market for new investors (e.g. [63]; see also [50,51]). However, the position of incumbent electric utilities and their main business organisations has facilitated the dismantling process and contributed to the successive slowdown of the country's energy transition.

4. Relaunching the Italian energy transition: towards a changing role for incumbent electric utilities

The first efforts to relaunch the Italian energy transition were made in 2018–19 in the context of the formulation of the National Energy and Climate Plan (NECP) introduced by Regulation EU 2018/1999. The impetus for this move originated from the 2018 revision of the EU's '2030 Climate and Energy Framework' and the launch of the 'Clean Energy for All Europeans Package' under the European Green Deal agenda. At the national level, the new government appointed in 2018 and led by Giuseppe Conte sustained this agenda, which was also embraced by the subsequent government led by Mario Draghi (2021–2022) [64]. The NECP, approved in December 2019, set a target of a 55 % share of renewables in electricity consumption by 2030 (in 2019, it was around 35 %). To accelerate the deployment of wind and PV, the plan also restarted, in 2019, the auction and registers system with the so-called 'FER 1 Decree', which was further extended in 2021 with Legislative Decree No. 199 of 8 November. Moreover, in parallel with these measures – that resumed the growth of RES (Fig. 1) – with the Ministerial Decree of 28 June 2019, the government launched the Italian

Capacity Market. This mechanism, advocated by the incumbent electric utilities (see below), aimed to find a solution to resource adequacy problems and properly manage the integration of expanding RES generation into the energy system. However, it was also designed to address pressing problems of overcapacity for conventional electricity producers, especially gas generators, which were still financially exposed to the drop in demand since the economic crisis [65] (see also [66]). Later, after the Russian invasion of Ukraine and in line with the new EU 'FIT for 55' package and REPowerEU, the new Italian government led by Giorgia Meloni (appointed in October 2022) revised the 2019 NECP with the 2024 NECP, which sets a new target of 63.4 % of renewable energy in electricity consumption by 2030. This implies an acceleration of the Italian energy transition (Table 3); 16 GW and 49 GW of new wind and PV capacity respectively should be installed to reach the new target, in particular by increasing the penetration of utility-scale installations. Against this background, the positions of incumbent electric utilities have evolved since 2018–19, both in terms of instrumental and business activity, with a shift from resistance to growing support for the Italian energy transition.

4.1. Instrumental activity: organised interests, lobbying and coalition building for RES development

4.1.1. The changing landscape of organised interests

The landscape of organised interests in energy policy has changed significantly in recent years (Fig. 2). This change has taken place during the two phases described above and, in particular since the beginning of the 2010s, despite the slowdown of the Italian energy transition. The result of this shift has been a gradual increase in the presence of renewables interests in the energy policy field, as new organisations have been created to represent such interests and traditional fossil fuel business organisations – which saw the participation of incumbent electric utilities (Table A5) – have merged with new green ones (Fig. 2).

After the creation of the Associazione Nazionale Energia del Vento (ANEV) – bringing together operators in the wind sectors – an important step towards consolidating the representation of the renewable energy business was taken in 2013, when Assosolare and APER (Associazione Produttori Energia da Fonti Rinnovabili) merged to form Assorinnovabili (Fig. 2), which became the main organisation representing the Italian renewable energy sector. This move followed the period of dismantling illustrated above, when renewable energy interests were sidelined by more traditional fossil fuel coalitions that included business organisations such as Assoelettrica and Confindustria Energia. However, the most important innovation occurred in 2017, when the largest Italian interest group for the electricity sector, Elettricità Futura (EF), was created through the merger of Assoelettrica and Assorinnovabili (Fig. 2), which were respectively the traditional fossil fuel electricity and renewable energy arms of the Confindustria system. This development was important to ensure that the “world of renewables” became “an

Table 3
NECP 2024 targets and expected increased in Italian RES capacity by 2030 (in MW).

	NECP 2024 target by 2030	Variation (2023–2030)
Solar PV	79,173	+48,854
Wind	28,140**	+15,805
Geothermal	1000	+183
Bioenergy	3240	–866
Innovative RES*	5000	+5000
Total	111,553	+68,976

Notes: Hydropower capacity is only expected to increase from 19,265 MW in 2022 to 19,410 MW in 2030.

* Innovative RES technologies include floating offshore wind, floating PV, advanced geothermal energy, marine energy and concentrated solar power.

** Of which 2100 MW of offshore wind.

Sources: Authors' elaboration based on NECP [67] and data in Fig. 1.

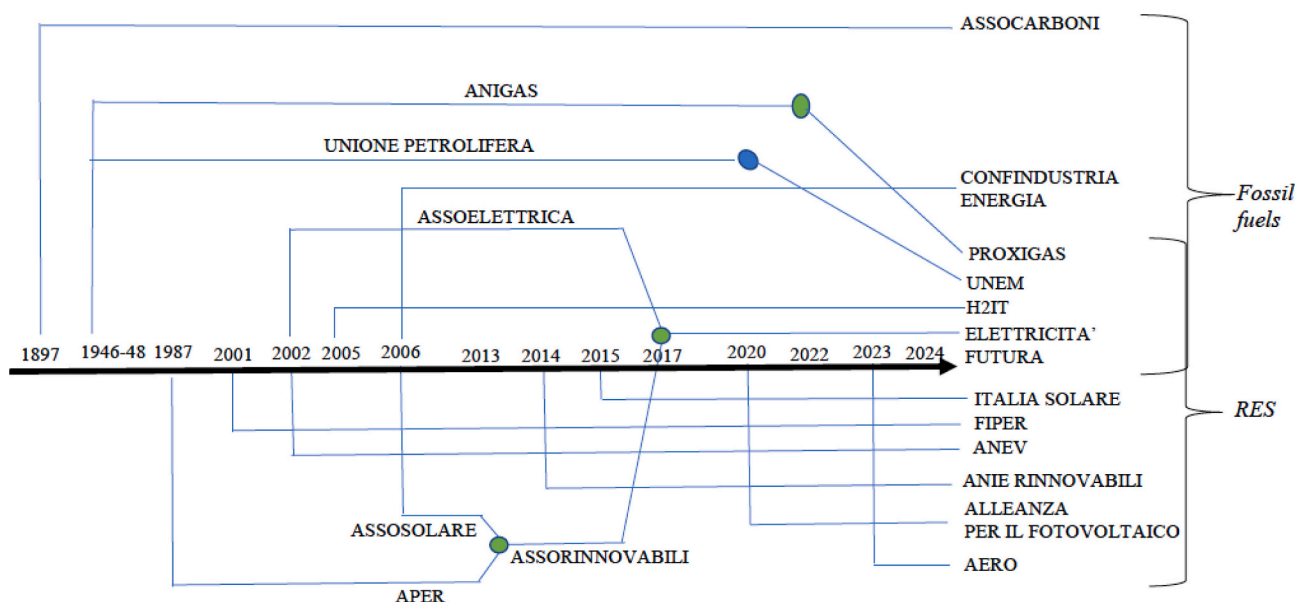


Fig. 2. The changing landscape of organised interests in the Italian energy transition.

Notes: green circles = merger of two associations; blue circles = transformation of the association. In 2020, Unione Petrolifera, the traditional association for the oil industry, becomes UNEM to also represent the interests of e-fuels and biofuels for mobility. In 2022, ANIGAS, the traditional association for the natural gas industry, merged with IGAS, the association for green gases, to form PROXIGAS. (For interpretation of the references to color in this figure legend, the reader is referred to the web version of this article.)

Sources: Authors' elaboration.

integral part of the Italian energy system” and to increase the potential influence of the electricity business in the context of the energy transition [68]. EF brings together operators representing around 70 % of the national electricity supply, including the incumbent electric utilities (Table A5). EF joined Confindustria Energia, but also Coordinamento Free, a green umbrella organisation founded in 2012, which includes business groups but also several Italian environmental organisations, such as Legambiente and the Kyoto Club (ANEV and Italia Solare, focused on the solar energy business and created in 2015 outside the Confindustria system, are also members of Coordinamento Free). Later, in 2020, a new association for the solar sector, Alleanza per il Fotovoltaico, was founded, bringing together several new players entering the Italian market. Finally, in 2023, AERO (Associazione delle Energie Rinnovabili Offshore) was created as a business association focused on offshore wind. For the incumbent electric utilities, however, the main reference associations remained EF and ANEV (Table A5). Especially EF, anchored in the Confindustria system, has a close access to the decision-making venues; it is a core insider in the Italian energy policy and has become a key actor in the country’s energy transition [64].

4.1.2. Incumbent electric utilities’ mobilization for RES development

As shown, in the critical period after the 2008 crisis, the positions of incumbent electric utilities were not supportive of the Italian energy transition. These positions started to evolve in the wake of the formulation of the 2019 NECP, and they continued to evolve in line with the new initiatives promoted between 2021 and 2024. During this period, the Italian government discussed and adopted two important legislative frameworks: Legislative Decree No. 199 of 8 November 2021, aimed at implementing the EU Renewable Energy Directive 2018/2001 (also known as ‘RED II Decree’); and Legislative Decree No. 181 of 9 December 2023, the so-called ‘Energy Security Decree’, issued after the start of the war in Ukraine. In addition, the government formulated the revision of the NECP in 2024. These initiatives resulted in important policy developments for the Italian RES electricity sector, including the new supporting measures for RES installations (see Table A6). And overall, in all these important passages, incumbent electric utilities signalled their growing support for the Italian energy transition, both

directly and through their main business organisations, in particular EF, but also ANEV. To map these evolving positions, we examined their formal statements in the parliamentary hearings related to the above-mentioned laws and plans (Table 4). We carried out an in-depth

Table 4 Major plans and legislative frameworks for the Italian energy transition (2019–2024).

Plans/legislative frameworks	Year	Key issues discussed in the area of renewable energy policy
NECP 2019	2019	<ul style="list-style-type: none"> Targets for renewable energy resources in the national electricity mix Support schemes for renewable energy (Auctions, Power Purchase Agreements) Streamline of permitting procedures for renewable energy installations (e.g. ‘Suitable areas’)
‘RED II Decree’	2021	<ul style="list-style-type: none"> Capacity market Support schemes for renewable energy (Auctions, Power Purchase Agreements) Streamline of permitting procedures for renewable energy installations (e.g. ‘Suitable areas’) Regulatory framework for Renewable Energy Communities (RECs)
‘Energy Security Decree’	2023	<ul style="list-style-type: none"> Support schemes for storage systems Regulatory framework for favouring energy-intensive industries’ self-production of renewable energy Incentives for regional and local authorities for renewable energy installations Regulatory framework for off-shore wind supply chain
NECP 2024	2024	<ul style="list-style-type: none"> Targets for renewable energy resources in the national electricity mix Support schemes for renewable energy (Auctions, Power Purchase Agreements, Contracts for Differences) and storage systems Streamline of permitting procedures for renewable energy installations (e.g. ‘Suitable areas’, Renewable Energy Consolidated Act)

Sources: Authors’ elaboration.

qualitative content analysis, focusing on the main renewable energy policy issues related to each of these laws/plans, in order to extract the positions of incumbent electric utilities and their business organisations (Table 4; see Table A7 for references). We also drew on other primary sources to highlight relevant coalition dynamics (see below).

All incumbent electric utilities supported the government's objectives set out in the 2019 NECP and underlined their intention to contribute to their achievement [A2A 2019, EDISON 2019, ENEL 2019, ENI 2019, ERG 2019, IREN 2019, SORGENIA 2019]. They also supported the introduction of new support schemes for utility-scale RES installations, such as auctions and Power Purchase Agreements (PPAs), and expressed the need to streamline permitting and authorisation procedures to accelerate the deployment of RES installations, a long-standing issue limiting RES development in the country. Similarly, incumbent electric utilities supported the capacity market initiative, stressing its importance in enabling a rapid transition towards the new renewables' targets. At the same time, all these actors stressed the importance of natural gas and combined cycle power plants in allowing the Italian energy transition, envisaging a system based on a combination of renewables and this fossil fuel. This position, which suggests the emergence of 'double strategies' [18], was particularly underlined by ENI, who presented natural gas as a real 'enabler' of the Italian energy transition [ENI 2019]. EF was also very supportive of the new NECP targets and expressed the need for a rapid start of the new support schemes (the 'FER 1 Decree' was approved on July 2019; see Table A6), the capacity market and the reform of the regulatory framework for the authorisation and permitting of new RES installations [EF 2019]. ANEV, on the other hand, lobbied for an expansion of the targets set by the government and called for more ambitious goals [ANEV 2019]. This business association – which unlike EF does not include ENI and other incumbent electric utilities (Table A5) – also called for a reduction in the role of natural gas as an enabler of the energy transition, pointing to other technological solutions such as electrochemical storage [ANEV 2019].

This growing support for the Italian energy transition was confirmed in the context of the 'RED II Decree' and the 'Energy Security Decree', which, as explained, resulted in major policy developments for the RES sector (Table A6). In the case of the 'RED II Decree', once again, incumbent electric utilities lobbied for a rapid reform of the regulatory framework regarding permitting procedures, a smooth implementation of Renewable Energy Communities (RECs) and the launch of support schemes for renewable energy and storage systems [A2A 2021, EDISON 2021, ENEL 2021, ENI 2021, ERG 2021]. EF called for expanding the areas suitable for PV installations, including in agricultural lands, and for enhancing the opportunities for large consumers to develop RECs [EF 2021]. A coalition between EF, Confindustria, ANIE Rinnovabili and Italia Solare has been formed to lobby for further simplification for allowing the diffusion of solar energy in agricultural lands [EF 2022] [69]. Through Cordinamento Free, EF also played an important role as a focal point for green business associations and leading environmental organisations such as Legambiente and Greenpeace. As an insider, EF acted as a hub for amplifying the voices of environmental and other climate-focused organisations. ANEV has also forged coalitions with environmental organisations, implementing joint protocols to promote the deployment of wind installations in collaboration with Legambiente, WWF and Greenpeace, and issuing a joint manifesto for offshore wind with Legambiente, Greenpeace and the Kyoto Club [70].

In the case of the 'Energy Security Decree', incumbent electric utilities sustained the government's efforts to establish a new regulatory framework to favour the self-production of renewable energy by energy-intensive industries and to promote offshore wind [EDISON 2023, ENEL 2023, ERG 2023, IREN 2023]. In addition, these actors, together with EF, successfully lobbied to prevent the introduction of a measure that would have required renewable energy producers to pay a new tax – 10 euros per 1 kW installed – on new RES installations [EDISON 2023, EF 2023, ENEL 2023, ERG 2023, IREN 2023]. To be sure, the lobbying

efforts of incumbent electric utilities have not always been successful. Despite their opposition, in May 2024, the Meloni government passed a new law, the so-called 'Agricultural Decree', that limited the possibilities for developing solar PV installations in some agricultural lands (e.g. [71]). This measure – which reversed previous decisions on 'suitable areas' taken by the Draghi government with the 'RED II Decree' (see Table A6) – was supported by powerful agribusiness organisations with privileged links to the new Italian government [72].

Finally, in the case of NECP 2024, EF and ANEV sustained the launch of new support schemes for renewables (new rounds of auctions, PPAs, Contracts for Differences) and storage systems [ANEV 2024, EF 2024]. They also continued to support all efforts to improve the regulatory framework to facilitate permitting procedures, in particular for utility-scale RES installations, through the rapid implementation of the so-called 'Suitable Areas Decree' and the Renewable Energy Consolidated Act ('Testo Unico Rinnovabili'), which were both approved in 2024, along with the new RES support schemes enacted with the so-called 'FER 2 Decree' and 'FER X Decree' (Table A6). EF, however, went even further. It strongly criticised the 2024 NECP for its limited ambition in terms of renewable energy targets. It proposed to increase these targets from 73 % to 84 % of renewables in the electricity mix by 2030, suggesting that such a target was largely achievable for the country [EF 2024]. This vision promoted by EF was (again) shared by several environmental groups, notably Legambiente and Cordinamento Free, but it was not embraced by the Meloni government.

4.2. Business activity: promoting system preparedness and RES development

As explained, to prepare the electricity system for a large penetration of renewables, the Italian government introduced a capacity market in 2019. Its main mechanism entails the announcement of capacity auctions where – on a voluntary basis – market operators offer their production capacity to a centralised buyer, Terna (the Italian Transmission System Operator) which procures the necessary quantity of resources to guarantee the adequacy of the electricity system. In accordance with the principle of technological neutrality the auctions are open to all technologies and existing and new power generation plants (also those undergoing approval, as long as they respect certain timeframes), as well as cross-border capacity and storage capacity.³

Terna held the first two auctions in November 2019 for the delivery years 2022 and 2023, an auction in February 2022 for the delivery year 2024 and the auction in July 2024 for the delivery year 2025. Incumbent electric utilities – and chiefly ENEL, A2A, ENI and Edison – have played a major role in the implementation of the capacity market since the first auction, covering the 90 % of the total allocated capacity (Fig. 3; see also Table A8). More than 85 % of this allocated capacity covered existing thermoelectric capacity. As highlighted by Ragosa et al. [65], the Italian capacity market was introduced also to sustain major conventional electricity producers by providing "financial relief" for existing power plants (p. 7). However, incumbent utilities are also leading in terms of new storage capacity. In the 2022 and 2024 auctions, Terna allocated 1210 MW of new capacity for electrochemical storage technologies, mainly provided by ENEL (86.7 %), EPH (6 %), A2A (1.3 %), ERG (1 %) and Edison (0.6 %) [73,74].

In parallel with their key contribution to the implementation of the capacity market and the deployment of new storage technologies, incumbent electric utilities have increased their involvement in the development of RES. As mentioned above, their participation in the Italian auction system was minimal: they bid for only 54 MW from 2012 to 2019. With the launch of the new auctions under the 'FER 1 Decree',

³ In line with the provisions of Regulation UE 2019/943 the most polluting generators have been excluded from capacity remuneration, in particular coal-fired power plants.

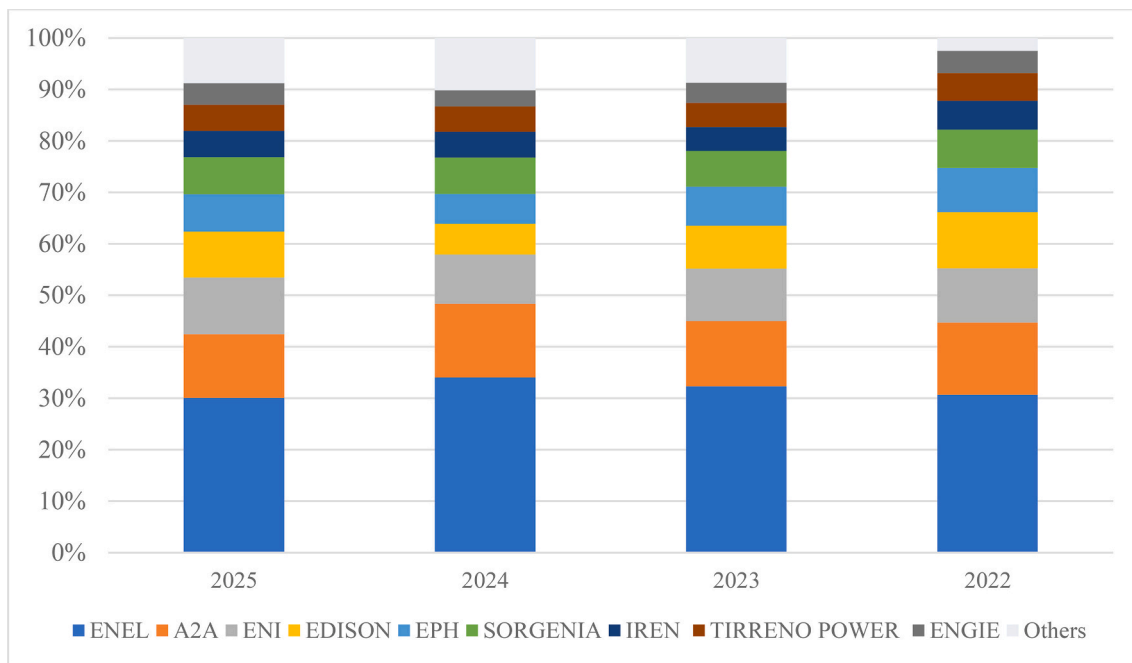


Fig. 3. Major capacity providers for the Italian capacity market (incumbent electric utilities share of the total MW assigned by the auctions with delivery period 2022–2025).

Source: Authors' elaboration from Terna [73–76].

the situation has improved: in four years (2020–2024) they bid for more than 460 MW (Table 5). Since 2020, ENI has also participated in this system for the first time (Table 5). Among the other incumbents, ERG confirmed its pioneering role in the wind sector (with 239 MW), while Engie bid for PV capacity (Table 5).

Overall, however, incumbent electric utilities have significantly increased their installed RES capacity since 2019: from 2012 to 2018 the growth was 961 MW (+22 %), but from 2019 to 2023 it was 2917 MW (+65 %) (Table A4). ENI, which was a latecomer to the RES sector, went from 67 MW to 823 MW between 2019 and 2023. It is worth noting that in 2021, a new ENI utility company – Plenitude – was created, focusing on the downstream gas and electricity business and the expansion of RES generation. ENEL's capacity additions have been more incremental (although it remains the larger Italian renewables company). A2A almost doubles its renewable capacity between 2019 and 2023. Over the same period, Iren triples its capacity, and Sorgenia and EPH move from zero to 370 MW and 280 MW respectively. In all cases, the share of RES in their total generation capacity increased (Table A3). To be sure, except for Edison (17.6 %), this share remained relatively low compared to their thermoelectric capacity (Table A3). However, with the

Table 5

Incumbent electric utilities participation in the Italian auctions under the FER 1 Decree: bid for wind and PV capacities (2020–2024).

Auctions' calls	Year	Company (capacity in MW, technology)	Total (in MW)
1–4	2020	ENEL (15.3 MW, Wind) ENI (4 MW, PV)	29.9
5–7	2021	ENGIE (10.6 MW, PV) ENEL (69.1 MW, PV) ERG (239 MW Wind) ENGIE (19.8 MW, PV) EDISON (1 MW, PV)	328.9
8–9	2022	ERG (75 MW Wind)	75
10–14	2023–24	ENI (29 MW, PV) ENGIE (2 MW, PV)	31
		TOTAL (in MW)	464.8

Sources: Authors' elaboration based on the data provided by GSE [56].

exception of A2A and Iren – which saw a significant reduction in hydroelectric capacity – the increase in the share of RES capacity was accompanied by a decrease in the share of thermoelectric capacity for all other incumbents (Table A3). This trend, again excluding A2A and Iren (along with EPH), has been mirrored by a reduction in their thermoelectric installed capacity (Table A9). Particularly evident in the case of ENEL, this overall trend has led to a 24 % decline in total fossil fuel generation assets among incumbent electric utilities between 2012 and 2023 (from 56,759 to 43,141 MW; Table A9). At the same time, their overall contribution to the country's wind and PV generation has increased; in 2022–23, these companies were among the largest producers of both sources (Table A2). As a result, their contribution as a percentage of the total Italian installed RES capacity increased from 11 to 12 % in the 2012–2020 period to 15 % in 2023 (Fig. 4). These figures are lower than in the early stages of Italy's energy transition, when the contribution of the incumbent electric utilities was more prominent and the RES market was still a niche market, but they clearly indicate a change in their business activity compared to the previous years of stagnation.

Furthermore, this trend towards a growing involvement of incumbent electric utilities in the Italian energy transition is confirmed by their investment plans for the coming years (Table 6).

Taken together, these plans, if fully implemented, would lead to an increase in national RES capacity of up to 20.3 GW by 2030 (Table 6); this represents a tripling of the 7.2 GW of capacity installed by incumbent utilities in 2023 (see Table A4). This new capacity would cover approximately the 29 % of the 2030 targets set with 2024 NCEP. The contribution of incumbent electric utilities to Italy's RES capacity is therefore expected to increase from 15 % in 2023 to 23 % in 2030 (Fig. 4).

5. Discussion and conclusions

The role of incumbents in the energy transition has evolved in parallel with the transformation of the transition process itself. Only recently have scholars begun to offer more complex pictures of the positioning and strategies of these actors, beyond the simple image of

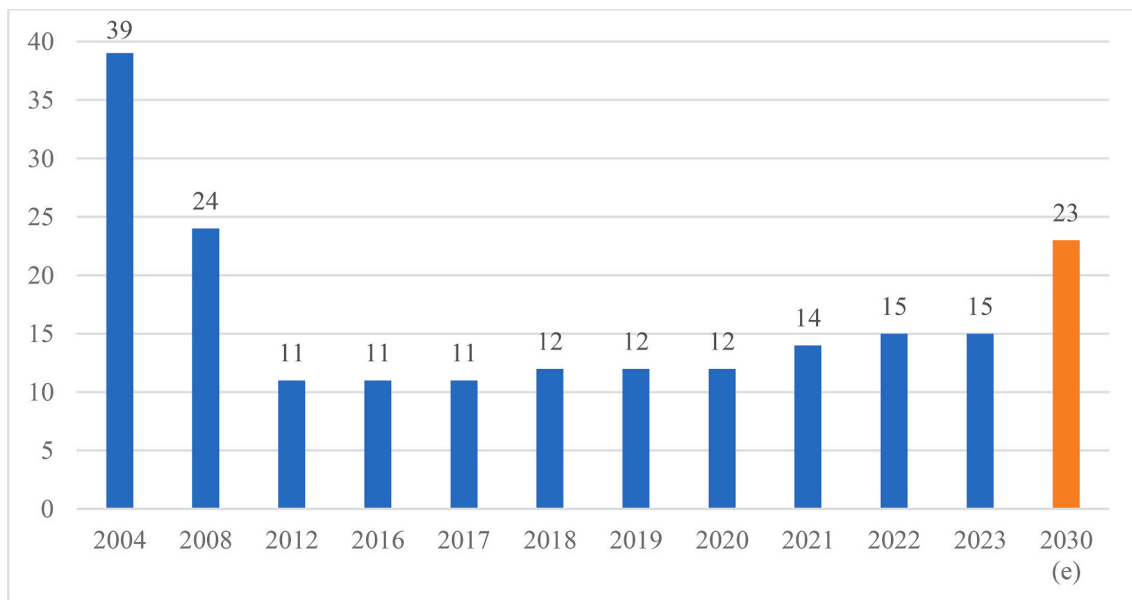


Fig. 4. Contribution of incumbent electric utilities (%) to Italy's installed RES capacity (excluding hydro).

Sources: Authors' elaboration based on the data presented in Fig. 1 and Table A4. The expected data for 2030 have been obtained by adding to the Italian RES capacity in 2023 the capacity increase planned in the 2024 NECP and considering the data provided in Table A4 and Table 6.

Table 6

Incumbent electric utilities planned contributions to Italian RES development.

Company	Planned RES capacity addition (excluding hydro) in the next years
A2A	3.6 GW by 2035
EDISON	3 GW by 2030
ENEL	2 GW by 2027
ENGIE	2 GW by 2030
ENI	5 GW by 2030*
ERG	4.5 GW by 2026
IREN	2 GW by 2030
Total (by 2030)**	20.3 GW

* For this data, we considered the global target set by Plenitude (15 GW by 2030) and then divided this target by three, as in 2023 Italy represented about one third of the company's total installed renewable capacity.

** For the total by 2030, we considered 1.8 GW by A2A by 2030.

Sources: Authors' calculations based on companies' industrial plans and companies websites.

villains or opponents of renewable energy policy. With our framework, we aimed to contribute to this debate by highlighting how incumbent electric utilities can adapt their strategies to resist or support the energy transition by activating different resources as business and political agents. To validate this framework, we applied it to the Italian case, filling a gap in the literature as there are no studies on the role of incumbent electric utilities in the energy transition in this country. We have traced their changing positions over time, showing a recent shift towards a more supportive stance towards the country's energy transition, after a period in which their scarce support contributed to the stagnation of RES development. To be sure, this shift is incremental, and thermoelectric capacity – although in both relative and absolute decline – remains a core component of their generation portfolio. Moreover, the empirical analysis of their formal inputs into the policy process has further shown that these actors continue to advocate for maintaining an important role for natural gas in the country's electricity mix. This view

– which has been promoted by some large utilities and by ENI (the major Italian gas company) – represents a risk for the country's decarbonization goals as well as for its energy security.⁴ Nevertheless, the overall positioning of the incumbent electric utilities in Italy cannot be equated to a simple strategy of 'trasformismo' (e.g. [31,32]), as their contribution to RES development has increased not only in terms of installed capacity or system preparedness, but also in terms of organised interests, lobbying and coalition building. Indeed, lobbying to improve the regulatory framework to accelerate the deployment of renewables, to increase RES targets, or to oppose stricter limits on solar installations on agricultural lands, contrasts with an approach aimed at simply maintaining the status quo. This latter trend also represents a significant innovation compared to the previous phase of policy dismantling, when incumbent electric utilities resistance contributed to slow down the transition. Important policy drivers for this shift have been the introduction of the capacity market and the increased focus on utility-scale RES installations and instruments such as PPAs and Contracts for Difference. These developments are in line with a transition pattern of reconfiguration of the Italian electricity system in which major companies that dominate conventional electricity production (slowly) take part in a process that can trigger further changes [29]. At the same time, while our simple resistance/support dichotomy has proven useful in mapping wider changes in incumbents' approaches to the Italian energy transition, it is also important to account for the presence of political 'double strategies' ([18], p. 11) aimed at supporting RES development while simultaneously preserving the profitability of incumbents' non-sustainable business areas, for example by negotiating compensation for legacy technologies. Advocating for the introduction of the capacity market and maintaining natural gas as a transition fuel – particularly by ENI – can be interpreted as manifestations of such a double strategy in the Italian context. Thus, in arguing that incumbent electric utilities have adopted a more supportive stance towards the Italian energy transition, we do not intend to obscure this potential strategic ambivalence. Overall, however, the recent innovations highlighted in the article may increase the resilience of Italian renewable energy policy, although

⁴ Natural gas accounts for 45 % of Italy's electricity production and the country is largely dependent on imports for its gas supply.

it is still too early to assess whether the country will be able to meet its 2030 targets or whether all the incumbents will effectively implement their investment plans for RES.

CRedit authorship contribution statement

Andrea Prontera: Writing – original draft, Supervision, Methodology, Investigation, Data curation, Conceptualization. **Paola Arrigoni:** Writing – original draft, Investigation, Data curation. **Renata Lizzi:** Project administration, Investigation, Funding acquisition, Data curation. **Alessandro Rubino:** Writing – original draft, Investigation, Data curation.

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Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.erss.2025.104452>.

Data availability

Data will be made available on request.

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