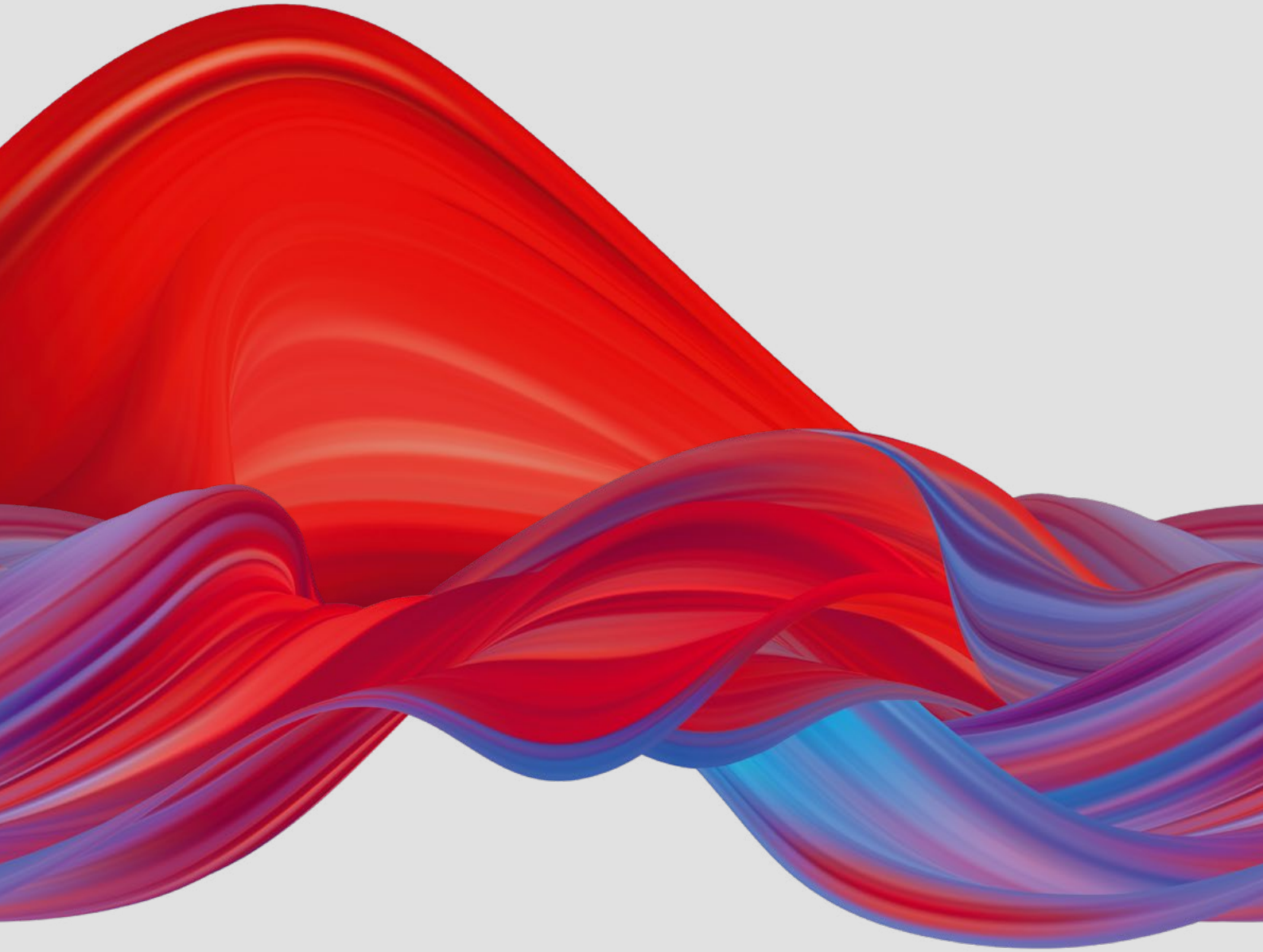
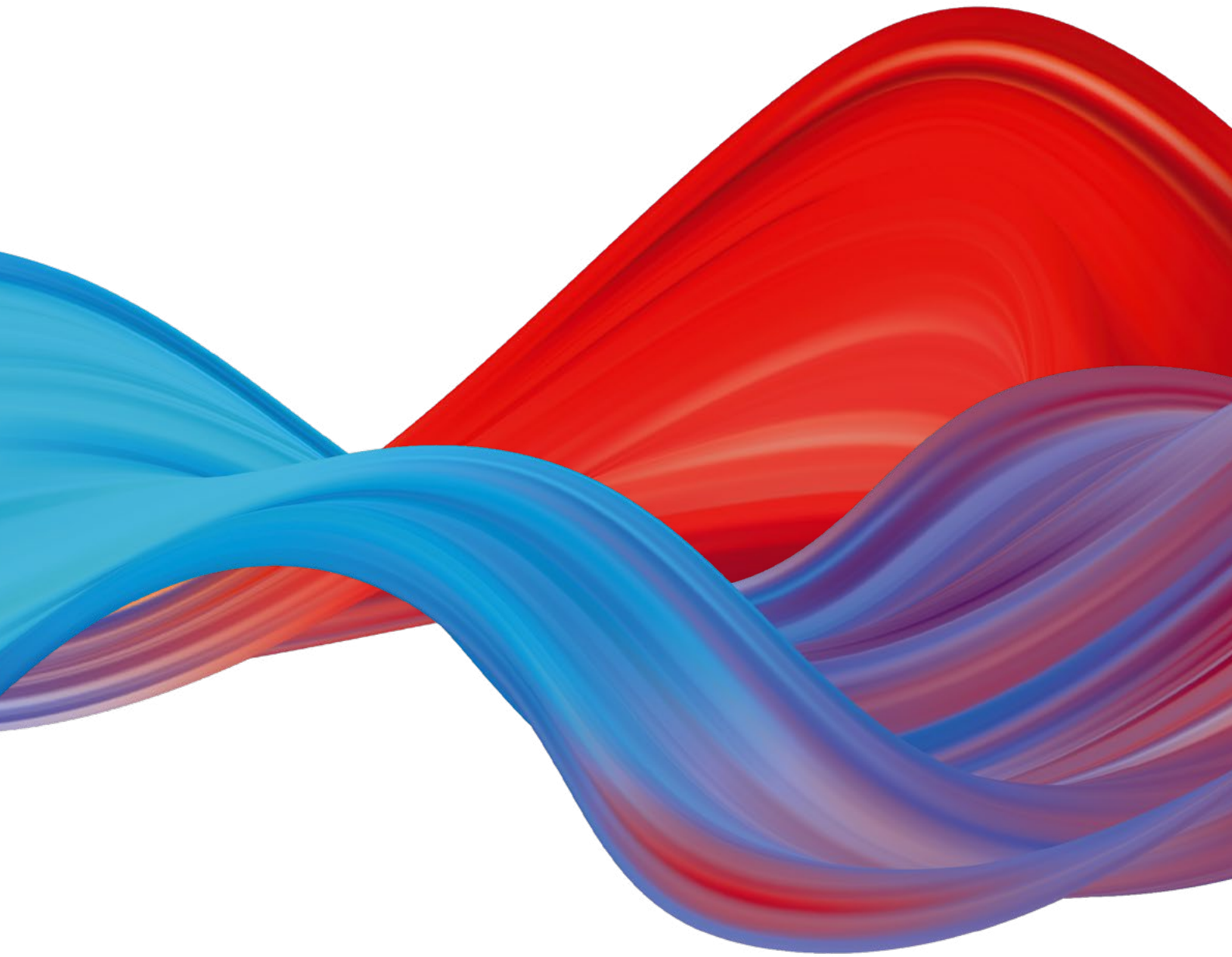
2023
DEVELOPMENT PLAN
Renewable Development and Connection activities



Terna
Driving Energy



Driving Energy

We are Europe's largest independent electricity transmission system operator.

We are engaged in **driving and enabling the ecological transition** in order to create a new development model based on renewable sources and respect for the environment.

Sustainability, innovation and distinctive competencies are behind everything we do, with the aim of providing the generations to come with a clean, accessible and emission-free energy future.

We have the major responsibility for providing the country with energy, ensuring **security, quality and cost-effectiveness over time**.

We manage Italy's high-voltage electricity transmission grid, one of the most modern and technologically advanced in Europe, which we are working to **develop and integrate with the European grid**, guaranteeing secure and **equal access to all grid users**.

We are developing **Non-regulated Activities** and new business opportunities, making our expertise and experience available in Italy and overseas.

Terna
Driving Energy

Contents

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Summary

Summary

1

European climate targets (EU Regulation no. 2021/1119) set the climate neutrality target ("net zero") by 2050, with an intermediate reduction of greenhouse gas (GHG) emissions of at least 55% by 2030 compared to 1990 levels.

The decarbonisation targets defined in the new EU legislative package "Fit for 55" impose new challenges on the electricity sector. By 2030 it will be necessary to install approximately 70 GW of new renewable capacity to achieve at least 65% of penetration of the RES share in gross electricity consumption.

In this scenario, the market operators would seem to respond with significant investment plans concentrated mainly in the South of Italy and the Islands, zones with high availability of primary energy resources. The level of renewable plant development initiatives proposed by private investors is very encouraging: at 31 December 2022 Terna has received requests for connection to the National Transmission Grid for more than 311 GW of which approximately 74.7 GW of onshore wind power, 103.7 GW of offshore wind power and 123.7 GW of photovoltaic power.

The analysis of the evolution of renewable connections and the monitoring of connection requests are of particular significance for the purposes of identifying points of attention and planning the development of the infrastructures and of new instruments that make it possible to achieve the objectives in the most efficient way.

The trend of requests for connection to the NTG is much higher than the targets set by the FF55 scenario, with a different geographical distribution and a different technological mix compared to that prefigured in the said scenario. To achieve the target it would be sufficient to implement 20% of the initiatives presented as of today. The geographical distribution of the requests for RES plants, often localised in already congested areas, will require therefore the performance of further grid development works aimed at enabling the full integration of these sources into the grid.

However, the zonal distribution of the connection requests differs from the installed RES capacity provided for in the scenario at 2030, in terms of both specific quantities and technological mix. In detail, we can note two themes of opposite natures: for the zones of the South and Islands (Sicily and Sardinia) the connection requests present a nominal power of up to 5 times more than the forecast of installed capacity at 2030; in the North area instead the currently active connection requests are in line with the installed power provided for in the energy scenario.

In the 2023 Development Plan, new infrastructural developments have been planned in order to integrate RES contingents provided for in the FF55 reference scenario. The effective implementation of the connection requests, which differ significantly from this scenario, could determine a considerable increase in congestions on certain portions of the grid, with the consequent need for additional works to strengthen the national transmission grid and consequent use of Storage plants in order to “accompany” the development of the grid.

The investments in RES, to be implemented, need a simplification of the authorisation processes and fixed-term market rules that would enable efficient financing.

The effort to simplify the authorisation processes is crucial, in order to facilitate the decarbonisation of the production facilities and the development and integration of RES. On 15 December 2021 Italian Legislative Decree 199/2021 came into force, transposing the RED II Directive. Italian Legislative Decree 199/2021 which provides for the issue of a Ministerial Decree to define the criteria for identifying suitable/unsuitable areas for the installation of new RES plants and for distributing power between Regions/Provinces. After this Decree is issued, the single Regions will apply the criteria defined at the ministerial level for mapping the areas suitable for RES, areas in which the initiatives for the development of new plants will be able to benefit from an acceleration of the Authorisation Process.

On this point, Terna has carried out an analysis to assess the presence of legislative restrictions in the areas of localisation in which requests for onshore connection have been made. The objective of the study is to understand the “quality” of the total portfolio of initiatives with respect the territorial restrictions present even if only in a necessarily simplified view.

1. The analysis conducted highlights three particularly significant phenomena: the portfolio of initiatives that have requested a connection solution, and in particular for photovoltaic power, does not overlap significantly with the restricted areas. This testifies to an attention of the market to the aspects of authorisability of the initiatives that determines a good premise as regards achieving the targets,
2. Some specific areas of the south and the islands have a particularly significant density of initiatives with a consequent energy density per km2 that requires particular attention as regards the use of both the territory and the HV network infrastructure for the collection and transport of the related energy,
3. An assessment by macro-area (region/province) of the achievement of the energy scenario provided for would be compatible with the portfolio of initiatives presented that do not fall within precisely restricted areas, with a limited percentage “occupation” of the territory and without requiring strong energy concentrations per km^2 unless this is by choice (i.e., areas with industrial vocation and already infrastructured). This last aspect could make the system of suitable areas even more effective for achieving the targets set.

In this context, it is of primary importance to follow the evolution of these phenomena to be able to assess and plan opportunely the electricity grid development activities, especially in relation to the possible critical issues that would emerge from a very different distribution of RES from what is assumed in the FF55 energy scenario, described in the 2022 Scenarios Description Document[1] drawn up jointly by Terna and Snam (see Dossier "Status of the Electricity System"). It is clear, in fact, that fulfilment of the connection requests received could entail a different distribution of renewables, making potentially necessary further unplanned actions and/or a change in the priorities of those identified.

Among the different technologies that characterise the evolution of the connection requests that Terna receives on the HV grid, **offshore wind** is worth a more in-depth examination, as it is a technology that only recently has been developing in Italy, with very high figures for connection requests, more than 12 times (103.7 GW requested up to 31 December 2022) what was provided for in the energy scenario identified (8.5 GW of offshore wind power plants installed at 2030). The reasons for this development are essentially an improvement of the technology, which is reaching a maturity such as to make it implementable also in applications in which the great depth of the seabed would constitute a limit.

For these plants, the connection solutions present greater technical complexity owing both to the dimensions of the single initiatives and to their concentration in already heavily congested areas. In addition, the connection requests for this type of plant are characterised by significant power so it is fundamental to assess the problems associated with possible sudden losses of power injections given the unpredictability of the primary source, which make the choice of the connection scheme crucial.

In order to collect useful information about the technologies available, development prospects and best practices in the European context, Terna has conducted an extensive technological survey involving suppliers and other TSOs with more experience in formulating connection solutions for offshore wind power plants of a significant size and in their safe management.

At the end of 2022 Terna released connection solutions for approximately 73.4 GW putting into practice a specific grid planning methodology for offshore wind power. In particular, the solutions were issued after conducting grid studies aggregating the demand to avoid inefficiencies in the solutions and limiting grid reinforcements which had been given as a condition for the connection to facilitate the authorisation process.

It seems therefore essential to carefully monitor the evolution of these events in order to anticipate and possibly make appropriate updates to the planning and development of the works and the essential infrastructure projects for a full and secure integration of renewable sources into the electricity system.

In the gradual search for solutions aimed at promoting simplicity and efficiency for providing the service and taking into account the future developments of the electricity system, an important change last year was the new connection standard at the **36 kV voltage level**.

The new standard connection solution at 36 kV was identified for production plants to be connected to the NTG with power of up to 100 MW. This solution makes it possible to provide the connection at a voltage level more adequate for the average size of the production plants, releasing them at the same time from the authorisation complexities brought into play by construction at 150-132 kV. The voltage is in fact raised from 36 kV to higher levels by Terna, no longer by the producers and this makes it possible to rationalise and simplify the technical solutions adopted.

[1] For more details, consult the 2022 Scenarios Description Document.

In particular, the main advantages of the new 36 kV connection standard do not regard only, as said, the **rationalisation** of the technical solutions for the connection, but also the **reduction of land use** and therefore a potential **greater territorial acceptability** deriving from the lower environmental impact of the 36 kV connection solution, because it enables the sharing of a single EHV/36 kV or HV/36 kV transformer among several applicants. This leads therefore to **better management of the connection procedures** for production plants powered by renewable sources, because the 36 kV connection solutions enable more efficient dimensioning of the grid plant for the connection commensurate with the effective size of the plants, and the consequent **optimisation of the total costs** for the electricity system.

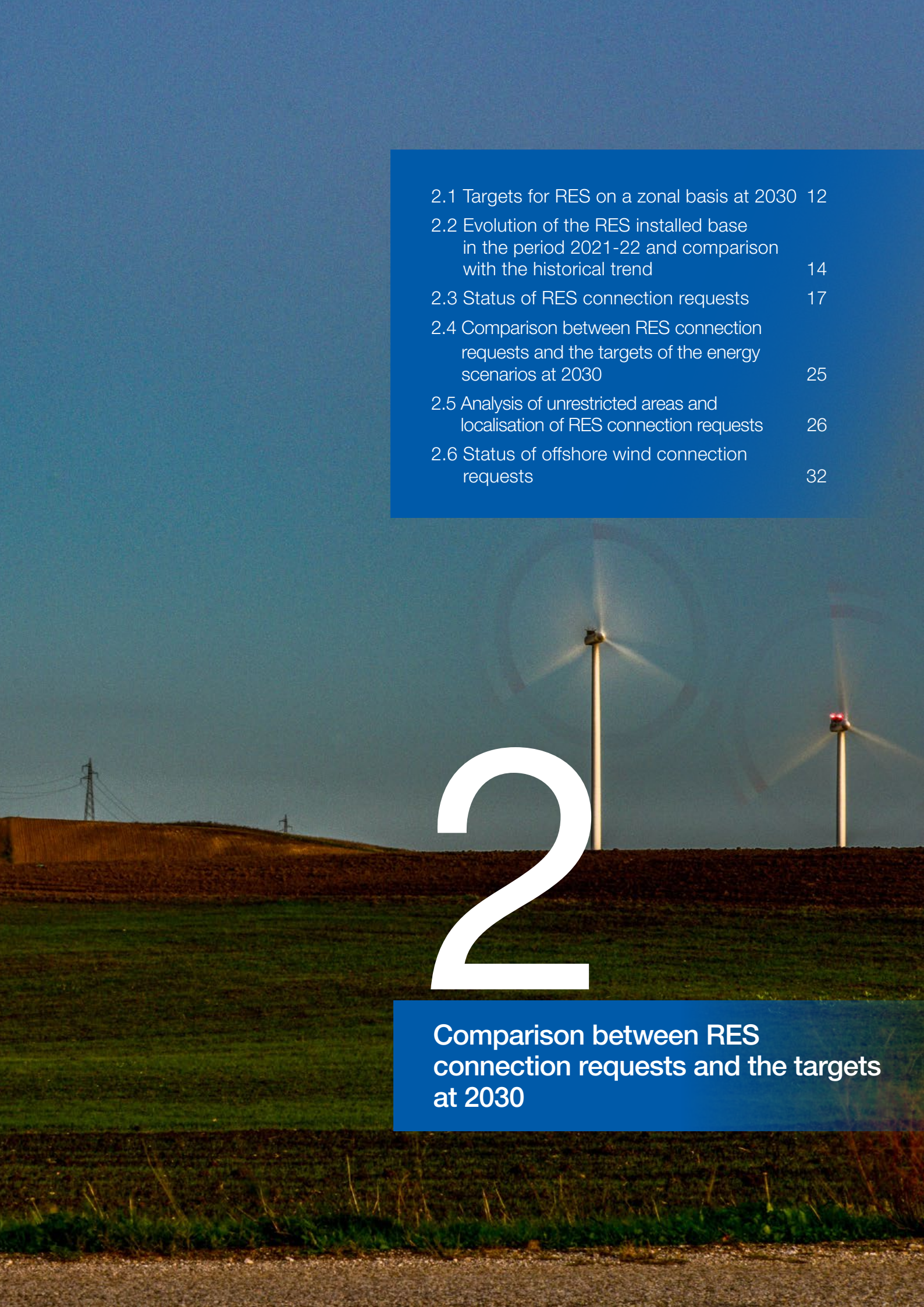
The introduction of the **new 36-kV connection standard** met with widespread diffusion and, at 31 December 2022, more than 1,400 Connection Estimates issued at 36 kV had been recorded, for a total capacity of RES production and storage systems of more than 56 GW. This shows that this solution has been considered positively by investors in RES.

Terna's objective in the near future will be to provide for not only concentrated nodes at 36 kV but also portions of dedicated grid at 36 kV for the purpose of "collecting" the RES connections in a more rational and efficient way with a view to optimising even more the technical solutions and the related environmental impact.

Another sector in rapid expansion, in the context of grid planning and monitoring of connection requests, is that deriving from connection requests for **data processing centres** (DPCs, or *datacenters*).

These plants must withdraw energy constantly and without interruptions and their localisation is strongly conditioned by the availability of access to both the transmission grid and the telecommunications network. Analysing the connection requests, the total expected withdrawal is extremely high (almost 2 GW) and is strongly concentrated on particular nodes of the NTG; it can be noted that almost all, that is 80%, of the requests are concentrated in the province of Milan, for a total of 1.4 GW.

It is important to note that in the energy scenarios prefigured it was not considered a growth of the specific electricity demand as regards datacenters owing to the lack of certainty on the total investments and assuming that cloud solutions would replace on-premise ones, with potentially also an efficiency advantage. In any case it will be necessary to pay particular attention to the evolution of these initiatives above all for the aforementioned level of concentration.



2

Comparison between RES connection requests and the targets at 2030

2 Comparison between RES connection requests and the targets at 2030

2.1 Targets for RES on a zonal basis at 2030

FOCUS: FF55 ENERGY SCENARIO, ZONAL DISTRIBUTION OF THE RES CONTINGENTS AT 2030

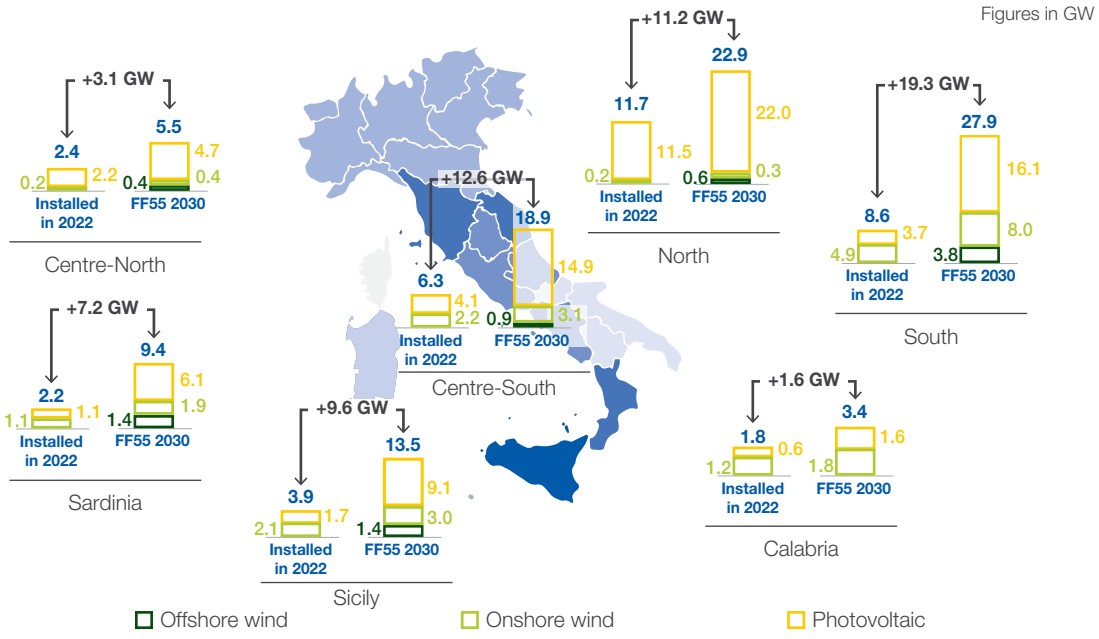
To achieve the objectives set by the FF55 scenario, it has been estimated that a total installed capacity of almost 102 GW of photovoltaic and wind power plants will be necessary in Italy; these must be distributed in the market zones into which the Italian national electricity system is divided.

From the point of view of the type of source, the scenario at 2030 provides for more than 60% of the installed capacity represented by solar power with approximately 75 GW, of which 53 GW from utility-scale plants and 21.5 GW from distributed (rooftop) plants, while wind power reaches 27 GW, of which 18.5 GW from onshore plants and 8.5 GW from offshore plants.

At the moment of defining this scenario, the related zonal distribution of the RES (*Figure 2*) was determined in a manner in keeping with the connection requests and with the development potential on the territories, taking into account technical and economic constraints and the best possible estimate at the time of territorial availability of areas potentially not subject to legislative restrictions.

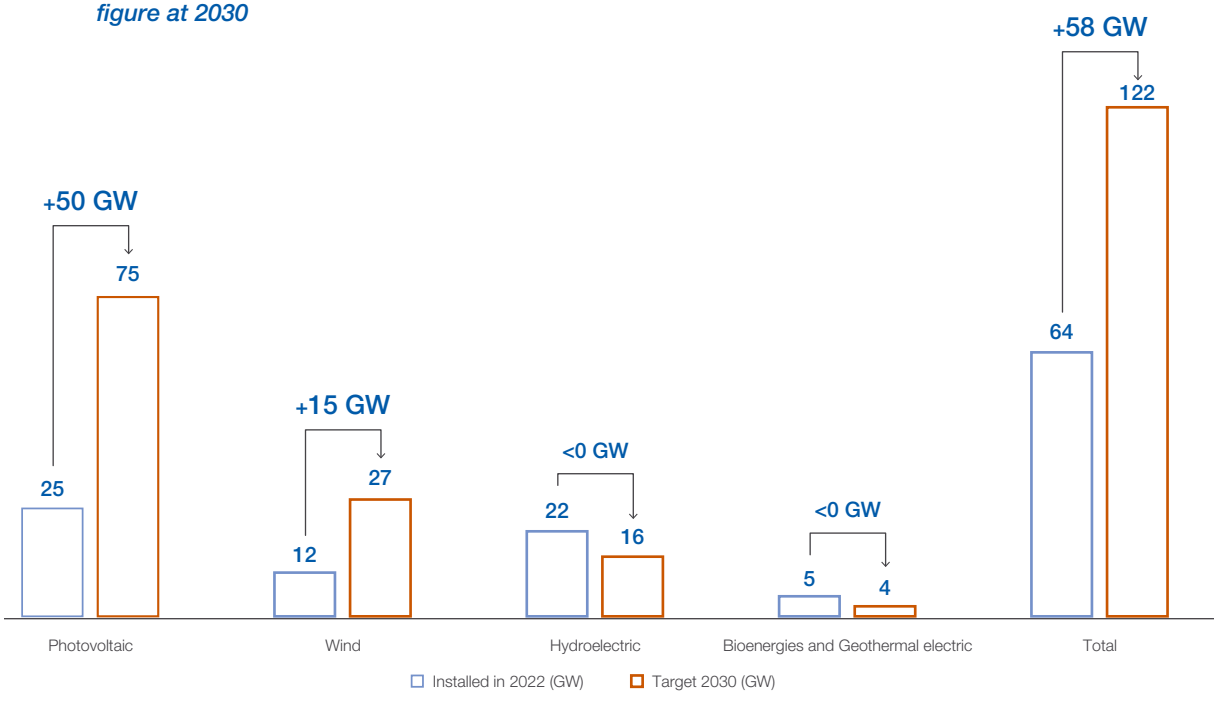
Figure 1 ***Regional distribution of the Market Zones***

FIGURE 2 *Comparison between installed photovoltaic and wind capacity at 2022 and evolution to 2030 in the FF55 scenario (GW)*



The target figure at 2030 does not provide for significant evolutions of the installed capacity for hydroelectric and bioenergy/geothermal electric plants, as can be seen in the chart below:

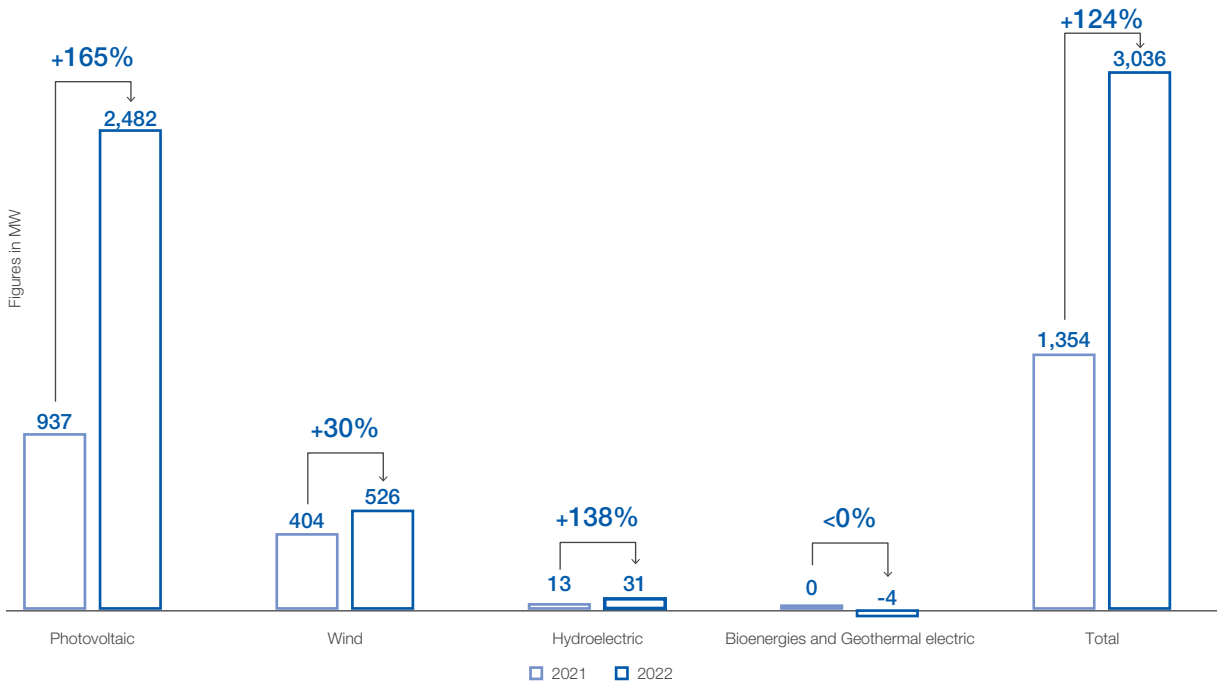
FIGURE 3 *Comparison by type of RES source between installed capacity at 31.12.2022 and forecast target figure at 2030*



2.2 Evolution of the RES installed base in the period 2021-22 and comparison with the historical trend

The monitoring carried out by Terna on the evolution of RES capacity shows, during **2021** compared to 2020, an increase in RES capacity available in the whole of the country of **+1354 MW**; while in **2022** the increase recorded compared to 2021 is **+3036 MW.** This result is due both to the entry into service of new plants and to changes in the power of existing plants, due to upgrades, downgrades and decommissioning. The details[2] of the division by source are presented below:

FIGURE 4 ***Change in the annual RES capacity available (MW)***

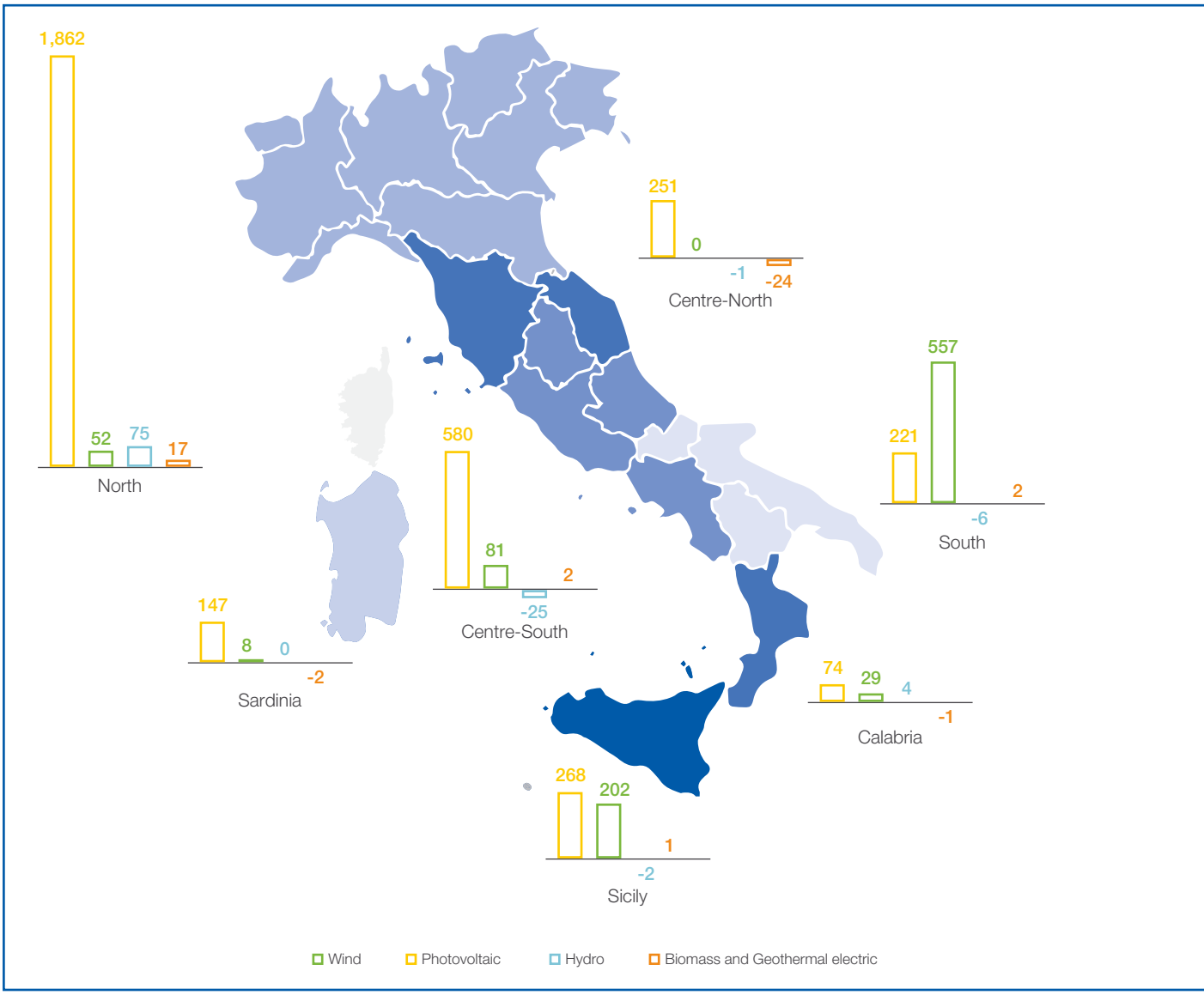


Analysing the data presented above it emerges that during 2022 more than 3 GW of new RES capacity became available, with an increase of 124% compared to the same data for 2021. This increase was due mainly to the acceleration of the rate of installation of new photovoltaic capacity which, with an increase of 165%, went up from +936 MW in 2021 to +2482 MW in 2022. The rate of installation of new wind capacity remained more or less stable, increasing in 2022 by only 30%, going up from +404 MW in 2021 to +526 MW in 2022. The changes in hydroelectric and bioenergy/geothermal electric capacity are residual compared to those of photovoltaic and wind power.

The **geographical distribution** of changes in installed RES capacity in the years 2021 and 2022 compared to the total installed at 2020, with details for single market zones is presented in *Figure 5*. The values include decommissioned or downgraded generation plants during the two-year period, the whose capacity is therefore no longer available (negative values).

[2] Source: Gaudì platform and Processing of Terna Data

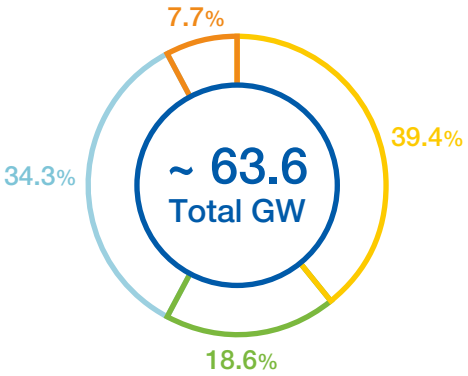
FIGURE 5 *Zonal distribution of the RES capacity change in the years 2021 and 2022*



From the data presented it emerges that the new installations of photovoltaic power are concentrated in the regions of the North zone with more than 1.8 GW of new capacity and are mainly small-scale plants connected in medium and low voltage, followed by the Centre-South zone with more than 0.5 GW. The new wind power installations are recorded in the regions of the South zone with more than 0.5 GW of new capacity, mainly connected directly high voltage to the NTG. The type of wind power to which reference is made is only onshore, with the exception of a single 30 MW offshore plant. The latter is the first offshore wind plant installed in Italy, built in the port of Taranto (South Market zone) and it came into service during 2022.

At 31.12.2022 the total capacity of RES plants installed all over the country was **63,622 MW** divided as follows by type of source:

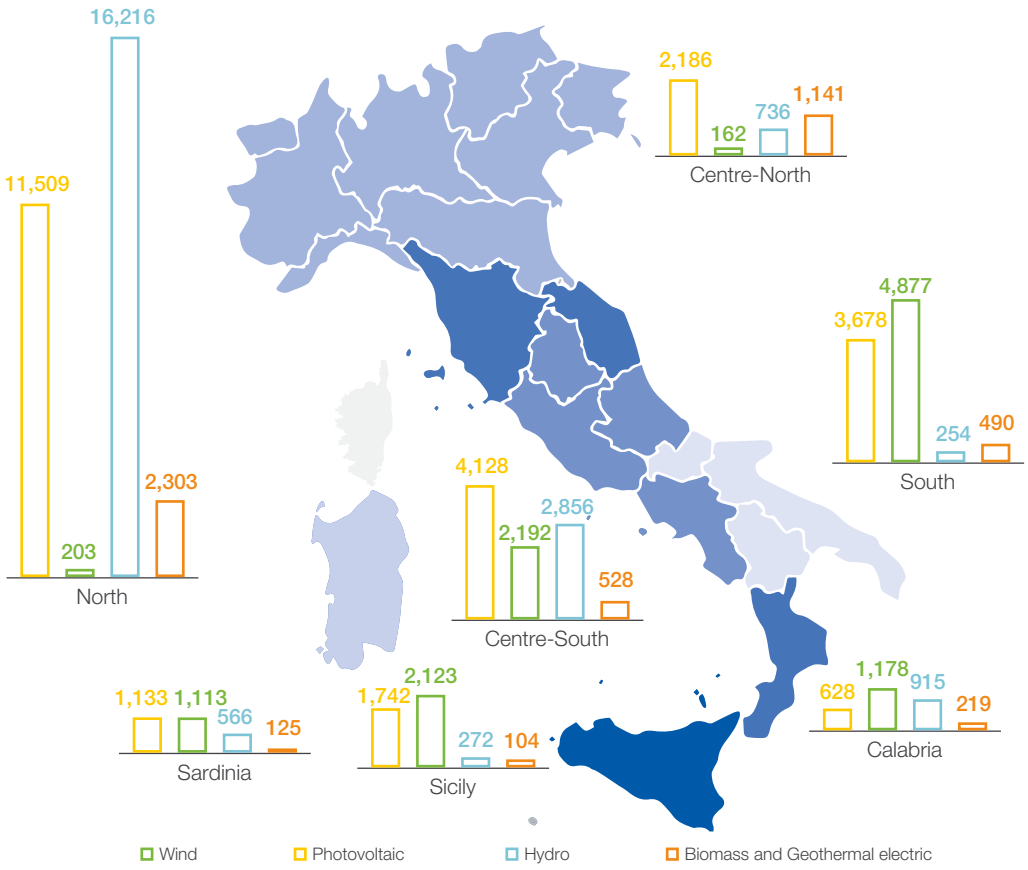
FIGURE 6 *RES capacity available at 31.12.2022*



	[MW]	[%]
Photovoltaic	25,048	39.4%
Wind	11,848	18.6%
Hydroelectric	21,816	34.3%
Bioenergy and Geothermal electric	4,910	7.7%
TOTAL	63,622	100%

The **geographical distribution** by single market zone is detailed in *Figure 7*.

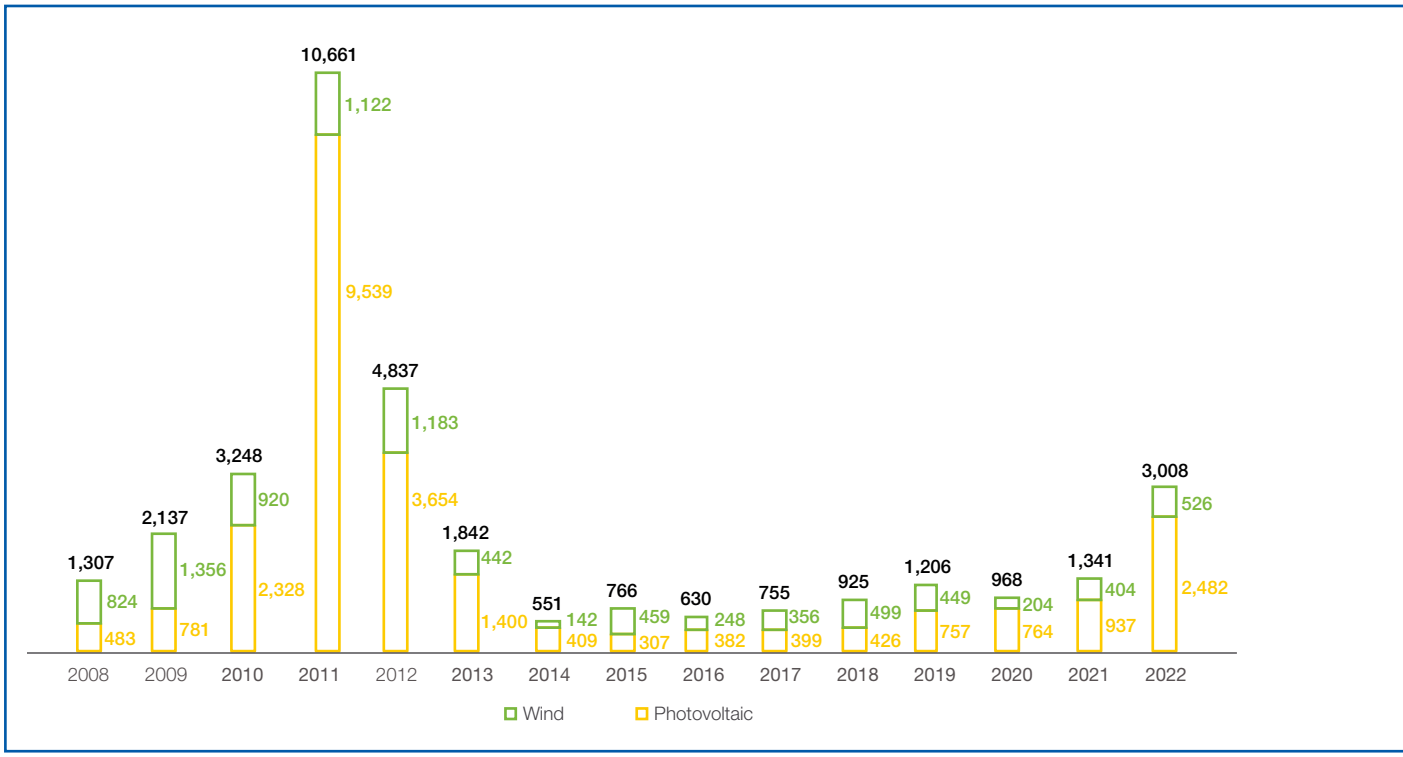
FIGURE 7 *Zonal distribution of the RES capacity available at 31.12.2022 (MW)*



Analysing the progression of the data on photovoltaic and wind installation over the years (*Figure 8*), there emerges an increase in the installation rates in 2021 and 2022 compared to the average trend of 800 MW/year, recorded from 2014 to 2020. In particular, in 2021 an increase was recorded, of 936 MW of available photovoltaic capacity and 404 MW of wind power, for a total therefore of more than 1300 MW. For 2022 this figure was more than 3000 MW with the incremental data related to wind power up a little compared to 2021 with 526 MW, while we can note a sharp increase in the trend of installation of photovoltaic power, which reached 2482 MW.

Assessing these data at the same time as the set of active connection requests which will be presented in the following chapter, we can forecast for the coming years a significant increase in the trend of installations which can replicate what happened in the years 2008-2011. This acceleration is fundamental for following the road of the energy transition and achieving the decarbonisation objectives at 2030, defined by the FF55 reference scenario.

FIGURE 8 *Evolution of installed photovoltaic and wind power plants (MW)*



FOCUS: CONNECTION PROCESS

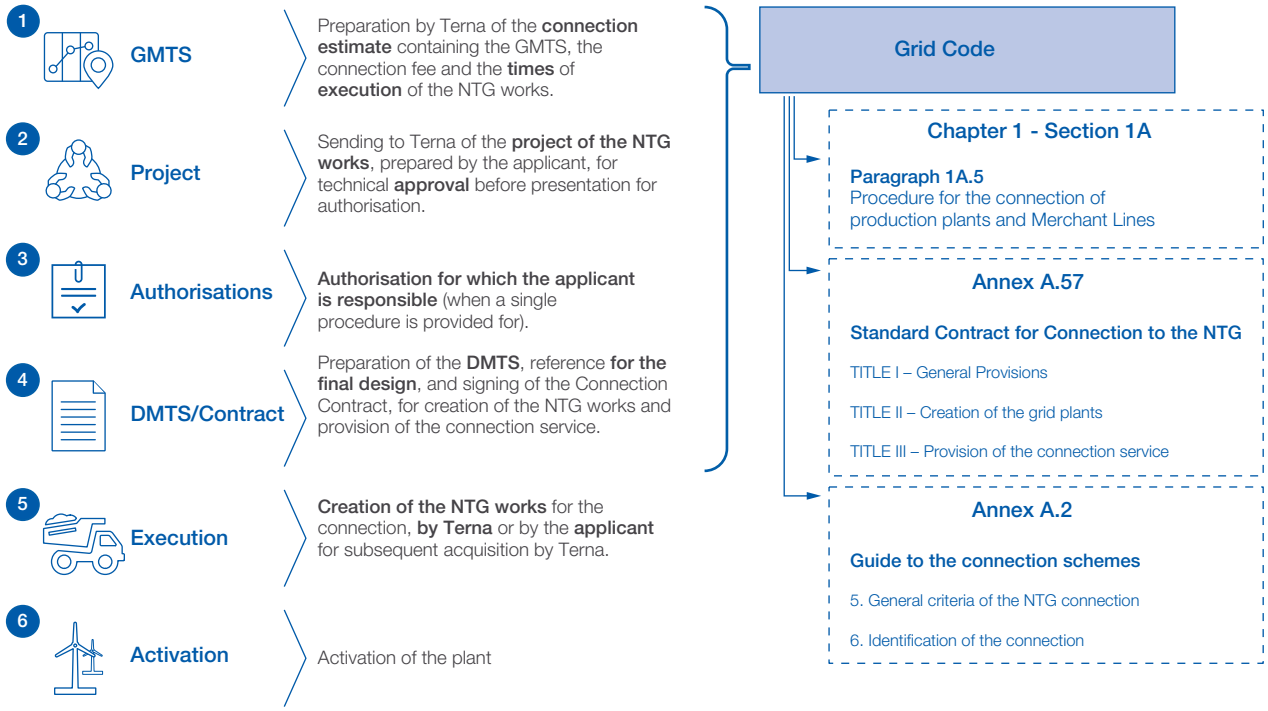
Terna, as indicated in the current legislation, has the obligation to connect to the National Grid all subjects that make a request for this. The connection solutions must observe the criteria guaranteeing the continuity and security of operation of the Grid, as regards the portion on which the new plant will be inserted. The methods and technical conditions, both procedural and economic, for providing the NTG connection service are governed by the measures issued by ARERA. These resolutions are applied in the first chapter of the Grid Code, "Access to the National Transmission Grid", which lists the rules (transparent and non-discriminatory) for managing the connection process.

This process, which begins with the presentation of the connection request by the proponent to Terna and ends with the entry into service of the plant, is made up mainly of four stages (see *Figure 9*):

- preliminary stage (GMTS);
- planning stage (Project);
- authorisation stage (Authorisations);
- final stage (DMTS/contract, construction and activation).

Although not all the connection requests progress with the same timing in the process, the geographical location of the same, for example for renewable source production plants localised in the South area, can provide important information for making the grid development more efficient and effective.

FIGURE 9 *Connection process*



Analysing the connection process in detail (see *Figure 9*), we can note the four stages indicated above.

After the connection request by the user, the **preliminary stage** begins; in this Terna prepares, within 90 days of receiving the request, the connection estimate containing the General Minimum Technical Solution (GMTS) expressing the times and costs of creating the NTG plants provided for and/or of any actions on the existing grid necessary for the purposes of the connection.

Within 120 days from the date of communication of the estimate by Terna, the user is required to accept this connection solution to maintain its validity.

After the acceptance, the **planning stage** begins; this is performed in two different steps according to the type of the plant to be connected:

- **production users** prepare the project for the Grid plants, which is discussed with Terna to verify that it corresponds with the requirements of the Grid Code before being presented to the bodies responsible for the authorisation. The authorisation procedure, including all the documentation necessary, including the project validated by Terna of the grid connection plant and any actions of the existing grid, must be launched within 120 days from the date of acceptance of the estimate;
- **consumption users** are not required to prepare the project for the Grid plants, which instead is prepared directly by Terna (unless a different explicit request is made by the user).

As regards the **authorisation stage**, after obtaining all the authorisations (for the user plant and the NTG plants) the user asks Terna to prepare the Detailed Minimum Technical Solution (DMTS). This must be formulated and sent to the user within 90 days, presenting the final specifications for the detailed design and the construction of the grid plants.

Following acceptance of the DMTS, the **connection contract** between Terna and the user is defined; this contains the details of the times, costs and conditions for construction of the grid plants and the rules for provision of the connection service and the scheme of the Operating Regulations.

After the Connection Contract has been signed, the **construction stage** starts officially.

2.3 Status of RES connection requests

Management of high-voltage connection requests, received directly and indirectly (through distributors) from proponents of renewable initiatives, enables Terna to achieve a systemic overview what could be the future scenarios for the development of renewable plants.

The objective of this chapter is to present the status of connection requests as of 31 December 2022 related to RES plants using photovoltaic, onshore wind, hydroelectric and bioenergy/geothermal electric sources. In the following chapters, there is instead a section devoted to offshore wind power plants.

High Voltage

The high-voltage connection requests with connection procedure active as of 31 December 2022 for RES plants using photovoltaic, onshore wind, hydroelectric and bioenergy/geothermal electric sources amounted to a total of 207,673 MW.

In the last two years, the increase in connection requests for RES plants using photovoltaic, onshore wind, hydroelectric and bioenergy/geothermal electric sources has been exponential: the procedures with high-voltage connection process active as of 31 December 2022 have more doubled the figures recorded in the previous Terna Development Plan, referred to 31 December 2020.

From the detailed analysis of the division of connection requests according to the current **stage of progress** of the related procedures (see *Figure 10*), it can be seen that:

- the power that makes reference to GMTS (general minimum technical solutions) still **to be processed** by Terna is 39,926 MW;
- the power that makes reference to GMTS processed and **provided**, the stage in which Terna has provided the solution of connection to the national transmission grid and is waiting to receive the related acceptance by the proponents, is 23,303 MW;
- the power that makes reference to GMTS **accepted** by the proponents is 96,418 MW;
- the power that makes reference to projects for which the planning documents for grid works required for the connection have been submitted and are therefore **under evaluation** by Terna to verify compliance with the technical standards is 17,212 MW;
- the power that makes reference to projects which have received approval of the plans for grid works and have therefore been **approved** by Terna for the start of the authorisation procedure is 26,886 MW;
- the power that makes reference to projects which have successfully completed the authorisation process and can therefore enter the final stage of the connection process requesting the **Detailed Minimum Technical Solution (DMTS)** and subsequently the Connection Contract from Terna is 3,928 MW.

The division by source is presented in detail in the table below:

	TO BE PROCESSED		PROVIDED		ACCEPTED	
	[MW]	[%]	[MW]	[%]	[MW]	[%]
Photovoltaic	26,790	67%	14,055	60%	54,621	57%
Onshore Wind	10,065	25%	9,238	40%	36,687	38%
Hydroelectric	3,047	8%	0	0%	4,905	5%
Bioenergy and Geothermal electric	24	0%	10	0%	205	0%
TOTAL	39,926	100%	23,303	100%	96,418	100%

	PROJECTS UNDER ASSESSMENT		PROJECTS WITH APPROVAL		DMTS/CONTRACTS	
	[MW]	[%]	[MW]	[%]	[MW]	[%]
Photovoltaic	10,970	64%	14,963	56%	2,312	59%
Onshore Wind	5,994	35%	11,288	42%	1,430	36%
Hydroelectric	212	1%	577	2%	33	1%
Bioenergy and Geothermal electric	36	0%	58	0%	154	4%
TOTAL	17,212	100%	26,886	100%	3,928	100%

Overall, more than 140,000 MW of active connection requests have at least a General Minimum Technical Solution (GMTS) accepted.

FIGURE 10 *Status of the HV connection requests by type of source (MW)*

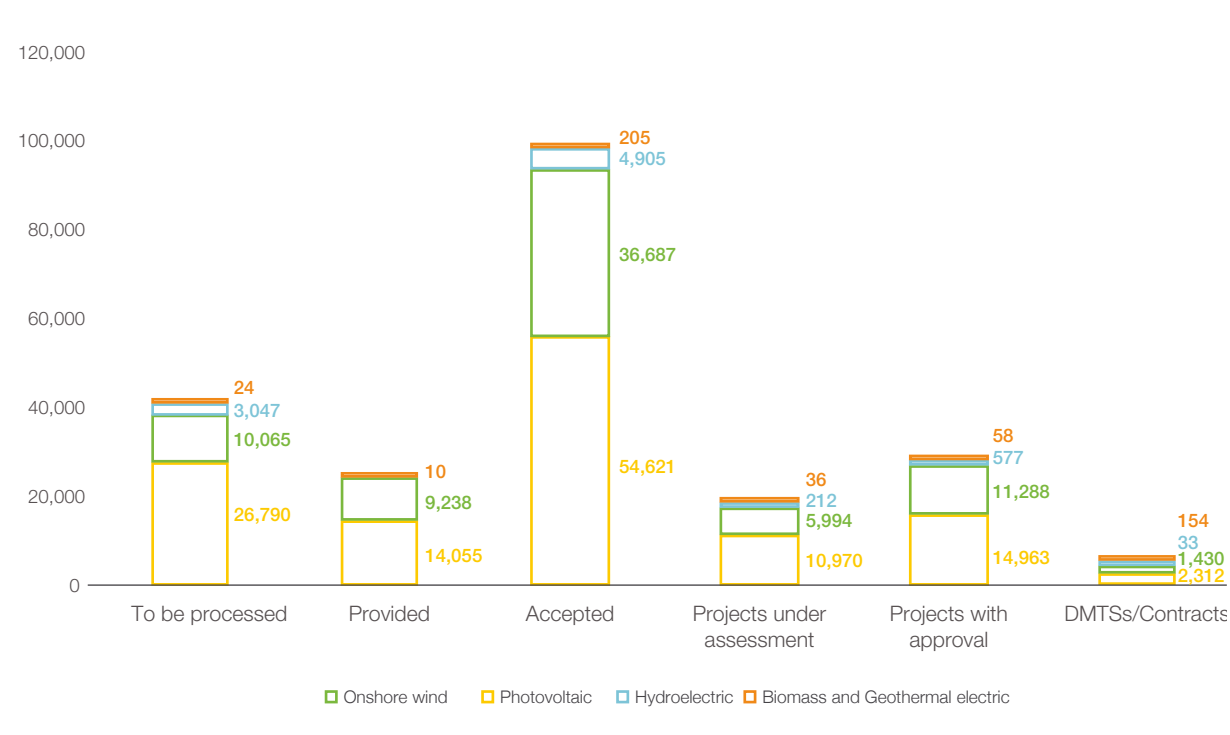


FIGURE 11 *Zonal distribution of RES connection requests at 31.12.2022 (MW)*

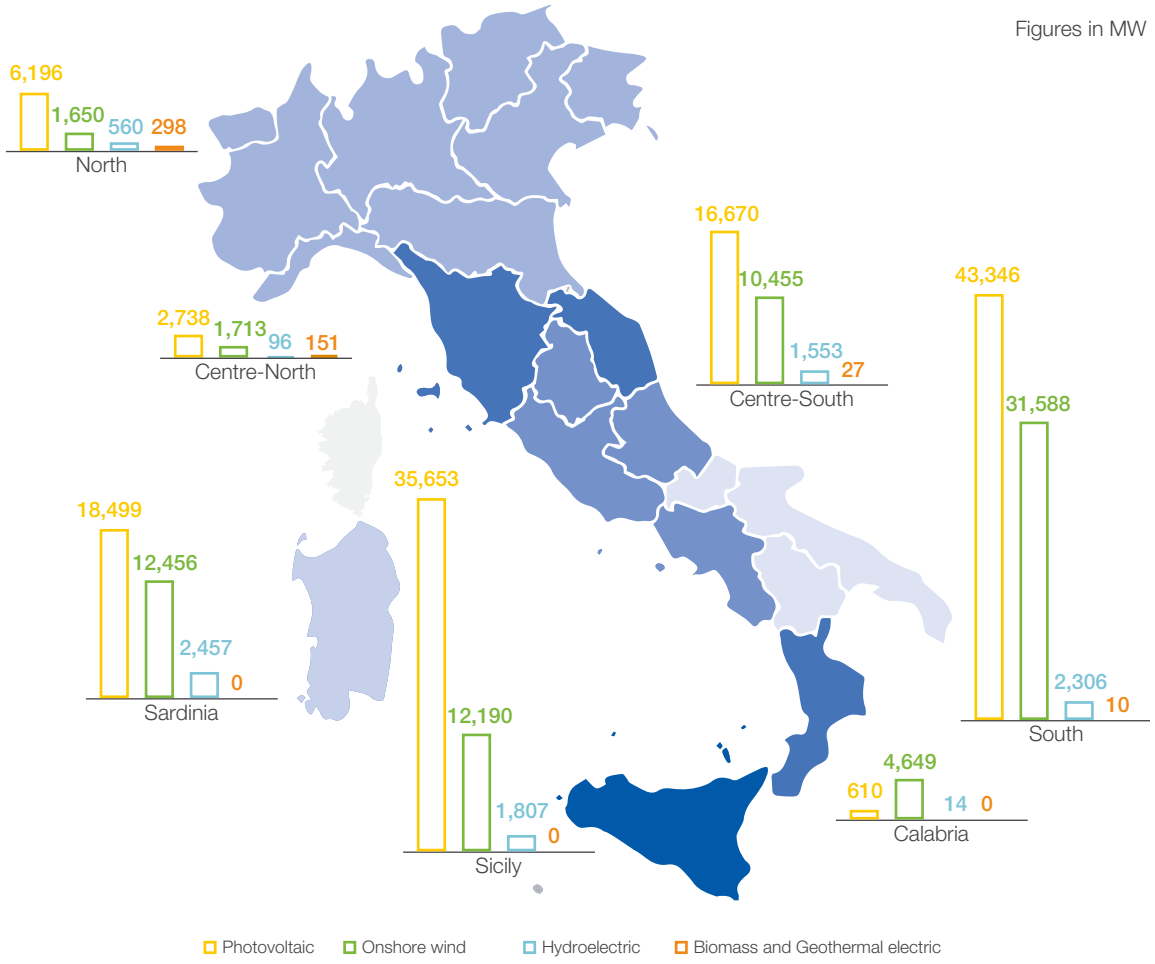


Figure 11 shows the **geographical distribution** of high-voltage connection requests with details for each Market Zone at 31.12.2022:

	NORTH (4%)		CENTRE-NORTH (2%)		CENTRE-SOUTH (14%)		SOUTH (37%)	
	[MW]	[%]	[MW]	[%]	[MW]	[%]	[MW]	[%]
Photovoltaic	6,196	71%	2,738	58%	16,670	58%	43,346	56%
Onshore Wind	1,650	19%	1,713	36%	10,455	37%	31,588	41%
Hydroelectric	560	7%	96	2%	1,533	5%	2,306	3%
Bioenergy and Geothermal electric	298	3%	152	4%	27	0%	10	0%
TOTAL	8,704	100%	4,699	100%	28,685	100%	77,250	100%

	CALABRIA (3%)		SICILY (24%)		SARDINIA (16%)		TOTAL ITALY (100%)	
	[MW]	[%]	[MW]	[%]	[MW]	[%]	[MW]	[%]
Photovoltaic	610	12%	35,653	72%	18,499	55%	123,711	60%
Onshore Wind	4,649	88%	12,190	24%	12,456	37%	74,701	36%
Hydroelectric	14	0%	1,807	4%	2,457	8%	8,774	4%
Bioenergy and Geothermal electric	0	0%	0	0%	0	0%	487	0%
TOTAL	5,273	100%	49,650	100%	33,412	100%	207,673	100%

The zones of the South and Islands (Sicily and Sardinia), with greater availability of the primary energy resource, are therefore those most involved in new connection requests for photovoltaic and onshore wind plants with connection procedures for total power of approximately 160,000 MW (77% of the total).

Medium and Low Voltage

As established by articles 37 and 38 of Annex A to Resolution ARG/elt 99/08 as amended, the distributor companies, whose grid is directly connected to the national transmission grid, must send to Terna a quarterly report, according to a scheme approved by the Electricity and Gas Authority (ARERA), related to each plant to be connected to the medium and low voltage distribution grid.

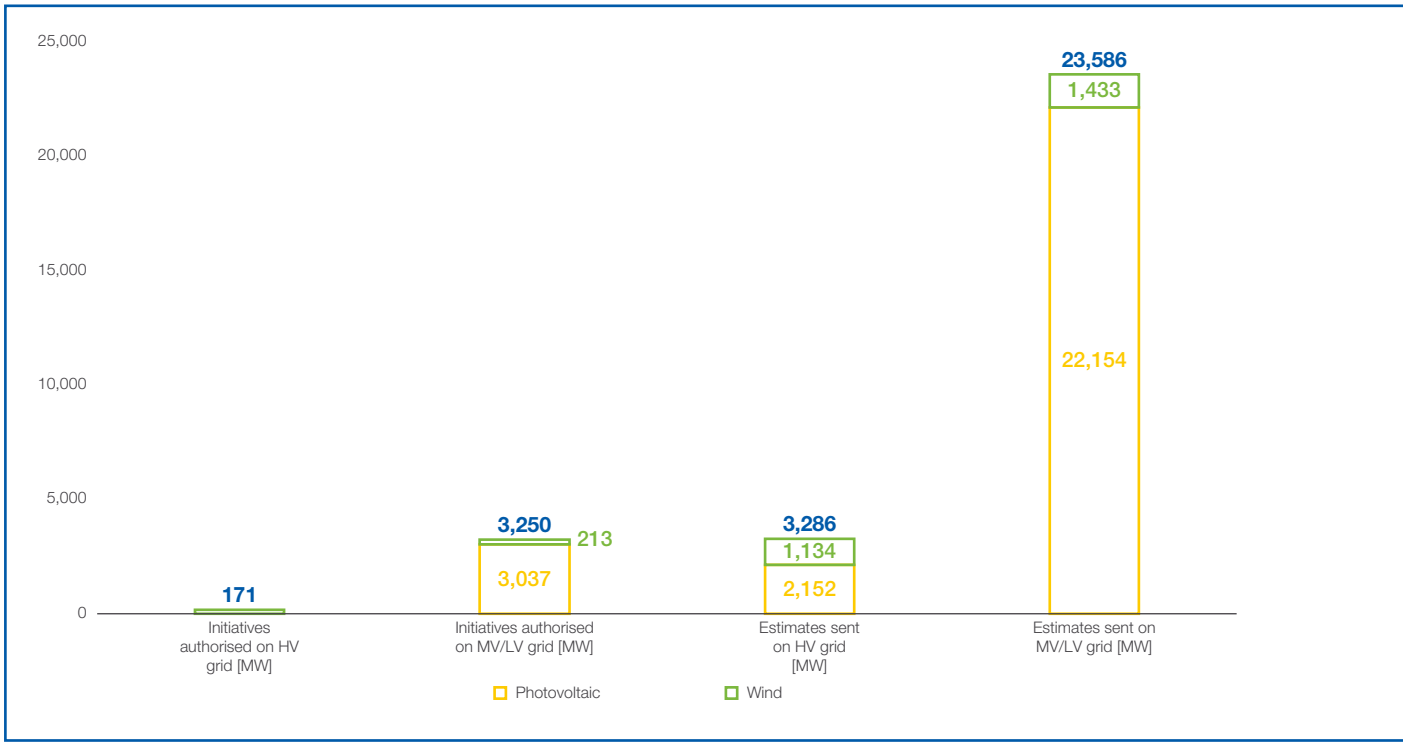
The information sent by the distributors and received by Terna presents connection requests aggregated by distribution plant (e.g. by primary cabin). For this reason, the level of detail on the status of medium and low voltage procedures is different from that presented in the previous paragraph and referred to plants that request the connection directly in high voltage.

Also on medium- and low-voltage grids we can see a growing trend in the last few years of connection requests for renewables. In particular, on the basis of the latest available data communicated by the distribution companies updated to 30 November 2022, these requests amount to a total of 30,293 MW, of which 27,343 MW of photovoltaic plants and 2,950 MW of wind power plants.

In detail, from *Figure 11*, it emerges that:

- 3,420 MW, of which 3,037 MW (89%) of photovoltaic and 384 MW (11%) of wind power, are related to initiatives **authorised** by the Bodies. Of these plants, 3,037 MW of photovoltaic on MV/LV grid, and 171 MW of wind power on HV grid and 213 MW on MV/LV grid are provided for;
- 26,873 MW, of which 24,306 MW (90%) of photovoltaic and 2,567 MW (10%) of wind power, have the **connection solution processed and sent by the distributor**. Of these plants, 2,152 MW of photovoltaic on HV grid and 22,154 MW on MV/LV grid, and 1,134 MW of wind power on HV grid and 1,433 MW on MV/LV grid are provided for.

FIGURE 12 *Status of MV/LV connection requests authorised and with solution sent at 30.11.2022, processing of data provided by the distribution companies (MW)*



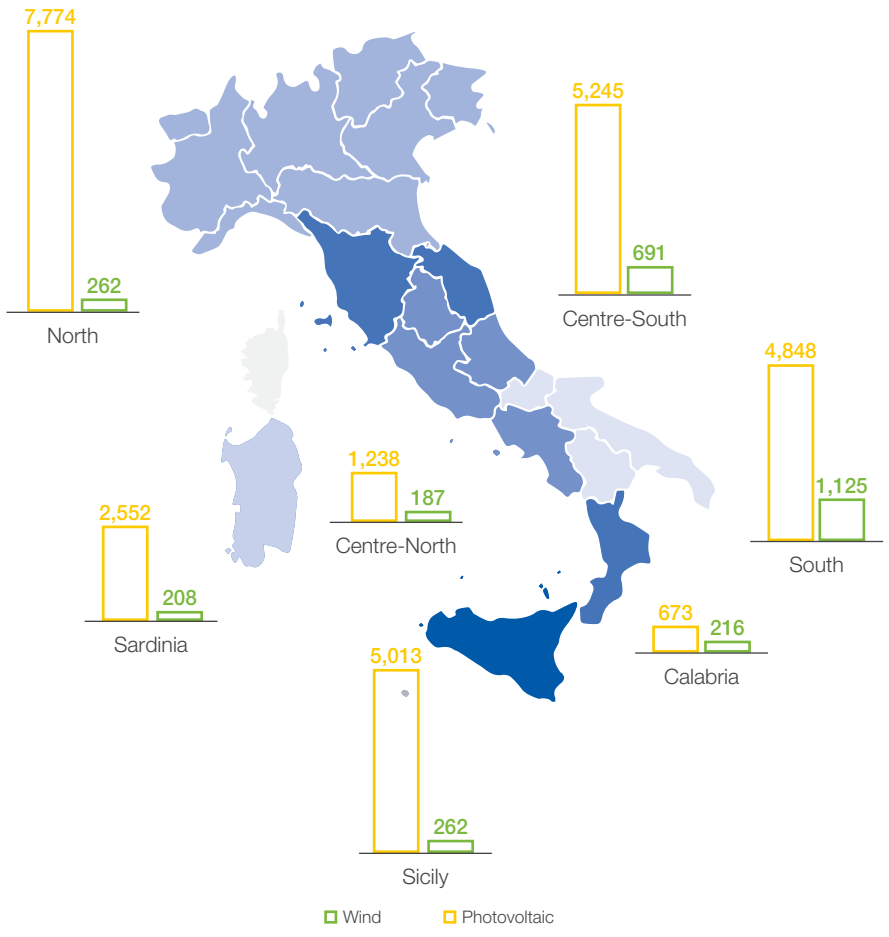
For connection requests at medium and low voltage we can see the predominance of photovoltaic over onshore wind technology. The wind power plants consist in fact mainly of turbines of a significant size, to be connected therefore to the high voltage transmission grid.

In particular, observing *Figure 13*, it emerges that:

	NORTH (27%)		CENTRE-NORTH (5%)		CENTRE-SOUTH (29%)		SOUTH (20%)	
	[MW]	[%]	[MW]	[%]	[MW]	[%]	[MW]	[%]
Photovoltaic	7,774	97%	1,238	87%	5,245	88%	4,848	81%
Wind	262	3%	187	13%	691	12%	1,125	19%
TOTAL	8,036	100%	1,425	100%	5,936	100%	5,972	100%

	CALABRIA (3%)		SICILY (17%)		SARDINIA (9%)		TOTAL ITALY (100%)	
	[MW]	[%]	[MW]	[%]	[MW]	[%]	[MW]	[%]
Photovoltaic	673	76%	5,013	95%	2,552	92%	27,343	90%
Wind	216	24%	262	5%	208	8%	2,950	10%
TOTAL	889	100%	5,275	100%	2,760	100%	30,293	100%

FIGURE 13 *Zonal distribution of MV/LV connection requests for photovoltaic and wind power plants at 30.11.2022, processing of data provided by the distribution companies (MW)*



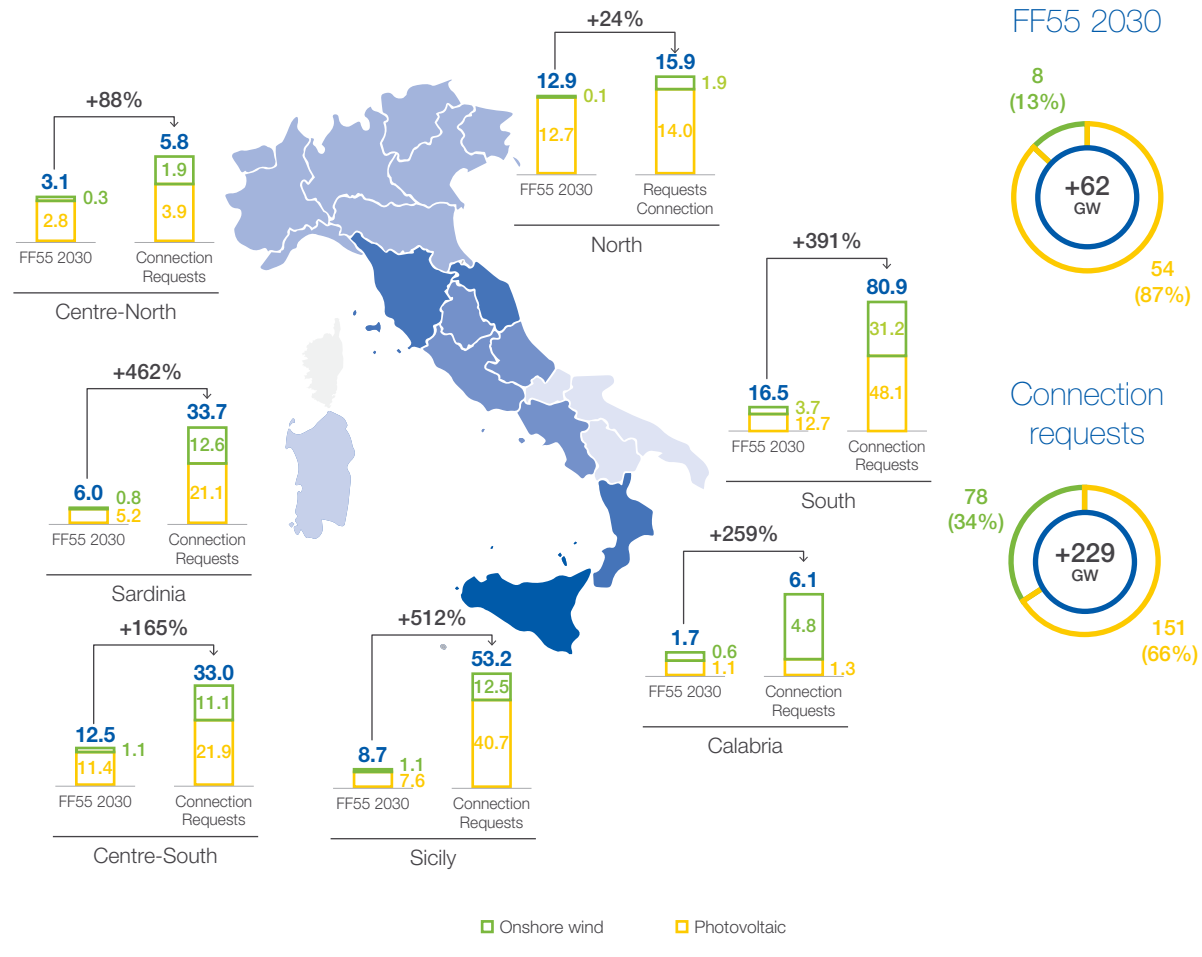
Analysing the data presented above, we can note that the geographical distribution of connection requests at medium and low voltage is more uniform compared to the trend recorded on the high voltage grid. In fact, in the South and Islands (Sicily and Sardinia) market zones there is total power of 14,008 MW (46% of the total), in the North, Centre-North and Centre-South zones there is total power of 15,397 MW (51% of the total).

2.4 Comparison between RES connection requests and the targets of the energy scenarios at 2030

As already stated, the connection requests exceed the targets in particular in the zones of the South and Major Islands; this implies the possibility of achieving the targets and at the same time the risk of a different distribution with respect to the "efficient" one assumed in the scenarios. In particular, in the energy scenarios the quantities of RES per area were identified according to the principle of maximum acceptability (limited reduction of RES) in the presence of the grid works presented in the 2023-2032 DP and storages.

Figure 14 shows the difference in the zonal distribution of connection requests (received both for HV, and for MV and LV) compared to the installed RES capacity provided for in the FF55 reference scenario, in terms of both specific quantities and technological mix.

Figure 14 ***Comparison between new RES power installed provided for in the FF55* at 2030 and Connection Requests both HV and MV/LV for photovoltaic and onshore wind power plants (GW)***



** For more details, consult the 2022 Scenarios Description Document.*

In detail, we can note a different trend with respect to the market zone taken into consideration: for the zones of the South and Islands (Sicily and Sardinia) the connection requests present a nominal power of up to five times more than the forecast of installed capacity at 2030, while for the North area an installed power at 2030 is envisaged at the moment which is approximately in line with respect to the currently active connection requests.

2.5 Analysis of unrestricted areas and localisation of RES connection requests

The development of new RES capacity is often limited owing to factors associated with the authorisation processes and with the lack of indications on the areas usable for such developments.

On 15 December 2021 Italian Legislative Decree 199/2021 came into force, transposing the RED II Directive and providing for the definition of the criteria for identifying the areas suitable/unsuitable for the installation of new RES plants and for the distribution of power among Regions/Provinces, with the issue of a Ministerial Decree (initially expected in June 2022).

In order to assess the presence of any impediments in the process of connecting new RES capacity and to assess the "quality" of the portfolio of RES development initiatives, Terna carried out a study over the whole country with the objective of analysing the localisation of connection requests for photovoltaic and onshore wind plants with respect to areas characterised by territorial and environmental restrictions, defined by the legislation.

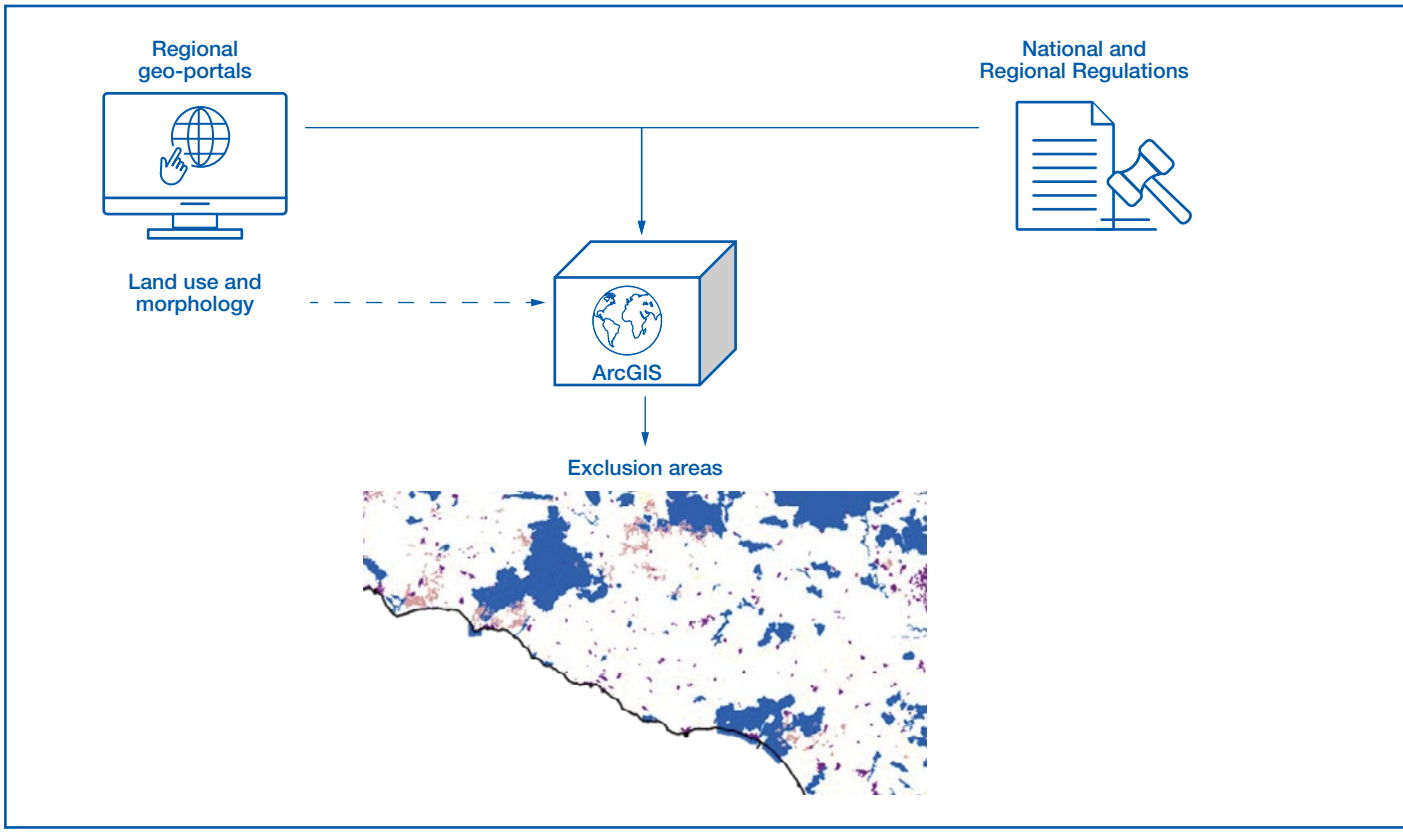
On the basis of the expertise acquired in the infrastructural planning of works with low environmental impact, the potential selective criteria were identified to carry out the mapping of the restricted areas, in particular starting from the current legislation on the subject of safeguarding the environment, and the cultural and landscape assets of the single Regions.

The estimate of the restricted area was then obtained through the procedure described below:

1. preparation of a geo-database, for each region, containing the restrictions imposed by the regional legislation for the construction of RES plants (or, in the absence of this, national). With the aid of GIS (Geographic Information System) instruments, in the same geo-database, further information was also included in relation to both the area, such as heights and gradients, and the land use. This made it possible to identify the restricted areas not only owing to legislative provisions, but also for outlook and characteristic type of the territory (restrictions of technical nature),
2. construction, on a regional basis, of an "exclusion layer" through the superimposition of all the restrictions and all the areas of morphological exclusion contained in the geo-database.

These first two stages of the procedure are outlined in *Figure 15*.

FIGURE 15 *Construction process of the regional geo-database and identification of the exclusion areas*



The next step in the study involved the construction of a map of the areas with favourable outlook and not subject to legislative restrictions, obtained eliminating from the regional area the "exclusion layer" defined as a whole.

In particular, the restriction databases for the identification of the "exclusion areas" of each Region were created starting from the indications of the REAPs (Regional Energy and Environment Plans), analysing the cartographic restrictions available on the regional geo-portals as regards safeguarding the environment, and the cultural and landscape assets, and assessing what is defined by the National and Regional legislation available in a digital format.

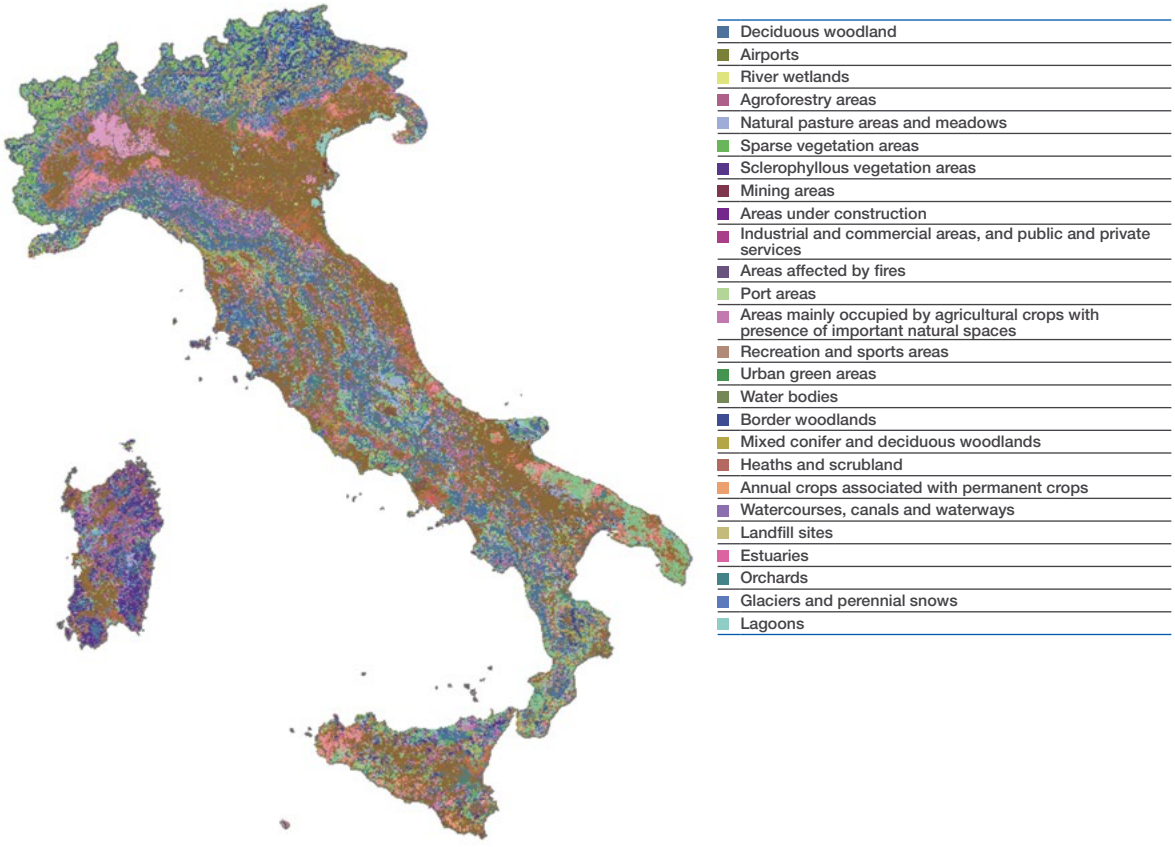
In this process, the following categories of restrictions were identified:

- areas with hydrological restrictions and at hydrogeological risk according to the Hydrogeological Structure Plans and the ISPRA mosaics of the areas at risk of landslides and floods;
- landscape and cultural assets (areas protected by Italian Legislative Decree no. 42/2004 with the Code of Cultural and Landscape Assets), including the specific assets and the buffer areas provided for by law;
- further areas of landscape interest identified by the Regional Territorial Landscape Plans (RTLPs) and defined as "further contexts worth protection";
- areas of particular naturalistic significance (Rete Natura 2000, Official List of Protected Areas, WWF areas, etc.).

The data-base was subsequently completed through the identification of further criteria for mapping the exclusion areas, obtained also on the basis of the information exchanged in the discussions between Terna and the Regions in the context of the SEA:

- unsuitable land uses, excluding areas not subject to legislative restrictions but with land uses not in keeping with the installation of RES plants (urban green areas, residential zones, tourist structures, sports areas, hospitals, etc.). *Figure 16* shows the overall mapping of the land use at the national level;
- areas with high-quality crops;
- morphological restrictions, and areas with gradients and outlooks not convenient for the installation of photovoltaic plants.

FIGURE 16 *Mapping of land use*



The different thematic layers representing the restrictions identified were then superimposed in order to identify the **exclusion areas** for each Region. Subsequently the areas not subject to legislative restrictions and with a good outlook for the installation of RES plants (defined below as "unrestricted areas") were mapped, as the difference between the regional area and the exclusion layer.

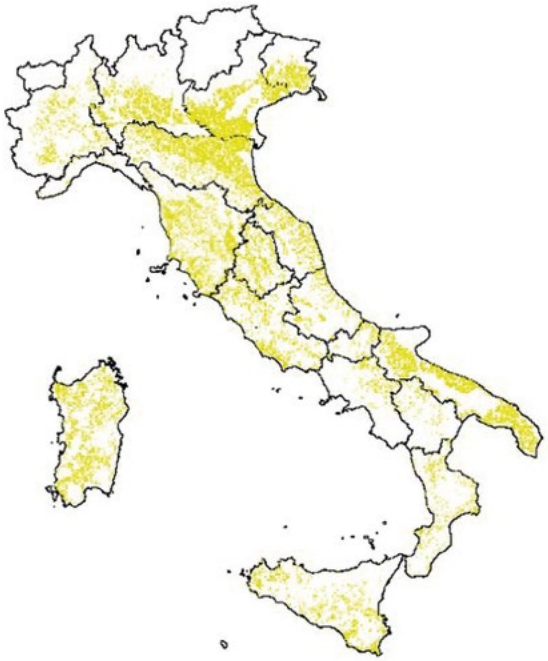
As shown in *Figure 17* and *Figure 18*, over the whole country, the following were identified:

- **approximately 5,792,600** ha of **unrestricted areas** potentially usable for the installation of **photovoltaic plants** (**19%** of the national territory);
- **approximately 6,771,900** ha of **unrestricted areas** potentially usable for the installation of **wind power plants** (**22%** of the national territory).

The areas in question are, clearly, not necessarily suitable for the development of RES or areas earmarked for energy production but more limitedly areas for which restrictions already identified of an administrative nature or of technical feasibility do not overlap.

FIGURE 17 *Unrestricted areas potentially useful for the installation of photovoltaic plants*

PHOTOVOLTAIC



Approximately 5,792,600 ha
of unrestricted areas
for the installation of
photovoltaic plants
(19% of the national territory);

FIGURE 18 *Unrestricted areas potentially useful for the installation of wind power plants*

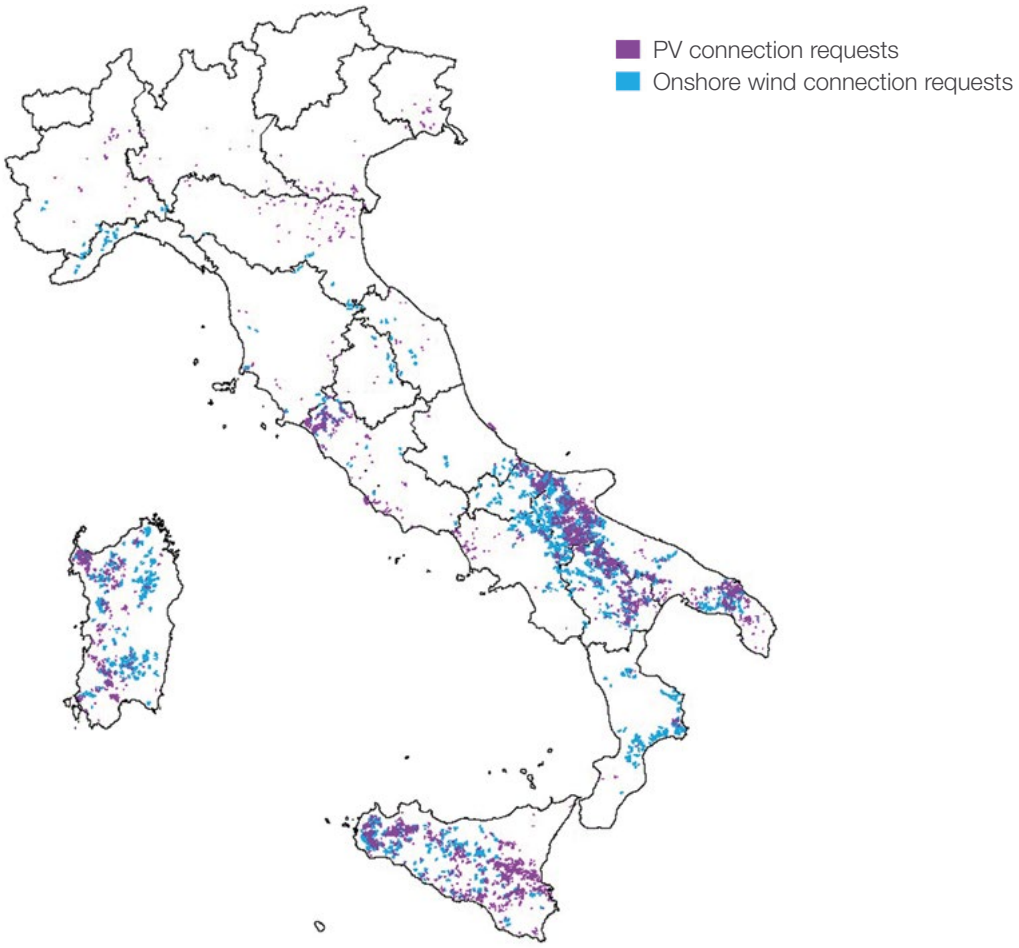
WIND

Approximately 6,771,900 ha
of unrestricted areas
for the installation of
wind power plants
(22% of the national territory);

In order to assess the localisation of RES plants with respect to the areas identified as unrestricted, Terna carried out the precise geolocalisation of the connection requests received directly in EHV-HV up to December 2022, starting from the **localisation** of the plants **provided by the proponents** or, in the absence of these, from the identification of the **land registry parcels** covered by the initiatives.

As can be seen in *Figure 19*, 80% of the connection requests are localised in the Regions of the South and the Islands.

FIGURE 19 *Geolocalisation of connection requests for photovoltaic and wind power plants*



In order to assess the RES connection requests coming within unrestricted areas, **the layers** related to **unrestricted areas** for PV and onshore wind plants were **superimposed** with the **connection requests**.

From the superimposition it emerged that **3185 applications (153GW)**, approximately **80% of the total requests** received, are located completely or partially[3] in unrestricted areas, of which:

- **2044 applications (91GW)** are connection requests for **PV** plants;
- **1141 applications (62GW)** are connection requests for **onshore wind** plants.

[3] For procedures in areas partially unrestricted, plants whose extension falls only in part in an unrestricted area identified by the Terna analysis are indicated.

We can note that **Apulia** is the Region with the **highest number of requests** for **PV and onshore wind** connections completely or partially in unrestricted areas.

The results of the analyses are illustrated in *Figure 20* and *Figure 21*.

FIGURE 20 *PV connection requests in unrestricted areas*

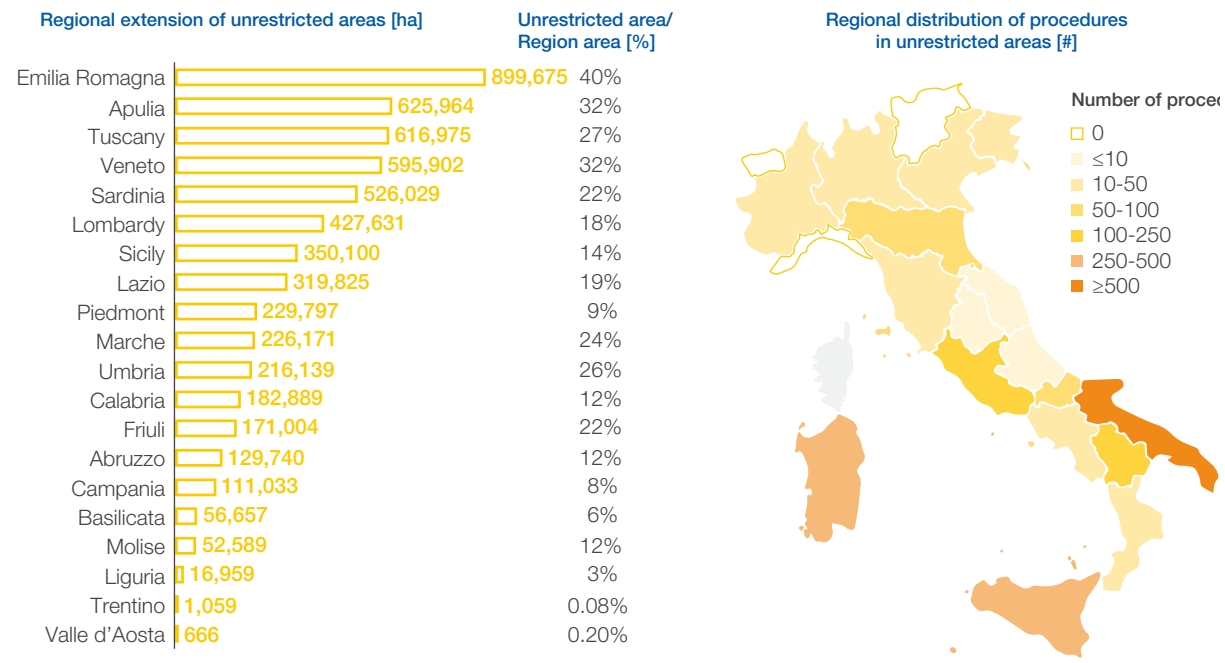
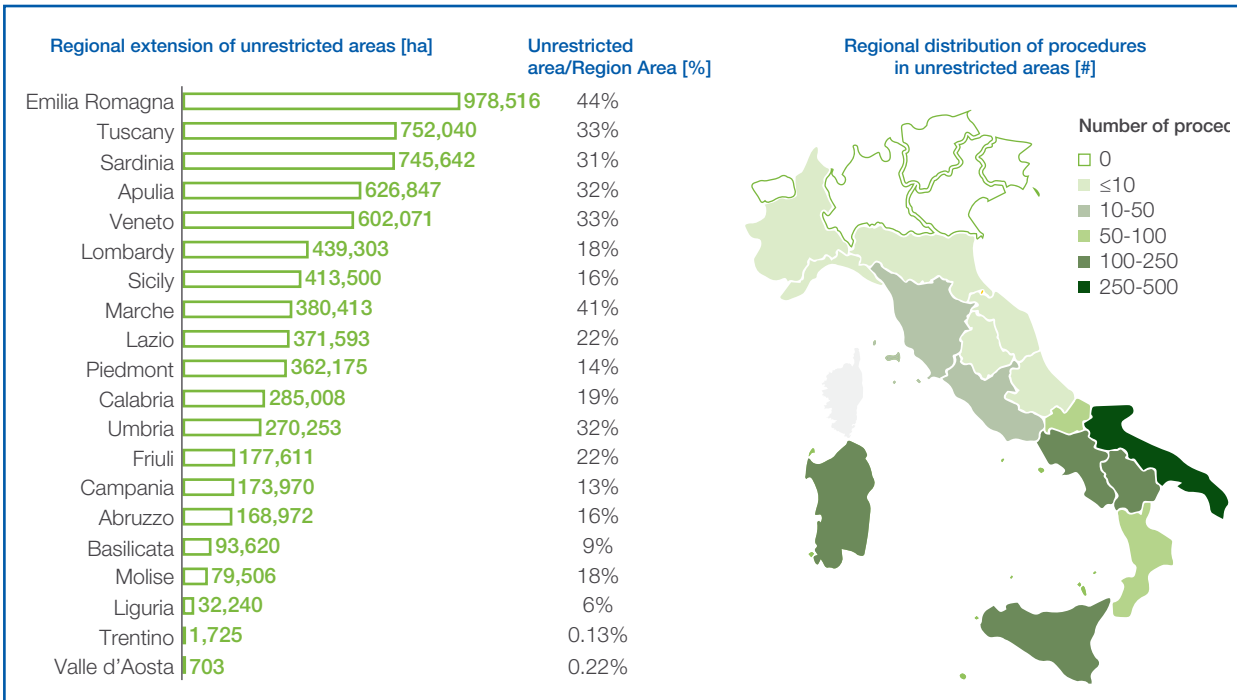


FIGURE 21 *Onshore wind connection requests in unrestricted areas*



2.6 Status of offshore wind connection requests

The offshore wind power installed in Italy at 31.12.2022 amounted to only 30 MW, compared to a total of more than 14 GW installed in Europe in 2021. However, the connection requests for this type of plant are accelerating sharply above all in the areas of the South of Italy and the Islands. The reasons are the following:

- an improvement of the technology of floating turbines, which is reaching a maturity such as to make it implementable also in applications in which the great depth of the seabed would constitute a limit (e.g Mediterranean Sea),
- the greater availability of the primary energy source in the aforesaid areas.

At 31.12.2022 there were in fact more than 103,733 MW (almost 20 times more compared to 31.12.2020) of requests for connection to the high voltage electricity grid (*Figure 22*).

Figure 22 ***Trend of connection requests for offshore wind power plants starting from December 2020***

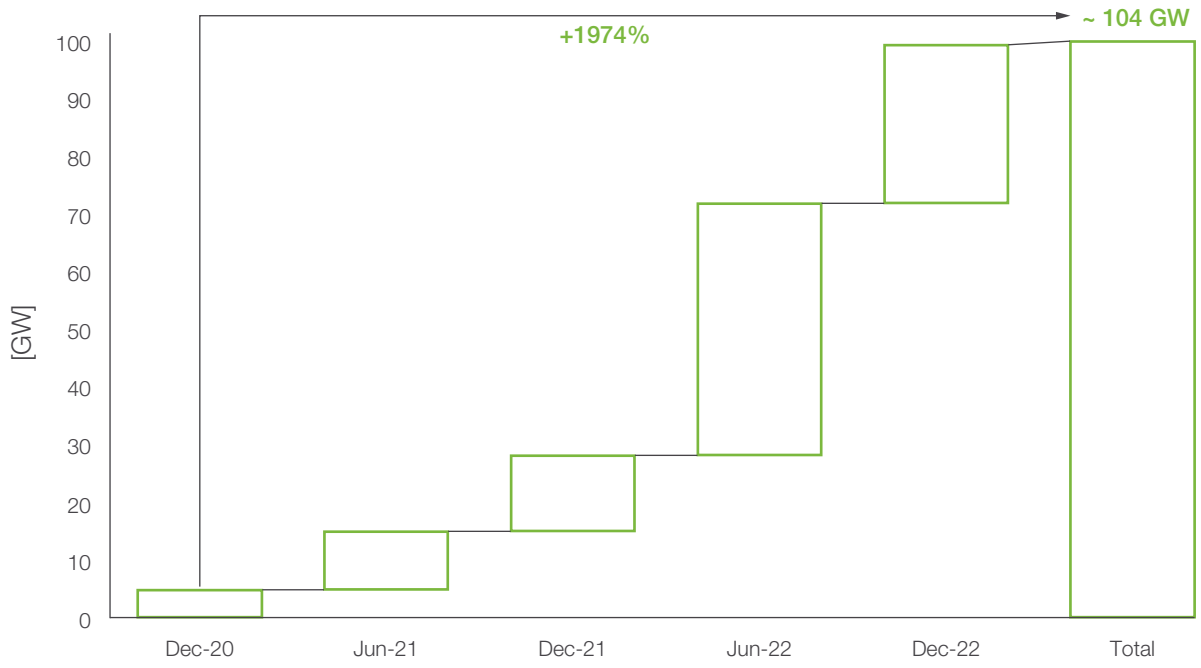


Figure 22 shows that the trend in requests is considerably more than the national target of 8.5 GW set by the FF55 policy scenario at 2030.

In particular, in relation to the status of the procedures we can note:

- 73,468 MW (of which approximately 18% and 52% of the total are respectively in the status of GMTS Accepted and GMTS Provided) have obtained the related General Minimum Technical Solution (GMTS) or are in a more advanced stage of the connection process;
- 20,629 MW (approximately 20% of the total) have a preliminary connection solution identified and work groups launched with the operators for the purpose of issue of the GMTS;
- 9,636 MW (approximately 9% of the total) are suspended awaiting supplements to the documentation presented, in order to prepare the General Minimum Technical Solution (GMTS).

Analysing instead the distribution of connection requests for offshore wind power plants in *Figure 23*, we can note that they are concentrated mainly in the regions of the South (approximately 30% of the total in Apulia) and the Islands (approximately 22% and 23% respectively in Sicily and Sardinia), that is in the zones with high availability of the primary energy resource:

MARKET ZONE	CONNECTION REQUESTS [MW]	CONNECTION REQUESTS [%]
North	1,380	1%
Centre-North	5,154	5%
Centre-South	13,366	13%
South	33,000	32%
Sicily	23,354	22%
Sardinia	23,729	23%
Calabria	3,750	4%

Some of the requests received for offshore wind power plants are characterised by significant sizes (e.g. 5 initiatives for a total of 13,600 MW with average rated power of 2.8 GW).

FIGURE 23 *Distribution of offshore wind power initiatives at 31.12.2022 compared with the incremental capacity provided for at 2030 in the FF55 scenario (MW)*

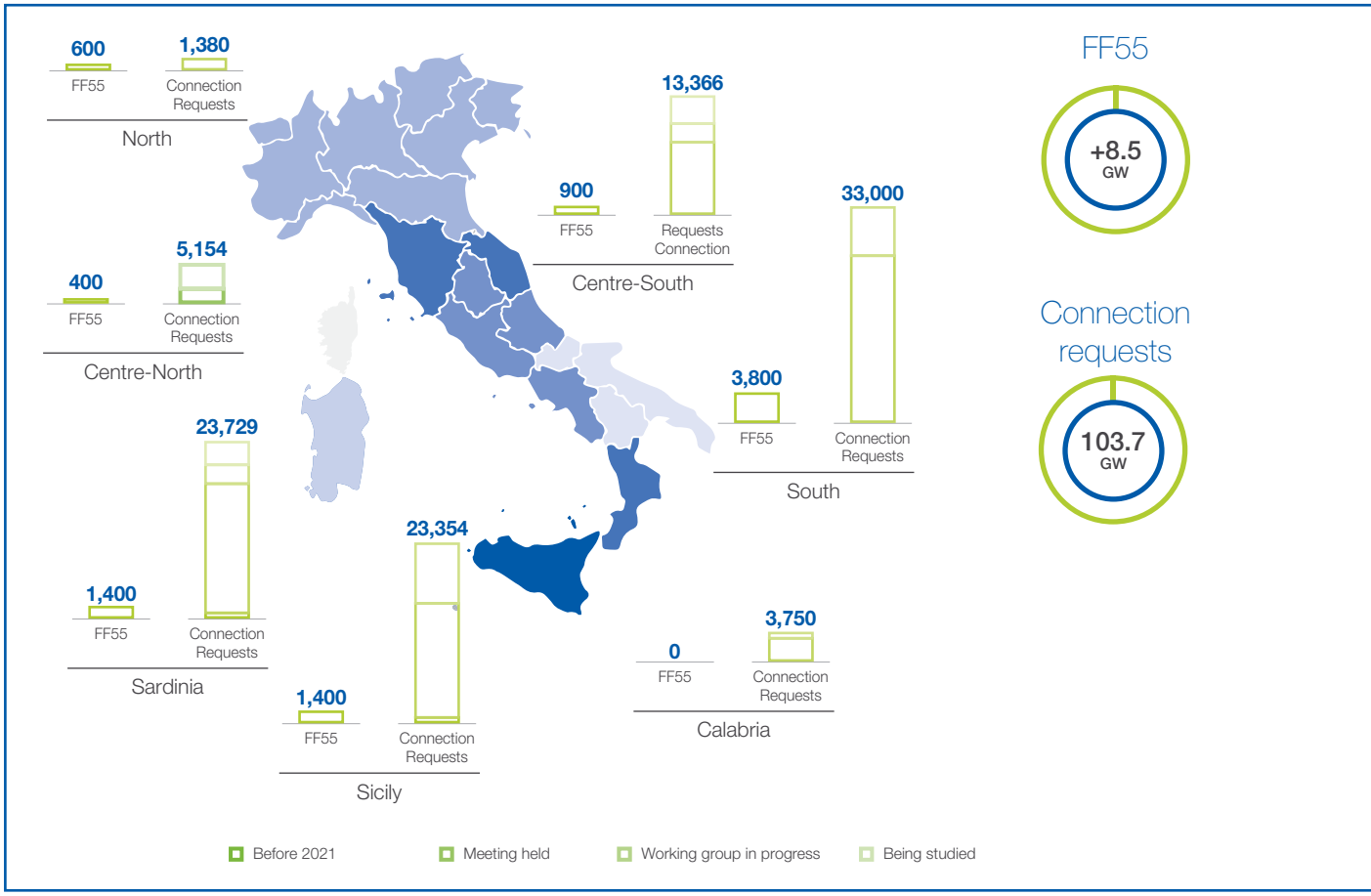


Figure 23bis shows the details of the localisation of plants related to offshore connection requests presented to Terna.

FIGURE 23BIS *Localisation of offshore wind connection requests*

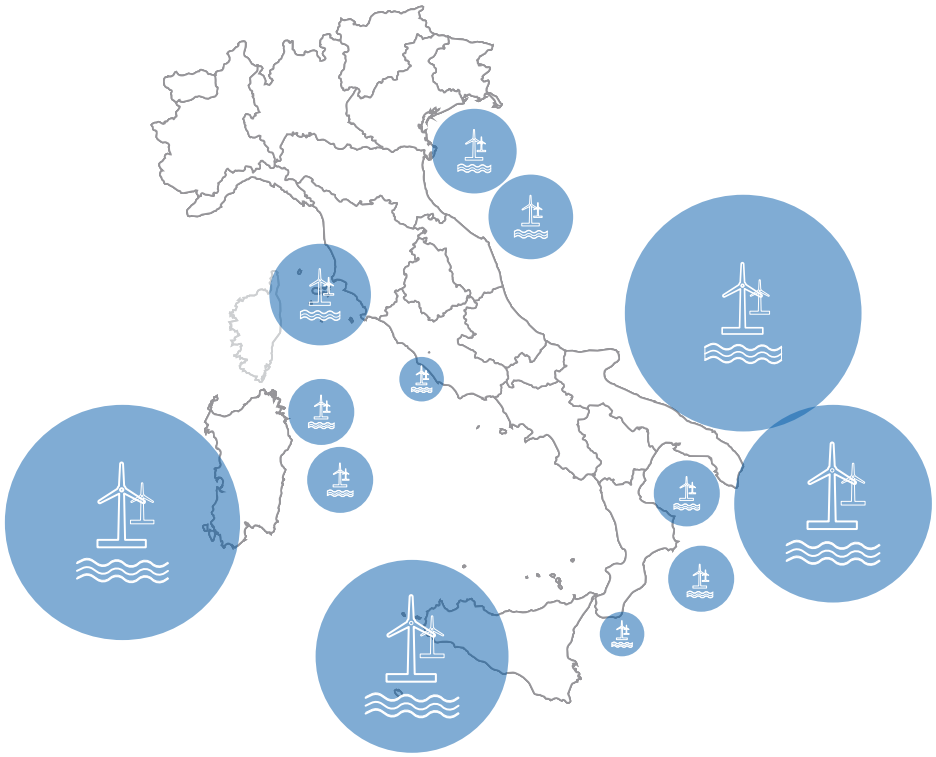
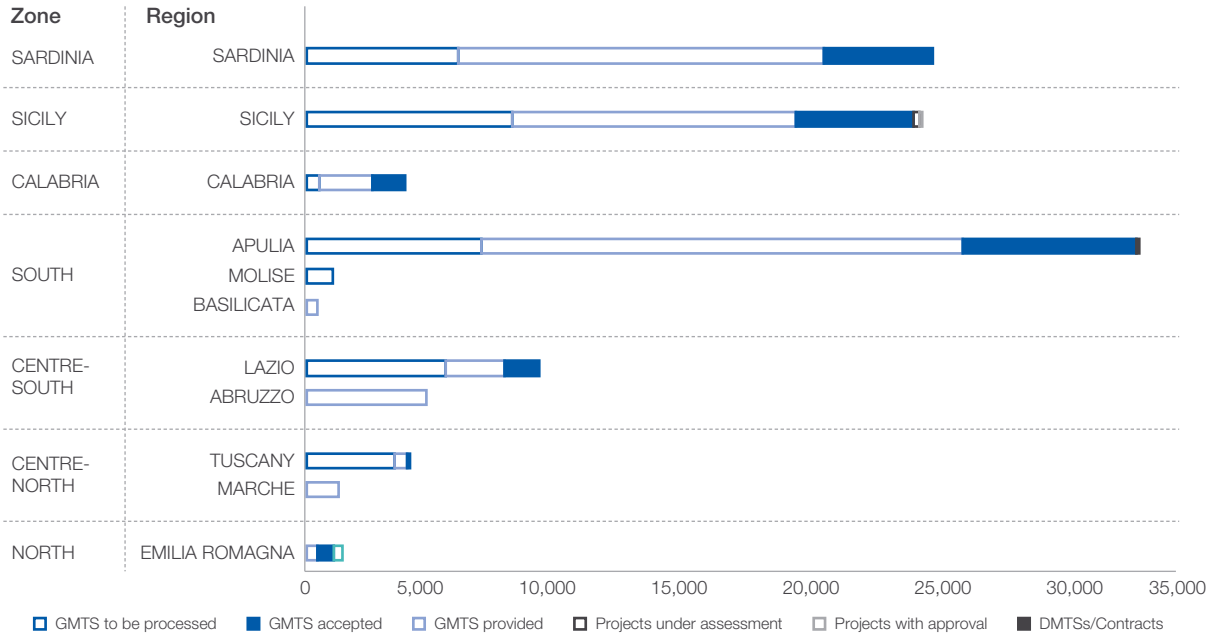
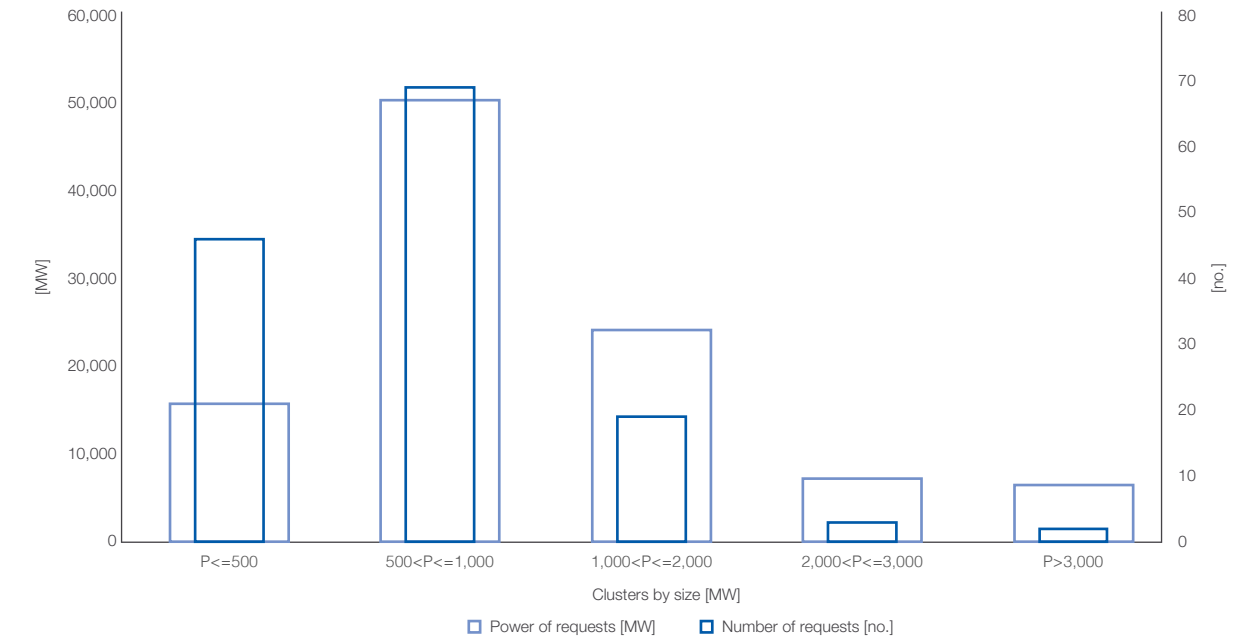


FIGURE 24 *Status and regional distribution of offshore wind power plants initiatives at 31.12.2022 (MW)*



Considering the significant dimensions of these plants, which in many cases are more than hundreds of megawatts of power to be connected at high voltage (*Figure 25*), and the high unpredictability of the primary energy source, there emerges the need for careful monitoring in order to prevent and manage carefully the potential impacts that they could have on the transmission grid and on the operation of the entire Italian national electricity system.

FIGURE 25 ***Clusterisation of connection requests for offshore wind power plants according to the rated power requested at 31.12.2022***

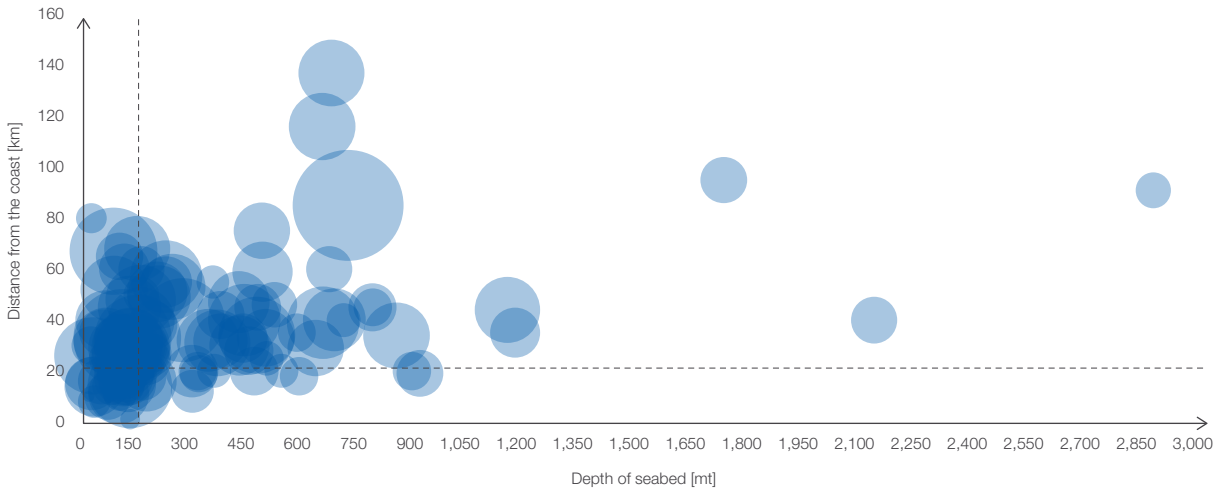


To manage the sudden losses of power injection owing to the unpredictability of wind, it is for example crucial to choose an adequate connection scheme, while to transport the large quantity of energy produced in the South towards the consumption centres present in the North, additional infrastructural developments are necessary making it possible to integrate efficiently the offshore wind power generation.

The large number of requests received has made necessary further studies by Terna aimed at identifying the best connection solutions from the technical and economic point of view. There are three parameters that most condition the identification of the most suitable connection solution for offshore wind power plants: rated power of the plant, distance from the coast and depth of the seabed where they are localised (making reference to the geographical coordinates provided by the producers in the connection request for a barycentric point of the offshore wind farm).

The chart in *Figure 26* shows the distribution of the requests according to the three magnitudes mentioned above: each initiative is represented by a bubble the size of which is a function of the nominal scale of the plant; we can note that approximately 80% of the initiatives are located in areas in which the depth of the seabed is more than 100 mt and approximately 88% are at a distance of less than 60 km from the coast.

FIGURE 26 *Distribution of requests according to the size of the initiatives, the distance from the coast and the depth of the seabed*



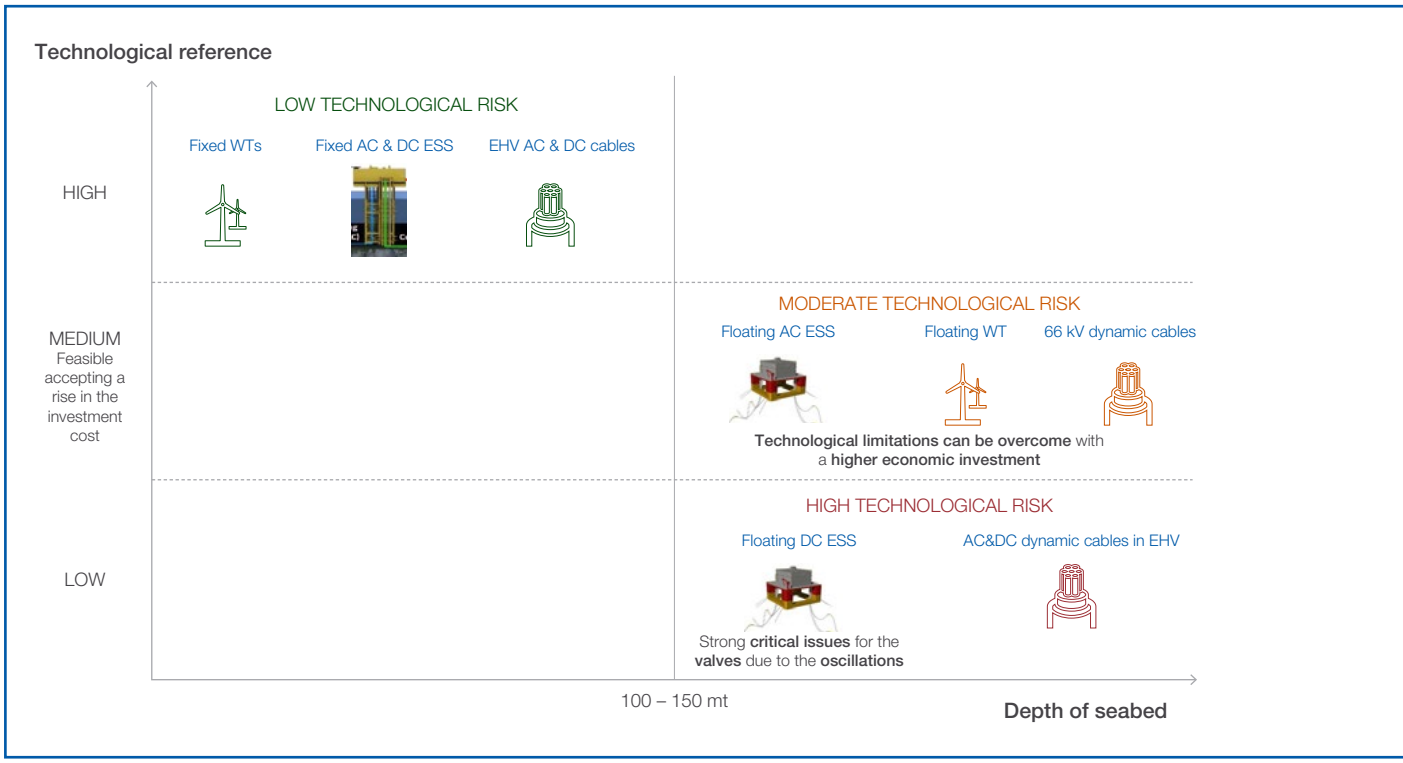
In order to collect useful information about technologies available, development prospects and best practices in the European context, Terna has conducted extensive technological surveys involving: suppliers of turbines and substations (fixed and floating solutions), suppliers of cables (with particular interest for the state of the art and prospects for dynamic cables), and other European TSOs with more experience in formulating connection solutions for offshore wind power plants of a significant size and in their safe management.

From the analysis of the portfolio of projects under construction by the main suppliers in Northern Europe, it emerged that for distances from the coast of less than 150 km and for powers of less than 1 GW the connection solution in alternating current (HVAC) is used, with the construction of an offshore substation that makes it possible to carry out the transformation between the voltage level of the wind farm collection cables (typically at 66 kV) and the voltage level adopted for the power cables for transmission to the land. On the other hand, for distances of more than 150 km and significant powers the connection solution in direct current (HVDC) is adopted, with the construction of an offshore AC/DC converter substation. It is important to stress that all the projects analysed are located over seabeds with depths of less than 100 mt (on average 40-50 mt) and, therefore, they refer exclusively to “bottom-fixed” connection solutions, that is they include turbines and transformer or converter substations anchored to the seabed.

As the Mediterranean Sea is characterised by completely different bathymetries, with seabed depths of more than 1000 metres already at a few km of distance from the coast in some Italian regions, we can understand that the range of possible connection solutions is closely linked to the maturity of the technologies available as of today. With particular reference to floating solutions, from the surveys conducted by Terna the following information emerged (summarised graphically in *Figure 27*):

- For seabed depths of less than 100-150 mt, fixed solutions (turbines, transformer and converter substations, cables laid on the seabed) present a consolidated technological maturity;
- Beyond the threshold of 100-150 mt of depth, the floating solutions already available or soon to be available on the market are turbines, dynamic cables at 66 kV and transformer substations in alternating current;
- The floating solution for AC/DC converter substations would seem instead as of today difficult to pursue owing to the risks associated with the damage that can be caused to the converter valves by wave motion. The dynamic solutions for HVDC and HVAC transmission cables are still at a very preliminary stage.

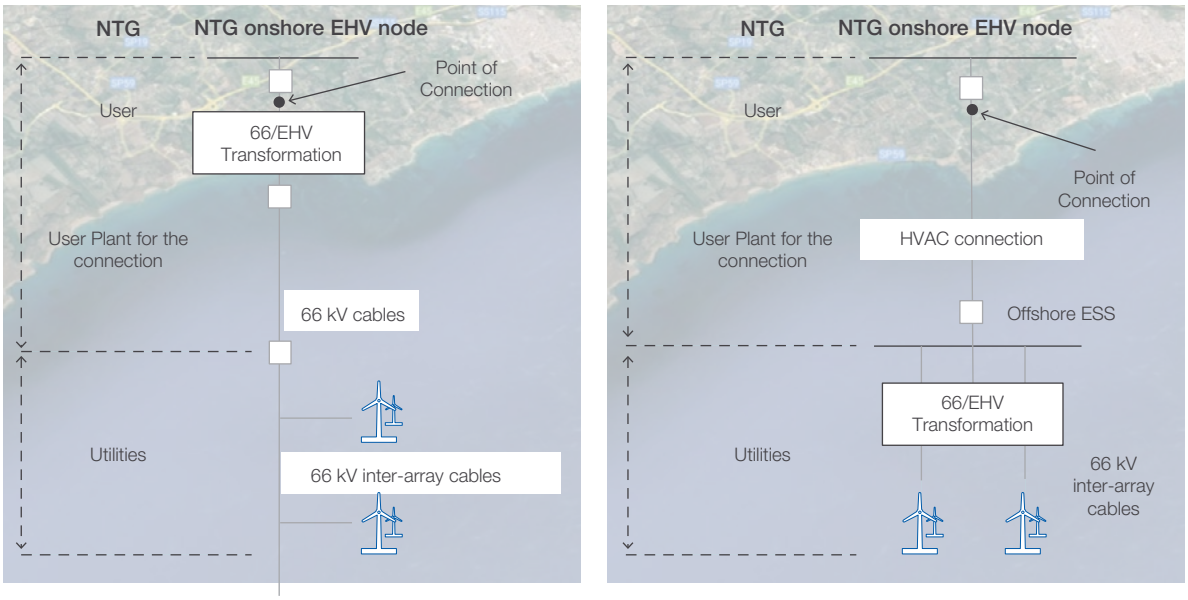
FIGURE 27 *Highlights from the technological surveys conducted*



The evidence that emerged from the studies conducted and the analysis of the connection requests received led to the definition of two **possible general connection schemes**, summarised in *Figure 28*, the application of which depends on the distance from the possible connection node at Extra-High Voltage (EHV), belonging to the National Transmission Grid (NTG):

- the scheme presented in Figure 28.a is applicable to small-scale production plants (typically hundreds of MW), localised at a distance from the NTG connection node of less than approximately 40-60 km. The scheme provides for the direct connection of the wind farm to the onshore NTG connection node via a connection at 66 kV, after transformation, in the user substation, to the voltage level envisaged in the connection solution;
- the scheme in *Figure 28.b* represents, instead, a connection proposed for initiatives located at a distance of more than 40-60 km from the NTG connection node. In this case, the scheme provides for the construction of a user substation (offshore ESS) for collecting the wind farm production, which will be conveyed to the onshore NTG node by means of an HVDC or HVAC connection (typically HVAC is used for a connection length of up to 120 km).

FIGURE 28 *General connection schemes possible: a) Connection scheme with direct 66 kV connection of the wind farm to an onshore EHV node; b) Connection scheme with connection of an offshore ESS to an onshore EHV node*



The identification of the connection solutions of offshore wind power plants, containing the indication **of the grid plant for the connection**[4] and the **development activities provided for in the Development Plan** and functional to the injection of the energy produced by the plant, were carried out also by means of grid studies taking into account the FF55 reference scenario so as to consider in operation (irrespective of the localisation of the plants in the zone) a maximum contingent of RES equal to the sum of the zonal demand and the limit of exchange with the other market zones, this last set according to the development works planned. The **General Minimum Technical Solution (GMTS)** provides for, as the connection point, typically a dedicated bay on a new electrical substation or on the expansion of an existing substation and an indication of the grid upgrades necessary to manage contingencies and congestions reducing the risk of permanent limitations of the power at the connection node. Connection requests significantly exceeding this scenario, in terms of both specific quantities and technological mix, could lead to the emergence of permanent limitations of the production plants for the portion of capacity exceeding the target integrable; therefore the implementation of connection requests in some areas different from the reference scenario, could determine the need of additional development works.

[4] the grid plant for the connection is the portion of the connection plant pertaining to the Grid Operator, included between the input point on the pre-existing grid and the connection point.

FOCUS: WORKSHOP "EVOLUTION OF RENEWABLES – FOCUS ON OFFSHORE"

On 22 November 2022 the seminary **"Evolution of renewables – Focus on offshore"** was held. It was organised by Terna, with the participation of the **Ministry of the Environment and Energy Security (MEES)** and the **Regulatory Authority for Energy, Networks and Environment (ARERA)**, and was aimed at sharing with all the operators involved the evolution of connection requests for renewable source production plants, with a particular focus on offshore technology.

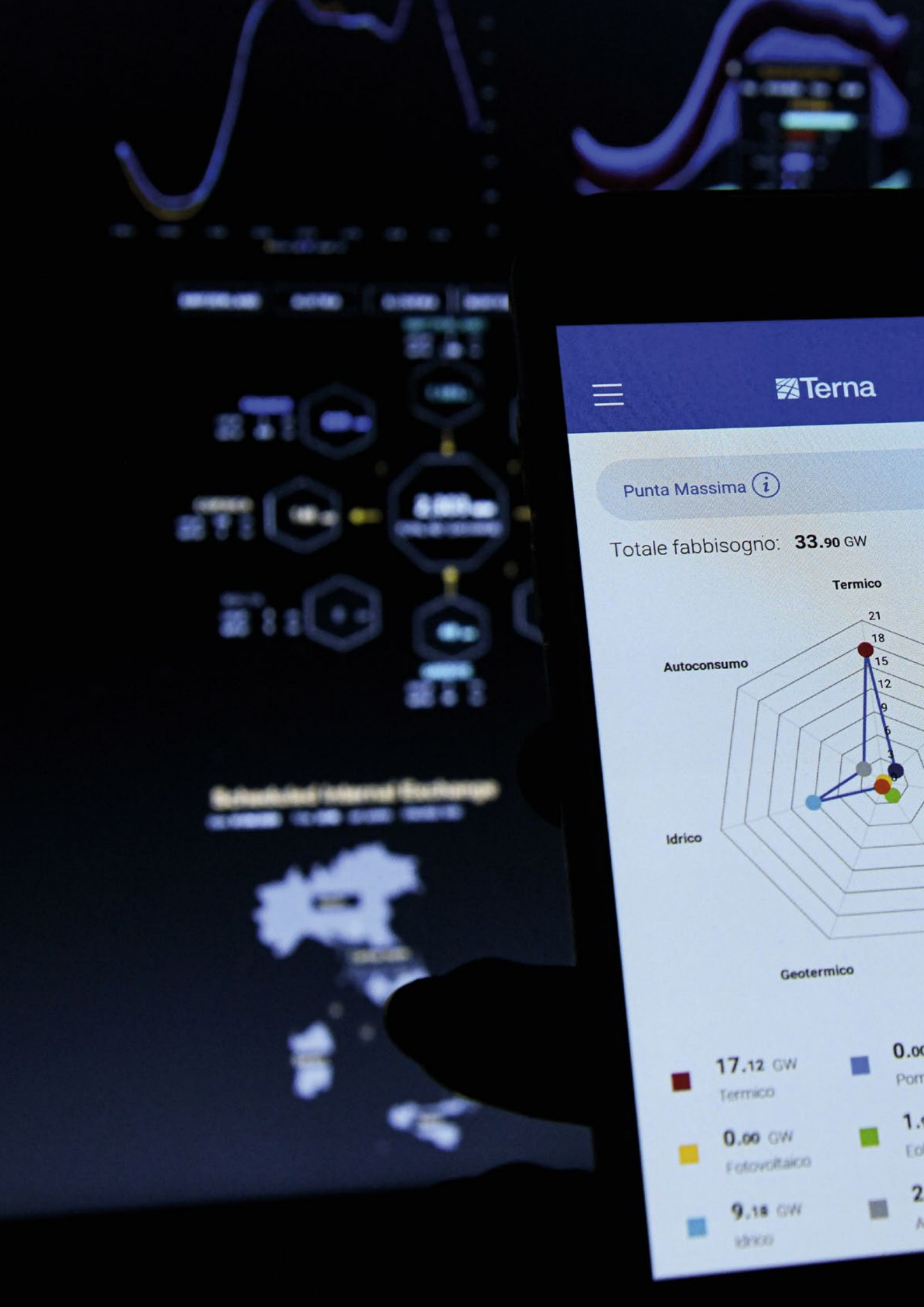
The national system and Terna are experiencing an important phenomenon in which the trend of requests for connection to the National Transmission Grid of RES initiatives is confirmed as in continuing growth; in particular **offshore floating wind power** is developing most on the seabeds of our country's seas in virtue of the technological developments that have matured in the European and international market.

The significant rated power of these plants, which in many cases is more than hundreds of megawatts of power to be connected at high voltage, and the non-programmable and intermittent nature of the primary energy source, has required a **period of careful monitoring and in-depth study of the subject**; the in-depth studies were carried out also through international benchmarking with TSOs, constructors and operators.

During the event, divided into a plenary session and a Q&A session, the following themes were examined in depth:

- **Energy scenarios** at 2030, with particular attention to the Fit-for-55 policy scenario, compared with the connection requests;
- **Legislative and regulatory** context of reference;
- Detailed focus on the evolution of **connection requests for offshore wind power plants**, on the **technological studies** conducted and on the **criteria for the definition and release of connection** solutions.

Numerous operators in the sector had the possibility of discussing with Terna and with the Institutions subjects of significant importance in the transition process in progress.


Terna
Punta Massima
Totale fabbisogno: 33.90 GW
Termico
Autoconsumo
Idrico
Geotermico
21
18
15
12
9
6
3
17.12 GW
Termico
0.00 GW
Fotovoltaico
9.18 GW
Idrico

3

New 36 kV connection standard

New 36 kV connection standard

3

The current context of requests for connection of renewable source production plants to the NTG shows that approximately **90%** of onshore plants for which a connection request is presented to Terna have a **size of less than 100 MW** with a total average size of approximately 35 MW.

The traditional standards of connection to the NTG pursuant to Annex A.2 to the Grid Code provided for, typically in 380/150-132 kV or 220/150-132 kV collection stations, the construction of 150-132 kV bays with the function of grid plants for the connection of the single production plant. 150-132 kV bays can connect production plants of power up to 200-250 MW, more than the average size of the production plants for which most of the requests for connection to the NTG are currently presented. This misalignment between infrastructural capacity and size of the plants entails:

- inefficiencies due to the **not always optimal use of the capacity** of the bay and of the network infrastructure;
- **more land use** due to the need to expand the substations to construct dedicated 150-132 kV bays for each production plant;
- the need for applicants to construct a 130/150 kV substation with more land use and inefficiencies in the investment;
- the consequent **greater complexity of authorisation** for applicants.

In order to make more efficient the use of the available capacity on every single NTG bay and to rationalise the use of the grid structures, there emerged a need to share the grid plant for a plurality of production plants (“condominium” on the same NTG bay).

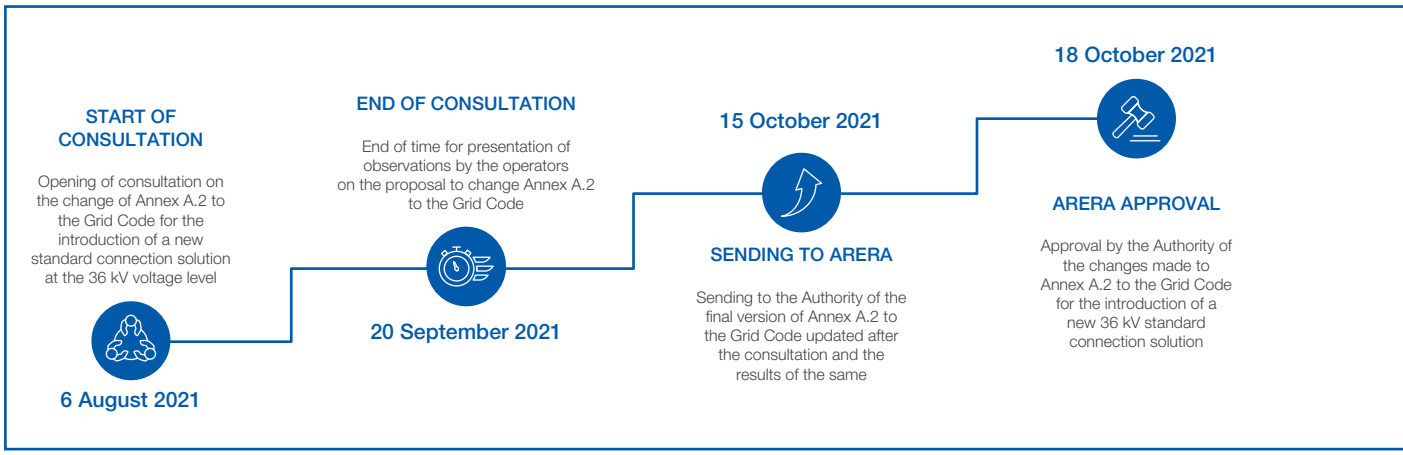
Consequently, this entailed the sharing by the applicants also of the user plant for the connection. The sharing by a plurality of users of the grid and user plant entails:

- **technical and operational** difficulties with consequent conflicts linked to the need for an agreement among producers for coordination of the authorisation, construction and operating stages;
- **longer times** for completion of the connection process;
- **inefficiencies**, also in the case of agreement, deriving from the incomplete use of the power capacity of the NTG bay.

Terna, in the gradual search for solutions aimed at promoting simplicity and efficiency in providing the service and taking into account the evolution of the electricity system as a whole in view of achieving the European objectives on the subject of electricity production from renewable sources, has identified a new connection standard at the 36 kV voltage level for production plants with power of up to 100 MW to be connected to the NTG.

The new connection standard was introduced following a consultation process, represented in, *Figure 29*, which was completed on 18 October 2021 with Resolution 439/2021/R/EEL of the Italian Regulatory Authority for Energy, Networks and Environment.

FIGURE 29 *Consultation process on the new 36 kV connection standard*



The new 36 kV standard connection solution makes it possible to provide the connection to the NTG at a voltage level more adequate for the average size of the production plants requesting the connection, releasing them at the same time from the authorisation complexities brought into play by the construction of a bay at 150-132 kV.

In particular, the new standard connection solution involves each production plant being connected directly to a bay at a voltage of 36 kV, which performs the function of grid plant for the connection with conventional power of 100 MVA. The raising of the voltage from 36 kV to higher levels is therefore done by Terna, and no longer by the producers, in the context of its NTG management activities, which makes it possible to rationalise and simplify the technical solutions adopted.

More in detail, this entails:

- the **simplification** of the user plants for the connection for which the producers are responsible, because they no longer involve raising the voltage up to 150-132 kV or higher values;
- the **rationalisation** of the technical solutions for the connection for which Terna is responsible because providing the connection at 36 kV makes it possible to share a single 380-220-150-132/36 kV transformer among several applicants, meaning that these applicants no longer need their own 150/36-31 kV transformers;
- the **reduction of land use**, consequent to the sharing of a single 380-220-150-132/36 kV transformer among several applicants;
- the potential **greater territorial acceptability** deriving from the lower environmental impact of the 36 kV connection solution, which could facilitate and accelerate the authorisation procedures for the grid works for the connection;
- **better management of the connection procedures** for production plants powered by renewable sources, because the 36 kV connection solution enables a dimensioning of the grid plant for the connection (bay) more in keeping with the effective size of the said production plants, with consequent efficiencies in terms of a higher rate of use of the capacity of the bay and in terms of reduction of the operational complexity and the times of the connection procedure;
- the **optimisation of the total costs** for the electricity system, because the construction of NTG plants at 150-132/36 kV makes it possible to rationalise the NTG itself, with positive reflections also for applicants for the connection.

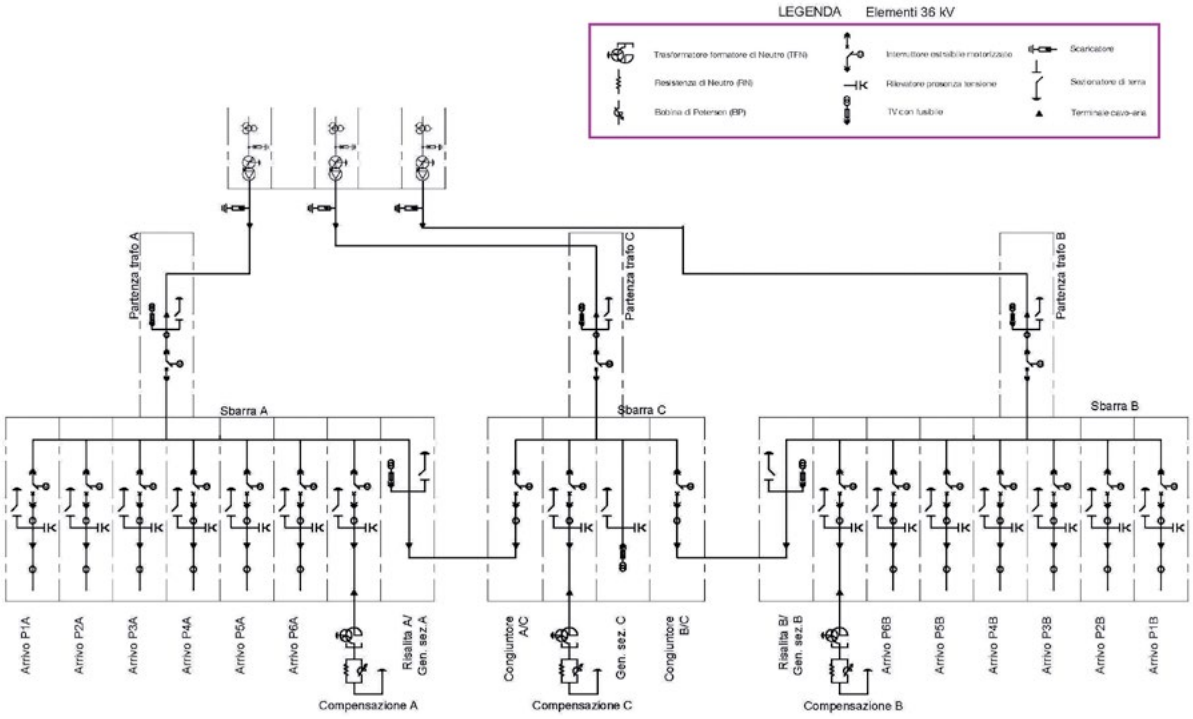
The introduction of the new 36 kV connection standard met with widespread diffusion and, at 31/12/2022, more than 1400 Connection Estimates issued at 36 kV had been recorded, for a total capacity of RES production and storage systems of more than 56 GW. Of these, more than 600 estimates, for approximately 26 GW, were requests to re-examine at 36 kV estimates already issued previously with connection solutions at 220-150-132kV.

The distribution of the 36 kV connection solutions shows a majority of requests from photovoltaic plants with approximately 34 GW of capacity, followed by wind power with approximately 19 GW. The remainder, approximately 2.5 GW of capacity, is issued to stand-alone Storage Systems, showing that this type of solution encourages also the connection of this type of plants.

TECHNICAL BOX: NEW 36 KV CONNECTION STANDARD

From the technical point of view, the new 36 kV connection standard is based on principles of modularity and scalability, in order to simplify the design, speed up the implementation and reduce the costs. As can be seen from the design standards available in the section of the Terna website devoted to the forms for the connection to the NTG[5], the constituent element common to all the solutions is the standard 150/36 kV module, 2x125 MVA at 36 kV made up of 2 three-phase transformers (plus 1 in hot reserve) at 220-150-132/36 kV, connected to a single 36 kV section. Each section is made up of two semi-busbars, each of which provides for 6 bays thus making it possible to connect up to 12 production plants. For each semi-busbar the compensation of the neutral is provided for using a Petersen Coil to guarantee an optimal elimination of any faults. In addition there is a redundancy management system which makes it possible, in the case of an outage or a fault in one of the transformers, to transfer the load to the reserve transformer guaranteeing the safety and continuity of operation.

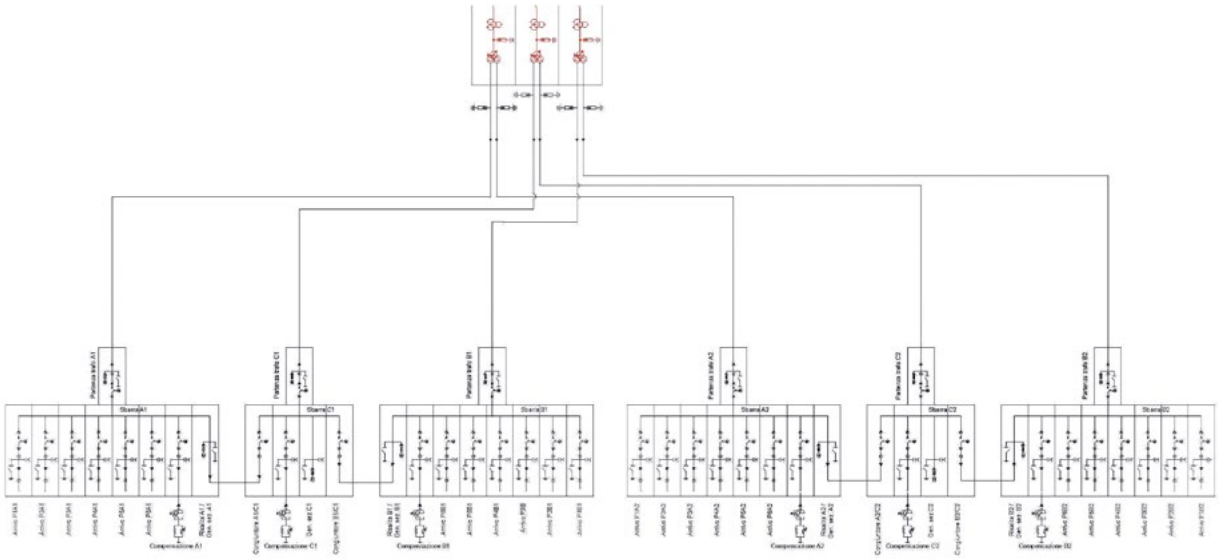
FIGURE 30 *Simplified single-line wiring diagram of 150/36 kV standard module of 2x125 MVA*



[5] https://www.terna.it/it/sistema-elettrico/codici-rete/codice-rete-italiano

If the total power of the renewable source production plants understood as a single station becomes high, a solution is introduced which provides for a standard 380/36 kV module, 2x250 MVA at 36 kV made up of 2 36 kV sections and 2 250 MVA transformers (plus 1 in hot reserve). Each transformer is made up of 3 single-phase units with primary coil at 380-220-150-132 kV of 250 MVA and two secondary coils of 125 MVA. Each secondary coil is connected to a 36 kV semi-busbar with 6 bays, thus making it possible to connect to the entire module a total of up to 24 production plants. Thanks to the modular construction, solutions have been prepared for up to 4 +1 250 MVA machines, providing for a growing number of 36 kV sections, each capable of connecting 2 x 125 MVA of renewable sources.

FIGURE 31 *Simplified single-line wiring diagram of 380/36 kV standard module of 2x250 MVA*



4

NON-RES Production Plants

NON-RES Production Plants

4

The connections related to NON-RES Production Plants include all the NTG plants necessary for the connection of thermoelectric power stations.

The production from non-renewable sources is destined to decrease to achieve the policy targets and to reduce greenhouse gas emissions down to the “net zero” provided for at 2050.

As regard connection requests, together with requests for the decommissioning of plants, we are seeing mostly requests for modernisation and/or expansion of existing power stations connected to the Grid and connection requests for new thermoelectric plants of various types, of small sizes (cogeneration plants, microturbines, etc.).

This type of plant is authorised to participate, observing the CO_2 emission limits, in the capacity market auctions. Through this mechanism, Terna procures the capacity to be offered on the energy market through contracts of an annual or multi-annual duration. Terna’s ultimate objective is to enable the decommissioning of inefficient plants and encourage the installation of more flexible and less polluting plants so as to be able to:

- reduce the carbon footprint of the generation facilities;
- enable greater integration of RES production;
- improve the efficiency of the production facilities.

5

Consumption Users

Consumption Users 5

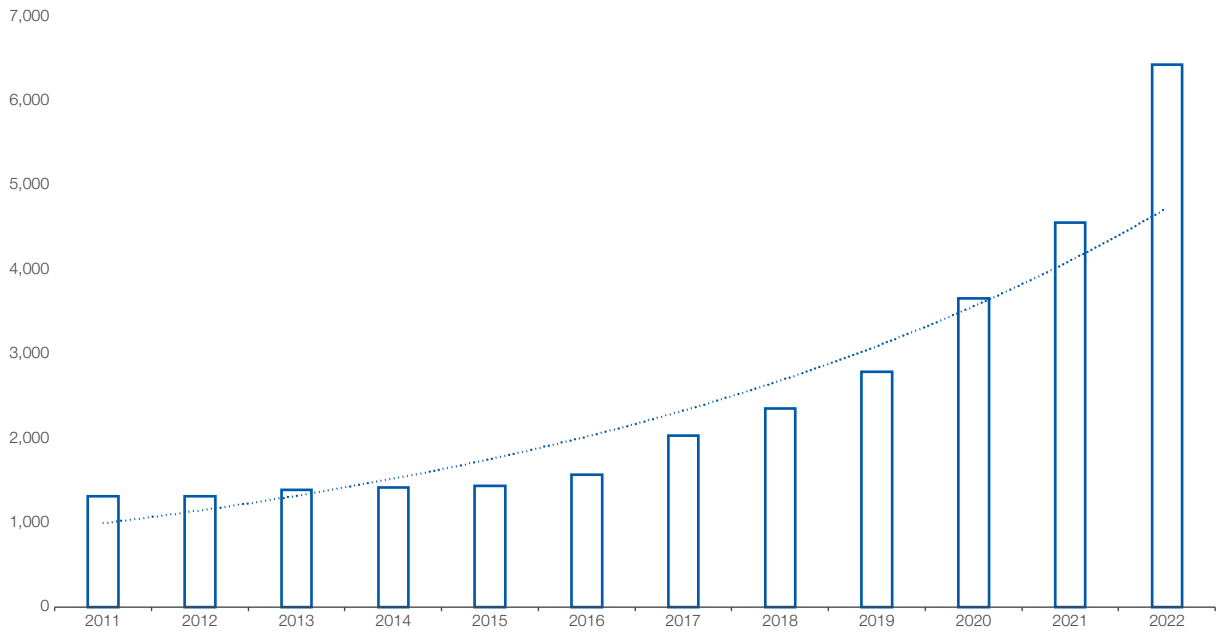
The connections related to Consumption Users include all the NTG plants necessary for the connection of passive users.

Passive users, which withdraw directly from the National Transmission Grid, consist of particularly energy-intensive plants that have a strong impact on the economy of the territory. The range of connection requests for capacity market units includes changes to existing plants, with the addition of production lines, and new plants that need a connection to the NTG.

The requests analysed in this paragraph are those with a connection solution accepted by the applicant. For the initiatives of consumption users, after acceptance of the solution, Terna has in fact the responsibility to complete the authorisation procedure for the connection grid plant and for any actions on the electricity grid.

Below, in *Figure 32*, is the trend in power associated with connection requests for capacity market units, distributed over the whole country, to highlight the sharp increase starting from 2017.

Figure 32 ***Comparison of powers associated with connection requests for consumption from 2011 to 2022 (MW)***



During 2022, over the whole country, the monitoring carried out by Terna showed an increase in power withdrawn of 41% compared to 2021, with a total request of 6.43 GW (+1.87 GW compared to 2021).

The requests are mainly related to industrial plants devoted to the production and transformation of raw materials (steel, glass, timber, cements, etc.), withdrawal plants devoted to rail transport and industrial plants devoted to the processing of chemical substances.

Figure 33 shows the **geographical distribution** of high-voltage connection requests with details for each Market Zone:

	NORTH		CENTRE-NORTH		CENTRE-SOUTH		SOUTH	
	[MW]	[%]	[MW]	[%]	[MW]	[%]	[MW]	[%]
Capacity Market Unit	5,051	100%	165	100%	690	100%	190	100%

	CALABRIA		SICILY		SARDINIA		TOTAL ITALY	
	[MW]	[%]	[MW]	[%]	[MW]	[%]	[MW]	[%]
Capacity Market Unit	60	100%	277	100%	0	100%	6,433	100%

For the **NORTH Market zone** we can note total withdrawn Power requested of 5.05 GW and an increase of 1.79 GW compared to 2021.

To highlight that the density of connection requests for this type of plant is not distributed equally among the regions that make up the North zone, below, in *Figure 34*, is a chart that shows the distribution of requests in 2022. It is clear that just over 50% of the requests, that is 2.69 GW, are located in the territory of Lombardy.

FIGURE 33 ***Comparison of connection requests for consumption between 2021 and 2022 (GW)***

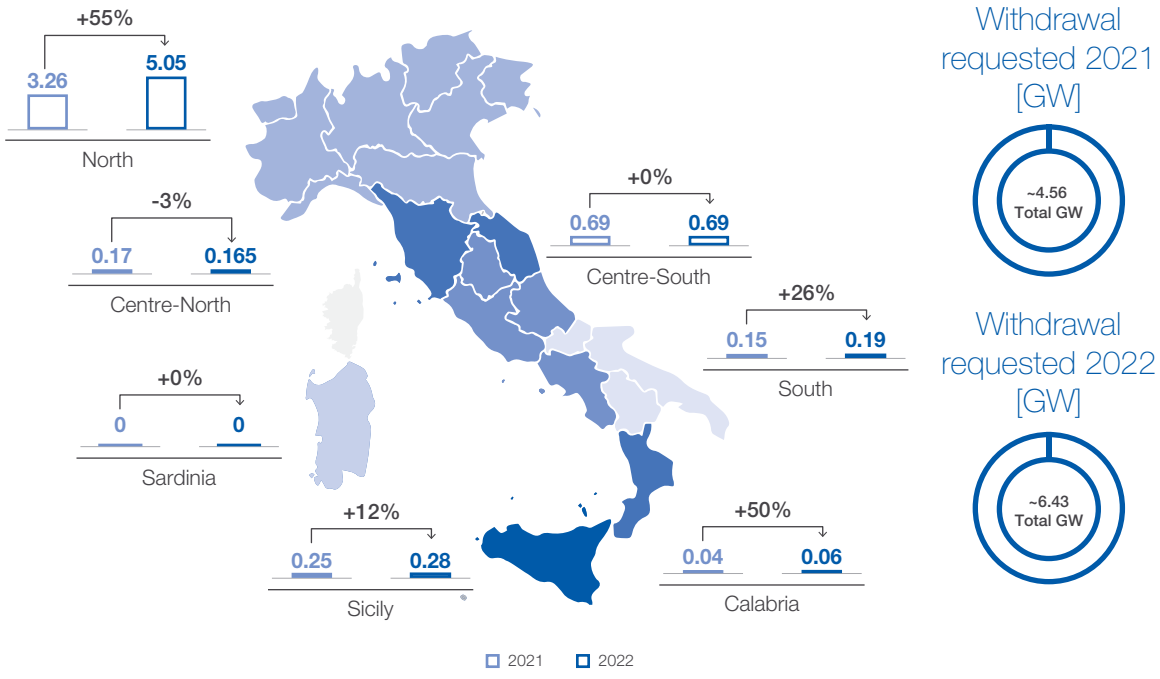
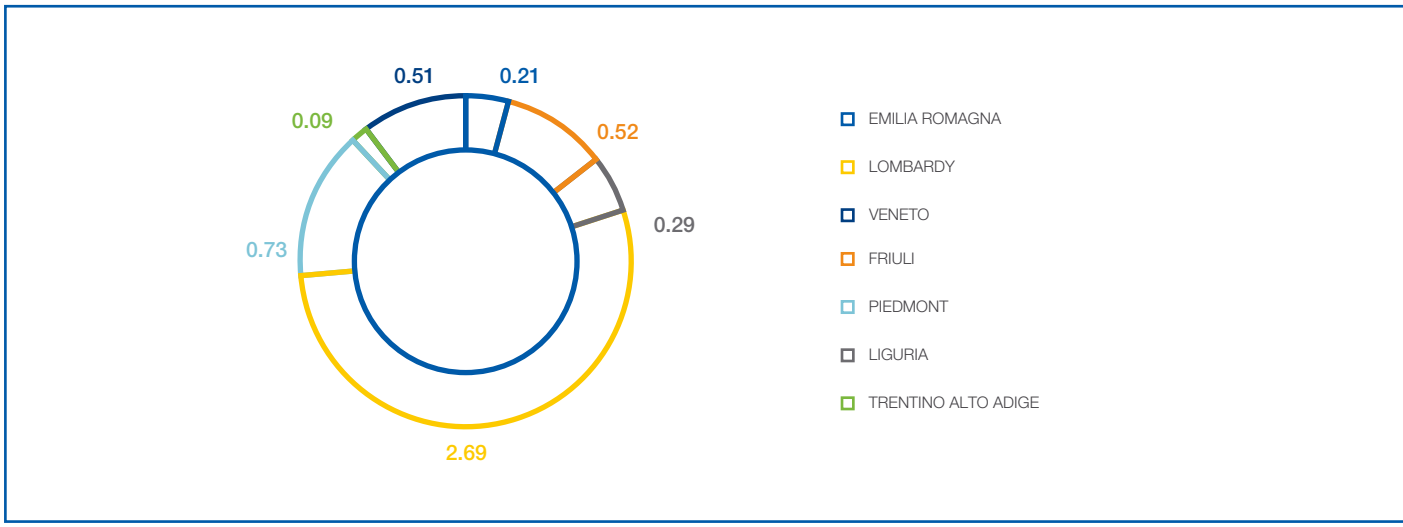


FIGURE 34 *Regional division of power associated with connection requests for consumption for the NORTH Market Zone (GW)*



We can note, in addition, that with respect to the total requests for connection to the National Transmission Grid in Lombardy, for plants corresponding to capacity market units, 67.7 % relate to Data Processing Centres (Datacenters), 1.82 GW out of a total of 2.69 GW. The plants are mainly situated in the Milan area, with some further developments in the Pavia area. The requests related to datacenters are located almost entirely in Lombardy; however, they constitute 28.3 % of connection requests for consumption over the whole country.


ABB

6

Primary Cabins

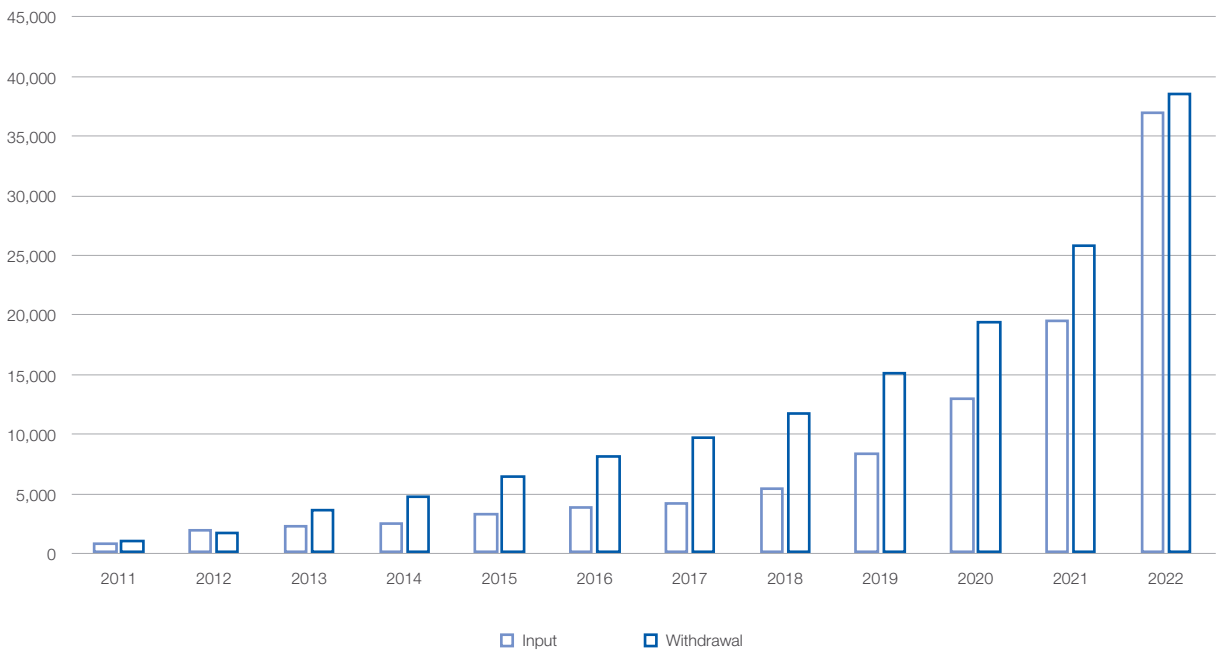
Primary Cabins

6

The connections related to Primary Cabins include all the NTG plants necessary for the connection of Primary Cabins (PCs) for distribution planned by the Distributors. The cabins can be planned both following connection requests for distributed generation plants (Primary Cabins for RES Collection) and following connection requests for passive plants or for improvement of the operating quality provided (Primary Load Cabins).

Below, in *Figure 35*, is the trend in power associated with connection requests for capacity market units, distributed over the whole country, to highlight the sharp increase starting from 2019.

Figure 35 ***Comparison of powers associated with connection requests for consumption from 2011 to 2022 (MW)***



During 2022, over the whole country:

- the request for power withdrawn increased by 50% compared to 2021, with a total request of 38.45 GW (+12.82 GW compared to 2021);
- the request for power input increased by 90% compared to 2021, with a total request of 36.78 GW (+17.44 GW compared to 2021);

These assessments were done on the power capacity assigned, that is for all the primary cabins for which the connection solution has been accepted by the applicant.

Figure 36 shows the **geographical distribution** of high-voltage connection requests with details for each Market Zone:

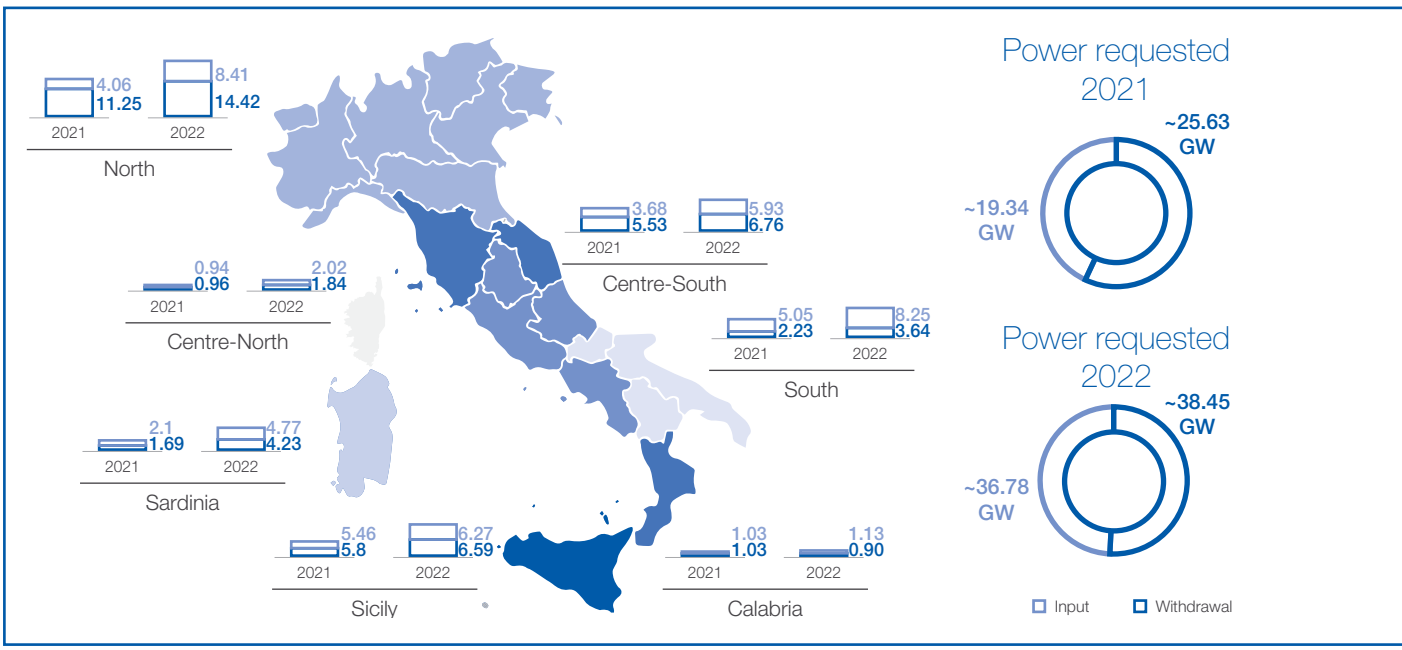
	NORTH		CENTRE-NORTH		CENTRE-SOUTH		SOUTH	
	INJECTION [MW]	[%]	INJECTION [MW]	[%]	INJECTION [MW]	[%]	INJECTION [MW]	[%]
Load PCs	5,044	60%	1,500	74%	2,580	44%	2,140	26%
Collection PCs	3,370	40%	520	26%	3,350	56%	6,110	74%
TOTAL	8,414	100%	2,020	100%	5,930	100%	8,250	100%

	CALABRIA		SICILY		SARDINIA		TOTAL ITALY	
	INJECTION [MW]	[%]	INJECTION [MW]	[%]	INJECTION [MW]	[%]	INJECTION [MW]	[%]
Load PCs	690	61%	2,080	33%	960	20%	14,994	41%
Collection PCs	440	39%	4,190	67%	3,810	80%	21,790	59%
TOTAL	1,130	100%	6,270	100%	4,770	100%	36,784	100%

	NORTH		CENTRE-NORTH		CENTRE-SOUTH		SOUTH	
	WITHDRAWAL [MW]	[%]	WITHDRAWAL [MW]	[%]	WITHDRAWAL [MW]	[%]	WITHDRAWAL [MW]	[%]
Load PCs	11,870	82%	1,610	88%	5,010	74%	2,760	76%
Collection PCs	2,550	18%	230	12%	1,750	26%	880	24%
TOTAL	14,420	100%	1,840	100%	6,760	100%	3,640	100%

	CALABRIA		SICILY		SARDINIA		TOTAL ITALY	
	WITHDRAWAL [MW]	[%]	WITHDRAWAL [MW]	[%]	WITHDRAWAL [MW]	[%]	WITHDRAWAL [MW]	[%]
Load PCs	820	85%	2,450	37%	1,210	29%	25,730	67%
Collection PCs	150	15%	4,140	63%	3,020	71%	12,720	33%
TOTAL	970	100%	6,590	100%	4,230	100%	38,450	100%

FIGURE 36 *Comparison of connection requests for primary cabins between 2021 and 2022 (GW)*



7 Storage

Storage

7

The FF55 reference scenario foresees growing operating difficulties for the electricity system related to management of the intermittent production, due to the cyclicity of solar radiation. In this context, storage plants play the fundamental role of accumulating energy in the central hours of the day and releasing it during the evening hours, when solar generation decreases rapidly while the demand for electricity remains high. The optimal dimensioning of the need for storage and its geographical localisation are therefore greatly dependent both on the power and localisation of the solar capacity and on the expected effective development of the network infrastructure, without forgetting the necessary synergy with the other system resources.

Storages are divided into:

- small-scale storages, that consist of electrochemical batteries with a medium energy/power ratio (4 hours). These systems are designed above all to accompany the development of small-scale RES plants in order to maximise self-consumption;
- “utility-scale” storages, with a high energy/power ratio (8 hours);
- hydroelectric pumping plants, designed to store large quantities of energy with high power availability.

Stand-alone storage systems, or systems integrated with other types of production, can participate (following the principle of technological neutrality) in the fast reserve project, that is the service of ultra-rapid frequency adjustment. The objective of the project is to test the supply of a new power service with a view to the future decarbonisation of the production facilities. This adjustment service, which would act before the classic 30-second band of intervention of the primary adjustment, is necessary to:

- enable greater integration of RES production;
- increase the quality of the grid service;
- reduce the overall frequency instability of the system;
- guarantee the adequacy and security of the electricity system.

The connection requests that reach Terna, in relation to storage plants, refer to pumping plants and utility-scale plants, both of the stand alone type and associated with other generation plants; small-scale plants generally have a connection in medium and low voltage.

The connection requests received as of 31.12.2022 amounted to a total of approximately 20 GW for stand-alone storage systems, approximately 15 GW for storage systems associated with other generation plants and approximately 8 GW for hydroelectric pumping plants. Compared to the data at the end of 2021, an increase in connection requests was recorded, of approximately 22 GW for storages (stand-alone and integrated) and 3.5 GW for pumping plants.

The table below shows the distribution of connection requests divided by stage of progress of the connection procedure.

	TO BE PROCESSED		PROVIDED		ACCEPTED	
	[MW]	[%]	[MW]	[%]	[MW]	[%]
Stand-alone	8,035	52%	4,187	61.4%	5,104	32.7%
Integrated	4,415	29%	2,637	38.6%	6,082	39%
Pumping	2,963	19%	0	0%	4,420	28.3%
TOTAL	**15,413**	**100%**	**6,824**	**100%**	**15,606**	**100%**

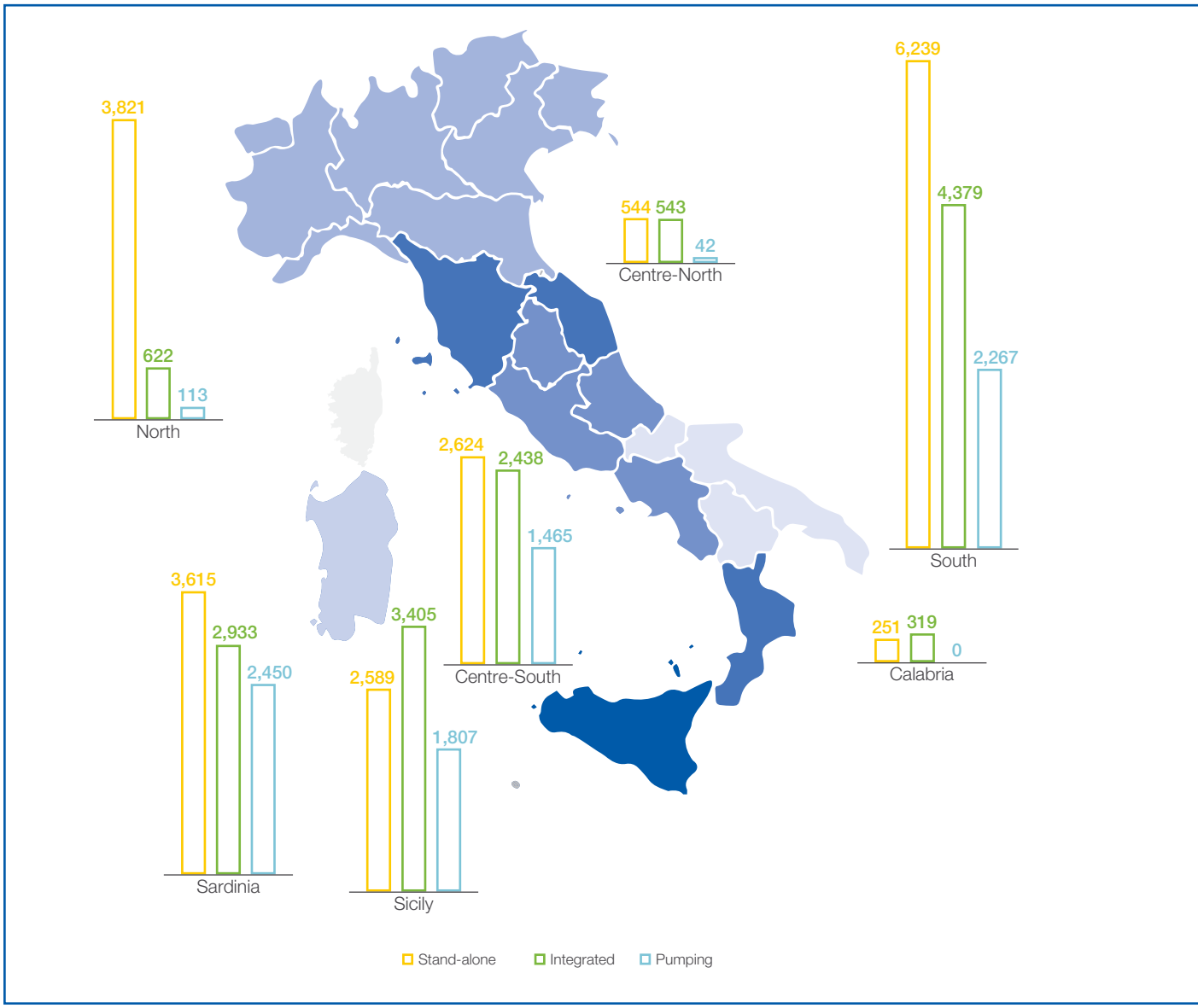
	PROJECTS UNDER ASSESSMENT		PROJECTS WITH APPROVAL		DMTS/CONTRACTS	
	[MW]	[%]	[MW]	[%]	[MW]	[%]
Stand-alone	796	40.6%	1,235	54%	349	90%
Integrated	955	48.6%	509	22%	41	10%
Pumping	212	10.8%	550	24%	0	0%
TOTAL	**1,963**	**100%**	**2,294**	**100%**	**390**	**100%**

The **geographical distribution** by single market zone is detailed below and in *Figure 37*.

	NORTH (11%)		CENTRE-NORTH (3%)		CENTRE-SOUTH (14%)		SOUTH (30%)	
	[MW]	[%]	[MW]	[%]	[MW]	[%]	[MW]	[%]
Stand-alone	3,821	84%	544	48%	2,624	40%	6,239	48%
Integrated	622	14%	543	48%	2,438	37%	4,379	34%
Pumping	113	2%	42	4%	1,465	23%	2,267	18%
TOTAL	**4,556**	**100%**	**1,129**	**100%**	**6,527**	**100%**	**12,885**	**100%**

	CALABRIA (1%)		SICILY (19%)		SARDINIA (22%)		TOTAL ITALY (100%)	
	[MW]	[%]	[MW]	[%]	[MW]	[%]	[MW]	[%]
Stand-alone	251	44%	2,589	33%	3,615	40%	19,683	46%
Integrated	319	56%	3,405	44%	2,933	33%	14,639	34%
Pumping	0	0%	1,807	23%	2,450	27%	8,144	20%
TOTAL	**570**	**100%**	**7,801**	**100%**	**8,998**	**100%**	**42,466**	**100%**

FIGURE 37 *Zonal distribution of storages and pumping plants (MW)*



8

Appendix - Actions for connection to the National Transmission Grid (NTG)

8 Appendix - Actions for connection to the National Transmission Grid (NTG)

In the context of the Development Plan, Terna provides information relating to the actions for connecting users to the NTG, which contribute to defining the base for the preparation of the electricity system development scenarios for correct planning of the grid. These actions, presented in the present Appendix, are organised into the following categories:

- connections of Power Stations: this includes the list of NTG plants necessary for connecting power stations, classified by source and geographical location; for these stations the detailed minimum technical solution (DMTS) has been accepted and the connection contract has been defined (*Tables 1 and 2*);
- connections of Mixed Primary Cabins (PCs): this includes the list of NTG plants necessary for connecting electrical distribution cabins programmed by the Distributors mainly following connection requests for distributed generation plants (although they may be functional in the future also for supplying local loads). For these plants, including the connected works of the NTG, the necessary authorisations under the terms of the current legislation have already been obtained (*Table 3*);
- connections of Primary Cabins (PCs): this includes the list of NTG plants necessary for connecting primary distribution cabins, mainly passive (that is dedicated to the supply of local loads). For these primary cabins the connection solution released by Terna has been accepted by the applicant (*Table 4*);
- connections of Consumption Users: this includes the list of NTG plants necessary for the connection of passive users. For these users the connection solution released by Terna has been accepted by the applicant (*Table 5*);

The Appendix is completed by *Tables 6-7*, containing the works for the connection on the NTG completed in the three years 2020-2022.

TABLE 1 - CONNECTIONS OF POWER STATIONS

NTG PLANTS TO BE BUILT	APPLICANT COMPANY	SOURCE	REGION	PROVINCE
New 380 kV bays in the Trino NTG ES	Enel Produzione S.p.A.	BESS	Piedmont	Trino (VC)
	Agatos Green Power Trino S.r.l.	Photovoltaic+BESS		
New 132 kV bay in the “Alessandria North” 132 kV NTG ES	Enel Produzione S.p.A.	BESS	Piedmont	Alessandria (AL)
New 380 kV bay in the Ostiglia 380/132 V NTG ES	EP Produzione S.p.A.	Thermoelectric	Lombardy	Ostiglia (MN)
New 380 kV bay in the Tavazzano 380/132 V NTG ES	EP Centrale Tavazzano Montanaso S.p.A.	Thermoelectric	Lombardy	Montanaso Lombardo (LO)
New 132 kV NTG ES to which to connect the 132 kV lines coming from the Bressanone, Varna and Vandoies nodes and to which to reconnect the existing 132 kV NTG ES named "Rio Pusteria" with two short 132 kV power lines (code 668CRT)	Eisackwerk Rio Pusteria S.r.l.	Hydroelectric	Trentino Alto Adige	Rio di Pusteria (BZ)
New 132 kV bay in the “Adria South” 380/132 kV NTG ES	Marco Polo Solar 2 S.r.l.	Photovoltaic	Veneto	Loreo (RO)
New 132 kV bay in the “Porto Tolle” 380/132 kV NTG ES	Enel Produzione S.p.A.	BESS	Veneto	Porto Tolle (RO)
New 132 kV NTG ES to be inserted as input - output in the “Gorizia AMG - Gorizia PC” 132 kV line, after upgrading of the “Gorizia AMG - San Giovanni al Natisone" 132 kV line (code 409CRT)	Energia Pulita S.p.A.	Biomass	Friuli Venezia Giulia	Gorizia (GO)
New 132 kV bay in the “Carpi Fossoli” 380/132 kV NTG ES	Enel Produzione S.p.A.	BESS	Emilia Romagna	Carpi (MO)
New 132 kV NTG ES to be inserted as input - output in the 132 kV line "Ferrara South - Centro Energ. Sez." named "Aranova" (code 860CRT)	S. Alberto S.r.l.	Photovoltaic	Emilia Romagna	Ferrara (FE)
Expansion of the “La Casella ST” 380/132 kV NTG ES	Enel Produzione S.p.A.	BESS	Emilia Romagna	Castel San Giovanni (PC)
New 150 kV bay in the future Celano 150 kV NTG ES, provided for in the Terna Development Plan (code 791CRT)	Municipality of Celano	Photovoltaic	Abruzzo	Celano (AQ)
New 150 kV NTG ES to be inserted as the input - output in the "ACEA Orte - ACEA Flaminia” 150 kV line (construction by Third Parties).	Tosti Energia S.r.l.	Photovoltaic	Lazio	Civita Castellana (VT)
	Cilea Energia S.r.l.			
New 150 kV NTG ES to be inserted as input - output in the "Latina Nucleare - Latina Lido" 150 kV line (code 708CRT)	BS Solar S.r.l.	Photovoltaic	Lazio	Borgo Sabotino (LT)
New 150 kV NTG ES to be inserted as input - output in the "Cesano - Crocicchie" 150 kV line (code 722CRT)	Orsa Maggiore PV S.r.l.	Photovoltaic	Lazio	Rome (RM)
Expansion of the Montalto di Castro 380/150 kV NTG ES	Montalto di Castro S.p.A.	Photovoltaic	Lazio	Montalto di Castro (VT)
	Camposcala S.r.l.			
New 150 kV bay in the Montalto di Castro 380/150 kV NTG ES	Solar Italy III S.r.l.	Photovoltaic	Lazio	Montalto di Castro (VT)
	Solar Italy IV S.r.l.			
New “Vulci” 380/150 kV NTG ES to be connected via the 380 kV NTG power line to the Montalto di Castro 380/150 kV NTG ES and to be inserted as input-output in the “Montalto – Tarquinia NK” 150 kV line	EG Marconi S.r.l.	Photovoltaic	Lazio	Montalto di Castro (VT)
	Vulci S.r.l.			
	EG Rinnovabili S.r.l.			
	Solar Energy Otto S.r.l.			
New 380/150 kV NTG ES to be inserted as input-output in the ""Rome North – Pian della Speranza"" 380 kV line	E-SOLAR 2 S.r.l.	Photovoltaic	Lazio	Viterbo (VT) Bomarzo (VT)
	Martello S.r.l.			
New 150 kV bays in the Tuscania 380/150 kV NTG ES	EG Sole S.r.l.	Photovoltaic	Lazio	Tuscania (VT)
	EG Volta S.r.l.			
	E-SOLAR S.r.l.			Tarquinia (VT)
New 150 kV bay in the Arlena di Castro 150 kV NTG ES	Agro Solar I S.r.l.	Photovoltaic	Lazio	Arlena di Castro (VT)
New 150 kV bay in the Santa Lucia 380/150 kV NTG ES	Dioniso S.r.l.	Photovoltaic	Lazio	Tarquinia (VT)
Expansion of the Bisaccia 380/150 kV NTG ES	Eurowind Lacedonia S.r.l.	Wind	Campania	Lacedonia (AV)
	Bisaccia Wind S.r.l.	Wind	Campania	Bisaccia (AV)

NTG PLANTS TO BE BUILT	APPLICANT COMPANY	SOURCE	REGION	PROVINCE
New 150 kV NTG ES to be inserted as input-output in the double-circuit line “Macchialupo – Bisaccia”	Energia Emissioni Zero 4 S.r.l.	Wind	Campania	Aquilonia (AV)
	Metalsider S.r.l.			Bisaccia (AV)
New 380/150 kV NTG ES named “Ariano Irpino” to be inserted as input-output in the “Benevento 3 – Troia 380” 380 kV line	Campo Eolico Ariano S.r.l.	Wind	Campania	Ariano Irpino (AV)
	C&C Tre Energy S.r.l.			Casalbore (AV)
	Giglio S.r.l.			Greci (AV)
	Wind Energy San Giorgio S.r.l.			San Giorgio La Molara (BN)
New 150 kV NTG ES named “Foiano GIS” to be connected to the 150 kV lines: • “Foiano – Benevento 2” • “Foiano – Roseto” • “Foiano All. – Colle Sannita” • “Foiano All. - Montefalcone” (1196CRT) after construction of: - a new 150 kV double-circuit power line connecting the two new substations of Foiano GIS and Ariano Irpino (code 002CRT)	Edison Rinnovabili S.r.l.	Wind	Campania	Montefalcone di Val Fortore (BN)
	Golden Fri-El Colle Sannita S.r.l.			Colle Sannita (BN)
	Sanmarco Power S.r.l.			Foiano di Val Fortore (BN)
	C&C Uno Energy S.r.l.			Baselice (BN)
	C&C Castelvetere S.r.l.			Castelvetere (BN)
	Ecoenergia Foiano S.r.l.			Foiano di Val Fortore (BN)
New 150 kV NTG ES to be inserted as input - output in the 150 kV line "Colle Sannita - Montefalcone der. Foiano" (construction by Third Parties)	Ecoenergia Franzese S.r.l.	Wind	Campania	San Marco dei Cavoti (BN)
New 220/150 kV NTG ES named “Montesano sulla Marcellana” to be inserted as input - output in the "Rotonda - Tusciano" 220 kV line (code 1125CRT)	Essebiesse Power S.r.l.	Wind	Campania	Casalbuono (SA)
New 150 kV bay in the Sicignano degli Alburni 150 kV NTG ES and repowering of the “Campagna - Contursi” 150 kV line (code 1101CRT)	Macro Energy Power S.r.l.	Biomass	Campania	Postiglione (SA)
New 150 kV bay in the “Benevento 3” 380/150 kV NTG ES	LAFRANCESCA25 S.r.l.	Photovoltaic	Campania	Benevento (BN)
Expansion of the Matera 380/150 kV NTG ES (code 1103CRT)	Asja Ambiente Italia S.p.A.	Wind	Basilicata	Matera (MT)
	Meltemi Energia S.r.l.			
New 150 kV NTG ES to be inserted as input - output in the "Pisticci-Senise" and "Pisticci-Rotonda" 150 kV lines (construction by Third Parties)	Sarve S.r.l.	Wind	Basilicata	Craco (MT)
New 150 kV NTG ES named “Avigliano” to be inserted as input - output in the “Avigliano - Potenza” and “Avigliano -Avigliano C.S.” 150 kV lines; two new 150 kV NTG power lines between the new Avigliano ES and a new 150 kV NTG ES named “Vaglio”; two new NTG power lines between the new “Vaglio” ES and the 150 kV NTG ES named “Oppido”; two new 150 kV NTG power lines between the Oppido ES and the Genzano 380/150 kV NTG ES (codes 1214CRT; 1217CRT; 1218CRT)	Serra Carpaneto 3 S.r.l. (code 1214CRT)	Wind	Basilicata	Pietragalla (PZ)
	Eolica Forenza S.r.l. (code 1214CRT)			Forenza (PZ)
	Ares S.r.l.			Atella (PZ)
New 150 kV NTG ES named “Vaglio”; two new 150 kV NTG power lines between the new Vaglio ES and the 150 kV NTG ES named “Oppido”; two new 150 kV NTG power lines between the Oppido SE and the Genzano 380/150 kV NTG ES (code 1217CRT)	Eolica Cancellara S.r.l.	Wind	Basilicata	Cancellara (PZ)
	Lucania Wind Energy S.r.l.			Vaglio Basilicata (PZ)
	Edison Rinnovabili S.r.l.			
New 150 kV NTG ES named “Oppido”; two new 150 kV NTG power lines between the Oppido ES and the Genzano 380/150 kV NTG ES (code 1218CRT)	C & C LUCANIA S.r.l.	Wind	Basilicata	Tricarico (MT)
	Save Oppido Lucano S.r.l.			Oppido Lucano (PZ)
	Parco Eolico Forleto Nuovo 2 S.r.l.			Tolve (PZ)
	Serra Energia S.r.l.			San Chirico Nuovo (PZ)
	C&C Tolve S.r.l.			Tolve (PZ)
	Gallo Due S.r.l.			Oppido Lucano (PZ)

NTG PLANTS TO BE BUILT	APPLICANT COMPANY	SOURCE	REGION	PROVINCE
New 150 kV NTG ES to be inserted as input - output in the “Genzano – Forenza Maschito” 150 kV line, after construction of: • a new 150 kV power line connecting the aforementioned 150 kV NTG ES and the Oppido 150 kV NTG ES • two new 150 kV power lines connecting the Oppido NTG ES and the Genzano 380/150 kV NTG ES (code 1238CRT)	VRG WIND 127 S.r.l.	Wind	Basilicata	Genzano di Lucania (PZ)
	VRG WIND 149 S.r.l.			Banzi (PZ)
	I.V.P.C. POWER 6 S.r.l.			Forenza (PZ)
	WKN Basilicata Development PE2 S.r.l.			Maschito (PZ)
New 150 kV bay at the future expansion of the Melfi 380/150 kV NTG ES	Metaenergiaproduzione S.r.l.	Thermoelectric	Basilicata	Melfi (PZ)
New 150 kV bay in the Rotello 380/150 kV NTG ES	EDP Renewables Italia Holding S.r.l.	Wind	Apulia	Serracapriola (FG)
• New 150 kV NTG ES named “San Paolo di Civitate” to be inserted as input - output in the “S.Severo - Serracapriola” 150 kV line; • New 380/150 kV NTG ES named “Torremaggiore” to be inserted as input-output in the “Rotello 380 – S.Severo 380” 380 kV line; • Two new 150 kV NTG power lines between the San Paolo di Civitate 150 kV NTG ES and the Torremaggiore 380/150 kV NTG ES; • Repowering of the ”S.Severo - Serracapriola” 150 kV power line in the stretch between the new San Paolo di Civitate NTG ES and the San Severo PC.	I.V.P.C. Power 6 S.r.l.	Wind	Apulia	Poggio Imperiale (FG)
	Lucky Wind S.p.A.			Apricena (FG)
	Sud Energy S.r.l.			San Paolo di Civitate (FG)
New 380/150 kV NTG ES named “Cerignola” to be inserted as input - output in the "Foggia – Palo del Colle" 380 kV line	ENERMAC S.r.l.	Wind	Apulia	Orta Nova (FG)
	Naonis Wind S.r.l.			Cerignola (FG)
• New 150 kV NTG ES named “Stornara 2” to be inserted as input - output in the "Cerignola - Ortanova” 150 kV NTG line; • Two new 150 kV NTG connections between the aforesaid Stornara 2 NTG ES and the Cerignola 380/150 kV NTG ES.	Parco Eolico Ascoli S.r.l.	Wind	Apulia	Stornara (FG)
New 150 kV bay in the Erchie 380/150 kV NTG ES	Metka EGN Apulia S.r.l.	BESS	Apulia	Erchie (BR)
New 150 kV NTG connection in cable between the “Valle”, “Camerelle” and “Deliceto” NTG ES (construction by Third Parties)	Daunia Work 1 S.r.l.	Wind	Apulia	Ascoli Satriano (FG)
New 150 kV bay in the Terranova 150 kV NTG ES	Eolica Wind Power S.r.l.	Wind	Calabria	San Demetrio Corone (CS)
New 150 kV bay in the 150 kV section of the Ciminna 220/150 kV NTG ES	Bilancia PV S.r.l.	Photovoltaic	Sicily	Mezzojuso (PA)
New 150 kV bay in the 150 kV section of the Fulgatore 220/150 kV NTG ES	Stromboli Solar S.r.l.	Photovoltaic	Sicily	Trapani (TP)
New 150 kV NTG ES which will be connected, via two new 150 kV NTG power lines, with the Mineo Primary Cabin and the Assoro Primary Cabin	MF Energy S.r.l.	Photovoltaic	Sicily	Aidone (EN)
New 220 kV bay in the future 220 kV NTG ES added to the input-output in the “Fulgatore – Partanna” 220 kV line named “Partanna 2”	VGE 01 S.r.l.	Photovoltaic	Sicily	Mazara del Vallo (TP)
		Wind		Marsala (TP)
New 220/150 kV NTG ES (with 220 kV section to be provided for in 380 kV insulation class) to be inserted as input-output in the “Favara – Chiaramonte Gulfi” 220 kV line	Parco Eolico di Licata S.r.l.	Wind	Sicily	Licata (AG)
New 150 kV bay in the Licodia Eubea 150 kV NTG ES	Acea Solar S.r.l.	Photovoltaic	Sicily	Licodia Eubea (CT)
New 150 kV NTG ES to be inserted as input - output in the "Ravanusa - San Cono” 150 kV line (construction by third parties)	Solarwind 2 S.r.l.	Wind	Sicily	Mazzarino (CL)
New 150 kV bay in the Paternò 380/150 kV NTG ES	IBVI1 S.r.l.	Photovoltaic	Sicily	Belpasso (CT)
New 150 kV bay in the Petralia 150 kV NTG ES	EDPR Sicilia Wind S.r.l.	Wind	Sicily	Santa Caterina Villarmosa (CL)

NTG PLANTS TO BE BUILT	APPLICANT COMPANY	SOURCE	REGION	PROVINCE
New 150 kV NTG ES to be inserted as input-output in the “Canicattì – Caltanissetta” 150 kV line (construction by third parties)	Wind Energy Racalmuto S.r.l.	Photovoltaic Wind power+BESS	Sicily	Racalmuto (AG)
New 150 kV NTG ES to be inserted as input-output in the “Caltavuturo - S.Caterina” 150 kV line (construction by third parties).	Parco Eolico Monti Sicani S.r.l.	Wind	Sicily	Polizzi Generosa (PA)
New 150 kV bay at the Augusta 150 kV NTG ES	Blusolar Augusta 1 S.r.l.	Photovoltaic	Sicily	Augusta (SR)
Expansion of the Carlentini 150 kV NTG ES	Trina Solar Sicilia 2 S.r.l.	Photovoltaic	Sicily	Carlentini (SR)
New 220 kV NTG ES to be inserted as input-output in the "Rumianca – Sulcis" 220 kV line	Sandalia Solar Farm S.r.l.	Photovoltaic	Sardinia	Uta (CA)
Expansion at 150 kV of the Ottana 220 kV NTG ES	Karalis Solar Farm S.r.l.	Photovoltaic	Sardinia	Noragugume (NU)
New 150 kV bays in the 150 kV GIS section of the Fiumesanto 380/150 kV NTG ES	Società Energetica Sarda S.r.l.	Wind	Sardinia	Porto Torres (SS)
	Anemone Sol S.r.l.	Photovoltaic		
	Metka EGN Sardinia S.r.l.			Sassari (SS)
New 150 kV bay in the Porto Torres 150 kV NTG ES	Sardinia Solar Energy S.r.l.	Photovoltaic	Sardinia	Sassari (SS)

TABLE 2 - CONNECTIONS OF POWER STATIONS ON OTHER OPERATOR THAT INVOLVE ACTIONS ON THE NTG

NTG PLANTS TO BE BUILT	APPLICANT COMPANY	SOURCE	REGION	MUNICIPALITY
Connectors for the connection in input - output to the “Vallelunga FS - Caltavuturo” 150 kV line (code 584-C)	Asja Ambiente Italia S.p.A.	Wind	Sicily	Polizzi Generosa (PA)

TABLE 3 - CONNECTIONS OF MIXED PRIMARY CABINS (PCS) FOR DISTRIBUTION

NTG PLANTS TO BE BUILT	APPLICANT DISTRIBUTION OPERATOR	PLANT	REGION	MUNICIPALITY
Expansion of the Montalto di Castro 380/150 kV NTG ES	e-distribuzione	Camposcala 2 PC	Lazio	Montalto di Castro (VT)

TABLE 4 - CONNECTIONS OF PRIMARY CABINS (PCS) FOR DISTRIBUTION

NTG PLANTS TO BE BUILT	APPLICANT DISTRIBUTION OPERATOR	PLANT	REGION	MUNICIPALITY
New 132 kV NTG overhead power line between the Ayas PC and a future 132 kV ES to be inserted as input - output in the "Gressoney – Sendren nk" 132 kV line.	Deval	Ayas PC	Valle d'Aosta	Ayas (AO)
Connectors for the connection in input - output to the "Sangone – Trofarello" 132 kV line	e-distribuzione	Vadò PC	Piedmont	Moncalieri (TO)
New "Magliano - Fossano" 132 kV NTG power line (code 1027CRT)	e-distribuzione	Fossano PC	Piedmont	Fossano (CN)
New 132 kV NTG power line between a new 132 kV NTG ES to which to connect the "Vinadio" PC and the lines currently related to the plant named "Vinadio CE" and a new 132 kV NTG ES to which to connect all the lines currently related to the plant named "Demonte" (code 1063CRT)	e-distribuzione	Vinadio PC	Piedmont	Vinadio (CN)
Connectors for the connection in input - output to the "Busca PC – San Rocco PC" 132 kV line	e-distribuzione	Cuneo North PC	Piedmont	Cuneo (CN)
New 132 kV NTG ES named "Novara East", provided for in the 155-P project of the Terna Development Plan	e-distribuzione	Novara Est PC	Piedmont	Novara (NO)
Connectors for the connection in input - output to the "Cirie - Venaria" 132 kV line (code 1375CRT)	e-distribuzione	Caselle PC	Piedmont	Turin (TO)
Connection to the 132 kV NTG lines coming from "Rondissone", "Leyni" and "Michelin Stura"; New 132 kV NTG cable power line between the "Michelin Stura" PC and the "Monterosa" PC.	e-distribuzione	Cebrosa PC	Piedmont	Settimo Torinese (TO)
New 132 kV connection between the "IC Borgomanero" PC and "Borgomanero East" PC.	e-distribuzione	Piedimulera PC	Piedmont	Piedimulera (VB)
New 132 kV NTG ES to be inserted as input-output in the "Balzola – Valenza" 132 kV line	e-distribuzione	Pomaro PC	Piedmont	Pomaro Monferrato (AL)
Connectors for the connection in input-output to the "Vercelli Nord – Robbio" 132 kV line, after upgrading/ reconstruction of the "Vercelli – Robbio – Mortara" 132 kV NTG line	e-distribuzione	Borgo Vercelli PC	Piedmont	Borgo Vercelli (VC)
New "Dogliani – Isorella Cuneo" 132 kV NTG power line	e-distribuzione	Dogliani PC	Piedmont	Dogliani (CN)
New 132 kV NTG power line connecting the "Vesime" PC with a new 132 kV NTG ES to be inserted as input-output in the "Bistagno – Sassello NK" 132 kV line provided for in the Terna Development Plan	e-distribuzione	Vesime PC	Piedmont	Vesime (AT)
Upgrading/reconstruction of the "Rivara – Favria – S. Giorgio" 132 kV NTG power line	e-distribuzione	Rivara PC	Piedmont	Rivara (TO)
		Favria PC		Favria (TO)
New "Sommariva del Bosco – Casanova" 132 kV NTG power line	e-distribuzione	Sommariva del Bosco PC	Piedmont	Sommariva del Bosco (CN)
Connectors for the connection in input - output to the "Pont - Bardonetto" 132 kV line	e-distribuzione	Locana PC	Piedmont	Locana (TO)
Connectors for the connection in input - output to the "S. Bernando – Caluso" 132 kV line, after upgrading/ reconstruction of the "Caluso – Rondissone" and "Montestrutto – Ivrea" 132 kV lines and related removal of any limiting elements in the PCs involved.	e-distribuzione	Scarmagno PC	Piedmont	Scarmagno (TO)
New HV/MV NTG transformers in the "Alessandria North" 132 kV NTG ES	e-distribuzione	Distribution plant related to the Alessandria North NTG ES	Piedmont	Alessandria (AL)
Connectors for the connection in input - output to the "Polytechnic - TO South" 220 kV line (code 1052CRT)	IRETI	Bramante PC	Piedmont	Turin (TO)
New 132 kV NTG cable power line connecting the Michelin PC and the Monterosa PC.	IRETI	Michelin PC	Piedmont	Turin (TO)
New 132 kV bay at the "Stura" 220/132 kV NTG ES	IRETI	Stura PC	Piedmont	Turin (TO)

NTG PLANTS TO BE BUILT	APPLICANT DISTRIBUTION OPERATOR	PLANT	REGION	MUNICIPALITY
New bays and related HV/MV NTG transformers in the “Genoa Termica” 132 kV NTG ES	e-distribuzione	Distribution plant related to the Genoa Termica NTG ES	Liguria	Genoa (GE)
New HV/MV NTG transformers in the “Morigallo” 220/132 kV NTG ES	e-distribuzione	Distribution plant related to the Morigallo NTG ES	Liguria	Genoa (GE)
Connectors for the connection in input - output to the future line between the "Molassana" NTG ES and the future "Bobbio" NTG ES, as per rationalisation actions in the area, in accordance with what is provided for in the Terna Development Plan	e-distribuzione	Torriglia PC	Liguria	Torriglia (GE)
Connectors for the connection in input - output to the “Rebocco - La Pianta” 132 kV line (code 1055CRT)	e-distribuzione	Antoniana PC	Liguria	La Spezia (SP)
New 132 kV NTG power line between the “La Pianta” PC and the “Spezia Station” 380/220/132 kV NTG ES	e-distribuzione	La Pianta PC	Liguria	La Spezia (SP)
Connection to the “Voltri” node to be done reinstating the “Sassello - Masone” 132 kV double-circuit NTG line and using the “Voltri - Sassello” and “Voltri - Rossignone” routes (code 1029CRT)	e-distribuzione	Sassello PC	Liguria	Sassello (SV)
Connectors for the connection in input - output to the “Lenna All – Lenna ST” 132 kV line New 220/132 kV NTG ES to be inserted as input - output in the 132 kV line to be connected to the 220 kV infrastructure present in the area; New 132 kV NTG power line between the new Ponte PC and the aforesaid new 220/132 kV NTG ES.	e-distribuzione	Ponte PC	Lombardy	Ponte San Marco (BG)
Upgrading/reconstruction of the “Lonato - Desenzano” 132 kV NTG power line	e-distribuzione	Calvagese PC	Lombardy	Calvagese (BS)
Connectors for the connection in input - output to the “Ricevitrice South BS PC – Mincio ES” 132 kV line	e-distribuzione	Mazzano PC	Lombardy	Mazzano (BS)
Upgrading/reconstruction of the 132 kV NTG power line “Verderio ES – Bernareggio PC”, “Bernareggio PC – CS IBM Vimercate” and “CS IBM Vimercate – Agrate PC so-called Arcore PC”	e-distribuzione	Caponago PC	Lombardy	Caponago (MB)
Upgrading/reconstruction of the “Lacchiarella – Pieve Emanuele” 132 kV NTG power line	e-distribuzione	Melegnano PC	Lombardy	Melegnano (MI)
New 132 kV bay at the “Lacchiarella” 380/132 kV NTG ES	e-distribuzione	Lacchiarella PC	Lombardy	Lacchiarella (MI)
New 66 kV NTG cable power lines to be connected at the future 66 kV section of the “Premadio” 220 kV NTG ES, after upgrading of the same and installation of the necessary transformers	e-distribuzione	Livigno PC	Lombardy	Livigno (SO)
New 132 kV NTG ES to be inserted as input-output in the “Colunga – Bussolengo” 132 kV line, after performance of the works 326-P and 168-N provided for in the Terna Development Plan	e-distribuzione	Valdaro PC (Mantua South)	Lombardy	Mantua (MN)
Connectors for the connection in input-output to the “Bagnolo S. Vito PC – Pegognaga PC” 132 kV line	e-distribuzione	Suzzara PC	Lombardy	Suzzara (MN)
New 132 kV NTG ES to be inserted as input-output in the “Tavazzano ST – Pavia Torretta” 132 kV line, after upgrading/reconstruction of the following 132 kV lines: • Tavazzano ST – Pavia Torretta; • Pavia Torretta – Pavia East; • Copiano – Arena Po; • Arena Po – La Casella.	e-distribuzione	Torrevecchia Pia PC	Lombardy	Torrevecchia Pia (PV)

NTG PLANTS TO BE BUILT	APPLICANT DISTRIBUTION OPERATOR	PLANT	REGION	MUNICIPALITY
New 220/132 kV NTG ES to be inserted as input-output: - in the 220 kV NTG power line "Cassano ES – Ric. North MI ES"; - in the "Limito PC – Sio CS" 132 kV NTG power line; - in the "Vignate PC – Sio CS" 132 kV NTG power line.	e-distribuzione	Vignate PC	Lombardy	Vignate (MI)
- New 132 kV NTG ES to be inserted as input-output in the "Vittuone PC – Parabiago PC" 132 kV line; - New 132 kV NTG connection between the aforesaid NTG ES and the Magenta PC, through the use of the "Novara RT – Rho RT" 132 kV NTG line; - Resolution of the "Vittuone All" rigid derivation; - Construction of connections in input - output of the Sedriano AV ES to the "Novara RT – Rho RT" 132 kV NTG line.	e-distribuzione	Vittuone PC	Lombardy	Vittuone (MI)
Connectors for the connection in input - output to the "Ospiate - RISE Sesto" 132 kV line (code 953CRT)	e-distribuzione	Vulcano CDS PC	Lombardy	Sesto San Giovanni (MI)
Upgrading/reconstruction of the "Lacchiarella – Pieve Emanuele – Melegnano – Tavazzano" 132 kV NTG power line	e-distribuzione	Pieve Emanuele PC	Lombardy	Pieve Emanuele (MI)
Connectors for the connection in input - output to the "Alagna PC – Sannazzaro PC" 132 kV line	e-distribuzione	Gropello PC	Lombardy	Gropello Cairoli (PV)
New 132 kV NTG power line connecting the Varzi PC and the future Bobbio/Boffalora PC to be connected in input - output to the new "Molassana – Borgonovo" 132 kV NTG power line	e-distribuzione	Varzi PC	Lombardy	Varzi (PV)
Expansion of the "Vobarno" 132 kV NTG ES	UNARETI	Vobarno PC	Lombardy	Vobarno (BS)
Connectors for the connection in input - output to the "Toscolano - Storo - Riva" 132kV line (code 949CRT)	UNARETI	Tremosine PC	Lombardy	Tremosine (BS)
Connectors for the connection in input - output to the "Torbole - Almag Roncadelle All." 132kV line	UNARETI	Violino PC	Lombardy	Roncadelle (BS)
Connectors for the connection in input - output to the "Ospiate - Cormano - Torretta - Sesto San Giovanni" 220 kV line.	UNARETI	Comasina PC	Lombardy	Milan (MI)
Connectors in cable for the connection in input - output to the "Lambrate ES - Porta Venezia ES" 220 kV line	UNARETI	Mugello PC	Lombardy	Milan (MI)
New 220 kV NTG ES to be inserted as input-output in the "Ricevitrice West MI - Gadio" 220 kV line, after construction of a new 220 kV NTG power line between the aforesaid new 220 kV NTG ES and the "Ricevitrice South MI" 220 kV NTG ES.	UNARETI	Po PC	Lombardy	Milan (MI)
Connectors for the connection in input-output to the future 220 kV NTG cable power line connecting the "Ricevitrice South Milan" 220 kV NTG ES and the future "Mugello" PC, to be inserted as input-output in the "Lambrate ES – Porta Venezia ES" 220 kV NTG cable power line	UNARETI	Porta Romana PC	Lombardy	Milan (MI)
Connectors for the connection in input-output to the "Romanterra ES - Ponte Caffaro ES" 132 kV line	UNARETI	Bagolino PC	Lombardy	Bagolino (BS)
Connectors for the connection in input-output to the "Musocco ST - Porta Volta" 220 kV cable line after expansion of the "Ospiate" NTG ES	UNARETI	Caracciolo PC	Lombardy	Milan (MI)
New 220 kV NTG ES to be inserted as input-output in the 220 kV line "Cormano – Sesto S. G. PC", after construction of a new 220 kV NTG power line between the aforesaid new 220 kV NTG ES and the "Ricevitrice North MI" 220 kV NTG ES.	UNARETI	Sarca PC	Lombardy	Milan (MI)
Connection to the new "Sarnes" PC of the T861 line coming from Barbiano and of the new "Albes" 132 kV NTG ES to which to connect: - two new lines coming from Bressanone; - the T002 line coming from Cardano.	A.S.M. BRESSANONE SPA	Sarnes PC	Trentino Alto Adige	Bressanone (BZ)

NTG PLANTS TO BE BUILT	APPLICANT DISTRIBUTION OPERATOR	PLANT	REGION	MUNICIPALITY
New 132 kV NTG ES to be inserted as input-output in the future 132 kV NTG cable power line connecting the “Bressanone” NTG ES and the future “Albes” NTG ES	A.S.M. BRESSANONE SPA	Bressanone PC	Trentino Alto Adige	Bressanone (BZ)
New 132 kV NTG power line between the “Corvara PC” and the “Laion PC” (code 687CRT)	EDYNA	Corvara PC	Trentino Alto Adige	Corvara in Badia (BZ)
New 132 kV NTG ES to be inserted as input-output in the “Rio Pusteria ST – Vandoies FS” 132 kV line, after construction of a new NTG power line between the aforesaid new NTG ES and the “Brunico” PC (code 688CRT)	EDYNA	Vandoies PC	Trentino Alto Adige	Vandoies (BZ)
Connectors for the connection in input - output to the future “Dobbiaco – Sillian” 132 kV NTG cable power line provided for in the Terna Development Plan	EDYNA	Sesto PC	Trentino Alto Adige	Sesto Pusteria (BZ)
New 132 kV NTG ES to be inserted as input - output in the future 132 kV NTG cable power line connecting the future “Albes” 132 kV NTG ES and the “Sciliar” 132 kV NTG ES	EDYNA	Barbiano PC	Trentino Alto Adige	Barbiano (BZ)
New 132 kV bay at the “Bolzano” 220/132 kV NTG ES, after performance of the works provided for in the restructuring of the Val d’Isarco	EDYNA	Bolzano PC	Trentino Alto Adige	Bolzano (BZ)
Connectors for the connection in input - output to the “S. Antonio - Cardano” 220 kV line	EDYNA	S. Antonio PC	Trentino Alto Adige	Renon (BZ)
New 220/60 kV NTG ES to be connected to the existing "S. Antonio - Sarentino” 60 kV line, after change to 220 kV of the same and related connection to the future expansion of the 220 kV GIS section of the "S. Antonio” NTG ES	EDYNA	Sarentino PC	Trentino Alto Adige	Sarentino (BZ)
New 132 kV NTG ES to be inserted as input-output in the “S. Massenza - Cimego” 132 kV line, after reconnection of the line towards the Giustino PC and the La Rocca hydroelectric production station (code 676CRT)	SET Distribuzione	Tione PC	Trentino Alto Adige	Tione di Trento (TN)
Two new 132 kV bays in the future 132 kV NTG ES named “Cirè” to be inserted as input-output in the “Ora – Trento South” 132 kV line provided for in the Terna Development Plan (code 670CRT)	SET Distribuzione	Pergine PC	Trentino Alto Adige	Pergine Valsugana (TN)
New 132 kV NTG power line between the Grigno PC and the Arsié NTG ES	SET Distribuzione	Grigno PC	Trentino Alto Adige	Grigno (TN)
New 132 kV bay at the “Taio” NTG ES	SET Distribuzione	Taio PC	Trentino Alto Adige	Taio (TN)
New 132 kV NTG power line between the Campitello PC and the Moena NTG ES. New 132 kV NTG power line between the Campitello PC and a future 132 kV NTG ES to be inserted as input - output in the “Malga Ciapela – Saviner PC” 132 kV NTG line	SET Distribuzione	Campitello PC	Trentino Alto Adige	Campitello di Fassa (TN)
Connectors for the connection in input-output to the “Nave – Santa Massenza” 132 kV line	SET Distribuzione	Nembia PC	Trentino Alto Adige	San Lorenzo Dorsino (TN)
New 132 kV NTG power line between the Caldonazzo PC and the future Ciré ES (already provided for in the Terna Development Plan); New 132 kV NTG power line between the Caldonazzo PC and the future expansion of the Borgo Valsugana ES.	SET Distribuzione	Caldonazzo PC	Trentino Alto Adige	Caldonazzo (TN)
New 132 kV NTG power line between the Giustino PC and the Monclassico 132 kV NTG ES	SET Distribuzione	Giustino PC	Trentino Alto Adige	Giustino (TN)
New 132 kV NTG power line between the future San Martino di Castrozza PC and the Castelpietra plant; New 132 kV NTG power line between the future San Martino di Castrozza PC and a future 132 kV NTG ES to be inserted as input - output in the “Predazzo – Varena” 132 kV NTG line	Azienda Reti Elettriche	San Martino di Castrozza PC	Trentino Alto Adige	Primiero San Martino di Castrozza (TN)

NTG PLANTS TO BE BUILT	APPLICANT DISTRIBUTION OPERATOR	PLANT	REGION	MUNICIPALITY
New 132 kV NTG power line between the Castelpietra plant and a future 132 kV NTG ES to be connected in input - output to the “Predazzo – Varena” 132 kV NTG line	Azienda Reti Elettriche	Castelpietra PC	Trentino Alto Adige	Primiero San Martino di Castrozza (TN)
New 132 kV NTG cable power line between the Campolongo PC and the Ovaro PC	e-distribuzione	Campolongo PC	Veneto	Santo Stefano di Cadore (BL)
Replacement of the current rigid derivation of the PC by construction of a second connection to the “Moline -Arsiè” 132 kV line (code 689CRT)	e-distribuzione	Pedesalto PC	Veneto	Fonzaso (BL)
New 132 kV NTG power line between the “Zuel PC” and the “Somprade PC”; New 220/132 kV NTG ES to be inserted as input-output in the “Soverzene – Lienz” 220 kV line and in the “Ponte Malon - Pelos - der. Campolongo” 132 kV line (code 1376CRT)	e-distribuzione	Zuel PC	Veneto	Cortina d’Ampezzo (BL)
Connectors for the connection in input - output to the “Camposampiero – Castelfranco” 132 kV line	e-distribuzione	Piombino Dese (Castelminio) CP	Veneto	Piombino Dese (PD)
Connectors for the connection in input - output to the “Saviner - Corvara” 132 kV line after construction of the new “Laion – Corvara” 132 kV NTG power line	e-distribuzione	Arabba PC	Veneto	Livinallongo del Col di Lana (BL)
Connectors for the connection in input - output to the “Ferrara Focomorto - Lendinara NK” 132 kV line (code 1350CRT)	e-distribuzione	Guarda Veneta (Polesella) PC	Veneto	Polesella (RO)
New 132 kV NTG cable power line between the Ca’ Emiliani PC and the 132 kV section of the “Station 1” NTG ES; Reconstruction of the 132 kV section of the “Station 1” NTG ES; Upgrading/reconstruction of the “Villabona – Ca’ Emiliani” 132 kV NTG line	e-distribuzione	Ca’ Emiliani PC	Veneto	Venice (VE)
New 220 kV NTG ES to be inserted as input-output in the "Taio – Sandrà" 220 kV line	e-distribuzione	San Zeno PC	Veneto	San Zeno di Montagna (VR)
Reclassing to 132 kV of the “Donada – Rosolina” and “Rosolina – Brondolo” 50 kV power lines	e-distribuzione	Brondolo PC Rosolina PC	Veneto	Chioggia (VE)
Connectors for the connection in input - output to the “Dolo NTG ES – Rovigo PA PC” 132 kV line	e-distribuzione	Vigonovo PC	Veneto	Vigonovo (VE)
New 132 kV NTG connection between the San Giobbe PC and the Mestre Barche PC	e-distribuzione	San Giobbe PC	Veneto	Venice (VE)
Connectors for the connection in double antenna to the “Castegnero” 220/132 kV NTG ES (code 678CRT)	e-distribuzione	Castegnero PC	Veneto	Castegnero (VI)
New 132 kV NTG power line between the “Marostica PC” and the “Bassano Grappa” PC (code 690CRT)	e-distribuzione	Marostica PC	Veneto	Marostica (VI)
Replacement of the current rigid derivation of the PC by construction of a second connection to the “Vellai – Fonte NK” 132 kV line (code 691CRT)	e-distribuzione	Costalunga PC	Veneto	Cavaso del Tomba (TV)
New 132 kV NTG power line between the Asiago PC a new 132 kV NTG ES to be inserted as input - output in the “Arsiè - Zugliano” and “Carpanè - Schio” 132 kV lines, to which to reconnect the Conco PC	e-distribuzione	Asiago PC	Veneto	Asiago (VI)
Connectors for the connection in input - output to the “Nogarole Rocca – Vago PC” 132 kV line (code 1352CRT)	e-distribuzione	Vallese PC	Veneto	Oppeano (VR)
Connectors for the connection in input-output to the “Mincio – Volta Mantovana” 132 kV line	e-distribuzione	Foroni PC	Veneto	Valeggio sul Mincio (VR)
Connectors for the connection in input - output to the “649 Quero – Castelfranco so-called Cem Rossi” 132 kV line; Upgrading of the “649 Quero – Castelfranco so-called Cem Rossi” and “648 Vellai – Caerano der. Quero” 132 kV lines	e-distribuzione	Valdobbiadene PC	Veneto	Valdobbiadene (TV)
New 132 kV NTG ES to be inserted as input-output in the no. 520 “Bassanello – Camin” 132 kV line, after upgrading/ reconstruction of the same	e-distribuzione	Voltabarozzo PC	Veneto	Padua (PD)

NTG PLANTS TO BE BUILT	APPLICANT DISTRIBUTION OPERATOR	PLANT	REGION	MUNICIPALITY
New 220 kV NTG ES to be inserted as input - output in the "Salgareda - Pordenone" 220 kV line, after construction of a future 380/220/132 kV NTG ES to be inserted as input - output in the "Udine West - Cordignano" 380 kV line, provided for in the Terna Development Plan	e-distribuzione	Motta di Livenza PC	Veneto	Motta di Livenza (TV)
Connectors for the connection in input - output to the "Levada – Pordenone so-called Sesto al Reghena" 132 kV line, after upgrading/reconstruction of the same	e-distribuzione	Pramaggiore PC	Veneto	Pramaggiore (VE)
Connectors for the connection in input-output to the "Sorio – San Bonifacio so-called Zevio Power Station" 132 kV line, after upgrading/reconstruction of the same	e-distribuzione	Belfiore PC	Veneto	Belfiore (VR)
upgrading/reconstruction of the "San Bonifacio – Zevio NK" 132 kV line.	e-distribuzione	San Bonifacio PC	Veneto	San Bonifacio (VR)
New 132 kV NTG connection between the Casale Scodosia PC and the Legnago PC.	e-distribuzione	Casale di Scodosia PC	Veneto	Casale di Scodosia (PD)
New 132 kV NTG ES to be inserted as input-output in the "Dolo CP – Scorzè" 132 kV line.	e-distribuzione	Mirano PC	Veneto	Mirano (VE)
Connectors for the connection in input - output to the "Chievo CE - Ricevitrice South" 132 kV line	V-RETI	Marangona PC	Veneto	Verona (VR)
Connectors for the connection in input - output to the future "Vicenza Monteviale - V. Pace 2" 132 kV cable line, provided for in the Terna Development Plan (code 219-P)	Servizi a Rete	Monte Crocetta PC	Veneto	Vicenza (VI)
Connectors for the connection in input - output to the "S. Foca – Villa Rinaldi" 132 kV line	e-distribuzione	S. Quirino PC	Friuli Venezia Giulia	San Quirino (PN)
New 132 kV NTG power line between the Ovaro PC and a new 132 kV NTG ES to be inserted as input-output in the "Secab NK - Tolmezzo" 132 kV line.	e-distribuzione	Ovaro PC	Friuli Venezia Giulia	Ovaro (UD)
Connectors for the connection in input - output to the "Hera Pavullo- Sassuolo" 132 kV line	INRETE	M. BALDACCINI PC	Emilia Romagna	Pavullo nel Frignani (MO)
Connectors for the connection in input - output to the "Rubiera- Modena West" 132 kV line	INRETE	Cittanova PC	Emilia Romagna	Modena (MO)
Works for the reorganisation of the grid in the Bologna area from the Terna Development Plan	e-distribuzione	Bologna North PC Bologna Maggiore PC	Emilia Romagna	Bologna (BO)
Connectors for the connection in input - output to the "Carpani NK – Cà Tiepolo" 132 kV line	e-distribuzione	Mesola PC	Emilia Romagna	Mesola (FE)
Connectors for the connection in input - output to the "Forlì RT – Cesena RT" 132 kV line Upgrading of the "Imola RT - Schiappa" 132 kV NTG power line.1	e-distribuzione	Cesena-S. Vittore PC	Emilia Romagna	Cesena (FC)
Connectors for the connection in input - output to the "Fidenza FS - Parma FS" 132 kV line (code 1298CRT)	e-distribuzione	Fidenza North PC	Emilia Romagna	Fidenza (PR)
Connectors for the connection in input - output to the "S. Quirico - SPIP" 132 kV line (code 1299CRT)	e-distribuzione	S. Quirico Tracasali PC	Emilia Romagna	Torrile (PR)
Connectors for the connection in input - output to the "Borgotaro RT – Berceto RT" 132 kV line, after integration with the NTG of the 132 kV line between the Pontremoli RT - Borgataro RT - Berceto RT plants as provided for in the Terna Development Plan.	e-distribuzione	Berceto PC	Emilia Romagna	Berceto (PR)
Connectors for the connection in input - output to the future "Molassana - Borgonovo" 132 kV line	e-distribuzione	Bobbio (Boffalora) PC	Emilia Romagna	Bobbio (PC)

NTG PLANTS TO BE BUILT	APPLICANT DISTRIBUTION OPERATOR	PLANT	REGION	MUNICIPALITY
New 132 kV NTG power lines between the “San Martino in XX” 380/132 kV NTG ES and the future 132 kV expansion of the “Riccione RT” NTG ES in accordance with what is provided for in the Terna Development Plan; Restructuring of the 132 kV grid in the area; Removal of limitations on the “S. Martino in XX – Riccione” and “S. Martino in XX – Rimini Condotti” 132 kV power lines; Actions to increase the resilience of the “Rimini Condotti – Rimini South” and “Rimini South – Riccione” power lines; Future 132 kV connectors between the ex-RFI lines and the Gambettola PC and the “S. Martino in XX” NTG ES.	e-distribuzione	Riccione Mare PC	Emilia Romagna	Riccione (RN)
Replacement of the current rigid derivation of the PC by construction of a second connection to the “Mirandola - Crevalcore” 132 kV line (code 878CRT)	e-distribuzione	San Prospero PC	Emilia Romagna	San Prospero (MO)
Connectors for the connection in input - output to the “Ligonchio - Torrechiara” 132 kV line (code 825CRT)	e-distribuzione	Schiezza PC	Emilia Romagna	Castelnovo ne’ Monti (RE)
Connectors for the connection in input - output to the "Villa Cadé FS - Rubiera FS” 132 kV line and new connection towards the “Castelnovo di Sotto” PC (code 875CRT)	e-distribuzione	Mancasale PC	Emilia Romagna	Reggio nell’Emilia (RE)
New 132 kV cable power line connecting the expansion of the “Adria South” NTG ES and the Ariano PC (code 880CRT)	e-distribuzione	Ariano PC	Emilia Romagna	Mesola (FE)
Connectors for the connection in input-output to the “Focomorto PC – Mezzolara” 132 kV line	e-distribuzione	Ferrara Imperiale PC	Emilia Romagna	Ferrara (FE)
Connectors for the connection in input-output to the "Cesena North – Cesena West” 132 kV line, after carrying out the following works: - performance of the work 321-P, provided for in the Terna Development Plan; - upgrading/reconstruction of the “Cesena North – S. Martino in XX” 132 kV NTG line.	e-distribuzione	Cesena Oro PC	Emilia Romagna	Cesena (FC)
Upgrading/reconstruction of the “Cesena North – S. Martino in XX” 132 kV NTG line; Action of the Terna Development Plan code 321 – P.	e-distribuzione	Cesena North PC	Emilia Romagna	Cesena (FC)
Upgrading/reconstruction of the “Crevalcore PC – Bentivoglio” 132 kV NTG line; Action of the Terna Development Plan code 326-P.	e-distribuzione	Cento PC	Emilia Romagna	Cento (FE)
Connectors for the connection in input - output to the “Calenzano - Sodo” 132 kV line (code 1355CRT)	e-distribuzione	University PC	Tuscany	Sesto Fiorentino (FI)
Connection in 132 kV double antenna to the “Casola Valsenio” and “Firenzuola” PCs (code 876CRT)	e-distribuzione	Marradi PC	Tuscany	Marradi (FI)
Connectors for the connection in input - output to the “Ghirlanda – Giuncarico All. – Grosseto FS” 132 kV line (code 881CRT)	e-distribuzione	Ribolla PC	Tuscany	Roccastrada (GR)
Connectors for the connection in input - output to the "Paganico - Murci" 132 kV line after construction of a new 380/150 kV NTG ES named “Paganico”, provided for as action 338-P of the Terna Development Plan, to be inserted as input - output in the “Rome North – Pian della Speranza” and “Suvereto – Montalto” 380 kV NTG lines and to the “Paganico – Murci” 132 kV NTG line.	e-distribuzione	Cinigiano PC	Tuscany	Cinigiano (GR)
Connectors for the connection in input - output to the “Strettoia – Vinchiana” 132 kV NTG line	e-distribuzione	Camaiore PC	Tuscany	Camaiore (LU)
Replacement of the current rigid derivation of the PC by construction of connection in input - output to the “Georgia P. AL. – Cart. Castelnuovo” 132 kV line (code 882CRT)	e-distribuzione	PC Castelnuovo di Garfagnana	Tuscany	Castelnuovo di Garfagnana (LU)
New 132 kV bays in the “Populonia” 132 kV NTG ES	e-distribuzione	Montegemoli ZI PC	Tuscany	Piombino (LI)

NTG PLANTS TO BE BUILT	APPLICANT DISTRIBUTION OPERATOR	PLANT	REGION	MUNICIPALITY
Connectors for the connection in input - output to the "S. Romano - Castelfiorentino" 132 kV line, after removal of the crossing between the “Certaldo – Poggibonsi” and “Tavernuzze – Larderello” 132 kV transmission lines the Casaglia district, thus obtaining two new connections “Larderello – Certaldo” and “Tavarnuzze – Poggibonsi”, as provided for in the Terna Development Plan	e-distribuzione	PC S. Miniato	Tuscany	San Miniato (PI)
Connectors for the connection in input - output to the “Chiusi - Pruneto” 132 kV line (code 0001CRT)	e-distribuzione	Torrita di Siena PC	Tuscany	Torrita di Siena (SI)
New 132 kV NTG power line between the Rosia PC and a new NTG ES to be inserted as input-output in the "Pian della Speranza – Nuova Radicondoli” line; Upgrading of the “Rosia – Pian della Speranza” 132 kV NTG power line.	e-distribuzione	Rosia PC	Tuscany	Sovicille (SI)
Connectors for the connection in input - output to the "Iesi - Candia” 132 kV line	DEA	Osimo PC	Marche	Osimo (AN)
Connectors for the connection in input - output to the “Acquara - Acquara All.” 132 kV line, after construction of: - new “Acquara - Potenza Porta Picena” 132 kV connection - new 132 kV NTG connection from the current rigid derivation named “Acquara All.” up to the Osimo PC (code 1798CRT)	DEA	Acquara Nuova PC	Marche	Recanati (MC)
Connectors for the connection in input - output to the “Camerata Picena – Agip Sez. Marche” 132 kV line.	e-distribuzione	Jesi East PC	Marche	Jesi (AN)
Connectors for the connection in input - output to the “Candia - Colunga” line, after performance of the works pursuant to the Development Plan, in the context of the action named "mid-Adriatic EHV/HV grid" (code 403-P), consisting of: - downgrading at the 132 kV voltage level of the “Candia - Colunga” 220 kV NTG line; - connection between the Candia Electrical Substation and the Fossombrone PC.	e-distribuzione	Senigallia West PC	Marche	Senigallia (AN)
Connectors for the connection in input - output to the “Grottammare - Colmarino” 132 kV line (code 1292CRT)	e-distribuzione	Campofilone PC	Marche	Campofilone (FM)
Connectors for the connection in input - output to the “Treia – Corneto” 132 kV line, after performance of the works pursuant to the Terna Development Plan consisting of: - construction of a new “Acquara –Porto Potenza Picena” 132 kV NTG power line; - construction of a new 132 kV NTG power line from the current rigid derivation named “Acquara All.” up to the Osimo Primary Cabin; - removal of the limitations present on the 132 kV Adriatic grid, including the Candia and Rosara electrical substations.	e-distribuzione	Villa Potenza PC	Marche	Macerata (MC)
Connectors for the connection in input - output to one of the two circuits of the “Baschi -Attigliano” 132 kV line (operates at 120 kV)	e-distribuzione	Baschi PC	Umbria	Baschi (TR)
Connection with the “Cappuccini” 132 kV NTG ES, by connection at the Bastardo PC of the two existing “Cappuccini – Bastardo C.le” 132 kV NTG power lines	e-distribuzione	Bastardo PC	Umbria	Gualdo Cattaneo (PG)
New 150 kV NTG connection between the Assergi PC and the Bazzano I.Z. PC.	e-distribuzione	Assergi PC	Abruzzo	L’Aquila (AQ)
Connectors for the connection in input - output to the “AE S. Angelo - Cocullo ST Brulli” 150 kV line (code 1803CRT)	e-distribuzione	Roccaraso PC	Abruzzo	Roccaraso (AQ)
New 150 kV NTG connection between the Sulmona PC and the Sulmona N.I. PC.	e-distribuzione	Sulmona City PC	Abruzzo	Sulmona (AQ)

NTG PLANTS TO BE BUILT	APPLICANT DISTRIBUTION OPERATOR	PLANT	REGION	MUNICIPALITY
Connection to the 150 kV NTG line no. 846 (today “Celano All. – Celano Smistam.) after performance of action 417-P of the Terna Development Plan	e-distribuzione	Celano PC	Abruzzo	Celano (AQ)
New connection between the San Salvo PC and the “San Salvo” 150 kV NTG ES	e-distribuzione	San Salvo PC	Abruzzo	San Salvo (CH)
Connectors for the connection in input - output to the “Montesilvano - Marrucina” 132 kV NTG line (code 798CRT)	e-distribuzione	Santa Filomena PC	Abruzzo	Pescara (PE)
Connectors for the connection in input - output to the “Golden Lady - Cellino Attanasio” 132 kV line (code 792CRT)	e-distribuzione	Basciano PC	Abruzzo	Basciano (TE)
Connectors for the connection in input-output to the “Penne – Villanova” 132 kV NTG line, after performance of the works provided for in the Terna Development Plan: connections of the “Adrilon – Cellino Attanasio” 132 kV NTG line to the future 132 kV section of the Teramo 380 kV substation	e-distribuzione	Castilenti PC	Abruzzo	Castilenti (TE)
Connectors for the connection to the 132 kV NTG lines coming from the “Teramo I.Z.”, “Cellino Attanasio” and “Isola G.Sa.” nodes (code 1343CRT)	e-distribuzione	Teramo PC	Abruzzo	Teramo (TE)
New 150 kV NTG connection between the Villetta Barrea PC and the Castel di Sangro PC, after performance of the works to remove the limitations of the “Alanno – Villa S.Maria” and “ Villa S.Maria - Castel del Giudice” 150 kV NTG lines, provided for in the Terna Development Plan	e-distribuzione	Villetta Barrea PC	Abruzzo	Villetta Barrea (AQ)
New 150 kV NTG power line connecting the Lama dei Peligni PC with a new 150 kV NTG ES to be inserted as input-output in the "Cocullo Brulli - Acea Sant' Angelo" and "Acea Santangelo - Acea Santangelo All.2” 150 kV NTG lines	e-distribuzione	Lama dei Peligni PC	Abruzzo	Lama dei Peligni (CH)
New 132 kV NTG connection between the Isola del Gran Sasso PC and the future 132 kV section of the Teramo 380 kV substation, provided for in the Terna Development Plan	e-distribuzione	Isola del Gran Sasso PC	Abruzzo	Isola del Gran Sasso d’Italia (TE)
New 132 kV NTG ES to be inserted as input-output in the “M.Prandone All. – Roseto RT” 132 kV NTG line, after performance of actions 441-P and 442-P of the Terna Development Plan	e-distribuzione	Mosciano PC	Abruzzo	Mosciano Sant’Angelo (TE)
Connectors for the connection in input - output to the “Magliana – Ponte Galeria” 150 kV line (code 762CRT)	ARETI	Parco dei Medici PC	Lazio	Rome (RM)
Replacement of the current “S. Rita All.” rigid derivation after performance of ARETI development actions (code 799CRT)	ARETI	Parchi PC	Lazio	Rome (RM)
Connectors for the connection in input - output to the future “Primavalle – Flaminia 380/150 kV” 150 kV line (code 772CRT)	ARETI	La Storta PC	Lazio	Rome (RM)
New 220 kV NTG ES to be inserted as input - output in the "Rome South - San Paolo" 220 kV line (code 764CRT)	ARETI	Castel di Leva PC	Lazio	Rome (RM)
Connectors for the connection in input - output to the "AE. Tor di Valle – Laurentina” 150 kV line (code 1800CRT)	ARETI	ASR PC	Lazio	Rome (RM)
Connectors for the connection in input - output to the "A.Vitinia-A.Valleranello NK” 150 kV line	ARETI	Valleranello PC	Lazio	Rome (RM)
Replacement of the current rigid derivation of the PC by construction of a second connection to the “Sora - Cassino” 150 kV line (code 1806CRT)	e-distribuzione	Atina PC	Lazio	Atina (FR)
Connectors for the connection in input - output to the “S. Rita – Aprilia 150” 150 kV line (code	e-distribuzione	Fossignano PC	Lazio	Aprilia (LT)
Upgrade of the “Ceprano – Ceprano RFI – Fondi RFI” 150 kV line after upgrade of the Ceprano RFI and Fondi (PC and RT) plants and connection between Fondi RT and Fondi PC	e-distribuzione	Fondi PC	Lazio	Fondi (LT)
Insertion in input - output in the "Aprilia - Pomezia" 150 kV line of the new "Y2" module (code 795CRT)	e-distribuzione	Santa Procula PC	Lazio	Pomezia (RM)

NTG PLANTS TO BE BUILT	APPLICANT DISTRIBUTION OPERATOR	PLANT	REGION	MUNICIPALITY
Connectors for the connection in input - output to the “Aprilia - Le Ferriere” 150 kV line (code 797CRT)	e-distribuzione	Olimpo PC	Lazio	Aprilia (LT)
Replacement of the current rigid derivation of the PC by construction of a second connection to the “Corvaro All. - Tagliacozzo” 150 kV line	e-distribuzione	Corvaro PC	Lazio	Borgorose (RI)
Connectors for the connection in input - output to the “Capena RFI – Nomentana RFI” 132 kV line (code 1804CRT)	e-distribuzione	Fara PC	Lazio	Fara in Sabina (RI)
Replacement of the current rigid derivation of the PC by construction of a second connection to the “AE. Orte - A. Flaminia” 150 kV line (code 1807CRT)	e-distribuzione	Morlupo PC	Lazio	Morlupo (RM)
Connectors for the connection in input - output to the "Anzio – Latina Nucleare” 150 kV line	e-distribuzione	Nettuno PC	Lazio	Nettuno (RM)
Connectors for the connection in input - output to the "S.Marinella – Cerveteri” 150 kV line	e-distribuzione	Furbara PC	Lazio	Cerveteri (RM)
New connection between the Pian di Tortora PC and the Viterbo PC; Connectors for the connection of the “Arlena SE – Canino” 150 kV line with the Tuscania 380/150 kV NTG ES, provided for in the Terna Development Plan	e-distribuzione	Pian di Tortora PC	Lazio	Viterbo (VT)
Connectors for the connection in input - output to the “Orte FS – Capranica FS” 132 kV line (code 1801CRT)	e-distribuzione	Ronciglione PC	Lazio	Ronciglione (VT)
Connectors for the connection in input - output on the “Orte RFI - Gallese RFI” 132 kV NTG line (code 1805CRT)	e-distribuzione	Orte PC	Lazio	Orte (VT)
Connectors for the connection in input - output to the “Aprilia 150 – Campo di Carne” 150 kV line, by construction of a new 150 kV NTG cable connection starting from the Lavinio PC and rationalisation\bunching of the existing 150 kV NTG double circuit line starting from the Campo di Carne PC (for the purpose of completing the “Campo di Carne – Lavinio – Aprilia” scheme)	e-distribuzione	Lavinio PC	Lazio	Anzio (RM)
Connectors for the connection in input - output to the “Nomentano RT – Capena” 132 kV line	e-distribuzione	Montelibretti PC	Lazio	Montelibretti (RM)
New NTG power line between the Rotello PC and the 150 kV section of the Rotello 380/150 kV NTG substation, after expansion of the same.	e-distribuzione	Rotello PC	Molise	Rotello (CB)
Connectors for the connection in input - output to the “Castel del Giudice – Villa S.Maria” 150 kV line, after performance of the works to remove the limitations of the Alanno – Villa S.Maria and “Villa S.Maria - Castel del Giudice” 150 kV NTG lines	e-distribuzione	Agnone PC	Molise	Agnone (IS)
Connectors for the connection in input - output to the “Marzanello - Capriati” 150 kV NTG line	e-distribuzione	Sesto Campano PC	Molise	Sesto Campano (IS)
Connectors for the connection in input - output to the “Calvizzano PC - Patria PC” 132 kV line (code 1356CRT)	e-distribuzione	Casapesenna PC	Campania	Casapesenna (CE)
Connectors for the connection in input - output to the “Caserta South - Saint Gobain - Santa Sofia” 150 kV line (code 511-P)	e-distribuzione	Saint Gobain PC	Campania	Caserta (CE)
Connectors for the connection in input - output to the “Garigliano ST – Ceprano” 150 kV line, after putting into continuity the “Montelungo – Suio” and “Suio – Sessa Aurunca” 60 kV NTG power lines in order to makes “Montelungo – Sessa Aurunca” connection.	e-distribuzione	Suio PC	Campania	Sessa Aurunca (CE)

NTG PLANTS TO BE BUILT	APPLICANT DISTRIBUTION OPERATOR	PLANT	REGION	MUNICIPALITY
Connectors for the connection in input-output to the “Astroni – Naples Centre” 220 kV NTG line New 220 kV NTG cable power line connecting the new Bagnoli PC and the Astroni PC. Actions provided for in the Terna Development Plan consisting of upgrading of the Astroni – Naples Centre 220 kV power line pursuant to the Restructuring of the 220 kV grid in the city of Naples.	e-distribuzione	Bagnoli PC	Campania	Naples (NA)
New HV/MV NTG Transformer in the “Fratta” 220/150 kV NTG ES (code 1240CRT)	e-distribuzione	Distribution plant related to the Fratta NTG ES	Campania	Frattamaggiore (NA)
Connectors for the connection in input - output to the “Fratta - San Giuseppe 2" 150 kV line after carrying out the activities pursuant to the “S. Sofia 380 kV Substation" action of the Terna Development Plan (code 1241CRT)	e-distribuzione	San Giuseppe PC	Campania	San Giuseppe Vesuviano (NA)
New 220 kV NTG power line between the “Doganella” PC and the “Poggioreale” PC (code 1357CRT)	e-distribuzione	Doganella PC	Campania	Naples (NA)
Connectors for the connection in input-output to the “Astroni – Naples Centre” 220 kV NTG line Performance of the works provided for in the Terna Development Plan (upgrading of the Astroni – Naples Centre 220 kV power line pursuant to the Restructuring of the 220 kV grid in the city of Naples and new Arenella PC – Fuorigrotta PC 220 kV power line).	e-distribuzione	Fuorigrotta PC	Campania	Naples (NA)
Connectors for the connection in input - output to the “Astroni-Fuorigrotta (Naples Centre)” 220 kV line; Performance of the works provided for in the Terna Development Plan (upgrading of the Astroni – Naples Centre 220 kV power line pursuant to the Restructuring of the 220 kV grid in the city of Naples and new Arenella PC – Fuorigrotta PC 220 kV power line).	e-distribuzione	Agnano PC	Campania	Naples (NA)
Connectors for the connection in input - output to the "Poggio Reale - Secondigliano” 220 kV line	e-distribuzione	Di Vittorio PC	Campania	Naples (NA)
Connectors for the connection in input - output to the "Astroni-Patria” 220 kV line	e-distribuzione	Quarto PC	Campania	Quarto (NA)
Connectors for the connection in input - output to the future 150 kV NTG line between the Mercatello PC and the Mercato S.S. PC, after performance of the works provided for in the Terna Development Plan in the context of the restructuring of the HV Grid of the Sorrentine peninsula (code 1038CRT)	e-distribuzione	Baronissi PC	Campania	Baronissi (SA)
Two new 220 kV NTG cable power lines from the new Salerno Port PC to the Salerno North PC	e-distribuzione	Salerno Port PC	Campania	Salerno (SA)
Connectors for the connection in input-output to the “Doganella PC – Naples Levante” 220 kV line after creation of a further 220 kV NTG cable connection between the Doganella PC and the Poggioreale PC	e-distribuzione	Porto Levante PC	Campania	Naples (NA)
Connectors for the connection in input-output to the “Doganella PC – Naples Centre PC” 220 kV line after creation of a further 220 kV NTG cable connection between the Doganella PC and the Poggioreale PC	e-distribuzione	Porto Ponente PC	Campania	Naples (NA)
Connectors for the connection in input - output to the “Goleto S. Angelo - Castelnuovo” 150 kV line	e-distribuzione	Morra PC	Campania	Morra de Sanctis (AV)
New 150 kV NTG power line connecting the Ponte Annibale PC and the Capua PC;	e-distribuzione	Ponte Annibale PC	Campania	Capua (CE)
Connectors for the connection in input-output to the “Brusciano – Nola 220” 220 kV line	e-distribuzione	ASI Marigliano PC	Campania	Nola (NA)
New 380/150 kV NTG ES to be inserted as input - output in the "Benevento 2 - Presenzano” 380 kV line	e-distribuzione	Isclero PC	Campania	Sant’Agata dei Goti (BN)

NTG PLANTS TO BE BUILT	APPLICANT DISTRIBUTION OPERATOR	PLANT	REGION	MUNICIPALITY
New 220 kV NTG ES to be inserted as input-output in the "Secondigliano – Fratta" 220 kV line	e-distribuzione	Arzano PC	Campania	Arzano (NA)
New 150 kV NTG ES to be inserted as input-output in the "Montecorvino – Pontecagnano" 150 kV line	e-distribuzione	Battipaglia PC	Campania	Bellizzi (SA)
New 150 kV NTG ES to be inserted as input-output in the “Marzanello PC – Pignataro All.” 150 kV line.	e-distribuzione	Pontelatone PC	Campania	Pontelatone (CE)
New 150 kV NTG ES to be inserted as input-output in the “Capriati PC – Marzanello PC” 150 kV line.	e-distribuzione	Presenzano PC	Campania	Presenzano (CE)
Connectors for the connection in input - output to the "Agri – Montemurro” 150 kV line	e-distribuzione	Agri PC	Basilicata	Missanello (PZ)
Connectors for the connection in input - output to the “Agri - Anzi” 150 kV line (code 581CRT)	e-distribuzione	Guardia (Corleto Perticara) PC	Basilicata	Corleto Perticara (PZ)
Upgrading/reconstruction of the “Agri - Montemurro - Viggiano” 150 kV NTG line;	e-distribuzione	Marsico Nuovo PC	Basilicata	Marsico Nuovo (PZ)
		Viggiano PC		Viggiano (PZ)
New NTG power line between the “Baragiano” PC and the “Picerno” 150 kV NTG ES; Actions provided for in the Terna Development Plan in the area (“Restructuring of the HV grid in the Potenza area ” - Action Code 503-P).	e-distribuzione	Baragiano PC	Basilicata	Balvano (PZ)
Upgrading/reconstruction of the “Potenza – Anzi – Corleto Perticara – Agri” 150 kV NTG line	e-distribuzione	Anzi PC	Basilicata	Anzi (PZ)
Connectors for the connection in input - output to the “Loseto - Mola” 150 kV line (code 1233CRT)	e-distribuzione	Bari San Giorgio PC	Apulia	Bari (BA)
Connectors for the connection in input-output to the "Conversano - Polignano FS” 150 kV line; new 150 kV power line between the new Polignano PC and the Monopoli PC	e-distribuzione	Polignano PC	Apulia	Polignano a Mare (BA)
Connectors for the connection in input - output to the "Matera-Altamura All.” 150 kV line; Connection of the line coming from the “Matera” NTG ES to the Altamura PC n order to make a "Matera - Altamura PC” connection.	e-distribuzione	Altamura North PC	Apulia	Altamura (BA)
Connectors for the connection in input - output to the "Bisceglie - Terlizzi - Molfetta” 150 kV line	e-distribuzione	Bisceglie South PC	Apulia	Bisceglie (BT)
Connectors for the connection in input - output to the “Fasano – Ostuni” 150 kV line	e-distribuzione	Ostuni Mare (Villanova) PC	Apulia	Ostuni (BR)
Connectors for the connection in input - output to the “Casarano - Castrignano” 150 kV line	e-distribuzione	Presicce PC	Apulia	Presicce (LE)
Connectors for the connection in input-output to the “Palagiano – Taranto N2” 150 kV line	e-distribuzione	Crispiano PC	Apulia	Crispiano (TA)
Connectors for the connection in input - output to the “Manduria - San Pancrazio” 150 kV line	e-distribuzione	Ruggianello PC	Apulia	Avetrana (TA)
Connectors for the connection in input - output to the “Foggia - Trinitapoli” 150 kV line (code 1242CRT)	e-distribuzione	Foggia Onoranza PC	Apulia	Foggia (FG)
Two new 150 kV bays at the Foggia 380/150 NTG ES	e-distribuzione	Foggia North PC	Apulia	Foggia (FG)
Connectors for the connection in input - output to the “Corato – Bari Ind 2” 150 kV line after performance of the works of the Terna Development Plan provided for in the area (150 kV connectors of the “Bari Ind 2 – Corato” line to the Palo del Colle ES, reconstruction of the “Corato – Bari Termica” 150 kV power line)	e-distribuzione	Corato South PC	Apulia	Corato (BA)
Connectors for the connection in input - output to the “Cerignola – Stornara” 150 kV line	e-distribuzione	Cerignola West PC	Apulia	Cerignola (FG)

NTG PLANTS TO BE BUILT	APPLICANT DISTRIBUTION OPERATOR	PLANT	REGION	MUNICIPALITY
Connectors for the connection in input - output to the “Bari West – Grumo Appula” 150 kV line, after upgrading/ reconstruction of the “Matera – Acquaviva delle Fonti” 150 kV line, provided for as action 520-P of the Terna Development Plan, named “Actions on the HV grid for collecting the renewable production in Basilicata”	e-distribuzione	Adelfia PC	Apulia	Bari (BA)
Connectors for the connection in input-output to the “Ripalta – Lesina” 150 kV NTG line	e-distribuzione	Ripalta PC	Apulia	Lesina (FG)
Connectors for the connection in input-output to the “Manduria – Ruggianello All.” 150 kV line, after creation of the connections in input-output of the Ruggianello PC to the “Manduria-Monteruga” 150 kV NTG line	e-distribuzione	Maruggio PC	Apulia	Maruggio (TA)
Connectors for the connection in input-output to the “Taranto N2 – Villa Castelli” 150 kV line	e-distribuzione	Ceglie Messapica PC	Apulia	Ceglie Messapica (BR)
New 150 kV NTG ES to be inserted as input-output in the “Ischitella PC – S.Giovanni Rotondo PC” 150 kV line	e-distribuzione	Cagnano PC	Apulia	Cagnano Varano (FG)
New 150 kV NTG ES to be inserted as input-output in the “Galatina – Porto Cesareo” 150 kV line, after creation of the connections in input-output of the Ruggianello PC to the “Manduria-Monteruga” 150 kV NTG line	e-distribuzione	Nardò PC	Apulia	Nardò (LE)
New 150 kV NTG ES to be inserted as input-output in the “150 kV Troia ES – Troia PC” 150 kV line, after performance of the works provided for in the Terna Development Plan in the area: - future “Foggia – Accadia” connection with input-output on Orsara NTG ES (action 519-P); - future “Troia 380/150 kV ES – Troia PC – Troia 150 kV ES/ EOS 1 ” 150 kV connection (action 505-P)	e-distribuzione	Borgo Segezia PC	Apulia	Troia (FG)
New 150 kV NTG ES to be inserted as input-output in the “Loseto PC – Mola PC” 150 kV line.	e-distribuzione	Noicattaro PC	Apulia	Noicattaro (BA)
New 150 kV NTG ES to be inserted as input-output in the “S.Giorgio Ionico – Lizzano” 150 kV line.	e-distribuzione	Pulsano PC	Apulia	Pulsano (TA)
New 150 kV NTG ES to be inserted as input-output in a future 150 kV NTG line connecting the “Lecce Mare” PC and the “Diso” PC.	e-distribuzione	Otranto PC	Apulia	Otranto (LE)
		Roca PC		Melendugno (LE)
Replacement of the current rigid derivation of the PC by construction of a second connection to the “Ionadi - Feroleto” 150 kV line (code 1255CRT)	e-distribuzione	Francavilla PC	Calabria	Francavilla Angitola (VV)
Connectors for the connection in input-output to the “Stilo – Roccella Ionica” 150 kV line	e-distribuzione	Caulonia PC	Calabria	Caulonia (RC)
Connectors for the connection in input - output to the "Girifalco-Palermiti” 150 kV line, after creation of the 150 kV NTG i-o connections of the "Girifalco-Jacurso" line to the “Maida” NTG ES provided for in the Terna Development Plan.	e-distribuzione	Vallefiorita PC	Calabria	Vallefiorita (CZ)
Connection in i-o to the "Soverato-Serra San Bruno” 150 kV NTG line	e-distribuzione	Chiaravalle PC	Calabria	Chiaravalle Centrale (CZ)
Connectors for the connection in input - output to the “Reggio Condera - Gallico” 150 kV line (code 1253CRT)	e-distribuzione	Casalotto PC	Calabria	Reggio di Calabria (RC)
Connectors for the connection in input-output to the “Melito PS – Bruzzano Zeff” 150 kV line	e-distribuzione	San Pasquale PC	Calabria	Bova Marina (RC)
Connectors for the connection in input - output to the “Rende – Cosenza” 150 kV line	e-distribuzione	Commenda PC	Calabria	Rende (CS)
New 150 kV NTG ES to be inserted as input-output in the “Rossano – Corigliano” 150 kV line, after upgrading/ reconstruction of the “Rossano – Corigliano” 150 kV line and performance of the work 542-P, provided for in the Terna Development Plan.	e-distribuzione	S. Irene PC	Calabria	Corigliano-Rossano (CS)

NTG PLANTS TO BE BUILT	APPLICANT DISTRIBUTION OPERATOR	PLANT	REGION	MUNICIPALITY
Connectors for the connection in input - output to the “Caltabellotta - San Carlo” 150 kV line	e-distribuzione	Sambuca PC	Sicily	Santa Margherita di Belice (AG)
New 150 kV NTG power line connecting the Corleone PC and the San Carlo PC	e-distribuzione	Sambuca PC	Sicily	Santa Margherita di Belice (AG)
		Corleone PC		Corleone (PA)
		Sciacca PC		Sciacca (AG)
New 150 kV NTG connection between the "Cammarata" 150 kV NTG ES and the user "Campofranco FS" provided for in the Terna Development Plan	e-distribuzione	Santa Caterina PC	Sicily	Santa Caterina Villarmosa (CL)
Connectors for the connection in input - output to the “Misterbianco - Zia Lisa” 150 kV line (code 585CRT)	e-distribuzione	San Giorgio PC	Sicily	Catania (CT)
Connectors for the connection in input - output to the “Acireale FS - Acicastello All.” 150 kV line (code 593CRT)	e-distribuzione	Acireale PC	Sicily	Acireale (CT)
Upgrading/reconstruction of the "Acicastello - Contesse FS” 150 kV backbone	e-distribuzione	Acireale PC	Sicily	Acireale (CT)
		Letojanni PC		Letojanni (ME)
Connectors for the connection in input - output to the “Belpasso - Viagrande” 150 kV line	e-distribuzione	S.Pietro Clarenza	Sicily	Nicolosi (CT)
Two new 150 kV NTG cable power lines connecting to the Carini PC and to Carini FS, after upgrading of the Carini FS plant	e-distribuzione	Carini 2 PC	Sicily	Carini (PA)
Connectors for the connection in input - output to the "Alia - Caccamo" 150 kV line after construction of a new 150 kV NTG power line between the PC and the “Castronovo RT” 150 kV NTG ES (code 594CRT)	e-distribuzione	Alia 2 PC	Sicily	Alia (PA)
New 380/150 kV NTG ES to be inserted as input - output in the "Chiaramonte Gulfi - Priolo” 380 kV line.	e-distribuzione	Palazzolo Acreide PC	Sicily	Palazzolo Acreide (SR)
Connectors for the connection in input - output to the "Cappuccini - S.ne Ciminna” 150 kV line	e-distribuzione	Palermo University PC	Sicily	Palermo (PA)
Connectors for the connection in input - output to the “Vittoria - Gela” 150 kV line (code 1043CRT)	e-distribuzione	Dirillo PC	Sicily	Acate (RG)
New 150 kV NTG connection between the "Ragusa North" PC and the "Ragusa" 220/150 kV NTG ES (code 596CRT)	e-distribuzione	Ragusa North PC	Sicily	Ragusa (RG)
		Ragusa 2 PC		
Connectors for the connection in input - output to the “Noto - Cassibile” 150 kV line	e-distribuzione	Avola PC	Sicily	Avola (SR)
Connectors for the connection in double antenna to the Augusta 2 PC, as provided for in the Terna Development Plan (code 1044CRT)	e-distribuzione	Filonero PC	Sicily	Augusta (SR)
Actions provided for in the Terna Development Plan, consisting of: • rationalisation of the 150 kV existing grid between Lentini PC, Melilli ES, Pantano d’Arci PC and Misterbianco ES, with meshing actions between the 150 kV grid and that at 220 kV (to be reclassed); • construction of the future “Augusta 2 – Augusta ES” 150 kV NTG power line. (code 1040CRT)	e-distribuzione	Augusta 2 PC	Sicily	Augusta (SR)
Connectors for the connection in input - output to the “Partanna – S. Ninfa” 150 kV NTG line	e-distribuzione	Partanna PC	Sicily	Partanna (TP)
New “Salemi PC - Partanna ES” 150 kV connection; Expansion of the Partanna 220/150 kV NTG ES; Upgrading/reconstruction of the “S. Ninfa - Partanna” 150 kV line.	e-distribuzione	Santa Ninfa PC	Sicily	Santa Ninfa (TP)
		Partanna PC		Partanna (TP)
New 150 kV NTG ES to be inserted as input-output in the “Custonaci – Fulgatore” 150 kV line.	e-distribuzione	Paceco PC	Sicily	Paceco (TP)

NTG PLANTS TO BE BUILT	APPLICANT DISTRIBUTION OPERATOR	PLANT	REGION	MUNICIPALITY
New 150 kV NTG ES to be inserted as input-output in the future “Augusta 2 - Pantano” 150 kV NTG line, after performance of the work 603-P of the Terna Development Plan.	e-distribuzione	Villasmundo PC	Sicily	Melilli (SR)
Connectors for the connection in input - output to the “Rumianca - S. Gilla” 150 kV line.	e-distribuzione	Assemini PC	Sardinia	Assemini (CA)
Connectors for the connection in input - output to the “S. Margherita – Cagliari South” 150 kV line.	e-distribuzione	Pula PC	Sardinia	Pula (CA)
Connectors for the connection in input - output to the “Quartucciu – Villasimius” 150 kV line	e-distribuzione	Terramala PC	Sardinia	Quartu Sant’Elena (CA)
New 150 kV NTG power line connecting the Galtellì PC and the Lula PC.	e-distribuzione	Galtellì PC	Sardinia	Galtellì (NU)
Connectors for the connection in input - output to the “Iglesias 2 - Siliqua” 150 kV line.	e-distribuzione	Posada PC	Sardinia	Posada (NU)
Connectors for the connection in input - output to the “Padria - Alghero” 150 kV line.	e-distribuzione	Alghero South PC	Sardinia	Alghero (NU)
Connectors for the connection in input - output to the “Olbia 2 - S. Teodoro” 150 kV line; New 150 kV NTG connection between the Santa Teresa ES and the new Buddusò ES, provided for in the Terna Development Plan.	e-distribuzione	Porto S. Paolo PC	Sardinia	Loiri Porto San Paolo (NU)
Connectors for the connection in input - output to the “Viddalba - Aglientu” 150 kV line.	e-distribuzione	Trinità D’Agultu PC	Sardinia	Trinità d’Agultu e Vignola (NU)
Connectors for the connection in input - output to the “Villasimius - Muravera” 150 kV line.	e-distribuzione	Oliaspeciosa PC	Sardinia	Castiadas (SU)
Expansion of the new 150 kV NTG ES named “Selegas” provided for in the Terna Development Plan	e-distribuzione	Selegas PC	Sardinia	Selegas (SU)
Connectors for the connection in input - output to the “Iglesias 2 - Siliqua” 150 kV line.	e-distribuzione	Villamassargia PC	Sardinia	Villamassargia (SU)
New 220 kV NTG ES to be inserted as input-output in the “Villasor - Rumianca” 220 kV line.	e-distribuzione	Villaspeciosa PC	Sardinia	Villaspeciosa (SU)
Connectors for the connection in input - output to the “Santa Teresa 150 – Palau” 150 kV line (code 587CRT)	e-distribuzione	Palau 2 PC	Sardinia	Palau (SS)
Connectors for the connection in input - output to the “Macomer – Ula Tirso” 150 kV line.	e-distribuzione	Abbasanta PC	Sardinia	Abbasanta (OR)
Connectors for the connection in input - output to the “Ploaghe - Tergu” 150 kV line.	e-distribuzione	Nulvi PC	Sardinia	Nulvi (SS)
Connectors for the connection in input - output to the “Portocanale – Cagliari 3” 150 kV cable line.	e-distribuzione	Cagliari Porto PC	Sardinia	Cagliari (CA)
Expansion of the 150 kV NTG ES named “Nurri” (provided for in the Terna Development Plan), after carrying out the following actions: • creation of the connectors of the “S. Miali – Selegas” 150 kV line with the • 150 kV section of a new 380/150 kV NTG ES to be inserted as input – output in the “Ittiri – Selargius” 380 kV line; • upgrading/reconstruction and removal of the limitations on the “Isili – Flumendosa 2”, “Arbatax – Lanusei” and “Arbatax – Flumendosa” 150 kV lines; • removal of the limitations on the current “Santu Miali – Goni” and • Villasor – Nurri” 150 kV lines (pursuant to the Terna Development Plan); • new 150 kV NTG ES to be built at the current Goni Primary Cabin (pursuant to the Terna Development Plan); • new “Selargius – Goni” 150 kV NTG power line	e-distribuzione	Nurri ED PC	Sardinia	Nurri (SU)

NTG PLANTS TO BE BUILT	APPLICANT DISTRIBUTION OPERATOR	PLANT	REGION	MUNICIPALITY
Two new 150 kV NTG power lines connecting to the “Lula” PC and to the future “Buddusò” 150 kV NTG ES, provided for in the Terna Development Plan.	e-distribuzione	Bitti PC	Sardinia	Bitti (NU)
Expansion of the “Mogorella” 220 kV NTG ES	e-distribuzione	Mogorella PC	Sardinia	Mogorella (OR)
New 150 kV NTG ES to which to connect the “Olbia – Olbia 2”, “Arzachena – Olbia”, Oblia – Tempio” 150 kV lines and the existing Olbia PC	e-distribuzione	Olbia Porto PC	Sardinia	Olbia (SS)
Connectors for the connection in input - output to the “Selargius - Terramaini” 150 kV cable line.	e-distribuzione	Quartu South PC	Sardinia	Quartu Sant’Elena (CA)
Connectors for the connection in input - output to the “Codrongianos – Porto Torres 1” 150 kV line.	e-distribuzione	Tissi PC	Sardinia	Tissi (SS)
Connectors for the connection in input - output to the “Taloro – Villasor” and “Tuili – Villasor” 150 kV lines.	e-distribuzione	Samassi PC	Sardinia	Samassi (SS)
New 150 kV NTG ES to be inserted as input-output in the “Taloro – Tuili” 150 kV line.	e-distribuzione	Sorgono PC	Sardinia	Sorgono (NU)
Connectors for the connection in input - output to the “Rumianca - Portocanale” 150 kV line.	e-distribuzione	Porto Canale 2 PC	Sardinia	Cagliari (CA)
Connectors for the connection in input - output to the “Sarroch – Rumianca” 150 kV line.	e-distribuzione	Capoterra PC	Sardinia	Capoterra (CA)

TABLE 5 - CONNECTIONS OF CONSUMPTION USERS

NTG PLANTS TO BE BUILT	APPLICANT COMPANY	REGION	MUNICIPALITY
Upgrading of the "Arquata Scrivia" 132 kV NTG ES (code 1359CRT)	Consorzio COCIV	Piedmont	Arquata Scrivia (AL)
Upgrading of the "Novi S. Bovo" 132 kV NTG ES (code 1360CRT)	Consorzio COCIV	Piedmont	Novi Ligure (AL)
Two new 132 kV bays in the 380/132 kV ES of Venaus after upgrading of the same by reconstruction in GIS (code 1007CRT)	TUNNEL EURALPIN LYON TURIN S.a.s.	Piedmont	Susa (TO)
Actions on the “Venaus – Salbertrand” 132 kV NTG line for insertion of user plant (code 1059CRT)	TUNNEL EURALPIN LYON TURIN S.a.s.	Piedmont	Chiomonte (TO)
New 132 kV NTG ES to be inserted as input - output in the "Venaus- Salbertrand" 132 kV line (code 1060CRT)	R.F.I. S.p.A.	Piedmont	Chiomonte (TO)
Expansion of the “Vercelli RT” 132 kV NTG ES to be inserted as input-output in the "Vercelli North – Robbio PC" 132 kV line, after upgrading/reconstruction of the “Vercelli North – Mortara” 132 kV line.	R.F.I. S.p.A.	Piedmont	Vercelli (VC)
New 132 kV NTG ES to be inserted as input - output in the “Condove – Vertek – Avigliana” 132 kV line.	R.F.I. S.p.A.	Piedmont	Avigliana (TO)
New 132 kV NTG ES to be inserted as input-output in the “Acc. Beltrame TO – Condove” 132 kV line	R.F.I. S.p.A.	Piedmont	Borgone Susa (TO)
New 132 kV NTG ES named “Novara East”, provided for in the 155-P action of the Terna Development Plan	MEMC S.p.A.	Piedmont	Novara (NO)
New 132 kV NTG ES to be inserted as input - output in the "San Giovanni GE - Praoil Fondega" 132 kV line (code 1061CRT)	Consorzio COCIV	Liguria	Genoa (GE)
Actions on the “Morigallo - Trasta” 132 kV NTG line for insertion of user plant (code 1361CRT)	Autostrade per l'Italia S.p.A.	Liguria	Genoa (GE)
Actions on the “Varenna - Pra” 132 kV NTG line for insertion of user plant (code 1362CRT)	Autostrade per l'Italia S.p.A.	Liguria	Genoa (GE)
New 132 kV NTG ES to be inserted as input - output in the "Trasta - Ronco Scrivia" 132 kV line (code 1363CRT)	Consorzio COCIV	Liguria	Ronco Scrivia (GE)

NTG PLANTS TO BE BUILT	APPLICANT COMPANY	REGION	MUNICIPALITY
New 132 kV NTG ES to be inserted as input-output in the "Campochiesa – Cervo" 132 kV line.	R.F.I. S.p.A.	Liguria	Albenga (SV)
New 132 kV NTG ES to be inserted as input-output in the "La Pianta PC – Spezia ST" 132 kV cable line and in input-output in the "La Pianta PC – Termom. NK – Oto Melara NK – CNG Muggiano" 132 kV line, after creation of a further 132 kV NTG cable connection between the "La Pianta 2" PC and the "Spezia ST" NTG ES	Autorità di Sistema Portuale del Mar Ligure Orientale	Liguria	La Spezia (SP)
New 132 kV NTG ES to be located near the existing "UT ASO Allacciamento" rigid derivation to which to connect, as well as the "UT ASO Ospitaletto – UT ASO Allacciamento" derivation line, also the "Travagliato – der. ASO Allacciamento – Ospitaletto" and "Travagliato – der. Passirano – Ospitaletto" lines (code 103CRT)	ASONEXT S.p.A.	Lombardy	Ospitaletto (BS)
Upgrading/reconstruction of the "Cavenago PC – CS SGS-SAPIO" and "Bernareggio PC – CS IBM" 132 kV lines	ST Microelectronics S.r.l.	Lombardy	Agrate Brianza (MB)
Extension of the "Lonato" 380/132 kV NTG Electrical Substation (ES) and installation of a dedicated transformer and modification of the 132 kV NTG power lines on entry to the afore said ES.	CEPAVDUE S.C.A.R.L.	Lombardy	Calcinato (BS)
connections in input-output of the "Ricevitrice Sud BS – Mincio" 132 kV NTG line to the 132 kV section of the "Lonato" 380/132 kV NTG ES; Connector for the connection of the "Lonato CS" Cabin to the 132 kV NTG line coming from the "Ricevitrice Sud BS" 132 kV NTG ES; Connector for the connection of the 132 kV NTG line coming from "Lonato All." (currently connected to the "Lonato CS" Cabin) to the 132 kV NTG line coming from the "Mincio" 220/132 kV NTG ES.	FERALPI SIDERURGICA S.p.A.	Lombardy	Lonato del Garda (BS)
New 132 kV NTG ES named "Valsabbia" to be inserted as input - output in the "Leali Odolo All. - Odolo" 132 kV line and to the 132 kV section of the new Agnosine 220/132 kV NTG ES (code 116-P)	FERRIERA VALSABBIA S.p.A.	Lombardy	Odolo (BS)
Connector in antenna at 132 kV to the Vobarno PC (code 908CRT)	VALSIR S.p.A.	Lombardy	Vobarno (BS)
New 132 kV NTG Electrical Substation (ES) to be inserted as input-output in the "Pozzolengo - Castelnuovo" 132 kV NTG line.	CEPAVDUE S.C.A.R.L.	Lombardy	Pozzolengo (BS)
New Electrical Substation (ES) of the 380 kV NTG to be inserted as input - output in the "ISP Cremona – Cremona" 380kV NTG line, after construction of a new 380 kV NTG power line connecting the aforesaid new NTG ES and a future expansion of the "Maleo" 380/132 kV NTG ES	ACCIAIERIA ARVEDI S.p.A.	Lombardy	Spinadesco (CR)
Two new 132 kV bays in the Baggio 380/132 kV NTG ES	EQUINIX S.r.l.	Lombardy	Settimo Milanese (MI)
New 132 kV NTG Electrical Substation (ES) to be inserted as input-output in the "Magenta ST – IC SARPOM" 132 kV line.	VETROPACK ITALIA S.r.l.	Lombardy	Boffalora sopra Ticino (MI)
Expansion in GIS of the "Baggio" 380/220/132 kV NTG ES	DATA4 ITALY S.p.A. MICROSOFT 4825 ITALY S.R.L. ITALY INVESTMENT COMPANY 324 S.r.l.	Lombardy	Settimo Milanese (MI)
New 132 kV NTG Electrical Substation (ES) to be inserted as input-output in the "Caleppio – Zelo Buon Persico" 132 kV NTG line.	STOGIT S.P.A.	Lombardy	Settala (MI)
New 132 kV NTG Electrical Substation (ES) to be inserted as input-output in the "Vimodrone PC – Rodano PC – Peschiera B. PC" 132 kV NTG line	MICROSOFT 4825 ITALY S.R.L.	Lombardy	Peschiera Borromea (MI)

NTG PLANTS TO BE BUILT	APPLICANT COMPANY	REGION	MUNICIPALITY
New 220 kV NTG Electrical Substation (ES) to be inserted as input-output in the “Ricevitrice South Milan – Tavazzano 220” 220 kV NTG line.	ITALY INVESTMENT COMPANY 324 S.r.l.	Lombardy	Melegnano (MI)
New 132 kV NTG ES to be inserted as input - output in the "Cittiglio - Barasso" 132 kV line to which must be connected also the current UT Colacem derivation (code 910CRT)	COLACEM S.p.A.	Lombardy	Caravate (VA)
Expansion of the “Ponte San Marco” 132 kV NTG ES	CEPAVDUE S.C.A.R.L.	Lombardy	Calcinato (BS)
Expansion of the “Vobarno” 132 kV NTG ES	FONDITAL S.p.A.	Lombardy	Vobarno (BS)
Expansion of the 132 kV section of the “Lacchiarella” 380/132 kV NTG ES	R.F.I. S.p.A.	Lombardy	Lacchiarella (MI)
	NOVIGLIO DATACENTERS MXP I S.r.l.		Noviglio (MI)
	STACK EMEA - ITALY S.r.l.		Siziano (PV) and Vellezzo Bellini (PV)
Expansion of the 132 kV section of the “Ospiate” 380/220/132 kV NTG ES	VAILOG S.r.l.	Lombardy	Rho (MI)
New 132 kV NTG ES to be inserted as input-output in the “Tavazzano ST – Pavia Torretta” 132 kV line, after upgrading/reconstruction of the “Tavazzano ST – Pavia Torretta”, “Pavia Torretta – Pavia East”, “Copiano – Arena Po” and “Arena Po – La Casella” 132 kV lines	MICROSOFT 4825 ITALY S.R.L.	Lombardy	Bornasco (PV)
Two new 220 kV bays at the “Magenta ST” NTG ES, after construction of the related new 380 kV section and of the related connections to the “Turbigo – Baggio” 380 kV line, as provided for in the Terna Development Plan	NAMIRA SGRPA SPA	Lombardy	Magenta (MI)
New 220/132 kV NTG ES to be inserted as input-output in the “SE Cassano - SE Ric. North MI” double-circuit 220 kV line in input-output in the “CP Limito - Sio CS” 132 kV line and in the “CP Vignate - Sio CS” 132 kV line	STACK EMEA - ITALY S.r.l.	Lombardy	Vignate (MI)
New 220 kV NTG ES to be inserted as input - output in the “Baggio ES – Magenta ES” 220 kV line	VANTAGE DATA CENTERS ITALY S.R.L.	Lombardy	Settimo Milanese (MI)
New 220 kV NTG ES to be inserted as input - output in the “Baggio ES – Magenta ES” 220 kV line and new 220 kV cable connection between a new NTG ES as above and the “Baggio” NTG ES	DATA4 ITALY SPA	Lombardy	Settimo Milanese (MI)
	EQUINIX ITALIA SRL		Cornaredo (MI)
	SAVILL INVESTMENT MANAGEMENT SGR SPA		
Upgrading/reconstruction of the “Baggio – Magenta” 220 kV line in the stretch between the new 220 kV NTG ES to be inserted as input - output in the “Baggio ES – Magenta ES” 220 kV line and the “Baggio” NTG ES	DATA4 ITALY SPA	Lombardy	Settimo Milanese (MI)
	SAVILL INVESTMENT MANAGEMENT SGR SPA		Cornaredo (MI)
Upgrading/reconstruction of the “Baggio – Magenta” 220 kV line in the stretch between the new 220 kV NTG ES to be inserted as input - output in the “Baggio ES – Magenta ES” 220 kV line and the “Magenta” NTG ES	SAVILL INVESTMENT MANAGEMENT SGR SPA	Lombardy	Cornaredo (MI)
Expansion of the Lambrate 220 kV NTG ES	IMMOBILIARE 2C SPA	Lombardy	Segrate (MI)
New 132 kV NTG ES to be connected via new 132 kV NTG power lines to the Magenta PC, to "Novara RT" 132 kV NTG ES, and to a future NTG ES to be inserted as input-output in the "Vittuone PC - Parabiagio PC” 132 kV line, after completion: - of the aforesaid new 132 kV NTG ES in input-output “Vittuone PC - Parabiagio PC” line; - of a new 132 kV connection between the aforesaid NTG ES and the Magenta PC, through the use of the “Novara RT – Rho RT” 132 kV line; - of the resolution of the "Vittuone All.” rigid derivation; - of connections in input - output of the Sedriano AV NTG ES to the “Novara RT – Rho RT” 132 kV line.	DEVELOG 6	Lombardy	Mesero (MI)
New 132 kV NTG ES to be inserted as input-output in the “Colunga – Bussolengo” 132 kV line, after performance of the works 326-P and 168-N provided for in the Terna Development Plan.	Fassa S.r.l.	Lombardy	Mantua (MN)

NTG PLANTS TO BE BUILT	APPLICANT COMPANY	REGION	MUNICIPALITY
New 132 kV NTG ES to be inserted as input-output in the “Casalpusterlengo – Pizzighettone” 132 kV line, after upgrading of the same	ROCKWOOL ITALIA	Lombardy	Bertonico (LO)
New "Fortezza" and "P. Gardena” 220 kV NTG substations, provided for in SF6, and new 220 kV NTG overhead power lines (code 1321CRT)	R.F.I. S.p.A.	Trentino Alto Adige	Fortezza (BZ) and Ponte Gardena (BZ)
New 132 kV NTG ES to be inserted as input-output in the “Trento RT – Ala RT” 132 kV line	R.F.I. S.p.A.	Trentino Alto Adige	Trento (TN)
New 132 kV NTG ES to be inserted as input - output in the “Bressanone – Brunico CE” 132 kV line.	Funivia Plan de Corones S.r.l.	Trentino Alto Adige	Brunico (BZ)
New 132 kV NTG ES to be connected to the “FLAG” user cabin and to the “Mestre Barche” PC (code 1171CRT)	SAVE S.p.A.	Veneto	Venice (VE)
New 132 kV NTG ES to be inserted as input - output in the "Montecchio – Montebello PC" 132 kV line (code 683CRT)	Consorzio IRICAV DUE S.c.a.r.l.	Veneto	Montebello Vicentino (VI)
New 132 kV NTG ES to be inserted as input - output in the "Ca’ del Bue – Ricevitrice North" 132 kV line (code 682CRT)	Consorzio IRICAV DUE S.c.a.r.l.	Veneto	San Martino Buon Albergo (VR)
New 132 kV NTG ES to be inserted as input - output in the "Caldiero – Montebello FS" 132 kV line (code 684CRT)	Consorzio IRICAV DUE S.c.a.r.l.	Veneto	Belfiore (VR)
New 132 kV NTG ES to be inserted as input-output in the "Caldiero – Montebello FS” 132 kV line and to be reconnected, via two new NTG power lines, to the Dugale 380/132 kV NTG ES (code 685CRT)	Consorzio IRICAV DUE S.c.a.r.l.	Veneto	San Bonifacio (VR)
New 132 kV NTG ES to be connected to the following 132 kV NTG lines: - “Verona FS - Peri FS” - “Verona FS - Domegliara” - “Verona FS - Caldiero” - “Verona FS - Peschiera FS” - “Verona FS - Buttapietra” (code 1364CRT)	R.F.I. S.p.A.	Veneto	Verona (VR)
New 220/132 kV NTG ES to be inserted as input - output in the "Dugale - Sandrà" 220 kV line	CEPAVDUE S.C.A.R.L.	Veneto	Sona (VR)
New 132 kV NTG ES to be inserted as input-output in the “Nogara RT – Ostiglia RT” 132 kV line; New 132 kV NTG ES to be connected to the “Nogara PC – Nogara All.”, “Venera – Nogara All.” and “Nogara All. – Ostiglia ST” 132 kV lines; New 132 kV NTG underground cable connection between the aforesaid two new NTG ESs; Upgrading/reconstruction of the 132 kV line between the “Ostiglia RT” NTG ES and the new 132 kV NTG ES to be inserted as input-output in the “Nogara RT – Ostiglia RT”	VERALLIA ITALIA S.p.A.	Veneto	Gazzo Veronese (VR)
New 132 kV NTG ES to be inserted as input-output in the “Sovizzo – Montecchio” 132 kV line New 220 kV NTG ES to be inserted as input-output in the “Scorzè – Soverzene” 220 kV line	SNAM Rete Gas	Veneto	Istrana (TV)
New 132 kV NTG ES to be inserted as input-output in the “Cessalto – Caorle” 132 kV line, after performance of the work 260-N of the Terna Development Plan	R.F.I. S.p.A.	Veneto	Cessalto (TV)
New 132 kV bay in the Planais 380/132 kV NTG ES, after installation of a third ATR and creation of the third 132 kV busbar system (code 616CRT)	NUNKI STEEL S.p.A.	Friuli Venezia Giulia	San Giorgio di Nogaro (UD)
New 132 kV ES to be inserted as input - output in the "Chiusaforte - Tarvisio" 132 kV line (code 1365CRT)	SNAM Rete Gas S.p.A.	Friuli Venezia Giulia	Malborghetto Valbruna (UD)
New 132 kV NTG ES to be inserted as input-output in the “Redipuglia – Schiavetti” 132 kV line	R.F.I. S.p.A.	Friuli Venezia Giulia	Fiumicello (UD)
New 132 kV NTG ES to be inserted as input-output in the “Latisana – Planais” 132 kV line	R.F.I. S.p.A.	Friuli Venezia Giulia	Latisana (UD)
New 132 kV NTG ES to be inserted as input - output in the "Cannaviè - Cà Tiepolo" 132 kV line and to which to reconnect the existing user “Conserve Italia” (code 1366CRT) (construction by Third Parties)	Brulli Service S.r.l.	Emilia Romagna	Codigoro (FE)

NTG PLANTS TO BE BUILT	APPLICANT COMPANY	REGION	MUNICIPALITY
New 132 kV NTG ES to be inserted as input - output in the future “Altedo – Ferrara South” 132 kV NTG line provided for in the DP	SNAM RETE GAS	Emilia Romagna	Poggio Renatico (FE)
New 132 kV NTG ES to be inserted as input - output in the "S. Rocco – Caorso" 132 kV line (code 812CRT)	S.A.I.B. S.p.A.	Emilia Romagna	Caorso (PC)
New 132 kV NTG ES to be inserted as input - output in the "Parma North - Bormioli" and "Parma FS - Fornovo” 132 kV lines (code 1367CRT)	Bormioli Luigi S.p.A.	Emilia Romagna	Parma (PR)
New 132 kV NTG ES to be inserted as input-output in the "S. Martino in XX - Cesena North” 132 kV line, after performance of the works pursuant to the development action named “Forlì/Cesena Area Grid" (code 1368CRT)	R.F.I. S.p.A.	Emilia Romagna	Sant’Arcangelo di Romagna (RN)
New 132 kV NTG ES to be inserted as input-output in the “Mezzolara – Focomorto” 132 kV line	STOGIT S.p.A.	Emilia Romagna	Minerbio (BO)
Reconstruction in underground cable solution of one of the 132 kV NTG overhead power lines entering the “Ravenna Porto” PC	Autorità di Sistema Portuale del Mare Adriatico Centro-Settentrionale	Emilia Romagna	Ravenna (RA)
New 132 kV NTG ES in GIS solution to be inserted as input-output in the “Battiferro – S. Donato Bolognese” 132 kV line, after performance of the works provided for in the area in the Terna Development Plan (code 326-P)	Cineca Consorzio Interuniversitario ECMWF	Emilia Romagna	Bologna (BO)
Expansion of the "San Donato" 132 kV NTG ES (code 1369CRT)	R.F.I. S.p.A.	Tuscany	Rignano sull’Arno (FI)
New 132 kV bay in the Sondel Porcari Sez. ES (code 1173CRT)	DS SMITH PAPER ITALIA S.r.l.	Tuscany	Porcari (LU)
- New 132 kV power line between the Massa I.Z. PC and the Avenza 220/132 kV NTG ES; - New 220/132 kV ATR in the Avenza SE and creation of the third busbar system; - New 132 kV connections between the "Avenza - Vinchiana" line and the Strettoia PC (code 814CRT)	NUOVO PIGNONE S.p.A.	Tuscany	Massa (MS)
New 132 kV bay in the “Marginone” 380/132 kV NTG ES	Verallia Italia S.p.A.	Tuscany	Pescia (PT)
Expansion of the "Roccapriora" 132 kV NTG ES (code 1370CRT)	R.F.I. S.p.A.	Marche	Falconara Marittima (AN)
New 132 kV NTG power line between the "Fano I.Z. PC" and the "Fano E.T." 380/132 kV NTG ES and related 132 kV bay at the aforesaid “Fano E.T.” 380/132 kV NTG ES (code 1293CRT)	Lamial S.p.A. Profilglass S.p.A.	Marche	Fano (PU)
New 132 kV NTG ES to be inserted as input - output in the "Villanova - Penne" 132 kV line (code 1174CRT)	BARBERINI S.p.A.	Abruzzo	Città Sant’Angelo (PE)
New 150 kV bay in the San Salvo 150 kV NTG ES	STOGIT S.p.A.	Abruzzo	Cupello (CH)
New 150 kV NTG ES to be inserted as input-output in the “Popoli – Sulmona N.I.” 150 kV line	R.F.I. S.p.A.	Abruzzo	Pratola Peligna (AQ)
New 150 kV NTG ES to be inserted as input-output in the “Alanno – Chieti Scalo” 150 kV line	R.F.I. S.p.A.	Abruzzo	Manoppello (PE)
New 150 kV NTG ES to be inserted as input - output in the two 150 kV lines "Garigliano - Ceprano" and “Pontecorvo - Piedimonte San Germano”, after removal of some limitations on the NTG (code 1802CRT)	FCA ITALY S.p.A.	Lazio	Piedimonte San Germano (FR)
Upgrading of the "Settebagni" 132 kV NTG ES (code 1371CRT)	R.F.I. S.p.A.	Lazio	Settebagni (RM)
Upgrading of the "Capena" 132 kV NTG ES (code 1372CRT)	R.F.I. S.p.A.	Lazio	Capena (RM)
New 150 kV NTG ES, in GIS insulation, to be connected: - with two 150 kV NTG cable power lines, to the Rome East 380/150 kV NTG ES, which must be opportunely expanded; - by means of modification of the “Enea Frascati RM – Enea Frascati Ut” 150 kV NTG power line, to the “Enea Frascati RM” Primary Cabin.	Agenzia Nazionale per le Nuove Tecnologie, l'Energia e lo Sviluppo Economico Sostenibile (ENEA)	Lazio	Frascati (RM)

NTG PLANTS TO BE BUILT	APPLICANT COMPANY	REGION	MUNICIPALITY
New 132 kV NTG ES to be inserted as input-output in the “Gallese – Capena” 132 kV line	SNAM Rete Gas	Lazio	Gallese (VT)
New 150/60 kV NTG ES created with MCM and to be connected via a new 150 kV cable power line to a new 380/150 kV NTG ES to be inserted as input-output in the “Benevento 2 - Presenzano” 380 kV line and to which to reconnect the current 60 kV lines coming from the Benevento PC (line to be reclassed to 150 kV) and from the user “Biferno” (code 1373CRT)	R.F.I. S.p.A.	Campania	Telese Terme (BN)
New 150 kV NTG ES to be inserted as input-output in the future "S. Sofia - Saint Gobain PC" 150 kV line provided for in the Terna Development Plan (code 1377CRT)	Laminazione Sottile S.p.A.	Campania	San Marco Evangelista (CE)
New 150 kV NTG ES to be inserted as input - output in the "S. Sofia – Durazzano All. – Durazzano” 150 kV line (code 1246CRT)	R.F.I. S.p.A.	Campania	Maddaloni (CE)
New 150 kV NTG ES to be inserted as input-output in the “Carinola – Castelvolturno” 150 kV line, after performance of the work 553-P provided for in the Terna Development Plan	R.F.I. S.p.A.	Campania	Falciano del Massico (CE)
New 220 kV NTG ES to be inserted as input-output in the “Laino – Tusciano” 220 kV line	R.F.I. S.p.A.	Campania	Campagna (SA)
New 150 kV NTG ES to be inserted as input-output in the “Padula – Lauria” 150 kV line	SNAM Rete Gas	Campania	Montesano sulla Marcellana (SA)
New 150 kV bay in the new 380/150 kV NTG ES named "Garaguso" (code 1175CRT)	BRULLI ENERGIA S.r.l.	Basilicata	Salandra (MT)
New 150 kV NTG ES to be inserted as input-output in the “Salandra – Ferrandina” 150 kV line	R.F.I. S.p.A.	Basilicata	Ferrandina (MT)
New 150 kV NTG ES to be inserted as input-output in the future “Matera PC – Grottole” 150 kV line, after performance of the work 520-P of the Terna Development Plan	R.F.I. S.p.A.	Basilicata	Matera (MT)
New 150 kV NTG ES to be inserted as input-output in the “Italcementi-Italcementi Matera (today pole 92)” 150 kV line	R.F.I. S.p.A.	Basilicata	Bernalda (MT)
New 150 kV NTG ES to be inserted as input - output in the "Orsara - Bovino" 150 kV line (code 1374CRT)	R.F.I. S.p.A.	Apulia	Bovino (FG)
New 150 kV NTG ES to be inserted as input-output in the “Paola PC – Fiumefreddo PC” 150 kV line	R.F.I. S.p.A.	Calabria	Paola (CS)
New 150 kV NTG ES to be inserted as input-output in the “Catania IZ – STM Micro M5” 150 kV NTG line, after: - connection of the 150 kV NTG line coming from the Misterbianco ES with the 150 kV NTG line coming from the User Acciaierie di Sicilia; - performance of the works in the area provided for in the Terna Development Plan, made up of the new 380/150 kV NTG ES of Pantano d’Arci and related 150 kV connections of the NTG lines from Pantano PC and from Catania IZ PC; - removal of the limiting elements on the portion of grid related to the new substation.	STMICROELECTRONICS S.r.l.	Sicily	Catania (CT)
New 150 kV NTG ES to be connected to the Assoro PC and to the Sferro 150 kV NTG ES via two new 150 kV NTG power lines (code 588CRT)	R.F.I. S.p.A.	Sicily	Catenanuova (EN)
New 150 kV NTG ES to be inserted as input-output in the “Acicastello – Contesse FS” 150 kV line, after upgrading and resolution of the elements limiting the transmission capacity of the said line, for the connection of the consumer plants named “Giampilieri”, “Fiumefreddo di Sicilia” and “Sant’Alessio Siculo” (code 595CRT)	R.F.I S.p.A.	Sicily	Fiumefredddo di Sicilia (CT) Messina (ME) Sant’Alassio Siculo (ME)

NTG PLANTS TO BE BUILT	APPLICANT COMPANY	REGION	MUNICIPALITY
Actions on the "Caracoli – Cefalù FS" 150 kV NTG line (code 589CRT)	TOTO S.p.A. COSTRUZIONI GENERALI	Sicily	Cefalù (PA)
New 150 kV NTG ES to be inserted as input-output in the "Partinico 2 - Partinico PC" 150 kV NTG line.	R.F.I S.p.A.	Sicily	Partinico (PA)
New 150 kV NTG ES to be inserted as input-output in the "Custonaci – Alcamo" 150 kV NTG line.	R.F.I S.p.A.	Sicily	Buseto Palazzolo (TP)
New 150 kV NTG ES to be inserted as input-output in the "Custonaci - Castellammare - Alcamo" 150 kV NTG line.	R.F.I S.p.A.	Sicily	Alcamo (TP)
New 150 kV NTG ES to be inserted as input-output in the "Nicoletti – Valguarnera" 150 kV line	R.F.I S.p.A.	Sicily	Enna (EN)
New 150 kV NTG ES to be inserted as input-output in the "Cammarata – Caltavuturo" 150 kV line, after construction of the "Cammarata – Vallelunga RT" power line provided for in the Terna Development Plan	R.F.I S.p.A.	Sicily	Vallelunga Pratameno (CL)
New 150 kV NTG ES to be inserted as input-output in the "Caracoli – Caltavuturo" 150 kV line	R.F.I S.p.A.	Sicily	Sciara (PA)
New 150 kV NTG ES to be inserted as input-output in the "Fontanarossa – Lentini" 150 kV line	R.F.I S.p.A.	Sicily	Motta Sant'Anastasia (CT)
New 150 kV NTG ES to be inserted as input-output in the future "Zia Lisa PC – Pantano d'Arci ES" 150 kV cable line, provided for in the Terna Development Plan	R.F.I S.p.A.	Sicily	Catania (CT)
New 150 kV NTG ES to be connected via two new 150 kV power lines to the "Castronovo RT" NTG ES and to the "Alia 2" PC	R.F.I S.p.A.	Sicily	Castronovo di Sicilia (PA)
New 150 kV NTG ES to be inserted as input-output in the "Mussomeli – Marianopoli" 150 kV line	R.F.I S.p.A.	Sicily	Petralia Sottana (PA)
New 150 kV NTG ES to be connected via two new 150 kV power lines to the "Enna RT" NTG ES and to the "Caltanissetta" NTG ES	R.F.I S.p.A.	Sicily	Enna (EN)
New 150 kV NTG ES to be inserted as input-output in the "Cefalù – Santo Stefano Camastra" 150 kV line	R.F.I S.p.A.	Sicily	Cefalù (PA)

TABLE 6 - MAIN DEVELOPMENT WORKS COMPLETED FOR THE CONNECTIONS OF PRODUCTION PLANTS IN THE THREE YEARS 2020-2022

WORKS COMPLETED	APPLICANT COMPANY	PLANT	REGION	PROVINCE
New 132 kV NTG ES to be inserted as input - output in the "CP Saluzzo - CP Savignano - der. Sanfront" 132 kV line (code 1288CRT)	Sedamyl S.p.A.	Thermoelectric	Piedmont	Saluzzo (CN)
New 220 kV NTG ES to be inserted as input - output in the "Avenza - San Colombano" 220 kV line (code 872CRT)	Oppimitti Costruzioni S.r.l.	Wind	Emilia Romagna	Albareto (PR)
	Fri - El Albareto S.r.l.			Tornolo (PR)
Expansion of the Populonia 132 kV NTG ES (code 1348CRT)	Società Elettrica Ligure Toscana S.r.l.	Wind	Tuscany	Piombino (LI)
New 380 kV bay in the Presenzano NTG ES	Edison S.p.A.	Thermoelectric	Campania	Presenzano (CE)
New "Castelpagano - Benevento 3" 150 kV NTG backbone: • new 150 kV NTG ES named "Pontelandolfo" (construction by Third Parties) • new 150 kV NTG power line between the Pontelandolfo 150 kV ES and the Castelpagano 150 kV NTG ES (construction by Third Parties) • new 150 kV NTG power line (to be made in 380 kV class) between the Pontelandolfo 150 kV ES and the Benevento 3 380/150 kV NTG ES (code 1235CRT)	Eolica San Lupo S.r.l.	Wind	Campania	San Lupo (BN)
	Dotto Morcone S.r.l.			Morcone (BN)
	Parco Eolico Casalduni House S.r.l.			Casalduni (BN)
	Eolica P.M. S.r.l.			Morcone (BN)

WORKS COMPLETED	APPLICANT COMPANY	PLANT	REGION	PROVINCE
New 150 kV NTG backbone named “Morcone” (construction by Third Parties) to be connected on the new “Castelpagano - Benevento 3” 150 kV NTG backbone (code 1236CRT)	Compagnia Generale Investimenti S.r.l.	Wind	Campania	Circello (BN)
	Cogein Sannio S.r.l.			Santa Croce del Sannio (BN)
New 150 kV bay in the “Genzano” 380/150 kV NTG ES (code 1248CRT)	Parco Eolico Banzi S.r.l.	Wind	Basilicata	Banzi (PZ)
New 380/150 kV NTG ES named “Garaguso” to be inserted as input - output in the "Matera – Laino" 380 kV line (code 1237CRT)	EDP Renewables Italia S.r.l.	Wind	Basilicata	Salandra (MT)
	Fergas Solar S.r.l.	Photovoltaic		Ferrandina (MT)
New 150 kV NTG ES of Stornarella to be connected to the Deliceto 380/150 kV NTG ES via a new 150 kV NTG connection in cable (code 1318CRT)	Inergia S.p.A.	Wind	Apulia	Orta Nova (FG)
	Wind Farm			Cerignola (FG)
	Parco Eolico Ascoli S.r.l.			Ascoli Satriano (FG)
	Parco Eolico Stornarella S.r.l.			Stornarella (FG)
New 150 kV NTG ES to be inserted as input-output in the “Grumo Appula - Bari Ovest” and “Grumo Appula – Acquaviva delle Fonti” 150 kV lines	Micropower S.r.l.	Wind	Apulia	Sannicandro di Bari (BA)
New 150 kV NTG ES to be inserted as input-output in the “Taranto Molo - Taranto West” 150 kV line	Beleolico S.r.l.	Wind	Apulia	Taranto (TA)
New 150 kV bay in the Catanzaro 150 kV NTG ES (code 1250CRT)	Dynamica S.r.l.	Wind	Calabria	Simeri Crichi (CZ)
New 150 kV NTG ES to be inserted as input - output in the “Petralia – Caltanissetta S.ne” 150 kV line	AM Energie Rinnovabili S.r.l.	Wind	Sicily	Gangi (PA)
New 150 kV bay in the 150 kV section of the Partanna 220/150 kV NTG ES	Aero-Tanna S.r.l.	Wind	Sicily	Partanna (TP)
New 220 kV NTG ES to be inserted as input - output in the “Fulgatore- Partanna” 220 kV line named “Partanna 2”.	Metora S.r.l.	Wind	Sicily	Marsala (TP)
	FW Turna S.r.l.	Photovoltaic		Mazara del Vallo (TP)
New 150 kV bay in the 150 kV section of the Fulgatore 220/150 kV NTG ES	VRG WIND 153 S.r.l.	Wind	Sicily	Trapani (TP)
New 150 kV bay in the 150 kV section of the Partanna 220/150 kV NTG ES	RWE Renewables Italia S.r.l.	Wind	Sicily	Partanna (TP)
New 150 kV bay in the Buseto 150 kV NTG ES	Asja Ambiente Italia S.p.A.	Wind	Sicily	Buseto Palizzolo (TP)
New 150 kV bays in the Rumianca 380/220/150 kV NTG ES (code 430CRT)	Monteverdi Energia S.r.l.	Biomass	Sardinia	Assemini and UTA (CA)
	Albinoni Energia S.r.l.			
	Bellini Energia S.r.l.			
	Corelli Energia S.r.l.			
	Tartini Energia S.r.l.			
	Trovaioli Energia S.r.l.			
	Leoncavallo Energia S.r.l.			
	SFE S.r.l.			
	Blusolar Uno S.r.l.			

TABLE 7 - MAIN DEVELOPMENT WORKS COMPLETED FOR THE CONNECTIONS OF DISTRIBUTION PLANTS (PCS) AND CAPACITY MARKET UNITS IN THE THREE YEARS 2020-2022

WORKS COMPLETED	APPLICANT COMPANY	PLANT	REGION	MUNICIPALITY
New 132 kV NTG ES to be inserted as input - output in the "Rivacciaio – Mondovì" 132 kV line, after construction of a new 132 kV power line between the aforesaid ES and the Ceva PC and upgrading of the "Rivacciaio - Mondovì" 132 kV power line (code 1006CRT)	RIVA ACCIAIO S.p.A.	Consumption	Piedmont	Lesegno (CN)
Connection in 220 kV antenna to a new 380/220 kV NTG ES (Udine South) to be inserted as input - output in the future "Redipuglia – Udine Ovest" 380 kV line (code 609CRT)	ACCIAIERIE BERTOLI SAFAU S.p.A.	Consumption	Friuli Venezia Giulia	Pozzuolo del Friuli (UD)
Connection to the 132 kV NTG lines coming from "Chiusa Pesio", "AGC Flat Glass" and "San Rocco Cuneo"	e-distribuzione	Cuneo East PC	Piedmont	Cuneo (CN)
Connectors for the connection in input - output to the "Stura – Turin Centre" 220 kV line (code 1025CRT)	IRETI	Arbarello PC	Piedmont	Turin (TO)
Connectors for the connection in input - output to the "Vaiano Valle – Bolgiano" 132 kV line (code 928CRT)	UNARETI	Rogoredo PC	Lombardy	Milan (MI)
Connectors for the connection in input - output to the "Cesano Maderno - Tavazzano Est" 220 kV line (code 951CRT)	UNARETI	Rozzano PC	Lombardy	Rozzano (MI)
Connectors for the connection in input - output to the "Ricevitrice West - South Milan" 220 kV line (code 1287CRT)	UNARETI	San Cristoforo PC	Lombardy	Milan (MI)
Connectors for the connection in input - output to the "Brugherio - Lambrate" 220 kV line (code 950CRT)	e-distribuzione	Segrate PC	Lombardy	Segrate (MI)
Upgrading actions in the S. Valburga 220 kV NTG ES and construction of the new 220 kV bay (code 686CRT)	EDYNA	S. Valburga PC	Trentino Alto Adige	Ultimo (BZ)
Two new 132 kV bays in the future 132 kV NTG ES named "Brennero" (code 672CRT)	EDYNA	Brennero PC	Trentino Alto Adige	Brennero (BZ)
Connectors for the connection in input - output to the "Castelbello - Glorenza" 132 kV line (code 1031CRT)	EDYNA	Laces PC	Trentino Alto Adige	Laces (BZ)
Connectors for the connection in input - output to the "Mezzocorona – Mori" 132 kV line (code 669CRT)	SET Distribuzione	Rovereto North PC	Trentino Alto Adige	Rovereto (TN)
Connectors for the connection in input - output to the "Bassanello - Altichiero" 132 kV line (code 1032CRT)	e-distribuzione	Brentelle PC	Veneto	Padua (PD)
Connectors for the connection in input - output to the "Cavallino - Jesolo" 132 kV line, after construction of the "Cavallino - Sacca Serenella" 132 kV line (code 1351CRT)	e-distribuzione	Jesolo Lido PC	Veneto	Jesolo (VE)
Connectors for the connection in input - output to the "Colunga – Ravenna Canala" 132 kV line (code 847CRT)	INRETE	Selice PC	Emilia Romagna	Massa Lombarda (RA)
Connectors for the connection in input - output to the "Modena N. – Modena Crocetta" 132 kV line (code 832CRT)	INRETE	Modena 2 (East) PC	Emilia Romagna	Modena (MO)
New 132 kV NTG power line between the "Conselice" PC and the "Voltana" PC (code 879CRT)	e-distribuzione	Conselice PC	Emilia Romagna	Conselice (RA)
Connectors for the connection in input - output to the "Viareggio - Strettoia" 132 kV line (code 1033CRT)	e-distribuzione	Montramito PC	Tuscany	Viareggio (LU)
Connectors for the connection in input - output to the "Visignano - Lucca Ronco" 132 kV line (code 1036CRT)	e-distribuzione	Ospedaletto PC	Tuscany	Pisa (PI)
Connectors for the connection in input - output to the "Vasto - Lanciano" 150 kV line (code 793CRT)	e-distribuzione	Fossacesia PC	Abruzzo	Fossacesia (CH)
Two new 150 kV bays at the "Pontelandolfo" NTG ES	e-distribuzione	Pontelandolfo PC	Campania	Pontelandolfo (BN)
Connectors for the connection in input - output to the "Cariati – Rossano" 150 kV line (code 1212CRT)	e-distribuzione	Caloveto PC	Calabria	Caloveto (CS)
Connectors for the connection in input - output to the "Scilla – Rizziconi" 150 kV line (code 501-P)	e-distribuzione	Bagnara PC	Calabria	Bagnara Calabra (RC)
Connectors for the connection in input-output to the "Trapani – Ospedaletto" 150 kV line	e-distribuzione	Saline Trapani PC	Sicily	Trapani (TP)
New 150 kV NTG ES to be inserted as input - output to the "Porto Torres – Fiumesanto" 150 kV line, after reactivation of the second circuit of the power line no. 342 (code 431CRT)	e-distribuzione	Nurra 2 PC	Sardinia	Sassari (SS)

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