



THE ITALIAN CLIMATE CHANGE THINK TANK

# THE NATIONAL ENERGY AND CLIMATE PLAN

A plan for action

EXECUTIVE  
SUMMARY



## EXECUTIVE SUMMARY

### *Introduction –what is the NECP and why is it important?*

The 195 countries that joined the Paris Agreement in 2015 have committed to reducing their emissions and striving to limit the temperature increase to 1.5°C above pre-industrial levels.

However, the [synthesis report by the co-facilitators on the technical dialogue of the first Global Stocktake](#) reveals that the combined contributions of the Parties to the Agreement show gaps in both ambition and effective implementation for achieving temperature containment.

In Europe, the contribution to meeting the Agreement's objectives is determined at the Union level. The so-called 'decarbonization' process involves a stepwise approach to achieving net-zero emissions by 2050<sup>1</sup>, with the first milestone being a 55% net emission reduction by 2030, compared to 1990 levels. Discussions are ongoing to define the 2040 reduction target, likely aligning with [European Scientific Advisory Board on Climate Change](#) recommendations for 90-95% reductions by 2040. This path is marked and, in Europe, it's established by law<sup>2</sup>.

The common EU objective is translated into national plans through the National Integrated Energy and Climate Plans (NECP). Although conceived with a ten-year time horizon, the current plans, dating back only to 2019, need to be revised to take into account the "Fit for 55" package, as well as economic and social changes resulting from the pandemic and the energy price crisis.

The Plan is not just a list of policies for energy and climate objectives for 2030, but the **first step in the transformation of our economy** towards 2050, with significant repercussions on the economic and productive fabric and on the lives of all citizens.

The Plan also represents one of the few policy programming tools with immediate and pervasive effects on the lives of citizens, with a ten-year horizon, much broader than that of economic and financial planning, as well as government cycles. This characteristic necessitates the Plan to be structurally adequate for its function, with a solid governance structure that allows it to adapt over time in relation to its objectives.

### *The 2019 NECP*

Despite the fact that the PNIEC2019 is in force and that at least part of its policies have been financed and implemented (e.g. policies to promote energy efficiency of buildings), Italy already does not comply with the national reduction target for the sectors [Effort Sharing](#) of 2021 and for more than 10MtCO<sub>2</sub>eq ([Table 1](#)).

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<sup>1</sup> Countries that have legally committed to net-zero emissions by 2050, besides the EU, include Canada, Chile, Colombia, Fiji, Japan, South Korea, New Zealand, USA, and Australia. Some countries have set shorter-term commitments, like the Maldives, Guatemala, and Iran targeting 2030. <https://zerotracker.net/>

<sup>2</sup> In the EU, the commitment to net-zero emissions by 2050 is formalized through the EU Climate Law, Regulation (EU) 2021/1119. <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32021R1119>

The non-compliance with the targets has relevant implications. It determines the application of 'penalty' mechanisms, as well as infringement procedures, whereby Italy would have to compensate for the excess emissions, which have a monetary value, increased by a factor established by the law<sup>3</sup> (equal to 8% of the excess, ed.), with a potential effect on public finances.

	1990	2005	2021	2025	2030
	MtCO <sub>2eq</sub>				
<b>Greenhouse gas emissions (excluding LULUCF), of which:</b>	<b>523</b>	<b>594</b>	<b>418</b>	<b>389</b>	<b>359</b>
ETS Sectors		248	132	124	110
Effort Sharing (ESR) Industries		344	284	263	246
Effort Sharing Objectives (*)			273	241	194
<b>Distance to ESR targets</b>			<b>10,9</b>	<b>22</b>	<b>52</b>

**Table 1** – Historical greenhouse gas emissions and projections under the current policy baseline for the ETS and non-ETS sectors. Source: ISPRA, PNIEC

The existing plan declared the targets achievable, but that was not sufficient for Italy to meet them from the first year. Therefore, the existing Plan lacks the implementation force to **effectively steer policies, including public spending, in a coherent and targeted design with respect to climate objectives.**

### Where we are today – the proposal of the NECP 2023

Among the first countries in the Union, Italy submitted its proposal for the update of NECP 2023 last July, but still it shows [elements that undermine its potential effectiveness and ambition](#).

The NECP 2023 proposal declares its intention to abandon the 'unrealistic' approach of the previous version, which postulated the achievability of the targets without periodic assessments of the effects of policies. There emerges the will to start a path of improvement that leads to raising the level of ambition of the Plan until the final submission foreseen for June 2024.

Both the 2019 Plan and the latest 2023 proposal identify a very high number of policies and measures for achieving the targets, with brief descriptions and referring to subsequent implementing measures. The Plan, then, emphasizes 'what' to do.

As the goals become more challenging, however, the Plan should outline the strategy for implementing policies and provide a meaningful framework for **'how'** doing it. As highlighted in the [synthesis report by the co-facilitators on the technical dialogue of the first Global Stocktake](#) , **the ambition and the ability to implement the measures are equally important.**

From identifying objectives and proposals on paper, moving on to the implementation phase is equally crucial.

<sup>3</sup> Article 9 of the Effort Sharing Regulation 'an addition to the Member State's greenhouse gas emission figure of the following year equal to the amount in tonnes of CO<sub>2</sub> equivalent of the excess greenhouse gas emissions, multiplied by a factor of 1,08'

In this perspective, what are often considered as 'ancillary' dimensions of climate and energy policies become central. How to involve territories and governing bodies or all the stakeholders that should be? How to finance the transition? How to evaluate and manage the socioeconomic impacts of the proposed measures to maximize the benefits and minimize the risks of the transition?

The [EU Court of Auditors' special report of 2023](#), del 2023, referring to the Italian Plan<sup>4</sup>, indicates that **due to a lack of information at the policy level, it is difficult to assess whether the objectives can be achieved**, and that the number and type policies might not be sufficient to achieve the objectives, especially after 2022, as the measures for that period still need to be budgeted and approved.

**Therefore, alongside the measures, it would always be necessary to explicitly state the elements required for their realization and subsequent assessment, with an integrated approach.** In the absence of such elements, the Plan will always present an implementation gap that is difficult to resolve with contingent measures, which, by their nature, are not organic and emergency-based and, therefore, ineffective.

A possible scheme for the presentation of policies and measures of the NECP could partly follow that of the reporting model used by the Member States for policies and measures ([Figure 2](#)), in such a way as to adequately track the progress of the Plan.

Measure or policy	Source of funding	Financing instrument	Socioeconomic impact	Monitoring indicators	Governance of the measure
Synoptic description of the measure	% public-% private	Taxation, public debt, incentive?	Scope and assumption within which the measure is defined	For both the main dimension and the 'enabling' ones	Who does what - relevant bodies and stakeholders and methods of involvement
(...)					

**Figure 1** – Possible scheme of supplementary information for the measures and policies of the NECP

PAM number	Name of policy or measure	Sector(s) affected <sup>(a)</sup>	GHG(s) affected <sup>(b)</sup>	Objective <sup>(c)</sup>	Quantified objective <sup>(d)</sup>	Short description <sup>(e)</sup>	Type of policy instrument <sup>(f)</sup>	Union policy which resulted in the implementation of the PAM		Status of implementation <sup>(g)</sup>	Implementation period		Projections scenario in which the PAM is included	Entities responsible for implementing the policy <sup>(h)</sup>		Indicators used to monitor and evaluate progress over time				Reference to assessments and underpinning technical reports	General comments	
								Union policy <sup>(i)</sup>	Other <sup>(h)</sup>		Start	Finish		Type	name	Description	Values <sup>(k)</sup>					
																	[Year]	[Year]	[Year]			[Year]

**Figure 2** – Model for the communication of information relating to the policies and measures of the Member States (Source, ECA 2023)

<sup>4</sup> Table in Annex IV of the report

## An 'implementation-oriented' approach for the National Energy and Climate Plan 2024

With the aim of contributing to the process of defining the final version of the Plan, due by June 2024, this work outlines the lines of an alternative approach, with ideas and concrete proposals so that the final Plan can be more ambitious and effective.

To this end, a simplified bottom-up emission scenario for 2021-2030 was developed, starting from the policies and their expected effect, in such a way as to highlight their risks and opportunities.

The scenario, called ECCO-FF55, was developed for the four main macro-sectors of energy production and use, i.e. the power sector, buildings, industry, and transport. This is not a modeling work, strictly speaking, but a **tool developed to focus on the priorities of the policy and measures framework, the investment needs, and the reform framework necessary to enable the transformation.**

For each sector, the main levers of action to be activated to achieve the objectives were analysed, the differences compared to the NECP2023 scenario and the list of sectoral policies that are considered to be priorities<sup>5</sup>.

The ECCO-FF55 scenario takes into account **Italy's commitment at the G7 to a substantially decarbonised electricity system by 2035**,<sup>6</sup> enhancing the results achieved by the [ECCO-Artelys scenario](#).

During the period 2021-2030, the ECCO-FF55 scenario leads to a total reduction of **-54.5%** in GHG emissions **compared to 2005**, reaching a value of **270 MtCO<sub>2eq</sub> by 2030**, compared to the **312 MtCO<sub>2eq</sub>** of the NECP (see Table 84 of NECP 2023).

The ECCO-FF55 scenario meets Italy's Effort Sharing Regulation reduction targets for 2030, with a reduction of about 44.1% compared to 2005<sup>7</sup>, and also implies significant reductions in the ETS sectors, by about 69% compared to 2005, due to the more accelerated decarbonization of the power sector (with 72% of final electrical consumption from RES against 65% of the NECP).

For each sector, the considered policies are detailed and developed as far as possible. These are very targeted policies, given the tight timeframes and very challenging objectives. So called 'enabling reforms' are also identified, which can facilitate the adoption of decarbonization solutions, such as a comprehensive reform of the tariff structure in order to rebalance electricity and gas prices for the building sector or a reform of taxation for cars.

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<sup>5</sup> For some sectors for which sufficient data were not available for independent modelling, the same as those of the PNIEC were assumed, such as potential biofuels, process emissions for industry, agriculture or LULUCF

<sup>6</sup> Communicated 2023 <https://www.whitehouse.gov/briefing-room/statements-releases/2023/05/20/q7-hiroshima-leaders-communicate/#:~:text=We%20reaffirm%20our%20commitment%20to,temperature%20rise%20within%20reach%20a> nd, which recalls the communiqué of the previous year [https://www.bmu.de/fileadmin/Daten\\_BMU/Download\\_PDF/Europa\\_International/q7\\_climate\\_energy\\_environment\\_ministers\\_communique\\_bf.pdf](https://www.bmu.de/fileadmin/Daten_BMU/Download_PDF/Europa_International/q7_climate_energy_environment_ministers_communique_bf.pdf)

<sup>7</sup> Reference year of EU policies for climate and energy. This percentage translates to 48% when compared to the emission levels of 1990, the basis for communicating the EU's commitment to the Paris Agreement. This is Italy's contribution to the overall contribution of the Union, which amounts to -55% compared to the 1990 levels.

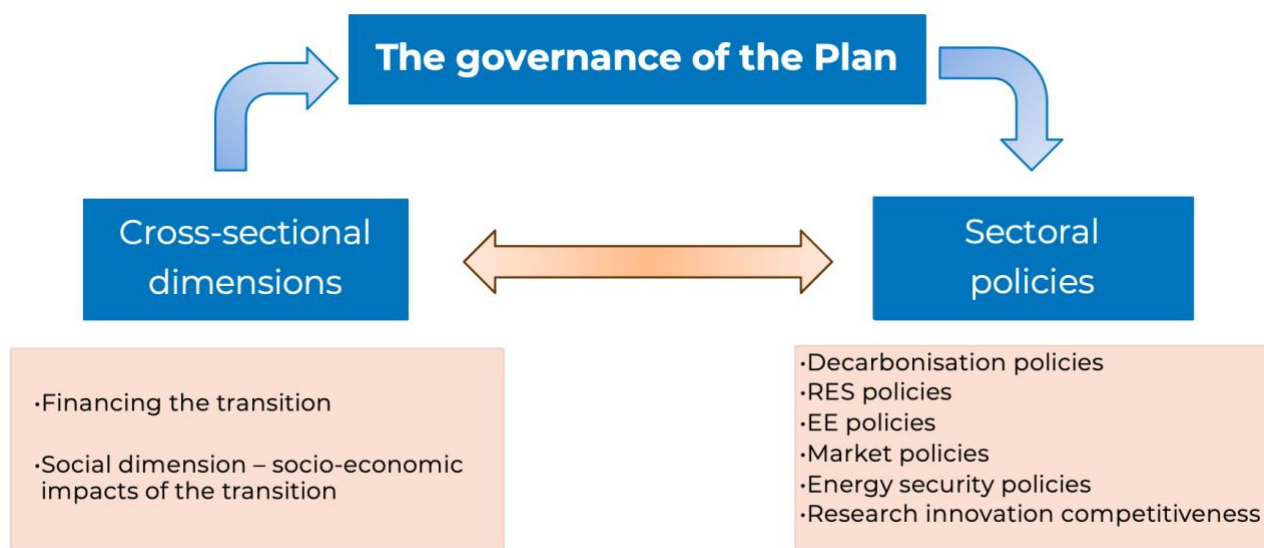
	2005	2030	
		NECP MtCO <sub>2</sub> eq	ECCO-FF55
<b>From ENERGY USES, of which:</b>	<b>488</b>	<b>232</b>	<b>189</b>
Energy industry	160	51	41
Industry (including ILVA)	92	41	34
Transport	128	77	64
Building sector	96	56	43
Of which agriculture*	9,2	7	7
Other energetic and fugitive uses	12	7	7
<b>From OTHER SOURCES, of which :</b>	<b>106</b>	<b>81</b>	<b>81</b>
Industrial Processes	46	33	33
Agriculture (cultivation and livestock)	35	32	32
Waste	24	16	16
<b>Total (excluding LULUCF)</b>	<b>594</b>	<b>312</b>	<b>270</b>
LULUCF	-36	-35	-35
<b>Of which ESR</b>	<b>344</b>	<b>216-223</b>	<b>193</b>
<b>Distance to ESR targets</b>		<b>22-29,1</b>	<b>-1</b>

**Table 2** – Historical evolution of GHG emissions by sector (source: ISPRA) and emission scenario for 2021-2030 (source: ECCO elaboration)

Furthermore, consistently with the [analyses carried out on the NECP 2019](#), the so-called cross-cutting dimensions have been developed, namely finance and the assessment of the socioeconomic implications of policies, since these should **guide** the development and evaluation of policies. For each sector, the **investment needs linked to the framework of the proposed policies have been assessed**, and examples are shown – in dedicated boxes – of how a lack of evaluation of the socio-economic impacts of measures, both regarding consumption and industrial policies, can undermine their effectiveness (e.g. Boxes on Wind energy, Superbonus and ILVA).

In the text sent to Brussels, the assessments of financing needs and socioeconomic impacts are aggregated and not yet sufficient to **focus the strategy to achieve the challenging goals of the Plan**. For this reason, for some ‘flagship’ measures, a table is in the annex section of this document, which alongside the measures, provides for the minimum set of information which would be necessary to **accompany each measure from its design to its implementation**.

A complex framework like the one described cannot stand without a solid governance structure that is both embedded in an implementing regulatory framework and, at the same time, **ensures the possibility of dynamically adjust policies to the targets over time**.



**Figure 3** – Simplified scheme of the integration of the dimensions of the National Energy and Climate Plan

Following the described approach, **the inclusion of a chapter and a dedicated strategy for the manufacturing sector is key**. The industrial sector catalyzes the abovementioned issues, requiring comprehensive policies to accompany the transition and sectoral assessments of the socio-economic impacts of industrial transformation, over a long-term horizon, which is the horizon where the challenge of the competitiveness of the national industry is at stake.

### Summary of conclusions and recommendations

The effects of climate change are evident. The recommendations of science on the strategies to be implemented to mitigate the increase of the global average temperature are known, and in Europe, they have legal force<sup>8</sup>. The challenge is increasingly complex, and reductions must be delivered in a very short timeframe<sup>9</sup>. The regulatory tool that translates all this for Italy is the National Integrated Energy and Climate Plan, and ensuring that this is **ambitious** and **effective** must be a priority.

Accompanying the measures of the Plan with strategies for their implementation appears to be a necessary step to show a concrete path of decarbonization and a vision of the country's development, in the shorter and longer term perspectives, to seize the opportunities of a NECP that is, actually, to the advantage of all citizens.

The objectives of the Plan and its coherence will determine the framework for major public and private investments, in a long-term perspective, and will also affect the consumption choices of individual citizens. How can we make our homes more efficient? How will we commute or travel? Which path must our manufacturing industry take to not lose competitiveness and re-orient towards decarbonized productions, investing in its transformation?

The challenge risks being lost from the start if one is not able to mobilize participation, to ensure breadth, vision, and transparency in the writing of the Plan's revision.

<sup>8</sup> <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32021R1119> Regulation (EU) 2021/1119

<sup>9</sup> <https://www.ipcc.ch/report/ar6/syr/>

With this spirit, the analyses of this study were conducted and their conclusions, in view of the drafting of the final Plan in June 2024, lead to the definition of the following recommendations:

1. **The governance of the Plan is the essential element for its implementation.** The NECP should be approved through an implementing regulatory instrument, e.g., a deliberation by the Interministerial Committee for Economic Planning and Sustainable Development (CIPESS). The coordination and implementation body should be placed at the highest decision-making levels and establish a close dialogue with the various levels of government, both central and local. This steering committee should also coordinate with all stakeholders involved in the implementation of the Plan and assess and adjust the policies and measures to the objectives over time.
2. **The measures of the NECP should be accompanied by strategies for their implementation.** The NECP should clearly identify the priority sectoral policies, based on an explicit assessment of the effects achieved so far and the strategic objectives to be pursued. For each measure, alongside effectiveness in reducing emissions or in the spread of renewables, the Plan should report the necessary financial requirements and how these are met, as well as the expected socio-economic impacts, at least in terms of costs and benefits, and clearly identify the stakeholders and the authorities responsible for implementing the measures and how these are included in the decision-making process.
3. **The NECP should include a sectoral chapter dedicated to the manufacturing industry.** Due to the strategic relevance of the manufacturing sector in the country's economy and the technological, economic, and social challenge implied by its transformation, it is considered fundamental that the NECP explicitly states in a dedicated chapter the decarbonization strategy for the manufacturing industry, which, as much as possible, deepens specific sectoral analyses that highlight the risks and opportunities offered by the acceleration towards innovation of the supply chains imposed by the decarbonization of the economy.





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