

## ENGAGER Training School 2: Mainstreaming Innovative Energy Poverty Metrics

10-13 CEST, 26-30 April 2021, Stavanger, Birmingham, Magdeburg/Dortmund, Lisbon, Getafe/Madrid

Online: <https://stavanger.zoom.us/j/63275032550?pwd=RUMyYalRnWEFyOHNSWU5jdIRIL3B1QT09>

### Final Programme (19 April 2021 version)

No.	Name, Institution	Home location
<b>26 April: Energy poverty metrology and digitisation for low-carbon energy infrastructure</b> <i>Stavanger anchor: <a href="#">Siddharth Sareen</a>. Trainers: <a href="#">Tomas Skjølsvold</a>, <a href="#">Tor Håkon Inderberg</a></i>		
1	Vasileios Ntouros, National & Kapodistrian University of Athens	Athens, Greece
2	Ágos Gosztonyi, University of Helsinki	Helsinki, Finland
3	Rodrigo Felix, NOVA University of Lisbon	Lisbon, Portugal
4	Miguel Sequeira, NOVA University of Lisbon	Lisbon, Portugal
<b>27 April: Birmingham hub: Composite energy poverty indicators and popularising innovative datasets</b> <i>Birmingham anchor: <a href="#">Harriet Thomson</a>. Trainers: <a href="#">Caitlin Robinson</a>, <a href="#">Danielle Butler</a></i>		
5	Lin Zhang, University of Leeds	Leeds, UK
6	Ioanna Kyprianou, Cyprus Institute	Nicosia, Cyprus
7	Luca Lamonaca, University Institute of Lisbon	Lisbon, Portugal
8	Pedro Palma, NOVA University Lisbon	Lisbon, Portugal
<b>28 April: Measuring transport energy poverty and impact on wellbeing</b> <i>Magdeburg/Dortmund anchors: <a href="#">Philipp Biermann</a>, <a href="#">Giulio Mattioli</a></i>		
9	Katherine Mahoney, NOVA University of Lisbon	Lisbon, Portugal
10	Luka Majic, Society for Sustainable Development Design	Zagreb, Croatia
11	Anais Varo, University of Girona	Girona, Spain
12	Daniel Wuebben, Universidad de Rey Juan Carlos	Segovia, Spain
<b>29 April: Mainstreaming energy poverty metrics into NECPs including cooling</b> <i>Lisbon anchors: <a href="#">Miguel Brito</a>, <a href="#">Marta Panão</a>. Trainers: <a href="#">Ana Horta</a>, <a href="#">João Pedro Gouveia</a></i>		
13	Adam Hearn, University of Basel	Bad Säckingen, Germany
14	Irene Gonzalez-Pijuan, Sheffield Hallam University	Barcelona, Spain
15	Ricardo Barbosa, University of Minho	Lisbon, Portugal
16	Lidija Zivcic, Focus Association for Sustainable Development	Ljubljana, Slovenia
<b>30 April: Energy poverty indicators, policy impact and hidden energy poverty</b> <i>Getafe/Madrid anchors: <a href="#">Raúl Castaño</a>, <a href="#">Sergio Tirado Herrero</a></i>		
17	Minh Nguyen, University Institute of Lisbon	Lisbon, Portugal
18	Flavia Carvalho, NOVA University of Lisbon	Lisbon, Portugal
19	Cameron Ward, University of Liverpool	Liverpool, UK
20	Roberto Barrella, Comillas Pontifical University	Madrid, Spain
<b>Casual attendees (occasional drop-ins, not part of groups)</b>		
X1	Marjeta Bencina, Focus Association for Sustainable Development	Ljubljana, Slovenia
X2	Nora Feldmar, Habitat for Humanity	Budapest, Hungary
X3	Sara Freitas, Lisboa E-Nova	Lisbon, Portugal

## Theme of ENGAGER TS2

The ENGAGER TS2 (see <http://www.engager-energy.net/trainingschool2/>) addresses the challenge of mainstreaming innovative energy poverty (EP) metrics. It covers complementary aspects of the overarching theme: digitisation, composite indices, transport energy poverty, cooling and hidden energy poverty, all in relation to impact at scale. We build on our Training School 1 on mobilising data for energy poverty research and action, held during June 2019 (<http://www.engager-energy.net/trainingschool1/>).

## Participation logistics

Trainees must participate on all five days of the TS2. Synchronous participation takes place 10-13 CET daily. Group work requires five hours of asynchronous work. Each day follows the same structural template:

**10:00-10:30 Short lectures by trainers from the host hub** (to be recorded live)

**10:30-10:45 Plenary discussion among participants** (to be recorded live)

10:45-11:00 Informal chit-chat in the plenary room

**11:00-11:15 Hands-on exercise with prep material** (to be recorded live)

11:15-11:30 Work in random groups in the breakout rooms

**11:30-11:45 Plenary discussion by all groups** (to be recorded live)

11:45-12:00 Break

**12:00-12:15 Presentation by trainee group from the host hub** (to be recorded live)

**12:15-12:30 Plenary discussion based on the presentation** (to be recorded live)

**12:30-12:45 Reflections on policy relevance by trainers from the host hub** (to be recorded live)

12:45-13:00 Group work planning time in hub-wise breakout rooms

Each hub, *including trainers and trainees*, anchors one day on the thematic focus area:

26 April: Energy poverty metrology and digitisation for low-carbon energy infrastructure (Stavanger)

27 April: Composite energy poverty indicators and popularising innovative datasets (Birmingham)

28 April: Measuring transport energy poverty and impact on wellbeing (Magdeburg/Dortmund)

29 April: Mainstreaming energy poverty metrics into NECPs including cooling (Lisbon)

30 April: EP indicators, policy impact and hidden energy poverty (Getafe/Madrid)

## ***Pre-TS2 preparation for trainees***

Trainees 'belong' to a specific hub (see pre-final programme above). Each trainee group makes a 15-minute presentation during the third session of their hub day. This must be based on a problem statement given to the group in advance (see the day-wise module programme for details). Please read all the assigned texts.

## ***Post-TS2 outputs, profiling and GDPR compliance***

Two hours of plenary activity will be recorded on each day of the TS2 and made available subsequently via a Youtube channel and the ENGAGER website to serve as a future resource on mainstreaming innovative energy poverty metrics (see bracketed indications under participation logistics). Breakout rooms and any informal chats will not be recorded. The trainee group of each hub will be responsible for writing a short reflection based on the session 2 workshop plenary discussion (500 words) and making available their deck of 10 slides from the session 3 group presentation, to be profiled on the ENGAGER website after the TS2.

## **Pre-TS2 timeline**

Please coordinate with your hub group trainees (four per group, refer to the participant list above). You are tasked with preparing a good presentation on your assigned theme before the start of the TS2, and to get to know each other a little bit. Please identify the emails of hub group trainees from the email thread.

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### 26 April 2021: Energy poverty metrology and digitisation for low-carbon energy infrastructure

[Siddharth Sareen](#), [Tomas Skjølsvold](#), [Tor Håkon Inderberg](#)

As low-carbon energy transitions advance, energy infrastructure becomes increasingly digitised. Rapid evolution is apparent in European cities where retail electricity is remotely monitored and controlled through digital data flows of real-time use down to household scale. Applications across sectors are emerging, for instance with distributed rooftop solar photovoltaic generation and smart charging of electric transport solutions. Yet this digitisation risks excluding the energy poor or exacerbating existing disparities, unless it is explicitly designed to ensure just distributive effects. The Stavanger hub will draw on fieldwork in urban Norwegian contexts to illustrate scope to make digitisation for low-carbon energy infrastructure an inclusive and fair process. It will bring forth examples of emerging metrics and principles that can be widely applied as more contexts undergo digitisation in key energy infrastructure. The module will feature emerging insights from the JPI Climate funded project [Responsive Organising for Low Emission Societies](#) (ROLES) on socially inclusive digitisation of energy infrastructures.

#### 10:00-10:30 Short lectures by trainers from the host hub (recorded live)

*Energy poverty metrology and socio-spatial inclusion in digitisation at the urban scale* – S. Sareen

*Reflections about social inclusion in digital innovation for urban mobility* – T. Skjølsvold

*New dimensions of energy poverty? Evolving requirements for household electricity consumer flexibility* – T. Inderberg

#### Recommended reading:

European energy poverty metrics: Scales, prospects and limits – S. Sareen, H. Thomson, S. Tirado Herrero, J. Gouveia, I. Lippert, A. Lis (<https://doi.org/10.1016/j.egt.2020.01.003>)

Promise of the obsolete: expectations for and experiments with self-driving vehicles in Norway. (B. Haugland, T. M. Skjølsvold (<https://doi.org/10.1080/15487733.2020.1765677> )

Centrally decentralising? Analysing key policies and pathways in Norway's electricity transitions – T. H. J. Inderberg (<http://dx.doi.org/10.17645/pag.v8i3.2874>)

#### 10:30-10:45 Plenary discussion among participants (recorded live)

#### 10:45-11:00 Informal chit-chat in the plenary room

Since this module is on the first day of TS2, we will use this informal slot for an ice-breaker exercise.

#### 11:00-11:15 Hands-on exercise with prep material (recorded live)

The Norwegian city of Stavanger has a Climate and Environmental Plan 2018-2030 (English version online here: <https://www.stavanger.kommune.no/siteassets/renovasjon-klima-og-miljo/miljo-og-klima/climate-and-environmental-action-plan--stavanger-2018-2022---final-version.pdf>). Chapter 1 (pp. 5-14) addresses transport, and lays out 62 measures under the following focus areas and sub-objectives:

Focus area 1: Reducing scope of transport and changing travel habits.

- T1.1: 70% of passenger transport takes place by bike, foot and public transport in 2030.
- T1.2: Streamlining commercial transport and urban logistics.
- T1.3: Reducing the negative impact of long journeys to and from Stavanger.

Focus area 2: Promoting renewable fuel and technology in the transport sector.

- T2.1: GHG emissions from light vehicles have been reduced by 80% by 2030 and by 100% by 2040.
- T2.2: GHG emissions from heavy vehicles have been cut by 20% by 2030 and by 100% by 2040.
- T2.3: Port operations, fast boats and ferries are fossil-free by 2030.

We will provide a short overview of these transport measures, to lead you into group work. Please browse the plan (pp. 5-14) in advance of the module. We will spontaneously divide groups across these measures:

- Group 1: Focus area 1, T1.1
- Group 2: Focus area 1, T1.2 and T1.3
- Group 3: Focus area 2, T2.1
- Group 4: Focus area 2, T2.2 and T2.3

During the short time for group work in breakout rooms, each group has the same task, related to the measures in your assigned focus area and sub-objective(s). Discuss these two questions:

- What sort of digitisation is required to monitor these measures and achieve these targets?
- How can digitisation due to these measures impact household (transport) energy poverty?

**11:15-11:30 Work in random groups in the breakout rooms**

**11:30-11:45 Plenary discussion by all groups** (recorded live)

Each group will have 3-4 minutes to report in plenary based on your discussion. Each group should report on measures from their assigned section within the scope of these questions. You are welcome to focus more on those questions that seemed most relevant during your discussion in the breakout room:

- What risks do you foresee for energy poverty due to transport digitisation?
- In what ways can transport digitisation aid efforts to alleviate energy poverty?
- What measures could be added or removed for transport digitisation to address energy poverty?

**11:45-12:00 Break**

**12:00-12:15 Presentation by trainee group from the host hub** (recorded live)

The trainee group linked with the Stavanger hub will make a 15-minute group presentation this day, in response to the following challenge:

*What urban scale metrics can enable energy poverty alleviation in digitisation for low-carbon transition?*

**12:15-12:30 Plenary discussion based on the presentation** (recorded live)

**12:30-12:45 Reflections on policy relevance by trainers from the host hub** (recorded live)

*How researchers can contribute to mainstreaming energy poverty related metrics in digitisation* – S. Sareen  
*How socio-technical perspectives may render inequalities and other unanticipated consequences visible* – T. Skjølsvold

*Illuminating the social in digitisation developments and demand-management policies* – T. Inderberg

**12:45-13:00 Group work planning time in hub-wise breakout rooms**

The task during this closing part on the first day will be to discuss how to frame written group reflections. Trainees should use the discussion prompts provided for 11:30-11:45 to structure a 500-word essay. You are free to create your own title for the essay, with some relevance to the title theme of your hub group.

## ENGAGER Training School 2: Mainstreaming Innovative Energy Poverty Metrics

**27 April 2021: Composite EP indicators and popularising innovative datasets**

**Theme anchor:** [Harriet Thomson](#). **Additional trainers:** [Caitlin Robinson](#), [Danielle Butler](#)

As a highly multidimensional issue, composite indicators have an important role to play in how we measure and understand the distribution and intensity of energy poverty. The Birmingham hub will begin with a conceptual exercise about designing composite indicators of energy poverty, combining insights from both qualitative and quantitative research. During the exercise participants will map out key themes of interest, considering how we can select innovative indicators that best represent each theme. We will also reflect on the aggregation and weighting of different indicators. Participants will then design and visualise their own composite indicators using pan-European data, e.g. EU Energy Poverty Observatory indicators. These composite indicators will provide a starting point for discussion about what data we are missing in Europe, both thematically (i.e. which aspects of energy poverty are we unable to represent with quantitative indicators?), and spatially (i.e. for which regions do we have a good understanding?). Our discussions will inform an application for a European Social Survey rotating module on energy poverty in 2022.

**10:00-10:30 Short lectures by trainers from the host hub** (recorded)

*Introduction to composite indicators and their challenges* (H. Thomson, 15 mins)

*Energy poverty indicators: What are we missing?* (C. Robinson, 15 minutes)

Recommended reading:

Middlemiss, L. (2017). A critical analysis of the new politics of fuel poverty in England. *Critical Social Policy*, 37(3), 425-443. <https://eprints.whiterose.ac.uk/103895/2/MiddlemissNewPoliticsOfFuelPoverty.pdf>  
Romero, J. C., Linares, P., & López, X. (2018). The policy implications of energy poverty indicators. *Energy policy*, 115, 98-108. <https://www.sciencedirect.com/science/article/abs/pii/S0301421517308789>  
Thomson, H., Bouzarovski, S., & Snell, C. (2017). Rethinking the measurement of energy poverty in Europe: A critical analysis of indicators and data. *Indoor and Built Environment*, 26(7), 879-901. <https://journals.sagepub.com/doi/pdf/10.1177/1420326X17699260>

Suggested post-hub reading:

OECD (2008). *Handbook on Constructing Composite Indicators: Methodology and User Guide*. Paris: OECD <https://www.oecd.org/sdd/42495745.pdf>

**10:30-10:45 Plenary discussion among participants** (recorded)

**10:45-11:00 Hands-on exercise with prep material** (recorded)

Statistical indicators are an important and necessary part of the policy landscape, revealing and obscuring patterns of energy vulnerability, and in turn shaping decisions around the targeting of alleviation measures. However, the measurement and monitoring of energy poverty typically relies on existing secondary data from household and building stock surveys, which constrains index-building efforts.

A key challenge for researchers, policymakers and practitioners is to construct meaningful composite indicators that take into consideration questions of quality, representativeness, geographical coverage, and, oftentimes, political suitability.

Between 2016-2020, the team leading the European Commission's EU Energy Poverty Observatory (EPOV) carried out extensive stakeholder and expert consultations to define a set of four primary indicators that they argued would address the lack of agreed-upon indicators by providing a comprehensive overview of

the structure and character of energy poverty. (Pages 16-23 of this report outlines the chosen indicators [https://www.energypoverty.eu/sites/default/files/downloads/observatory-documents/19-06/paneureport2018\\_updated2019.pdf](https://www.energypoverty.eu/sites/default/files/downloads/observatory-documents/19-06/paneureport2018_updated2019.pdf))

However, we know from an earlier review by Rademaekers et al. (2016) (<https://ec.europa.eu/energy/sites/ener/files/documents/Selecting%20Indicators%20to%20Measure%20Energy%20Poverty.pdf>) that a much broader range of relevant indicators is available to stakeholders at the European level, covering themes such as housing quality, energy expenditure, household income and more.

During this hands-on exercise, each group has the following tasks:

- Review the full set of pan-European data available: <https://www.energypoverty.eu/indicators-data>
- Agree upon the key themes that a composite index of energy poverty should address
- Design and visualise your own composite indicators using an open access tool (a short demo will be provided)

11:00-11:30 Work in random groups in the breakout rooms

**11:30-11:45 Plenary discussion by all groups** (recorded)

Each group will have 3-4 minutes to present their composite index in plenary, and to respond to the prompt questions below. You are welcome to focus more on those questions that seemed most relevant during your discussion in the breakout room:

- Which groups are likely to be privileged by your index, and which will be silenced?
- At what spatial scale(s) does your index function?
- In what ways can this index support or divert policymaking?
- How can we integrate qualitative data within statistical indices, and what are the strengths and limitations in doing so?

11:45-12:00 Break

**12:00-12:15 Presentation by trainee group from the host hub** (recorded)

The trainee group linked with the Birmingham hub will make a 15-minute group presentation (up to 10 slides) on this day, in response to the following challenge:

*What are the urgent thematic gaps in energy poverty measurement, and what are the necessary metrics for resolving these lacunae?*

**12:15-12:30 Plenary discussion based on the presentation** (recorded)

**12:30-12:45 Reflections on policy relevance by trainers from the host hub** (recorded)

*The role of lived experience approaches in understanding how policy and practice shape the lives of those experiencing or living at risk of energy poverty* - D. Butler

*Evidencing the geography of energy-related inequalities using spatially-explicit indicators, to inform policy and practice* - C. Robinson

*Operationalising policy and practice-relevant statistical indicators for measuring the complex realities of energy poverty* - H. Thomson

12:45-13:00 Group work planning time in hub-wise breakout rooms (host hub trainee group only)

Trainees should use the discussion prompts provided for 11:30-11:45 to structure a 500-word essay. You are free to create your own title for the essay, with some relevance to the title theme of your hub group.

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### 28 April 2021: Transport energy poverty, double energy vulnerability and impacts on well-being: how to measure it

[Giulio Mattioli](#), [Philipp Biermann](#)

While the focus of energy poverty research remains overwhelmingly on domestic energy consumption and affordability, similar issues in the transport sector are drawing increasing attention. Developing transport energy poverty metrics, however, requires more than just applying existing energy poverty metrics to a new sector. The Magdeburg/Dortmund will focus on this new area, and will be structured in three components: i) a critical discussion and examination of existing transport energy poverty metrics; ii) a review studies that have attempted to measure 'double energy vulnerability', i.e. the overlap between domestic and transport energy poverty; iii) an introduction of empirical approaches to measure the impact of domestic and transport energy poverty on subjective well-being. The session will rely on empirical studies conducted in France, UK, Germany and Australia.

#### 10:00-10:30 Short lectures by trainers from the host hub (recorded)

*Indicators of transport energy poverty and double energy vulnerability: an overview* – G. Mattioli  
*Assessing the welfare impact of energy poverty: Energy Poverty and Subjective Well-Being in Germany* – P. Biermann

Recommended reading:

- Mattioli, G., Wadud, Z., & Lucas, K. (2018). Vulnerability to fuel price increases in the UK: A household level analysis. *Transportation Research Part A: Policy and Practice*. 113, pp. 227-242.  
<https://doi.org/10.1016/j.tra.2018.04.002>
- Berry, A. (2018). Measuring energy poverty: uncovering the multiple dimensions of energy poverty. *CIREN Working Paper Series*, 2018-69 <https://hal.archives-ouvertes.fr/hal-01896838/document>
- Philipp Biermann, 2016. "[How Fuel Poverty Affects Subjective Well-Being: Panel Evidence from Germany](#)," *Working Papers* V –395–16, University of Oldenburg, Department of Economics

#### 10:30-10:45 Plenary discussion among participants (recorded)

10:45-11:00 Informal chit-chat in the plenary room

#### 11:00-11:15 Hands-on exercise with prep material (recorded)

The European expert network OpenExp has published a report (see [https://www.openexp.eu/sites/default/files/publication/files/european\\_energy\\_poverty\\_index-eepe\\_en.pdf](https://www.openexp.eu/sites/default/files/publication/files/european_energy_poverty_index-eepe_en.pdf)) proposing a multidimensional metric of energy poverty (EEPI), including both a domestic energy (EDEPI) and a transport energy sub-indicator (ETEPI). The transport indicator is described at p.11-12, along with a ranking of EU member states. It covers the three following 'causes' of transport energy poverty:

- the share of transport energy expenditures out of the total expenditures for car-owning first income quintile citizens "which captures at the same time the cost of petrol, the efficiency of the vehicle owned and distance travelled"
- the level of difficulty in accessing public transport
- the affordability of public transport



We will provide a short overview of these indicators and the ranking of EU countries, to lead you into group work. Please browse the report (notably pp. 11-12) in advance of the module. For group work in breakout rooms, each of groups (5-6 people each) will discuss one of the following questions:

- Group 1: which aspects of transport energy poverty are adequately captured by the ETEPI indicator?
- Group 2: which aspects of transport energy poverty are not adequately captured by the ETEPI indicator?
- Group 3: How can the subjective well-being approach help to construct an adequate multidimensional EPI?
- Group 4: What are the main requirements in terms of data quality to capture the multidimensional aspects of ETEPIs?

11:15-11:30 Work in random groups in the breakout rooms

**11:30-11:45 Plenary discussion by all groups** (recorded)

Each group will have 3-4 minutes to report in plenary based on their discussion. You are welcome to focus more on those questions that seemed most relevant during your discussion in the breakout room.

11:45-12:00 Break

**12:00-12:15 Presentation by trainee group from the host hub** (recorded)

The trainee group linked with the Dortmund/Magdeburg hub will make a 15-minute group presentation this day, in response to the following challenge:

*What are the additional challenges of measuring transport energy poverty, and assessing its impact on welfare and well-being, as compared to domestic energy poverty?*

**12:15-12:30 Plenary discussion based on the presentation** (recorded)

**12:30-12:45 Reflections on policy relevance by trainers from the host hub** (recorded)

*Policy challenges to mainstreaming transport energy poverty measurement* – G.Mattioli

*Assessing the welfare effects of transport energy poverty to justify the need for indicators and measures* - P. Biermann.

12:45-13:00 Group work planning time in hub-wise breakout rooms

The task during this closing part on the first day will be to discuss how to frame written group reflections. Trainees should use the discussion prompts provided for 11:00-11:30 to structure a 500-word essay. You are free to create your own title for the essay, with some relevance to the title theme of your hub group.



## ENGAGER Training School 2: Mainstreaming Innovative Energy Poverty Metrics

**29 April 2021: Mainstreaming EP metrics into NECPs including cooling**

**Theme anchors:** [Miguel Brito](#), [Marta Panão](#). **Additional trainers:** [Ana Horta](#), [João Pedro Gouveia](#)

National Energy and Climate Plans (NECP) should tackle how nations can address and mitigate EP in the years to come. However, the EU Energy Poverty Observatory reported that EP is recognised by the NECPs in 18 out of 26 European countries, and only 14 of them explicitly mention the EP indicators used for monitoring. Summer energy poverty is a crucial challenge, especially for Southern European Countries, but it is only expressly addressed in the France NECP. The Lisbon hub will identify and discuss the main EP indicators used in various NECPs. Using examples at different spatial scales in Portugal, we will consider: i) which data sources can be drawn for EP assessment; ii) how to identify EP households and vulnerable districts; iii) how to quantify the impact of EP policies (e.g., subsidised energy bills, buildings renovation); iv) which indicators or indexes should be combined for a comprehensive understanding of summer and winter EP and allow its monitoring; and v) how to decrease EP in a sustainable manner aligned with NECP and carbon neutrality goals.

**10:00-10:30 Short lectures by trainers from the host hub** (recorded)

- João Pedro Gouveia - Energy Poverty in Portugal: The Good, the Bad and the Ugly.
- Ana Horta – Complexity and uncertainty in household cooling practices.
- Marta Panão – Future energy consumption of national building-stock: more than Physics.

Recommended reading:

S. Bouzarovski, H. Thomson, M. Cornelis (2021). *"Confronting Energy Poverty in Europe: A Research and Policy Agenda"*. *Energies* 2021, 14, 858 (<https://doi.org/10.3390/en14040858>)

LIFE Unify (2020). *"Tackling energy poverty through National Energy and Climate Plans : Priority or empty promise?"* (<https://caneurope.org/content/uploads/2021/01/Energy-poverty-report- Final December-2020.pdf>)

M. Brøgger, K. B. Wittchen (2018). *Estimating the energy-saving potential in national building stocks - A methodology review*. *Renewable and Sustainable Energy Reviews*, 82, 1489-1496 (<https://doi.org/10.1016/j.rser.2017.05.239>)

**10:30-10:45 Plenary discussion among participants** (recorded)

10:45-11:00 Informal chit-chat in the plenary room

**11:00-11:15 Hands-on exercise with prep material** (recorded)

Starting from the recommended reading try to address one (or more) of the following topics. In the group you can decide to focus on two/three different countries.

- How are different national energy and climate plans dealing with energy poverty mitigation?
- Is there any reference to summer vulnerability?
- What are they critically missing?

11:15-11:30 Work in random groups in the breakout rooms

**11:30-11:45 Plenary discussion by all groups** (recorded)

Each group will have 3-4 minutes to report in plenary based on the discussion of the three questions above.

11:45-12:00 Break

**12:00-12:15 Presentation by trainee group from the host hub** (recorded)

The trainee group linked with the Lisbon hub will make a 15-minute group presentation this day, in response to the following challenge:

- How are different national energy and climate plans dealing with energy poverty mitigation?
- Is there any reference to summer vulnerability?
- What are they critically missing?

For the individual NCEP assessments you can check [https://ec.europa.eu/energy/topics/energy-strategy/national-energy-climate-plans/individual-assessments\\_en](https://ec.europa.eu/energy/topics/energy-strategy/national-energy-climate-plans/individual-assessments_en)

**12:15-12:30 Plenary discussion based on the presentation** (recorded)

**12:30-12:45 Reflections on policy relevance by trainers from the host hub** (recorded)

*The role of municipalities for Energy poverty sustainable mitigation* (J.P. Gouveia)

*Towards sustainable adaptation* (A. Horta)

*Energy poverty challenges in warmer countries* (M.C. Brito)

**12:45-13:00 Group work planning time in hub-wise breakout rooms**

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### EP indicators, policy impact and hidden energy poverty

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. These metrics emphasise indoor thermal discomfort, low incomes and high energy bills, which are symptoms rather than root causes of domestic energy deprivation. Institutional recognition through indicators, however, comes at the expense of hidden aspects (seldom recognised in the scientific literature but even less so in policy practice) of the lived experience of energy poverty, such as household indebtedness, disconnections and precarious, informal or irregular connections. In this vein, the Getafe/Madrid hub aims to critically examine existing institutional indicators and to discuss new metrics for better civic engagement and policy-making. The hub session will rely on ongoing work of the host institution (UC3M) in the Energy Poverty Intelligence Unit (EPIU) and the Cañada Real Galiana projects. Both projects seek to identify hidden energy poverty and establish an innovative support mechanism for vulnerable households in Spain's Madrid region.

### 10:00-10:30 Short lectures by trainers from the host hub (recorded)

*From invisibility to recognition: the challenge of hidden energy poverty* (S. Tirado)

*Listening to the invisible energy groups through four Spanish cases* (R. Castaño-Rosa)

Recommended reading:

Karpinska, L., Śmiech, S., 2020. Invisible energy poverty? Analysing housing costs in Central and Eastern Europe. *Energy Research & Social Science* 70, 101670. <https://doi.org/10.1016/j.erss.2020.101670>

Middlemiss, L., Gillard, R., Pellicer, V., Straver, K., 2018. Plugging the Gap Between Energy Policy and the Lived Experience of Energy Poverty: Five Principles for a Multidisciplinary Approach, in: Foulds, C., Robison, R. (Eds.), *Advancing Energy Policy*. Springer International Publishing, Cham, pp. 15–29. [https://doi.org/10.1007/978-3-319-99097-2\\_2](https://doi.org/10.1007/978-3-319-99097-2_2)

Interrogating Madrid's "Slum of Shame": Urban Expansion, Race, and Place-Based Activisms in the Cañada Real Galiana – S. Gonick (<https://doi.org/10.1111/anti.12156>)

### 10:30-10:45 Plenary discussion among participants (recorded)

### 10:45-11:00 Informal chit-chat in the plenary room

### 11:00-11:15 Hands-on exercise with prep material (recorded)

The Spanish Government launched the country's first [National Strategy against Energy Poverty](#) in April 2019. Among other actions, it sets an official statistical framework for monitoring the incidence of energy poverty and assessing the impact of relevant policies through the four main indicators of the European Observatory of Energy Poverty (EPOV): High share of energy expenditure in income (2M); Low absolute energy expenditure (M/2); Inability to keep home adequately warm; and Arrears on utility bills. Thinking the biases and omissions introduced by official metrics, we propose each trainee group to answer the three questions below:

- Which forms and what dimensions of energy poverty are currently going unrecognised by the Spanish Strategy and the EPOV indicators in the EU?
- Which groups are more likely to experience these unrecognised forms of energy poverty?

- What data and indicators could be used for an improved recognition of the above?

**11:15-11:30 Work in random groups in the breakout rooms**

**11:30-11:45 Plenary discussion by all groups** (recorded)

Each group will have 3-4 minutes to report in plenary based on the discussion of the three questions above.

**11:45-12:00 Break**

**12:00-12:15 Presentation by trainee group from the host hub** (recorded)

As a follow-up to the ENGAGER Energy Rights Forum, the Getafe/Madrid hub trainee group will make a 15-minute group presentation this day answering the three main questions of the 'Invisible energy precarity groups' session:

- What needs to be done?
- What are the barriers to achieve what needs to be done?
- Who should be involved in the solution?

**12:15-12:30 Plenary discussion based on the presentation** (recorded)

**12:30-12:45 Reflections on policy relevance by trainers from the host hub** (recorded)

*Indicators and policies need to account for informality in housing and energy access* (S. Tirado)

*How can researchers contribute to the invisible energy groups recognition?* (R. Castaño)

**12:45-13:00 Group work planning time in hub-wise breakout rooms**

Trainees should use the discussion prompts provided for 11:30-11:45 to structure a 500-word essay. You are free to create your own title for the essay, with some relevance to the title theme of your hub group.