



THE ITALIAN CLIMATE CHANGE THINK TANK

THE NATIONAL ENERGY AND CLIMATE PLAN

A plan for action

CROSS-CUTTING DIMENSIONS
The socio-economic dimension



1 CROSS-CUTTING DIMENSIONS OF THE PLAN

Both the 2019 Plan and the latest 2023 proposal identify a very large number of policies and measures to achieve the objectives, with brief descriptions and few further details. The Plan therefore places the emphasis on **'what'** to do.

As the climate and energy targets become more challenging and lower-cost, higher-impact decarbonization solutions are exhausted, the Plan should increasingly serve as a **place of synthesis** of various dimensions and provide a strategic framework for **'how'** to implement policies. Which policies and what are the elements needed to achieve the transition? From identifying objectives and proposals on paper, moving on to the implementation phase is anything but trivial. With this in mind, those that are often dismissed as 'ancillary' dimensions of climate and energy policies become central. How to effectively involve the territories and all the actors that should be involved (*governance*)? How to finance the transition? How to assess and govern the socio-economic impacts of the proposed measures to maximise the benefits and minimise the risks of the transition (social dimension)?

The tables of the NECP (National Energy and Climate Plan) should always include explanations of the elements necessary for their implementation, in addition to listing the measures. Without these elements, the Plan will inevitably suffer of an implementation gap which cannot be addressed solely with contingent measures. Such measures, by their nature, are non-organic and emergency-based, and therefore ineffective.

Integrating cross-cutting dimensions with sectoral policies can enable:

1. to **prioritise** actions with respect to effectiveness criteria (e.g. effectiveness towards the objectives of the Plan, effectiveness of public spending, etc.)
2. to clearly identify, alongside the **objectives**, the **strategy** to achieve them.
3. to **reduce** the risk of **inconsistency** within the overall framework in relation to individual measures.

These cross-cutting dimensions are described below, i.e. the financing strategy, the assessment and socio-economic impacts, and the dimension on which all these elements should be based in order to be effective, meaning the governance of the Plan.

THE SOCIO-ECONOMIC DIMENSION OF THE PLAN

The path towards net-zero by 2050 will be extremely complex and it will involve deep economic and social transformations. Such transformations can create or exacerbate existing inequalities; therefore, it is of paramount importance that decarbonization policies and measures are designed and implemented according to principles of justice, equity and inclusion. This approach is essential to ensure social acceptance of decarbonisation policies and to ensure that no one is left behind. Thus, climate policies cannot provide "niche" solutions or undermine the well-being of social groups, territories and communities. On the contrary, the ecological transition should be the basis of a new model of development, one that integrates principles of social justice in its implementation.

The Commission Guidelines¹ require the Plan to be accompanied by an assessment of its impacts on macroeconomic (e.g. income, employment) and socio-economic variables (e.g. health, quality of employment, education, skills). These guidelines have barely been updated in the new Plan proposal, where instead is recommended an input-output analysis² based on sectoral interdependencies matrices published by the National Institute of Statistics. However, more recent publications and methodologies could be taken into consideration³ to **expand the impact analysis on macroeconomic and socioeconomic variables.**

The Plan social sustainability should therefore consider policy impacts on vulnerable groups and dedicate specific space and tools to allow climate policies to become an opportunity of well-being for everyone. It should also couple incentive tools with an **efficient allocation of resources**, so that the stakeholders involved are urged to achieving objectives desired **both by society** (i.e. the reduction of greenhouse gas emissions) **and by the private sector (i.e. implementation of a given project at the minimum cost)**. As a matter of fact, action against climate change can be effective and transformative if solutions and technologies for its implementation are desirable and accessible to the majority of citizens, as well as to the most vulnerable social groups. **Assessment of the socio-economic sustainability of the transition is an enabling element for the full implementation of decarbonisation policies.**

The NECP and its policies need to adequately consider what tools should accompany the social sustainability of the transition, to comprehensively intervene on employment issues, public spending, taxation, and poverty (beyond energy-related aspects). This means matching policies and measures with indicators capable of directing public investment towards the industry sector and the labour force. This will in turn allow a just transition for workers, demand-side selective incentives, diffusion of new technologies, weighting risks, invest in workers up-skilling and re-skilling, protecting and providing straightforward and beneficial solutions to disadvantaged social classes.

Furthermore, to enhance efficiency in public spending, the Plan should include **a strategic framework for assessing social sustainability**, beyond energy poverty. The prerequisites for such an evaluation and the fundamental methodologies for its implementation should be outlined and cover at least two key areas:

¹ See Annex 1 of the Governance Regulation <https://eur-lex.europa.eu/legal-content/IT/TXT/PDF/?uri=CELEX:02018R1999-20210729>

² The NECP scenario can be analysed from the point of view of its macroeconomic impacts compared to the current policy scenario. This analysis was carried out using a standard input/output model based on the matrices of sectoral interdependencies published by the National Institute of Statistics (ESM calculations). These matrices represent an accounting framework that schematizes the economic structure of a country over a given period of time, highlighting in a concise and immediate way the interdependencies between the different sectors that make up the economy. The matrices, suitably transformed through specific procedures, make it possible to estimate the macroeconomic impacts (added value, employment) due to changes in final demand in a given sector in a given year. The matrices are constructed from the tables of resources and uses published by the National Institute of Statistics (ISTAT) on an annual basis. The latest tables, available at the time of writing, refer to the year 2019 and are disaggregated into 63 economic sectors. (NECP 2023)

³ Examples of existing analyses, such as "[Green Transition and the Italian Labour Market](#)" (Oct 2023) Or the exercise done, with a different methodology on the NRRP: BdL: "Employment activated by the NRRP and its characteristics" (Feb 2023) or "Employment activated by the NRRP in the construction sector at the regional level" (Jun 2023), <https://www.bancaditalia.it/pubblicazioni/qef/2023-0775/index.html>

1. **Consumption policies** assumptions and objectives (for instance, selective demand incentives in transport and civil-buildings) with reference to different social dimensions⁴. This should be accompanied by specific public finance measures and evaluation criteria to weight their effectiveness, distributional implications and the need for compensatory measures.
2. Impact assessment methodologies **to evaluate effects of the Plan's policies on the country's productive fabric from a socio-economic point of view**. This includes effects on employment and effects (positive or negative) on supply chains transformation or creation of new ones.

With such a framework, the Plan could fulfill EU Commission requests concerning identification of **principles for the Social Climate Plans and to achieve concrete integration of the Territorial Just Transition Plans**, both missing in the current version.

Consumer Policies: Distributional Effects and Effectiveness of Public Spending

In addition to macroeconomic assessments, currently lacking in the Italian Plan⁵, each policy should be accompanied by implementation tools, including those assessing socio-economic impacts. This means identifying within the Plan the **prerequisites for tracking and monitoring the effectiveness of public spending, in line with climate policy objectives**⁶.

These tools would make it possible to highlight the **economic and social opportunities** arising from the transition, but also the risks stemming from an accelerated deployment of new technologies. This analysis could help identifying the most effective spending tools, such as selective demand incentives with reference to multiplier effects or the learning curve necessary for upscaling new technologies diffusion.

There is a need to use methodologies that can support a socio-economic impact assessment of the Plan's measures, which could quantitatively assess and explain their social and private rate of return⁷. Plausible methods are cost-benefit analyses, however, they might ignore indirect social impact and should, therefore, be integrated with specific social indicators.⁸ Another possible method is the Social Return on Investments or SROI, which measures the value of an intervention, net of resources invested. Within the cost-benefit analysis, SROI is used to quantify the social, environmental, and economic return on investments⁹. Several indicators could be added together or taken into account in this exercise. Some countries, including the UK, employ the "Healthy Street

⁴ As methodological examples, the Bdl exercises on the cost-benefit impacts (through the SCC methodology) of some key measures of the NRRP such as superbonus, renewables, hydrogen, grid and mobility are useful here. See Bdl "Costs and Benefits of the Green Transition Envisaged in the Italian NRRP" (Oct 2022), <https://www.bancaditalia.it/pubblicazioni/qef/2022-0720/index.html>

⁵ The Spanish Plan, for example, uses the model as the DENIO model, DENIO is a dynamic input-output econometric model of the Spanish economy, which has its origin in the FIDELIO model of the Joint Research Centre (JRC) of the European Commission. The model was developed by the Basque Centre for Climate Change (BC3) in collaboration with the Centre for Economic Scenario Analysis and Research (CESAR). This model makes it possible to simulate the effect of a wide range of economic, fiscal, energy or environmental policies. https://energy.ec.europa.eu/system/files/2020-06/es_final_necp_main_en_0.pdf

⁶ Here is a useful reference to what has been achieved by the Inequalities and Diversity Forum (IDF) on the NRRP <https://www.forumdisuguaglianzediversita.org/monitoraggio-pnrr/>

⁷ By way of example: https://www.uniroma1.it/sites/default/files/allegati/AIR_Def_11.11.13senza_citazione_Obiettivo1-1.pdf%3B <https://www.funzionepubblica.gov.it/sites/funzionepubblica.gov.it/files/16897.pdf>

⁸ <https://www.lse.ac.uk/cities/research/cities-space-and-society/Measuring-impact-beyond-financial-return>

⁹ <https://edizionicafoscari.unive.it/media/pdf/books/978-88-6969-409-7/978-88-6969-409-7-ch-04.pdf>

*Approach*¹⁰ for evaluation of transport and mobility policies. Centered on 10 evidence-based indicators, it represents a methodology that incorporates public health considerations into transport and urban planning decisions.

NECP measures, whether within the Plan or influenced by it, should have a more systematic and clear assessment of socio-economic impacts, like any public policy. This assessment would draw synergies within policies linked to certain objectives, in a design coherent and effective from a public spending point of view, as well as for the benefit of climate and society.

Climate and energy policies impacts on the productive sector

The new NECP should also identify the methodologies used to assess **positive and negative socio-economic effects that the Plan's measures will have on the national production sector**. Decarbonisation strategies – including those in sectors beyond industry like electricity or transport – are closely tied to the responsiveness of the production system and material supply chains. Allowing these supply chains and their competences¹¹ to relocate nationally or abroad, it's not a positive achievement. The Plan should therefore develop more complex scenarios, which highlight the social and economic impacts of the transition on the production system and show links between different industrial supply chains. In this regard, input-output simulations that consider different propensities to import on different production chains, would be highly valuable. This is true both **for existing and developing supply chains, the latter being functional to decarbonising the former** (as explained in the chapter 'The Plan and the manufacturing industry').

Regarding existing supply chains, it is necessary to assess how their transformation can turn certain tasks obsolete or even result in closure of entire production sectors. Simultaneously, positive impact of creating new jobs and skills should be assessed, within a framework of existing policies, possibly supplemented with additional support measures.

The repercussions of this transformation will not be neutral, nor will they be uniform. Not all new jobs will automatically be able to compensate for the obsolescence generated by the transition; The net result could be negative within the same sub-fund. The *automotive* sector has similar characteristics, since the work intensity of the electric motor is lower than that of the endothermic motor.¹² At the same time, there are problems of skills transferability: the technical knowledge embodied in workers of a sector is not always perfectly transferable to the new activity but requires deep and structural retraining¹³.

Additionally, some productions that could be downsized are concentrated in specific geographical areas, where the social impacts of employment collapse would be more pronounced. This issue is

¹⁰ <https://www.healthystreets.com/what-is-healthy-streets>

¹¹ To give an example, the desired decarbonisation of final consumption in the residential sector is linked to the development and production capacity of electric heat pumps, but not only. It also depends on the presence and preparation of manpower and designers who are able to adopt a preferable technological solution to the current one.

¹² Brown, D., Flickenschild, M., Mazzi, C., Gasparotti, A., Panagiotidou, Z., Dingemans, J., & Bratzel, S., (2021). *The Future of the EU Automotive Sector*. Policy Department for Economic, Scientific and Quality of Life Policies, European Parliament

¹³ Cetrulo, A., Dosi, G., Moro, A., Nelli, L., & Virgillito, M., E., (2023). *Automation, digitalization and decarbonization in the European automotive industry: a roadmap towards a just transition* (No. 2023/36). Laboratory of Economics and Management (LEM), Sant'Anna School of Advanced Studies, Pisa, Italy.

addressed by the Territorial Just Transition Plans (TJTP) of Taranto and Sulcis, but these cannot be the only industrial areas taken into account, nor are these areas undergoing climate transition induced transformations. Alongside these areas, characterized by an history of industrial crisis, it would be necessary to focus on **new transformations**, which means on those territories that never experienced and industrial crisis¹⁴. Therefore, the Plan must at least acknowledge, if not already identify a method for mapping potential areas of crisis¹⁵ and intervening for redevelopment and economic diversification of those areas, tailored to the technological and industrial specificities of the activities involved.

Regarding the supply chains that will have to be created or developed, the NECP should include a comprehensive estimate of the positive impacts that these may entail, in terms of direct and indirect creation of new jobs, induced investments, savings in electricity consumption, reduction of emissions and more. A specific example, probably too detailed for the purposes of the Plan, but certainly illustrative, is shown below in [Figure 1](#) with reference to the UK government's policy for the decarbonisation of buildings.

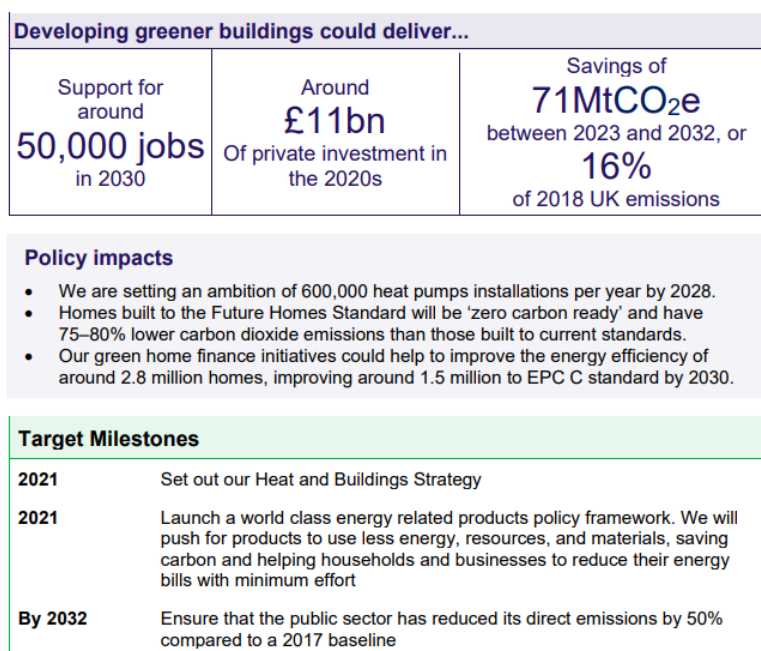


Figure 1 – Extract from *The Ten Point Plan for a Green Industrial Revolution*, UK Gov. 2020¹⁶.

Such detailed work must therefore provide adequate space for an evaluation methodology integrated with public policies, both industrial and in support of employment and training.

¹⁴ As in those territories of the centre-north where the main companies in the components sector are located. the *automotive sector* related to the endothermic engine.

¹⁵ Also in relation to what is already present in the NECP in relation to the phase out of coal.

¹⁶ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/936567/10_POINT_P_LAN_BOOKLET.pdf



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