



Social Protection Committee Indicators Sub-group

Fiche on available energy poverty indicators at EU level

Introduction

On 17 November 2021, the ISG held an exchange on energy poverty indicators, based on a discussion note prepared by the Commission. Delegates agreed that energy poverty is an issue of major importance that should find more space on the SPC/ISG agenda in the wider context of the social dimension of the green transition and with a focus on enforced lack, in synergy with the newly established Energy Poverty and Vulnerable Consumers Coordination Group with the Member States¹. As a first step to develop this work, it was agreed to prepare a fiche that would present an inventory of EU commonly available indicators to communicate to the public the state of play regarding the monitoring of energy poverty at EU level. This fiche should also be considered along with other relevant work in the area, such as the update of the national energy and climate plans.

1. ENERGY POVERTY

Access to adequate warmth, cooling, lighting, and energy to power appliances is key to ensure a decent standard of living and citizens' health in everyday life. The **European Pillar of Social Rights** places energy among the essential services everyone shall have access to and calls for support measures for those in need (**principle 20**). UN Sustainable Development Goal number 7 (**SDG7**) also calls for ensuring access to affordable, reliable, sustainable, and modern energy for all. Moreover, the **Employment Guidelines** that inform the work on the European Semester invite Member States to address energy poverty.²

Various initiatives have been adopted at EU level in recent years to address energy poverty and ensure that the green transition is a just and inclusive one, such as the “**Clean Energy for all Europeans**” package, the “**Fit for 55**” package. The Commission has made indicative guidance available to Member States on appropriate indicators for measuring energy poverty and defining what a ‘significant number of households in energy poverty’ is through the **Commission Recommendation on Energy Poverty** and its accompanying staff working document³. Most recently, in response to the spike in wholesale prices, the Commission published the Communications “Tackling rising energy prices: a toolbox for action and support”⁴ and “REPowerEU: Joint EU action for more affordable, secure and sustainable

¹ Commission Decision 2022/589 of 6 April 2022 establishing the composition and the operational provisions of setting up the Commission Energy Poverty and Vulnerable Consumers Coordination Group <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32022D0589>

² See “Guideline 8: Promoting equal opportunities for all, fostering social inclusion and fighting poverty”, COUNCIL DECISION (EU) 2020/1512 of 13 October 2020 on guidelines for the employment policies of the Member States.

³ EU Guidance on Energy Poverty accompanying the document Commission Recommendation on energy poverty SWD(2020)960

⁴ Commission Communication 2021/660 of 13 October 2021 on Tackling rising energy prices: a toolbox for action and support

energy”⁵. The proposal for a **Council Recommendation on the social and labour aspects of a just transition towards climate neutrality** also addresses energy poverty and support access to essential energy services, calling for a strengthening of the evidence base on fair transition policies, including energy poverty. More details on the policy context are provided in Annex II.

Energy poverty is generally understood at EU level as a situation in which households are unable to access (affordable) essential energy services.⁶ Addressing energy poverty is key to empower European citizens, enhance social inclusion and ensure a just transition. Achieving this depends also on the quality and effectiveness of the indicators and monitoring tools available to assess and monitor energy poverty at EU level.

2. AVAILABLE INDICATORS

Energy poverty is a multi-dimensional phenomenon that cannot be easily captured by a single indicator. It results from a mix of low levels of income, high expenditure on energy and other factors related to energy efficiency, such as poor building efficiency standards. Various indicators have been developed that focus on a specific dimension and should be viewed and used in combination.

While energy poverty is not explicitly part of the EU social monitoring framework, **the EU 2030 poverty and social exclusion reduction target, that is based on the AROPE indicator directly relates to some dimensions of energy poverty through its material and social deprivation component.** In particular, two dimensions of material and social deprivation directly relate to energy poverty and provide useful indicators to monitor energy poverty: inability to keep home adequately warm and arrears on utility bills (both EU-SILC based indicators). On top of these, some other information is available that focuses primarily on households’ expenditure patterns, relating to both households with low consumption or high consumption (based on HBS). Further work will be needed to look into various dimensions and refine the set of indicators available to monitor energy poverty.

2.1. Material deprivation indicators

Two dimensions of the primary EU indicators of **material and social deprivation (MSD)** and **severe material and social deprivation (SMSD)** are directly relevant for the monitoring of energy poverty and are frequently used as proxies to monitor energy poverty in the EU: the **inability to keep one’s home adequately warm and arrears on utility bills.**⁷ Both are thus also part of the AROPE headline indicator that has been underpinning the EU2020 poverty and social exclusion target and is now underpinning the new 2030 EU poverty and social exclusion reduction target.

Based on these dimensions, it is estimated that nearly 37 million Europeans are unable to afford keeping their home adequately warm, according to the latest available data (EU SILC 2020)⁸. It appears also that a significant share of people at risk of poverty are affected but that energy poverty can also concern the middle-income groups.

⁵ Commission Communication 2022/108 of 8 March 2022 on REPowerEU: Joint European Action for more affordable, secure and sustainable energy.

⁶ Commission Recommendation (EU) 2020/1563 of 14 October 2020 on energy poverty

⁷ These indicators are also among the four primary indicators used by the EU Energy Poverty Observatory.

⁸ This number takes into account the break for EU27 (due to DE break), which contribute to an increase for EU27 inability to keep home adequately warm rate to 8.2% in 2020, compared to 6.9% the year before.

2.1.1. Inability to keep home adequately warm

The inability to keep the home adequately warm is one of the items of the (Severe) Material and Social Deprivation indicator. It relates to the SILC survey question: “*Can your household afford to keep its home adequately warm?*”, and is about affordability (ability to pay) to keep the home adequately warm, regardless of whether the household actually needs to keep it adequately warm).⁹ Adequacy is generally referred to in this context and depends on people’s preferences and perceptions, which can vary between people across Member States and within the same Member State, depending on differences in temperature and habits.

At EU27 level, the inability to keep home adequately warm was at 8.2% of total population in 2020 (i.e. 8.2% of persons were living in a household with an inability to keep its home adequately warm), with an overall decrease of -1.7pp over the last decade¹⁰. There is a large heterogeneity across Member States for this dimension, as it ranged in 2020 from 1.5% in AT to 27.5% in BG. There was also a large heterogeneity in the change in this indicator since 2010 across Member States, as its change ranged from -39.0pp in BG to +3.4pp in ES.¹¹

It is also interesting to consider the values of this indicators between the AROP and non-AROP sub-populations as well as across the income distribution. AROP people face a significant higher risk of being unable to keep their home adequately warm but at the same time that this is a phenomenon that affects also to a non-negligible extent the middle class and not only the bottom of the income distribution (for the EU27 in the year before SILC 2020: only 53% of the total population unable to keep home adequately warm was in the first two income deciles and 26.1% of it was in income deciles 4 to 7).

2.1.2. Arrears on utility bills

Arrears on utility bills relates to the survey question: “In the past twelve months, has the household been in arrears, i.e. has been unable to pay the utility bills (heating, electricity, gas, water, etc.) of the main dwelling on time due to financial difficulties?”¹². This variable does not only concern energy for home but also other utility types.

At EU27 level, the arrears on utility bills was at 6.3% of total population in 2020 (i.e. 6.3% of persons in total population were living in a household with arrears on utility bills), with an overall decrease by -3.3pp since 2010¹³. At Member States’ level, there was a large heterogeneity across Member States for this indicator in 2020, as it ranged from 1.5% in NL to 28.2% in EL. There was also a large heterogeneity in the change in this indicator since 2010 across Member States, as its change ranged from -14.4pp in HR to +9.4pp in EL.

As in the case of inability to keep home adequately warm, breakdowns between AROP and non AROP and across the income distribution show that energy poverty affects mostly the AROP population but also a non-negligible share of the middle class (for the EU27 in the year before SILC 2020: only 48.5% of the total population with arrears on utility bills was in the first two income deciles and 27.5% of it was in income deciles 4 to 7).

⁹ Source: Description of EU SILC variables.

¹⁰ This is based on EU27 SILC 2020 data that includes the break in DE SILC 2020 data. Before the break, the decrease was of -3.0 pp.

¹¹ There was a large increase (+9.0pp) for DE but this was due to the break in DE SILC 2020 data.

¹² Source: Description of EU SILC variables. The variable also allows to split only one arrear on utility bills from two or more arrears on utility bills. The variable does not cover solid fuels and does not capture needs and difficulties of low-income households related to that.

¹³ This is based on EU27 SILC 2020 data that includes the break in DE SILC 2020 data. Before the break, the decrease was of -3.4 pp.

2.2. Consumption indicators

Besides these two indicators, other indicators have been developed at EU level. To increase the understanding of energy poverty and support Member States in their efforts to monitor and decrease energy poverty, the European Commission launched the EU **Energy Poverty Observatory (EPOV)** in 2018, an initiative now followed up by the recently established **Energy Poverty Advisory Hub (EPAH)**¹⁴.

On top of the two indicators outlined above, EPOV has **put forward** two indicators on energy expenditure (based on HBS data on households' expenditure for electricity, gas and other fuels- EUR_HE045:), known as M/2 and 2M indicators.¹⁵

- The M/2 indicator presents the **share of households whose absolute energy expenditure is below half the national median**, or in other words low. This could be due for instance to high energy efficiency standards but may also be indicative of **households** abnormally under-consuming energy (i.e. hidden energy poverty).
- The 2M indicator presents the proportion of **households whose share of energy expenditure in income is more than twice the national median share**. High variance in energy/income shares can occur due to structural differences in energy expenditure between household groups, as well as in situations where energy is often, but not exclusively, included in rent.

3. AREAS FOR FURTHER WORK

The indicators presented in the previous section address specific dimensions of energy poverty. Advancing work on monitoring energy poverty at EU level would benefit from expanding the measurement and analysis of these dimensions as well as adding new ones. For instance, during its duration EPOV has created a dashboard of consensual expenditure-based indicators covering 19 dimensions that are relevant in its context. These are extracted from different data sources – mainly the Eurostat (ESTAT) website, EU-SILC and the Building Stock Observatory (BSO) – and include e.g. energy prices and housing-related data.¹⁶ The EPOV Methodology Guidebook¹⁷, published in 2020, presents the calculation, interpretation and detailed database of all these information, which have also been taken up in the dedicated annex of the Commission Recommendation on energy poverty¹⁸, which divides them between indicators focusing on the affordability of energy services and complementary indicators. EPOV's dashboard has also been integrated into its successor's portal¹⁹, the Energy Poverty Advisory Hub (EPAH) to ensure continuity.

The need to address the aspect of adequate cooling on a par with warming is also often stressed, as well as the importance to go beyond access to energy services related to housing

¹⁴ https://energy-poverty.ec.europa.eu/index_en

¹⁵ The [EPOV Methodology Guidebook](#), published in 2020, presents the calculation, interpretation and detailed database of all indicators.

¹⁶ These indicators include fuel oil prices, biomass prices, coal prices, household electricity prices, district heating prices, household gas prices, dwelling comfortably cool during summer time, number of rooms per person (owners), dwelling comfortably warm during winter time, number of rooms per person (owners / renters / total), dwellings in intermediately / densely populated areas, poverty risk, dwellings with energy label A, energy expenses per income quintile, dwellings equipped with air conditioning / heating, Excess winter mortality/deaths, dwellings with presence of leak, damp, rot.

¹⁷ https://energy-poverty.ec.europa.eu/system/files/2021-09/epov_methodology_guidebook_1.pdf

¹⁸ https://ec.europa.eu/energy/sites/ener/files/recommendation_on_energy_poverty_-_annex.pdf

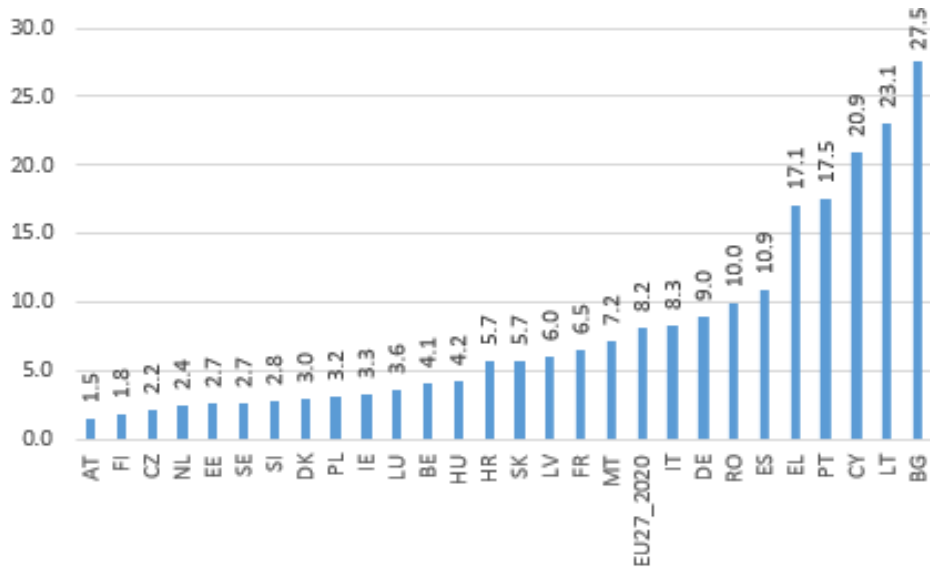
¹⁹ https://energy-poverty.ec.europa.eu/discover/epah-atlas_en

to cover also mobility challenges and transport poverty. Both aspects are indeed likely to gain increasing attention in the framework of the green transition and in the context of rising energy and fuel prices. Aspects related to energy efficiency and to the use of solid fuels are two additional issues to consider for future work in this area.

Another important dimension to consider relates to the joint distribution of income and energy consumption. Indeed, using EU-SILC and HBS jointly can yield insights into vulnerabilities and impact of energy prices on different types of households, including in relation to energy taxation and income support schemes (and other compensation measures).

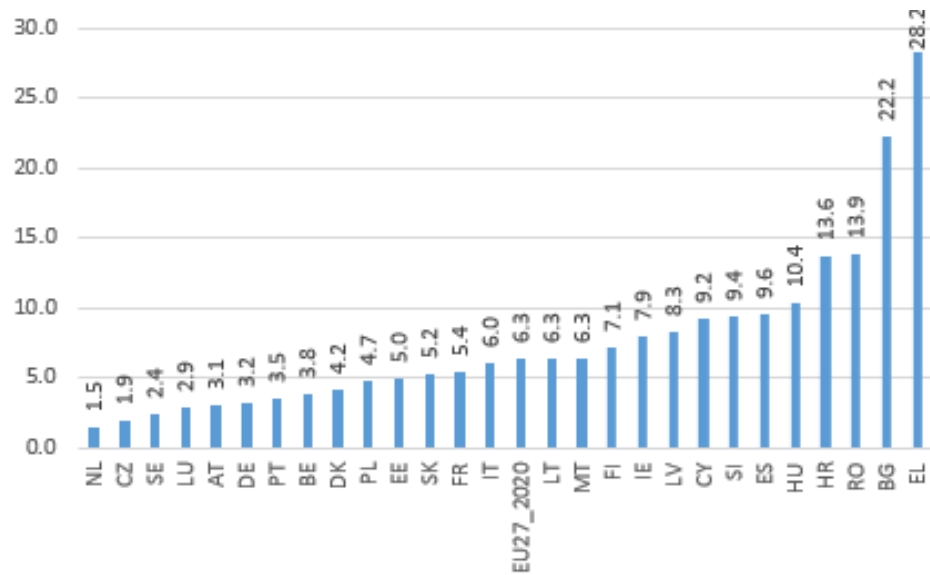
Annex I - Charts

Chart 1 - Share (in % of total population) of persons living in a household unable to keep its home adequately warm (SILC 2020)



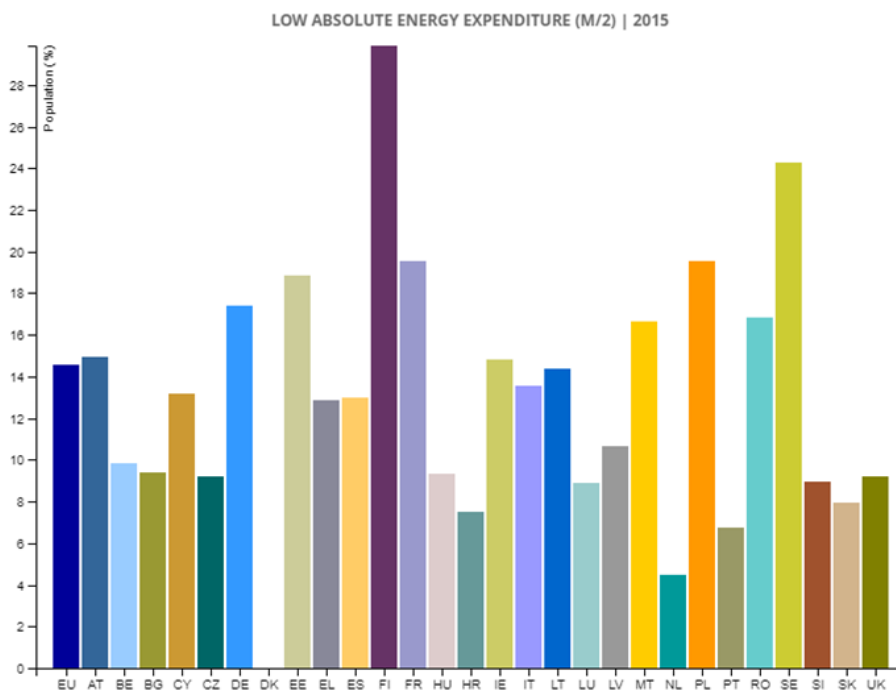
Source: Eurostat data

Chart 2 - Share (in % of total population) of persons living in a household with arrears on utility bills (SILC 2020)



Source: Eurostat data

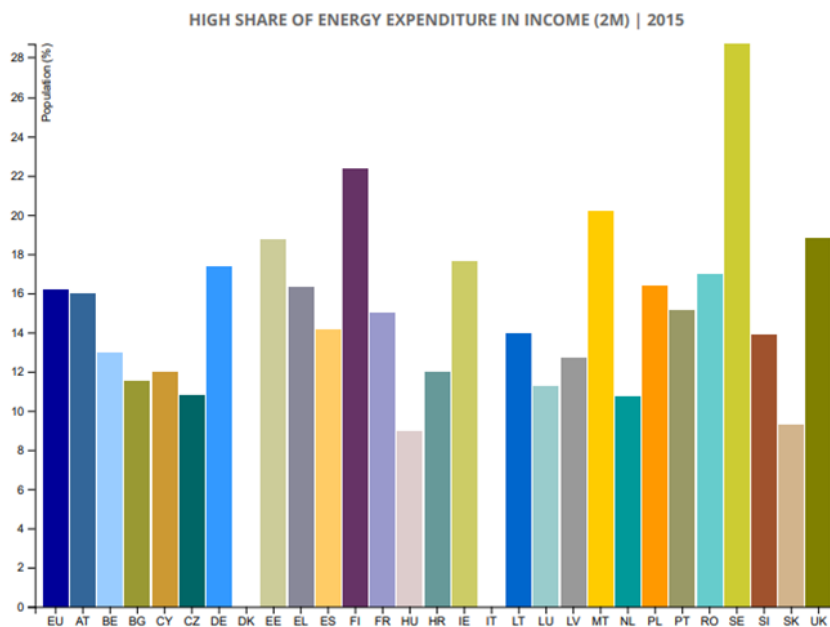
Chart 3 - Low absolute energy expenditure (M/2) (HBS 2015)



Note: no data for DK.

Source: Energy poverty advisory hub

Chart 4 - High share of energy expenditure in income (2M) (HBS 2015)



Note: no data for DK and IT.

Source: Energy poverty advisory hub

Annex II – Policy context

Energy poverty is a key concern of the ‘**Clean Energy for All Europeans**’ legislative package, designed to facilitate a fair energy transition. Through their interaction, the pieces of legislation are designed to provide structural remedies to the problem and ensure that energy poverty is addressed exhaustively and comprehensively in the Governance framework and the mix of energy policy measures implemented under the **national energy and climate plans (NECPs)**, which will be subject to progress reporting and updates by Member States.

Pursuant to Regulation (EU) 2018/1999 on the **Governance of the Energy Union and Climate Action and Directive (EU) 2019/944** of the European Parliament and of the Council on common rules for the internal market for electricity, the Commission has made indicative guidance available to Member States on appropriate indicators for measuring energy poverty and defining what a ‘significant number of households in energy poverty’ is through the **Commission Recommendation on Energy Poverty** and its accompanying staff working document²⁰. The Commission also provides information on emerging good practices and underlines the importance of the policies associated with national energy and climate plans (‘NECPs’) and with long-term renovation strategies to tackle these problems.

Both the **Electricity Directive (EU) 2019/944** and the **Gas Directive 2009/73/EC** require Member States to take appropriate measures to address energy poverty wherever it is identified, including measures addressing the broader context of poverty.

Moreover, all initiatives under the ‘**Fit for 55 Package**’ to implement EU’s 2030 climate and energy objectives, have been consistently designed to unfold synergies, to mitigate potentially negative distributional effects, including between Member States, particularly on the most vulnerable and energy poor (proposal for a recast of the Energy Efficiency Directive, proposal for a Social Climate Fund, proposal for a recast of the Energy Taxation Directive, proposal for a recast of the Energy Performance of Buildings Directive, the Hydrogen and Decarbonisation of Gas package, proposal for a Council Recommendation on ensuring a fair transition towards climate neutrality).

The proposed revision of the **Energy Efficiency Directive** proposes to define energy poverty as “a household’s lack of access to essential energy services that underpin a decent standard of living and health, including adequate warmth, cooling, lighting, and energy to power appliances, in the relevant national context, existing social policy and other relevant policies”. This is also cross referenced in the proposed revision of the Gas Directive and in the proposed revision of the Energy Performance of Buildings Directive.

Another novelty worth highlighting is the link it establishes between energy communities and energy poverty. The **Electricity Directive** states that “Community energy can also advance energy efficiency at household level and help fight energy poverty through reduced consumption and lower supply tariffs. Community energy also enables certain groups of household customers to participate in the electricity markets, who otherwise might not have been able to do so”.

Also, the proposed **Social Climate Fund** addresses in particular the energy poverty challenges for vulnerable households and vulnerable micro-enterprises. It should support measures to promote energy efficiency, energy saving and the development of new and renewable forms of energy as structural solutions to eradicate the “root causes” of energy poverty and address any pre-existing vulnerabilities and inequalities.

²⁰ EU Guidance on Energy Poverty accompanying the document Commission Recommendation on energy poverty SWD(2020)960

The proposal for a **Council Recommendation on the social and labour aspects of a just transition towards climate neutrality** also addresses energy poverty and support access to essential energy services, calling for a strengthening of the evidence base on fair transition policies, including energy poverty on the basis of Commission Recommendation (EU) 2020/1563.