European Energy Poverty

Agenda Co-Creation and Knowledge Innovation

Policy Brief

Energy poverty in times of crisis: Has the EU failed to protect its most vulnerable citizens?

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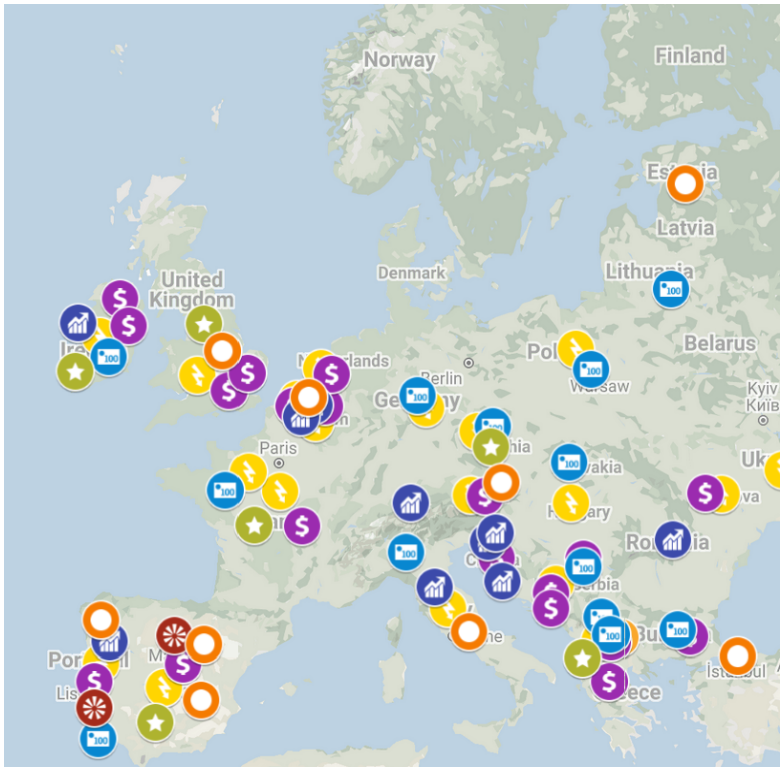
The unprecedented COVID-19 health and economic crisis have enlarged the depth and severity of energy poverty (EP) – a significant form of household material deprivation. Tens of millions of Europeans struggle daily to satisfy their domestic energy needs. The COVID-19 pandemic has likely enlarged the breadth and depth of this and exacerbated the unequal social provisioning of essentials such as housing, energy, or food[1][2][3]. The initial COVID-19-induced household energy crisis, manifested primarily as an effect of lockdowns forcing households to increase their energy expenditure, or income loss, thus pushing more over the energy poverty threshold.

This was followed by the rebound of global energy demand, which is having a significant impact on energy prices worldwide. This effect has again disproportionately hit the domestic economies of the vulnerable and disadvantaged. Consequently, this made pressure on the EU and governments to put in place emergency measures to palliate the most immediate impacts of the new crisis. However, in many countries **the measures are generally lacking in scope and effect and have so far failed to provide real assurance and relief of crisis impact on the energy poor**. ENGAGER's COVID-19 Energy Map shows that throughout the COVID pandemic, a wide variety of measures were undertaken by governments, regulators, and public and private utilities to ensure the affordability and availability of energy supplies for households, and thereby to mitigate energy poverty. Such measures were either generic or targeted in nature, such as disconnection moratoriums, (social) tariff adjustments, (targeted) financial support measures, deferred payment arrangements, VAT cuts, etc. Targeted measures were especially implemented in EU Member States that already have a practice of monitoring energy poverty and taking targeted action[4].



There is also evidence that during the energy price crisis **(EU) governments without energy poverty strategies may find it difficult to target policies to those most in need** (See Box 1). Lack of data on severity and prevalence of energy poverty and not having strategies for its mitigation, leads to inefficient government spending, and less than optimal results on energy poverty alleviation.

[1] Alfonso Carfora, Giuseppe Scandurra, Antonio Thomas, Forecasting the COVID-19 effects on energy poverty across EU member states, Energy Policy, 2021, 112597.
[2] Ambrose A, Baker W, Sherriff G, Chambers J. Cold comfort: Covid-19, lockdown and the coping strategies of fuel poor households. Energy Reports. 2021;7:5589-5596.
[3] Paolo Mastropietro, Energy poverty in pandemic times: Fine-tuning emergency measures for better future responses to extreme events in Spain, Energy Research & Social Science, Volume 84, 2022, 102364.
[4] Marlies Hesselman, Anaïs Varo, Rachel Guyet, Harriet Thomson,
Energy poverty in the COVID-19 era: Mapping global responses in light of momentum for the right to energy,
Energy Research & Social Science, Volume 81, 2021, 102246.

Box 1: Responding to energy poverty in the Netherlands: the cost of untargeted measures
The Netherlands is heavily affected by rizing European gas and electricity prices, which is particularly problematic for the estimated 44% of all households on variable (default) tariff contracts, or with expiring contracts. The Netherlands has a largely unregulated market for electricity and gas supply prices, and the government soon realized that large number of households will be confronted with major increases in energy bills, especially per 1 January 2022, when new variable supply tariffs will be set[5]. As a result, the government announced it would seek to offer 'targeted support' to those who most in need[6]. However, without a government supported national energy poverty definition, figures, and existing policies, the Government proved unable to develop a system for target support. It now depends on a generic tax rebate of approximately 400 euro for all households during 2022. This costs the government 2.7 billion euros. It spends an additional 150 million on small energy efficiency measures for (vulnerable) households, accessible via existing municipal projects through energy advice and kits projects. The generic measure is widely critiqued as not serving those in need sufficiently and being an early 'Christmas present' for those who do not need it[7].

Whilst the COVID-19 pandemic demonstrated people's vulnerability to energy poverty, the energy crisis has really revealed structural problems in relation to low incomes; unfairly distributed burdens of low energy efficiency; tenure status, (in)ability to invest in efficiency, and role of energy companies.

At the same time, the EU is spearheading global climate action. The EU has recently raised the ambition of its Climate Target Plan to reduce greenhouse gas emissions by at least 55% below 1990 levels by 2030. EU is on the path to achieve climate neutrality by 2050. Such efforts entail a far-reaching transformation in the way EU societies capture, transform, and use energy and large-scale deployment of renewable and energy efficiency technologies. The paradox is that, in parallel, **millions of Europeans are unable to access a sufficient level of domestic energy services for fully participating in the lifestyles, customs and activities that define membership of society**. The transition itself, if not implemented in a way which will protect the vulnerable and mitigate energy poverty, will further deepen, and exacerbate the problem.

Properly understanding the impacts of the COVID pandemic, compounded by the European energy price crisis, requires an accurate and thorough understanding of who was already struggling afford energy services before, along with the way new external shocks negatively afford people's ability to use the energy they need, or invest in energy efficiency. As stated in Electricity Directive 2019/944:

> *'Member States should collect the right information to monitor the number of households in energy poverty. Accurate measurement should assist Member States in identifying households that are affected by energy poverty in order to provide targeted support. [The Commission should actively support the implementation of the provisions of this Directive on energy poverty by facilitating the sharing of good practices between Member States]*[8]*.*

The upcoming changes to the EU Emissions Trading Scheme Directive (2003/87/EC) which will bring expansion to residential buildings is likely to further burden the vulnerable groups and increase numbers of those in energy poverty. Lack of clear measuring systems, strategies and support mechanisms has already proven to be determinant in the recent crisis. **It is of utmost importance to act promptly and to develop national measuring and monitoring systems and clear energy poverty mitigation paths.**

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[5] Some smaller energy companies have– controversially – cancelled consumer contracts prematurely, so as to impose higher prices by 1 November, with very significant increases for some households.
[6] https://nos.nl/artikel/2401346-kabinet-wil-gerichte-maatregelen-tegen-stijgende-energierekening.
[7] https://nos.nl/collectie/13880/artikel/2404912-geen-verdubbeling-variabel-energietarief-stijgt-volgend-jaar-met-ruim-20-euro-netto.
[8] Directive (EU) 2019/944 of 5 June 2019 on common rules for the internal market, OJL L 158/125, recital (59).

Box 2: Carbonizing EU's energy poor with gas

Gas has been promoted as a transition fuel in public discourse on energy transition and just transition, because it has lower CO_2 emissions than other fossil fuels and is easily accessible. The European Commission is even planning to fund some large gas fired projects within the Long-term external action budget for 2021-2027 with aim to boost Western Balkan's economy and development and speed up their accession process[9]. Reliance on gas has, particularly now in the COVID-19 induced crisis, shown to be an unreliable and expensive source of energy. The gas prices in the EU are particularly volatile, with a continuous trend of increase. The vulnerable groups relying on gas are faced with disconnections in winter, leaving them unprotected from the cold and unable to switch to alternative fuels.

Furthermore, the upcoming amendments to the European Emissions Trading Scheme, which foresee inclusion of residential buildings sector in the scheme will directly lead to domestic gas prices increases for all users from the household category. Taxing CO_2 in the residential buildings requires adding to the price of gas for domestic consumers. This will inevitably lead to an increase in the number of energy poor and an even greater burden on the national and EU governments to provide short and long-term protection measures, putting heavy financial burden on national economies. Reliance on gas decreases energy security, poses adverse impacts on climate, and should not be seen as a way to ensure just transition. Transition which is reliant on gas, will increase depth of and prevalence of energy poverty. **We call for removal of gas from transition policies and from planned funding mechanisms, instead more renewable investments are needed to help energy poor avoid being stuck in a carbonization trap.**

Are energy poverty numbers underestimated?

Following the legislative mandate of Directive 2019/944, EU member states have put in place monitoring and reporting frameworks that contribute to a better recognition of energy poverty by stakeholders and support targeted action. **However, energy poverty figures reported in EU-wide and national monitoring frameworks systematically underestimate its incidence because of two main reasons:**

- Current monitoring frameworks consider energy poverty indicators in isolation from each other without recognizing that each of them **represents different forms of domestic energy deprivation,** which effectively overlap with each other, but only to some extent. For example, the information of being unable to keep warm by itself can be misleading as some people will say they were able to keep warm, while they were using only one room in their house giving up on the rest of their living space in winter. Others might say they were adequately warm because they already got so used to living in thick clothes and not moving much around the house etc. This means that, for instance, only a percentage of households declaring arrears on utility bills will simultaneously report inability to keep their home warm. Furthermore, **different groups tend to assess their situation differently**. So, for example, *older households are more likely than their younger counterparts to be identified as energy poor when using expenditure-based indicators but are less likely to self-identify as unable to afford adequate warmth*[10].

- Existing indicators capture the most prominent forms of energy poverty (i.e., indoor thermal discomfort in winter, excessive energy expenditures relative to income, insufficient spending, and inability to pay bills on time) **but disregard other experiences of energy deprivation**, such as being indebted to the supplier, having lost access to the supply or

[9] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52020DC0641

[10] David Deller, Glen Turner, Catherine Waddams Price, Energy poverty indicators: Inconsistencies, implications and where next?, Energy Economics, Volume 103, 2021, 105551. https://www.sciencedirect.com/science/article/pii/S0140988321004278

self-disconnections related to prepaid forms of energy (such as prepayment meters, bottled gas or solid fuels).

To illustrate an **alternative 'holistic' assessment of energy poverty indicators**, results from the Spanish 2016 SILC dataset are presented in Table 1 below. If incidence was measured strictly through individual indicators, then only a maximum of 10% of the Spanish population (4.6 million people) would be affected by energy poverty, as measured by the inability to keep home warm. Alternatively, if all households experiencing at least one of the conditions captured by indicators were counted, total incidence would increase to 15% of the Spanish population (6.8 million people).

Table 1: Incidence of energy poverty in Spain in 2016 according to consensual SILC indicators
Source: Spanish Environmental Science Association (ACA), 2018.

	Households (millions)	Persons (millions)	% of population
Unable to keep home adequately warm	1.9	4.6	10%
One arrear on utility bills	0.3	0.8	2%
Two or more arrears on utility bills	0.9	2.8	6%
One arrear and unable to keep home adequately warm	0.1	0.2	0,4%
Lost access to the supply (also unable to keep home adequately warm)	0.3	0.9	2%
Two arrears and lost access to the supply (also unable to keep home adequately warm)	0.2	0.5	1%
Unable to keep home adequately warm and arrears on utility bills (TOTAL households in EP)	2.6	6.8	15%

Current monitoring frameworks, if they are at all applied on a national level, are underpinned by a significant body of knowledge and methods that quickly developed over the last 20 years. These approaches successfully make use of previously existing datasets[11] not specifically intended to measure energy poverty. However, such energy poverty metrics are significantly constrained by the scope of those very datasets. Since energy poverty research and policymaking increasingly rely on quantitative data, whatever is not included as a survey item in the main available data sources remains unrecognized in societal and policy debates. This shows the importance of sophisticated, context-specific, ongoing energy poverty measurements, as well as the importance of continued attention to energy poverty measurement under the CEP/NECPs, inspired by best practice sharing and indicators available through EPOV.

There is a clear need for governments to urgently undertake the following steps:

1. Develop and implement energy poverty measuring systems, which are based on most recent research and gathering information on more than one indicator
2. Implement measuring schemes which will gather non-subjective data, such as temperature, occurrence of draught, absolute and relative costs etc.

[11] Such as national Household Budget Surveys and the EU and national surveys on income and living conditions

Box 3: Developments and progress on energy poverty definitions and measurement in the Netherlands

Since 2018, several Dutch semi-governmental planning and advisory bodies have begun to independently measure and report on energy poverty in the Netherlands. Policy-makers are currently also exploring how to best measure and monitor energy poverty nationally, so as to fulfil their obligations under EU law, and to ensure a 'just energy transition'. Inspired by EPOV indicators, especially different income-based definitions, coupled to indicators on housing energy efficiency amongst tenants and homeowners, such Dutch studies estimated that at least 550,000-650,000 households (7-9% of the Dutch population) struggle with payment or investing in adequate energy services access. Such figures have been used by the Government in its first NCEP to the Commission but have not been translated into official national indicators or policy yet. On top of this, Ecorys has estimated that a poorly managed 'heating transition' may drive a total of 18% of the Dutch population into energy poverty by 2030,[12] while in the shorter term, experts (conservatively) expect an additional 150,000 households to suffer from energy poverty over 2022, due to the impacts of increases in gas and electricity prices in the energy crisis.[13]

The European Energy Poverty Observatory (EPOV): A pillar in the struggle for justice and equality

We call for the continued existence, operation and development of the EU Energy Poverty Observatory (EPOV). Although it has been announced that EPOV will continue to function in the future, currently there is a gap in relation to the requirements of EU acquis (See Box 4) and ability of MS to find easily accessible guidance on how to proceed with developing their energy poverty strategies and how to report.

The need for energy poverty monitoring and measurement is constantly growing, given the limited amount of data that has historically been available on this subject from relevant EU- and national-level agencies. **It is of utmost importance to ensure that European institutions, as well as Member States, have the necessary statistical tools to follow energy poverty rates**. What is more, there is a pronounced need for improving energy poverty measurement as it relates to space cooling, transport, and regional-level trends in particular. EU Member States depend on state-of-the-art information and best practices on energy poverty measurement and monitoring to fulfil their obligations under EU legislation. Maintaining a central focal point for sharing of national level insights and best practices is indispensable, and crucially, **it will help the Commission to fulfil its function of monitoring and actively sharing, supporting and facilitating 'the implementation of the provisions' of Electricity Directive and other EU law and policy in the area of energy poverty.**

The EU Energy Poverty Observatory has become a vital and constituent element of numerous EU level legal and policy documents, as well as programmatic initiatives and projects funded by EU bodies. Its indicator set has been integrated in national policies across the EU. This process has helped render energy poverty visible and tangible. It should be allowed to continue in the future.

Robust continued guidance on indicators is necessary to help EU Member States to deliver on obligations and expectations set out in the NCEP. Furthermore, different pieces of legislation, as well as NECPs, will be reviewed and updated over the next eight years, and as early as of 2024-2025, with a view to 'assess whether customers, especially those who are vulnerable or in energy poverty, are adequately protected' by EU law, or whether regulated prices should be phased out. It will be impossible to adequately assess this without having widely shared, available, comparable, state-of-art data on the development of energy poverty across EU MS.

[12] https://www.ecorys.com/nl/netherlands/latest-news/ecorys-brengt-financiele-gevolgen-van-de-warmtetransitie-kaart
[13] https://www.nu.nl/binnenland/6162430/tno-verwacht-energiearmoede-bij-nog-groter-aantal-huishoudens.html

Box 4: The requirements and obligations related to EPOV

EPOV has been envisaged as a central point for all decision makers to find easily accessible guidance on energy poverty mitigation options and measuring tools and indicators, while at the same time enabling the European Commission to monitor the situation across the EU and on level of each MS. Its role is best described as a true decision makers' "one-stop-shop" for energy poverty.

With that in mind, EC has set obligations to MS to report their data to EPOV through The Governance of the Energy Union and Climate Action ((EU) 2018/1999) and Directive on common rules for the internal market for electricity ((EU) 2019/944). The Union Regulation states in Article 24 Integrated Reporting on Energy Poverty: The Commission shall share data communicated by Member States pursuant to this Article with the European Energy Poverty Observatory[14].
The Article 29 of the Electricity Directive states: Energy poverty: When assessing the number of households in energy poverty pursuant to point (d) of Article 3(3) of Regulation (EU) 2018/1999, Member States shall establish and publish a set of criteria, which may include low income, high expenditure of disposable income on energy and poor energy efficiency.

The Commission shall provide guidance on the definition of 'significant number of households in energy poverty' in this context and in the context of Article 5(5), starting from the premise that any proportion of households in energy poverty can be considered to be significant[15].

In addition to EU acquis, recently funded projects funded under the EU H2020 call for mitigating energy poverty are required to link their actions to EPOV[16], and Covenant of Mayors initiative directs local authorities to EPOV for advice[17]

Conclusions and steps to success

Urgent action is needed to set the EU on a path of just transition. Just transition in terms of energy poor requires immediate response from EU and national decision makers through:

- Adoption of comprehensive, easily understandable and measurable indicators for measuring energy poverty based on most recent research findings;
- Implementation of required systems for gathering data necessary for monitoring energy poverty levels based on defined indicators;
- Set up national energy poverty strategies;
- Continue with operation and development of EPOV as a true "one-stop-shop" on energy poverty.

[14] https://eur-lex.europa.eu/eli/reg/2018/1999/oj
[15] https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32019L0944&from=EN
[16] https://cordis.europa.eu/programme/id/H2020_LC-SC3-EC-2-2018-2019-2020
[17] https://www.eumayors.eu/component/attachments/?task=download&id=539