SOCIAL IMPACTS IN THE EU ENERGY TRANSITION: WHAT ARE THE DISTRIBUTIONAL EFFECTS OF EUROPEAN ENERGY POLICIES?

Publication date:
May 2025

Contact:
Mattia Bonfanti, Ewa Jarosz, Amalia Tuchmann (IEEP)

Institute for European Environmental Policy

ABOUT:

The Institute for European Environmental Policy (IEEP) organises a series of Science4Policy briefing events on European environmental policies. With these events, IEEP wants to create an open dialogue where MEPs, civil society, research institutes and businesses can gain insight on environmental topics relevant to the work of the European Parliament, as well as gather input from other key stakeholders participating in the discussion.

SCIENCE4POLICY BRIEFING

A just and inclusive EU energy transition requires pairing ambitious climate policies with focused social measures, such as strengthened, well-targeted funding, harmonised eligibility criteria, and participatory governance, to mitigate regressive impacts and ensure that vulnerable households and regions benefit equally from the green transition.

At the Science4Policy briefing *"Social impacts in the EU energy transition: what are the distributional effects of European energy policies?"* held on 20 May 2025 at the European Parliament, the Institute for European Environmental Policy (IEEP), with the support of the Heinrich Böll Stiftung European Union and the MEP Group on "Climate Change, Biodiversity and Sustainable Development" brought together MEPs, Commission officials and civil-society experts to examine two flagship initiatives from Commissioner Dan Jørgensen's mission letter – the Citizens Energy Package and the European Affordable Housing Plan – alongside the pending Energy Taxation Directive. Hosted by **MEP Nicolás González Casares (S&D)** and moderated by **Chiara Antonelli**, Head of Programme – Climate and Circular Economy at IEEP, the session featured a keynote presentation by **Xaquin García-Muros**, Research Fellow at the Basque Centre for Climate Change, followed by reactions and discussion with **Alejandro Ulzurrun De Asanza Y Munoz,** Directorate-General for Energy, European Commission, **Frank Siebern-Thomas,** Directorate-General for Employment, Social Affairs and Inclusion, European Commission, **Claire Roumet,** Strategic Partnership, Energy Cities, **Hélène Sibileau,** Senior Policy Advisor, Buildings Performance Institute Europe (BPIE), **Jörg Mühlenhoff,** Head of Programme - European Energy Transition, Heinrich-Böll-Stiftung European Union, before closing remarks by **Andries Gryffroy**, Member of the Committee of the Regions.

Social impacts in the EU energy transition: what are the distributional effects of European energy policies?

MEP Nicolás González Casares

"This briefing comes in the right moment while we have two critical initiatives that lie at the heart of our shared European vision: the European Affordable Housing Plan and the upcoming Citizens Energy Package. Both initiatives shall reflect our unwavering commitment to ensuring that the energy transition is not only green and sustainable but also just, inclusive, and beneficial to all Europeans."

This summary presents the key takeaways from the discussion, addressing the distributional impacts of European energy policies.

The energy transition promises long-term benefits, including environmental protection, economic development, energy independence, and cleaner air. However, without careful design, its implementation risks being regressive. The current distribution of costs places a greater financial burden on lower-income households, for whom electricity and heat represent a larger share of expenditure. Home energy poverty is more likely for rural, female-headed, and elder-headed households. There are also distributional concerns at the member-state level, as Eastern EU countries are more dependent on fossil fuels. Because of these distributional issues, carbon pricing must be paired with compensation mechanisms that consider income levels, geography, and household socioeconomic characteristics such as rurality, gender, and age.

The following are the key policy recommendations that were discussed during the Science4Policy briefing event:

1. Strengthen and Target the Social Climate Fund (SCF)

To mitigate the regressive impacts of carbon pricing under ETS 2 and support households most at risk of energy poverty, the SCF must be reinforced with clear, harmonised eligibility criteria. These should go beyond income thresholds to include demographic characteristics—rurality, age, gender, and building performance—to ensure support reaches those in worst-performing homes, notably rural, female-headed, and elder-headed households. Prioritisation of funds for renovations and energy upgrades in these buildings will directly address home energy poverty and help prevent disproportionate burdens in Eastern and rural regions.

Key recommendations:

1.1. Establish clear criteria for identifying vulnerable and disproportionately affected households, taking into account not just income but also household demographic characteristics such as rurality, location, age, and gender.
1.2. Prioritise vulnerable households in the worst-performing residential buildings in funding allocations.

2. Finalise the revision of the Energy Taxation Directive (ETD2) including Electricity Tax Reductions

The current ETD framework (ETD1) disproportionately affects lower-income households through high minimum taxes on electricity and heating fuels. ETD2 must introduce reduced minimum tax rates on electricity—recognising its central role in decarbonisation—to alleviate immediate welfare losses among low- and middle-income households. This reform, paired with targeted redistribution, is key for making affordable renewable electricity more accessible to households and thus a potential mechanism for combatting energy poverty**.**

Key recommendations:

2.1. Ensure ETD2 introduces lower minimum tax rates on electricity to reflect its role in decarbonisation and counteract the regressive impact of fossil fuel taxation. This reduction will help protect vulnerable households during the clean energy transition.

3. Ensure Effective Implementation of the Energy Performance of Buildings Directive (EPBD)

Aligning EPBD's building renovation timelines and financing mechanisms with the SCF and Member States' national renovation strategies is crucial. By directing SCF resources towards the worst-performing residential buildings, we can maximise energy savings and social benefits in line with EPBD's objectives.

Key recommendations:

3.1. Align implementation timelines and funding mechanisms with SCF and national building renovation strategies. Using funds from the SCF to maximise the energy performance of vulnerable households in worst-performing buildings in accordance with the framework set by the EPBD can minimise the regressive impacts of energy policies.

4. Improve Data, Monitoring, and Tools

Robust, real-time analysis of policy impacts is essential for adaptive social safeguards. Scaling up instruments like the Carbon Pricing Incidence Calculator (CPIC), a tool estimating the additional costs households may face for carbon-intensive goods and services (e.g., heating, electricity, transport) after a carbon price is introduced, will allow policymakers to simulate distributional effects across income deciles, regions, and household types, and to test different compensation scenarios before implementation.

Key recommendations:

4.1. Scale up the use of instruments like the CPIC to assess distributional impacts of climate policies in real time.

5. Harmonise Terminology and Eligibility Definitions

Inconsistencies between the SCF and EPBD in defining "vulnerability" risk leaving gaps in coverage. Establishing a unified taxonomy across these instruments will streamline administrative processes, reduce confusion among national authorities and beneficiaries, and improve the accuracy of targeting mechanisms.

Key recommendations:

5.1. Align definitions of "vulnerable groups" across the SCF and EPBD to reduce fragmentation and ensure coherence.

6. Empower Local Actors

Local governments, municipalities, and NGOs are frontline implementers of social climate measures. Providing tailored technical assistance, capacity-building, and planning support will help these actors design place-based solutions that reflect the diversity of local energy poverty challenges—such as blackout resilience in Spanish regions—and leverage existing networks and platforms for quicker uptake.

Key recommendations:

6.1. Support local governments, municipalities, and NGOs in the implementation of SCF-funded programmes.
6.2. Provide technical assistance, planning support, and capacity-building resources that would recognise local variation in social impacts.

7. Invest in Social Infrastructure and Resilience Planning

Beyond building upgrades, investments in social infrastructure (public health systems, sustainable mobility services, and digital inclusion) are vital to bolster community resilience. Such complementary interventions, especially in rural and underserved areas, will help households cope with both energy and transport poverty, fostering solidarity and mutual support among neighbours.

Key recommendations:

7.1. Complement building upgrades with strengthening social infrastructure such as public health systems, mobility services, and digital inclusion, especially in rural and underserved areas.

8. Engage and Empower Citizens

Embedding participatory governance mechanisms—local consultations, transparent communication channels, and accessible information portals—will enhance democratic legitimacy and social acceptance of energy policies. By actively involving citizens in planning and decision-making, the EU can ensure its transition is not only technically sound but also enjoys broad societal support.

Key recommendations:

8.1. Include participatory governance mechanisms in the planning and implementation of climate policies.

8.2. Ensure transparent communication, local consultations and accessibility of information.

Further reading:

1. García-Muros, Xaquín, Claudia Dias Soares, Jesus Urios and Eva Alonso-Epelde (2023) 'Who took the burden of the energy crisis? A distributional analysis of energy prices shocks', Policy Report, Institute for European Environmental Policy. https://ieep.eu/wp-content/uploads/2023/04/Who-took-the-burden-of-the-energy-crisis_IEEP-BC3-2023.pdf
2. Gore, T.; García-Muros, X.; Rodríguez-Zúñiga, A.; Alonso Epelde, E.; González-Eguino, M. (2022) Can Polluter Pays policies in the buildings and transport sectors be progressive? Assessing the distributional impacts on households of the proposed reform of the Energy Taxation Directive and extension of the Emissions Trading Scheme. Research report, Institute for European Environmental Policy https://ieep.eu/publications/can-polluter-pays-policies-be-progressive/

This work has been produced with the financial support of the LIFE Programme of the European Union. The paper reflects only the views of its authors and not the donors.