Shifting perspectives:
insights from the Energy Policy Fellowships

Energy
-SHIFTS

Energy
Social sciences &
Humanities
Innovation
Forum
Targeting the
Set-Plan

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Executive summary

In this report, we present the journeys of 21 policyworkers from across Europe who participated in the Policy Fellowship programme of the EU-funded Energy-SHIFTS project (*Energy Social sciences & Humanities Innovation Forum Targetting the SET-Plan*). This programme aimed to establish research-policy dialogue, by directly connecting researchers working across the Social Sciences and Humanities (SSH) with those on the energy policy 'frontline'. In the first half of 2020, our 21 Policy Fellows – which included one team of three - participated in online conversations and exchanges with 3-6 carefully matched energy-SSH researchers, or Policy Associates.

This report therefore includes 19 full Fellowship reports, in which we describe the Fellows' policy context, policy challenges, how they were matched with their Associates, main discussion points and SSH insights generated, as well as how these were translated to policy impacts. For the purpose of organising the Fellowships, the Fellows were divided over five thematic categories: Citizen Engagement; Social Acceptance; Just Transitions; Behaviours; and Human Capital. While these categories enabled a closer interaction between Fellows and the Energy-SHIFTS team, they are by no means mutually exclusive, with many content overlaps occurring.

Under Citizen Engagement, we cover the insights of seven Fellows, who respectively discuss flexibility in energy scenario planning, increasing public engagement in energy policy, citizen engagement in city-wide retrofitting, incorporating citizens' values into energy policy decisions, and designing effective dialogue processes for a national climate agreement. Under the category of Social Acceptance, the journeys of three Fellows are described, including developing a more nuanced understanding of social acceptance for wind power, incorporating a deeper understanding of social acceptance challenges for a national renewable energy strategy, and enhancing social acceptance of low-carbon energy policy. The Fellowship reports on Just Transitions trace the Fellowship journeys

of six Fellows, who explored protecting vulnerable Europeans against market-based pricing and digitalisation, making solar energy accessible and affordable, working with neighbourhoods to decide on non-gas heating alternatives, reorganising neighbourhood energy systems in socially just ways, creating policy instruments for alleviating energy poverty, and making the energy transition 'by the people for the people'. Next, the Fellowship reports under Behaviours cover the experiences of three Fellows, who discussed designing effective policies for behavioural change to achieve 2050 climate targets, bringing challenging agendas into policy advisory mechanisms to accelerate societal transitions, and scoping the agency of policymakers to facilitate a fair energy transition. The two Fellowship experiences included under Human Capital review fostering positive actor relationships and mutually beneficial outcomes in the heat transition, and strengthening a sense of security for local coal-mining communities during transition processes.

At the end of this report, we highlight cross-thematic issues regarding shifts in Policy Fellows' thinking about, and understanding of, energy transitions. We find that Fellows raised systemic questions about their policy dilemmas in conversation with their Associates, e.g. through unpacking concepts, complexity and knowledge paradigms. Moreover, the Fellowships provided a space where Fellows could challenge themselves to gain a deeper understanding of their policy contexts, and to explore best practices elsewhere. Fellows also zoomed in on evaluating social justice throughout entire energy transitions processes, rather than in isolation, and issues of changing (institutional) roles and collaborations. Finally, we include a reflection on both the Fellows' and Associates' experiences of research-policy interactions, and revisit the hypothesis that the programme enabled both policyworkers and researchers to strengthen their work through personal connections and a deeper, mutual understanding for each other's perspectives.

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1. Introduction

It is often said in the field of low-carbon energy transitions is that the technology we need already largely exists: the real bottlenecks are social capabilities for changing systems, political will, and cultural innovation[1]. Consequently, it could be argued that questions on how to transform society to accommodate low-carbon lifestyles and systems, develop new ways of governing, and change behaviours, ought to be centre-stage in policy discussions and energy research. Nevertheless, a significant discrepancy remains between research spending on energy innovation in Science, Technology, Engineering and Mathematics (STEM) versus Social Sciences and Humanities (SSH) research on energy. As reported by the SHAPE ENERGY research project, in 2016 the EU Horizon 2020 research budget on energy allocated only 4% of its budget to SSH partners, versus 96% to STEM[2], a difference which may be considered inordinate.

To address this tension, the EU-funded Horizon 2020 Energy-SHIFTS project (*Energy Social sciences & Humanities Innovation Forum Targeting the SET-Plan*) set out with the ambition to place social, political and cultural questions at the heart of the European Energy agenda. The project includes two core elements: a Working Group trajectory in which groups of academic frontrunners and field leaders of SSH scholarship unearth an agenda for future energy-SSH research[3], and a Policy Fellowship programme, which aims to bridge SSH knowledge on the energy transitions and the daily reality of energy policyworkers. This report focuses on the outcomes of this Fellowship programme. The programme has been inspired by earlier initiatives which

aim to reconcile the science-policy interface through personal contact, such as the Cambridge Centre for Science and Policy (CSaP) Fellowships[4], and the developed schemes for scientific advice to governments[5] and elected representatives across Europe, which have tended to focus on technical (rather than social) expertise to date. Notably, in recognition that policy does not merely depend on the work of elected politicians, the Energy-SHIFTS programme was deliberately opened out to individuals working at policy-facing organisations including the European Commission, national ministries, municipal organisations and civil society organisations (such as think tanks, NGOs, trade associations and advocacy organisations). For this reason, we refer to our Policy Fellows as policyworkers, rather than policymakers.

We argue that such policy-facing organisations can benefit from greater interaction with energy-SSH experts through relating their policy dilemmas to larger shifts in thinking around energy transitions, thereby opening up a richer array of possible policy options and future directions. Indeed, a key finding from the start of the programme was that significant appetite exists for this type of collaboration. Simultaneously, it may create a better understanding of on-the-ground policy reality for SSH researchers. Again, the positive response rate amongst researchers we invited to interact with our Policy Fellows was very high. As such, the following aims were formulated for the Energy-SHIFTS Policy Fellowship Programme:

> "*By connecting policyworkers directly to SSH researchers, the programme aims to: engage policyworkers with in-depth energy-SSH insights; give SSH academics the opportunity to gain insights into 'live' policy issues as well as increase the direct impact of their research; and build future capacity for research-policy dialogue.*"[6]

As summarised in the visualisation at the end of this section, the programme selected 21 policyworkers from across Europe (including one collaborative team of three

1   E.g. Sovacool, B.K., Hess, D.J., Amir, S., Geels, F.W., Hirsh, R., Rodriguez Medina, L., Miller, C., Alvial Palavicino, C., Phadke, R., Ryghaug, M., Schot, J., Silvast, A., Stephens, J., Stirling, A., Turnheim, B., van der Vleuten, E., van Lente, H., Yearley, S., 2020. Sociotechnical agendas: Reviewing future directions for energy and climate research. Energy Res. Soc. Sci. 70, 101617. or Sovacool, B.K., Ryan, S.E., Stern, P.C., Janda, K., Rochlin, G., Spreng, D., Pasqualetti, M.J., Wilhite, H., Lutzenhiser, L., 2015. Integrating social science in energy research. *Energy Res. Soc. Sci.* 6, 95–99.

2   Robison, R., and Foulds, C., 2019. *7 principles for Horizon Europe: SHAPE ENERGY Research & Innovation Agenda 2020-2030.* Cambridge: SHAPE ENERGY; original figure from: European Commission, 2018, *Integration of social sciences and humanities in Horizon 2020 Participants, budget and disciplines: 3rd monitoring report on SSH flagged projects funded in 2016 under the societal challenges and industrial leadership priorities.*

3   For more information on these four Working groups, see: https://energy-shifts.eu/activities/working-groups/

4   For more information see: http://www.csap.cam.ac.uk/

5   See, for example: https://eptanetwork.org/

6   de Geus, T., Lunevich, I., Ibrahim, I., Bode, N. and Robison, R., 2020. *Live energy policy challenges: questions for the Social Sciences & Humanities.* Cambridge: Energy-SHIFTS.

individuals), ranging from individuals working at EU-level institutions, to municipal civil servants focussing on the energy transition in a particular neighbourhood. These Policy Fellows were matched with between three and six (EU or Associate country based) energy-SSH researchers, or 'Policy Associates', who worked across a broad range of SSH disciplines and energy themes. In total, 86 Associates participated in the full programme[7].

Fellows were grouped within five thematic categories identified at the application stage of the Fellowship, with different Energy-SHIFTS consortium partners acting as knowledge brokers and 'matchmakers' for the five areas: (i) Citizen Engagement, (ii) Social Acceptance, (iii) Just Transitions, (iv) Behaviours, and (v) Human Capital[6]. These groupings enabled the Fellows' to work closely with a named consortium member, as well as allowing Fellows to get together in smaller online workshops for discussion of synergies across their challenges.

Overall, this report has two main aims: the primary purpose is to present the collection of Fellow reports, which reflect the crucial insights and shifts in thinking from our 19 Policy Fellowships (Section 3 - 7). While readers are welcome to read the report from cover to end, we also encourage them to navigate through Sections 3 - 7 based on their own specific energy policy interests. These reports can be read as standalone resources for those who are interested in reading about the particular experience of any Fellow, and are also intended as standalone resources for the Fellows to use as records to feed into their future work. The reports include the main discussion points and SSH insights generated, as well as how the insights are planned to be translated into tangible policy impacts. The broad range of policy impacts are also visualised in at the end of the introduction.

A secondary aim of this report, found in Section 8, is the discussion of two key issues regarding the interactions of the Fellows and Associates: 1) examining shifts in thinking that can be observed across the Policy Fellows' understanding of the energy transition, in response to their interaction with Policy Associates; and 2) exploring the research-policy dialogue process that took place between the Fellows and Associates. First, we find that the Fellowship programme helped Fellows to raise systemic questions about their policy dilemmas, e.g. through unpacking concepts, complexity and knowledge paradigms. Second, we observe a reflexive turn, meaning that Fellows were challenged to investigate the particularities of their policy contexts, and how best practices might be relevant. Third, Fellows zoomed in on evaluating

issues of social justice throughout all elements of energy transitions, e.g. in terms of forecasting and planning actual implementation of energy projects. Fourth and finally, we reflect on issues of changing (institutional) roles and collaborations. With regards to evaluating the research-policy interactions that took place, we highlight both the policyworker and academic research perspective on the Fellowship programme. We then revisit the hypothesis that the programme enabled both policyworkers and researchers to strengthen their work through personal connections and a deeper, mutual understanding of each other's perspectives.

This report is part of a three-tier set of publications, the first of which was published in March 2019 and was entitled '*Live energy policy challenges: questions for the Social Sciences & Humanities*'. This provided an indication of the policy dilemmas faced by energy policyworkers across Europe, based on the 39 eligible applications for the Policy Fellowship programme[6]. This report is part two of the series, and focuses on the insights generated on the energy transition through the Fellowship journeys. The third report will provide a deep dive in the preconditions needed for fruitful exchanges in the policy-research interface, and guidelines for supporting similar initiatives aiming to bridge SSH research and policy realities. This report will be available in early 2021.

A key audience for this report are policyworkers across Europe who are looking for a deeper understanding of the policy challenges they encounter in their practice, and how SSH can support them in addressing these issues. It also provides an indication of the tangible impacts this may enable for them and their organisations. Furthermore, we hope it also provides inspiration for energy-SSH researchers that there is an audience of energy policyworkers keen to engage with their research, as well as lessons from on-the-ground policy challenges.

The report is structured as follows: Section 2 outlines how this report builds on the data that was collected from the interactions between the Fellows and the Associates. The following Sections 3 - 7 each detail a group of Fellowship Reports, sorted under the five thematic categories mentioned earlier (within which they are presented alphabetically by Fellow), and each with an introduction from the Energy-SHIFTS partner who facilitated interactions in that category[8]. Finally, we discuss our reflections on the main knowledge shifts and interactions between policyworkers and SSH researchers in the Discussion, in Section 8.

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7   This excludes the two Associates who shared a written response to the policy question of the Fellow who withdrew from the programme.

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8   Since each report is also available as a self-contained resource, we note that footnote numbering restarts for each report.

The Energy-SHIFTS Policy Fellowships: a visualisation

Fellowship programme timeline/activities

Meetings and workshops timeline

DEC 2019 — FELLOWS ARE ANNOUNCED ON WEBSITE

JAN 2020 — FELLOWS MEET WITH ENERGY-SHIFTS TEAM

FEB

MAR — FELLOW-ASSOCIATE ONE-ON-ONE MEETINGS

APR

MAY

JUN — ONLINE WORKSHOPS FOR EACH THEMATIC CATEGORY

JUL

Geographical spread of Fellows an Associates

▼ Fellow's location

● Associates' locations

Institutions

- EUROPEAN COMMISSION — 1
- MINISTERIAL / PUBLIC INSTITUTION — 2
- MUNICIPALITY — 3
- NGO/ THINK TANK — 4
- MINISTRY — 9
- ASSOCIATION — 1
- PRIVATE CORPORATION — 1
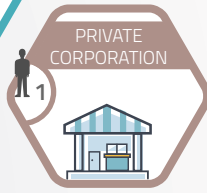
Total number of Fellows and Associates

🧍 Female
🧍 Male

21 Fellows

86 Associates

(Researchers from across the energy-related Social Sciences and Humanities)

Disciplines

Each Associate brought expertise from the Social Sciences and Humanities, including across the disciplines of:

BEHAVIOURAL STUDIES BUSINESS COMMUNICATION STUDIES DEVELOPMENT ECONOMICS ENVIRONMENTAL SOCIAL SCIENCE ETHICS HISTORY HUMAN GEOGRAPHY INTERNATIONAL RELATIONS LAW MARKETING PHILOSOPHY PLANNING POLITICS PSYCHOLOGY PUBLIC ADMINISTRATION RELIGIOUS STUDIES SCIENCE AND TECHNOLOGY STUDIES SOCIAL ANTHROPOLOGY SOCIAL POLICY SOCIOLOGY THEOLOGY TRANSITION STUDIES

Some Associates had additional experience across the following non-SSH disciplines:

ARCHITECTURE CHEMICAL ENGINEERING CLIMATE CHANGE STUDIES ENGINEERING ENGLISH LITERATURE ENVIRONMENTAL MANAGEMENT ENVIRONMENTAL SCIENCES FINANCE HUMAN ECOLOGY MATHEMATICS PHYSICS

Energy-SHIFTS

Policy impact highlights (next page)

Policy impact highlights

Here we have identified one key policy impact each Fellowship has had; the individual reports describe the full set of impacts.

Policy Fellow	Selected Impact	One sentence
Gersende Chaffardon	**Social input into technological energy forecasting**	Feeding into a new approach for technological energy forecasting at the **French** energy agency, to include societal issues relating to flexibility within the modelling process.
Gideon Friedmann	**Increasing public participation mechanisms**	Develop the use of public participatory mechanisms within the **Israeli** Ministry of Energy, for instance for its Rooftop PV policy.
Bojan Gajić	**Redefining a core policy goal: 'Eradicate Energy Poverty'**	It became clear that the common goal for the City of **Niš (Serbia)** may need to evolve, if it is to more broadly address interconnected energy challenges.
Görkem Güngör	**Integrating social narratives into models**	Integrating views from a range of energy stakeholders at the start of modelling studies, such as those carried out at the **Turkish** Ministry of Energy and Natural Resources.
Andrea de Ruiter, Charlotte Koot and Menno Ottens	**Facilitating a national Citizen Assembly process**	Direct feed-in to the development of a **Dutch** Citizen Assembly for Climate, including exploration of various options for public dialogue mechanisms.
Jan Magne Bae	**Changing language to reject the NIMBY concept**	The Not-In-My-BackYard concept is now seen as too simplistic when discussing social acceptance of wind energy in **Norway**.
Víctor Marcos Morell	**Zooming in on local contextual knowledge**	For the implementation of **Spanish** Energy and Climate strategies, the importance of local contextual considerations were highlighted e.g. during the Environmental Impact Assessment,.
Hanna Uhl	**Key takeaways for wind power regulation**	Insights in the context of the Act on Wind Energy Investments in **Poland** included that wind farms are perceived differently than other sources of noise and require reliable public consultancy processes.
Gert De Block	**Feeding into position papers e.g. on energy vulnerability**	Fellowship insights will feed into cross-**European** group CEDEC strategy documents, such as their Working Group on Consumers position paper on improving energy retail markets especially for the most vulnerable.
Katarzyna Dulko-Gaszyna	**Experimenting with new communication strategies**	Insight on how financial incentives and barriers impact **Polish** consumer behaviour on solar PV will lead to a stronger communication approach for IKEA Poland.
Marieke van der Enden	**Considering cultural heritage in municipal heat strategies**	Insights on the importance of locally-rooted narratives, e.g. the cultural importance of greenhouses, will feed into a **Dutch** municipal strategy 'Transitievisie Warmte'.
Joyca Leplae	**Starting with historical analysis to improve participation**	Before setting out on new participatory processes on energy in neighbourhoods, documentation on historical processes will be explored, in **Ghent** (Belgium).
Andreas Schneller	**Consulting on energy poverty indicators**	Conversations and consulation with the **German** government on the set up of energy poverty indicators.
Molly Walsh	**Supporting the transposition of the Clean Energy Package**	The ideas and perspectives from the Fellowship will support Friends of the Earth **Europe**'s work on transposing EU directives on energy to national law.
Miriam Bueno Lorenzo	**Including behaviours in new policy package on climate and energy**	Learnings will be used in the Fellow's work on the implementation of the **Spanish** 'Marco Estratégico de Energía y Clima' policy package.
Adel El Gammal	**Set up of new SSH collaboration agreements**	The **European** Energy Research Alliance has established a formal collaboration agreement with Associates.
Efstathios Peteves	**Initiating regular meetings with energy-SSH project coordinators**	Better stocktaking of the results of energy-SSH research, including through improved interactions between the **European** Commission's Joint Research Centre and H2020 energy-SSH projects.
Holly Jeffers	**Developing dialogue on the roles of heat installers**	Contributing to the roles of professionals being an active area of research-policy dialogue at the **UK** Goverment Department of Business, Energy & Industrial Strategy.
Agata Kuźmińska	**Translating SSH insights for policy outreach**	Exploration of translation of Fellowship resources into **Polish**, in order to facilitate broader national outreach with these materials.

2. Reporting methodology

The 19 Fellowship reports included in this collection capture the full 'Fellowship journey'. Following their initial selection, the Fellows' policy context and policy challenges were further developed with them, insights were generated at meetings between Fellows and Associates, and finally, tangible outputs and impacts were discussed for the Fellows' ongoing work. In this section, we describe how these reports were compiled by describing the Fellowship journey (Subsection 2.1) and the writing process for the Fellowship reports (Subsection 2.2).

2.1. The Fellowship journey

SELECTION OF POLICY FELLOWS	CONSTRUCTING THE POLICY CHALLENGE	MATCHING OF 3-6 POLICY ASSOCIATES PER FELLOW	PREPARING FOR THE CALLS	ONLINE DISCUSSIONS BETWEEN FELLOWS AND ASSOCIATES, ONLINE WORKSHOP	REFLECTING ON THE FELLOWSHIP PROCESS
STEP 1	STEP 2	STEP 3	STEP 4	STEP 5	STEP 6
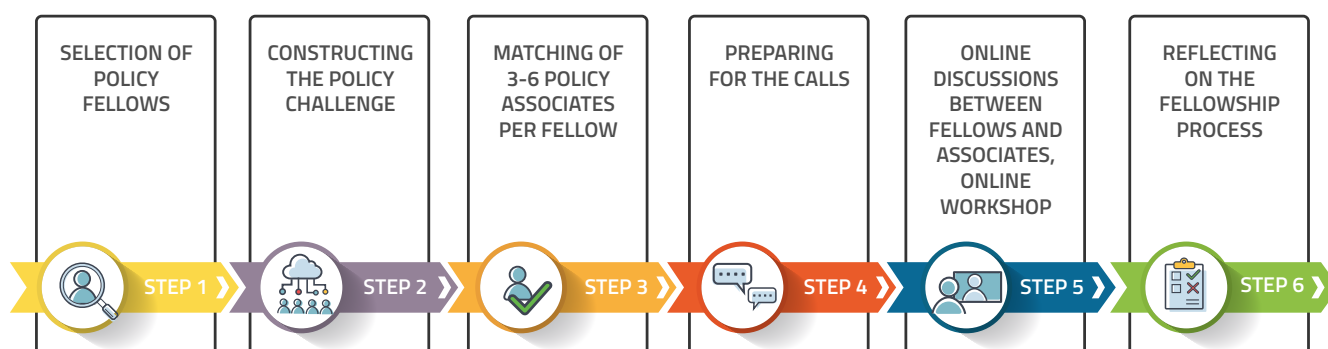
Fig 1. Overview of the Fellowship process.

This subsection describes in brief the steps conducted to guide the Fellows through the Fellowship programme, as illustrated in Figure 1 and further elaborated below. In the forthcoming third report from this Energy-SHIFTS series, published in early 2021, reflections on facilitating the Fellowship will be given in more detail.

Step 1 — Selection of Policy Fellows

From the open application call advertised on the Energy-SHIFTS website, 21 Fellows[9] were selected to participate in the programme according to the criteria

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9   Fellows and colleagues Andrea de Ruiter, Charlotte Koot and Menno Ottens joined forces from the start, making their participation a 'Team Fellowship'. One of the initial 22 Policy Fellows unfortunately had to withdraw from the programme due to the consequences related to the Covid-19 pandemic. This comes to a total of 21 Policy Fellows participating in the programme. However, in practice more than 21 policyworkers joined, as other Fellows also brought onboard one or more colleagues for (parts of) the Fellowship programme. Their involvement is mentioned at the start of each Fellowship report.

Connection, Scale, Innovation and Longevity[10]. After their admittance, the Fellows were grouped under five 'thematic categories' which were identified inductively from the Fellows' application forms (see Table 1). Each thematic category had a key Energy-SHIFTS partner responsible for the coordination: Citizen Engagement (Anglia Ruskin University), Social Acceptance (Jagiellonian University), Just Transitions (Dutch Research Institute for Transitions), Behaviours (EERA/Tecnalia), and Human Capital (Norwegian University of Science and Technology).

This allocation does not mean Fellows did not explore questions across other categories. Not only did Fellows often present a range of - sometimes interconnected, sometimes fairly separate - questions they wanted to explore, but the very process of the Fellowship was designed to introduce new perspectives from across SSH, and thus potentially new questions. In the previous report in this Energy-SHIFTS series we describe the selection and grouping process in greater detail[6].

Step 2 — Constructing the policy challenge

The Energy-SHIFTS consortium partner responsible for the respective thematic category conducted semi-structured introductory interviews with the selected Policy Fellows. During these interviews a summary of the policy context of the Fellow's current work was developed, as well as an overview of SSH-related policy challenges that would be shared with the Policy Associates to prepare the online discussions. These interviews provided a more nuanced understanding of the policy challenges, and provided the opportunity to ask Fellows about their priorities (e.g. in terms of SSH disciplines they were interested in), which complemented the data from the application form. As such, the interviews enabled the Energy-SHIFTS team to deepen their understanding of the Fellow's policy questions, thus providing a better starting point to look for Policy Associates to match with the Policy Fellows.

Table 1. The five thematic categories our Policy Fellows were assigned to.

Thematic category	Expanded description
Citizen Engagement	Including organising active citizen participation and citizen dialogue at different governmental levels, conveying public trust, and how to shift from a stakeholder approach to forge high-level agreements, to a democratic participatory approach.
Social Acceptance	Including how to communicate with citizens and businesses, and understand NIMBY-related[8] issues.
Just Transitions	Including creating policy instruments for alleviating energy poverty, making solar energy accessible, and fostering an inclusive energy transition.
Behaviours	Including accelerating low-carbon lifestyles, anticipating long-term behavioural changes, and designing policies on behavioural or social practice aspects.
Human Capital	Including implications for employees in the energy sector and readiness of consumers for changes in the energy market.

Step 3 — Matching of Policy Associates

Based on the application form and interviews, the Energy-SHIFTS team identified priorities for areas of SSH expertise and disciplines of relevance to each Fellow. Between three and six researchers were invited to become a Policy Associate for each Fellow. Recruiting Associates happened via a combination of an open call[11] and direct invitation. Selection criteria included providing a diversity in terms of discipline, gender, geographical region, and academic career level (with a desire to represent both senior and Early Career Researchers) for the group of Associates matched to each Fellow.

Step 4 — Preparing the online calls

Once Policy Associates confirmed their availability and willingness to join the programme, they

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10   Connection: Extent to which the question proposed by the applicant is a question that is reflected in Energy-SHIFTS' networks; Scale: Extent to which the applicant is in a position to apply the expertise gained in the fellowship to public interest and create public value; Innovation: Extent to which the policy question is part of the forefront of policy-making and pushes alternative/non-mainstream policy applications of SSH; Longevity: Extent to which the applicant has relevant experience, capabilities, enough time to take advantage of this opportunity, and aims to stay connected to academia.

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11   The recruitment of Associates is described in detail in de Geus, T., Lunevich, I., Ibrahim, I., Bode, N. and Robison, R., 2020. *Live energy policy challenges: questions for the Social Sciences & Humanities.* Cambridge: Energy-SHIFTS, p. 9

were provided with a briefing document. This generally included initial drafts of the 'Policy context' and 'Policy challenges' sections for their matched Fellow, as can be seen in the Fellowship reports in Sections 3 - 7. Associates were requested to prepare for the online calls by writing a short (typically one-page) response to the questions outlined in the brief, and share this with the Fellow prior to their call. This often included references to relevant research publications, by the Associate or others.

Step 5 — Liaising between Fellows and Associates

Bilateral online meetings

Fellows were requested to plan at least one online meeting with each of their Policy Associates to discuss their policy challenge and the Associate's written response. The discussions were self organised and took place between February and June 2020. One Fellow had a meeting in person with an Associate before Covid-19 restrictions were implemented, which prevented further face-to-face meetings (see Box 1 below). Fellows and Associates in the thematic category 'Human Capital' held group online introductory meetings in February. While most meetings were bilateral exchanges, sometimes a Fellow would invite one or more colleagues in the call[12], and on some occasions more than one Associate joined the same meeting. In the case of one Fellow, Gert De Block, part of the bi-lateral calls were conducted by a close colleague.

Thematic online workshops

Once most bilateral calls had been complete, the Energy-SHIFTS team responsible for each thematic category organised an interactive two-hour online workshop for the Fellows and Associates involved, to exchange impressions and to network. All online workshops had a slightly different format due to group size and degree of comparability between cases. In general, the Fellows were asked to openly reflect on their insights from the calls thus far. This opened up a possibility of cross-learning between the different Fellows, and invited attendees were able to have further discussion within a different group constellation.

Step 6 — Reflecting on the learning process

After the online workshops, both Fellows and Associates were asked to fill out a debrief survey, reflecting on both the process as well as the insights

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12   The Fellowship reports mention when a Fellow involved colleagues.

Box 1. Impact of the Covid-19 pandemic on the Fellowship programme.

The initial design of the Energy-SHIFTS Policy Fellowship programme included a travel budget to support face-to-face meetings between Fellows and Associates. However, due to Covid-19 restrictions, Fellows and Associates were not able to travel and meet each other in real life. Only Fellow Holly Jeffers and her Associate Sarah Hafner were able to meet in person just before travel restrictions were installed. .
The programme was also affected by secondary effects of Covid-19. Some Fellows and Associates became part of Covid-19 response teams in their organisations, which meant that their working conditions significantly changed. Others dealt with increased care responsibilities. This caused the planned activities of the Fellowship programme in some cases to be somewhat delayed. In the debrief evaluation of the Fellowship, Fellows reported that while the online meetings with Associates had been a valuable experience, face-to-face meetings would indeed add to the depth of exchanges and the building of collaborative relationships, and it is hoped this may happen in future.

they had gained from their discussions. These reflections provided the basis for the Energy-SHIFTS team to write the Fellowship reports, which were sent to Fellows for additional input and sign-off. This process is described in the next section.

2.2. Writing the Fellowship reports

Each report can be read as a summary of the Fellows' journey through the programme, summarising their case and initial SSH-related policy questions, and discussing the main insights from their meetings. In this subsection, we explain in brief how the data for the Fellowship reports was collected and translated into the reports. As mentioned, for each thematic category a different partner of the Energy-SHIFTS team was responsible for liaising with the Fellows and writing the reports. This naturally led to slight differences between the running of the categories, and indeed a useful range of facilitation techniques were thus imlpemented. Nevertheless, the team decided on a uniform structure for each of the reports, namely: (1) Policy context, (2) Policy challenges, (3) Discussion points and SSH insights, (4) Translation to policy impacts, and (5) Reflections from Associates. Figure 2 shows the relation between data sources and sections in the reports. The reports were written by the Energy-SHIFTS partners while liaising with the Fellows about the completeness and correctness of the information.

DATA SOURCE

FELLOWSHIP REPORT

FELLOW APPLICATION FORM

INTERVIEW NOTES

ASSOCIATES' WRITTEN RESPONSES

ASSOCIATES DEBRIEF SURVEYS

FELLOW DEBRIEF SURVEYS

ONLINE WORKSHOP NOTES

1 POLICY CONTEXT

2 POLICY CHALLENGES

POLICY BRIEF

3 DISCUSSION POINTS AND SSH INSIGHTS

4 TRANSLATION TO POLICY IMPACTS

5 REFLECTIONS FROM ASSOCIATES
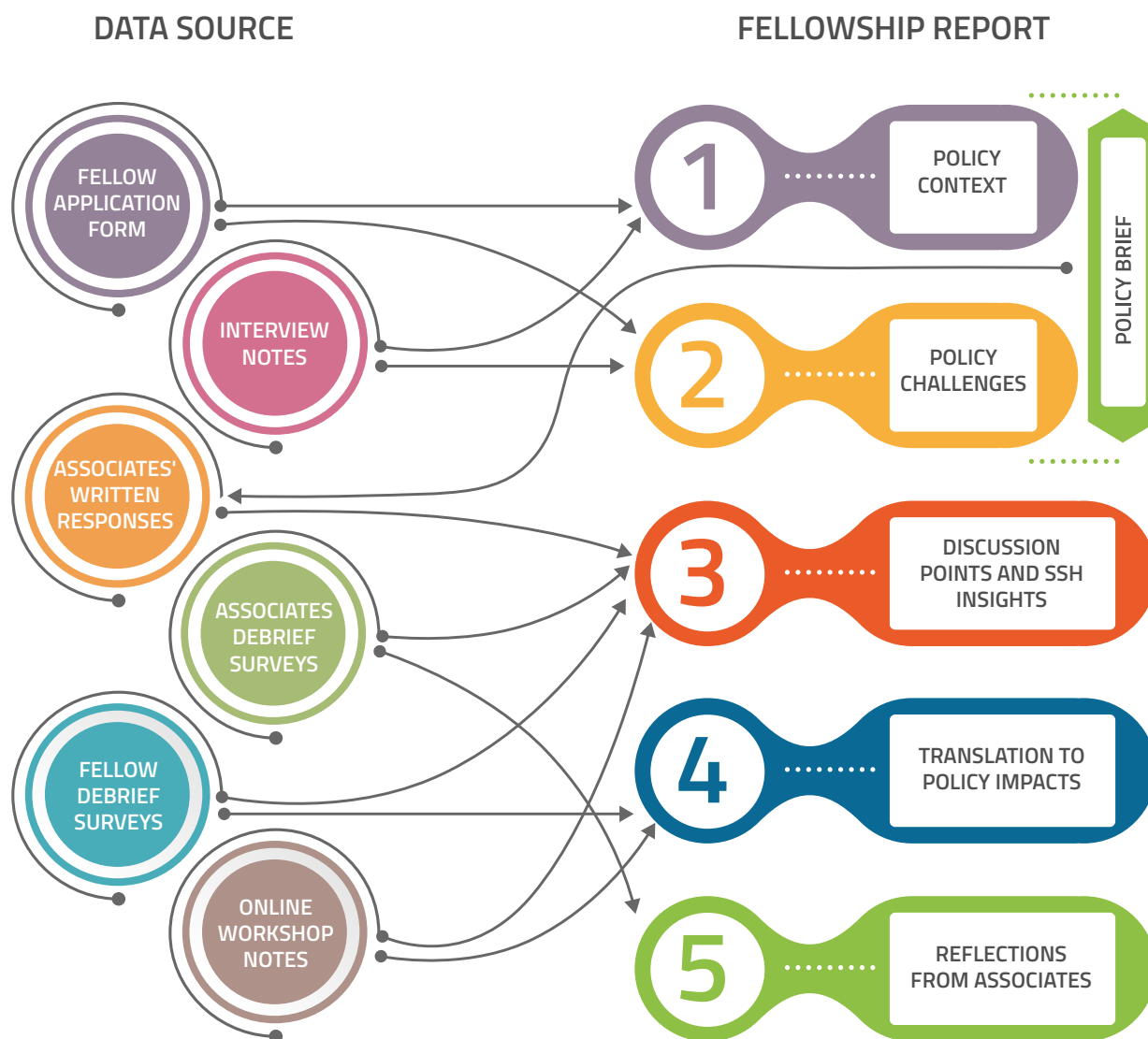
Fig 2. Relation of data sources (left) and sections of Fellowship reports (right).

The sections 'Policy context' and 'Policy challenges' were generally based on the **Policy brief** document. This document provided an initial summary of the Fellows' policy context and SSH questions, and was co-produced by the Fellow and the Energy-SHIFTS theme lead based on the **application form results** and a **semi-structured interview** with the Fellow. The sections 'Discussion points and SSH insights' and 'Translation to policy impacts' were primarily based on the **Fellow debrief survey** results. In this survey, the Fellows were asked to describe the main insights about their policy challenge that they gained from interacting with each Associate. In most cases, this section was enriched with data from the **written responses**: the responses to the policy brief that Associates shared

prior to the calls. The data was analysed by identifying key problems, positions and arguments. Furthermore, the quotes in the section 'Reflections from Associates' were collected from the **Associate debrief survey.**

The introductions of the thematic categories, which frame Sections 3 - 7, provide a cross analysis on common insights between the Fellowship reports in that Section. The introductions were enriched with insights from the **online workshops** involving multiple Fellows and Associates from that thematic category.. During these interactions, new insights emerged, and ideas were validated or challenged. In Section 3 - 8, we draw together insights from across the entire Fellowship programme.

3. Fellowship reports: Citizen Engagement

By Rosie Robison, Mel Rohse and Chris Foulds

At the European energy policy level, the role of citizens are being given increasing prominence, with a visible shift to the term 'citizens' in preference or in addition to the term 'consumers' when it comes to energy. This can be seen explicitly in a number of high level strategy documents, such as the *Clean Planet for all* communication[13] which proposes that: *"Climate change can only be tackled if people actively engage, as consumers and as citizens."* The newly launched European Green Deal adds the idea of co-design of policy directions, reflecting that *"Recent political events show that game changing policies only work if citizens are fully involved in designing them"*[14].

However, between and even within such strategies, different conceptualisations of 'Citizen Engagement' are apparent; the term can mean very different things to different policyworkers. This relates to both how the citizen is conceptualised (i.e. one's place within society and its various orderings) as well as how institutions would (or could) seek to 'engage' and interact with a citizen from that positioning. All of this debate arguably provides further justification for the existence of the Energy-SHIFTS Policy Fellowship programme and similar initiatives, to help navigate this landscape. The upsurge in interest in citizen engagement in EU policy, as well as the variable ways in which the term is used, are well described in a recent paper on the topic[15] from Gerd Schönwälder, Policy Officer within DG Research and Innovation at the European Commission. That paper also highlights a 'triple test' of whether engagement is *"inclusive, deliberative and influential"*[16] as being a useful way to assess whether an initiative truly counts as an 'engagement' strategy, rather than for example a communications one[17].

In the original applications to the Energy-SHIFTS Policy Fellowship programme, SSH-related policy challenges raised by European policyworkers linked to citizen engagement were seen as covering four underlying priorities: (1) The role of local authorities / municipalities in engaging with citizens; (2) Developing clearer roles between policymakers and citizens, in particular in terms of decision-making; (3) Incorporating citizen dialogue and empowerment into the implementation of regulatory frameworks; (4) Engaging with consumers to affect their behaviour. Our seven Fellows - including one team of three - assigned to this thematic category and working across **a municipality (1), government ministries (5), and a public institution (1),** reflected this diversity. Thus one Fellowship focussed on local authority rollout, three Fellowships on incorporating dialogue and citizens views within regulatory frameworks, and one covered a variety of aspects including engagement for behaviour change. As such, differences in how active or passive the target audience (citizens) were or could be, as well as how much freedom (or not) the policy institutions gave to those citizen to make e.g. participatory contributions through the design of their 'engagement' interventions, meant that discussions across the Fellowships did at some time or another cover the full range of rungs on the ladder of participation[18] even though they all initially labelled it as being engagement.

We next briefly describe each of the five reports:

Firstly, In '**Flexibility and societal issues in energy scenario planning in France**', we share Fellow Gersende Chaffardon's reflections on discussing her challenge of bringing SSH evidence into play in the French transmission system operator's forecasting exercise on electricity and consumption with her five Policy Associates. We highlight a range of SSH approaches

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13   A Clean Planet for all. A European strategic long-term vision for a prosperous, modern, competitive and climate neutral economy. See: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52018DC0773

14   The European Green Deal. See: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52019DC0640&from=EN

15   Schönwälder, G., 2020. Engaging citizens to boost climate neutrality and greater circularity: opportunities and challenges for research and innovation. *Clean Technologies and Environmental Policy*, pp.1-7.

16   Quoted from p2. of the above, as proposed by Janette Hartz-Karp, from the Institute Western Australia.

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17   We note that the strand of inclusive engagement has been explored in earlier Energy-SHIFTS activities, see: Suboticki, I., Świątkiewicz-Mośny, M., Ryghaug, M. and Skjølsvold, T.M., 2019. *Inclusive Engagement in Energy with special focus on low carbon transport solutions. Scoping workshop report.* Cambridge: Energy-SHIFTS.

18   See: https://www.citizenshandbook.org/arnstein-sladder.html

to flexibility in energy consumption, including what factors (e.g. cultural, psychological) underpin the adoption of energy technologies, and what role different actors (e.g. intermediaries, governments, citizens) can play in changing consumption patterns.

Next, in '**Increasing public engagement in Israeli energy policy**', we explore the take-away messages from Fellow Gideon Friedmann's discussion with his six Policy Associates regarding how to develop an effective public engagement strategy at the Israeli Ministry of Energy, including to achieve a better uptake of energy efficiency measures in the country. On this particular topic, we draw attention to a range of theoretical approaches (e.g. social practices) to behaviours beyond the mainstream economics framing to account for the wide range of motivations that shape people's decision-making processes. Regarding public engagement, we focus on the different meanings of the terms and on research-informed advice for meaningfully engaging the public.

A particularly striking impact from the Fellowships is found within the report '**Citizen engagement in city-wide retrofitting in Serbia**', from Fellow Bojan Gajić. Bojan found the experience of the Fellowship, and his discussions with five Associates, led to the realisation that a significant evolution of his city's aims with their retrofitting programme may be needed. Thus, moving from the aim of engagement to persuade homeowners to invest in energy efficiency upgrades, to the goal of 'Eradicating Energy Poverty' was proposed. Three policy priorities were identified to support this: building citizen capacity, aligning national policy, and ensuring convenience.

Fellow Görkem Güngör's discussions, in '**Incorporating citizens' values into Turkish energy policy decisions**', held during four meetings with Associates, brought him new perspectives on incorporating insights from SSH into his technical energy work, and in particular from qualitative methods into modelling work. Here Görkem was keen to discuss ways to understand citizens' values in different cultural contexts, and this led to reflections on the need to expand beyond e.g. expert elicitation methods to consider wider stakeholders. As with many of the Fellows, this has provided a foundation for future SSH interactions.

Finally, in '**Designing effective dialogue processes to connect with citizens in the implementation of the Dutch Climate Agreement**', we discuss how our team of three Fellows - Andrea de Ruiter, Charlotte Koot and Menno Ottens - brought a very detailed brief to their conversations, motivated by the need, prescribed in Dutch law, to set up a citizen dialogue process around climate. Discussions with their four Policy Associates included questions around the impacts such dialogue were intended to have, specific examples of processes run elsewhere, and ways to move beyond their Ministry's historical focus on individuals. They were particularly interested in ideas of mapping the participatory process landscape in the Netherlands, and took a number of clear ideas for next steps from their Fellowship.

The breadth of SSH disciplines represented by the matched Policy Associates means that the Policy Fellows had rich and diverse discussions about how to answer their policy challenges, as is reflected in every individual report. However, we are able to identify a range of cross-cutting themes in the Associate-Fellow conversations. First, several discussions acknowledged the **challenges inherent in bringing together quantitative and qualitative data**, such as in using scenario narratives in modelling future energy use. Second, **citizens' values, perceptions and culture** were discussed as important factors and motivational aspects in engaging with energy policy and adopting energy efficient measures or new technologies. Third, a **range of methods for citizen participation and engagement** were discussed, and two key lessons were drawn, (1) that public engagement should be planned for as early as possible, and (2) that a suite of approaches can be used together, providing that sufficient reflection has been given to the purpose of the engagement (relating to the notion of engagement being 'influential', as highlighted earlier).

Several of those themes were brought up during a virtual discussion that was held on 23 June 2020, attended by six Policy Fellows and eleven Policy Associates, with the aim of Fellows sharing their key takeaways from the one-to-one conversations as well as eliciting new insights for each Policy Fellow. In particular, participants discussed different engagement methods and their theoretical underpinnings (e.g. how psychology can inform the design of stakeholder consultation processes). In addition, the idea that it is mutually beneficial for researchers and policyworkers to work together came through strongly, including in how the participants interacted during the workshop which proved to be a useful networking tool.

Beyond the cross-cutting themes, each Policy Fellow benefitted from talking with a new set of Policy Associates at the workshop, and each came away with new insights on their policy problem. For example, in small group discussion with Gersende Chaffardon several researchers highlighted the idea of narrative-based exercises as tools to bridge disciplinary divides and bring together experts from different backgrounds. In Gideon Friedmann's case, there was a specific discussion on the need to change the

mindsets of policyworkers, and to provide them with SSH evidence to make policies that facilitate people's engagement with, for instance, energy demand reduction. In Görkem Güngör's group, issues related to energy access in rural and urban environments were highlighted as well as the different cultures and energy understandings in different countries. In another breakout discussion, Policy Associates cautioned the Dutch team about the challenges of implementing national level public engagement with diverse publics. For Bojan Gajić, in his city context, there was discussion of learning by doing and through longitudinal evaluation of things. One key message which was re-emphasised was how public engagement needs to make clear to participants how their contributions will feed into policy, and then demonstrate in the resulting policies where the contributions have been used.

Finally, we note that citizen engagement was a recurring theme across Fellowships within the other thematic categories, with mechanisms for participatory processes a particular focus of discussion and keen policy interest. Ultimately, citizen engagement needs a favourable 'policy environment' to be successful[15] and our Fellows were certainly motivated to help provide this.

3.1 Flexibility and societal issues in energy scenario planning in France

KEYWORDS   Flexibility in energy demand; Energy sufficiency; Social acceptance (of renewables); Demand response; Local energy communities

TIMEFRAME   Fellowship meetings with Associates took place in May and June 2020

ENERGY-SHIFTS RAPPORTEUR   Mel Rohse

Energy-SHIFTS Policy Fellow

Gersende Chaffardon

Research Projects Manager, Réseau de Transport d'Electricité (RTE),
Paris, France

▼ FELLOW'S
  LOCATION

● ASSOCIATES' LOCATIONS

Policy context

Within the R&D department of RTE (the French electricity transmission system operator), Gersende is part of a team working on *Energy Systems Foresight*. There she is responsible for RTE's recent research programme in Social Sciences and Humanities (SSH) applied to energy transition and climate change. RTE is in charge of carrying out forecasting exercises for France's electricity supply and consumption, also taking into account interdependences at European level. This mission is entrusted to it by law by the French State via a public service contract. This exercise is traditionally conducted with a purely technical and economic approach by engineering teams. Gersende is in charge of broadening this approach, for the first time, through feeding in societal aspects to the scenarios which are going to be used. RTE is looking at organising this scenario planning work around three areas: (1) consumption, (2) production, (3) flexibility. Gersende is particularly interested in understanding SSH insights into flexibility, including around the empirical areas of Electric Vehicles (EVs) and prosumption, since there is key interest in how peak demand could be moved to different times. In addition, in this scenario-modelling work, the figure of the consumer is still often reduced to an actor acting in a purely rational way (example: response to a tariff signal). Reducing consumers to this vision neglects essential levers of action to engage them in the energy transition. Gersende is also keen to explore how non-economic levers may be integral to the flexible consumption potentially sought (see quote).

> *With the crucial issue of the energy transition, a purely technical and economic approach is not enough. As I am not a researcher myself, I need to create academic contacts in order to collaborate on these topics. I have so many questions on the societal aspects of energy for which I don't have an answer that I am keen to consolidate my network to broaden my vision, including at European level.*

Gersende Chaffardon

Policy challenges

Based on the policy context above, Gersende prepared the following SSH-related questions to stimulate discussion with her matched Policy Associates; these were sent to Associates prior to conversations.

Main question:

- How can we include societal issues and impacts in the energetic transition scenarios constructed as part of the RTE French and European electricity forecasting exercise?

Sub-questions related to including social insights in scenario modelling:

- How can we move from qualitative data on energy demand analysis of demand response to data which can be used in models (e.g. how can we account for the motivations and values that impact on consumers' energy demand?);
- How can we take into account the diversity of individual consumption practices?;
- What are the boundaries of what social science might actually be able to 'predict' / feed into these scenarios?.

Sub-questions on flexibility:

- Empowerment of the 'active consumer': how to engage them in flexible practice (to deal with intermittent energy sources)?
- Perception of the risks associated with the flexibility of consumption: what is acceptable and what is not?

Matched Policy Associates

Given the policy challenges addressed by Gersende, the Energy-SHIFTS team looked for academics with knowledge of active consumers, understanding of flexibility, public engagement and acceptance of new technology, and was also guided by Gersende's reading of some academic papers on understanding attitudes around peak demand and demand response. Her five matched Policy Associates were:

Morgane Innocent – Postdoctoral Research Fellow, Laboratoire d'Economie et de Gestion de l'Ouest, Université de Bretagne Occidentale, Brest, France. Disciplines: Business, Psychology, Marketing, Behavioural Studies. Research interests: crowdsourcing innovation, sustainable skills and practices, individual values and sustainable practices. Her expertise was sought on consumer behaviour and energy saving in the context of individual transition practices, including on values associated with electricity consumption.

Farid Karimi – Researcher, Interdisciplinary Centre for Baltic Sea Region Research (IFZO), University of Greifswald, Germany. Disciplines and research interests: Energy Social Science, Energy Policy, Energy Politics and Risk Perception. Farid's expertise was sought on flexibility in energy systems with a focus on behavioural change with consideration of cultural orientation.

Jacopo Torriti – Professor of Energy Economics and Policy, Energy and Environmental Engineering Research Group, University of Reading, UK. Research interests: Flexible electricity demand economics, Energy Policy, Demand side response. Jacopo's expertise was sought on flexibility in energy demand and changes in demand side response from an economics perspective.

Tali Zohar – Environmental Consultant and PhD Researcher, Department of Natural Resources and Environmental Management, University of Haifa, Israel. Disciplines: Energy Social Science, Environmental Management. Research interests: Consumer behaviour, Demand side response, Middle actors, Energy transition. Her expertise was sought on middle-out perspectives, focusing on middle actors as agents of change in their top-down, bottom-up and sideways networks.

Gerald Taylor Aiken – Research Associate, Luxembourg Institute of Socio-Economic Research, Luxembourg. Disciplines: Human Geography, Human Ecology. Research interests: Community low Carbon Transition, sustainable communities, energy community. His expertise was sought on the role of community in the transition to low-carbon futures, including grassroots and community-based activism.

Discussion points and SSH insights

Each Policy Associate wrote a brief response to Gersende's policy challenges, and one-to-one conversations followed between 12 May and 19 June. At the end of the Fellowship programme, on 23 June, Gersende took part in an online workshop with other Fellows and Associates working on similar policy challenges under the 'citizen engagement' thematic category. In this section, we share the experiences and insights Gersende shared with us in her reflections. Quotes from the Associates are shown in italics in the main text.

The rhythms of everyday life impact on energy demand and flexibility

Through her meetings, it became apparent to Gersende that in order to engage consumers with flexible practice, one first needs to understand the dynamics of demand. In that respect, several of her meetings touched on what is

known about the rhythms of daily life and the organisation of households' timetables. A key concept in that respect is that of social practices, which remind us that people do not use energy *per se* but they use it to fulfil socially and temporally situated activities in their everyday lives. As a result, impacting on energy consumption such as peak demand cannot rely solely on pricing and load management (see quote from Gersende below); rather, it needs a change in how the sequences and timings of practices are organised at a societal level[1]. In that respect, quantitative data may be useful and can be used to input in energy scenario models, in so far as patterns can be identified. For example, research on the time dependence of social practices[2] has resulted in the characterisation of UK commuters according to the time they return home and the time they go to bed, which has implications for energy demand[3].

> ❝ *[This meeting] allowed me to confirm that the price signal is not the major concept to be mobilized in the flexibilisation of energy consumption.* ❞
>
> Gersende Chaffardon

A range of factors impact on innovation adoption

An important insight from Gersende's meetings were that there are many factors that impact on technology and innovation adoption, not just economic incentives (see quote from Gersende below). Within those, individuals' psychological well-being plays an important role. For example, research has found that people's well-being is linked to the power to control their own consumption, to meeting challenges in lowering their consumption and to sharing their experiences with their relatives. Another factor is linked to how innovation and technology are rolled out, and the issue of empowering households to make technology and new systems their own so that it works for their own purposes. Indeed, the necessity of co-designing with future users, and to avoid imposing new systems was seen as paramount for ensuring successful adoption. Both of those aspects are particularly relevant in the light of other research which has identified some of the challenges that consumers face when it comes to smart technology rolled out to improve flexibility, such as *"high purchase costs, feelings of alienation, loss of control over home routines and concerns over loss of privacy."*

> ❝ *I discovered ... the importance of the innovation dissemination process and the support that needs to be put in place for it to be fruitful.* ❞
>
> Gersende Chaffardon

Bringing together qualitative and quantitative data is needed but challenging

In her work, Gersende faces a particular challenge in that she is bound by the task she has to complete, which is to input into the intrinsically quantitative RTE energy scenarios. This raises challenges in terms of data and how qualitative data can be used in modelling and the value of doing so (see section below on quantification of energy policies). Yet, the methodologies associated with agent-based modelling were brought forward as a way of bringing together technical and social variables[4]. This is something Gersende is keen on exploring further with a follow-on conversation with her matched Associates.

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1   DEMAND, 2018. *Unpacking Peak Demand. Societal Rhythms of Energy and Travel.* https://www.youtube.com/watch?v=X-QJ-BQwOHz0 (last accessed: 25.09.2020)

2   Torriti, J. 2017. Understanding the timing of energy demand through time use data: Time of the day dependence of social practices. *Energy Research and Social Science*, 25, pp.37—47.

3   See: https://www.creds.ac.uk/flexibility/

4   Desmarchelier, B. and Fang, E.S. 2016. National culture and innovation diffusion: Exploratory insights from agent-based modelling. *Technological Forecasting and Social Change*, 105, pp.121—28.

National cultures influence energy demand

One element Gersende particularly picked up on as something she had not come across before, and which is under-reported in her line of work, is the role of culture on energy demand (see quote from Gersende below). Through her meetings with Associates, she heard about examples from different European countries, which demonstrated how national cultures influence energy practices. In particular, her attention was drawn to the impact of culture on perceptions of risks and benefits in relation to socio-technical innovation, which in turn would have consequences for flexibility. This was described by one Associate as follows: "*Societies are selective concerning risk and uncertainty. So, here the culture is a factor that could explain to some extent why societies are selective, and also it is matter 'who' decides about the importance of measures.*" This notably raised the issue of using French data in any future scenario modelling, and served a useful reminder that technical and economic factors only paint part of the picture.

> " *We discussed the importance of the cultural dimension in energy consumption and more specifically on the subject of flexibility. I had not considered this dimension at all until then.* "

Gersende Chaffardon

Intermediary actors are often ignored but play a part in demand reduction

Flexibility and consumption reduction are often analysed and encouraged at the scale of individuals within households, with a focus on behaviour change. However, a range of intermediary actors (e.g. installers, project coordinators, local authorities) can play a part in encouraging flexible consumption without relying on economic incentives. This brought forward the importance of scale analysis when considering how to design and implement energy demand reduction measures. Via a range of case studies in Israel, Gersende learnt about different types of levers that intermediate actors can activate to enable consumption flexibility, such as economic incentives, tailored information sent via text messages to households, and community engagement events[5].

The quantification of energy policies risks disengaging consumers

In discussing the implementation of energy policies, it became apparent that the quantification of energy consumption, linked to smart metering, runs the risk of distancing and disengaging consumers, which in turn would impact on the flexibility of consumer practices. Indeed, research into community energy schemes has shown that funding is often tied to quantitative measures (e.g. CO_2 reductions, kWh reductions, money saved), despite the fact that people's motivations to take part in such schemes are often qualitative. This has a number of consequences, including "'*crowding out' citizen involvement in energy transition*" by introducing a "calculative logic" at odds with key motivations for getting involved with community energy. Extended to consumers, the logic of setting targets for consumers risks excluding them from the energy transitions, as "*the ways citizens are engaged in flexible energy practice has key effects in how they then respond, act and behave*".

Translation to policy impacts

For Gersende, the Fellowship has opened up new areas of enquiry on flexibility and increased the credibility of social science approaches within her institution. At this key stage of scenario planning, Gersende plans to work with her colleagues to further translate social science evidence into their scenario modelling. This will include paying particular attention to ways of bringing qualitative and quantitative data together.

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5   Zohar, T., Parag, Y., and Ayalon, O. 2020. Strategizing demand management from the middle out: Harnessing middle actors to reduce peak electricity consumption. *Energy Research and Social Science*, 61, p. 101360.

Specifically, Gersende aims to translate her policy insights into the following two ongoing policy processes:

1. **RTE's forecasting exercise "Long term adequacy report on the electricity supply-demand balance in France"**, to be published around mid-2021. The results of the forecasting exercise will be used by the French government to guide its energy policy at both national and local level. Including wider social science research in this exercise has never been achieved before. During Autumn 2020, and building on her learnings through the Fellowship, Gersende will engage in discussion with the Research Officer in charge of modelling flexibility for the foresight exercise to develop a new approach to including societal issues relating to flexibility within the modelling process. Pragmatically, they will need to work together to assess which societal issues can be quantified (and therefore included directly in the modelling) and which cannot be quantified but could still be used in the writing of scenarios.

2. **Virtual public discussion aimed at preparing the bilan prévisionnel,** which forecasts flexibility from a technical point of view, in October/November 2020. Gersende will introduce the Research Officer to societal issues related to flexibility, as well as providing a short briefing paper to enable discussion of these issues during a public consultation on "projections on flexibility opportunities in demand response" (*Projections sur les gisements de flexibilité de la demande*), itself part of a wider consultation on the long term adequacy of electricity supply-demand balance in France[6]. This briefing will contribute to introducing SSH perspectives into RTE's discussions and strategic planning at a wider level.

Reflections from Associates

Associates were asked what they learnt about on-the-ground energy policy challenges from their virtual meeting with Gersende, bearing in mind that Gersende is the only person allocated to social science research within a large organisation. Here we share some of their reflections.

*"The meeting made me aware of the **difficulties for organisations and/or companies with an industrial energy culture to include social sciences** and behavioural issues in their prospective scenarios."*

*"I learned further about the **tendency for overlooking social factors** in energy policy [e.g. in large organisations]."*

*"I learned about RTE's **approaches to energy scenario forecasts**."*

*"[I learned about] the utilities and **regulators' need to try and predict consumers' behaviour**, even though it is not possible."*

*"I learned that **persuading technicians and engineers to take seriously humanities** [evidence] is a challenge."*

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6   See: https://www.concerte.fr/content/actualité-de-la-commission-perspectives-système-et-réseau

3.2 Increasing public engagement in Israeli energy policy

KEYWORDS Social acceptance; Citizen engagement in energy efficiency; Willingness to pay; Trust in government

TIMEFRAME Fellowship meetings with Associates were held in May and June 2020

ENERGY-SHIFTS RAPPORTEUR Mel Rohse
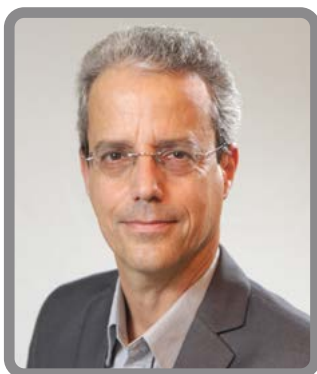
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Prague
CZECH REPUBLIC

Karlsruhe
GERMANY

Jerusalem
ISRAEL

▼ FELLOW'S LOCATION

● ASSOCIATES' LOCATIONS

Policy context

Gideon leads a team of around 15 people at the Ministry of Energy, with a budget the equivalent of €15m. The team oversees and interacts with R&D projects across academia, start-ups and demonstrators and in also involved in multiple international collaborations. There is some involvement of the Social Sciences (mainly Economic Sciences) in the Ministry's work at the moment.

A central question of this Policy Fellowship, working with Social Sciences and Humanities (SSH) scholars, was if and how the Israeli Energy Ministry can become more of a bridge between government and the public with regards to energy policy rollout. A particularly 'live' issue for the Ministry is related to public trust in energy policy, given recent controversies over gas field connection, and renewable rollout. The overall challenge therefore was related to the Ministry's engagement with the public on complex energy policy decisions.

As a starting point, Gideon was particularly interested in communication (and countering disinformation) given the various trade-offs that may need to be made in committing to certain policy paths. A specific example would be how to communicate about the trade-offs when making a policy decision on rooftop solar vs. large field solar or wind farms. There was also scope to develop this to think about wider public participation mechanisms to increase public involvement in sustainable energy pathways.
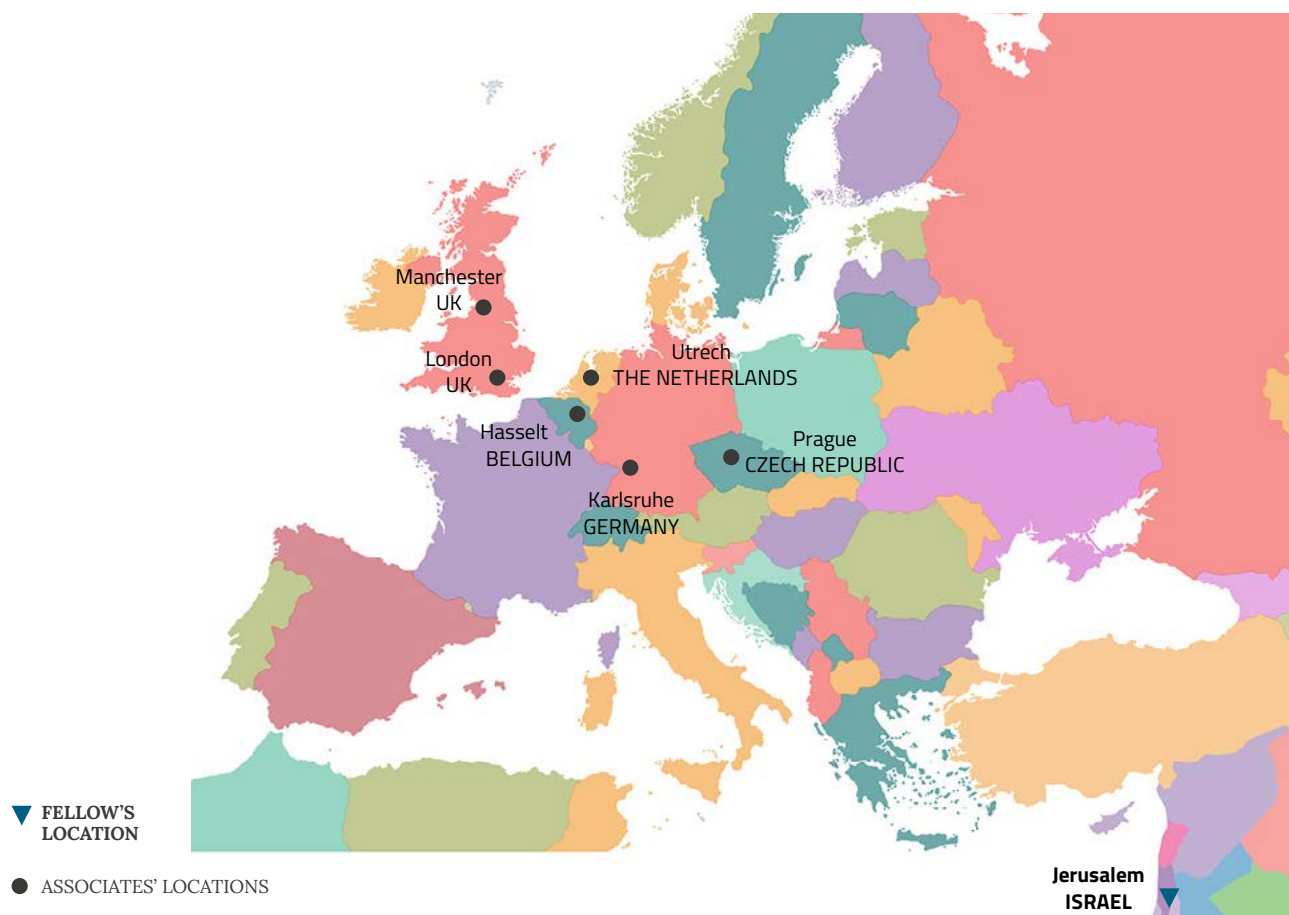
A secondary challenge concerned the achievement of energy efficiency improvements and in particular those which depend on the engagement of the consumers in steps to reduce energy consumption. As a result, Gideon was interested to find out more on people's motivations relating to energy saving. There was thus interest in Behavioural Economics approaches, but also building familiarity with alternatives to behavioural approaches.

> "*Implementation of policy is often strongly dependent on social aspects, which are often ignored. So, I am hoping to better be able to take those into account following the work in this program. In particular the issue of the loss of trust of the public in the government, and how to convey complex information as is often the case in the energy arena, when there is conflicting information from other sources.*"

Gideon Friedmann

Policy challenges

Given the policy context above, Gideon prepared the following SSH-related questions to stimulate discussion with his matched Policy Associates; these were sent to Associates prior to conversations.

- How can the Ministry of Energy better engage the public in energy policy decisions, particularly with regards complex energy issues where there may be trade-offs to be made?
- How can the Ministry motivate people to save energy, when the cost of energy is not high?
- How can the Ministry encourage people to take up renewables when return on investment may be long and the cost of oil is declining rapidly?

Matched Policy Associates

Given the policy challenges raised by Gideon, the Energy-SHIFTS team looked for academics with knowledge of consumer and behavioural Psychology, social practice theory (as an alternative to behavioural approaches), energy communities and public participation. The six Associates with which Gideon was matched were therefore as follows:

Victoria Taranu – Postdoctoral Researcher, Faculty of Architecture and Arts, Hasselt University, Belgium. Disciplinary expertise and research interests: Behavioural Economics, Energy efficiency, Sustainable buildings, Energy renovation. Victoria's expertise was behaviourally-informed and evidence based policies, applied psychology insights and different approaches to decision-making, including how message framing impacts on people's willingness to implement energy efficiency measures.

Audley Genus – Professor and Director of the Small Business Research Centre, Kingston Business School, Kingston University London, UK. Research interests: Innovation and renewable energy, Sustainable consumption practices, Sustainable and social entrepreneurship. Audley was invited to take part for his expertise on a range of social science approaches, in particular on social practice theories, and his insights from the ENERGISE project on good practice and innovation for sustainable energy.

Thomas Bauwens – Senior Researcher and Lecturer, Copernicus Institute of Sustainable Development, Utrecht University, the Netherlands. Disciplinary expertise and research interests: Environmental and Ecological Economics, Institutional Economics, Sociology, Sustainable business models and innovations, Community energy governance, Energy transition, Circular economy, Collective action for sustainability. Thomas was invited to take part due to his work and expertise on citizen participation, including marginalised voices, and renewable energy communities.

Carly McLachlan – Professor of Climate and Energy Policy and Director of Tyndall Manchester, Department of Mechanical Aerospace and Civil Engineering, University of Manchester, UK. Disciplinary expertise and research interests: Renewable Energy Socio-Economics, City level climate action, Renewable energy siting processes, Local energy, stakeholder engagement with energy. Carly's expertise was sought on community energy, and stakeholder engagement, including how the public engages with climate change, energy and sustainability issues.

Heike Brugger – Senior Researcher, Competence Center Energy Policy and Energy Markets, Fraunhofer Institute for Systems and Innovation Research ISI, Karlsruhe Germany. Disciplinary expertise and research interests: Political Science, as well as Mathematics and Physics, Energy efficiency, Digitalization, Sufficiency, Energy demand, Energy policies. Heike's experience and insights from the SONNET projects were sought, in particular her work on policy network analysis and on local energy transition and policy-making.

Eva Richter – Researcher and Lecturer, Department of Sociology, Faculty of Arts, Charles University, Czech Republic. Disciplinary expertise and research interests: Social Sciences, Environmental Sociology, Social research methodology, Risk perception, Policy attitudes, Social construction of nature, Environmentally-significant behaviour. Eva's expertise was sought on public responses to environmental policy-making, including on attitudes to climate change mitigation policies and their measurements.

Discussion points and SSH insights

Gideon had a bilateral call with each of his Policy Associates over 27 May to 18 June 2020, after which he participated in an online workshop on 23 June with other Fellows and Associates working on policy challenges under the 'Citizen Engagement' thematic category. In this section we highlight discussion points and insights that were shared by Gideon and the Associates after these exchanges. Quotes from Associates (as well as from references they gave) are given in italics in the text.

Individuals' motivations for adopting energy efficiency behaviours are complex and extend beyond economic motivations.

Gideon had conversations on energy efficiency and attitudes with several of the Associates, and across those conversations there was a consensus that information and economic incentives are not enough to encourage individual action. Rather, individuals have a range of motivations in how they engage with energy efficiency. Importantly, those motivations depend on space and time, and can vary across groups, across regions of a country, and across countries.

Beyond money savings, motivations can include *"energy independence, frugality, reliability"* and *"comfort, healthy indoor conditions, negative impact on health from emissions from fossil fuels, and social status"* which are all culturally sensitive. Gideon was also introduced to the idea of social practices[1], where *"practices comprise the material and the socially shared meanings of (e.g. keeping warm at home) combined with the knowledge that people employ in everyday energy use."*

When it comes to policy design, one way to account for behavioural and social factors would be to use laboratory experimental research[2] . Other techniques were discussed, such as randomised control trials to reveal individual preferences, although their limitations in energy and environment contexts were noted. Other considerations on policy design were mentioned, such as the importance of including justice aspects in terms of environmental and social costs and benefits within the policy design and policy communication.

In addition to motivations, *"policy-makers may want to consider energy literacy in the adoption of energy efficient appliances. Questions such as the extent to which people know and understand simple and more complex issues concerning their own energy consumption matter, such as how much energy they need in their home, or whether it is more efficient to use a kettle or a stove to heat water."*[3] In addition, Gideon was warned against a tendency amongst experts to view the public as misunderstanding the issues at hand, where in reality, the public have a lot of expertise, for example from *"their own lived experience of previous government and energy initiatives and their understanding of their own homes and transport needs. This needs to be valued and captured."*

> **"** *It is worthwhile to check the effects of policy experimentally, where possible. In most cases simple social experiments can give a good headway in the right direction.* **"**
>
> Gideon Friedmann

Public engagement with energy issues needs to be planned ahead of policy-making and needs to include public participation.

'Public engagement' is a term that can be used in many different ways, and Gideon's attention was drawn to the different meanings and processes behind different terms such as 'communication' with the public, as well as engagement, participation and involvement. In this respect, Gideon was introduced to some examples of participatory processes that have been tried out in Germany at various levels, such as with citizens at the city level or with

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1   A key reference flagged on social practices was: Shove, E. and Walker, G. (2014) What is energy for? Social practice and energy demand. *Theory, culture and society.* 31(5): pp.41-58.

2   An example of laboratory experimental research was given in: Taranu, V., Verbeek, G., and Nuyts, E. (2019) Upgrading the energy label for dwellings in Flanders: an example of a behaviourally informed policy too. *Building research and innovation*, 48(1), pp. 18-33

3   See for example the work of the CHEETAH project, https://www.briskee-cheetah.eu/

experts and lobbyist of renewable energy at the national level. For example, there is currently a Roadmap process in place for an energy efficiency roadmap for 2050 for the German Federal Ministry for Economic Affairs and Energy. Another example was that of citizen assemblies that have been recently run in the UK on climate change, although it was stressed that it is paramount that these activities have real impact as an outcome, as trust in policymakers can hang in the balance and future engagement would be harder if promises are made but not kept. For example in Greater Manchester (UK), a series of over 40 listening events were held to help shape the 5-year Environment plan. The report[4] this was based on set out the views of the public regarding key topics related to the plan.

This is not to say that 'communication' should be dismissed, and there are a range of factors that impact on the success of communication around renewable energy technologies. For example, the quality, not the quantity of information is paramount. *"Psychological research suggests that what matters most is not the amount of information made available, but the way it is communicated[5]. In particular, information is more likely to induce behavioural changes when it is specific, vivid, personalised and direct. The source of information and, more precisely, its trustworthiness, can also greatly affects its effectiveness."*

One take-away message for Gideon was on the importance of conducting social science research ahead of policymaking, or to have a social scientist within the policymaking team as this can support with public communication, which will always be specific to a particular topic and case.

Associates also proposed that members of the public should be engaged very early on in the process and in a meaningful manner, for example, with *"deciding what problems need to be tackled, finding the ways to tackle them, choosing the best one, planning its implementation etc."* This would contribute to building trust between the different stakeholders. *"For years, environmental policy and energy infrastructure has been planned and implemented using the top-down approach. However, such "decide-announce-defend" approaches can contribute to social conflict and loss of trust[6]. Such top-down approaches usually seek to improve acceptance or acceptability of energy projects or environmental policies in general, or raise support, try to lower the opposition. But regarding public responses in such a limited way can hinder any meaningful debate and engagement. The public can respond in many ways, including lack of interest, tolerance and many others[7]."*

Gideon was alerted to the shortcomings of the 'NIMBY" (Not In My Back Yard) concept, due in part to its simplicity and failure to take into account issues of trust (in technology developers), fairness (of siting processes and distributions of impacts and benefits), and place attachment (the emotional bond people have with a place).

> " *I really liked the idea of going beyond behavioural economics to social sciences understanding of behaviour. Potentially with the right experts, better engagement can be built into the decision-making process.* "
>
> Gideon Friedmann

Translations to policy impacts

Following his Fellowship, Gideon aims to translate his policy insights into the following policy processes and documents:

1. Use learnings to feed into the **process of addressing the lack of public support for renewable energy** and increase the uptake of electric vehicles in Israel;
2. **Increase the use of public participatory mechanisms** for the development of energy policy within the Ministry of Energy. For example, the Ministry is examining its Rooftop PV policy right now in a (long) public participation process.

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4   Greater Manchester Combined Authority (2018) *Greater Manchester's Springboard to a Green City Region.* https://www.greatermanchester-ca.gov.uk/media/1317/springboard-report.pdf [Last accessed 14 October 2020]

5   A relevant reference was flagged as: Stern, P.C. (1992) What psychology knows about energy conservation. *American Psychologist*, 47(10), pp. 1224-1232.

6   A relevant reference was flagged as: Devine-Wright, P. (ed) (2011) *Renewable Energy and the Public: From NIMBY to Participation.*

7   A relevant reference was flagged as: Kyselá, E., Ščasný, M. and Zvěřinová, I. (2019) Attitudes toward climate change mitigation policies: a review of measures and a construct of policy attitudes, *Climate Policy*, 19(7), pp. 878-892.

3. Contributing to work on the **national plan for energy efficiency**, including with work on improving energy labels.

In terms of working practices, Gideon would like to encourage colleagues who face a similar policy challenge to carefully plan their interaction with the public and to engage early, bearing in mind that engagement needs to be meaningful and is not simply a question of conveying information. He would like to alert colleagues to the many factors that impact on public behaviour, beyond NIMBYism. He would also recommend the wider use of tools from the Social Sciences.

Gideon has already followed up with some of his Associates, and hopes to do so again, in particular on the topic of energy labelling and on how to motivate people to save energy, drawing on research beyond Behavioural Economics.

Reflections from Associates

Associates were asked what they learnt about on-the-ground energy policy challenges from their virtual meeting with Gideon. Here we share some of their reflections which reflect the diversity of challenges Gideon brought to the Fellowship.

*"[I learned about] the **difficulty of engaging the public and generating trust** around new developments of offshore gas infrastructures and renewable energies."*

*"The aforementioned problem poses a great challenge and requires **not only behavioural economics or psychology, but social science**. There is [across government departments] a lack of knowledge about the possibilities offered by social science, which should be remedied."*

*"It was **very interesting to learn from the administration perspective which challenges they face**. Particularly in designing evidence-based policy and at the same time reaching acceptability on the ground."*

*"[I learned about] specific detail of technologies and **siting controversy** around gas pipelines."*

3.3 Citizen engagement in city-wide retrofitting in Serbia

KEYWORDS Energy poverty; Social acceptance (of energy efficiency programs); Political histories

TIMEFRAME Fellowship meetings with Associates were held in May 2020

ENERGY-SHIFTS RAPPORTEUR Chris Foulds
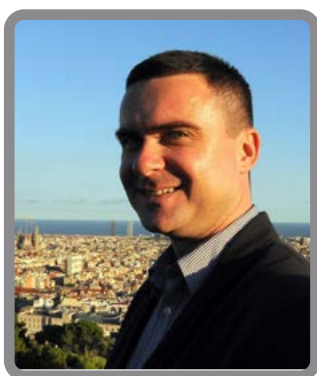
Energy-SHIFTS Policy Fellow

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Turin
ITALY

Niš
SERBIA

▼ FELLOW'S
LOCATION

● ASSOCIATES' LOCATIONS

Policy context

The City of Niš is the third largest city in Serbia. Bojan's role involves, amongst other things, overseeing energy data from public buildings, recommending projects, and directly managing large city schemes such as district heating, retrofit etc. Niš is launching several energy initiatives at the moment, and the municipality feels that increased citizen engagement will help in finding the best solutions to current energy challenges.

The municipality has had some difficult experiences in the past with regards to public acceptance of energy-related decisions made by local politicians. Changing a tariff system for District Heating caused huge dissatisfaction on the part of citizens, loss of trust in public institutions and even riots, but also led to further reactive political decisions made under public pressure. In this context, the city decided to launch a retrofitting program for residential buildings, and engagement of citizens and their acceptance of those activities are seen as crucial in the successful implementation of the program.

The City of Niš is also a partner in the EU Horizon 2020 project TOMORROW[1], via which they will be developing an 'Energy Transition RoadMap 2050', with the participation of stakeholders.

Bojan is in a key position of influence to be able to feed learnings from the Social Sciences & Humanities (SSH) into on-the-ground policy implementation on citizen engagement, and was keen to make full use of the Fellowship in this way (see quote).

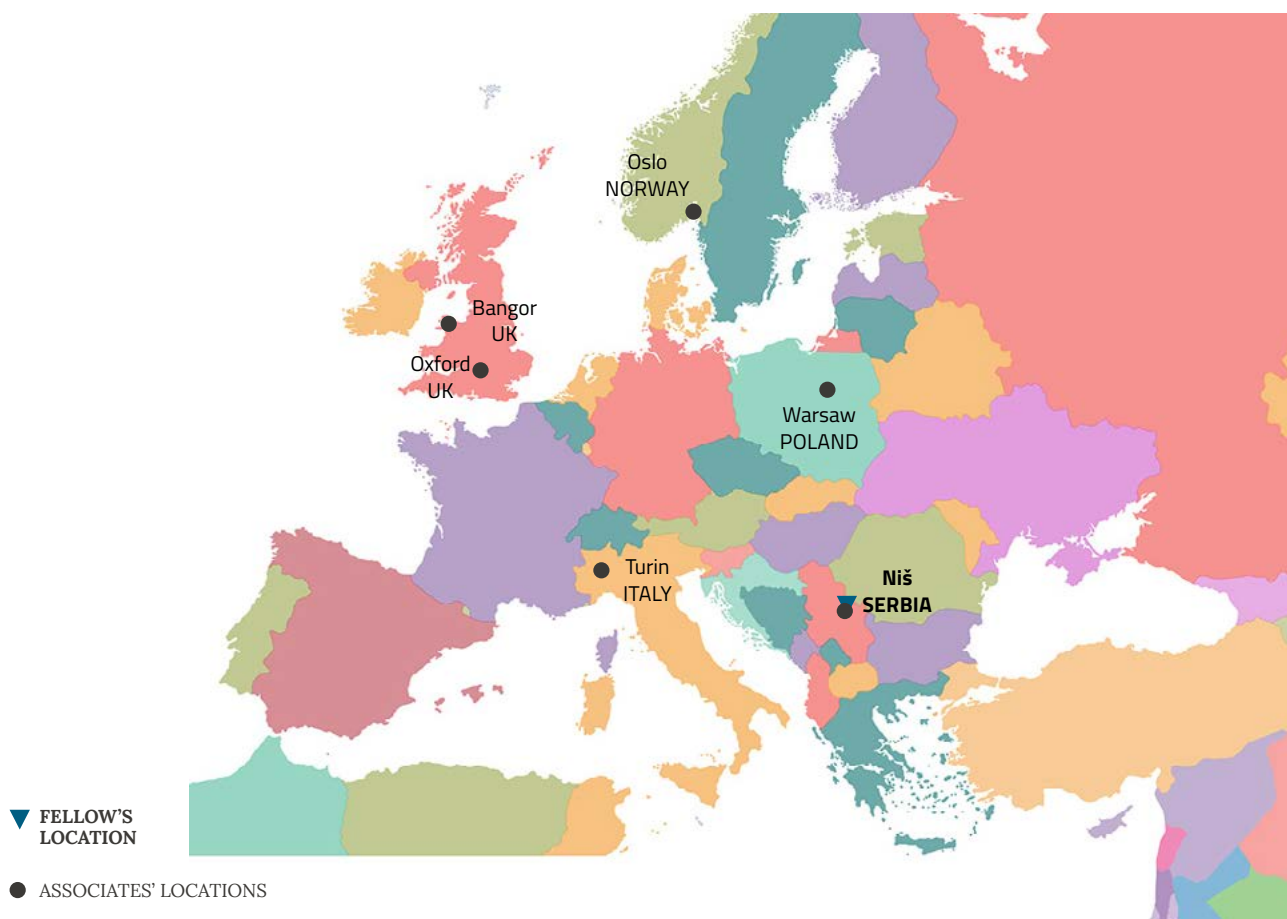> *My experience while working on energy topics at a local level is that important decisions in the field of energy will not be accepted if not developed together with citizens. I, as a technical person surrounded by many technical people, and working in a big and slow public administration, would like to build my confidence in discussing energy issues with those who do not have the same technical understanding as me (which is many citizens and politicians).*

Bojan Gajić

Policy challenges

Given the policy context above, the overall challenge Bojan was interested in discussing with Associates was: how to develop new citizen engagement programs to accompany city-wide retrofit schemes? In particular, he wanted to learn about better involving citizens in energy-related political decisions.

A secondary challenge concerned the development of the Energy Transition RoadMap 2050 (bearing in mind this will follow the TOMORROW project's methods), in particular by building Bojan's familiarity with stakeholder participation processes.

These challenges were shared with Associates prior to meetings.

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1   See: https://www.citiesoftomorrow.eu/

Matched Policy Associates

Given the policy challenges addressed by Bojan, the Energy-SHIFTS team looked for academics with knowledge of local and community-focused citizen engagement initiatives, within which municipalities held core responsibilities. Associate selection was also guided by Bojan's general networking and collaborative interests, for instance as part of the EU TOMORROW project. The five Associates matched with Bojan were:

Predrag Cvetkovic - Full Professor, Faculty of Law, University of Niš, Serbia. Predrag has considerable expertise in an array of legal matters, including issues relating to sustainable development. His significant expertise in practical governance issues as well as legislative mechanisms, in addition to clear familiarity with the Serbian policy contexts, was regarded as a fruitful starting point for good discussions around Bojan's policy interests.

Sioned Haf - Research Fellow, School of Environment, Natural Resources & Geography, Bangor University, UK. Sioned is a community energy researcher with a background in Geography, and also coordinates Carmarthenshire Energy Limited (local energy NGO). She recently completed a secondment with Energy Cities, where she did a literature review exercise for them entitled 'How Local Authorities can encourage citizen participation in energy transitions'. There was therefore clear alignment with Bojan's local policy challenges.

Colin Nolden - Vice Chancellor's Fellow, Law School, University of Bristol, UK, and Researcher, Environmental Change Institute, University of Oxford, UK. Colin is a sustainable energy policy expert, with a background in Geography and History, publishing on an array of issues including e.g. the governance of sustainable city business models, entrepreneurs and energy efficiency, energy service contracts, factors that encourage local authorities to engage with energy performance contracting for retrofitting, community energy business models and feed-in tariffs. As such, there were many synergies to build upon in conversation with Bojan.

Dario Padovan - Professor, Department of Culture, Politics and Society, University of Turin, Italy. Dario is a Sociologist with a specialism in energy and a track record in e.g. household consumption practices, social innovation, complex systems, sustainable comfort and energy saving, smart grids. Perhaps most significantly for the conversations, Dario coordinates the H2020 project, COMETS (COllective action Models for Energy Transition and Social innovation), which explores how citizens can be put at the centre of low-carbon energy system transitions – specifically to enable 'collective action' in new and novel ways.

Marta Struminska-Kutra - Associate Professor, Faculty of Theology Diaconia and Leadership Studies, VID Specialized University, Oslo, Norway, and Academic, Department of Social Sciences, Kozminsky University, Warsaw, Poland. Marta works across Organization Studies, Public Management, Public Administration, and Sociology. Marta was invited due to her extensive expertise in social innovation, organisation and leadership, with particular interests in e.g. public sector innovation, local governance and learning, institutional change.

Discussion points and SSH insights

Each Policy Associate wrote a brief response to Bojan's policy challenges, and one-to-one conversations followed between 7 and 18 May 2020. Towards the end of the Fellowship programme, Bojan engaged in an online workshop on 23 June alongside other Fellows and Associates who had working on policy challenges under the 'citizen engagement' thematic category.

In this section, we share the headline discussion themes that both Bojan and his Policy Associates shared with us in their reflections. Specifically, Bojan learnt that the core goal that brought energy-related local stakeholders together may need to evolve; from this, discussions generated three priorities that would help support its achievement. This new potential goal and its three subsequent priorities structure the following subsections.

Redefining a core goal: 'Eradicate Energy Poverty'

It became clear that the common goal for the City of Niš – which local stakeholders (the municipality included) follow – may need to evolve, if it is to more broadly address the interconnected energy challenges that are facing Niš. At present, the focus has remained steadily on engagement to persuade homeowners to invest in energy efficiency upgrades, but the one-to-one meetings pointed Bojan towards the wider aim of eradicating energy poverty.

In particular, Bojan is now especially mindful that the Niš citizens hit most heavily by energy poverty are experiencing social poverty too. He notes that around 50% of citizens live in single family houses and the majority of them use firewood and coal (very often even waste oil, solid waste, car tyres and other), burning them in old stoves and boilers. This 50% are in no position to buy any modern low-carbon energy or energy efficiency technologies. Most of the citizens choose only to heat the one room where they spend most of their time, too. All this is leading to poor living conditions and detrimental health impacts (e.g. via poor air quality, lack of thermal comfort).

Bojan was also concerned about issues around social inequalities and energy management may be exacerbating energy poverty in the city. For example, citizens living in buildings connected to a district-heating system are obliged to pay their heating bills, regardless of how expensive the bill may be or what their monthly incomes/expenditures are. To make matters worse, citizens with the lowest incomes are living in the buildings with the highest energy consumptions, leading to many of those with the least money having the highest bills. As such, energy poverty is a real problem for Niš', and Bojan believes it to be the necessary foundation to build citizen engagement initiatives around.

To address this new goal, three priorities were developed from the Fellowship.

Priority #1: Build capacities of citizens to secure their participation in the process

Bojan came into the Policy Fellowship programme acknowledging that citizen engagement matters, and his Fellowship experiences have only reaffirmed this. In discussing this, it became clear how one-size-fits-all solutions are unrealistic when engaging citizens, and how citizen engagement was not a multi-directional exchange, in that it was not only about expert knowledge being 'transferred' to non-experts – there was much to learn on all sides, especially if novel Social Science and Humanities methods are appropriately utilised. For instance, storytelling methods that focus on imagining the future could allow exchange to move beyond technicalities.

Priority #2: Secure the national support and policy alignment

The political landscapes – both locally and, in particular, nationally – were frequently discussed as constrained what was possible in the City of Niš. For example, the political histories (and related institutional arrangements) relating to Former Yugoslavia governance systems still affected what could be done in the present day. It was discussed, for instance, how a historic focus on self-governance – with workers at the centre and with strong organisations of syndicates and cooperatives – has led to Serbian citizens being firmly against community-owned process today. There was also discussion on how (defining appropriate) regulatory frameworks act as stimuli for initiating local action on low-carbon energy in the built environment.

Priority #3: Ensure ease and convenience when assisting motivated citizens

There was much discussion around the idea of a One-Stop-Shop, where citizens could receive all necessary information, contacts, and guidance, in helping them retrofit their homes. This suggestion related to the argument that making it as practically straightforward as possible to organise a retrofit would help already-motivated householders in actually making the leap to do a retrofit. It was clear that retrofit supply chains and intermediary organisations were still evolving and thus the provision of practical knowledge (e.g. all in one place, at one time) would be more useful than e.g. continuing information campaigns that argued for the (intellectual/theoretical) arguments for thinking about retrofits.

Translations to policy impacts

The on-the-ground policy impact of this work is very direct, given Bojan's day-to-day decision making role around community-level projects.

The dialogue undertaken in this Fellowship will therefore directly feed into:

1. The development of **a One-Stop Shop in Niš**, targeting the retrofit of residential buildings. To date, a concept and plan for a One-Stop Shop has been developed and interest has been shown by relevant donor organisations.
2. The development of **plans and feasibility projects focusing on establishing local energy cooperatives**. To date, a related project idea has been approved by the mPOWER programme, and the City of Niš will work on this in partnership with the City of Burgas (Bulgaria).
3. Assistance in the preparation of the **Sustainable Energy and Climate Action Plan (SECAP) 2030**, which will soon be launched. Many of planned activities will be reflecting conclusions of Fellowship dialogue.
4. More integral development of, and **consideration of societal factors in, residential buildings retrofitting schemes**. For example, a new initiative is under development (to be launched summer 2021) with the support of European Bank for Reconstruction and Development (EBRD), which has the potential for a step change in how citizens are engaged in Niš around energy.
5. Given the City of Niš' responsibilities in the EU Horizon 2020 project, TOMORROW – to work with stakeholders in producing an **Energy Transition Roadmap 2050** – these meetings will mean that the City will reflect more deeply on the design and delivery of citizen participation processes.

More generally, the priorities and ambitions underlying the City of Niš' design and implementation of future energy transition policies have evolved, in an attempt to better account for citizen motivations and everyday life. This is testament to Bojan's efforts and in-depth work as part of the Energy-SHIFTS Fellowship.

Reflections from Associates

Associates were asked what they learnt about on-the-ground energy policy challenges from their virtual meeting with Bojan. Here we share some of their reflections, which show a particular emphasis on enjoying the open and frank nature of exchanges.

*"We were **openly able to discuss political limitations and opportunities** which determine the 'playing field' on which energy related decisions are made."*

*"My expectations were fulfilled. I had clear communications with Bojan and **found our conversations to be both open and honest**."*

*"It was a really interesting conversation with Bojan, and has **inspired me to look more at eastern European experiences of energy transitions**. Research on energy transitions seem to be overly focused on Western Europe – so the Policy Fellowship programme has been very useful in shifting my perspective."*

*"It **taught me about important aspects of energy transitions**. We discussed these issues in a very open way."*

3.4 Incorporating citizens' values into Turkish energy policy decisions

KEYWORDS Modelling; Scenarios; Acceptance; Cultural contexts

TIMEFRAME Fellowship meetings with Associates took place in June 2020

ENERGY-SHIFTS RAPPORTEUR Rosie Robison

Energy-SHIFTS Policy Fellow

Görkem Güngör

Energy and Natural Resources Expert, Ministry of Energy and Natural Resources as well as PhD Researcher, Middle East Technical University[1], Ankara, Turkey

Cambridge UK

Cardiff UK

Malmö SWEDEN

Potsdam GERMANY

Ankara TURKEY

▼ FELLOW'S LOCATION

● ASSOCIATES' LOCATIONS

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1   Gorkem's participation in the Energy-SHIFTS project as a Policy Fellow was personal and not institutional, and thus this report doesn't necessarily reflect the opinion of the Ministry of Energy and Natural Resources or Middle East Technical University.

Policy context

Görkem is a researcher working on climate change and energy policy development at the Turkish Ministry of Energy and Natural Resources. He has an academic background in nuclear Engineering and Earth System Science (specifically, mathematical modelling of energy systems under environmental constraints using dynamic linear optimization solvers).

His current work involves the development of long-term energy planning and scenarios for Turkey. This primarily uses energy economics and mathematical modelling, using GAMS for both demand-side management and power supply strategies. Additionally, together with Middle East Technical University, he has some experience of qualitative research regarding the social dimensions of energy and climate policies. For example, running a pilot survey with energy experts on their perceptions for global and national energy and climate policies, as well as an expert elicitation survey to assess the narratives of socio-economic pathways and perceptions on climate change, energy technologies and environmental behaviour, in the Turkish context. From these experiences, he is keen to promote greater integration of social dimensions into the Ministry's modelling work, and hoped to explore this with his Fellowship.

Although climate change is a global issue requiring national actions, Görkem also sees how these national policy decisions are made by individuals (policymakers) through consultation at different levels with other individuals or groups. He therefore recognises how the values and beliefs of all groups – and the influence of local Turkish social norms – play a crucial role in the policymaking process. A secondary area of interest for his Fellowship was therefore to learn more about how research from across the Social Sciences and Humanities (SSH) can bring understanding of citizens' values into policy.

> *Current problems we face such as poverty, energy access, air pollution or climate change can't be solved relying only on engineering and mathematical methods. Therefore I believe that science should adopt a human-centred approach starting from the core values, beliefs and actions of individuals which affect societies and technologies. My objective is to collaborate with social scientists in my work on the acceptability of policy decisions related to climate change and the energy supply system.*

Görkem Güngör

Policy challenges

Based on the policy context above, Görkem prepared the following SSH-related questions to stimulate discussion with his matched Policy Associates; these were sent to Associates prior to conversations.

His overarching question was: How can a better understanding of citizens' values and beliefs related to climate change affect decisions of energy policymakers?

Underlying this, the two policy problems associated with his Fellowship were:

- how to better incorporate social science understandings into energy modelling processes; and,
- how might citizens' values and beliefs differ in different cultural contexts, and how can understanding of these feed into energy policy decisions.

Matched Policy Associates

Given the policy challenges outlined above, as well as specific disciplinary interests highlighted by Görkem, the Energy-SHIFTS team sought in particular experts to bring insights from social psychology, ecological philosophy, behavioural economics, and environmental ethics. The four Associates matched with Görkem were therefore:

Anders Melin - Senior Lecturer, Institute for Urban Research, Department of Global Political Studies, Malmö University, Sweden. Anders works across Ethics, International Relations, Humanities and Religious Studies, with a particular interest in energy and climate justice. Anders was invited due to his expertise in environmental ethics, as his work on how issues of justice can be considered during the construction and evaluation of energy scenarios.

Diana Süsser - Research Associate, Energy Transition Dynamics group, Institute for Advanced Sustainability Studies, Potsdam, Germany. Diana has a background in Human Geography and Environmental Sciences, and her research focuses on energy and climate policy, including policy-model interactions. Diana was invited due to her significant expertise in the integration of social aspects into energy models, bridging between technical and social energy research.

Aled Jones - Director, Global Sustainability Institute, Anglia Ruskin University, Cambridge, UK. SSH-related disciplines/research interests to be added by Associates or from online profile. Aled was invited due to his expertise in socio-economic aspects of energy system modelling, and work as part of the Centre for the Understanding of Sustainable Prosperity which seeks to understand how we can prosper within the world's environmental, social and economic limits. Sarah Hafner (PhD Researcher, Associate matched with Fellow Holly Jeffers) also joined Aled's call with Görkem.

Emily Cox - Research Associate, Understanding Risk Research Group, School of Psychology, Cardiff University, UK. Emily works across Environmental Policy and Social Psychology, focusing on social science dimensions of energy technologies such as public perceptions and ethics. Emily was invited to bring in-depth psychological expertise as well as due to her experience of working with engineers and technical energy experts.

Discussion points and SSH insights

Each Policy Associate wrote a response to Görkem's policy challenges, including extensive references to further research, and one-to-one conversations followed between 4 and 18 June 2020. At the end of the Fellowship programme, on 23 June, Görkem took part in an online workshop with other Fellows and Associates working on similar policy challenges under the 'Citizen Engagement' thematic category. In this section, we share insights from the Associates and Fellow, related to the policy challenges posed. Quotes from the Associates are shown in italics in the main text.

Integration of scenario narratives into modelling

Görkem's work involves modelling, in order to forecast both future energy power generation and energy supply/demand. With colleagues, he has been involved in extending these energy modelling studies to partly include social factors, to date primarily using survey and expert elicitation methods. However, as Görkem identified at the start of his Fellowship, this work could go a lot further, as one Associate explained: *"energy models are currently not able to sufficiently reflect social, political and technical interactions, e.g. renewable acceptance/opposition, renewable community ownership and policy design effects, and little attention is payed to actors and behaviours (e.g. politics, beliefs), which leads to an oversimplification of social realities."* As another Associate highlighted, even where models to seek

to involve individual behaviours, a common critique is that of the 'rational actor' assumption, which simply does not reflect how people engage with decisions around energy use: "*the 'rationality' assumption is not just associated with citizen behaviours but concerns the behaviour of all actors in these models.*"

A significant portion of the Fellowship conversations were on the topic of models, with Associates bringing a range of in-depth perspectives to the question of how to better include social science understandings into energy modelling. As one Associate commented "*Every modeller I've ever met has asked me this question, and unfortunately the simple answer is that human beings cannot generally be quantified!*". Nevertheless, there has been extensive research into how to approach this issue, including work which explores how different methods may provide different advantages. These include assessments from the SENTINEL[2] project which has sought to look at how policymakers across a range of country contexts are currently using models to inform their (energy transition related) decision making. This has shown the range of different strategies being used to "*Integrate human behaviour and social risks and opportunities*" into models, which as one Associate flagged up "*has been identified as one of four key challenges for models in the 21st century*".

The most commonly mentioned method for this type of integration was around using socio-technical narratives in the process of scenario building, which are then used either as the basis of models or to inform their development; there are a number of ways that qualitative input can be incorporated into this narrative/scenario building process. Although there are limitations, and some criticism that narratives often do not fully inform the final scenarios, this approach is generally seen as a significant improvement on simple cost optimisation techniques. Associates also discussed ways that this scenario building process may be made more participatory, including the use of discourse theory.

Görkem particularly felt that bringing scenario narratives into modelling using either 'bridging' or 'merging' strategies may be immediately useful for his work. Bridging looks to have twin tracks of modelling work and social science exploration, which engage in dialogue at key points, to inform each other[3]. Merging is more in-depth, and assumes that models can explicitly include social factors, and fundamentally adjusting models to take account for new variables or processes. Apart from scenario building, other approaches Associates flagged as ways to bring social factors more fully into models included: fuzzy cognitive (systems mapping); expert elicitation; agent based models; models using system dynamic principles. Importantly, Associates also highlighted what features models may need to be able to replicate or deal with in order to be able to simulate transitions.

Based on conversations with Associates, Görkem felt it would be important to look at ways to include narrative storylines into modelling processes, but importantly for these to be developed from not just the views of policy experts but other active energy stakeholders as well. Citizen involvement is discussed in more detail in the next two subsections.

Citizens' values in different cultural contexts

Görkem was interested broadly in how citizens' values and beliefs may differ in different cultural contexts. Conversation with Associates – and the academic style of asking questions *about* the question one is interested in – helped to refine this question, in two ways: (1) exploring the different types of 'cultural context' there may be; and (2) expanding consideration to ethical issues.

Firstly then, one Associate raised the multiple meanings of culture, and therefore the difference facets that may need to be considered when working with Turkish citizens. The most immediate use of the term often refers to geography, for example looking at the experience of citizens in Turkey as compared to other countries; this may depend on levels of familiarity in that country for example with climate change or energy issues. Secondly however, culture can be strongly tied to characteristics which are not primarily geographical. This may link into a sense of a religious community or indeed a workplace community (including the cultures present in policymaking organisations). These communities may in turn have a number of shared values, and Associates highlighted that given globalised communications systems this shared-values understandings are even more important, since people may also spend more time in contact with groups they are separated from geographically. Thirdly, the term has precise

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2   Sustainable Energy Transition Laboratory, see: https://sentinel.energy/. One interesting insight from the project showed the widespread use of models in policymaking, with almost two-third of 48 energy system modelling tools found to have a direct or indirect policy impact.

3   Trutnevyte, E., Hirt, L.F., Bauer, N., Cherp, A., Hawkes, A., Edelenbosch, O.Y., Pedde, S. and van Vuuren, D.P., 2019. Societal transformations in models for energy and climate policy: the ambitious next step. *One Earth*, 1(4), pp.423-433.

meaning in certain fields, specifically: *"cultural context can refer ... to Cultural Theory[4]. This posits that worldviews broadly fall into four categories: egalitarian, individualist, hierarchical, and fatalist. A person's worldview is influenced by their upbringing, peer group, experience etc, and is a strong predictor of their beliefs".* This discussion led to Görkem further developing his questions of interest with regards cultural dimensions, in particular to focus on cultural biases for further consideration in energy transition scenario narratives.

How to actually use insights into values in the policy work process was also discussed, with some of the tensions there may be in terms of politically trying to appeal to dominant worldviews. One Associate pointed out this can bring difficulties for climate action: **"***as we've seen in the US, this can lead to issues such as climate change becoming highly politicised and polarised.***"** There may also be ethical questions in altering messaging around climate change to try to appeal to certain groups, if this leads to certain risks being downplayed for example. Görkem flagged up at the start of his Fellowship his interest in the ethical and moral aspects of the policy challenges he is working on. This was also brought into discussion on how philosophical and religious worldviews may impact on environmental protection issues. The role of theology in the energy debate is arguably very under-represented in energy policymaking, however was an interesting point of discussion with Associates, drawing on the rich vein of work in this area and reflecting :*"Since the 1970s, there has been an increasing debate about humanity's moral relationship to nature within the world religions.***"**

All of this discussion led to expansion of possibilities for exploration in Görkem's work, as he explains:

> *I understand that the question on values and decisions of policy makers could be reformulated to include collective behaviour and group dynamics. As a researcher I am involved with interdisciplinary studies mainly with economists but I believe there is a lot of potential for studies in ethics for energy issues also having impact to modelling studies.*

Görkem Güngör

Methods for citizen participation

Finally, some of Görkem's Associate meetings moved on to discuss how to expand methods for citizen participation, with recent examples given from national government exercises across Europe. Associates highlighted that involvement of experts and policymakers in discussion may exclude important parts of the picture. As one Associate explained: **"***expert elicitation will only ever give a very partial view of social issues... publics are extremely plural, and engage in the energy system in a vast array of positive and proactive ways***"**

This is a topic which was also developed further in the online workshop discussions with a number of Fellows and their matched Associates, for example on the increasing use of digitisation to bring people into deliberation processes. Ultimately, there is a need for considering a very diverse range of actors, in order to achieve: *"systematic long term planning with transparency around changes in future policy targets .. consider[ing] relevant sectors, stakeholders, and additional co-benefits and adverse side-impacts of policies. These can then be ambitious and act as a driver for innovation."*

Translation to policy impacts

For Görkem, the Fellowship reinforced his desire to engage actively with social scientists to strengthen his policy work. He plans to take this forward in two specific ways:

1. **Further exploring the integration of social science research into the Ministry's energy models**
   Görkem's previous work has tended to include social studies at the end of a modelling process, for example his expert elicitation study mainly used the results of a modelling study as the basis of discussion. However, following his meetings he feels: *"integrating views at the start of the modelling study, before the narrative development, is more important"*, and this is something he will seek to discuss with colleagues and researchers whom

4   Douglas, M. and Wildavsky, A., 1983. *Risk and culture: An essay on the selection of technological and environmental dangers.* Univ of California Press.

he is acquainted with for further improvement of energy scenario narratives. Additionally, he is keen that such narrative scenarios should be developed not solely based on the views of policy experts, but also including other active energy stakeholders.

> " *As we extend the time horizon of our models, many more assumptions come into play (e.g. customer preferences of technologies). We need more of a basis for these assumptions.* "

Görkem Güngör

2. **Development of workshops with social scientists**

   As Görkem highlighted, in the Ministry, when it comes to the social sciences there is a strong focus on economics. He has found the experience of expanding his knowledge of other disciplines very useful, especially regarding customer preference and evaluation, but also the potential for studies in ethics to have a greater impact on modelling studies. Görkem is aware there are *"biases in decision making from relying only on consultation with social scientists instead of active engagement with them"* and this sees a great benefit for the Energy Ministry to hold workshops with social scientists, not only for consultation, but to discuss and cooperate at the beginning of processes. This is something he will look to develop by promoting this issue in seminars and workshops through collaboration with the academia.

> " *Active engagement with social scientists instead of solely consulting them would create more robust and long lasting policy recommendations.* "

Görkem Güngör

Learnings from Associates

Associates were asked what they learnt about on-the-ground energy policy challenges from their virtual meeting with Görkem. Here we share some of their reflections which particularly focussed on the learnings possible when considering a new country context.

"*I learnt a lot about the Turkish context, particularly their energy security challenges and the difficulty of balancing the 'trilemma' there (or of even getting policy-makers to accept that there is a trilemma which needs balancing!). Turkey is making great steps towards mitigating climate change, yet import dependence is a very real threat, and win-wins on the demand-side are challenging in an emerging economy context. Overall though, **I was surprised to learn that policy dynamics are very similar in Turkey. Just like [my own country], policy-makers are still prone to prioritising cost, and as a result tend to only include economists as representatives of 'social science'**. Also, policy-makers are reluctant to embrace complexity, and complex answers to societal questions are not easy for them to use.*"

"*[When considering the Energy Ministry, I learnt] they may be **very focussed on their specific areas**.*"

"*[I learnt more about] **the relevance [for policy work] of better understanding people's behaviour and energy use**.*"

"*I learned about **the challenges of Turkey to consider regional socio-cultural differences in policy-making**. People's values and past experiences play a large role for their attitude towards renewables. Regarding modelling, I learned that Turkey is currently evaluating its renewable energy potential. Modelling is still quite new to Turkey, but close collaborations with science could contribute to exploit its potential. Social aspects are not a priority for Turkish energy policy-making, however, there is an increasing awareness about the importance of people's values and attitudes.*"

3.5 Designing effective dialogue processes to connect with citizens in the implementation of the Dutch Climate Agreement

KEYWORDS Climate Policy; Interactive Governance; Citizen Participation; Citizen Engagement; Deliberative Democracy

TIMEFRAME Fellowship meetings with the Associates took place in April and May 2020

ENERGY-SHIFTS RAPPORTEUR Rosie Robison

Policy Fellows

This Fellowship uniquely involved a team of three colleagues who work within different teams of the same department

Andrea de Ruiter
Charlotte Koot
Menno Ottens

Senior Policy Officer/Senior Policy Officer/Policy Officer respectively, at Directorate-General of Climate and Energy, Ministry of Economic Affairs and Climate Policy,
The Hague, The Netherlands.

Lancaster UK

Norwich UK

The Hague
THE NETHERLANDS

Rotterdam, Eindhoven

▼ FELLOW'S LOCATION

● ASSOCIATES' LOCATIONS

Policy context

The recent finalisation of the Dutch Climate Agreement[1] (DCA) has been a major policy milestone for the Dutch government. Now, a transition is underway from the *policy-making phase* into the *implementation and execution* of that policy. Aspects of this implementation phase were the focus of this Fellowship involving three policyworkers with a keen interest in involving citizens in this process.

As the Fellows explained at the start of their Fellowship, a wide array of actors agreed upon the measures to reduce GHG-emissions specified in the Dutch Climate Agreement (DCA), using the traditional 'Polder-approach'. However, as with the predecessor of the DCA (the National Energy Agreement [2013-2020]) certain questions have been raised concerning both the process and the result in terms of its legitimacy. Critics in particular raise the question to what extend branch organisations, employer associations and employee-unions, and NGOs (actors involved in drawing up the DCA) actually represent their assumed constituencies and can make agreements that affect society to this deeply. As the DCA affects society as a whole, it is important to attain a higher and broader degree of public support in the implementation phase.

In addition, the DCA requires a 'citizen dialogue' process to be run aimed at gathering insights and increasing understanding of citizens' views and experiences of the energy transition. The process in development and there are detailed questions on how to design such an ongoing citizen dialogue for the period of a decade. Involving academic insight to answer questions such as these was a key reason for the team's interest in participating in the Energy-SHIFTS Policy Fellowship process , in order to discuss these issues with researchers from across the Social Sciences and Humanities (SSH).

> " *As three relatively new policy officers in this field, we believe more insight into the societal aspect of the energy transition would be beneficial, even essential to effectively bring this into practice. We each have a personal interest in the knowledge sector, and find that translating science to policy is a skill in and of itself that we would like to develop further. Similarly, we believe sharing our policy experience and insights could help science to think beyond theory.* "

Dutch Energy-SHIFTS Fellowship team

The Fellows' roles meant they were directly involved in the coming together and/or implementation of the DCA. As part of the implementation phase, they have contributed to setting up the framework for monitoring and evaluating the DCA and executing the agreed policies concerning citizens' participation and dialogue.

Policy challenges

Given the policy context above, the Fellows prepared the following overarching question for their Fellowship: **How do we move from the stakeholder approach taken thus far in developing the Dutch Climate Agreement, to one that includes and connects with citizens, in the implementation phase?**
Specific sub-questions of the above, which were shared with Associates prior to meetings to facilitate discussion, were:
- What are the take-aways from the Polder-approach both for (a) reaching future comparable climate goals and (b) the implementation phase of the DCA concerning public support?
- What are effective methods for gauging citizens' perspectives and interests, particularly of those groups whose voices generally are not well-represented in public dialogue and policy making?

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1   An English version of the DCA is available here: https://www.klimaatakkoord.nl/documenten/publicaties/2019/06/28/national-climate-agreement-the-netherlands. Of particular relevance are pp.225-228 entitled *Creating support in society*.

▪ How do we differentiate between *general attitudes* (e.g. climate is a key challenge, or a waste of public expenditure) versus *specific needs and perspectives* regarding citizens' own living environment and daily lives (e.g. no windmill in my backyard, or insulating one's home)?

Several relevant publications were also shared with Associates prior to meetings[2].

Matched Policy Associates

In the initial call between the Energy-SHIFTS team and the Dutch Fellowship team, we discussed their interest in public dialogue mechanisms, and this was something we particularly sought expertise in. In addition, we looked for Associates with experience with: psychosocial methods (facilitated/in-depth approaches), energy justice/marginalised voices, and energy/environmental policymaking. Finally, since the Dutch policy context was so relevant, we particularly approached Associates in the Netherlands. The clearly defined nature of the Fellows' policy challenges enabled identification of Associates with very specific expertise.

The four Associates were:

Darren McCauley – Professor of the Management of International Social Challenges, Department of Public Administration and Sociology, Erasmus University Rotterdam, the Netherlands. Darren is an interdisciplinary scholar but with collaborations across Environmental Social Sciences, Geography and Development. His research interests include fairness in energy systems, and comparative energy politics. Darren was invited to bring his significant expertise in energy justice and just transitions research, including leadership of international just transitions networks.

Ruth Mourik – Founder, DuneWorks, Eindhoven, the Netherlands. Ruth has a background in Anthropology, Sociology, and Science & Technology Studies. Following her PhD Ruth set up Duneworks, a private research 'for benefit' organisation specialising in the societal aspects of transitions towards an inclusive and sustainable climate. She was invited due to her extensive experience with facilitating methods, citizen engagement and ways to include wide and varying sections of the public in discussions.

Helen Pallett – Lecturer, 3S (Science, Society & Sustainability) Research Group, School of Environmental Sciences, University of East Anglia, Norwich, UK. Helen is an Environmental Geographer and Science & Technology Studies scholar interested in the relationships between science, democracy and the environment. She was invited due to her detailed research on participation, and the set-up of public dialogue mechanisms, as well as recent mapping of public engagement processes in the UK.

Rebecca Willis – Professor in Practice, Lancaster Environment Centre, Lancaster University, UK. Rebecca has a background working across Sociology and Political Sciences. Her research interests span environment, climate and energy policy and politics. Rebecca was invited to bring her insights on citizen dialogue in particular from her role as an Expert Lead for the UK's Citizen Assembly on Climate Change, launched in 2019.

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2   These included: (1) an article in the Economist: https://www.economist.com/europe/2019/07/09/costly-climate-measures-are-hard-to-sell-but-the-netherlands-has-a-plan; (2) a research paper concerning legitimacy and governance of the DCA: Ottens, M. and Edelenbos, J., 2019. Political leadership as meta-governance in sustainability transitions: A case study analysis of meta-governance in the case of the Dutch national agreement on climate. *Sustainability*, 11(1), p.110; (3) a brochure provided by the Social Economic Council, one of the major institutional anchors of the Dutch 'polder-model': https://www.ser.nl/-/media/ser/downloads/engels/2015/informatiebrochure-en.pdf; (4) a report concerning citizen dialogue related to DCA (Burgergesprekken   Klimaatakkoord)   https://www.npbo.nl/wp-content/uploads/2018/08/Rapport-meedenken-om-mee-te-doen-NPBO-bijeenkomsten-klimaatakkoord.pdf (in Dutch).

Discussion points and SSH insights

Together the Fellows undertook individual calls with each of the four Associates over 8th April to 14th May 2020. In this section we outline key areas the Fellows discussed with one or more Associates, in particular focussing on three ideas which resonated most and therefore the Fellows chose to highlight in an online workshop with other Fellows and Associates working under the same thematic category on 23 June 2020. Italicised quotes throughout are from the Associates.

The necessity of using a suite of approaches, and detailed questioning about the *purposes* of engagement

At a regional and local level, processes have been put in place for government and citizens to work together to implement climate policy. The Fellows indicated that their department is often informed through these subnational levels of government and public participation, but is looking at ways to engage with citizens more directly by finding an approach that works at a national level. In working towards this larger scale approach however, the Fellowship discussions had emphasised to them the importance and indeed necessity of using tailor made methods for different groups, if broad participation is sought. Different consultation approaches will exclude or include different parts of society and there will be no one perfect method which brings everyone around the table. This message could easily be overlooked or minimised in policy circles due to the increased complexity which is inevitably involved in putting this to practice. Indeed Associates highlighted the tendency to 'fall back' on large scale surveys which are quicker and cheaper to run, but do not allow for an approach based on in-depth dialogue. As one Associate said: *"Traditionally, large-scale surveys were employed. This is insufficient and lacks innovation. The real value* [of examples Fellows' highlighted as interesting] *in citizens engagements is the co-construction of shared problems and solutions."*

In this context therefore, as the Fellows' team develop new national engagement processes, Associates were able to highlight many questions which they felt may need to be asked and answered during the design process. This is one of the central and valuable features of an academic approach, to bring precise questioning to the planning stage of endeavours – what *exactly* are you trying to do, and why? Thus Associates brought to their conversations detailed questions about: (a) what (if anything) might actually be changed on the basis of such engagement processes? *"In other words, what kind of legitimacy is sought? With whom and why?"* (b) what the attitude to diversity in views would be, how would very different opinions be considered (by government or decision makers) and how would choices be made? *"How will the process, especially in light of legitimation, deal with conflicting values and needs?"* (c) what would those citizens who get involved in engagement processes get out of it? *"those voices not often heard would not be very inclined to participate if it is just to check"*. This type of questioning was echoed in terms of communicating the purpose of any engagement processes: *"it is important to be very upfront about what is and isn't up for discussion, so that people have clear expectations of what the process is likely to lead to."*

In support of the above, Associates were able to highlight relevant SSH research including on how identities impact on our role in dialogue, deliberative democracy[3], and environmental justice processes. Various frameworks based in the research literature designed to allow explicit consideration of these approaches were suggested to the Fellows, including one which identifies five key elements of a just process: *Recognition – Capability – Distribution – Responsibility – Participation.* Moreover, Associates highlighted the importance of a mixed-method approach, since there is not one single method available that fits all target groups and goals.

Institutionalising national citizen engagement with climate policy

There are currently a number of formal consultation processes which may be carried out on a one-off basis related to specific Dutch policies (for example concerning a national carbon tax, a bill on district hearing and citizens' engagement on regional energy strategies). However discussion with the Associates raised several new possibilities of applying methods which would allow formalisation of these engagement processes. Two specific examples suggested by Associates were (1) methods used in observatories, formal institutions which monitor and undertake engagement activities (such as 'participation mapping'), (2) a (regular) citizen's assembly on climate and/or energy

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3   *"Deliberative democracy means citizens communicating about and reflecting upon preferences, judgments and values regarding common concerns. ... Deliberation features civility and respect, mutual justification, listening, reflection and openness to persuasion."* Dryzek, J.S. and Niemeyer, S., 2019. Deliberative democracy and climate governance. *Nature human behaviour*, 3(5), p.411.

issues. This discussion feeds into one of the most direct policy impacts of the Fellowship, namely planning for a citizens' dialogue, for which the possibility of a Dutch citizen assembly for climate issues is currently being explored – see further discussion at the end of this report. As detailed by one Associate in regards politicians they met in their own research, citizen assemblies can also be transformative for the politicians involved: *"One of the main issues politicians told me they faced was a lack of public support for climate policy. I found that they underestimated the level of support (e.g. compared to polling data). This is one reason why I am a big supporter of deliberative processes like Citizens' Assemblies, Citizens' Juries and deliberative workshops – to allow politicians and citizens to debate and explore solutions together. In my experience of these processes, politicians often realise that there is more of a mandate than they had assumed."*

This discussion also links directly into considering what engagement processes are already being undertaken across the Netherlands, and effectively utilising learnings from these. As highlighted by one Associate: *"By mapping the range of different trajectories being envisaged in the system, you will be better prepared to account for and negotiate around areas of likely public resistance or disagreement. And you may also find that in many examples of public engagement around climate change and energy, groups of citizens are enacting transformations which are far more radical than those imagined by government, industry or big NGOs."* This type of mapping was picked up by the Fellows as having significant potential, and again is discussed at the end of this report.

Taking into account *systemic impacts* on groups, rather than individuals

As a former Ministry of *Economic* Affairs (now Ministry of Economic Affairs and Climate Policy), Fellows were conscious of a historical focus within their department on individual behaviours and attitudes and an economic rationale. This ties in with conversation about social practice theory approaches, as discussed with one of the Associates, as this requires policy makers to look beyond individual decision making and also incorporate social, cultural, and material factors into policy analysis and development. Now the Fellows and their colleagues are keen to expand to look more widely at different sections of society, and consider the different conditions and systems that people live within. However this is not yet done systematically. Through their discussions with the Policy Associates, the Fellows felt that taking account impacts on groups and social interactions, not just individuals, to be particularly important when it comes to ensuring a 'just' energy transition. Thus they are interested to further involve *energy justice* thinking in the Dutch approach to climate policy participation. Key elements they took away from these discussions included the importance of improved knowledge on the precise impacts of the energy transition on a 'just' society, indicators that have been developed to measure energy justice as well as regarding the practical implementation of existing initiatives, for example the Board of the Just Transitions network.

Translation to policy impacts

The DCA requires the national government to formulate a national climate policy plan every five years, the next being due in 2024. Before then, insights from the Fellowship will directly feed into (1) the societal platform and (2) the public dialogue mechanism, which are to be set up as part of the governance of the Climate Agreement. This and other direct impacts are discussed in this section.

1. **Immediate reporting to senior management of Directorate-General Climate and Energy**
    The Fellows described how policymaking, involving large teams and many layers of decision making, is often a time consuming process and directions may not change fast. Nevertheless, they have immediately fed back insights from the Fellowship to senior management of their team, via several updates in regular meetings with senior managers and directors as well as a more in-depth brainstorm concerning the take-aways of the Energy SHIFTS project. In these meetings, the following aspects were discussed in more detail: the further explorations of a citizens' assembly, 'mapping' as a method for researching public participation and the potential application of the framework of energy justice in the context of the Netherlands.

2. **Mapping analysis of the Dutch public participation landscape**

    A new idea which was introduced to the Fellows via their meetings was that of carrying out a mapping analysis of all the different public participation work (around climate change/energy) which is already going on, or has been carried out over a specified timeframe, across the Netherlands. The Fellows felt this would really help 'connect the dots' of which processes are being implemented as well as enable analysis of which topics are being addressed in formal consultation processes in the Netherlands and which topics aren't. The Fellows have discussed the method with TNO, a Dutch research institute, and are preparing a shared project to apply this method in the context of the Netherlands. This work could also feed into the setting up of a Dutch citizen assembly (discussed next). The Associates involved will join the Fellows and TNO in a meeting to exchange knowledge and experience.

3. **Development and setting up of a Dutch citizen assembly**

    As highlighted from the start of the Fellowship, setting up of a formal public dialogue mechanism, as mandated in the DCA, was a key area the Fellows were seeking expertise in. The ministry has been conducting a formal exploration into the various options for public dialogue mechanisms (e.g. citizens' assembly, G1000) and input from the Fellowship have directly fed into this. As a result, plans for a Dutch citizen assembly have in fact been sped up over the period of the Fellowship. Next steps will involve further discussion with senior managers and further research on potential applications in the Netherlands and insights from the Fellowship informing these next steps include in particular the notion that a citizens' assembly should be prepared and supported very carefully.

4. **Feeding insights into Regional Energy Strategies**

    Finally, the Ministry of Economic Affairs and Climate Policy is involved with the coordination of 30 Regional Energy Strategies across the country. These regions are newly designated, have no formal, governmental status and require municipalities, provinces and water boards to together establish energy policies in collaboration with regional stakeholders and citizens.

Whilst insights from the Fellowship primarily focussed on the national level, the discussions may interlink with developments in these strategies.

Reflections from Associates

We asked the Policy Associates what they learned about on-the-ground energy policy challenges from their interactions. Key quotes are as follows, which emphasise how the Dutch team hit the ground running with an in-depth understanding of many of the social scientific issues at play:

*"I learnt that there was a great deal of understanding already on how to come to decisions. There was less awareness and knowledge about how to implement those decisions. **It challenged my assumption that making a decision is the most difficult part** of energy related issues. In reality, the actual implementation of decisions is much harder."*

*"What became apparent is that the **policy officers I spoke with are very passionate about inclusion and participation**, which was heart-warming. The biggest challenge they face is to connect the national policy level to the day-to-day level of implementation."*

*"I learned a lot about the **role of legal challenges** in climate policy / strategy"* [one meeting included discussion of the Urgenda Climate Case against the Dutch Government]

*"A particular challenge in this case seems to have been around the perceived democratic legitimacy (or not) of the DCA given the limited amount of citizen engagement that the stakeholder 'Polder' process involved. [And therefore] how to robustly implement this process – which requires 49% GHG reductions in the next 10 years – whilst also engaging citizens in a meaningful way. The Fellows were **much better informed about social scientific research on this topic than I had expected, and therefore were much more open to the arguments I was making about thinking about public engagement in a slightly different way.** I expected … that I would have to do much more to justify and explain my points, but actually it felt like talking to fellow academic social scientists. I was also surprised at the range of activities which are going on related to public engagement and climate change in the Netherlands … and the close relationship between the funding of research and citizen engagement strategies."*

4. Fellowship reports: Social Acceptance

By Aleksandra Wagner, Seweryn Krupnik, Tadeusz Rudek, and Maria Światkiewicz-Mośny

Within applications to the Energy-SHIFTS Policy Fellowship programme, key areas of interest for European policyworkers related to 'Social Acceptance' were previously identified as relating to two empirical areas: (1) acceptance of energy policy by citizens, e.g. concerning the need for greater climate action, or specific regulation; (2) acceptance of energy policy by businesses, e.g. concerning its impact on the private sector or responses by business to invitations to take action[19]. It is important to take note here of the critical assessment of the implications of such a 'persuasive' understanding of social acceptance by researchers. Framing social interaction between public authorities and business or citizens as having the objective of subjugation, rather than primarily as engaging in a discussion or engagement process, arguably frames the implementation of energy policy as a problem that needs to be solved, and negates ethical dilemmas regarding attempts to change attitudes and beliefs of other social actors. This tension in the notion of social acceptance was recognised and observed during the online workshop held with Fellows and Associates towards the end of the programme, on 4 June 2020. As one Associate argued: "*Although in sustainability transitions technocratic considerations tend to be privileged over democratic ones, it is through public accountability and democracy that policy decisions can secure public legitimacy and more equitable and just outcomes.*" Nevertheless, social acceptance remains both a common starting framework for policy-research discussion and - as for all the thematic categories - did not constrain Fellowship discussions which were wide-ranging and indeed open to critical discussion of the concept of acceptance.

The thematic category of Social Acceptance originally involved four Policy Fellows, who respectively work at **an NGO (1) and local government (3)**. The following sections report on the facilitated cooperation between three out of four Fellows and their matched Associates, as work with the fourth Policy Fellow was unexpectedly

interrupted due to the implications of the Covid-19 pandemic. Therefore, instead of providing a full report, some reflections based on the Fellow's original policy brief and two written responses which had already been submitted by invited Associates are included as part of this expanded thematic introduction[20].

The first of the reports, titled '**Developing a more nuanced understanding of social acceptance for implementing wind power in Norway**', introduces the policy challenge of Jan Magne Bae, a Senior Adviser at the Climate, Industry and Technology Department of the Norwegian Ministry of Petroleum and Energy. His policy question concerned the challenge of understanding social acceptance, in order to improve outcomes for renewable energy developments. Through conversations with his Policy Associates, Jan confirmed his impression that the NIMBY[21] phenomenon does not offer a satisfactory explanation for the social protest against the construction of windmills in Norway. Therefore, he soon reframed his initial policy challenge, from discussing social acceptance to focussing more directly on citizen engagement framings. His Fellowship report illustrates how lessons learnt from case studies in other countries can aid understandings of issues in one's own national context.

The second report reflects on the policy challenges defined by Víctor Marcos Morell, who is a technical advisor at the Ministry for the Ecological Transition in Spain. His report, '**Incorporating deeper understanding of social acceptance challenges into the Spanish Renewable Energy Strategy**', discusses issues of social acceptance in relation to investment in the energy sector, with wind energy also a particular focus. Initially, social acceptance was understood instrumentally, namely as a condition necessary to avoid public protest, which may disturb or prevent investments. However, as part of conversations with his Policy

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19   de Geus, T., Lunevich, I., Ibrahim, I., Bode, N. and Robison, R., 2020. *Live energy policy challenges:questions for the Social Sciences & Humanities.*Cambridge: Energy-SHIFTS

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20   See the Appendix to view the biographies of these Associates, Christina Demski and Cristian Pons-Seres de Brauwer.

21   'NIMBY' is an acronym of 'Not In My Backyard'. It refers to opposition by residents to proposed developments in their local area (also see Dear,. M. (1992) Understanding and Overcoming the NIMBY Syndrome, *Journal of the American Planning Association*, 58:3, pp. 288-300, DOI: 10.1080/019443 69208975808)

Associates, Víctor reframed his challenge to not only focus on communication strategies for the 'effective persuasion', but to also concern concepts of citizens engagement, deliberative decision making and process participation. Particularly, he discussed how to recognise, understand and manage situations of potential conflict in the energy sector.

The third report, '**Enhancing social acceptance of low-carbon energy policy across diverse Polish stakeholders**', approaches the topic of social acceptance from the perspective of Hanna Uhl, Director of the Low Carbon Department at the Ministry of Development in Poland. This time, social acceptance is considered in the Polish context, and concerns diverse stakeholders such as citizens, producers of coal heating boilers and local and regional public administration. In this Fellowship report, particular governmental actions and decisions are in focus, including discussions of a new act that regulates the location of wind energy investments, strategies to convince businesses to participate in low carbon transformations, and compliance with new regulations on heating appliances.

We next turn to a number of themes cutting across these Fellowship dialogues.

Winds of change: shaping the idea of social acceptance

In the Fellowship reports, much attention is paid to renewable wind energy. Indeed, while the wind energy sector in Europe is rapidly growing and there is public support for the technology itself, community acceptance for local wind energy projects appears to be declining[22]. As a result, Fellows working at public government are faced with the challenge of finding the right balance between growth of the wind energy sector, and dealing with the concerns of local communities. While in each of the countries discussed in the reports, namely Poland, Spain and Norway, the problem is contextualized differently, the question of understanding how social acceptance works appears relevant throughout all the reports. Arguably, policyworkers initially may interpret the term social acceptance rather narrowly. As a result, their actions may be focused on overcoming resistance and removing barriers to the implementation process. Underlying reasons for local protests are often not well understood, and citizens are simply informed about decisions that have already been taken. As a result, policyworkers do not take advantage of opportunities which may be provided by the stakeholders' participation and local knowledge.

A vital question that develops throughout the reports, is how to engage local communities from the initial planning stages to the eventual construction of wind farms. The concept of fairness of this process is at the same crucial and difficult to navigate. Proposing to share in the benefits from wind farms is sometimes perceived as proposing bribes, and the issue of just distribution of profits among members of a local community then also becomes contentious. Both these issues of fair procedure and economic aspects, are linked to the notion of energy justice. Incorporating this term in policy appears as a crucial condition to conduct successful energy transitions: ignoring it might lead to a rise of populist movements and heightened frustrations in post-industrial areas.

From acceptance to ownership

A related source of tension are the relations between investors, local authority and citizens, which led to a questioning of conventional ownership models of wind energy. Depending on the local context, people can expect more state responsibility (Poland) or more community participation (Norway) in the decision-making process. The discussion led to the conclusion that it is necessary to rethink the idea of social acceptance. Particularly, it is taken up as an instrumentalist strategy, which can be affected by a simple exchange of certain benefits or effective persuasive communication.

According to one Associate, social acceptance should be understood more as "*social adaptation, where locals not only are informed and offered some benefits, but they are at the same time stakeholders and co-owners of investment*". As such, the question of how to convince people to change their attitudes is transformed into how to engage people in the process of planning energy transitions, and how to make them aware of relevant regulations. How to address place attachment[23], building trust, and securing equality and justice in the implementation of spatial changes for energy transitions were discussed as essential elements in this regard.

Businesses and Social Acceptance

In one case, the issue of acceptance was approached by focusing particularly on the business sector perspective. Thomas Pellerin-Carlin, Director of the Jacques Delors Energy Centre, who had to withdraw from the

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22   Ellis, G.; Ferraro, G. (2016), The social acceptance of wind energy; EUR 28182 EN, doi 10.2789/696070

23   The notion of place attachment is further explained in the Fellowship report on Jan Magne Bae, p.51.

programme, asked how the energy transition might be accepted by businesses in Europe, and particularly, the impact of the transition on the competitiveness of businesses. The two Associates who had responded to his policy challenges stress the importance of taking economic risks and making long-term investments as crucial elements of any business activity. In this context, minimising uncertainty by facilitating predictable and understandable policy is a vital condition for creating acceptance of energy transitions by businesses[24]. In addition, a combination of support mechanisms such as financial incentives and clear regulatory frameworks are needed. One of the Associates discussed how it arguably is the EU's and national governments' responsibility to provide regulatory certainty and market stability, to enable a 'safe operating space' for emerging new forms of economic activity and social innovation such as energy cooperatives.

Opportunities for research

During the online workshop for this thematic category, Fellows, their colleagues and Associates together identified a need for further research on two specific topics. First, to understand whether windmills are perceived differently than other investments, e.g. roads or factories, by local communities. For instance, in Poland the development of new highways do not cause the same amount of controversies that wind farms do. Second, the need to understand what kind of regulation

and support could help to develop sustainable businesses in the energy sector. In this regard, Associates suggested researching regulations that would oblige investors and local authorities to inform and consult citizens at an early stage of investment planning. Meanwhile, policyworkers urged for more studies on the impact of energy technology on local communities.

Additional themes

Many of the cross-thematic issues above concerned questioning the social acceptance concept itself. Additional underlying themes which emerged during the conversations related to the necessity of improving collaboration between policymakers and scientists, and the impact of the Covid-19 pandemic on sustainability transitions. Most discussions on the impacts of Covid-19 on the renewable energy transition referred to issues of democracy, for instance how democratic institutions would function with increased government control, or how to organise inclusive participation in societal lock down conditions. Finally, the Fellows and their Associates also discussed operational dilemmas, such as what channels of communication are most effective to use with citizens, and how to practically organise dialogue processes with stakeholders.

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24   See: https://ukerc.ac.uk/project/ best-practice-in-heat-decarbonisation-policy/

4.1 Developing a more nuanced understanding of social acceptance for implementing wind power in Norway

KEYWORDS Local communities; Renewable technologies; Landscape intervention
TIMEFRAME Fellowship meetings with Associates took place in April and May 2020
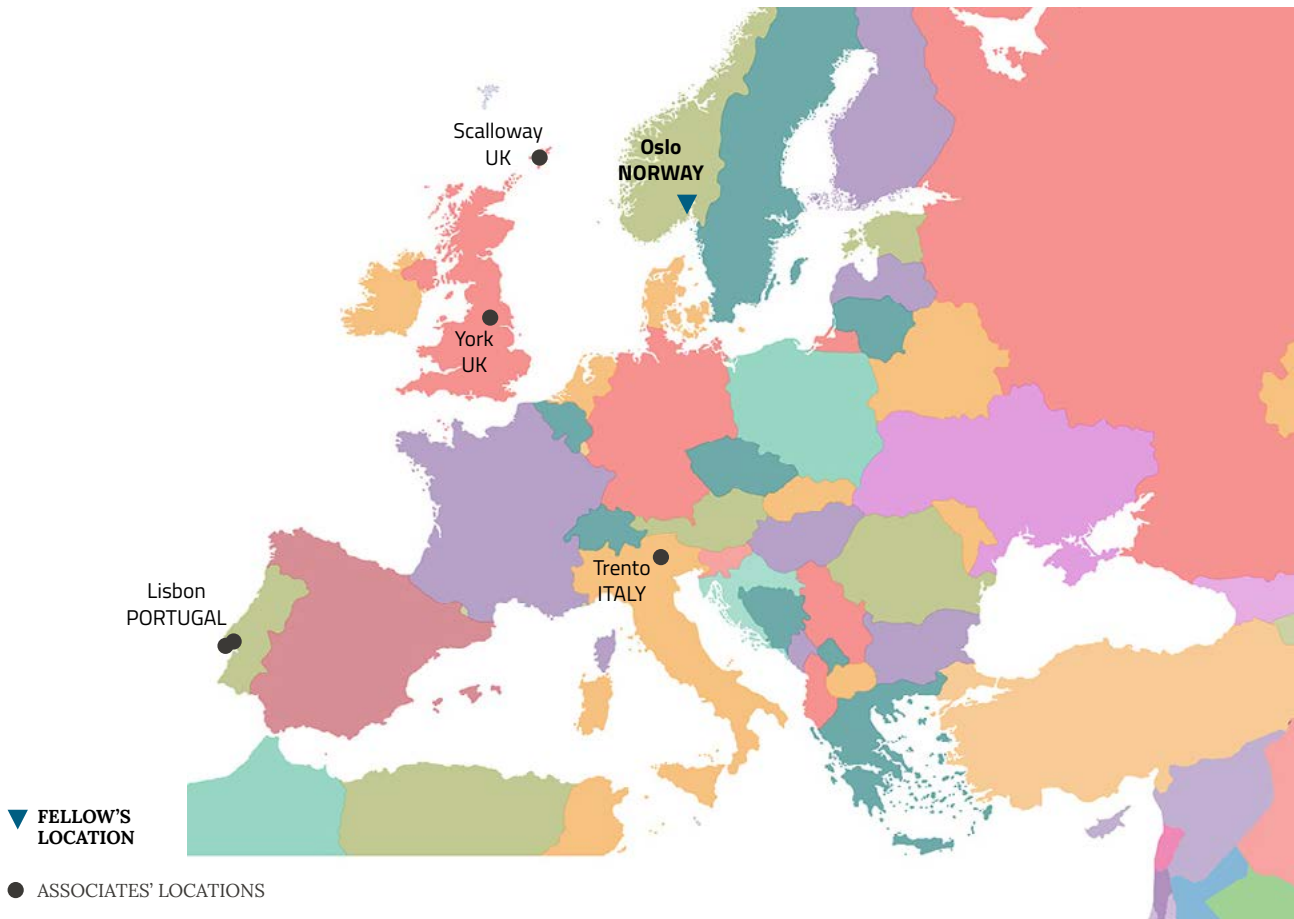ENERGY-SHIFTS RAPPORTEUR Aleksandra Wagner

Energy-SHIFTS Policy Fellow

Jan Magne Bae

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Oslo, Norway.

Scalloway
UK

Oslo
NORWAY

York
UK

Lisbon
PORTUGAL

Trento
ITALY

▼ FELLOW'S LOCATION

● ASSOCIATES' LOCATIONS

Policy context

Norway is one of the leading countries in terms of domestic renewable energy use. Although it produces gas and oil for export, Norwegian society primarily uses renewable energy, mainly from hydropower plants that have been established since the 19th century. Today, Norway has 1,166 hydroelectric generating stations, which account for 96% of total installed capacity[1]. Municipal, county and central authorities own about 90% of Norway's electricity production capacity[2]. Hydropower installation is often co-owned by communities and municipalities, with local communities sharing profits.

As the capacity to develop more hydropower is now limited, Norway has sought to expand its energy production including implementing other renewable technologies. One major reason for this is the high levels of electrification, particularly in the transport sector. The hydropower system in Norway ensures high storage capacity which means that production can be increased and decreased as needed at low cost. The growing share of wind or solar power technology improves the balance between production and consumption. Norway has excellent geographical conditions for implementing wind power, with foreign companies now beginning to invest in Norwegian wind and small-scale power production.

However, there is an increasing wave of social protest against the building of windfarms in Norway. Recent growth in the sector has seen increased public opposition to wind turbines, perceived as visually polluting the landscape and harmful for birds. Media reports have included a focus on local protests 'killing' Norway's wind plans[3]. Significantly, the government has ended work on a national framework for wind power[4] after overwhelming local opposition to the plans. This plan was supposed to designate the most suitable areas for wind power development, with the least consequences in terms of local opposition, nature, tourism etc, and at the same time de facto excluding many more areas for development. Instead, this 'map' was interpreted as giving the green light for even more wind power.

With the plan shelved, the Norwegian Minister of Petroleum and Energy decided to put all new licenses on hold and go back to Parliament with a new White Paper on the future of wind power in Norway.

Despite the above, across Norwegian society there is also wide support for climate protection goals, especially among younger groups; for respondents aged under 45, climate is perceived as the most urgent and important political issue in Norway[5]. Protests against windfarms, however, have been organised right across the country and it seems the problem goes beyond issues of NIMBYism[6].

In this context, Energy-SHIFTS Fellow Jan Magne Bae's role involves supporting policies within clean energy technology in the Norwegian Ministry of Petroleum and Energy. His field of responsibility includes monitoring and following up with a number of research centers and programmes on clean energy technology – both technical and within Social Sciences. Recently, there has been increased attention to non-technical barriers to renewable energy development.

Jan therefore wished to discuss this policy challenge area with Social Sciences and Humanities (SSH) researchers, including from different country contexts. According to his own intuition, the significant protests to windfarms could be linked to the self-perception of Norwegians who see themselves as an outdoor society and do not want to be limited by technologies in their practice of using landscapes.

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1   See: https://energifaktanorge.no/en/norsk-energiforsyning/kraftproduksjon/
2   See: https://energifaktanorge.no/en/om-energisektoren/eierskap-i-kraftsektoren/
3   See, for example, articles such as: https://www.windpowermonthly.com/article/1662940/local-protests-kill-norways-wind-plans ; https://www.reuters.com/article/us-norway-windfarm-politics/norways-public-backlash-against-onshore-wind-threatens-sector-growth-idUSKBN1WA177 ; https://www.newsinenglish.no/2020/06/15/new-wind-power-protests-turn-ugly/
4   Nasjonal ramme for vindkraft, see: https://www.nve.no/nasjonal-ramme-for-vindkraft/
5   European Commission, 2019, *Special Eurobarometer* 490 *"Climate Change"*, Directorate-General for Climate Action
6   NIMBY (or NIMBY syndrome) is an acronym of the phrase 'Not-In-My-BackYard'. It refers to characterization of opposition by residents to proposed developments in their local area, as well as support for strict land use regulations (see e.g. Dear, M.,1992, *Understanding and Overcoming the NIMBY Syndrome*, Journal of the American Planning Association, 58:3, pp. 288-300). Recently, this framework has been extensively critiqued for its simplification and pejorative framing of local opponents as motivated by selfishness and ignorance (see e.g. Burningham, K., Barnett, J. & Walker, G., 2015, *An Array of Deficits: Unpacking NIMBY Discourses in Wind Energy Developers' Conceptualizations of Their Local Opponents*, Society & Natural Resources, 28:3, pp.246-260).

" *I would like to discuss how to understand and relax the tension between the high level of acceptance for general aims of climate policy (however noting big differences between rural and urban areas) and the lack of acceptance for any intervention in the neighbourhood land.* "

Jan Magne Bae

Policy challenges

Jan prepared the following central question to stimulate discussion with his matched Policy Associates: How to create social acceptance and citizen engagement for the renewable energy transition, particularly themes relevant for smart cities and communities?

In this context, Jan felt he would find particularly valuable the following aspects:

- A comparative perspective, exploring similar problems regarding renewable technology rollout in different countries
- Going beyond economic factors and technology perspectives
- Going beyond 'NIMBY' explanations
- Understanding local communities

Matched Policy Associates

Given the policy challenges Jan was interested in exploring, the Energy-SHIFTS team looked for expertise across the social acceptance of renewables technology as well as motivation and dynamic of local protests. They bore in mind that his priority was to understand what affects public perception of energy technologies (in particular wind power) and to learn how to communicate with local communities. His five matched Associates were thus:

Susana Batel - Integrated Researcher, CIS- IUL Centre for Social Research and Intervention, Lisbon, Portugal. Her research adopts a critical perspective to examine the relationship between re-presentation, identities, power, discourse and communication, and social change, namely regarding public participation in environmental issues, and public responses to renewable energy and associated technologies. She was invited due to her knowledge of which factors should be taken into consideration to understand the public acceptance of renewables technology and what affects public participation in local communities.

Ana Horta - Research Fellow, Institute of Social Sciences, University of Lisbon, Portugal. Her main research interests are focused on energy transition, including social practices and representations, as well as media discourses on energy and climate change. In the programme, she provided her expertise on recent studies on how public accountability and democracy can secure public legitimacy and more equitable and just outcomes of policy decisions.

Natalia Magnani - Assistant Professor, Department of Sociology and Social Research, University of Trento, Italy. Her recent research is focused on energy transition and environmental conflicts. She was invited due to her knowledge on analysis of the conflicts over renewables that underline the relevance of a variety of social and cultural factors concerning the interaction with political and social institutions (cultural aspects of the perception of risk, justice, trust, territorial attachment, etc.).

Karen Parkhill - Senior Lecturer, Department of Environment and Geography, University of York, UK. Her research interests span energy geographies. She uses qualitative methods to explore how the public engages with/resists notions of low carbon lifestyles and low carbon transitions, including examining how they themselves consume/perceive energy. In the programme, she provided knowledge on how the public socially construct and engage with environmental and technocratic risks.

Inne Withouck - PhD Researcher, NAFC Marine Center, University of the Highlands and Islands, Shetland, UK. Her research interests focus on spatial decision support to assist the energy sector in optimising the siting of marine energy developments, which broadened the discussion on the presented policy challenge. She brought to the programme her insights on the problem of the 'social gap' – a mismatch between nation-wide support for climate protection vs. overwhelming local opposition to onshore wind.

Discussion points and SSH insights

Jan had one-to-one calls with each of his Policy Associates between 29 April and 13 May. The discussions were preceded by exchanging written responses on the policy challenges between Jan and each Associate. In this section we share the experiences and insights Jan shared with us in his reflections. In particular he sought to understand the mismatch between support for climate protection vs. opposition to onshore wind. These started with discussing the limitations of the explanation of local protest in terms of NIMBY syndrome, which is still a powerful policy

discourse. From here, social acceptance was introduced as a complex and context-dependent issue. This was useful to prepare the ground for further analysis of chosen protests against wind power technologies in different countries and regions.

Overcoming the limitations of the NIMBY concept

In conversation with Associates, Jan confirmed his original intuition that so-called 'Not-In-My-BackYard' attitudes, or the NIMBY syndrome, despite being a popular explanation of local protest, have been very much challenged in research communities as too simplistic, and that opposition to renewable energy systems has more complex explanations. By referring to the NIMBY syndrome, policyworkers and developers often dismiss local opposition because they see it as based in selfish, ignorant, fear of change and lack of information. This powerful discourse leads to undermining the legitimacy of public opposition. Moreover, it closes down the space to actually acknowledge communities and opposers' valid concerns and local knowledge, which can contribute to further increase local opposition[7].

> *I learned that in recent research the NIMBY-theme has very much challenged as too simplistic and that opposition to RES has a much more complex explanation.*

Jan Magne Bae

Social acceptance as a complex and context-dependent issue

The complexity of social acceptance results from the interaction of different actors (local communities, publics, developers, policymakers and policyworkers), different factors (such as associated with technology, process and place dimensions), and at different scales (local, regional, national and global).

Leading on from discussion of the main limitations of the NIMBY concept, Jan explored reframing his policy challenge as related more towards exploring the perceived gap between acceptance for climate policy at a national level and opposition at a local level. It was also underlined that if we want to fully understand responses to renewable energy generation and associated technologies (RET) we must first understand assumptions and preconceptions that may permeate key RET stakeholders' ideas and practices around local communities' opposition. Major factors helpful in understanding people's attitudes to renewable energy technologies are: socio-cultural and institutional factors, market factors and community factors.

Jan discussed with Associates how concepts like 'Place Attachment'[8], as well as research into equity, fairness and trust can be applied to better understand social acceptance questions. Symbolic meanings of landscape, nature and outdoor recreation should be addressed respectfully.

In the light of recent research the opposition against renewables energy technologies seems to be neither a selfishness grounded nor a solely communication problems but is linked to the energy governance[9]. Also, the concept of 'Energy Justice' with its three tenets – distributional, recognition and procedural[10] was proposed as helpful in analysing the distribution of the costs and benefits of energy production. Jan evaluated being introduced to these

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7   Devine-Wright, P. 2011. Public engagement with large-scale renewable energy technologies: breaking the cycle of NIMBYism. *Wiley Interdisciplinary Reviews: Climate Change*, 2(1), pp.19-26

8   The Place Attachement concept offers a multidimensional approach to understood affective bonds between people and place. Symbolical meaning associated with a proposed project and the places affected by it can help explain the difference in residents' response to implemented projects. (See: Devine-Wright, P., Howe, Y., 2010, Disruption to place attachment and the protection of restorative environments: A wind energy case study, *Journal of Environmental Psychology*, Volume 30, Issue 3, September 2010, pp.271-280)

9   Wolsink, M., Wind power implementation: The nature of public attitudes: Equity and fairness instead of 'backyard motives', *Renewable and Sustainable Energy Reviews*, Volume 11, Issue 6, August 2007, pp.1188-1207.

10   Distributional justices recognises unequal allocation of environmental benefits and ills and represents a call for the even distribution of benefits and ills on all members of society regardless of income, race, etc.; Recognition justice states that individuals must be fairly represented, that they must be free from physical threats and that they must be offered complete and equal political rights; Procedural justice refers to equitable procedures that engage all stakeholders in a non-discriminatory way (see: Jenkins, K., McCauley, D., Heffron, R., Stephan, H. and Rehner, R., 2016. Energy justice: a conceptual review. *Energy Research & Social Science*, 11, pp.174-182.)

concepts as valuable as his Ministry very much leans towards technical or economical explanations. He reflected on the necessity of multidisciplinary disciplinary approach.

Lessons learnt from local protests against renewables in other countries

During the calls, Jan learnt about a similar case with regards to local opposition to onshore wind in the Scottish isles, and used as a basis to discuss a number of relevant concepts:

> *various concepts like 'democratic deficit', 'social gap', 'qualified support' [were] all useful trying to understand the Norwegian context.*

Jan Magne Bae

This example helped illustrate how the concepts of the 'social gap'[11] could be applied in practice. That case, as well as more discussion about energy development in general, and wind energy in particular, were useful trying to understand factors affecting public participation and its significance for sustainable energy transition.

Translations to policy impacts

Jan evaluated his interactions with researchers very positively, and found significant value in terms of broadening his understanding of relevant SSH perspectives as well as leading to deeper insight into social protests as context-dependent and complex issues. The Fellowship has led to three main areas of policy impact for Jan:

1. **Changing language: rejection of the NIMBY concept**
   Jan found his Fellowship experience inspired him to learn from similar cases in other countries. A key impact is that he now rejects the whole NIMBY concept as too simplistic. This will feed into Jan's discussions with colleagues including within the Ministry, relevant directorates and the Norwegian energy research community.

2. **Feed-in to policy advisory roles**
   Jan holds a number of current advisory roles including working on programmes that seek to address social sciences and the energy transition. The themes discussed during the Fellowship are highly relevant for two of them, FME NTRANS and FME INCLUDE[12] the latter of which seeks to provide knowledge on how to realise a socially just low carbon society. Learnings from the Fellowship will directly inform his work with these programmes.

3. **Development of further policy-research dialogue mechanisms**
   Jan recommends more direct contacts between policyworkers and researchers, for example organisation of a problem-centred joint conference. The idea behind such conferences would be to look at specific energy related problems from many different viewpoints. He strongly believes that many existing conferences are too centered on technological or economical aspects of energy. Jan has offered his Associates support in terms of consulting on their research problems and further exchange of knowledge and experience. In a post-pandemic reality he hopes face-to-face meetings may be possible.

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11   The term 'social gap' refers to a mismatch between acceptance at a national level and opposition at a local level. The reasons for this have been broadly grouped by some researchers into three main explanations: 'democratic deficit', 'qualified support' and 'self-interest'. Democratic deficit describes the lack of the public participation - people who are just informed about the decision, are more inclined to object rather than accept project ideas; Qualified support refers to situation when renewable energy is only accepted if its implementation meets certain conditions; Self-interest (linked to the NIMBY concept) relates to supportive of wind energy generally but oppose any developments in own area. See: Bell, D., Gray, T. and Haggett, C., 2005. The 'social gap' in wind farm siting decisions: explanations and policy responses. *Environmental politics*, 14(4), pp.460-477.

12   See: https://www.sum.uio.no/english/include/

Reflections from Associates

Associates were asked to reflect on their meeting with Jan, including what they learnt about on-the-ground energy policy challenges. Here we share some of their reflections which particularly show appetite for the Fellowship marking the start of conversations and relationships which can further develop over time; this was certainly one of the aspirations of the programme.

"As [someone] *without professional experience in the field of policymaking, it is easy to assume that sharing scientific journal articles that address the policy challenge could lead to a quick short-term solution to the problem, but in reality of course this is not the case and* **research is something that could inform policy in the long-term, in a slower but perhaps more effective way**."

"*It was* **very interesting to get a glimpse of the complexity of energy policy challenges** *from the point of view of a policy maker, who needs to make decisions taking into account so many different dimensions and competing interests.(...) Would be good to have these initiatives more often, if possible with more time for discussion and in in-person meetings.*

"*That it seems as if* **similar challenges are found in different countries**. *Also, that the policy challenge does not have a straightforward solution, even if there is a lot of research out there that addresses this challenge (albeit in different contexts).*"

"*The meeting* **further highlighted the challenge of translating research into operational and relatable recommendation***s and statements.*"

4.2 Incorporating deeper understanding of social acceptance challenges into the Spanish Renewable Energy Strategy

KEYWORDS Decarbonisation; Large-scale renewables; Social movements; Protest movements

TIMEFRAME Fellowship meetings with Associates took place in April 2020
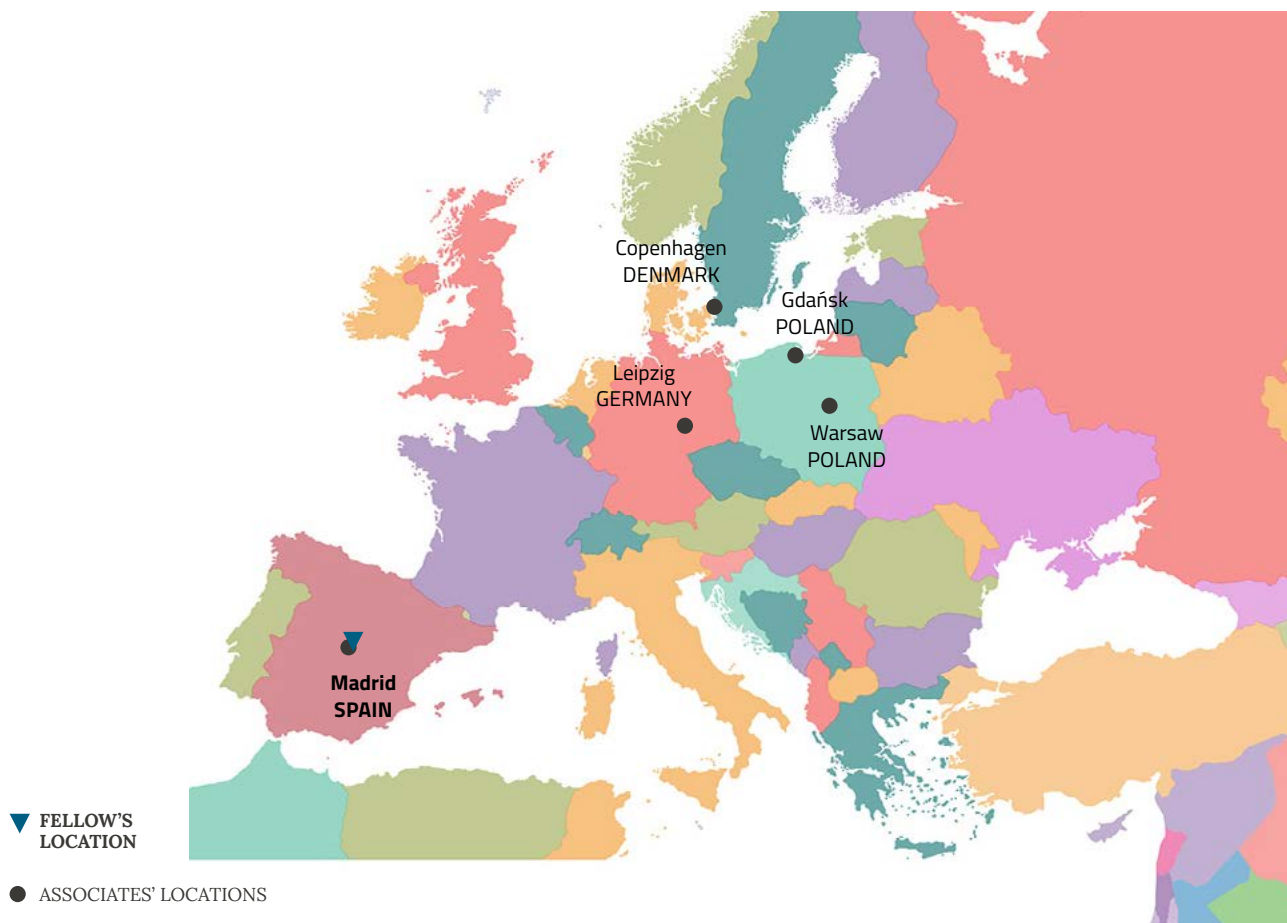
ENERGY-SHIFTS RAPPORTEUR Maria Świątkiewicz-Mośny

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SPAIN

▼ FELLOW'S
LOCATION

● ASSOCIATES' LOCATIONS

Policy context

Energy-SHIFTS Fellow Víctor Marcos is an energy professional working on the Spanish National Energy and Climate Plan 2021-2030 (NECP), as well as the country's Long Term Energy Strategy[1]. Every EU member state is now required to produce an NECP[2], which is a 10 year plan outlining national targets and implementation plans regarding energy efficiency, renewables, greenhouse gas, emissions reductions, interconnections, research and innovation. The first version of the Spanish NECP was released in January 2020[3]. It will be reviewed every two years to better meet changing environment, societal and economics conditions. Large-scale renewables deployment is seen as an essential part of Spain's (and Europe's) decarbonisation aims, and is thus a core component of their NECP, for example with a target of 42% of energy coming from renewables by 2030.

Victor's own background and expertise is techno-economical (for example working with costings, energy consumption or CO_2 emission data) and he works across both micro (regional) and macro (Spain) level. Victor has experience with types of quantitative and qualitative data, and has sought to include a social perspective in his work to date. Victor's role in the development of the NECP involves management of the modelling team, checking assumptions, holding meetings with authorities to explain the content of the NECP, among other tasks.

The main policy challenge Victor wished to discuss during his Fellowship was connected to social acceptance. He felt this was of crucial importance to the NECP implementation, for several reasons:

(1) to ensure investment in the energy sector, especially for large-scale renewables implementation;

(2) because a lack of social acceptance, and/or social protest, can significantly affect projects' viability.

He saw these as interconnected since if citizens do not support technological projects then protests may occur and, as a consequence, investment may be stopped. He hoped to bring more in-depth understanding of the latest Social Sciences and Humanities (SSH) research on social acceptance issues into his work (see quote) and highlighted that bringing in 'bottom-up perspectives' is important for him.

> *Social analysis is a key part of a successful implementation of the energy transition. Social acceptance of an ambitious objective [i.e. large-scale renewables deployment] is crucial for its fulfilment. Participating in this Fellowship program, [my expectation is that] researchers [will] help me consider the social view in my planning work. I would like to get first-hand information on the topics I am studying for the deployment of the energy transition ahead.*

Victor Marcus Morell

Policy challenges

Given the policy context above, the overall challenge Victor was interested in discussing was thus how to better incorporate consideration of social acceptance issues in the implementation of large-scale renewables, as part of Spain's NECP.

Within this context, he was interested in the following sub-questions:

- How can the NECP approach issues of *lack of* social acceptance and/or social protest?
- What is the latest research relating to relevant communication strategies, as well as involving citizens in deliberation and participation process?
- What could be done locally, and what on the national level, before implementation of projects, to increase social acceptability of projects?
- What recommendations and good practices from other countries may be helpful for the Spanish context?

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1   The strategy has just finished its public consultation period, see: https://energia.gob.es/es-es/Participacion/Paginas/DetalleParticipacionPublica.aspx?k=336

2   https://ec.europa.eu/energy/topics/energy-strategy/national-energy-climate-plans_en

3   An English translation of Spain's NECP is available here: https://ec.europa.eu/energy/sites/ener/files/documents/ec_courtesy_translation_es_necp.pdf

Matched Policy Associates

Following contact with Victor, the Energy-SHIFTS team sought SSH expertise in social movements, social acceptance, and public policy. We looked for some experts familiar with the Spanish policy context but also those with experience in other national contexts. We were also mindful of gender balance. The five Associates who participated in Victor's Fellowship were thus as follows:

Alena Bleicher - Researcher, Helmholtz Centre for Environmental Research - UFZ, Leipzig, Germany. Alena is a geographer, but with a background which also encompasses training in sociology and history. Her research interests include: framing and role of publics in technology development, governing technology development in the context of exploitation of energy or mineral resources, technological development and experimental practices within energy use (particularly geothermal), the concept of non-knowledge in environmental management and technology development.

Katarzyna Iwińska - Adjunct Professor at Collegium Civitas, Warsaw, and Research Fellow at Adam Mickiewicz University (Poland). Katarzyna is a sociologist interested in the energy just transition, activities of NGOs, local communities and social aspects of environmental protection. Her research focuses on social perception of energy transition. She is the author of numerous publications related to public engagement, environment perception, and environmental conflicts at a local and national (Polish) level. She also collaborates with consultancy companies engaged in public decision-making processes.

Xaquin Pérez-Sindin López - Marie Curie Postdoctoral Fellow, Department of Geosciences and Natural Resource Management University of Copenhagen, Denmark. Xaquin works across Social/Economic Geography, Environmental and Development Sociology and Globalization Studies. His projects have included mixed-method analysis of public opinion about the exploitation of a large-scale mine in Spain and the adjacent power plant. He has also analysed changes of socio-economic and public health indicators, as well as engaging in academic debates related to regional planning.

Sylwia Mrozowska - Professor of Political Science, Department of Political Thought and Recent History, University of Gdańsk, Poland. Sylwia is a political scientist and specialist in international affairs. She is interested in European integration and social participation, especially participatory technology assessment. She is the author of works on the roles of lobbying and participation in EU Energy Policy.

Daniel Wuebben - Marie Curie Cofund Fellow, Ciberimaginario Group, Department of Communication and Sociology, University of Rey Juan Carlos, Madrid, Spain. Daniel works across Communication Studies, Energy Humanities, and Science and Technology Studies, with a background in English Literature. His book, Power-lined, offers a cultural history of overhead electric infrastructure in the United States. He has specific expertise on the Spanish policy context and his research interests are related to social acceptance, community energy, and digital rhetoric.

Discussion points and SSH insights

Victor had a one-to-one call with each of his matched Policy Associates over 8-12 April. The calls was preceded by exchanging written responses on the policy challenges Victor had raised. In this section we highlight key discussion points and insights from across the interactions.

Defining social acceptance and introducing new concepts

Victor discussed the definition of social acceptance with Associates. One Associate proposed a useful definition as being "*a positive attitude towards a technology that leads to supporting actions when needed or requested and counteracting other people's resistance*". Associates presented projects and outputs which have previously sought to bring together understandings of social acceptance of wind energy specifically. The concept of social acceptance in energy has been widely discussed among SSH scholars, with some arguing that it should be understood through a critical perspective, since "*acceptance seems to be more related with a passive reception of those infrastructures, with people tolerating but not actually supporting them.*" (Batel et al., 2013, p. 4) This distinction between tolerance and support is an important one when considering wider (and potentially long term) citizen engagement programmes.

Importantly, Associates also introduced other relevant theoretical concepts through the discussions, including: (energy) communities, participatory approaches, social dialogue, deliberative processes, environmental education, values, social norms.

Understanding local contexts and communities

Victor was introduced to various models of social acceptance developed by researchers, and accompanying ideas of how to analyse situations of potential conflict. As one example, an Associate presented one model of social acceptance factors as follows: "[There are] *seven … important factors of acceptance of wind energy, according to the literature on this topic: four related to the site of the development and three to the management of the project itself.*"

This linked into discussion about how, for local communities, their territory may be connected with tradition, habits and culture and thus the importance of policyworkers to be aware of local context, ownership and former use of territory. This also included conversation about how specific, local, contextual knowledge was sometimes difficult to get hold of, and the challenges in obtaining it.

Environmental awareness and going further

The role of environmental awareness, or environmental education, was highlighted by some Associates. "*Social acceptance is influenced both by environmental awareness and its consequences, and by the knowledge of the renewable energy technologies involved. There's a positive connection between people's understanding of climate change and its consequences, and their willingness to act.*" The role of policy in developing citizens' environmental awareness was seen as highly relevant and there was discussion of the phenomenon of 'fake news', and questions about the responsibility of policymakers and local leaders for action on education.

Whilst if people understand climate change and have knowledge about renewables energy technology they may have more willingness to act, there are other crucial factors (beyond awareness) that were also highlighted in discussion. These include fairness of the decision-making process and trust in decision-makers.

Communication principles and participatory approaches

There are many communication strategies which could be applied in this context. As highlighted above, policyworkers may need to develop or apply tools for learning about the local context and also be sensitive to social values and norms in carrying this out. Associates flagged up several relevant projects and, as one example, Victor was introduced to communication guidelines developed by the project WISEPower - see Box 2.

Box 2. Example communication guidelines

> *"1. **Openness** means the sharing of relevant information about the developer's decisions and activities. Such information should be presented to the community and other stakeholders in a clear, accurate, timely, and honest manner.*
>
> *2. **Inclusiveness** means identifying and interacting with all project stakeholders, to ensure their perspectives are understood and taken into consideration.*
>
> *3. **Responsiveness** means listening and responding to community and stakeholder concerns and needs were relevant to the wind farm.*
>
> *4. **Accountability** involves the ongoing process of monitoring, evaluating, and sharing information about the wind farm throughout its lifecycle, including the positive and negative impacts of the development.*
>
> *5. **Flexibility** (Impuls) means preparing for local requests and required amendments to the development. This includes being open to e.g. shifting the location of the turbines or grid connection lines."*
>
> Quoted from Dütschke and Wesche, 2014, *Wind-Acceptance: A Userguide for Developers and Municipalities*, WISEPower, p.15, available here: http://wisepower-project.eu/wp-content/uploads/2014_08_Deliverable_2_1_final_version.pdf

SSH research often emphasises and explores processes such as deliberation and different types of (citizen) participation. In this context, the concept of social dialogue – seen as all types of negotiation and consultation between (representatives of) government and citizens – and the ways social dialogue may interlink with social acceptance, was discussed. Ways that SSH findings can feed into the design of project management were explored, including how local communities may be involved in decision making within different structures.

Associates discussed the ways that bringing specific social science expertise into projects may be necessary to ensure appropriate application of participatory approaches: "*It is always good to cooperate with experts in social sciences and within interdisciplinary groups tackle the issue of social acceptance as well as conflict management around the new investments*".

Translations to policy impacts

Victor is looking to now develop learnings from the Energy-SHIFTS Fellowship in two ways:

1. **Sharing relevant knowledge with local authorities and developing local contextual knowledge**
   A key area which was identified through the Fellowship was the challenges of gathering and applying local, contextual, knowledge rather than general national-scale strategies, however it is necessary to develop this national wide strategies in a documents such as the NECP. It will be during the Environmental Impact Assessment when local considerations will be introduced in each one of the projects. The Spanish process of Environmental Impact Assessment allows the local communities to express themselves before the development of each one of the projects. This, along with improvements in regulation to increase the involvement of the citizenship in the renewable energy development, are intended to increase overall acceptance of energy policy measures.

2. **Future interactions with SSH researchers**
   Victor evaluated his interactions with researchers as part of the Energy-SHIFTS Fellowship very positively and found their contributions interesting and useful for the policy challenges he is working on. It has laid the foundations for further future interactions with SSH researchers, such as related to renewable energy communities and the development of citizenship energy communities in Spanish regulation. The improvement of flexibility and aggregation in order to put the citizen at the centre of the energy system will be a core area where this policy-SSH research dialogue will be of value.

Reflections from Associates

The Associates evaluated positively their interactions with Victor, in particular highlighting the value in learning more about the local context of Spain's energy landscape, and thus comparing it to their own countries experiences. We share some of their reflections on what they learnt about on-the-ground policy challenges here:

"We discuss[ed] the NECP for Spain that was released last month [and] Victor answered some of my questions about the public participation … **I learned about the process of the NECP, how it is composed in teams** *and about how different companies and NGOs comment upon these plans."*

"[I learnt] that the social acceptance issue is a real problem because **there is little knowledge [relating to] specific locations, people's values and their place attachment..** *to build an international platform for this kind of virtual shared knowledge [demands] time for better connections, collecting specific data and discussion on real-based problems."*

"[I learnt about] **practical challenges** *of energy transition in Spain."*

"I learned … about the situation of **renewable energy policy in Spain** *and the institution with which Victor is affiliated."*

"I [learnt] that policy makers are there and welcome feedbacks from outside. They are, particularly in this time of Covid, there like us, academics, sitting in front of the computer and we should [strengthen] our interactions. I think **I will now have a more proactive attitude … [and] just write those policy makers who might be potentially interested in what I d**o*."*

4.3 Enhancing social acceptance of low-carbon energy policy across diverse Polish stakeholders

KEYWORDS Wind power; Carbon intensive industry; Coal heating; Local communities; Heating appliances

TIMEFRAME Fellowship meetings with Associates took place in May 2020

ENERGY-SHIFTS RAPPORTEUR Seweryn Krupnik

Energy-SHIFTS Policy Fellow

Hanna Uhl

Director of Low Carbon Department[1], Ministry of Development, Warsaw, Poland

Policy Fellow Team Members

During meetings Hanna was joined by other civil servants from the Low Carbon Department: Przemysław Hoffman (Deputy Director) and Barbara Wąsowska, as well as Katarzyna Stadnik (Marshal's Office of the Malopolskie Voivodship, Poland).

▼ **FELLOW'S LOCATION**

● ASSOCIATES' LOCATIONS

1   In October 2020 Hanna moved out of public administration and looks forward to using her Fellowship insights in new roles within the private sector.
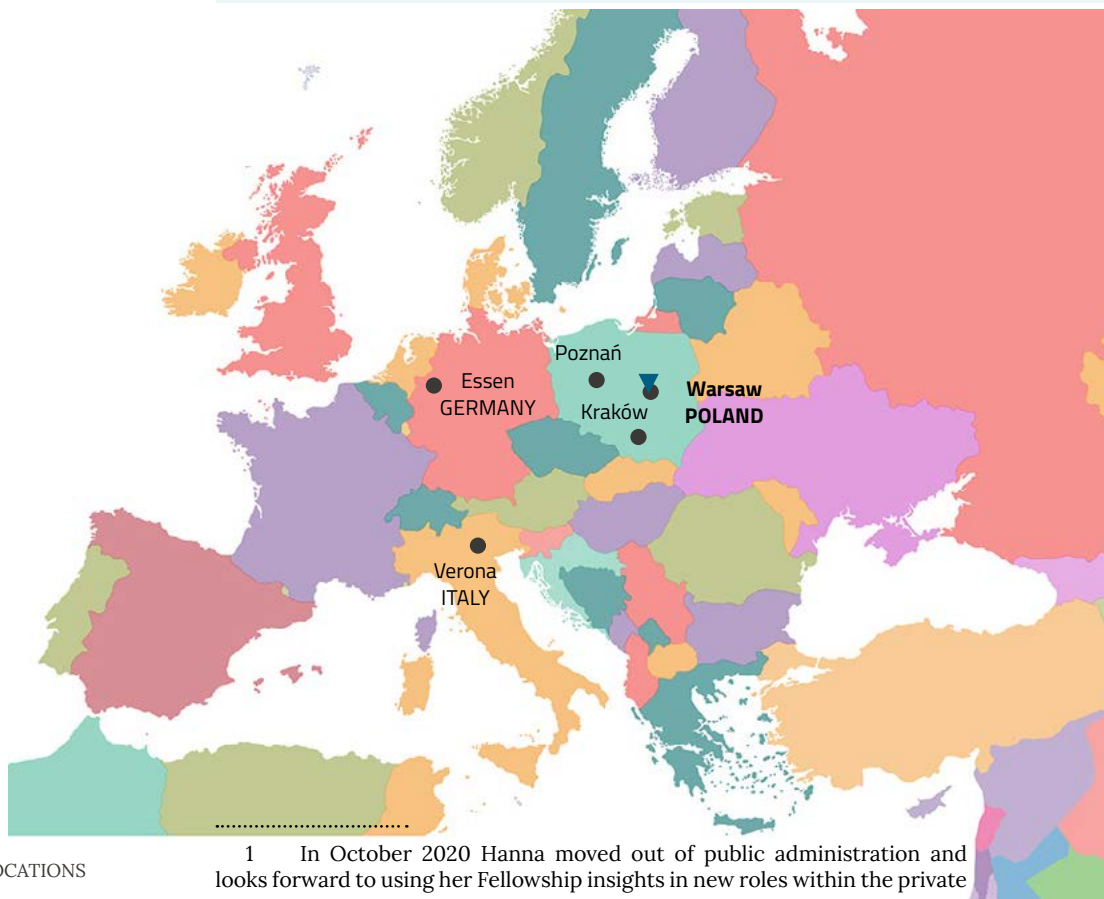
Policy context

During the Fellowship, Hanna Uhl held the role of Director of the Low Carbon Department at the Ministry of Development in Poland, having held this role since March 2020 (and previously as Deputy Director since May 2019). Poland needs to accelerate its shift to low-carbon energy systems[2] and in this context Hanna and her department face many important and difficult choices. Some of these involve engaging and building social acceptance amongst crucial actors, such as citizens, business owners and local authorities. As part of her Energy-SHIFTS Policy Fellowship Hanna articulated three specific issues she was facing, related to different topics and stakeholders.

Firstly, in 2016 a new Act on Wind Energy Investments[3] introduced strict rules for wind power plants - so-called 10H principle - which establish minimum distances between wind energy installations and protected areas. It is forbidden to build wind turbines at a distance less than 10 times the turbine height. The regulation is perceived as a key obstacle for the wider use of wind energy in the country. Therefore, the government has been considering loosening this regulation. However, it expects strong opposition to any new regulations from stakeholders on a national level and local communities. Hanna and her colleagues – including Przemysław Hoffman who joined her during meetings - face a challenge of finding the right balance between enhancing the growth of the sector and taking into account concerns of local communities.

Secondly, the national Polish government is currently seeking to convince more businesses to participate in a low-emission transformation. They are especially targeting those who otherwise could face challenges due to lower-carbon regulations, e.g. producers of coal heating boilers. Currently the government is offering an opportunity to such businesses to take advantage of innovation subsidies in order to conduct research and development activities and design new products or services. However, there is a general feeling from government that the existing offer is not sufficient. Hanna was accompanied by Barbara Wąsowska from Ministry of Development while discussing the subject with Policy Associates.

Thirdly, new regulations regarding heating appliances have been introduced in the Małopolska Region (South of Poland) in 2017. The region is a pioneer in Poland with regards to transforming their heating systems, largely due to pressure from local citizens and Non-Governmental Organisations. These new regulations, which entail obligation to replace boilers using coal or wood and not meeting any emission standards by the end of 2022, have strong support among many inhabitants of the region. However, it may be difficult to convey messages to certain groups of inhabitants and convince them to also change their appliances. During the meeting with Policy Associates dedicated to this topic Hanna was joined by Katarzyna Stadnik from the Marshal's Office of the Malopolskie Voivodship.

With these clearly defined policy challenges, Hanna came to the Energy-SHIFTS Policy Fellowship keen to engage in dialogue with the latest research from the Social Sciences and Humanities (SSH):

> *One of my biggest motivations is to learn different perceptions of the issues I work on in order to find new solutions and improve my work*

Hanna Uhl

Policy challenges

Together with the Energy-SHIFTS team, Hanna developed detailed sets of initial questions related to each of the three policy challenges described above.

1. How to design wind power plants regulations while finding the right balance between enhancing the growth of the sector and taking into account concerns of local communities?
   - What role should regional authorities be obliged to take during the decision-making process regarding new wind power plants?

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2   See: Ministry of Energy, 2019, *National Energy and Climate Plan for the years* 2021-2030, Warsaw
3   See: https://isap.sejm.gov.pl/isap.nsf/DocDetails.xsp?id=WDU20160000961

2. How best to convince SMEs to participate in low-emission transformation (changing business models etc)?
    - What kinds of intervention would help producers of coal heating boilers to move into other areas of energy-related production (e.g. heat pumps)?
3. How to communicate changes to convince citizens to replace heating appliances and follow requirements for the quality of used fuels?
    - What kind of arguments will convince citizens? What would motivate people to change their behavior (i.e. replace heating appliances and follow requirements for the quality of used fuels)?
    - What methods are best to make people aware of relevant regulations? How should we get messages to people who are the most difficult to reach (door-to door, leaflets)?
    - How to convince the 'most difficult groups' to comply with new regulations?

Matched Policy Associates

Following discussion with Hanna, the Energy-SHIFTS team particularly sought SSH expertise in Public Policy, Economics, Sociology and Anthropology as well as inviting a number of Associates with familiarity with the Polish policy context. Thus five Associates participated in Hanna's Fellowship, as follows:

Mark Andor - Senior Researcher (Economist), Environment and Resources Department, RWI – Leibniz Institute for Economic Research, Essen, Germany. Mark's research focuses on Behavioural and Experimental Economics, Applied Econometrics and Energy, Environmental and Resource Economics. He was invited in particular due to his knowledge of the effectiveness of diverse public programmes in the areas of consumer choices.

Aleksandra Lis - Associate Professor, Department of Anthropology, Adam Mickiewicz University, Poznań, Poland. Aleksandra is a sociologist whose research interests include just transitions, energy technologies, expertise, energy security, public perceptions. She was invited for her expertise in the perception of investments in energy sources in Poland.

Katarzyna Lisek - PhD Researcher at the Institute of Sociology and Project Manager at the Center for Evaluation and Analysis of Public Policies, Jagiellonian University, Krakow, Poland. Katarzyna is a sociologist and her research interests include evaluation and public policies designed for enterprises. She was invited to bring her knowledge of innovation schemes which support enterprises, including processes around their creation.

Elena Claire Ricci - Assistant Professor, Department of Business Administration, University of Verona, Italy. Elena specializes in Environmental/Food Economics and Policy. She was invited due to her track record of projects concerning pro-environmental consumer behaviour: evaluation of products by consumers and the way their preferences are formed.

Rafał Trzciński - Research Fellow, Faculty of Philosophy and Sociology, Warsaw University, Poland. Rafal works across disciplines and is an expert in public funds support for enterprises. He was invited due to his thorough knowledge of the schemes of support for enterprises in Poland, its relevance and factors influencing its effectiveness.

Discussion points and SSH insights

Hanna had three calls with her Policy Associates dedicated to the three topics introduced above between 13 and 27 May 2020, after which she participated in an online workshop with Associates working across the 'Social Acceptance' thematic category. In each of the meetings she was accompanied by another public servant who was involved in the given policy challenge.

While the initial questions phrased by Hanna did not change, assumptions hidden in some of them were challenged in interesting ways through the meetings. As an example, one of the Associates challenged the idea that obligations should be put on local authorities in case of wind power plant investments and raised questions about obliging investors instead.

In this section we share three main topics that emerged from the Fellowship conversations.

Taking time to understand on-the-ground challenges facing groups of stakeholders

Whilst interacting with stakeholders, a first stage is to learn about their situation and perspectives and Associates discussed different aspects to this i.e. considering ways of thinking, opinions, interests and emotions involved. Then, keeping in mind policy goals it has to be decided what exactly the aim of further interaction is e.g. roll out of a public program, regulation or communication. When this next stage of interaction has to be designed one may face some elements of stakeholders' situations or perspective that challenge the policy goals. These may be time consuming, difficult to deal with or not taken into account by the public policy tools which are at hand (and require new ones).

As an example, Hanna discussed with Associates how producers of coal heating boilers are usually small enterprises without much propensity to conduct research & development activities. The existing public program proposed to them – which directly supports research & development activities – could go further in acknowledging this. Alternative schemes i.e. enabling the use of existing effects of research & development activities in the form of ready products or designing a new program with design thinking approaches were discussed during one of the Fellowship meetings. However, they may be more difficult and time consuming to implement, and provide a direct example of the tensions which may exist in real-life policy implementation.

Another example involves wind power plants. Local communities and public opinion in general seem to perceive the plants as more dangerous than other investments in alternative energy sources. Collective fear is thus an important challenge. If there is no scientific evidence that wind power plants are special technologically, should government regulations treat them as a unique case? The answer provided by social scientists highlighted that they can have particular social significance.

As one of the Associates noted "*I can see that the Fellow from central administration assumes that in order to propose some special regulations concerning wind energy, they would have to persuade other involved institutions and stakeholders about the 'really' distinct nature of risks and impacts of wind energy. In my view, the outstanding status of wind energy among other types of investments stems from different social perceptions thereof. Social perceptions make a real difference as well but they need to be studied with sociological methods*". As Hanna note concluded: "*The interactions encouraged us to strengthen the importance of overcoming collective fear of wind farms via an innovative process of public consultations.*"

No one-size-fits-all solution that could be imported from other contexts

It would be great to find ready-made solutions from another context and copy them in Poland. Since there are countries which are more advanced in low-carbon energy transitions, the expectation to find these seems reasonable. Except, unfortunately, this kind of solutions do not exist. Case study and insights from other countries serve as real inspirations – and during the Fellowship Hanna discussed experiences from UK and Germany - however they may be most useful conceptually, not instrumentally.

Therefore, while expert knowledge allows for more in-depth understandings and Hanna found that "*...especially international cases were very insightful*", conclusions from discussions was that there is always a need for thorough and time consuming design of new interventions for the Polish context. Moreover, they should be pilot-tested and evaluated before implemented on a wider scale. As one of the Associates put it, "*the most important advice would be to explicitly test interventions and policies in a representative sample that closely resembles the target population*"..

Rethinking targets, process over outcome

One of the areas discussed with Associates was a change of perspective in terms of the aims of policy, and in particular letting go of the target of social acceptance as an outcome. Policyworkers perhaps in fact have limited possibilities to secure social acceptance itself. Instead, they should focus on acknowledging the context of their actions and ensuring the high quality of a process that may lead to the desired effect. .

This change of perspective may be insightful in reformulating the questions that should be asked. One of the Associates wrote: "*I would like to propose a change of perspective – from the one focused on convincing, persuading people to comply with new rules to a strategy that aims at relating new rules, regulations, practices and technologies to the ones that already exist. If we pursue this approach in order to address the presented task of inducing boiler transition, we would need to change the perspective and reformulate how we pose questions.*

Instead of asking: What kind of arguments will work? What would motivate people to change their behavior?

Ask: How can we practically relate boiler change to other types of practices that people have built around their heating practices? How to lower the overall cost of change if changing a boiler makes other practices more costly?"

Policyworkes are not able to guarantee they can convince a given local community to accept a new wind power plant. However, they can do much to secure a clear and fair process of public consultation about the investments. As it was indicated by Associate, "*for the acceptance of (and compliance with) policies,the perceived fairness of a policy is often crucial*". Policyworkers cannot make all citizens to happily change their heating appliances. However, they can make sure that incentives are attractive, easy to understand and accessible. Therefore, they were advised by another Associate to "*focus on: making the benefits clear, reducing main barriers and working on social norms*".

Translations to policy impacts

Hanna identified a number of direct and immediate impacts on her Department's conversations, due to the insights she gained from the Fellowship.

1. **Conversations on wind farm regulations**

   Firstly, concerning the policy challenge relating to new wind power regulations an amendment to the **Act on Wind Energy Investments** was to be proposed in September 2020 including a section dedicated to compulsory public consultation. Ideas for this public consultation section included detail on informing citizens about the idea of locating a wind farm by local authorities as well as consultation meetings between the investor, local authorities and local community.

   The policy world moves fast and in October 2020, when this Fellowship report was being finalised, the landscape around these regulations changed. Nevertheless, based on the insights from the Fellowship, Hanna identified a number of recommendations she would share with policyworkers facing a similar policy challenge:

   "*1. Do assume that wind farms are perceived differently than other sources of noise, they raise specific fears and reasons for resistance among local communities.*

   2. Because of that, locating wind farms requires specific regulations covering reliable public consultancy process.

   3. One of the elements of public consultancy should be an initial active information procedure basing on delivering information to citizens (instead of making them search for information by themselves)."

2. **Further SSH discussion to dig into some challenges**

   Insights related to the two other policy challenges were less detailed but included the insights related to on-the-ground challenges facing groups of stakeholders, need for developing and testing new approaches and rethinking targets of public actions. Moreover, the specific idea emerged to design new support for producers of coal heating boilers with the design thinking approach within existing public policy programmes[4].

   Hanna identified that whilst conversations were started, more time would be needed to develop detailed policy plans. In this regard, she hopes to continue communication with some Associates.

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4   inno_LAB programme, realized by Polish Agency for Enterprise Development under Smart Growth Operational Programme.

Reflections from Associates

Associates were asked what they learnt about on-the-ground energy policy challenges from their virtual meeting Hanna and her colleagues. Here we share some of their reflections which demonstrate how the Fellowship conversations conveyed a real sense of the day-to-day reality of grappling with these policy challenges.

*"The meeting brought light on the character of the challenges that department is facing in case of boiler industry…. In my opinion knowledge brokering is one of the most important tasks of policy research centers. Therefore this project has an important function of building platform between experts and policy makers and spreading good practices of this kind. **I hope that the projects that bring practitioners and researchers together to work on important social matters become a golden standard on academi**a."*

*"I realised the difficulty in communication and coordination among policy makers at different levels. It was also interesting to know about issues by policy makers in measuring/assessing the status quo. Thus, **it challenged the idea that different policy actors can communicate and coordinate relatively easily** and the fact that policy makers have access to crucial information for defining the target and the success of energy policies."*

*"I've learned that central administration is currently facing a serious **problem of re-establishing wind farm projects as a viable kind of investment** which could gain local acceptance."*

*"I … learned more about the Polish energy challenges what I found interesting. I am very regularly in contact with policy makers, so there was not a big surprise about 'on-the-ground' energy policy challenges in general. Yet, **I was a bit surprised that they were mostly interested in quite specific … questions**."*

*"[I learned that] **making a difference requires a strong commitment at the level of public bodies**."*

5. Fellowship reports: Just Transitions

By Nena Bode and Tessa de Geus

The term 'Just Transitions' has received much attention as part of the Green Deal action plan presented by the European Commision in December 2019. Whereas in the Green Deal the focus is primarily on redistributing the unequal effects of energy transitions across regions in Europe, the Policy Fellows primarily focussed on questions surrounding social justice within their own countries or municipalities. The 'Just Transitions' thematic category of the Energy-SHIFTS Policy Fellowship programme thus involved six Policy Fellows, who respectively work at **NGOs/think tanks (2), municipalities (2), an association (1) and the private sector (1)**. Based on the content of the applications received for the Fellowship programme, the theme of 'Just Transitions' was understood to *"relate to how energy transitions might exacerbate or reproduce existing inequalities"*, covering mostly issues of *"accessibility of energy, [..], vulnerable populations and energy poverty"*[25].

Among the policy challenges put forward by the Fellows, we can thus consider how key entry points covered different aspects of these themes of accessibility, vulnerability and energy poverty. Accessibility was discussed in relation to facilitating ownership in energy transitions, by supporting and initiating democratic processes. This can be seen in the report **'Making the energy transition 'by the people for the people' across Europe'** from Fellow Molly Walsh, a Renewables Campaigner at Friends of the Earth who works on community participation and renewable energy projects. Questions on accessibility can also be recognised in the challenge posed by civil servant Fellows Marieke van der Enden, who works at the municipality of Westland in the Netherlands, and Joyca Leplae, who works at the municipality of Ghent in Belgium. Their respective reports **'Working with neighbourhoods to decide on non-gas heating alternatives in the Netherlands'**, and **'Reorganising Ghent's city neighbourhood energy systems in socially just ways'**, both deal with the decision-making and implementation of different energy solutions in different areas, without exacerbating existing socio-economic fault lines.

In the report of Fellow Gert De Block, Secretary-General of CEDEC (the European Federation of Local Energy

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25   p. 22, de Geus, T., Lunevich, I., Ibrahim, I., Bode, N. and Robison, R., 2020. *Live energy policy challenges: questions for the Social Sciences & Humanities.* Cambridge: Energy-SHIFTS.

Companies), energy vulnerability is directly addressed under the title: **'Protecting vulnerable European energy consumers against market-based pricing and digitalisation'**. Gert approaches this area from the perspective of local energy companies and reflects on multi-dimensional causes of energy poverty, and how they might be best addressed in the energy transition. Similarly, for Fellow Andreas Schneller, a Project Manager at the German think tank Adelphi, energy poverty was a central issue of interest for his report: **'Creating policy instruments for alleviating energy poverty in Germany and Romania'**. Andreas' Fellowship discussed the conceptual meaning of energy poverty, as well as how to make policy and funding solutions as context specific as possible, in order to give better policy recommendations.

Finally, Fellow Katarzyna Dulko-Gaszyna, Sustainability Manager at IKEA Retail Poland, approached energy poverty from the viewpoint of (financial) accessibility of acquiring solar PV installations in the report titled **'Making solar energy accessible and affordable for Polish citizens'**. During conversations with her Associates, she dived into the question of how to reach marginalised communities, overcome financial barriers, and how to influence political agendas to put energy poverty at the top of policy agendas.

While all Fellows had unique interactions with their matched Associates, some overlapping themes can be identified across the exchanges that were held, as discussed below.

Seeing specificities

A common thread that runs throughout the reports in this thematic category is the importance of designing tactical and targeted communication in relation to renewable energy participation processes. Co-creating a narrative on what a desirable transition looks like in a specific area is considered vital to incorporate diverging interests, obtain support from local communities, as well to influence political agendas. Thereby context dependency plays an important role, for instance by taking into account local histories, such as those of earlier participation processes, but also cultural characteristics, local economies (such as coal mining sites in Poland), historical political ideologies, or protests (e.g. the Yellow vest

movements). Physical proximity of policyworkers to the citizens whose lives their policies affect was also considered important, in order for policyworkers to be able to understand socio-economic energy complexities, such as the intersection of factors which cause people to be vulnerable consumers in the energy market (e.g. economic, social, geographical, etc.), and to understand the social realities of people within groups that are generalised, such as elderly, women or young people.

Co-benefits and conflict

Furthermore, it was discussed how it is important to provide vulnerable populations with agency to determine for themselves what adjustments might work for them. In this sense, it is helpful to start from people's immediate social realities and needs, such as comfort and health (i.e. potential co-benefits from renewable energy implementation), before discussing how these might relate to renewable energy measures or retrofitting. Unpacking what is meant by 'the public' in participation processes, as well as being transparent about what leeway exists for participants to actually shape plans, were discussed as cornerstones of meaningful and 'just' participation processes. In addition, allowing time and space for issues of loss, or social conflict were highlighted. Rather than aiming for consensus, social conflict is actually indispensable in discovering different interests and views.

Re-imagining roles

In terms of actor roles, the importance of contractors for supporting citizens who want to adapt their home with renewable energy technology, was discussed, as well as how these contractors could be involved more explicitly. Working with local ambassadors and local leadership for unearthing energy transition conversations, transferring knowledge, or providing people with a positive experience of the potential of renewable energy, was also highlighted. Other crucial actors whose roles were re-imagined were real estate agencies, energy companies, or municipal energy utilities: they can contribute to transgressing the level of individual house owners, and move towards upscaling renewable energy restorations and retrofitting.

Galvanising EU-wide action

The implications of addressing energy poverty at the level of the EU were also discussed, focussing on EU funding opportunities and cross-European relations as

vehicles to learn from different experimentation and business models. Across the exchanges, experiences from different EU and non-EU contexts were discussed as a way to broaden horizons and to demonstrate the degree of innovation that is possible, including examples in sub-saharan Africa. Relatedly, the transposition of the EU Clean Energy Package was discussed as an important momentum, which will affect the rights and interpretations of energy communities. Namely, understanding the social justice implications of different system designs was deemed vital in relation to designing centralised or decentralised energy systems, and how energy communities might or might not be vehicles for a just transition.

Addressing finance

A recurring theme concerned how to overcome financial hurdles for low-income households to participate in energy transitions, such as the renowned split-incentive dilemma[26], or the high costs of installing solar PV technologies. Viable solutions were discussed, such as designing low-risk financial loans that can be paid over time, and designing leasing constructions for solar PV installations, as well as the potential of the European Just Energy Fund, CO_2 taxation, involving pension funds, and long-term financing subsidies and R&D.

Additional themes

On 8 June 2020, Fellows and Associates working under the Just Transitions thematic category participated in an online workshop. Apart from touching on cross-cutting issues as discussed above, the difference between nuanced academic and 'messy' policy language and how this can affect mutual misunderstandings was a point of discussion. In relation to this, there is also an issue of certain stakeholders potentially co-opting language to attach a meaning to it that serves their own interests. Additionally, participants noticed striking differences between EU member states and the gaps in their legislation on vulnerability and energy poverty. All in all, there might be an opportunity for research from across the Social Sciences and Humanities to provide insight in the controversies and interests involved in using certain concepts and terminology for better legislation and raising political awareness, and point out how EU member states might learn from each other in terms of effective policy concerning energy vulnerability.

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26   A split-incentive dilemma occurs when energy adjustments to buildings are not made, because the incentives of tenants (e.g. more comfort, lower energy bills) and real-estate owners (financial incentives) do not align..

5.1 Protecting vulnerable European energy consumers against market-based pricing and digitalisation

KEYWORDS Energy poverty; Consumer behaviour; Local energy; Energy Communities; EU Clean Energy Package

TIMEFRAME Fellowship meetings with Associates took place in May and June 2020.

ENERGY-SHIFTS RAPPORTEUR Nena Bode

Energy-SHIFTS Policy Fellow

Gert De Block

Secretary General, CEDEC - the European Federation of Local and Regional Energy Companies,
Brussels, Belgium

Policy Fellow Team Members
During the Fellowship, Gert involved his CEDEC colleague Monica Di Pinti (EU Policy Officer), who led two of the calls.

Sussex
UK

Utrecht
THE NETHERLANDS

Brussels
BELGIUM

Turin
ITALY

▼ FELLOW'S LOCATION

● ASSOCIATES' LOCATIONS

Policy context

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CEDEC - the European Federation of Local and Regional Energy Companies – was founded in 1992, with Gert taking on the role of Secretary General in 1996. CEDEC now represents the interests of more than 1,500 local and regional energy associations and companies across the EU. Local energy companies – including many with local, public shareholders – are often directly aligned with promoting the energy transition, and seeking to do so in a cost-effective, environmentally friendly way, while being an important engine for local value creation. CEDEC sees its members as able to provide services that are reliable, sustainable, and close to the customer.

The transition to a low-carbon energy system and supportive technologies is increasing the complexity of social problems, such as energy poverty. Regulated pricing – where energy prices are subject to regulation e.g. by the local authority – has been one tool which has been used, amongst other reasons, to protect customers. However the EU Clean Energy Package[1] creates pressure to phase out regulated prices for domestic energy users, which may put certain consumer groups at risk. To counter this, in the transposition of these directives, EU member states are free to implement exceptions to phasing out of regulated prices, so as to protect specific categories of consumers. The question then is how these new exceptions could or should be implemented.

Gert therefore wanted to use his Energy-SHIFTS Fellowship to discuss the implementation of the Clean Energy Package and its implications for vulnerable groups with researchers from across the Social Sciences and Humanities (SSH). He feels the European Commission does not sufficiently address the issue of vulnerable consumers currently. As a starting point, what constitutes 'vulnerable consumers' is not clearly defined, which makes it difficult for the member states to address the problem in a consistent way. Gert believes that this discussion will help CEDEC to follow up, guide and coordinate national primary and secondary legislation concerning vulnerable consumers. Doing so will ensure that CEDEC's members will have the means to provide these consumers with the fairest and most secure energy services. Gert is also interested in addressing potential negative implications for consumers (including vulnerable groups) of the digitalisation of energy systems and services.

> *Participating in Energy-Shifts Fellowship allows us to exchange with scientists on social implications of energy transition measures, to ensure they will be inclusive (a.o on pricing, digital services, appliances & infrastructures) and will benefit the whole society, including vulnerable energy consumers*

Gert De Block

Policy challenges

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Given the policy context outlined above, the following SSH-related questions were prepared by Gert and presented to Policy Associates prior to meetings, in order to facilitate discussion:

- How to prevent vulnerable consumers from being confronted with and getting locked into higher energy prices?
- How to take into account consumers who are not able to automatically adjust their consumption behaviour and cannot profit from the potential benefits provided by digitalisation such as dynamic prices?
- How to encourage less digital-savvy consumers to take up a more active role in the energy market through new energy services?
- How to ensure personal data is protected while data is shared and used to implement and improve the services?

Underlying these challenges is a more general interest (of Gert and CEDEC) in ensuring citizen participation in energy transitions to make these more inclusive, as well as the incentives that will help achieve – also in an inclusive way – energy and climate goals for 2030, and to realise full decarbonisation by 2050.

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1   The EU Clean Energy Package sets the EU energy efficiency and renewable energy ambitions for the 2030 horizon. It also updates the rules that govern the functioning of the internal electricity market and the transmission and distribution grids. Read more at: https://ec.europa.eu/energy/topics/energy-strategy/clean-energy-all-europeans_en

Matched Policy Associates

Given the policy challenges addressed by Gert, the Energy-SHIFTS team looked for academic expertise in the fields of energy poverty policy, digitalisation and (European) law. The four Associates matched with Gert were:

Bonno Pel - Researcher Sustainability Transitions, Institute for Environmental Management and Land-use Planning (IGEAT-CEDD), Université Libre de Bruxelles, Belgium. Bonno has a background in Environmental Social Sciences, Political Science, and Science and Technology Studies. Bonno was invited due to his research expertise in politics, sustainability transitions and governance dilemmas.

Sanne Akerboom - Postdoc researcher, Copernicus Institute of Sustainable Development, Utrecht University, the Netherlands. Sanne was invited for her relevant expertise in governance of the energy transition, legal frameworks and societal acceptance. Her background lies in Environmental Social Sciences, Law, and Politics.

Benjamin Sovacool - Professor in Energy Policy at the Science Policy Research Unit, University of Sussex, UK. Sovacool was invited for his expertise in energy justice, energy security, energy poverty, and overall Environmental Social Science. He regularly provides consultation for the development of energy policy.

Chiara Certomà - Assistant Professor in Political-Economic Geography, University of Turin and Research Affiliate, Centre for Sustainable Development (CDO), Ghent University, Ghent, Belgium. Chiara was invited for her general expertise in governance and sustainable development, and specifically on the topic of digital innovation.

Discussion points and SSH insights

Gert and Monica had bilateral calls with each of their Policy Associates between 19 May and 11 June 2020. Gert also participated in an online workshop with other Fellows and Associates working on challenges under the same thematic category on 8 June 2020. In this section, we summarise the main insights and discussion points from these exchanges.

The discussions show roughly three different, but not mutually exclusive, perspectives on how to address energy poverty and acceptance of renewable energy systems. One perspective emphasises building the capacities of energy communities as a catalyst for transition. The second perspective focuses on targeted strategies for including vulnerable groups to tackle energy poverty. Lastly, looking at the issue holistically, it was discussed that energy poverty must be understood and dealt with as a multidimensional problem. Finally, Gert had raised the question of digitalisation in his policy challenges, and this theme is touched on in a final subsection.

Encouraging energy communities by building capacity with those who can 'do more'

The role of energy communities[2] — as an intermediate body between energy suppliers and vulnerable consumers — are crucial in a free market and the meetings included discussion of how they may be currently underestimated in the EU Clean Energy Package. Like other intermediary bodies, energy communities can help vulnerable (and other) citizens in sharing production and distribution costs and implementing home-based solutions to save energy. However, energy communities can only be realised through collective investments upfront, for instance with regards to maintenance services, security of energy systems, and financial buffers. In order to achieve an energy transition,

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2   Energy communities are a way to organise collective energy systems, usually based on principles of open and democratic participation. These are initiated by a collective of citizens in which members themselves are responsible for producing (and distributing) energy for the local community.

some Associates suggested that vulnerable consumer groups may not (yet) have the means to seize all the opportunities offered by energy transition, digitalisation and dynamic prices.

Instead, one Associate argued, we could focus on maximising the positive externalities for those who have the possibility and can afford to 'do more' in transitioning to a low-carbon future, whilst ensuring a decent minimum basic social security for all. For this strategy, it is important to have a discussion about redistributing wealth beyond the sphere of energy policy. In this way, by following the logic of 'prosumerism'[3] - which, as mentioned, is only possible by collective investments upfront - energy communities can bring advantages to society, potentially reducing inequalities and making the energy transition more accepted, as long as no one loses from it.

Targeted strategies for vulnerable consumers

Two Associates brought a counter point to the approach above, highlighting that – whilst important – a focus on energy communities alone is not enough to ensure a just energy transition. Since participation in energy communities is seldom available to vulnerable consumers, this could ultimately create an even bigger gap between two consumer categories. This may mean that options for participation of vulnerable consumers in these schemes should be actively created. In order to improve the situation of vulnerable consumers, local needs and fair distribution of costs and benefits needs to be considered. In this regard, it may be very useful to have the decision-making of energy companies close to customers – a factor very much at the forefront of CEDEC's members priorities. This issue could also be addressed by EU Member States in their national energy poverty action plans or other means, such as non-financial policy instruments to support the role of energy communities. Improving the situation of vulnerable consumers will improve social acceptance of the energy transition, which could remove barriers to test innovative energy solutions.

Recognising multi-dimensionality of energy poverty

One Associate emphasised the need to define energy poverty as a multi-dimensional concept, which encompasses a wide variety of conditions that can make people vulnerable in a free-market scenario. These can be individual conditions that make people vulnerable to price oscillations, such as having low income or their housing situation. Conditions can also be contextual, such as living in a geographically marginal area (e.g. high mountain regions) or socially marginalised areas (e.g. banlieue). Moreover, where a lack of economic resources is accompanied by a lower-level education, this might prevent citizens from understanding contracts or participating in lobbying/political/consultancy activities. It is important to take both aspects into account in order to set up a fair energy provision system. As one Associate emphasised, in order to tackle energy vulnerability now and avoid replication in the future, a revision clarification of the role of 'energy communities' as defined in the Clean Energy Package would be very much welcomed.

Digitalisation

While initially Gert was interested in also focusing on the issue of digitalisation, throughout the conversations the focus mainly was on the possibilities, limitations and risks related to the engagement of vulnerable consumers in energy markets. These elements are enlarged when products and services become more digital. It is not necessarily possible for less digital-savvy consumers to profit from a more active role in the energy market through new energy services. Protection of personal data requires consumers' specific attention, while data are shared and used to implement and improve digital services.

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3   A situation in which the boundary between consumer and producer of energy becomes blurry, for example where members of energy communities produce energy for their own consumption without intermediate parties.

Translation to policy impacts

The programme allowed Gert and Monica to confront their ideas and underpin CEDEC's position with academic expertise. They found that very valuable and structured knowledge and thinking was shared by the researchers, which will lead to continued cooperation in the future to support CEDEC's policy positioning in these fields. Indeed, Gert held a follow up meeting with one of the Associates over summer 2020 to discuss precise content and deliverables for future cooperation.

Exchanges during the Policy Fellowship may directly contribute to three areas of CEDEC's work:

1. **Strategy documents.** These include internal briefings as well as reports developed by CEDEC for their membership.
2. **CEDEC Working Group proceedings.** Insights may feed into the CEDEC Working Group on Consumers, and in particular the Working Group is currently developing a position paper on how to improve the functioning of the energy retail markets for all types of consumers and especially for the most vulnerable ones.
3. **Dedicated webinars.** The academic insights and research results from the Fellowship are planned to be integrated in one or more upcoming CEDEC webinars.

Reflections from Associates

Associates were asked what they learnt about on-the-ground energy policy challenges from their virtual meetings with Gert and Monica. Here we share some of their reflections which emphasise the difficulties in concretely addressing energy vulnerability issues.

*"I learned about the practical difficulties to mediate different and often competing positions in the context of the EU, where **country-specific policies and culture-rooted routines are hard to be modified**. I also came to know about the impact of deciding for alternative definitions on the regulation of energy systems."*

*"There is a certain yearning to find decision-making arenas and channels for political influencing **through which to address issues of distribution and inclusion**."*

*"I learned that the idea of **vulnerable consumers** – although overall valued as important – **does not receive an elaboration nor implementation other than market competition**. Given the fact that the concept of vulnerability has been consistently used throughout the four energy directive packages, I thought it was rather important but in fact, **the solutions put forward fall short of actually improving the situation of vulnerable consumers**. I thought that was common knowledge, but was mistaken."*

*"It is inspiring to see a company such as CEDEC undertake efforts to reduce energy vulnerability. **I was challenged in my assumption that private sector actors won't seek to address energy justice concern**s."*

5.2 Making solar energy accessible and affordable for Polish citizens

KEYWORDS Solar energy; Consumption models; Consumer empowerment; Energy poverty; Legal barriers
TIMEFRAME Fellowship meetings with the Associates took place in May 2020.
ENERGY-SHIFTS RAPPORTEUR Nena Bode

Energy-SHIFTS Policy Fellow

Katarzyna Dulko-Gaszyna

Sustainability Manager, IKEA Retail Poland[1],
Warsaw, Poland

Policy Fellow Team Members

During the Fellowship, Katarzyna involved two of her IKEA colleagues in meetings: Bartosz Syk (Sales Leader of home solar), and Paweł Maśny (Project Manager dedicated to energy services).

London
UK

Delft
THE NETHERLANDS

**Warsaw
POLAND**

St. Gallen
SWITZERLAND

▼ **FELLOW'S LOCATION**

● ASSOCIATES' LOCATIONS

....
1   Katarzyna is the only Fellow representing a non-public organisation, approaching energy policy from a business perspective. The consortium considered her involvement to be a valuable addition to the Fellowship programme, given her strongly policy-facing role.

Policy context

Poland currently relies heavily on coal for its energy production. In addition, the electricity system is not perceived as being very resilient: particularly in rural areas there is a risk of power blackouts. Over recent years, increased air pollution and extreme weather events have raised awareness about climate change in Poland, as well as the urgency of looking for alternative energy sources. In this context, solar energy may be the cheapest and most sustainable solution to secure parts of the energy supply for the country. However, the transition to solar energy in Poland still faces a multitude of political, legal and social barriers.

IKEA Retail Poland (referred to here as 'IKEA Poland') aspires to realise a 'Triple-P' bottom line business ethic: balancing the interests of People, Planet, and Profit. According to their own market research, less than 5% of the Polish population knew what solar panels were when IKEA Poland started selling solar panels around 2017, often confusing them with solar collectors. Moreover, IKEA Poland was not considered by consumers as a likely company to buy solar panels from. IKEA Poland has therefore made concerted efforts to increase this awareness, through PR-events, designated stands in stores, social media campaigns, and customer support on their website. They also aim to make solar panels more broadly affordable: current pricing now starts around 12.000 zloty (approx 2.700 Euro).

Today's government in Poland is pro-solar in its ambitions: it has pledged to promote solar energy, and developed a number of policy instruments for this purpose (e.g. subsidies, tax reliefs). Nevertheless, these measures do not yet seem to cause a significant uptake of solar technology. Moreover, future political decisions (e.g. a potential sun tax[2]) might disrupt the solar industry. Politically, Katarzyna observes how the climate and energy debate in Poland is largely dominated by a number of experts, who are usually connected either to political or business interest groups. The debate often seems polarised between liberal/left-wing forces that emphasise the planet's needs, and conservative/right-wing forces that address economic losses for traditional labour sectors in the country.

Besides, the current discourse is dominated by technical market solutions, such as supporting technology sales or investments in the big data sector, which leaves little room for synergies and solutions that address multiple issues simultaneously. Katarzyna also described how there are significant issues with representation in the energy debate. The debate is male-dominated, and lacks the voices and views of young people, women and local activists. Young people can attend climate strikes, but there rarely is a constructive follow up debate. Women - especially those in rural areas – are also underrepresented.

In her role, Katarzyna focuses on sales and development of energy services, including energy efficient appliances and solar solutions for homes. She emphasises how energy services relate to questions of cross-sector solutions and collaboration across stakeholders to achieve effective low-carbon energy transformations on a broader scale. Moreover, she considers how the IKEA brand can be used as a way of reaching out to a broader section of society. It was in this context that she was keen to engage in dialogue with researchers from across the Social Sciences and Humanities (SSH) as part of an Energy-SHIFTS Fellowship.

Policy challenges

Given the policy context outlined above, the following SSH-related questions were prepared by Katarzyna and presented to Policy Associates prior to meetings, in order to facilitate a discussion. They broadly fell under two themes:

Consumer behaviour in relation to solar technology:

- How can we (IKEA Poland) communicate effectively about the affordability of the solar energy systems, and their (long) return on investment?
- What are the barriers to people investing in (domestic) solar technology?

....

2   A sun tax is a charge that must be paid when individuals opt for an energy self-sufficient home, but remain connected to the traditional electricity grid.

- How can we start a discussion on solar energy with a broader representation of society, rather than the current small segment of (male) homeowners?

Business as a force for sustainable energy activism:

- How can we give voice to address the needs of marginalised groups and people who are affected by renewable alternatives (such as mining communities)?
- How can we best collaborate with other stakeholders to address energy poverty in Polish cities?
- What role could IKEA Poland play in influencing the local legal situation/policies?
- How can we change the narrative to focus more on quality of living, the future of rural areas after closing the mines, and jobs and opportunities in new energy transformations?

Matched Policy Associates

Given the policy challenges identified by Katarzyna, the Energy-SHIFTS team looked for academic expertise particularly in the fields of new business models and socio-economic barriers to renewable technology.

The four Associates matched with Katarzyna were:

Jotte de Koning - Assistant Professor of Design for Sustainability Transitions, Faculty of Industrial Design Engineering, Technical University Delft, the Netherlands. Jotte was invited due to her expertise in sustainable product and service design, behavioural change and strategic user-centred design.

Jakob Knauf - Research Associate and PhD researcher, Institute for Economy and the Environment, University of St.Gallen, Switzerland. Jakob was invited because of his knowledge on the acceptance of financial participation in renewable energy projects, including crowdfunding and financing through institutional investors.

Vivien Kizilcec - PhD Researcher, Department of Civil, Environmental and Geomatic Engineering, University College London, UK. Vivien was invited as an Associate due to her knowledge of energy policy. Her thesis focuses on examining the adoption determinants and energy consumption patterns of off-grid solar customers in East Africa.

Iwona Bisaga - Research Associate, Department of Civil, Environmental and Geomatic Engineering, University College London, UK. Iwona was invited because of her background in Social Anthropology, and the focus of her current research, which focuses on setting up renewable energy systems in rural Africa.

Discussion points and SSH insights

Each Policy Associate wrote a brief response to Katarzyna's policy challenges, and Katarzyna and her colleagues from IKEA Poland (see box) had video calls with all four Policy Associates individually between 13 and 15 May. The IKEA Poland team also attended an online workshop with other Fellows and Associates working on similar policy challenges on 8 June. In this section we share six main insights and points of discussion from Katarzyna's exchanges. Quotes from the Associates are shown in italics in the main text.

Solar PV as an appropriate technology, with the 'right' legislative support

First of all, Katarzyna was confirmed in the decision to focus on solar PV as both an affordable and scalable form of renewable energy. For example, her Associates confirmed that there are opportunities for growth of solar PV sales in mature markets, and that current technological developments create the potential for solar panels to be adjusted to different kinds of housing and contexts (e.g. plug-in systems for balconies). However, through the discussions Katarzyna also became aware that to scale up towards mass solar panel coverage in Poland, legislative support is needed too. A suggested pathway in this regard, which is currently being considered or enacted by some governments, includes making solar PV installations obligatory for newly developed housing, integrating solar PV in building design from the very beginning.

Changing behaviour by providing an experience

> *Giving people more knowledge and information does not necessarily make people change their behaviour. Even though people are aware and motivated, this does not lead to action per se. We learned this is called the 'green gap'.*

Katarzyna Dulko-Gaszyna

As illustrated in the quote above, Katarzyna gained particularly valuable insights on consumer behaviour through her meetings. One of her Associates described how the 'green gap' concept refers to a situation where there is high motivation for change, but low levels of action due to situational conditions that do not provide the right context for motivations to turn into behaviour. Therefore, to make solar energy more widely recognised and accepted, IKEA Poland may want to focus more on giving people a positive hands-on experience, rather than just communicating information and knowledge. An Associate explained: *"It could be helpful to show people, instead of informing them. For example, for people to know that solar panels are a sustainable solution there could be demonstration sites; in-store comparisons of test set-ups; physical examples of systems that are in place for 5 years, 10 years and 15 years"*.

Katarzyna also discussed with her Associates how ambassadors - people in the neighbourhood that already have solar PV installed at their homes - could be key players to improve visibility (see quote below). IKEA Poland could, in line with their brand image, also improve customer experience by providing clear guidance and visualisations that go beyond technical jargon.

> *The offer needs to be easy to understand, as if a neighbour tells you the story. People are more likely to listen to their peers when it comes to sustainable behaviour*

Katarzyna Dulko-Gaszyn

Relatedly, an Associate noted how it can be very effective to have customers arrive themselves at the conclusion that they need resilient, sustainable, affordable energy solutions, and that an answer to their needs can be solar PV. *"It empowers people when they think they are arriving at a solution rather than 'you' giving them the solution (i.e. trying to sell it because of X, Y, Z)."* In line with this, another Associate emphasised incentives other than financial ones for people to install PV, such as the wish for autonomy. Knowing the Polish electricity system is considered to be not very reliable, more energy autarchy might be a motivation to buy PV.

Tailored strategies to reach out to marginalised communities

To specifically reach marginalised groups, Katarzyna learned about the importance of local leadership and connecting with community groups in conversation with an Associate (see quote below). As well as local leadership, Katarzyna actively discussed connecting with women's and youth groups, community engagement programs, schools and other educational centres. For example, they could collaborate on demonstrations or other events to

reach audiences beyond their 'usual suspects'. In order to address energy poverty issues, especially among farmers in rural areas, tailored (communication) approaches were also raised as a strategy. Associates discussed how hiring intermediaries who are well-connected in local communities have been found to be effective in creating trust and engaging important stakeholders. Another Associate highlighted opportunities to work with stakeholders who focus on energy poor households, such as the Energy Poverty Observatory[3].

> " *Local leadership's support of off-grid solar has been hugely impactful in building trust in solar and encouraging people to move away from candles and kerosene as polluting and, ultimately, costly sources* "
>
> Katarzyna Dulko-Gaszyn

Behaviour regarding solar energy is often about access to finance

Furthermore, Katarzyna gained new insights about energy poverty and financial models within the Polish context. A sizable proportion of the Polish population, 12.2%, or 4.6 million people, are estimated to be energy poor, meaning 'experiencing a lack of access to modern energy services', of which two-thirds live in rural areas. Out of that number, 5.6% is not considered income poor, meaning that energy poverty is not always caused by a lack of money. Furthermore, by profession, farmers are seen to be particularly affected, with every third farmer being energy poor, mainly due to living in low-efficiency, older, buildings.

One of the Associates was able to bring in insights from research work in sub-saharan Africa, where the biggest barriers to uptake of solar technology are often financial restrictions. For that reason, the most successful off-grid solar companies in that context are those offering solar systems with financing, i.e. offering people the ability to buy the installations through small instalments over a period of time (usually three years). *"Offering the ability to pay over time and making clear what the long-term electricity bill savings are going to be might work to entice more customers to explore solar as an option"*, the Associate stated. Another Associate suggested to remove financial restrictions by offering lease contracts as a potential business model.

Changing the narrative to influence political agendas

Regarding influencing the legislative landscape, two of the Associates independently suggested to start 'from the bottom up', by first building a narrative of clean air and independent and resilient infrastructures. Katarzyna acknowledged IKEA Poland could do more to address the positive side of PV business, by framing it as a way to positively develop the economy and prosperity of the country, e.g. by joining existing movements. Also, arguments like independence from foreign energy imports could eventually persuade more politicians that investing in solar PV is of benefit to Poland.

Nevertheless, there is still much uncertainty and apprehension about how policy making will affect the development of solar PV in Poland over the coming years. For instance, should the solar PV market grow too fast, causing the energy infrastructure to become overloaded with solar energy from households, the country could be facing additional legislative barriers to further development.

Taking lessons from different national contexts

Through her conversations with Associates, Katarzyna became more aware of the differences and similarities between the different national contexts. One associate, whose research revolves around off-grid solar systems in Sub Saharan Africa, was surprised about the overlap despite the vast differences between the global North and South. The meeting taught her that professionals in different contexts can really learn from each other. Another associate, highlighted the nuances within the EU, and how EU Member States cope differently with challenges regarding the same technology.

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3   The EU Energy Poverty Observatory (EPOV) is a new initiative by the European Commission to help Member States in their efforts to combat energy poverty. It exists to improve the measuring, monitoring and sharing of knowledge and best practice on energy poverty. https://www.energypoverty.eu/about/about-observatory

Katarzyna and her colleagues during a video call with one of the Associates. Picture used with permission of people displayed.

Translation to policy impacts

The Fellowship programme will directly contribute to the sustainability agenda developed by IKEA Poland in a number of ways:

1. **IKEA research programmes on sustainability.** The insights will enhance the outcomes of different research programmes existing across IKEA. IKEA periodically commissions reports to inform their ongoing work engaging in climate change issues (for an example of previous research, see Global Climate Action Report from IKEA[4], which identified key motivators to inspire consumer action). The insights from this Fellowship will most directly feed into IKEA Poland's on-the-ground engagement work around solar power, including planned strategies for communication, analysis of customers expectations in Poland, and the development of energy services.

2. **Internal dialogue.** As well as having involved colleagues in the meeting themselves, Katarzyna will be sharing findings from her Fellowship with wider members of the team through working in different groups in the country and internationally on further developing energy services at IKEA. Three key takeaways Katarzyna will highlight with colleagues include:

   I. Deliberately initiate connections to different stakeholders, like existing customers of home solar, but also activists of clean energy in Poland, who experience the change and can act as positive ambassadors. This insight can feed into IKEA Poland's work in connecting with women's and youth groups, community engagement programs, schools and other educational centres. For example, they could collaborate on demonstrations or other events to reach beyond their 'usual suspects'.

   II. Solar energy is connected to the sustainability agenda and many different motivations of customers and users who want to act positively for the planet. However, when it comes to consumer behaviour and purchases regarding solar PV, incentives and barriers may be more related to access to finance (and related energy poverty issues) than other sustainability areas. This insight may impact a stronger communication approach for solar PV by IKEA Poland, and explicit connection to financial benefits and affordability of all products and services.

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4   The Global Climate Action Report from IKEA is available at: https://www.ingka.com/news/global-climate-action-report-from-ikea/

III. The market is very dynamic: it can grow faster, or in very different directions, than expected. Therefore, all stakeholders in this field must act flexibly and have an innovative mindset. Being open-minded and willing to continuously learn about the field of sustainability is an important characteristic for the IKEA Poland team when taking this work forward.

Reflections from Associates

Associates were asked what they learnt about on-the-ground energy policy challenges from their virtual meetings with Katarzyna and colleagues. Here we share some of their reflections which include showing how some Associates gained insight into a very new (to them) context.

"I learned that **a lot is being done, tried, and experimented with, but adoption is [still] lacking. Tells me again that the challenge is social**, not technical."

"I am usually focusing on quantitative research and aim for generalisation of my results. **My assumption was before the virtual meeting that this [generalisation] is possible within a region like the EU. However, I learnt that there are big differences** within the member states of the EU."

When reflecting on the importance of translating research findings: "I was **challenged in my assumption that people [in non-research roles] have access to** or the time to read **the relevant literature** on the subject."

"I learned that the challenges in the global North and South are vastly different when it comes to clean energy transitions but in reality there are many areas of overlap and **a lot [that] professionals working in different contexts can learn from one anothe**r."

5.3 Working with neighbourhoods to decide on non-gas heating alternatives in the Netherlands

KEYWORDS Heating transition; Natural gas phase out; Social acceptance; Citizen participation; Narratives; Social justice

TIMEFRAME Fellowship meetings with Associates took place in May 2020
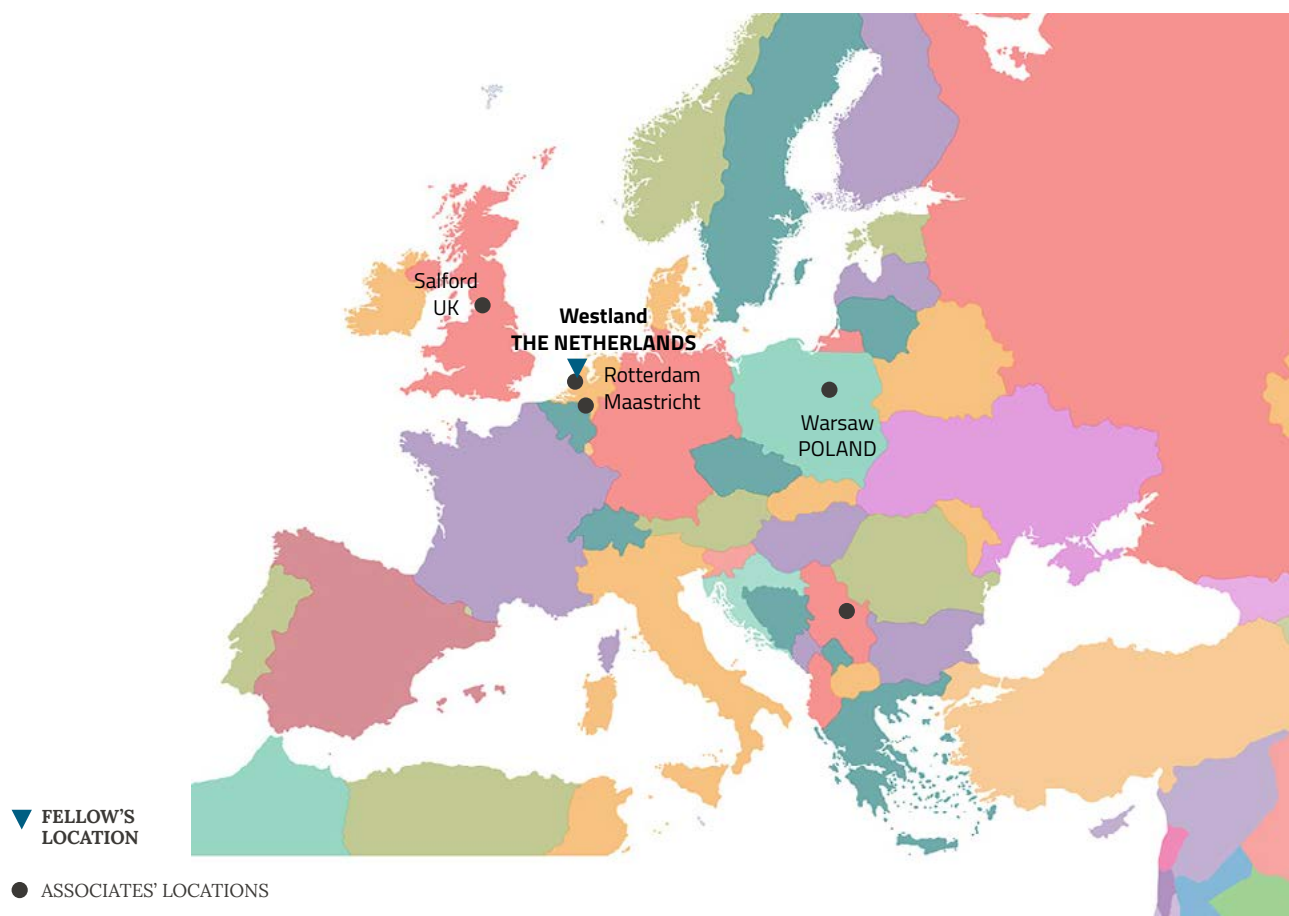
ENERGY-SHIFTS RAPPORTEUR Nena Bode

Energy-SHIFTS Policy Fellow

Marieke van der Enden

Policy Officer, Department of Energy and Transition, Municipality of Westland, the Netherlands

▼ FELLOW'S LOCATION

● ASSOCIATES' LOCATIONS

Policy context

Marieke van der Enden is a civil servant at the municipality of Westland, in the Netherlands. Together with two colleagues she works on decarbonising the built environment. They are currently developing a local vision and agenda on how to transition towards renewable energy based heating. The final plan for this is due to be finalised by the end of 2021, as required by the Dutch national government. As part of this, they aim to select two neighbourhoods that will be the first to disconnect from the natural gas grid. This process is raising many questions about the renewable energy alternatives that are available, but also about how to develop a citizen engagement process that is effective and just.

Marieke is most concerned about a current lack of public acceptance for the proposed alternatives. In general, the Dutch heating system is a very robust and centralised natural gas-based system. This has created a lock-in situation, which complicates the introduction of emerging decentralised heating alternatives. These alternatives are often different from the status quo in technology and (co-)ownership model, and need to be highly customised to the local context, for instance in terms of heating sources, type of building, as well as needs and financial resources of citizens. As such, it is likely that each district will end up having a system that differs in cost, comfort and governance.

While being cut off from the gas-grid eventually is a given, the municipality has no official authority to dictate which alternatives are chosen by individual citizens. However, the decision for alternative heating sources is not always an individual one, importantly in the case of district heating. Therefore, the municipality wants to engage with citizens to find the most sustainable, just and efficient solution for their whole neighbourhood (see quote). Since citizens are very much used to a centralised provision, some tend to become angry and frustrated when asked to think about alternative heating systems. Marieke's challenge is therefore to find a collective way to govern this local energy transition, particularly given the limited role and authority of local government. It is this that she wanted to focus on in discussion with researchers from across the Social Sciences and Humanities (SSH), during her Energy-SHIFTS Fellowship.

> *The municipality has no legal authority to disconnect houses from the gas network, and also does not have any authority regarding the alternative people choose. This means a total dependency on public faith and acceptance of the solutions we offer them. Every house owner will have to pay the costs of the energy transition in the built environment, but the costs for the individual differ.*

Marieke van der Enden

Policy challenges

Based on the policy context above, Marieke prepared the following SSH-related questions to stimulate discussion with her matched Policy Associates; these were sent to Associates prior to conversations.

Main challenge:

- How can we choose the right heating alternatives for the selected neighbourhoods in our municipality?

Sub-questions related to public acceptance and communication:

- How can we effectively foster acceptance and willingness among citizens for changing their heating system?
- How might we clearly communicate and inform citizens about the preferred technological alternatives (e.g. in terms of costs and comfort)?

Sub-questions related to social justice and equal distribution:

▪ How can we ensure the pros and cons of the alternative heating systems are equally distributed, or, how to make alternative systems and processes socially just?
▪ How can we facilitate a transition process that is inclusive and effective?

Matched Policy Associates

Given the policy challenges addressed by Marieke, the Energy-SHIFTS team looked for academics with knowledge of participatory governance, communication, and public acceptance in the context of transforming the built environment. Her four matched Associates were:

Danielle Butler - Postgraduate Researcher, Sustainable Housing & Urban Studies Unit, Salford University, UK. Danielle focuses on studying the lived experience of energy poverty and poor housing conditions, and how this relates to the issue of acceptance. She has a background in Psychology (Graduate Member of the British Psychological Society) and Social Policy.

Agata Dembek - Assistant Professor, Institute for Public Knowledge, Kozminski University, Warsaw, Poland. Agata was invited to share her knowledge of the cultural and political dimensions of sustainable development, sustainable entrepreneurship, and social innovation in energy. Her expertise lies in Business Studies, Science and Technology Studies, Social Anthropology, and Sociology.

Marc Dijk - Research Fellow, Maastricht Sustainability Institute, Maastricht University, the Netherlands. Marc combines an understanding of stakeholders (perspectives, practices, etc.) with systems analysis on topics such as urban mobility, solar energy and resource efficiency, and the socio-technical transformation of the built environment. His works covers innovation policy, sustainability assessment, and socio-technical systems analysis, and he has a background in Science and Technology Studies (as well as Engineering).

Michael Schreuders - Academic Researcher, Department of Public Administration and Sociology, Erasmus University, Rotterdam, the Netherlands. Michael was invited due to his knowledge on how the conditions and drivers in community renewable energy projects can lead to broader participation. His background lies in Psychology and Global Health.

Discussion points and SSH insights

Each Policy Associate wrote a brief response to Marieke's policy challenges, and Marieke had a bilateral call with each of them over 11-12 May. Marieke also participated in an online workshop with other Fellows and Associates working on policy challenges under the 'Just Transitions' thematic category on 8 June. In this section we share the discussions and key insights that were shared by Marieke and the Associates during these exchanges.

Co-creating a context-sensitive narrative of transition

Marieke's main insights from the Fellowship relate to her own role as a civil servant in facilitating the energy transition. She has concluded from her own work and Fellowship discussions that whether people will experience the energy transition as a just transition, depends largely on the surrounding narrative that is built (including by public bodies), and the extent to which residents are involved successfully. To build a good narrative, you have to have insight in what matters to the key users. Ideally, you would go further by building this narrative together with residents.

In this specific case, where Marieke wants to involve people in the changes in their neighbourhood, one area where the energy transition narrative could relate to earlier positive experiences is with greenhouses and heating networks. Greenhouses are a unique cultural characteristic and asset for the geographical area of Westland (see quote). Marieke's most important take-away therefore is to approach citizen involvement very clearly according to the context of the area and the type of community.

> *Develop a narrative based on the positive experiences with greenhouses and heating networks. People in Westland are proud of 'their' greenhouses and entrepreneurship. We should use that for a positive framing of energy transition.*

Marieke van der Enden

Differentiated participation, but starting somewhere

Marieke gained insights from Associates into how to practically organise public participation in a transition process, as well as gaining reassurance that involving citizens can start with a few interventions rather than working out a 'participation master plan' from the start. One Associate discussed that not every single person has to be involved to the same degree and in the same way: indeed this is not even possible.

As two approaches here, Marieke first considered how in transition processes, it can be effective to build a 'community of the willing'. This can be done by connecting (on- and off-line) to different already existing groups. Secondly Marieke discussed with Associates practices around interview sampling, for instance speaking to 50 residents about what they think is important with regards to heating will cover a large number of themes of relevance to that community and is an effective way to obtain valuable insights and also to show a broader group of people that you are interested in their needs.

> *There is a third way of participation: you don't have to approach all residents. Small groups can provide valuable insights and also deliver a sense of participation. For instance: interview 50 people on what they think is important in heating their houses.*

Marieke van der Enden

Importantly though, participation of citizens does need to be tailored to local contexts: differentiating your approach between different residential areas and different target groups. For example, Associates raised how only using digital methods may exclude vulnerable, least engaged or already invisible households, which highlights the need for different formats. In order to facilitate a process that is inclusive, one must recognise that not everyone is able to stand up for their own needs, and thus providing a stage for people to express themselves can be essential. One Associate stressed the importance of monitoring and evaluation in such participation projects, to adapt the approach based on the latest insights.

A 'gold standard' for heating contractors?

Another issue that was raised during the conversations with Associates concerned the importance of collaboration with contractors such as suppliers and installers of technology. In particular, the need for contractors to build confidence among residents was discussed. Currently, it is difficult for clients to know if contractors deliver good technology and services: the lack of certification around installing and providing heating alternatives hampers people to take action. It is therefore crucial that contractors take the time to ask the right questions when they start developing energy alternatives in a neighbourhood. As a way to encourage this, the municipality could make such considerations part of the tender process or permit conditions. Alternatively, a nation-wide 'gold standard' (i.e. certification) could be developed, outlining how energy providers and installation companies can best support participation and discussion in the energy transition.

Considering the challenges to navigate in the role of the civil servant

As highlighted at the start, Marieke found the Fellowship a valuable experience in reflecting on her own role as a civil servant. To act upon all of the above as a civil servant within the political context of a municipality is a challenge. As one example, Marieke discussed the importance of managing public expectations. One Associate noted that from a technological perspective there are of course always a limited set of options based on criteria such as costs, reliability, comfort, etc. Sustainable heating systems cannot be ordered by individual residents to exactly match their existing heating experience. The challenge of *how* to make a decision between the different options often brings up political/ideological questions and interlinks with the participation processes set up.

Positively, Marieke concluded that sometimes the fear civil servants have for residents' potential needs and wants (a point echoed in the Associate reflections at the end of this report) might be unnecessary. After all, people accept there may be differences in access to public transportation (e.g. access to a bus station) across areas, so why not for energy?

Translation to policy impacts

Her conversations with Policy Associates allowed Marieke to reconsider some of her assumptions and ideas about the heating transition in Westland. She plans to follow up with her Associates on emerging questions and insights in the political context of her municipality in the process of contributing to a number of upcoming policy processes.

Specifically, Marieke aims to translate her Fellowship insights to the following three policy documents under development:

1. **'Transitievisie Warmte' (translation: Transition Vision on Heat)**. This municipal vision on the heating transition is being developed using data from a broad range of stakeholders. It outlines and presents optimal scenarios for replacing natural gas, primarily from a technological perspective. Marieke's insights on the importance of locally-rooted narratives, such as regarding the cultural importance of greenhouses, will now feed directly into this document.

2. **'Regionale Energie Strategie – Regio Rotterdam Den Haag' (translation: Regional Energy Strategy – Region Rotterdam The Hague)**. The Regional Energy Strategies are part of a national programme for realising renewable energy in the Netherlands. The programme demands that the thirty regions suggest what sustainable energy sources they will use to replace fossil fuel energy sources in collaboration with grid operators.[1] Marieke will use her insights on methods of collaborating with citizens, and participatory processes, from the Fellowship to contribute to this document.

3. **'Westland Energie Opgave' (translation: Westland Energie Mission)**. This document outlines the overall policy for the energy transition in Westland, and is updated every two years.[2]

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1   The concept version of the Regionale Energie Strategie is available here: https://www.resrotterdamdenhaag.nl/context/regionale-energie-strategie/

2   The Westland Energie Opgave is available here: https://api1.ibabs.eu/publicdownload.aspx?site=Westland&id=f4e99e1a-7a5e-4f54-a923-8507711cd5b5

Reflections from Associates

Associates were asked what they learnt about on-the-ground energy policy challenges from their virtual meeting with Marieke. Here we share some of their reflections, which include recognition of the day to day challenges facing policyworkers which, without sufficient resource, can impede citizen engagement processes.

*"I was hoping that the policy advisor would feel more comfortable to engage with citizens, yet the conversation made clear that **policy advisors are hesitant, because of the resistance**."*

*"The **requirements for change are set by the central government with surprisingly little implementation guidelines**, and lack of clarity about funding. That is challenging because the municipal policy makers do not have themselves a full set of information that would most likely be expected by the community."*

*"[I learned] to think more broadly about vulnerability than only in terms of income (where my reading and writing is predominantly situated) and **striking the balance between practical and academic approaches/ solutions**."*

*"I learned about **the local specificities of the energy transition of the area of the Fello**w, which was interesting".*

5.4 Reorganising city neighbourhood energy systems in socially just ways

KEYWORDS Citizen engagement; Behavioural change; Energy poverty; Campaigns; Communication

TIMEFRAME Fellowship meetings with the Associates took place between 24 April and 15 May 2020

ENERGY-SHIFTS RAPPORTEUR Iryna Lunevich

Energy-SHIFTS Policy Fellow

Joyca Leplae

Head of campaigns, Service for Environment and Climate, Municipality City of Ghent, Belgium

Policy Fellow Team Members

During the Fellowship, Joyca was accompanied by three of her colleagues in meetings: Roeland Keersmakers (Transition Manager), Mieke Maerten (Communication Officer on Energy), and Simon Berlo (Communication Officer on Energy).

Rotterdam, Delft, Breukelen
THE NETHERLANDS

Ghent
BELGIUM

Karlsruhe
GERMANY

Lisbon
PORTUGAL

▼ FELLOW'S LOCATION

● ASSOCIATES' LOCATIONS

Policy Context

Joyca Leplae works for the municipality of Ghent, Belgium. She is a team coach for policy officers working on different topics related to the energy transition, ranging from building renovations to renewable energy and behavioural change. Her work involves meeting the challenges of identifying and applying effective participatory methods to engage people in implementing new low-carbon technologies and energy infrastructure.

Ghent has an elaborate support system for energy efficient renovations by citizens, based in a 'one-stop-shop'. This service provides expert advice on energy efficient renovation of individual households as well as financial assistance in the form of subsidies and loans. However, this support system mainly results in investments in energy measures by middle-class households. While there is specific support and there are financial measures for low-income households, energy poverty remains difficult to tackle. Currently, Ghent is combining all actions and measures already taken to monitor what does and does not work to address energy poverty.

In 2020, Joyca's team will start a transition plan for two neighbourhoods in Ghent to become fossil-fuel-free. One of the areas will likely be connected to the harbour, and will be using heat exchange technology, while the other is a more residential area where a local heating grid could be established. She hopes that these two cases will accelerate the transition process of the whole city.

Joyca's policy challenge is to engage all citizens in the city's new climate plan and to address energy poverty, to make sure no one is left behind in the energy transition.

> *We aim for local approval for our energy transition and climate plan. For our context and the topics of fossil free future and energy poverty, I am very excited to have access to recent academic insights from the Social Sciences and Humanities (SHH), and to discover how they can help us to accelerate solutions to these challenging transition issues* [1]

Joyca Leplae

Policy challenges

Within the policy context outlined above, Joyca had a large number of SSH-related questions she was interested in exploring. To facilitate discussion she therefore prepared the following list, presented to Policy Associates prior to meetings. These fell broadly across two areas:

Developing a local, action-based transition for fossil fuel-free neighbourhoods:

- What can be learned from, and how can we collaborate with, bottom up movements and networks where citizens lead the transition?
- How to get an integrated approach in which different departments and organisations work together effectively?
- How do you organize effective participation processes: start a campaign, or speak to citizens one at the time?
- How do we deal with certain thresholds such as high financial investments and mental barriers? How to change the negative mentality towards certain alternative technologies, such as heat pumps?

Exploring the means to reach out to target groups vulnerable for energy poverty:

- How to tackle and prevent energy poverty, making sure strategies reach out to lower-income households and tenants in precarious situations?

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1   This quote has been shortened and edited.

- What methods benefit lower income households? What policy instruments are effective in which situation? How to do this in a way that considers the needs of citizens, the existing built environment and geographical aspects of the areas?

Matched Policy Associates

Given the policy challenges addressed by Joyca, the Energy-SHIFTS team looked for academic expertise in the fields of Psychology, Anthropology, Transition Studies, Urban Transformation and Stakeholder Management. The five Associates matched with Joyca were:

Elisabeth Dütschke – Senior Scientist, Fraunhofer Institute for Systems and Innovation Research ISI, Karlsruhe, Germany. Elisabeth's work focuses on the human perspective on a changing energy system. Elisabeth was invited as an Associate due to her background in Environmental Psychology, Behavioural Science and Organizational Psychology.

Matthijs Hisschemöller - Senior Researcher, Dutch Research Institute for Transitions, Erasmus University - Rotterdam, the Netherlands. Matthijs' disciplinary expertise span Transition Studies, Energy Economics, International Relations and Public Administration. Matthijs' was invited due to his experience with political decision making processes and public participation in various energy transition projects in the Netherlands.

Anke van Hal – Professor of Sustainable Building, Center for Entrepreneurship, Governance & Stewardship, Nyenrode Business University, Breukelen, the Netherlands. Anke was invited due to her knowledge of energy friendly renovation processes and the sustainable transformation of existing dwellings and neighbourhoods. Her background lies in Economics, Architecture and Governance of Urban Transformation

Sophia Küpers – PhD Researcher, Center for Social Research and Intervention, University Institute of Lisbon, Portugal. Sophia's research focuses on the historical dimension of social acceptance of renewable energy projects. She was invited due to her work on how collective memory of past energy infrastructure and decision-making processes may shape how people think of nearby renewable energy projects. Her background lies in Environmental Social Science, Social Anthropology and Psychology. Pedram Soltani - PhD Researcher, Department of Management in the Built Environment, Faculty of Architecture, Technical University Delft, the Netherlands. Pedram was invited due to his research experience in stakeholder engagement in controversial community renewable energy projects. He specializes in public-private partnerships and inter-organizational governance in relation to the grand challenges of the construction industry. His disciplinary background spans Innovation Management and Policy Analysis.

Discussion points and SSH insights

Joyca and her colleagues had a bilateral call with each of her matched Policy Associates. She also participated in an online workshop with other Fellows and Associates working on policy challenges under the same thematic category. In this section we share the experiences and insights Joyca and her Policy Associates shared with us in their reflections.

Participation processes in the past can affect current plans

In one conversation, discussion included on how collective memories that people share across generations shape their attitudes, beliefs, and everyday practices towards new energy projects, and thus strongly affect their current responses to these projects. Joyca recognised that indeed the responses to the energy transition plan for the two designated neighbourhoods in Ghent might be affected by former projects undertaken in these areas and people's responses to them. Therefore, she decided it would be important to document participatory processes that took place there in the past, to understand if authorities adequately addressed citizens' queries at that time, as well as deliberately engaging different generations of citizens in the project. In addition, Associates emphasised the importance of paying attention to the local identity of the two designated neighbourhoods in Ghent and to identify existing social structures in these areas (e.g. neighbourhood groups, sport clubs, social centres, etc.). These two elements could form a basis for building relationships with the local communities in the Ghent neighbourhoods.

Using 'negotiated knowledge' to overcome social conflicts around energy issues

The meetings enabled Joyca to look at social conflict from a new perspective. Associates suggested that instead of perceiving public resistance and social conflicts as a barrier and as something that must be solved, rather they can be viewed as a means to understand perspectives of different actors on energy projects. One Associate noted that conflicts lead to knowledge production and information overflows and, therefore, can help to identify divergent perspectives that stakeholders have regarding energy transition projects and that might be overlooked in official assessment and participatory procedures. In order to solve social conflicts, a recommendation was to use 'negotiated knowledge': where stakeholders identify solutions to energy controversies and determine the 'right' information through interaction with each other. The source and status of knowledge and research, which supports the participation process, is thus also negotiated and agreed on. Joyca found this concept, which was new to her, particularly useful, as it allows greater understanding of what is going on behind protests and to find effective means to resolve conflicts.

Achieving energy transitions through 'fusion of interests'

Joyca has found in her work that in order to achieve energy transitions, it is necessary to take small steps that might not seem directly related to energy issues. One of the Associates, referred to work in Toronto where the energy transformation of low-income areas started by solving minor issues such as heating problems. Instead of targeting the energy efficiency of neighbourhoods right away, the city authorities collected residents' opinions and tackled the actual problems they experienced. At the same time, the authorities combined these solutions with their plans for energy renovation of residential areas. This way, it was easier to achieve the balance of interests, as citizens had a chance to comment on energy transformations and identify issues that should be solved first. Joyca's experience is that people's attitudes towards energy transitions might not always be influenced by financial arguments or seemingly 'rational' argument. Therefore, a key conclusion for her is to look to influence citizens' attitudes towards energy renovation in part by solving small issues in residential areas, building up trust and connection.

Teaming up with contractors to advise citizens on energy refurbishment

In addition, Joyca learned about the ways in which contractors (e.g. PV installers) can significantly affect people's decisions on energy renovations. Associates noted how some people might give up on plans for energy refurbishing or rooftop PV when they are not able to find somebody able to support them. In one meeting, a key discussion was around initiatives to work with and train contractors to be able to communicate clearly about renewable technologies to customers, and advise people well on future proof investments and technology. In addition, Joyca noted that in Ghent contractors tend to operate solo, and that the networks between similar companies are often absent. In response to this, one Associate suggested that organising one-stop-shops to connect contractors with each other, and with customers, might be a suitable solution for this problem. In turn, Joyca developed plans to encourage peer-to-peer networks so that people can share with each other information about their investments, contractors, and technology.

Developing innovative financial models to lower the burden

Finally, Joyca discussed various financial instruments for low-carbon transitions and possibilities in building. A relevant insight was that creating sustainable heating grids starts with choosing the right source. Participation should be thought about at an early stage, so that citizens are involved in understanding and ideally welcoming certain technologies. Joyca believes that one of the most promising instruments is the 'no more than gas price' measure. With this measure, the price of renewable energy is not higher than the price of gas. However, in Belgium the necessary tax shift from electricity to gas has not been made yet.

Translation to policy impacts

Joyca and her team will be using the insights from her Fellowship to further develop the transition plan towards fossil free heating for the selected two neighbourhoods in Ghent that they are working on. This plan will now include specific steps related to working with citizens, as well as an exploration of a number of specific initiatives:

1. **Researching documentation on participatory processes that took place in the past.** This will help Joyca and her team to understand how authorities addressed citizens' queries in previous instances. Indeed, Joyca feels strongly about considering the historical context of areas that are undergoing energy transformations. This may be achieved through, for example, analysis of municipality records.

2. **Using negotiated knowledge for the research that underlies action plans.** Specifically, Joyca will review the research that was recently done as part of their transition plan. Before the Fellowship programme, the conclusions of this research were accepted as by the project team as 'undisputed facts'. Now, the team recognises the risks related to research that is produced without input of the residents. Conclusions, methodology and even research questions of the research might be questioned by the residents when the results (or an action plan based on the research) are presented by the municipality.

3. **Working with local groups and including wider refurbishment challenges.** A clear conclusion from the Fellowship was that it makes more sense to facilitate meaningful participation of citizens in the transition plan (which may include participation of key community groups), rather than simply running an overall marketing campaign on fossil fuel free neighbourhoods. Such meaningful participation may include questions on how citizens see the future energy transition in their districts, but also building relationships through listening to wider refurbishment challenges that are currently being faced.

4. **More explicit inclusion of contractors in the services of Ghent's 'one-stop-shop'.** The 'one-stop-shop' service is run by City of Ghent under the name 'Energiecentrale'. Joyca and her colleagues aim to start a conversation about how contractors' needs could be addressed, for example through inviting them to contractor meetings organised by the one-stop-shop to explore in depth the goals of Ghent's climate policy, and the strategy in renovation towards a fossil free future.

Reflections from Associates

Associates were asked what they learnt about on-the-ground energy policy challenges from their virtual meeting with Joyca. Here we share some of their reflections, which included contrast in terms of relevant activities already being considered, but also subject to the constraints of a policy context (such as time pressure).

"*The virtual meeting showed me that the **time frames in which certain projects are planned and implemented may lead to limited opportunities for project managers to get to know the field** they are operating in.*"

"*I was amazed **how many of the ideas** that we are discussing in research projects **are already part of the activitie**s of the city team.*"

"*The most important lesson learned is that academic insights regarding energy policy can challenge the dominant frame of practitioners and lead to creative and novel [insights]*".

5.5 Creating policy instruments for alleviating energy poverty in Germany and Romania

KEYWORDS Energy efficiency; Split incentive dilemma

TIMEFRAME Fellowship meetings with Associates took place in April 2020

ENERGY-SHIFTS RAPPORTEUR Tessa de Geus

Energy-SHIFTS Policy Fellow

Andreas Schneller

Project Manager, Adelphi,
Berlin, Germany

▼ **FELLOW'S LOCATION**

● ASSOCIATES' LOCATIONS

Policy context

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Adelphi is an independent think tank and public policy consultancy on climate, environment, and development based in Berlin. At Adelphi, Andreas manages projects on behalf of German federal ministries and the European Commission. His work is focused on the evaluation of policy measures and the development of new strategies for energy efficiency, the analysis of political and financial aspects of new heating supply technologies, as well as research on social science aspects of the energy transition. Andreas works on energy poverty alleviation in Germany as well as in Romania, where his work is financed through the European Climate Initiative (EUKI), which is a project funded by the German Federal Ministry for Environment, Nature Conservation and Nuclear Safety (BMU).

Andreas joined the programme to discuss what and how policy instruments may effectively prevent and relieve energy poverty in Germany and Romania. Since he works on behalf of the federal ministry, he primarily focuses on policies that could be implemented at the federal level. Whereas he is already familiar with a variety of policy instruments, such as social tariffs, energy-efficient building renovation, energy consultations for households, and social benefit services, Andreas was keen to learn from international attempts at alleviating energy poverty.

Over the last couple of years, Andreas has been engaged with Social Sciences and Humanities (SSH) aspects of the energy transition, by carrying out SSH-related consulting and research projects. Through his Energy-SHIFTS Fellowship, Andreas wanted to obtain deeper insights from energy-related SSH, and learn which outcomes of SSH-research could be useful for alleviating energy poverty.

> **"** *I am excited to join the fellowship scheme because it is vital for a successful energy transition to take societal needs adequately into account. The often underestimated social aspects of the energy transition, such as energy poverty alleviation, are important issues for researchers and policy makers alike* **"**

Andreas Schneller

Policy challenges

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Based on the policy context above, Andreas prepared the following SSH-related questions to stimulate discussion with his matched Policy Associates. These were sent to Associates prior to conversations.

Main question:

- Which policy instruments have been effective in alleviating energy poverty?

Sub-questions:

- Which policy measures have been taken by different EU member states to relieve energy poverty?
- What strategic implications for energy policy design can be taken from the insights in synergies and side-effects of renewable energy systems?

In addition, in relation to his work for the government of Romania, in particular the region of Cluj-Napoca region, he raised the following questions:

- How to alleviate energy poverty in a post-soviet EU-member state?
- How might the distributional burden of climate policy be mitigated?
- How can emissions be lowered and energy efficiency be increased in buildings, in a socially sustainable way?
- How can the split-incentive dilemma[1] be avoided?

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1   The split-incentive dilemma concerns the situation where the party that pays for energy efficiency measures to be realised is not the one that directly benefits financially from these investments.

Matched Policy Associates

Given the policy challenges addressed by Andreas, the Energy-SHIFTS team sought academics with knowledge about policies and legal frameworks to alleviate poverty from a variety of geographical regions. His four matched Policy Associates were therefore:

Stefan Bourazovski - Professor of Geography, School of Environment, Education and Development, University of Manchester, UK. Due to his research interests in energy poverty, and urban development, Stefan was matched with Andreas.

Marlies Hesselman - PhD Researcher and Lecturer in International Law, Faculty of Law, Groningen University, the Netherlands. Marlies was matched with Andreas due to her research on international legal frameworks for access to affordable and reliable energy.

Johan Liliestam - Professor of Energy Policy, Energy Transition Dynamics group, Institute for Advanced Sustainability Studies, University of Potsdam, Germany. Johan was selected for his research focus on policies, strategies and instruments for a transition to a completely renewable energy system, including the effects of interactions between different energy policies.

Susan Mühlemeier - Head of Training Department, Department Suisse Romandie, Verband Schweizerischer Elektrizitätsunternehmen (VSE), Lausanne, Switzerland. Susan was selected as an associate for Andreas, due to her research of public corporate governance in energy systems, urban utility companies, and her background in transition studies.

Discussion points and SSH insights

Each Policy Associate wrote a brief response to Andreas' policy challenges, and one-to-one conversations followed between April 15th and April 29th 2020. On June 8th Andreas took part in an online workshop with other Fellows and Associates working on policy challenges under the thematic category of 'just transitions'. Several discussion points were raised over the course of the meetings. Notably, these included (conceptual) understandings of energy poverty and the right to energy, exploring policies and instruments in European energy contexts, future policy directions, energy efficiency in buildings, and the split-incentive dilemma. In this section we summarise the main discussion points and insights. Quotes from Associates are given in italics.

(Conceptual) understandings of energy poverty and the right to energy

Andreas and his Associates discussed whether energy poverty even exists, and how it is distinct from conventional understandings of poverty. One of the Associates pointed out that legal definitions for energy poverty often appear to be unclear or non-existent. A rights-perspective on legislation and enforcement was introduced, with regards to *"access to affordable, reliable and modern energy for all"*. It was suggested that a rights-based perspective might help reframe Andreas' question, with regards to determining what assumptions and definitions (e.g. what is understood by energy poverty) are being operated under.

To start with, discussion included how energy poverty policies and action ought to consider the human right to essential energy services as their starting point. For this purpose, societal benchmarks need to be developed, which outline the *"specific, social objectives of* [access to] *energy services"*, i.e. what the ultimate outcomes of any energy system, regulation or policy design, ought to be, and according to which it may be evaluated. To develop such a backbone, human rights law was discussed as a possible orientation, drawing attention to how the state has rights and responsibilities to *"regulate and leverage and (re)allocate public and private resources towards specific essential, universal, social objectives."*

In a similar vein, the new EU Governance Regulation on Energy and Climate and in the EU Electricity Directive was referred to, which on the one hand describes a *"minimum core of (subsistence) service levels at all times and with priority for everyone"*, which addresses *"purposes of health, well-being, social inclusion, personal development and participation"*. On the other hand, it puts forward *"a set of more progressive services levels commensurate with full human rights"*. This provides EU Member States a legal mandate and urgency to address energy poverty, and to mobilise the necessary resources. What providing energy services means exactly in the face of guaranteeing 'basic standards of living' will have to be established for each individual country through democratic processes, and in acknowledgement of specific and 'intersectional needs'[2]. Understanding energy poverty from a rights-based perspective then uncovers interdependencies with other rights, such as to education and health, and how these may be affected simultaneously, as well as embeddedness in other moral and ethical societal issues such as the occurrence of poverty and inequality.

In another discussion, the responsibility of designating a public entity with explicit political responsibility for safeguarding and monitoring such social justice issues in the energy transition was highlighted. One of the Associates mentioned the example of possible side-effects such as energy refurbishment leading to gentrification processes, ought to be held in check through social policies and institutions. Another example of such an unexpected side-effect might include how energy poverty can be manifested in terms of mobility; through gentrification, people might be pushed out of their neighbourhoods, which could result in longer commuters and in higher transport costs. These examples demonstrate the need for an interdependent understanding of the workings of energy poverty.

Exploring policies and instruments in European energy contexts

Academic insights on the drivers and consequences of energy poverty in Eastern Europe, and particularly Romania, were discussed. Experiences from across Europe were explored, in particular drawing on the EU Energy Poverty Observatory (EPOV) project[3], where an extensive repository of measures and instruments can be found. In one of the Associate's experience the most effective policy instruments address the improvement of energy efficiency of housing infrastructures.

Andreas and his Associates discussed experiences in Switzerland, Austria and France. Taking the case of Switzerland here, no specific measures to alleviate energy poverty seem to exist, but preventative measures do occur. Certain practical examples were shared like projects in Geneva (éco21) and Lausanne (Equiwatt), where measures included advice on energy savings by local energy efficiency advisors, refurbishment of social housing, and financial support for energy efficient appliances. In Switzerland, electricity is defined as a public service concept, which means that there is an obligatory grid connection. Energy costs (electricity, gas and heating) take up an average of 1.3% of households' income. Swiss regulations determine high energy standards for new buildings, as demonstrated in the model of Swiss cantonal energy regulations (MuKEn)[4], and energy consumers pay a tax for renewables and energy efficiency (0.023 CHF per kWh), which directly feeds into local projects by municipalities and energy companies that address energy justice issues.

Energy efficiency policies to tackle social injustices

One of the insights generated from the meetings was that most energy transition policy instruments do not in fact address issues of social justice. This emphasised the need to better link energy efficiency and energy justice in order to make progress on sustainability. Despite this, successful cases have demonstrated the benefits of including low-income households and non-house owners in schemes for installing renewable energy systems, as opposed to only homeowners and middle- and high-income groups. Discussion centred on how policy can be better designed to support the diffusion of renewable energy systems and technologies under low-income or marginalized households, as explored by projects such as Interreg POWERTY[5].

More policy instruments and broader range of collaborative models that focus on issues of social injustice are yet to be developed. These could be models that transgress working solely with individual house owners, such as

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2   One Associate explained intersectionality as: "*the fact that some persons may face double challenges not recognized when viewed just through one category, e.g. children with a disability, elderly with disability, pensioners in social housing, women in migrant communities, Roma in informal settlements.*"

3   See: https://www.energypoverty.eu/

4   *Energiedirektoren Mustervorschriften der Kantone im Energiebereich.* See: https://www.endk.ch/de/ablage/grundhaltung-der-endk/MuKEn2014_d-2018-04-20.pdf

5   See: https://www.interregeurope.eu/powerty/

involving those with real estate agencies, as well as municipal energy utilities and other public actors. This means that countries with strong public service systems and municipal ownership in energy systems may have more direct access to affecting such levers for change. In addition, it is important to develop a narrative on how society is transitioning from e.g. gas and coal to lower-carbon energy sources to get local public and private actors on board, rather than solely focussing on financial reasoning.

Understanding 'affordability' and regional disparities

One interesting discussion led to unpacking the meaning of 'affordability' of energy services from a human rights perspective, on three distinct levels: 1) affordability of energy supplies (e.g. electricity, heat, etc.); 2) affordability of appliances and technologies for the "*useful and efficient consumption of energy services (e.g. heating systems, insulation, etc.)*"; and 3) affordability of the repair and maintenance of both energy supplies and appliances. There are certain key principles that Member States should to take into account when developing future policy measures to address these different types of affordability. Importantly, this includes how the right to energy services access should not infringe on the ability to fulfil other essential basic needs. Moreover, poorer households should not be disproportionately burdened financially in comparison to richer households.

Raising awareness of regional disparities was also put forward as a key issue. The work by French geographer Angélique Pall on the yellow vest movement was mentioned in this regard[6]. One of the Associates drew from personal experience in the city of Leipzig, to argue how it is important to leverage local cultural tradition, narratives, values and histories to translate new realities. In this sense, cultural proximity might help, which would mean developing measures at the level of each neighbourhood, or even apartment block, by working with local agents. This could also enable being sensitive to the needs of different target groups, such as the elderly. Local approaches ranging from energy efficiency to installing PV and solar thermal installations, for which the European just transition fund could perhaps support in providing funding.

In reflection on these discussions, Andreas remarked how he learnt to further consult expert-opinions regarding different country specific local contexts in order to develop a suitable strategy.

Future policy directions: affordability and funding

In accordance with human rights treaties EU Member States are required to "*mobilize at all times maximum available resources to guarantee the full set of human rights for everyone*", meaning in terms of financial instruments (e.g. taxation), regulation (e.g. of private entities to curb maximum revenues for service provision or quality of services requirements) or otherwise.

In terms of funding future policy and instruments, the European Just Energy Fund was mentioned as a potential source for funding to mitigate distributional burdens of climate policy. Tax reform was also discussed as a solution, highlighting the importance of involving people from vulnerable socio-economic groups in such processes. In a similar vein, it was stressed that CO_2 taxation requires critical evaluation with regards to redistributive issues, for example referring to the work of Jeroen Van den Bergh, and a study by Thomas Douenne on the effects of CO_2 taxation on low-income households in France[7].

Energy efficiency in buildings and the split-incentive dilemma

Policies to mitigate energy poverty and to promote energy efficiency should go hand in hand, an observation which was supported by several Associates. In order to increase energy efficiency, ensuring the opportunity for participation and contestation, particularly from local governments and civil society was argued as vital in fostering a democratic and accountable process. To overcome the split-incentive dilemma[1], the éco21 programme in Geneva was offered as an example, where energy utilities, supported by the local government, rented out renewable installations to apartment blocks. This model provides low risk to the apartment owners, and simultaneously enables funding for implementing energy efficiency measures. In this way, long-term, low-financial risk models between public and private entities were highlighted as useful instrumental in addressing split-incentive issues.

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6   See: https://www.irsem.fr/equipe/palle.html
7   Thomas Douenne. Les effets redistributifs de la fiscalité carbone en France. 2018.

Translation to policy impacts

Based on his conversations, Andreas aims to translate the insights from his Fellowship to the following two policy processes:

1. **Developing policy recommendations to alleviate energy poverty in the Romanian context,** as part of the project *Mitigating GHG Emissions through energy poverty alleviation in Romania* (EnPoweR)[8]. EnPoweR is funded by the European Climate Initiative (EUKI), and is conducted by a consortium of Babes-Bolyai University, the city of Cluj-Napoca and adelphi. Conversations and resources from the Fellowship will directly feed into Andreas' work on this project.
2. **Consulting the German Government** on setting up energy poverty indicators.

Reflections from Associates

Associates were asked what they learnt about on-the-ground energy policy challenges from their virtual meeting with Andreas. Here we share some of their reflections which demonstrate many direct learnings from the encounters:

"*I thought politics are way more aware of the topic of energy poverty and* **I was surprised** *of the figures in Austria for example,* **how many people have to deal with energy poverty**. *I thought it was mainly a problem of countries with poor public service offers (e.g. UK) but* **I learned that even in countries with strong public service offers (such as Austria) the problem is real**."

"*Amongst policy makers there is often an interest in a list of best practice laws and policy examples that can be used in different countries to tackle a certain problem, but the challenge is sometimes* **that it is easier to say what did not work**, *or what they tried to do so somewhere else but did not fully work,* **or what created new problems**. *It still strikes me that energy poverty policy in Europe in particular is an area like this. There is now much knowledge about what the problem is, and there are some ideas on how it might be tackled, but* **very limited actual best practice exists, certainly in a way that is also transferable easily to different contexts**."

"*For me,* **it certainly challenged my view that energy poverty is not a thing, or not distinct from povert**y. *I still believe that they are linked (no energy poverty without poverty), but I learned about some deeper facets of the energy poverty issue, which was very interesting.*"

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8   See: https://www.energy-poverty.eu/en

5.6 Making the energy transition 'by the people for the people' across Europe
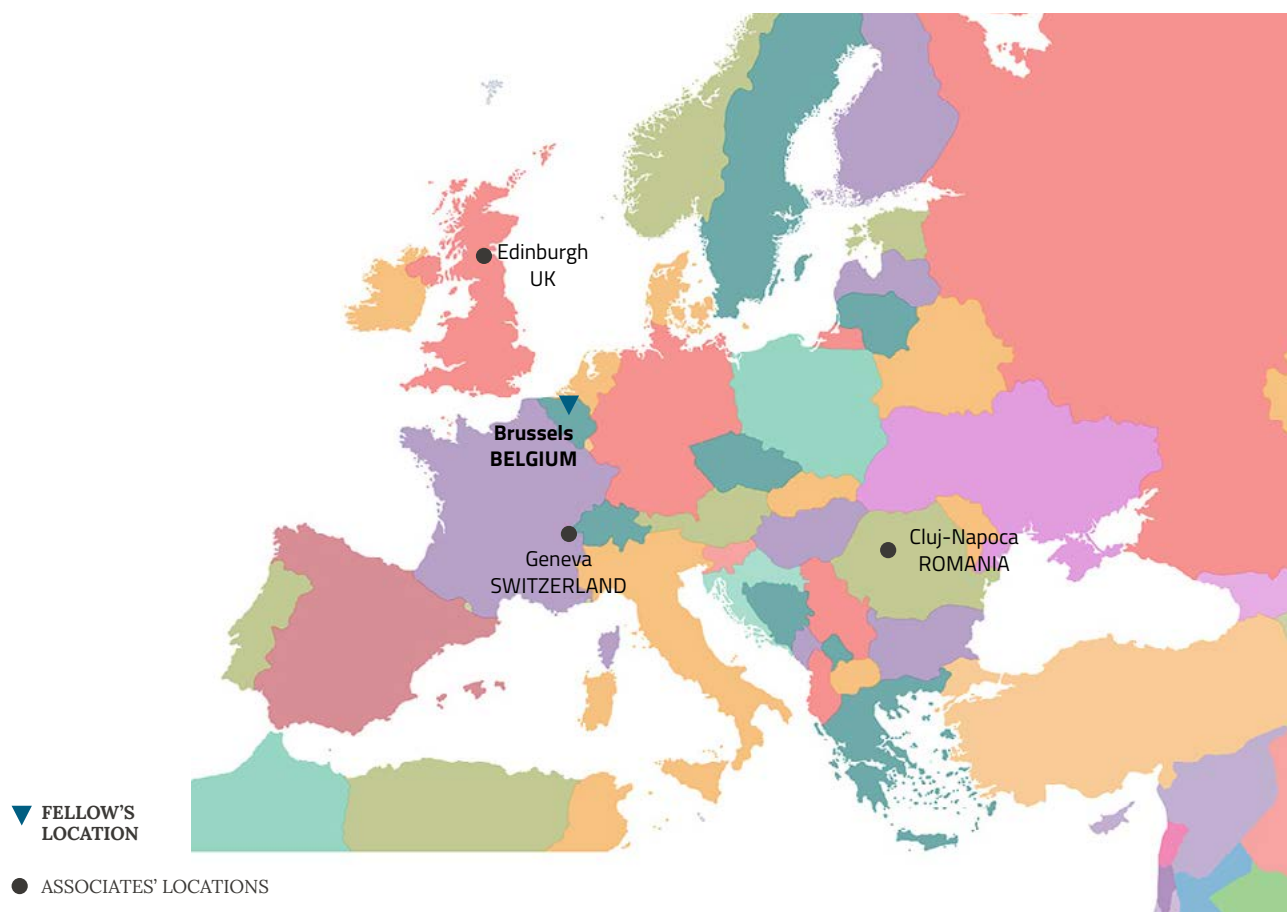
Energy-SHIFTS Policy Fellow

Molly Walsh

Renewables Campaigner, Friends of the Earth Europe,
Brussels, Belgium

▼ FELLOW'S LOCATION

● ASSOCIATES' LOCATIONS

Policy context

Molly Walsh is a renewables campaigner at the NGO Friends of the Earth (FoE) Europe, specialising in advocacy and diplomacy. Currently, Molly is based in Brussels where she 'infiltrates the Brussels bubble' to advocate for climate and energy justice, and campaigns for a people and community-owned renewable energy system. FoE Europe recently received significant attention due to their success in pushing for the issue of ownership and community engagement in the *EU Clean Energy for all Europeans* package[1] negotiations, which gives citizens the right to sell and produce energy.

While the technology necessary to move to a 100% renewable energy system already exists, Molly thinks that most policy makers and mainstream society are not well-aware of it, or, for various reasons, still retain doubts. She has observed a decrease in the popularity of renewables demonstrated for example via pushback from policy makers, poor quality policy making, as well as an increase in local anti-renewable sentiment.

From her perspective, this local anti-renewable sentiment is a key reason for the pushback against renewables across Europe. In Germany for example, this contributed to a political proposal for such strict distance requirements that it would almost eliminate on-shore wind turbines. According to Molly, resistance against wind farms are caused when people do not feel involved in the energy transition, and don't benefit from it. She argues for the urgency of making the energy transition 'for the people, by the people'. She decided to join the Energy-SHIFTS Fellowship programme to seek academic support and evidence from the Social Sciences and Humanities (SSH) on the effectiveness and cost-efficiency of alternative, decentralised, community-owned renewable systems. Through the programme, Molly hoped to gain a better understanding of these energy issues.

> **"** *If the transition is not democratically owned, it will fail.* **"**
>
> Molly Walsh

Policy challenges

Based on the policy context above, Molly prepared the following Social Sciences and Humanities (SSH) related questions to kick start her discussions with her matched Policy Associates. These questions were sent to the Policy Associates prior to their conversations.

- How does public engagement in energy transition projects affect the public perception of renewable energy?
- How can alternatives be promoted (such as decentralised community-owned systems), given a stage and pushed as alternatives to centralised solutions in EU policy making?
- What evidence is there that community participation makes the energy transition more popular?

1   See: https://ec.europa.eu/energy/topics/energy-strategy/clean-energy-all-europeans_en

Matched Policy Associates

Given the policy challenges addressed by Molly, the Energy-SHIFTS team aimed to involve academic views on dynamics of household energy consumption, fairness in energy systems and community transformation. Her three matched Associates were therefore:

Grégoire Wallenborn - Senior Researcher, Department of Sociology, University of Geneva, Geneva, Switzerland. Grégoire was invited to participate due to his research interests in Philosophy and Environmental Sciences, and experience in fieldwork on household energy consumption. He was also involved as a member of the Energy-SHIFTS Smart Consumption Working Group.

Kirsten Jenkins – Lecturer, Energy, Environment and Society, Department of Science, Technology and Innovation, University of Edinburgh, United Kingdom. Kirsten's research interests include energy justice, Just Transitions, fairness in energy systems more generally, alongside sustainable energy policy. Due to her involvement in sustainable development and Human Geography, and significant expertise in energy justice, Kirsten was matched as an Associate to Molly.

Andreea Vornicu – Researcher and PhD Candidate, Center for the Study of Democracy (CSD), Babes-Bolyai University, Cluj-Napoca, Romania. Andreea has extensive experience in field work in remote communities and exploring the various dimensions of energy poverty in Central and Eastern European countries. Andreea was selected to provide insights from the perspective of International Development, community transforming mechanisms and Law.

Discussion points and SSH insights

Each Policy Associate wrote a brief response to Molly's policy challenges, before bi-lateral calls took place between 6 May and 18 May 2020. Molly also took part in an online workshop on 8 June 2020 with other Fellows and Associates working on topics across the 'Just Transitions' thematic category. Quotes from Associates are shown in italics in the main text.

Critically unpacking 'participation'

Associates offered several perspectives on how to understand 'participation' and public engagement in the face of renewable energy projects. Rather than assuming that any participation is good in and of itself, the way that it is designed and deployed must depend on how 'the public' is being defined. As one Associate proposed, currently many people do not have access to decision-making with regards to energy transition projects, as public engagement schemes often seem to cluster on rural and middle-class communities.

Several issues may therefore need to be addressed in order to be able to claim systemic engagement of the public for renewable energy projects. For instance, while the idea of implementing 'procedural justice', meaning to "*engage all stakeholders in a non-discriminatory way*", might be considered an inherent objective of public engagement, in fact it requires upfront work to specifically determine what it is exactly that people are allowed to affect during the engagement process. Unclear public engagement processes could risk slowing the pace of transitions since clarity over how to progress may be diminished. Another key issue to consider is how the party who leads the engagement process will affect power dynamics. Useful academic references were flagged up by Associates including work on tailoring engagement to the type of energy in question[2] and Helen Pallett's work on mapping participation[3].

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2   Ellis and Ferraro (2016), *The social acceptance of wind energy.* Luxembourg: Publications Office of the European Union. Available at: https://publications.jrc.ec.europa.eu/repository/bitstream/JRC103743/jrc103743_2016.7095_src_en_social%20 acceptance%20of%20wind_am%20-%20gf%20final.pdf

3   Helen was in fact an invited Associate for Energy-SHIFTS Fellowship team Andrea de Ruiter, Charlotte Koot, and Menno Ottens. See: Pallett, H.; Chilvers, J.; Hargreaves, T. (2019) Mapping participation: A systematic analysis of diverse public participation

Another Associate highlighted the importance of considering politics in energy studies, by analysing different viewpoints and power relations between actors. In this way, the Associate argued, there is a need to go beyond 'social acceptance' understandings, and truly engage in local co-creation of energy projects in order to reach citizens that are not convinced of the need for renewable energy projects.

Understanding specific contexts

Molly discussed with Associates how successful participation strategies may be highly specific to respective (national) contexts. There may thus be a significant differentiation between Western European countries, where climate change is a widely acknowledged theme on the policy agenda, and former communist countries in Eastern Europe, where the topic appears to be not very well embedded yet with citizens.

Research has explored how local renewable energy projects that are transparent, supported by local leaders, and which simultaneously address tangible local problems, may help snowball broader public education about renewables in Eastern Europe. Examples of such local problems that might be simultaneously addressed include improving energy efficiency in residential buildings to reduce costs for residents. In contrast, Western Europe may already have ample examples of energy communities, and thus may primarily need to invest in disseminating success stories nationwide.

Supporting decentralised energy

Associates suggested several measures that might support public engagement for the case of decentralised renewable energy projects. These include practically fostering long-term financing e.g. through subsidies and R&D, as well as developing long-term political commitment to the energy transition, planning and land policy reforms. In addition, community ambassadors can play an important role in transferring knowledge, including making legal documents accessible to the public, and attempting to change social norms. This point was underscored in more than one of Molly's Fellowship meetings, which highlighted the importance of local formal and informal champions in promoting projects, and the potential of participatory budgeting initiatives to involve citizens. Importantly, the transposition of EU directives on energy communities[4] can also build important momentum for supporting decentralised energy. What the stakes and power (im)balances are, and how the directives are interpreted in different countries, was also subject to discussion.

Translation to policy impacts

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As a result of the exchanges in the Fellowship, Molly deepened her knowledge of the discussion and debates around a democratic energy transition. Specifically, Molly aims to use her insights for the following purposes:

1. **Supporting the transposition of the *Clean Energy for all Europeans* package.** Molly will be using the ideas and perspectives from her Fellowship to support FoE Europe's current work supporting the process of transposition of the Renewable Energy Directive (RED II) and regulation on electricity market design to national law in all EU member states, which is currently ongoing.
2. **Writing an academic journal publication.** Molly has maintained ongoing contact with the Associates she met through the Fellowship, and aims to write an academic article together with one of them. The article would analyse the involvement of the coalition that FoE brought together around the creation of the *Clean Energy Package*.

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in the UK energy system. Environment and Planning E: Nature and Space 2 (3), pp.590-616.

4   See: https://ec.europa.eu/energy/topics/renewable-energy/renewable-energy-directive_en

Reflections from Associates

We asked the Policy Associates what they learned about on-the-ground energy policy challenges from their interactions, with key quotes as follows . The influence of groups like Friends of the Earth Europe upon policy particularly impressed upon Associates:

"I went into the call very open-minded and without any assumptions of what we would discuss but did have pre-existing interests in the role of NGOs in shaping policy outcomes. It was a pleasure to hear about the extent of FoE's [Friends of the Earth's] ambition, engagement and feed-in. **The organisation appears more powerful than I would have assumed.***"*

"[I learned about] *what were* **the stakes and power balances under the writing of the Directives**. *How Friends of the Earth works to help their transposition in various countries, how the Directives are received and understood in different EU countries, and what is the NGO coalition supporting both Directives."*

"[I learned more about how] *there are several* **challenges about the availability of data and collecting them (local, regional and national level)** *and then interpreting the data for grounding the policy proposals on evidence."*

6. Fellowship reports: Behaviours

By Hanna Kuittinen and Valentina Lisi

The Energy-SHIFTS Policy Fellowship thematic category on 'Behaviours' explicitly addressed issues around citizens' motivations for individual action as an important route to reducing carbon emissions. The group brought together Policy Fellows from **national government (1), an EU institution (1) and an NGO (1)**. The discussions in this category focused particularly on two specific angles of the policy dilemma: 1) understanding individuals' motivations and behaviour; and 2) influencing behavioural change through policy.

Both Fellows and Associates agreed that the reliance on pure market signals is largely insufficient to drive the societal transformation needed to achieve the clean energy transition. There is a need for developing a better understanding of drivers for change of behaviours, which relate to values, lifestyle, and social standards. The policy dilemmas addressed therefore mainly concern how to include alternative understandings of human behaviour in decision-making.

The first Fellow report details the experience of Miriam Bueno Lorenzo, a Technical Advisor for the Deputy Directorate Renewable Energies and Studies at the Ministry for the Ecological Transition in Spain. She sought to address practical ways of translating recommendations for policy design, and her report is entitled: '**Designing effective policies for behavioural change to achieve Spain's 2050 climate targets**'. Her Fellowship was indeed aimed at better understanding the social perception of the energy transition. This was particularly in relation to achieving better insights on the aspects that are most important for citizens and how these could be best supported by effective policy measures. The translation to policy insights supported the drafting process of a new national strategy developed by the Spanish Ministry for Ecological Transition.

The report of Adel El Gammal, Secretary General at the European Energy Research Alliance (EERA), discusses '**Bringing challenging agendas into EU policy advisory mechanisms to accelerate societal transitions**'. It includes information on the role of citizens in the energy transition and the need of adapting policy approaches to meaningfully influence behaviour and lifestyle in the shortest time frame possible, in order to meet climate-neutrality objectives. It also addresses the importance of improving the adoption of market measures versus. non-market measures, which are necessary to effectively shape policies.

To conclude, Policy Fellow Efstathios Peteves, Head of Knowledge for the Energy Union Unit at the Joint Research Centre (JRC) of the European Commission, focuses on the possible consequences of the energy transition on society. His report addresses in more detail the discussion around '**Scoping the agency of EU policymakers to facilitate a fair energy transition**'. Efstathios mainly discussed the issue of effectively co-designing transition policies together with affected citizens, while developing a well-communicated narrative to support policy choices that might encounter resistance in regions economically affected by the clean energy transition. Moreover, he discussed the position of marginalised groups, including seniors and lower income households, in the transition, particularly in relation to the digitalisation of energy services.

During an online workshop with Fellows and Associates from across the thematic category, some of the key lessons learned from the discussions held during the programme were highlighted: these are outlined below.

Importance of tailored narratives

A particular cross-cutting issue to the policy dilemmas addressed included the importance of defining narratives of the energy transition that citizens can relate and connect to. Important factors to be considered in the narratives shared with citizens as well as wider strategies for engaging citizens in the transition process include differences between age groups, education levels, labour conditions, income levels and divisions between South and North Europe. In this regard, the role of local authorities and community level initiatives are considered important to engage marginalised or vulnerable groups of citizens.

Covid-19 policies: a sense of urgency

Not surprisingly, the Covid-19 pandemic crisis was mentioned as an example of a situation in which drastic

measures can be imposed by national governments which are still supported by citizens. This demonstrates that when a narrative is widely perceived as right, and considered fair, support of citizens is ensured, even if the measures may seem more radical than the recommendations based on scientific evidence. Both the Associates and Fellows in this group shared the opinion that the sense of urgency on fighting climate change is still widely missing in the political discourse. This makes the case for strong political initiatives and strict regulations on clean energy and the environment not yet perceived as necessary by the community, and therefore easily opposed by both political parties and citizens.

Role of policymakers

Even though clear objectives for emissions reduction are set worldwide, and the EU has enshrined the climate neutrality objective for the first time into a legislative proposal, there is not yet a globally shared urgency to achieve these objectives. While renewable energy resources and other emissions reduction solutions are increasingly becoming the new normal, the phase out of fossil fuels is still far from being a reality. Energy transitions, just as other historical transitions, bring with them the possibility of regulative measures becoming more stringent. It might also lead to worsening of living standards for some, and thus even lead to protests. As a result, in a democratic context, some political parties are and will be advocating for the 'easier way' and will push for short-sighted policies to win elections without imposing any measure against climate change.

It is therefore policymakers' duty to adopt disruptive and strong messages when communicating the need for the energy transition: no time should be wasted to this purpose. This being said, the sense of urgency should not justify the implementation of policies that have not been duly assessed to cover aspects of a just and fair transition, or to justify imposition over engagement of the community when designing them.

6.1 Designing effective policies for behavioural change to achieve Spain's 2050 climate targets

KEYWORDS Energy transition; Urban transport; Retrofitting; Energy poverty
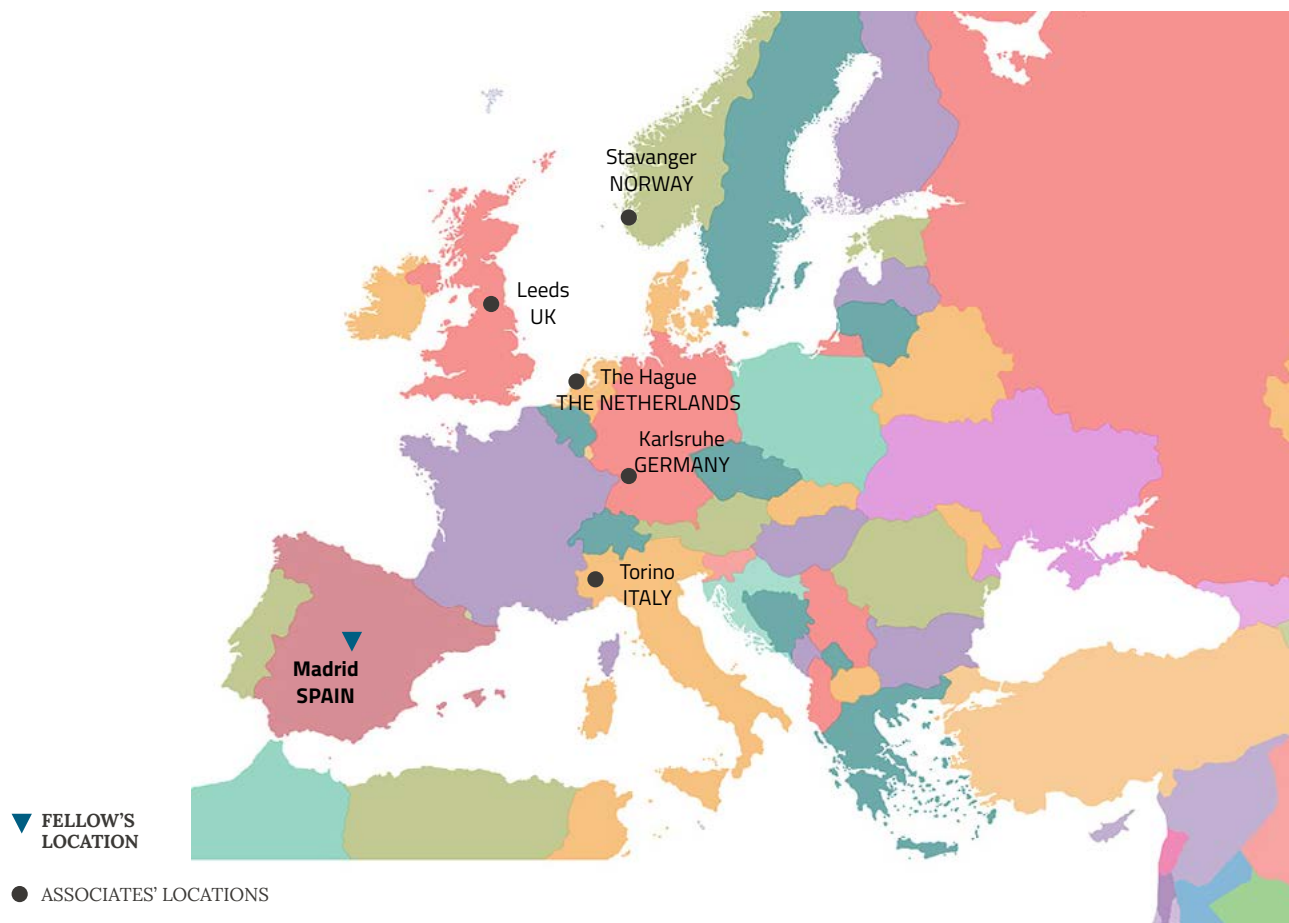TIMEFRAME Fellowship meetings with Associates took place over April and May 2020
ENERGY-SHIFTS RAPPORTEUR Hanna Kuittinen

Energy-SHIIFTS Policy Fellow

Miriam Bueno Lorenzo

Technical Advisor, Deputy Directorate Renewable Energies and Studies,
Ministry for the Ecological Transition,
Madrid, Spain

Stavanger
NORWAY

Leeds
UK

The Hague
THE NETHERLANDS

Karlsruhe
GERMANY

Torino
ITALY

Madrid
SPAIN

▼ FELLOW'S
   LOCATION

● ASSOCIATES' LOCATIONS

Policy context

Miriam Bueno Lorenzo works for the Secretary of State of Energy in Spain. Over the last three years, she has been working on the design of Spain's National Energy and Climate Plan (NECP). She is coordinating the modelling group, focusing on the methodological aspects and translating the modelling results to recommendations for policy design.

The key policy challenges she brought to the Energy-SHIFTS Fellowship were related to her day-to-day work in the design of the NECPs in order to achieve energy transition goals for 2050. The process of preparing the new long-term strategy is now at its final stage and the planned measures are ready to be implemented. At this juncture, Miriam is especially interested in better understanding behavioural aspects of the energy transition to achieve effective implementation of the policy measures designed (see quote).

> *What we need now is to design effective implementation of policies taking into account the social aspects*
>
> Miriam Bueno Lorenzo.

For her work, better understanding of social perceptions of the energy transition is particularly important. Through her Energy-SHIFTS Fellowship, and meetings with researchers working across the Social Sciences and Humanities (SSH), she was interested in gaining better insight into what issues are most important for citizens and how these could be best supported by effective policy measures across a wide range of energy matters. For example, she is keen to understand which key factors can induce a change of behaviour in urban transport from the use of individual cars to public transport; she would like to explore how energy poverty could be eradicated; and she would like to understand better behavioural aspects related to retrofitting.

> *There are several cross-cutting issues between governments, society and researchers in energy-related issues. Being part of this programme is a good opportunity to exchange opinions from different disciplines, and by doing so find holistic solutions to deal with the challenge of the energy transition.*
>
> Miriam Bueno Lorenzo

Policy challenges

The SSH-related policy challenges that Miriam presented to the Policy Associates prior to their meetings concerned three general questions:

- How can national governments design effective energy transition policies addressing behavioural aspects?
- What are the main social dimensions of energy transition, the key challenges and barriers?
- How can we better understand the social perception of the energy transition to design the most effective policy measures?

Underlying these challenges, topics that Miriam was particularly interested in were behavioural aspects relating to urban mobility, the eradication of energy poverty, and citizen awareness around the retrofitting of buildings.

Matched Policy Associates

The Energy-SHIFTS team facilitated matching to five Policy Associates to work with Miriam Bueno Lorenzo and provide her with new insights into her policy challenges. Echoing Miriam's wide-ranging interests, the Policy Associates were selected to represent different SSH research interests and geographic origins, and with particular expertise on the behavioural aspects of energy transitions.

Pepa Ambrosio-Albala - Postdoctoral Research Fellow, Sustainability Research Institute, University of Leeds, UK. Pepa's research work is focused on behavioural changes related to climate change and energy, public acceptance and stakeholders' perception of energy technology, and on energy vulnerability. She is currently developing the methodological and theoretical design for understanding how the UK Steel industry could be decarbonised, starting from the stakeholders' needs and expectations.

Kristiane Lindland - Associate Professor in Change Management, University of Stavanger, Norway. Kristiane has a background in Sociology. Her research interest has increasingly been directed towards how we can realize the zero-emission future, involving both different forms of energy sources, storage solutions, policy development, and business models and consumer behaviour.

Carlos Montalvo - Senior Scientist on Strategy and Innovation Policy, TNO, the Netherlands. Carlos works supporting the energy shift developing and testing new approaches to promote systemic innovation and behavioural change. He is currently developing models to address individual decision making and collective behavioural patterns.

Lisa Schmieder - Member of Scientific Staff, Socio-Technical Energy Futures Research Group, Institute for Technology Assessment and Systems Analysis, Karlsruhe Institute of Technology, Germany. Lisa is a social science researcher working on the energy transition, currently with a special focus on the design and evaluation of energy and climate policy instruments as well as on the current discourse on the future of the mobility transition, she also has expertise working at the interface of science and policy.

Alessandro Sciullo - Research Fellow, Department of Culture, Politics and Society, University of Torino, Italy. Alessandro has a background in Economic Sociology. His research interests include multilevel and multidomain challenges posed by the energy transition, including the development of effective energy policies as well as the engagement of consumers in order to drive changes in individual behaviours and social practices.

Discussion points and SSH insights

Miriam Bueno Lorenzo had bilateral calls with each of her Policy Associates over April to May 2020. This section reflects four key discussion points during her Fellowship.

Context dependent energy transition policy-mixes

The energy transition is in essence a systemic change involving a number of diverse actors and processes at different levels, including the macro- (e.g. regulation, incumbent private/public actors, trading, commercial and industrial relationship), meso- (e.g. culture and values, business models and lifestyles), and micro-level (e.g. individual choices and behaviours). Effective policy design needs to address all these levels and take into account the interdependence of the different levels. This results in a complex policy-mix including a large heterogeneity of policy instruments for the individual sectors of the energy transition (including electricity, heating, mobility, sector

coupling). In addition, the energy transition is very context dependent and thus there is no easily transferable universal policy-mix to achieve the desired change.

Placing behavioural change in a socially acceptable framework

The willingness of people to change their behaviour is only a part of the energy transition challenge. Behaviour of individuals is part of wider socially embedded practises and lifestyles and are not easily replaceable due to contextual factors, rules, or even social sanctions that are guiding the behaviour. Thus, a behavioural change must be first set in a socially acceptable framework before aiming to support the desired change. Important social dimensions include employment and income, energy security for all, affordability of energy and energy technologies, environmental awareness, and energy consumption. The misalignment of these social dimensions can result in injustices or in a transition failing to involve all citizens. Besides, focussing on enabling a just energy transition is not only a matter of values or social inclusion, it is crucial for the transition to occur at all. For example, changing urban mobility habits or raising awareness of building rehabilitation are only partially individual choices but they should be considered as cultural changes that need to be made socially desirable, affordable and reachable for all.

Fostering active involvement of citizens

The energy transition is not likely to be achieved unless citizens become active contributors towards the change. This requires a shift from passive energy consumers towards a collective level of active citizenship and prosumer(ism). Encouraging and providing incentives for citizens to act together (i.e. in energy cooperatives, communities, purchasing groups, etc.) is a way to empower citizens, and share energy investments and costs. Communication campaigns and construction of positive narratives of energy transition are considered effective tools for getting citizens on board. Additionally, new forms (e.g. short films, podcasts) of storytelling to foster behavioural change could support the process of creating desirable images of a future society.

From energy poverty towards energy affordability

New energy solutions that can reduce energy costs are often not available to those who would need them the most. For example, people living in rented apartments do not have the incentive and means to install solutions that can reduce their energy consumption or reduce the costs of their energy consumption. Similarly, there are regions with limited capacity to produce their own energy, and thus are dependent on buying energy at higher cost from other regions. Energy affordability can be guaranteed by creating a holistic regulatory framework (e.g. by allowing prosumers to sell their energy directly to others), incentivising new business models, directly supporting low income households, and by promoting a new energy consumption culture and habits.

Translations to policy impacts

❝ *We now need to implement the policy measures designed; I think better understanding of behavioural aspects is a key aspect for that.* ❞

Miriam Bueno Lorenzo

Miriam looks forward to translating the policy insights she gained from the Energy-SHIFTS Fellowship programme to practice. During Spring 2020, the Spanish Ministry for Ecological Transition was finalising the preparation of drafting a new policy package on climate change and energy transition (the **Marco Estratégico de Energía y Clima**[1]), which aims to achieve climate emission neutrality in Spain by 2050. **Miriam will use the Fellowship learnings for the implementation of this policy package.** She is convinced that gaining better understanding of behaviour of people related to energy transition is a crucial matter for effective policy implementation (see quote above).

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1   See: https://www.miteco.gob.es/es/cambio-climatico/participacion-publica/marco-estrategico-energia-y-clima.aspx

Reflections from Associates

Associates were asked what they learnt about on-the-ground energy policy challenges from their virtual meeting with Miriam. Here we share some of their reflections, which show clearly the insights it granted Associates into the political process, and indeed their appetite to quiz policyworkers in greater detail.

"*The job of policy advisors, technical officers and staff is undervalued. I think much more effort should be done – raising awareness – so citizens can understand the difficulty in developing and in the policy-making process.*"

"*In my experience it was a **very fruitful discussion**. I would also have found it exciting if we could also have written down and sent questions from science perspective for discussion in advance, so that it is a bidirectional exchange of experiences. Perhaps this would be interesting for the future.*"

"*[I learned] that the **Ministries as well consider the social dimension of the energy transition** as well as behavioural aspects **to be central for the success of this process**.*"

"*Interesting discussion on policy challenges and options available. [...] **There was genuine interest to hear what we have learnt from research policy practice** and options available to improve the policy process and implementation.*"

"*Limited resources and poor infrastructure constrain the extent and ability to implement policies. However, state configuration, together with different political colours and interest, can hinder the implementation of policies. I would say that **political willingness is at times a more determinant factor than the availability of economic resources**.*"

6.2 Bringing challenging agendas into EU policy advisory mechanisms to accelerate societal transitions

KEYWORDS Role of citizens; Policies for behavioural change; Alternative growth indicators; Decoupling

TIMEFRAME Fellowship meetings with Associates took place over March to May 2020

ENERGY-SHIFTS RAPPORTEURS Hanna Kuittinen and Valentina Lisi

Energy-SHIFTS Policy Fellow

Adel El Gammal

Secretary General, European Energy Research Alliance (EERA), Brussels, Belgium

▼ FELLOW'S LOCATION

● ASSOCIATES' LOCATIONS

Policy context

Adel El Gammal has been the Secretary General at the European Energy Research Alliance (EERA) since 2016. A non-profit association bringing together the European energy research community, EERA coordinates research activities across about 250 universities and public research centres across 30 countries. EERA's Joint Research Programmes cover the whole range of low-carbon energy technologies as well as systemic and cross-cutting topics, such as Energy System Integration, digitalisation and the economic, environmental and social aspects of the energy transition. EERA is currently preparing for the next Research and Innovation Framework Programme - Horizon Europe[1] - and has recently released a White Paper on the Clean Energy Transition, providing a conceptual framework allowing for a systemic approach towards the Energy Transition. This includes adopting a more holistic, trans-disciplinary and cross-sectoral approach that covers the wide scope of systemic, societal, and technological transformations needed.

The revised EERA mission of "*catalysing European energy research for a climate-neutral society by 2050*" recognises the role of 'system thinking' in addressing the global challenge of climate change. This is therefore now fully embedded into EERA's core strategy as well as in its advisory activities towards the EU institutions.

EERA research institutes are at the frontline of policy advising through their active participation in the Strategic Energy Technology Plan (SET-Plan) and though the identification of research and innovation challenges to potentially become Horizon Europe priorities for the upcoming EU budgetary period 2021-2027. EERA is currently also providing dedicated scientific advice on how to best support the Clean Energy Transition (CET) through the dedicated Partnership currently being prepared as part of Horizon Europe.

More specifically, Adel has been a long-time advocate of the crucial need to understand and address non-technological dimensions allowing for the profound societal transformation required to achieve the CET, and hence the crucial importance of integrating the Social Sciences and Humanities (SSH) in the transition definition process. Given EERA's wide ranging remit, he intended to utilise the Fellowship to expand and probe his own understanding of a variety of SSH-related themes, which might challenge and transform current policy directions.

These themes included firstly acquiring a better understanding of the central role of citizens in the energy transition and of the latest policy tools available to influence their behaviours and lifestyle. Related policymaking must be inclusive, effective and especially timely considering the very short time window available to act on climate change.

Secondly, he was keen to better understand the limitations of market base instruments in fighting climate change and the range of non-market policy measures that could be envisioned and activated to that effect. The role of education on citizen's behaviours, social standards and lifestyle was also of central interest here.

Finally, an important question for Adel was exploring the limits to decoupling and what their consequences should be on policymaking. Acknowledging the finiteness of available resources, permanent growth is theoretically impossible unless full decoupling can be achieved. Circularity can only partially respond to this challenge, as it only can decrease but not halt the need for additional resources.

> *Social innovation will have an enabling role in making the clean energy transition happen. I am looking forward to better understanding how behavioural sciences will help in designing and planning the most effective policy framework in Europe. This will contribute to the creation of the holistic knowledge necessary to bring forward research on pathways to climate neutrality, including new policies that will foster the behavioural changes needed to drive the profound societal transformation required to reach climate neutrality.*

Adel El Gammal

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1   See: https://ec.europa.eu/info/horizon-europe-next-research-and-innovation-framework-programme_en.

Policy challenges

Given the policy context above, Adel prepared the following overarching SSH-related questions to prompt discussion with Associates:

- What are the policy relevant drivers (beyond price signals) that lead people to change their behaviour? How can these drivers be activated and at what speed?
- What is the role of education in the process of engaging citizens to adopt new lifestyles, and notably avoid the rebound effect?
- How can policy be designed using new instruments and indicators to measure growth that better capture social and environmental aspects (e.g. as compared to GDP)?

Underlying the above was a desire to explore how policy can help facilitate a transition process that is fair, inclusive and effective.

Matched Policy Associates

Given the policy challenges outlined above, the Energy-SHIFTS team sought Policy Associates to work with Adel with expertise in technology use-related behaviours and the interrelationship between attitudes, values and the shape of the energy system, with a view to inform on the main drivers of behavioural change in relation to the energy transition. Experts were also sought with a strong background in Economics in order to bring insights on alternative growth indicators, whilst also covering a range of different disciplines and geographic origins. The five matched Associates were:

Floor Alkemade - Professor of Economics and Governance of Technological Innovation, Department of Industrial Engineering and Innovation Sciences, Eindhoven University of Technology, the Netherlands. Floor received her PhD in Agent Based Evolutionary Economics and her key areas of expertise include innovation, cleantech (and related technology use behaviours) and sustainability. Increasingly her work has included a focus on the global south.

Ganna Gladkykh - Researcher, ERASME - Jean Monnet Center of Excellence on Sustainable Development, Clermont-Ferrand, France. Ganna has a PhD in Philosophy and specialises in sustainable energy research. She has passion for research projects and initiatives where academic rigour is combined with policy relevance.

Witold-Roger Poganietz - Head of Group, Socio-technical Energy Futures Research Group, Institute of Technology Assessment and Systems Analysis, Karlsruhe Institute of Technology, Germany. Witold-Roger holds a PhD in Economics but also has a background in History and Political Science. His research interests include interrelationships between attitudes, values and the shape of the energy system.

Johannes Reichl - Project Manager, Energy Institute, Johannes Kepler University, Linz, Austria. Johannes is an applied statistical researcher working across the fields of Energy and Resource Economics. His work involves developing advanced econometric methods while investigating (energy) challenges facing society, including a focus on social acceptance and local opposition issues.

Valeria Jana Schwanitz - Professor of Energy Economics, Western Norway University of Applied Sciences, Sogndal, Norway. Valeria focuses on data-driven analysis of energy and technology systems, integrated assessment of human-nature systems, and epistemology of integrated assessment modelling. Her recent projects include work on mapping citizen-led low carbon energy projects across Europe.

Discussion points and SSH insights

Adel had bilateral calls with each of his Policy Associates over March to May 2020. He also participated in an online workshop with other Fellows and Associates working on policy challenges under the 'Behaviours' thematic category at the end of May 2020. This section reflects the main discussions points during the Fellowship programme.

Energy transitions are in essence fundamental societal transitions that are systemic in nature

The key role of citizens in embracing the clean energy transition and the importance of the Social Sciences and Humanities (SSH) in understanding the corresponding drivers of such a transition was the common ground at the start of the discussions with Associates. These very largely confirmed and instructed the initial assessment of the challenges faced, and the essential role of understanding the clean energy transition as a profound societal transformation. This reconfirmed for Adel the importance of adopting a holistic and global approach to the clean energy transition: "*We are actually transitioning a whole society and therefore must adopt a systemic approach, understanding the interlinkages of different drivers and barriers influencing the speed and direction of the transition*".

In addition, the absolute urgency in changing policy approaches and perceptions became very clear. "*The magnitude of change needed by 2050 appears increasingly incompatible with the actual speed of societal transformation we are currently witnessing, in Europe and globally. This reaffirmed my scepticism in our ability to meet Paris (or any non-disruptive) target at global level. In this respect, the learnings from the Covid-19 crisis should be taken into account in accelerating the process*" he continued.

The current Covid-19 pandemic crisis was in fact discussed as an example of a situation in which even very drastic measures, involving profound changes in lifestyle can be imposed by national governments and supported by citizens, on basis that the sense of urgency is clearly understood and acknowledged. The perception shared during the discussion highlighted how the sense of urgency on fighting climate change is still widely missing in the political discourse, making the case for more disruptive political initiatives and more ambitious regulations. The climate emergency is not yet acknowledged by the community and therefore easily opposed by both political parties and citizens. Another important learning comes from understanding the inertia of 'established order'. As an example, a few months of Covid-19 pandemic have generated an unprecedented switching from individual cars towards soft urban mobility, even within highly reluctant citizen's categories. This shift that may not be achieved over years under traditional policy measures.

Contradiction, complexity and possible complementarity of economic vs. societal ambitions

The reflections with the Associates implied that the likely contradiction between economic growth (hence material and energy flows and consumption) and zeroing emissions is a challenge that still requires substantial research efforts at the current stage. There is no evidence that total decoupling could ever be reached. Therefore, economic growth, as defined today, is very likely to be incompatible with emissions cuts and climate neutrality. This was recognised as a key issue that should be better understood and addressed by European strategic long-term policies such as the European Green Deal. One way forward could be the redefinition of 'growth' using indicators that are not correlated to energy or material flows and usage. This was recognised as a critical question, with in-depth answers requiring further analysis and additional expertise. Furthermore, across the discussions, reliance on pure market signals was seen as largely insufficient to drive a societal transformation forward.

> " *Societal transformation goes far beyond the aspects that can be influenced with market mechanisms; it is notably also about values, lifestyle, and social standards. These aspects are very complex to address especially in a short timeframe – as they usually entail cycle times of a 'generation' and also given the high cultural diversity of Europe* ",

Adel El Gammal

Associates also discussed how higher literacy of citizens in how their behaviour impacts emissions may be essential. Education is considered as key element to transform the fundamental perception and relationship citizens have to energy. Education was identified as often underused or even forgotten in the overall strategy to fight climate change.

Translations to policy

Following the Fellowship, Adel will be building on the insights generated in the following three ways:

1. **Sharing insights across EERA:** the main takeaways from the Fellowship will be widely shared and discussed within the EERA community by means of a range of internal communication channels, such as i) meetings and workshops involving all constituencies of the organisation, notably the Executive Committee members, the Coordinators of EERA Joint Programmes and the EERA secretariat (e.g. EERA Summer Strategy Meeting, Joint Programme Coordinators meetings, Policy Working Group, Strategy Task Force) and ii) EERA digital communication channels such as weekly briefing notes, articles and editorials in EERA newsletter, etc. The Fellowship was also a key input to the design of the EERA White Paper on the Clean Energy Transition.
Adel's four main takeaways to share with colleagues were:
   - Recognising that the energy transition is a societal (rather than a technological only) transition that needs to be approached with a systemic, cross-sectoral and multi-disciplinary view.
   - A renewed awareness on the essential role of social sciences in energy policy since, in essence, transition involves changing consumption patterns. In addition, learnings from the Covid-19 pandemic hint to a huge misperception of the urgency to fight climate change.
   - The need to understand and explore diversity in perception across European citizens, considering geographic location, level of understanding/education, socio-economic situation and dominant values and beliefs. These are all important factors to be considered by policymakers in building narratives that citizens can relate and connect to with a view to increase their engagement in the transition process with the required depth and speed.
   - The need to further understand the constraints and limitations to 'decoupling' and 'circularity' and how they should impact the policy making process in the view of zeroing GHG emissions by 2050.
2. **Enhancing EERA advisory input:** EERA has recently revised its mission statement to align it to the EU objective of climate neutrality by 2050. In that respect, EERA intends to expand its research fields and its activities beyond technology research. In the first quarter 2020, EERA has constituted a core expert team reflecting on how to best address the CET as a whole and define most effective pathways to achieve climate neutrality. The inputs gathered from interactions with the Associates have significantly enhanced EERA understanding of the energy related policy making. Insights from the Fellowship were widely integrated in EERA White Paper on the Clean Energy Transition.
3. **Set up of future collaboration agreements:** on the basis of Fellowship conversations, Adel has already established a formal collaboration agreement with one of the Associates. She was integrated in the EERA core writing team of EERA White Paper on the Clean Energy Transition and discussion for a permanent structural collaboration are currently underway. Through the discussions with Associates, EERA was also invited to participate and/or take an advisory role in several H2020 proposals. Adel also looks forward to continuing collaboration with other Associates informally. In the future he would like to see more policy-researcher interaction as part of EERA's work, as is already the case with some of EERA's flagship initiatives such as the SUPEERA project, the EERA White paper on the Clean Energy Transition, and other advising opportunities on the preparation of the Horizon Europe Framework programme:

Please multiply such initiatives and generalise as much as possible!

Adel El Gammal

Learnings from Associates

Associates were asked to reflect on their virtual meeting with Adel, and what they learnt from them about on-the-ground energy policy challenges. Here we share some of their reflections, which show how meetings developed Associates' thinking on the role of research advice for policy.

*"[The online meeting gave me] confirmation of the necessity of considering energy behaviour, values and attitudes, but also the **challenges to include them into policy advice beyond the typical bla-bla-bla.**"*

*"[I learned the] that **views between researcher[s] and policymakers are more different than expected**."*

*"**[The meeting prompted me to] puzzle on how to overcome the 'consultancy dilemma**'. On the one hand, scientists should be close to policymakers for providing science-based evidence to practical solutions. On the other hand, scientists need to investigate questions independently and without time pressure to ensure highest standards."*

*"The **decades long struggle to globally agree on effective climate policies may be rooted in the partial [neglect] of citizens' concerns and fears** about the effects strong climate policies might impose on their standard of living."*

6.3 Scoping the agency of EU policymakers to facilitate a fair energy transition

KEYWORDS Marginalised groups; Coal regions; Digitalisation; Justice

TIMEFRAM Fellowship meetings with the Associates took place in March and April 2020

ENERGY-SHIFTS RAPPORTEUR Hanna Kuittinen

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Karlsruhe
GERMANY

Linz
AUSTRIA

Pikermi
GREECE

▼ FELLOW'S
LOCATION

● ASSOCIATES' LOCATIONS

Policy context

As Head of Knowledge for the Energy Union Unit at the JRC, Efstathios Peteves supports the European Commission's Energy Union strategy for secure, affordable and clean energy, and fostering sustainable and efficient mobility in Europe. The Commission has a keen interest in better understanding justice implications of the energy transition, with the ambition of making the change fair and just for all EU citizens[1]. This includes greater consideration of marginalised demographic groups such as ageing citizens or citizens with lower income levels. These principles are enshrined in key political strategies to lead the clean energy transition in Europe, such as the *European Green Deal*[2] or the European Commission communication *A Clean Planet for All*[3].

Efstathios indicated that the JRC wants to develop an understanding of the concerns and fears of marginalised groups in relation to energy. This is complicated by uncertainty about the future pathways that the energy system will have to undertake to meet the 2050 climate-neutrality objective. Also, for this reason, he aims to learn more on the latest research outcomes on how to make the energy transition inclusive and to achieve wider engagement and participation.

As a specific example within the context of fair transitions, the transition of coal or carbon intensive EU regions is a challenging policy problem of current interest: "*Over the past years, we have done a lot of work with coal regions in transition and we have a big interest to continue this work. We looked into how coal regions transition to clean energy generation and take advantage of their industrial heritage and skills of their employees*". In this respect, it is seen as of utmost importance to develop a clear understanding of the (negative) effects of the energy transition on local employment and economy as well as to communicate effectively to the affected citizens the reasoning behind the transition.

Another area of interest to Efstathios is related to the digitalisation of the energy system and how new technologies, robotisation and artificial intelligence are challenging the democratic values of our societies. In his view there is a need for more reflections on the emerging ethical issues that digitalisation and the energy transition are bringing about.

Due to his managerial position, Efstathios is currently less directly involved in research, and therefore in taking up the Energy-SHIFTS Policy Fellowship he was especially interested in acquiring knowledge of state-of-the-art Social Sciences and Humanities (SSH) research, rather than addressing topics related to SSH research tools (e.g. research methods, survey design, public consultations, etc.). He was keen to help build a tighter network between energy-SSH researchers and policymaker communities, as he considers the energy-SSH research community to be able to greatly support future policymaking in the EU.

> *This programme is a great challenge to force myself to interact, debate and account for options that include SSH considerations.*

Efstathios Peteves

Policy challenges

Efstathios applied to the programme with a wide-ranging list of policy issues addressing change in behaviour and attitudes, the societal distribution of costs and the effects of technological innovation on democracy. While his initial question concerned behaviour, and he therefore was grouped within the 'Behaviours' thematic category, in discussion with the Energy-SHIFTS team his interests and questions soon broadened far beyond this issues.

Thus the questions he chose to focus on with Associates concerned two main themes: first, Efstathios argued how it is necessary to ensure the engagement of marginalised people, seniors, and the (lower) middle class in the energy transition. In carbon intensive regions facing transition (e.g. coal regions) it will also be necessary to address labour

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1   The Just Transition Mechanism (JTM) is a key tool for making energy transition fair. More information available: https://ec.europa.eu/regional_policy/en/newsroom/news/2020/01/14-01-2020-financing-the-green-transition-the-european-green-deal-investment-plan-and-just-transition-mechanism

2   See: https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en

3   See: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52018DC0773&from=EN

market issues. Second, the digitalisation of all the sectors of the economy, including energy, is having an impact on our democratic values, especially regarding loss of privacy. Efstathios' questions therefore concerned:

Ensuring wide participation, engagement and fair distribution of costs:

▪ How can EU policymakers ensure that the energy transition will be fair and just?

Monitoring the impact of digitalisation of the energy sector on democratic values:

▪ (How) Is technological innovation challenging our democratic values?

Matched Policy Associates

The Energy-SHIFTS team facilitated the involvement of five Policy Associates to work with Efstathios and provide him with SSH insights into his policy challenges. Given the breadth of Efstathios' policy challenges it was deemed appropriate to seek quite a range of different perspectives and topic expertise, to support his policy work. The five matched Policy Associates were:

Uta Burghard - Researcher/ Project Manager, Competence Center Energy Technology and Energy Systems, Fraunhofer Institute for Systems and Innovation Research, Karlsruhe, Germany. Uta has a background in Social Sciences, particularly Psychology, and her research interests focus on social acceptance of the energy system transformation. Her expertise was sought to provide insights about the needs of marginalised groups, and resistance to change.

Spyridon Karytsas - Scientific Member, Geothermal Department, Center for Renewable Energy Sources and Saving, Pikermi, Greece. Spyridon's current research interests include engagement of local communities in renewable energy projects. Spyridon was also invited due to his background in Economics, in order to provide this perspective on ways to achieve a just transition.

Christian Klöckner - Professor in Social Psychology, Norwegian University of Science and Technology, Trondheim, Norway. Christian was invited due to his research expertise on factors that influence environmentally relevant behaviour, especially the interaction between structural and psychological aspects.

Andrea Kollmann - Project Manager, Energy Institute, Johannes Kepler University, Linz, Austria. Andrea is an Economist, invited due to her specialism in investigating the social acceptance dimension of energy efficiency measures and energy infrastructure.

Jay Sterling Gregg - Senior Researcher, United Nations Environment Programme partnership with the Technical University of Denmark, Copenhagen, Denmark. Jay holds a PhD in Geography, and his current work is focused on socio-technical transitions. He is particularly interested in how innovation patterns and the adoption of new technologies can affect social structures, local economies, the environment, and quality of life. His expertise was particularly relevant to addressing questions on the effects of digitalisation on citizens' lives and democratic values.

Discussion points and SSH insights

Efstathios had bilateral calls with each of his Policy Associates over March and April 2020, for which each Associate had prepared a written response to his policy challenge questions in advance. Efstathios also participated in an online

workshop with other Fellows and Associates working under the same thematic category at the end of May 2020. This section reflects four key discussion points from Efstathios' interactions during the Fellowship programme.

Three forms of justice

Justice and fairness have become central questions for the success of energy transition. Associates discussed with Efstathios how previous research has recognised three forms of justice including *distributional justice* (how goods and risks are shared in a community and society), *procedural justice* (legislative and jurisdictional process), and *recognition justice* (representation, attention and respect). Policy makers working on a fair and just energy transition need to acknowledge these different types of justice in a balanced manner, addressing not only the economic aspects but also take into account non-monetary aspects such as impacts on identity.

The impacts of transitions on identities

As Efstathios identified at the start of his Fellowship, the negative impacts of energy transitions on certain (e.g. coal or carbon intensive) regions should be taken into account when planning transition policies. Although it is recognised that the energy transition will also create economic growth and jobs, this will not necessarily take place in the same location and timescale, nor will it always benefit the same people that have been negatively affected. Discussion included the notion that for these regions, the potential negative impact is not *only* related to employment and economy, but also to regional and individual identities and image. Here it may be important to consider the development of societal counter or protest movements (which of course can run pro- or anti-climate action). Recognising issues early on and addressing them with full transparency are key factors for policy planning. The policy processes should directly engage and involve the affected groups of citizens in shaping the future of the region, with co-design of transition policies together with affected citizens.

No one-size-fits-all solution for supporting citizens

Previous research has shown that successful energy transition strategies need to take account of individual lifestyles and lifestyle choices, and the resultant behaviours associated with these. According to certain psychological theories, lifestyle choices can be described as a series of decisions a person makes about how to live and behave, according to the individual's intentions and values, available opportunities, social and structural context, and perceived incentives. It is clear that the underlying factors driving the lifestyle choices are very diverse by nature, leading to no one-size-fits-all policy solutions supporting the citizens towards less carbon intensive lifestyle choices. Here the role of effective narratives that citizens can relate and connect to was highlighted as important by Associates. By narratives, researchers mean stories that connect and explain a carefully selected set of events, experiences, or the like, and which are intended to support a particular viewpoint or thesis. Divides between southern and northern Europe, different age groups, education levels, labour conditions, and income levels are important factors to be considered in the narratives shared with citizens, and for deciding on how to engage with citizens in transition processes. The role of local authorities and community level initiatives are also deemed particularly important, especially to engage marginalised or vulnerable groups of citizens.

Digitalisation: potential effects on democratic values

Digitalisation as a technological innovation has an impact on society at large. In some cases, digital technologies can offer more democratic access to information and better allow for citizen participation. There are however concerns in the public opinion related to how digital technologies are used, related to perceived loss of privacy by citizens, or unregulated access to private information by multinational companies. The benefits and threats of digitalisation equally apply when considering digitalisation of the energy sector. For instance, smart grid technologies offer more options for citizens to manage their electricity consumption, but at the same time the technology permits more control by third parties and a loss of privacy. Key factors to build and maintain trust of citizens include empowering them and ensuring transparency and transferability of data collection, permission of data use and data ownership.

Translations to policy impacts

> *The original key policy problems have not changed, but my answers to them have expanded*

Efstathios Peteves

As the above quote illustrates, overall, the programme gave Efstathios' new perspectives to the key policy problems through different conceptualising and ways of thinking, and re-emphasised for him the need for policy-researcher interaction to be further encouraged. He shared the insights he gained during the programme in a number of ways

1. **Internal knowledge sharing at JRC.** Efstathios has already shared the insights he gained during the Policy Fellowship programme with the members of his unit at the JRC. These exchanges of emails including links to additional resources and publications as flagged by Associates, are expected to contribute to the on-going work of JRC on a just and fair energy transition, particularly in carbon intensive regions, as well as to the preparation of a report in collaboration with the company KIC Innoenergy looking into major conclusions from Horizon 2020 projects on SSH in relation to the energy transition.

2. **A more detailed exploration of the achievements of H2020 funded energy-SSH projects.** The participation in the Fellowship programme resulted in a recommendation of better stocktaking of the achievements of energy-SSH research (see quote below). The Fellowship programme stimulated interest in better involving JRC with H2020 energy-SSH projects going forward, e.g. through regular meetings with the project coordinators.

> *We don't seem to capitalise enough on the knowledge created. It would be useful to have information on the project results produced so far more systematically available.*

Efstathios Peteves

3. **Establishing a sustainable network of SSH researchers.** Efstathios has been engaged in follow-up emails with the Policy Associates with more detailed responses or suggestions for further reading. Overall, he considers that the Fellowship programme allowed him to achieve a snapshot of state-of-the-art of energy SSH research in Europe, and to see how the research community has evolved and expanded over the years to a multi-disciplinary research field involving a wide variety of researchers. As several of the Fellows noted (and was prevented by the Covid-19 pandemic) he would be interested in having follow-up face-to-face meetings with Associates when possible.

4. **Feed-in to 'Social Innovation in Energy' JRC publication.** A final immediate consequence of the Fellowship has been the facilitation of Efstathios and colleagues to seek comment from the Energy-SHIFTS network of SSH experts on an upcoming JRC report.

> *Now I have access to a pool of experts who I can contact for collaboration in future policy processes*

Efstathios Peteves

Reflections from Associates

Associates were asked to reflect on their virtual meeting with Efstathios, and what they learnt from them about on-the-ground energy policy challenges. Here we share some of their reflections, which emphasis the Fellowship programme as an effective means of two-way exchange.

"It was very interesting for me to **get to know an EU policymaker** and to learn from his policy problems and to discuss them with him. The expenditure of time was also well manageable."

"It was a very **interesting exchange of opinions** on subjects such as market acceptance of RES [Renewable Energy Sources] technologies, overall benefits of energy efficiency actions (to the economy, the uptake of the building sector, etc.), **energy communities in relation to public acceptance**, etc."

"It is always interesting to see **how policymakers actually make policies and how much of this is based on catchy narratives** (ideally based on personal experience or something someone told them). SSH scientists seem to assume that we have such compelling findings that they will convince policymakers if we just present them, but reality is more that in general policymakers have already rather established assumptions which they (as any other human) rather try to confirm than challenge. As a result, what is picked up on depends a lot on if it matches the existing narrative or not. I think SSH needs to be better to tell stories."

"[I learned] that policy makers have many of the same concerns we have in the research community. That **policy makers have a healthy scepticism about model results**, but that there isn't a very good alternative at the moment. […] policy makers try not to be overly reliant on large scale models, and that the behaviour and attitudes of individuals are significant in policy decisions. Anecdotes and case examples also carry a lot of weight."

"[I learned] that there is an **urgent need to find strategies that can speed-up processes**, especially regarding consumers' involvement and their willingness to become more active in the energy system."

7. Fellowship reports: Human Capital

By Roger A. Søraa

The Energy-SHIFTS Policy Fellowships on 'Human Capital' addressed issues related to humans as end-users, co-developers, and active parts of building green futures. Informed by applications to the Energy-SHIFT Policy Fellowship programme, this thematic category was seen as encompassing: *"questions that refer to the change in skills, capacities and organisational processes that are associated with energy transitions. This includes the implications for professionals in the energy sector, how collaboration between people is organised, and readiness of consumers for changes in the energy market"*[27].

The category brought together two Policy Fellows from **national government (1), and an NGO (1)**. It was discussed how values from various stakeholder groups can be brought in, and how policymakers, together with the public and industry, can set clear targets for energy transitions. Only by including the general public and energy workers, as well as the people who are going to live with and in new energy futures, can new energy transitions happen. This correlates with how Associates discussed with Fellow Agata Kuźmińska, Founder/President of the Board at the Green Future Institute Foundation, themes within her area of interest, '**Strengthening a sense of security for local coal-mining communities during Polish transition processes**'. Fellow Holly Jeffers, who works at the Clean Heat Directorate at the Department for Business, Energy & Industrial Strategy of the UK government was also clearly focussed on the transformations needed in roles within the heat sector in her discussions on '**Fostering positive actor relationships and mutually beneficial outcomes in the UK heat transition**' with her Policy Associates.

Uniquely across the thematic categories, both Fellows had group calls with all of their Associates together at the start of the process, to present and develop their policy challenges, before one-on-one meetings. During these online workshops, as well as a combined one at the end of the programme, a number of themes were discussed which are highlighted here.

'No one left behind' in transitions

The group discussed energy transitions in particular in regards to the workers and consumers that are impacted. The term 'no one left behind' was, by many, proposed as a core focus. This term is understood as the aim of including as many people as possible from different social and professional groups: through their involvement they can become part of shared goals for the energy transition. Although fuel and energy production, storing, usage and politics are complex issues for many actors, intermediators and stakeholders involved, it is crucial that they are adapted to specific regional and local needs[28]. Local companies and stakeholders must therefore develop targets together with local authorities, and local people. For example, reskilling gas installers can build positive perceptions on how the energy transition is supported in practice in various communities. The group discussed how consumers especially can be included moving forward, by being involved in decision making with respect to the energy structure of their home and communities.

'The people aspect' and trust

Other cross-cutting themes from the online workshops included how subsystems affect each other, how governance interacts, and the need for interdisciplinary involvement of various sectors. If one does not think about such complexity, for example, one can forget about issues of trust. Such social aspects of energy transitions are important: by focusing on the 'people aspect', a stronger sense of trust can be attained. When a diverse group of actors are heard and see their perspectives included, working toward common energy goals becomes much easier.

27   de Geus, T., Lunevich, I., Ibrahim, I., Bode, N. and Robison, R., 2020. *Live energy policy challenges: questions for the Social Sciences & Humanities.* Cambridge: Energy-SHIFTS.

28   Evans, L., Milfont, T. L., & Lawrence, J. (2014). Considering local adaptation increases willingness to mitigate. *Global Environmental Change*, 25, pp.69-75.

Placemaking of local communities and learning across contexts

The concept of 'placemaking' for local communities was also discussed, as was the idea of belonging to a place: how do we take into account the lived experience of a location? By asking who is really driving the transition, and how people envision their future, the human dimensions of how energy futures can be shaped can be better identified. Finally, it was discussed how many energy transition themes were common across localities. As the group members' backgrounds were quite diverse, with experiences from Lebanon, Australia, Mexico, Brazil, Norway and across Europe, it was acknowledged that we could better implement and understand energy transitions if learned across, from and within other regions.

7.1 Fostering positive actor relationships and mutually beneficial outcomes in the UK heat transition

KEYWORDS Human capital; Citizen participation; Energy consumption; Energy transition
TIMEFRAME Fellowship meetings with Associates took place between February and June 2020
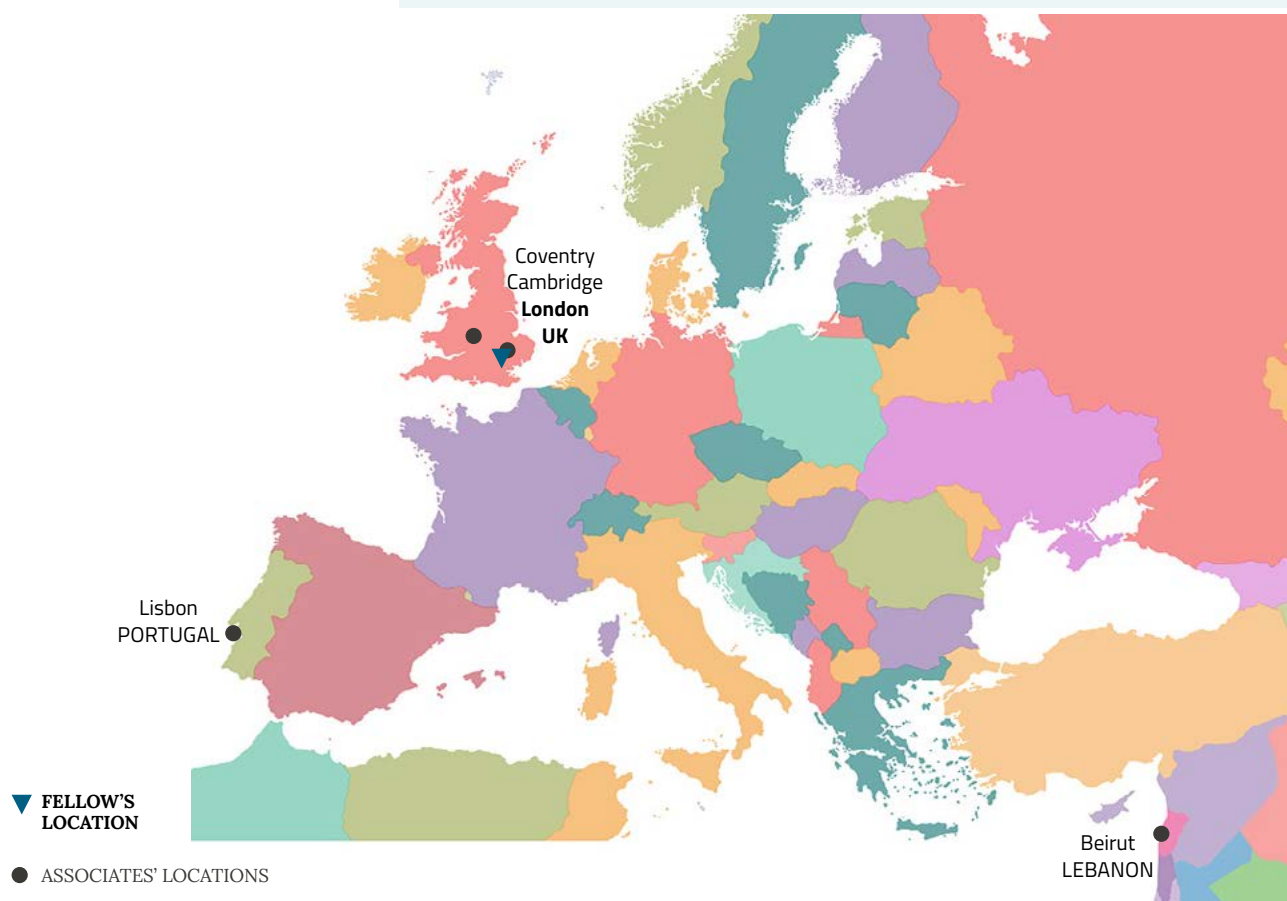ENERGY-SHIFTS RAPPORTEUR Roger Søraa

Energy-SHIFTS Policy Fellow

Holly Jeffers

Clean Heat Transformation Policy Lead, Clean Heat Directorate, UK
Department of Business, Energy & Industrial Strategy,
London, United Kingdom

Policy Fellow Team Members

During the Fellowship, Holly involved her colleague Harry Bradwell (Public Engagement Strategy Lead) in meetings.

Coventry
Cambridge
**London
UK**

Lisbon
PORTUGAL

Beirut
LEBANON

▼ **FELLOW'S LOCATION**

● ASSOCIATES' LOCATIONS

Policy context

Heating is central to our lives. In our homes, we rely on it for comfort, cooking and washing. Businesses need heating and cooling for productive workplaces and heat is integral to many industrial processes, and is one of the biggest reasons we consume fossil fuel in our society. Most of the heating in our buildings and industries is delivered by fossil fuels; natural gas remains the predominant source of heating for the vast majority of customers connected to the grid. As such, heating is still one of the largest causes of greenhouse gas emissions.

The prevalence of the gas grid presents a particular challenge to the UK in enabling the necessary shift to low carbon heat. Whichever approaches are taken, the way heating is supplied to nearly 24 million homes, businesses and industrial users connected to the gas grid will need to change. Ensuring this transition as smooth as possible represents a major national challenge over the coming years.

The UK Department for Business, Energy and Industrial Strategy set out the challenges of decarbonising heat in their publication in December 2018[1]. Similarly non-government sources, researchers and academics have set out their views on how the UK should approach decarbonising heat. A large challenge from this transition is the need to gain buy-in from, and coordinate with, all interested parties in heat decarbonisation.

The Department for Business, Energy and Industrial Strategy's explicit aims are to build "*a stronger, greener future by tackling climate change, unleashing innovation and making the UK a great place to work and do business*"[2], high-lighting the challenges associated with developing the new business and innovation models needed to move to a lower carbon future. Holly's work on the transition to low carbon heating in particular considers who can make decisions to deliver the transition, and how these decisions could be taken. In this regard she came to the Energy-SHIFTS Fellowship to explore with scholars from across the Social Sciences and Humanities (SSH) questions which seek to look at actors beyond just the end-user.

> " *Decarbonising heat is an unprecedented challenge and the scholars' findings can help us understand how we can make the transition work for everyone.* "
>
> Holly Jeffers

Policy challenge

Based on the policy context above, Holly prepared the following SSH-related question to start the discussion with her matched Policy Associates:

How can we foster positive relationships between different actors (whether Governmental, local, market or citizens) through a mass transition to low-carbon heating to ensure mutually beneficial outcomes to 2050?

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1   See: https://www.gov.uk/government/publications/heat-decarbonisation-overview-of-current-evidence-base
2   See: https://www.gov.uk/government/organisations/department-for-business-energy-and-industrial-strategy/about

Matched Policy Associates

Given the challenge addressed by Holly, four associates were chosen through an application process through the Energy-SHIFTS website portal, based on their interest in the 'Human Capital' thematic category, to add to the thematic discussion.

Marc Ayoub – Project Coordinator and Energy Policy Researcher, Issam Fares Institute for Public Policy and International Affairs, American University of Beirut, Lebanon. Marc was selected as he has worked to examine, inform and impact energy and security policies. His work in Lebanon revolved around influencing policy making through evidence-based research. Specifically, he advocated a national energy policy that utilizes renewables as a centerpiece of the energy mix rather than just a policy add-on. Marc works on themes across Development, Economics and Politics with a background in Chemical Engineering.

Sarah Hafner - Researcher, School of Engineering, ZHAW, Winterthur, Switzerland and Visiting Researcher, Global Sustainability Institute, Anglia Ruskin University, Cambridge, UK. In her research, Sarah investigates socio-economic dynamics of and solutions (e.g. new policies, regulations or business models) for sustainable energy transitions, using for example system dynamics modelling in combination with participatory modelling workshops. Sarah has a background in Economics and System dynamics.

Natalia Rocha Lawton – Lecturer in HR and Organisational Behaviour, Faculty of Business and Law, Coventry University, UK. Natalia was chosen because of her interdisciplinary theoretical approach to study complex intersections of management, workers' diversity, equality and inequality in different international contexts. Her background is in the public sector at the Secretariat of Energy, Mexican Government and holds a PhD in Sociology. Her research focuses on the social implications of economic deregulation of the energy policies and transition on employment relations, gender and diversity.

Tatiana Bruce da Silva – PhD Researcher, Sustainable Energy Systems Program, Instituto Superior Tecnico, Universidade de Lisboa, Portugal. Tatiana was chosen as an associate, as she has a multi-actor focus on how user involvement can be approached in energy transitions. Her academic background lies in Economics and Public Administration, and her professional and research background is in public policy, energy policy, and the current energy transition in the power and transportation sectors.

Discussion points and SSH insights

Holly met with all four of her matched Policy Associates for a joint call on 5 February 2020 to introduce her policy context and challenges to them; following this she prepared a short briefing document together with the Energy-SHIFTS team, which Associates then added written responses to. Holly then had a one-to-one meeting with each of her Policy Associates, this included one physical meeting right before the Covid-19 lock-down policy in the UK as well as virtual meetings. In this section we share six key areas of discussion during these exchanges.

Building value for all stakeholders in the UK heating transition

During the discussions it was pinpointed that decarbonisation of heating poses several challenges. As a first example, market solutions based on the technology's marginal cost, reflected in its price, can place low-carbon heating at a disadvantage compared to current solutions. Next, the general public are not as familiar with low-carbon heat technologies. Finally current incumbents exert their influence in order to maintain the status quo. Addressing barriers such as these is crucial for a transition to take place. As a fundamental step, policymakers must set

well-defined decarbonisation targets. The expansion of a low-carbon heating market will only be successful if the goals and steps are clear to all stakeholders, including industry, consumers, policymakers etc., and if uncertainty in the overall direction can be minimised. Following this, incentives and subsidies for customers, manufacturers and companies can be employed to build value and thus accelerate the transition.

Saving money, but also saving the environment?

The Associates highlighted dilemmas that Holly sees in her line of work such as the balance between saving money and being environmentally friendly. Saving money is an important factor that policymakers must consider when designing educational campaigns to promote low-carbon heating in the UK. Identifying and communication the value of a building for consumers, builders and contractors is a strategy that the *Building Decarbonization Coalition* in California is fostering in order to decarbonise buildings in the state[3].

A systems perspective on heating

One Policy Associate highlighted the complex nature of low-carbon heating transitions. Complex system transitions are characterised by non-linearity (e.g. sudden change or tipping points), path-dependency or lock-in, interdisciplinary, and emergent behaviour stemming from various interactions between system components (e.g. sub-systems, actors) and/or from multiple interrelated feedback-loops. Moreover, heating transitions involve interdependencies between various sub-systems, including the electricity, housing, agricultural (e.g. due to the production of biomass) and labour market (e.g. gas installers must be trained on giving advice for new heating technologies), finance (e.g. new heating infrastructure or business models require investments) as well as the governance or institutional sector. This interdependency extends to disciplinary inclusion in energy debates, for example, how knowledge from Engineering, Economics and Psychology (amongst other disciplines) can be in dialogue to promote better understanding of low-carbon heating transitions.

The role of the heat installers industry in the transition

Technological change from the use of fossil fuel to low-carbon heating represents a very important task to transform the heat system in the UK. The heat sector in the UK is defined as a complex market constituted by many different actors across the supply chain (upstream fuel producers, fuel, transporters, fuel suppliers, heating appliances manufacturers, heat installation and maintenance sector[4]). This structure requires businesses to play an active role, and to quickly respond and adapt to support the sustainable transformation of the British heating system.

Nationwide up-skilling is needed

Further, Holly and her Associates discussed nationwide up-skilling and accreditation and certification centres to deliver training on low carbon heating technologies in hydrogen boilers, heat pumps and hybrid heat pumps for installers as a key solution. This could improve installer-customer interaction to explain low carbon heat options to customers[5]. More research is needed to explore the role of heating technology installers and their contribution to promote a positive perception towards, and trust in, a technological change of low carbon heating.

A coordinated inclusive transition in UK heating system

In one of the discussions it was pinpointed how the mass transformation in the UK's heating system, in the same way as the overall grand energy transition, should be inclusive and leave no one behind. Around 14% of UK greenhouse gas emissions comes from housing - such as gas boilers - and numbers are still increasing. Decarbonising domestic heating is an important part of delivering a cost-effective energy system transition for the UK. For the UK, each home has of course a unique combination of building type, size and fabric, householders, neighbouring properties and space, location, and other factors which present different requirements, importantly including social needs. A holistic approach for the design of any change is necessary to reach effective low carbon provision of heating.

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3   The Building Decarbonization Coalition. (2019). A Roadmap to Decarbonize California Buildings. https://doi.org/10.1177/0002716217740116

4   Lowes, R., Woodman, B. and Clark M (2018) *Incumbency in the UK heat sector*, UK Energy Research Centre.

5   Furtado, J. (2019) Uncomfortable Home Truths: Why Britain urgently needs a low carbon heat strategy. Future Gas series: Part 3; Policy connect/carbon connect. Available from: https://www.polycyconnect.org.uk/cc/sites/site_cc/files/report/730/fieldreportdownload/uncomfortablehometruthsfuturegasseriespart3.pdf

Translation to policy impacts

Holly works within a wider team who are looking to identify the nature, timing, sequencing, and implications of the key decisions that must be made to transition the UK to low carbon heating. The work is part of a larger strategic objective to develop a new long-term policy framework for heat that supports transition. As part of this work they have been active in developing strong links to academia and participating in research-policy knowledge exchange; Holly's Energy-SHIFTS Fellowship is therefore a continuation in that vein, with the following direct impacts:

1. **Further developing BEIS' work with diverse SSH disciplines**
   Holly's key takeaway from the discussions with the Associates was an appreciation of how each had approached the research question from different angles. This has reinforced for her how complex the challenge of decarbonising heat truly is, involving a variety of different actors, interdependencies and economic factors.

2. **Adding to conversations around the role of heat installers and upskilling**
   It is clear that the heat sector (rather than just householders) are a key stakeholder group in Holly's team's current work, and thus conversations about the roles of professionals, including the evolution of the existing sector as well as new business models, are an extremely important area of research-policy dialogue at the current stage of transition.

Reflections from Associates

Associates were asked to reflect on their virtual meeting with Holly, and what they learnt from them about on-the-ground energy policy challenges. Here we share some of their reflections, which highlight learnings around the way policy considers wider stakeholder groups.

"I have learnt that the **Human Resource management aspect of the intermediaries and incumbents** is a very important area to be addressed to contribute to the Energy transition."

"It seems that a main challenge is **how to communicate the transition goal with all stakeholders in a way that it brings them value so that they decide to engage in the process**. Policy makers must show them how those goals will still be attained through policy that assures so."

"For me, it was important to discuss that **if we don't think about complexity we often forget issues of trust.**"

"[I learnt more about] the **political economy challenges and its influence on the decision-making process**."

7.2 Strengthening a sense of security for local coal-mining communities during Polish transition processes

KEYWORDS Human capital; Citizen participation; Coal-transition; Energy transition

TIMEFRAME Fellowship meetings with Associates took place between February and June 2020

ENERGY-SHIFTS RAPPORTEUR Roger Søraa

Energy-SHIFTS Policy Fellow

Agata Kuźmińska

Founder/President of the Board, Green Future Institute Foundation
Konin, Poland

Melbourne
AUSTRALIA

Trondheim
NORWAY

Cardiff
UK

Karlsruhe
GERMANY

Konin
POLAND

Patras
GREECE

▼ FELLOW'S
LOCATION

● ASSOCIATES' LOCATIONS

Policy context

Agata Kuźmińska is the Founder and President of the Board of the Green Future Institute Foundation, a think-and-do tank/local NGO established in 2020. The goal of the organisation is to support the region of Wielkopolska Wschodnia and the local community in the post-carbon transformation of the region. Therefore, the Foundation works with stakeholders to work out the best model for the development of the region, using good practices and developing local potentials.

Wielkopolska Wschodnia (Eastern Greater Poland Region) is a lignite region located in the centre of Poland in the constituency of Wielkopolska Voivodeship (Greater Poland Voivodeship) with five districts: City of Konin, Konin Poviat, Turek Poviat, Koło Poviat and Słupca Poviat – see map. It has 230,000 inhabitants in total. The dynamic development of the region dates back to 1960-1980, when mining, energy and heavy industry related to the exploitation of brown coal developed in Konin, Turek and nearby. The City of Konin grew from a small town, which had a population of several thousand before WWII, into a city of well over 80,000 by the millenium.

Now development is slowing down. The energy sector in the region is private - ZE PAK S.A. owns the Pątnów, Adamów and Konin power plants, and lignite open casts are owned by KWB Konin. There were three power plants in the region: one in Adamów which closed in January 2018, one in Konin powered by biomass which mainly produces heat for City of Konin, and one in Pątnów which is the biggest and the most modern - it produces about 6% of Poland's energy demands. There are also four open casts: in Turek, Jóźwin IIb, Tomisławice, and Drzewce. Next year is the last year of concessions for Jóźwin IIb and Drzewce and there are some efforts to extend these further. There is also one cast still waiting for an environmental agreement to start.

Wielkopolska Wschodnia is likely to be the first region where coal will be phased out. The mining permits run for 5-6 more years and could at a maximum be extended up to 10. This makes energy transition a very urgent challenge. In 2019, ZE PAK had about 5,500 employees and is therefore the biggest employer in the region. With only a few other labour sectors, Wielkopolska Wschodnia is an economic monoculture. In case of a crisis, there is a danger transition could impact the entire local economy, e.g. through the loss of jobs, stability and opportunities. Statistics show that the eastern part of the Wielkopolska Voivodeship is relatively weak, with a high unemployment and low entrepreneurship rate. Many young people leave the region after school for university and work in other big cities like Poznań. Interestingly earnings and pensions are still relatively high - many people benefit from the coal industry with high salaries.

The coal industry outcompetes other branches: young employees want to earn as much as their parents or grandparents working in the energy sector in the past. Fear of uncertainty in the future is high. People are afraid of change, they are afraid about their future lives, work places, and the future of their children. People still remember 'good times' when the energy sector was public and strong, helping to develop the city. The energy sector has provided many of the buildings in the city - like cultural centres, cinemas, schools and clubs - leaving a historical legacy. People are grateful for those times and they wish it to last.

In 2018 local activists started to talk about a just transition and the future after coal. They were calling for preparations for the future. They also participated in the *Coal Regions in Transition Platform* in Brussels from the beginning and convinced local politicians to join the process. In 2019, the Regional Development Agency (RDA) in Konin started to work on a just transition process, taking local political leadership of this and inviting others to work together. The RDA and the city of Konin are building visions for a green future with green jobs, hydrogen solutions, eco-transportation and economic development. Challenges lie in social aspects, such as local identity and post-industrial heritage, and it is these that Agata was keen to discuss with researchers working across the Social Sciences and Humanities (SSH) in her Fellowship.

> " *I hope my participation in the Energy-SHIFTS policy fellowship scheme will be very helpful for me, since I am working on the social dimensions of the energy transition. As a local actor contributing to a just energy transition, I also have a lot of local knowledge to share and hope that it can be inspiring for other participants and researchers.* "

Agata Kuźmińska

Policy challenges

Based on the policy context above, Agata prepared the following SSH-related questions to stimulate discussion with her matched Policy Associates. These were sent to Associates prior to conversations.

- How can we strengthen and ensure a sense of security for local communities in (pre/post) transition processes?
- How can we use the cultural heritage of coal mining to shape the new socio-economic future of the region?

Matched Policy Associates

Given the challenge addressed by Agata, four associates were chosen through an application process through the Energy-SHIFTS website portal, based on their interest in the 'Human Capital' thematic category, to add to the thematic discussion. They were:

Dimitra Koumparou - Postdoctoral Researcher, Laboratory of Technology and Policy of Energy and Environment, Hellenic Open University, Patras, Greece. Dimitra gave key insight in how studies on fighting energy poverty, and facilitating access to clean, affordable and secure energy social services can benefit the case study. Her background lies in Anthropology Urban/Rural Sociology, Sustainability, Climate Change and Energy Societies studies

Laura Norris - Research Associate, School of Geography and Planning, Cardiff, UK. Laura provided reflections on how local actors create new economic development pathways through the evolution of the region's industrial heritage. An Economic Geographer, she has a background in sustainable energy transitions, regional economic development and spatial inequalities. Laura's research focuses on how regional characteristics impact new technology trajectories, paying particular attention to less-developed regions.

Aneta Podkalicka - Lecturer, School of Media, Film and Journalism Monash University, Melbourne, Australia and upcoming Visiting Fellow, Department of Interdisciplinary Studies of Culture, NTNU: Norwegian University of Science and Technology, Trondheim, Norway. Aneta provided interesting comparative cases to international transition cases through her background from Australian and European energy and environmental studies, through her background in Media Studies.

Laura Patricia Oviedo Toral - PhD Researcher, Institute for Technology Assessment and Systems Analysis, Karlsruhe Institute of Technology, Germany. Laura is an expert in how societal concerns need time and cultural adaptation to their own particular background and frame conditions. Her work links to research across Development, Environmental Social Science, and Social Policy and she has a background in Environmental Engineering as well as Finance. In her PhD research, she is assessing how a solar energy system in rural Mixteca could be successful, focusing on societal drivers and constraints.

Discussion points and SSH insights

Agata met with all four of her matched Policy Associates for a joint call on 3 February 2020 to introduce her policy context and challenges to them; following this she prepared a short briefing document together with the Energy-SHIFTS team, which Associates then added written responses to. Agata then had a one-to-one virtual meeting with each of her Policy Associates. Towards the end of the Fellowship process she participated in an online workshop on 9 June 2020 with Associates from across the 'Human Capital' thematic category. In this section we share four key areas of discussion during these exchanges.

Strategies to phase out coal: where to start?

Agata and her Policy Associates first discussed the status of the energy transition in Poland. The 2030 EU climate and energy framework defines a target of 32% share for energy consumption coming from renewable energies sources[1]. To fulfil this target, EU members have to implement support policies that allow the transition from the long-life carbon intensive system into a sustainable system. Despite the significant reduction of mining capacity, Poland remains by far the largest hard coal producer in Europe[2]. For this reason, the country's economic growth depends on developments in the energy sector. The Polish government have formulated the country's Energy Strategy in order to achieve the goals of increasing the Polish population's standard of living and quality of life by means of further economic growth[3] which requires balancing energy demands with energy sources. At the same time, Poland is obliged to comply with the EU climate protection commitments. A logical outcome is to transition to renewable energy sources that promise sustainable energy development. Agata and the Associates discussed several other locations for inspiration, such as the UK, Germany and even Australian counterparts.

Inspiration for a post-coal industry

During the discussions Agata and her Associates imagined how mining sites could be turned into new business models after phasing out coal. A good example of how to use mining heritage and develop tourism in post-mining regions in Lusatia, Germany was discussed. This region is carrying out the decisive and highly innovative transformation of a mining region into a region focused on tourism, recreation and promotion of its mining heritage. The transformation of Bad Schlema, formerly a uranium mining site into a spa and the establishment of a regional event center in the brown coal district of Halle-Leipzig is generally regarded as another positive case[4]. People often take advantage of the cultural potential related to mining to make use of its cultural potential, mining sites are often reformed to museums. For example, the Mining Adventure Museum (Abenteuer Erzberg), welcomes thousands of visitors every year.

One of these discussions also highlighted similarities between the case study region and Wales. Wales has focused on ensuring a sense of security for local communities and utilised the industrial history to shape the new socio-economic future of the region. Wales was formerly a principal coal mining region in the EU, where decline was brought about rapidly following highly contested UK government decisions. This resulted in a range of regional development issues that continue to influence socio-economic activities. Much of Wales receives Convergence Funding to support regional development. In North Wales, a nuclear power plant is being decommissioned which provides new well paid jobs (the process takes decades).

Vulnerable groups and identities

The European Green Deal promises that Europe will be climate neutral by 2050. This new setting should be considered to reallocate investments and labour in various economic sectors. As it concerns the decarbonisation

1   European Commission. (2020, April 18). 2030 climate & energy framework. Retrieved from https://ec.europa.eu/clima/policies/strategies/2030_en

2   Euracoal - Poland. (2020, April 10). Retrieved from European Association for Coal and Lignite: https://euracoal.eu/info/country-profiles/poland/

3   J. Paska, M. S. (2009). Current status and perspectives of renewable energy sources in Poland. Renewable and Sustainable Energy Reviews, 13(1), 142-154. Retrieved from https://doi.org/10.1016/j.rser.2007.06.013

4   Harfst, J., & Wirth, P. (2011). Structural Change in Former Mining Regions: Problems, Potentials and Capacities in Multi-Level-Governance Systems. Procedia Social and Behavioral Sciences Comparative Designs, 14. doi:10.1016/j.sbspro.2011.03.033

process, it will impact the most vulnerable segments of society. For this reason, just transition mechanism should help local communities and generate the necessary investments to EU coal regions[5].

Additionally it was discussed that coal mining has a long history of technological progress in Poland. Mining is not an isolated technological feature, but it bears high social potency and political prowess. Mining for example impacts the economic, social and political structure including urbanization, education, political movements (workers association) and social security system[6]. Substantial time and effort will have to be dedicated to gaining insight into how communities' past organisation of social life (energy, education, housing, health system) was in accordance to the mining activity historically and at present.

Rapid industrialization

In discussion with one of the Associates, several socio-cultural aspects stood out in the presented account of the specificity of the Wielkopolska Wschodnia and its recent efforts to put the region on the map in public discussions about a 'just green transition' at the regional, national and European levels. The history of the rapid industrial development of the region and its capital city Konin in the post-war Poland, accompanied by the significant growth of population drawn from across Poland, seems to lead to the population sharing a limited prior rooted or place-based identity. Also, there is a significant grassroots activity/youth activism for promoting the region and inter-sector collaboration to support just energy transition. The topography of the region with the presence of extensive post-open-cut mining areas and, architecturally, the dominance of 50-70-year old communist-style block of flats is a stark backdrop to this transition. Broader socio-economic contexts, whereby small-and middle-sized cities in Poland are reportedly being left behind compared to a few large Polish cities, and a design of a formal transition strategy led by the Regional Development Agency (RDA) for the EU's 'Green Deal'/'Just Transition Fund' scheme to be completed by the end of 2020 was seen as key elements to securing a sustainable future.

Translations to policy impacts

Agata is looking to now develop learnings from the Energy-SHIFTS Fellowship in two ways:

1. **Translation of Fellowship resources into Polish**
   Agata is exploring translating the policy insight documents generated during the Fellowships (including this report and potentially the detailed responses from Associates) into Polish, in order to facilitate broader national outreach with these materials. Of particular use are the positive case study examples from other regions, as well as the variety of important socio-cultural issues raised during discussions. From her perspective of being embedded in the Wielkopolska Wschodnia region, she was able to gain valuable insights from other regions (not necessarily related to coal) that were or are undergoing transformation.

2. **Development of work stream around cultural activities and care for local identity**
   The most valuable effect of the Fellowship programme for Agata has been establishing contact with researchers representing different disciplines. Thanks to this, it was possible to challenge existing points of view with other experiences. Cooperation within the programme has inspired her in the Green Future Institute Foundation's continuing activities in the region, and in particular she is now looking to develop new written resources with conclusions and applications in the fields of cultural activities and care for local identity.

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5   European Commission. (2020, April 18). 2030 climate & energy framework. Retrieved from https://ec.europa.eu/clima/policies/strategies/2030_en

6   CEEweb for Biodiversity. (2017). How to financially support the transition of coal regions in Europe with a view to the SDGs. Retrieved from http://www.ceeweb.org/wp-content/uploads/2015/03/Transition-of-coal-regions.pdf

Reflections from Associates

Associates were asked to reflect on their virtual meeting with Agata, and what they learnt from them about on-the-ground energy policy challenges. Here we share some of their reflections, which demonstrate how interactions with a new 'live' policy challenge can help to deepen understandings of research applications.

*"It was interesting to note **the similarities in the challenges experienced by peripheral regions that have a strong history in fossil fuels as a source of growth**, with the dominant rhetoric of politicians focusing on the same metrics."*

"[A] *main challenge is translating and **adapting literature solutions into a real life context**, mainly because societal concerns need time and cultural adaptation to [their] own particular background and frame conditions.*"

"'*No one left behind*' [in energy transitions] *is a difficult endeavour and maybe **trust is key answ**er*"

8. Outcomes of the Fellowships

Arguably, the value of the Energy-SHIFTS Policy Fellowships is primarily measured through the quality of the unique interactions between the Fellows and Associates. We do not claim to summarise the richness and nuance of all these interactions in this discussion. Nevertheless, the content of this Section firstly aims to explore how the Fellowship process may have prompted shifts in the Fellows' thinking about, and understanding of, energy transitions. Thus, in Subsection 8.1 we discuss knowledge shifts which have taken place through the Fellowships. These may indicate opportunities for further inquiry and exploration in terms of SSH enriching energy policy discussions and vice versa. Secondly, in Subsection 8.2, we take an overview of the character of the research-policy dialogue which took place, to discuss what the Fellows and Associates gained from the process.

8.1. Shifts in Policy Fellows' problem understanding

Based on the data of the applications to the programme, we hypothesized in the previous publication of this series[29] that a shift of Policy Fellows problem understandings would likely be part of the process. Indeed, looking at the Fellows' initial questions which made up their 'policy challenge', it is clear that discussions almost always opened up to a broad range of other topics and perspectives. In this Subsection, we discuss a number of 'shifts' we can observe among the Fellows' views on energy transitions, including insights being taken taking forward within their respective organisations.

While we deliberately do not seek to identify linear or universal changes of perspectives towards certain new framings, we can indicate how the interactions opened up to a diversity of perspectives. We observe that Fellows may have: (i) reframed their policy challenges during the process as they were pointed in new directions, or (ii) realised that their initial question could be helpfully narrowed or broadened. On multiple occasions, the ways in which the policy challenges themselves were

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29   de Geus, T., Lunevich, I., Ibrahim, I., Bode, N. and Robison, R., 2020. *Live energy policy challenges: questions for the Social Sciences & Humanities.* Cambridge: Energy-SHIFTS.

formulated were unpacked in the discussions. Fellows were encouraged to think beyond their 'business-as-usual', as discussions with Associates involved questioned underlying assumptions and perceived limitations. This often opened up a discussion in their one-to-one meetings. As such, we discuss here four emerged themes: (1) Raising systemic questions; (2) Turning reflexive: understanding contexts; (3) Zooming in on procedural justice in energy transitions; and (4) Changing (institutional) roles and collaborations. Further deepening these changed understandings might be an interesting avenue for further discussion.

8.1.1. Raising systemic questions

During the Fellowship, Fellows (and Associates) were challenged and assisted to understand energy policy questions in terms of greater complexity and interrelatedness with other issues. Below, we list examples of how systemic links were made by unpacking concepts, seeing complexity and assessing knowledge paradigms.

Unpacking concepts

The endeavour of together defining key concepts was often a beginning point for conversations. These discussions opened up space to more broadly question the meaning of certain terminology used, which shed light on how definitions shape the understanding of problems, and can include or exclude certain interests. This resulted in a critical unpacking of terms such as participation, social acceptance, or behavioural change. As such, Miriam Bueno Lorenzo indicated she reframes energy poverty as energy affordability, and Andreas Schneller evaluated energy poverty from a rights-based perspective. Jan Magne Bae commented on no longer using the NIMBY concept as a discourse when discussing local protest, as it negates the reasons behind local opposition. Víctor Marcos Morell enriched his understanding of social acceptance by including other theoretical concepts in his discussions, such as participatory approaches, social dialogue, and deliberative processes. Efstathios Peteves (and others) deepened their understanding of energy justice, by discussing

different tenets, including distributional, procedural, and recognition justice.

Seeing complexities

The degree to which energy transitions are embedded in complex social (or socio-technical) systems was another way in which systemic questions were raised. Adel El Gammal discussed energy transitions funda-mental systemic societal transitions, whose interlinked drivers and barriers ought to be thoroughly understood. Coming from a technological orientation, this might suggest that establishing the societal dimensions of energy transitions is indeed not yet self-evident. Holly Jeffers discussed the importance of understanding archetype dynamics of transitions, such as non-linearity, path- and inter-dependency, and how the influence exerted by incumbents to maintain the status quo might be a barrier to implementing energy transitions. Relatedly, the need to 'fuse interests' and look for the co-benefits of energy measures was addressed in several conversations. Joyca Leplae, Holly Jeffers, Andreas Schneller and Katarzyna Dulko-Gaszyna discussed how saving money is an important co-benefit of sustainable energy (efficiency) measures. Simultaneously, financial barriers for people to participate in energy transitions must also be recognised. When discussing energy poverty, Gert De Block learnt about the multi-dimen-sionality of energy poverty: to understand it, people's financial, geographical and housing situation may need to be recognised as well. In Bojan Gajić's conversations the need to address energy poverty and social poverty (e.g. poor living and health conditions) was brought into much greater prominence, as a route to address other interdependent issues.

Knowledge paradigms

Another example of the systemic questions that were raised during the Fellowships, is how certain knowledge paradigms were assessed. Adel El Gammal raised the question of a possible contradiction between economic growth and becoming climate neutral, which would require a fundamental change in values and lifestyle. This also included questioning the dominant paradigm on energy ownership: who owns the means of generating electricity, and how is the electricity system designed? As such, models of decentral ownership (e.g. prosumer communities) were discussed by Molly Walsh and Gert De Block, amongst others. This gave Fellows insight on the transformative potential of certain *social* innovations (such as energy communities), while becoming aware that

these models might also have the potential to empower those in a position of energy poverty. Very often energy policy discourse has been focussed primarily on tech-nological innovations as solutions. Energy communities could potentially support vulnerable citizens to share production and install energy efficiency measures.

Finally, Fellows and Associates questioned knowledge paradigms together, by discussing whose knowledge is used for making policy. Joyca Leplae discussed using 'negotiated knowledge' to overcome social conflicts around energy issues, and Görkem Güngör aimed to include narratives in the modelling process, which rely on a multitude of energy stakeholders, beyond policy experts.

8.1.2. Turning reflexive: understanding contexts

Throughout the conversations some Fellows started to approach their questions more as researchers, and of course already had already some research experience themselves (although not necessarily within SSH). Whilst developing implementable solutions is a central part of policywork, the programme also enabled some time for 'reflexive' thinking, by understanding the context in which social phenomena related to energy exist. At the same time, policyworkers were invited to broaden their horizons of what (experimental) approaches might be translated to their contexts to address the issue at hand.

Contextual sensitivity and proximity

A need to develop a stronger sense of contextual sensitivity was one of the most obvious returning notions in the Fellowships. Cultural, historic, geographical and local conditions need to be taken into account when implementing energy policies. Elements of this came as new insights since within some policy contexts there is often a focus primarily on financial incentives; in this way Gersende Chaffardon and Gideon Friedmann both learnt more about the importance of national cultures in influencing social practices of energy peaks, rather than just pricing and economic motivations.

Jan Magne Bae and Víctor Marcos Morell both discussed with their Associates how socio-cultural, institutional, market and community factors are all crucial to take into account when discussing social acceptance. Land is connected to tradition, habits and culture: knowledge about this is important to include and value. For designing participation processes, Joyca Leplae learnt how studying the history of a given area

first, to understand how previous events and participation processes might affect new spatial developments and participation, could offer fruitful insights. Similarly, political histories, e.g. involving syndicates and cooperatives, might affect citizens' attitudes towards community-owned processes.

Marieke van der Enden learnt how local specificities, in her case a proud sentiment with regards to greenhouses, might be used as a vehicle to approach citizens. Also, for modelling, cultural contexts and biases can be helpful when considering energy transition scenarios, as was found by Görkem Güngör. Efstathios Peteves and Hanna Uhl both linked this context-sensitivity to how social practices in coal and carbon intensive regions are very much entwined with fossil-related employment, histories, political movements and organisation of social life. For a just transition, understanding this interrelatedness is key.

The implications for including a more reflexive way of working were translated to policy. For instance, Hanna Uhl felt that letting go of social acceptance as an outcome for policy may be important, and instead to focus on ensuring a good process in which the context is acknowledged. Gert De Block and Andreas Schneller both considered how physical proximity of policy makers to the people affected was considered an important condition to be able to respond to this complexity as a policyworker. Andrea de Ruiter, Charlotte Koot, and Menno Ottens considered how context-dependency can be used for understanding systemic impacts of the energy transition on groups, rather than focussing on individual behaviour change exclusively. Relatedly, Holly Jeffers flagged how context-specificity regarding building type, size and fabric, householders, neighbouring properties and space, location, etc. should be incorporated into a larger design vision of providing heating in the UK, as well as into goals, steps and visions that are clearly communicated with all stakeholders.

Translating best practices

In conversation with the Associates, the topic of learning from best practices was also raised during many conversations as a way to be inspired across geographical contexts. As Hanna Uhl discussed with her Associates, there are no 'one-size-fits-all' solutions that can be imported: examples ought to be used conceptually, rather than instrumentally. Designing it to match your policy context will always remain a time-consuming issue. For instance, the use of innovative solar PV business models in sub-saharan Africa was discussed as a potential business case for Poland in the case of Katarzyna. Furthermore, Andreas Schneller discussed

energy poverty policy in the EU Energy Poverty Observatory (EPOV) project[30], Switzerland, Austria and France, and Agata Kuźmińska learnt about phasing out coal examples from the UK, Germany and Australia.

8.1.3. Zooming in on social justice throughout energy transitions

Another shift that can be observed concerns initial policy challenges which focussed on questions about how to persuade citizens to increase their acceptance towards RES, to change their behaviour, or engage with them for a particular outcome. In many cases, these questions were opened up to reinterpret more centrally how 'social justice' ought to be present throughout all facets of energy transitions, rather than in 'isolated' initiatives related to participation or acceptance. This links to the previous development of becoming more reflexive: for each stage of the process, different tools are needed to facilitate a 'socially just' process. Hence, as discussed by Andrea de Ruiter, Charlotte Koot and Menno Ottens, Görkem Güngör, Efstathios Peteves and Marieke van der Enden, a diversity of engagement approaches is needed, relating to the stage of the process and the objective of the engagement.

As such, Fellows' (and Associates') motivation to involve citizens fairly throughout policy processes was able to come more to the fore as part of developing questions on social acceptance, behavioural change and citizen engagement. As Miriam Bueno Lorenzo discussed, active involvement of citizens is key throughout all elements of energy transitions. Víctor Marcos Morell discussed the term 'social dialogue' in this regard, which was considered as all kinds of negotiation and consultation between (representatives of) government and citizens. Importantly, as was discussed by Andrea de Ruiter, Charlotte Koot and Menno Ottens, such a comprehensive notion of citizen engagement with climate policy ought to be institutionalised in the organisations working on climate policy. Nevertheless, some Fellows did remain reserved and emphasized the importance of 'being realistic' when considering their policy practice. Arguably this notion could be further investigated, to explore when and why certain aspects of social justice may be an 'add on in some circumstances', rather than standard operation.

As was seen in several Fellowships social justice considerations can be made during planning and forecasting, as well as implementation, which are now discussed in turn.

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30   See: https://www.energypoverty.eu/

Planning and forecasting

Gideon Friedmann discussed how public engagement with energy issues needs to be arranged before policymaking takes place. This was echoed in the conversations Hanna Uhl had, in which taking the time to understand and getting to know stakeholders was emphasised, in line with the section above on the 'reflexive turn'. Relatedly, Görkem Güngör and Gersende Chaffardon emphasized the potential of already including more voices in the modelling work for their countries' energy system. Bojan Gajić also discussed how 'expert knowledge' ought not just to be communicated with citizens, but rather, citizens ought to be involved in imagining the future or energy in their locality.

Implementation

Both Víctor Marcos Morell and Adel El Gammal discussed the importance of higher energy literacy of citizens in order for them to be fully involved in transforming the energy system. Efstathios Peteves, in line with the 'reflexive turn' described above, discussed the need for appropriate communication campaigns regarding RES: narratives need to be tailored to the groups they are targeting.

While the need for a diversity of methods tailored to stage, objective and target group was emphasised, Marieke van der Enden also discussed the need to start somewhere, to build rapport and find out what the characteristics of people in a given locality are. In this regard, she learnt about building 'a community of the willing' and sampling interviews.

Efstathios Peteves and Gert De Block discussed the risks of using digital methods in energy transitions. Efstathios Peteves argued about how the threats and benefits of digitalisation, including privacy concerns and data ownership, equally occur in energy transitions, e.g. in the case of smart grid technologies. Besides, citizens who are not comfortable with digital technologies might be excluded from such new energy services, as Gert De Block discussed. This was also echoed in Bojan Gajić's conversations with his Fellows, who considered how to make the one-stop-shop for retrofitting houses as easily accessible as possible.

8.1.4. Changing (institutional) roles and collaborations

As the Fellowship progressed, some Fellows started reflecting on their own role, as well as their conceptions of the roles of others. This also relates to the issue of reflexivity mentioned earlier: if you as a policyworker are not solely in the role of announcing a 'perfect solution' ready for energy transitions, that others ought to simply accept, this opens up new and different roles. It also relates to the systemic questions that are raised about ownership in the transition, and what type of ownership current role descriptions reflect or should reflect.

In this way, Fellows were able to give significant insight into their own roles as policyworkers. Marieke van der Enden discussed how she needs to balance the political reality within the municipality, public expectations, and technological possibilities for realising natural gas-free neighbourhoods. Gersende Chaffardon reflects that her organisation's work related to modelling also requires different qualities in order to incorporate societal features and dynamics.

Finally, the important role of intermediary actors was frequently raised throughout the Fellowship. Gersende Chaffardon, Joyca Leplae, Marieke van der Enden and Holly Jeffers discussed how intermediaries such as installers or contractors could play a part in encouraging flexible consumption, energy refurbishment and building trust with citizens. Holly Jeffers specifically discussed how nationwide up-skilling among these sectors is also needed in order for new energy technologies to be installed. She also highlighted the need for collaboration across actors, for instance heating appliances manufacturers, heat installation and maintenance.

8.2. Reflecting on the research-policy interaction process

In this Subsection, we discuss observations with regards to the research-policy dialogue that took place between Fellows and Associates. We reflect on how both the Fellows and Associates appreciated their interactions in terms of quality of exchange, range of topics discussed, and being challenged in constructive ways. Considering how Subsection 8.1, and indeed the reports, are primarily focussed on the outcomes for Fellows, in this section there is slightly more emphasis on the Associates' experiences. In the forthcoming

publication on the process of the Fellowships, which will be published early 2021, insights on the relationship between the overall design of the Fellowship and the quality of the interactions will be discussed.

8.2.1. The policyworker perspective on the Fellowship

As demonstrated in Subsection 8.1, many policy-workers developed their initial questions, through their conversations with Associates. Arguably, this hints towards a significant value of the programme being to enable Fellows to gain a deeper understanding of their policy challenge, rather than solely providing straightforward or instrumental 'answers' to the policy questions. Some of these understandings led to reflections about potential changes in their professional practices and methods of working, and in particular new collaborations with SSH researchers. These are reflected in the translations to policy impacts, as summarised in 'The Energy-SHIFTS Policy Fellowships: a visualisation' (p 7).

Furthermore, many Fellows deliberately involved colleagues in some or all of their conversations, or identified immediate routes via which they planned to share their takeaways from the programme with their teams. The team nature of policywork means Fellows were looking to share their experience and insights, and possibly responsibility for the implications of this knowledge, with others in their organisation. Agata Kuźmińska aims to translate her key outcomes to Polish, to better inform her colleagues, and increase the impact of the Policy Fellowship. Indeed, it seems that several of the Fellows were keen to act as ambassadors for conveying the importance of SSH in energy within their organisations.

It is also relevant to question what answers could not be provided by Associates, and what the reasons may have been for this. For instance, many Associates emphasised the importance of each case being different. Thus, when some Fellows asked for specific strategies for involving citizens in discussing the implementation of Renewable Energy Systems (RES), which would be appropriate for their precise context, this was not always able to be provided within the framework of this time limited Fellowship. Similarly, some Fellows wanted greater detail on what the long term implications of RES may be on their communities, which again would require a more in-depth collaboration.

Meanwhile, it is also relevant to ask what SSH questions were not being asked by the Fellows. For instance, whereas some Fellows did ask about the consequences of deconstructing the fossil fuel industry for the employees, questions about more systemic, cultural or organisational changes in this regard were not as widely discussed in the conversations. Diving deeper into these 'unanswered' questions might be an opportunity to identify new areas for research, and provide better case study interpretation and learning.

8.2.2. The academic perspective on the Fellowships

When reviewing the 'Reflections from Associates' across the Fellowship reports, several observations can be made on what the Associates took from the programme. These particularly concerned: (1) exploring the nuts and bolts of policy work and gaining inside information; (2) seeing research through new eyes; (3) increasing empathy for policywork challenges; and (4) roles and expectations.

Exploring the nuts and bolts of policy work

It seems that many researchers enjoyed gaining a better understanding of the policy process. This indicates that the Fellowship indeed was a two-way learning experience. Associates list how they learnt about the difficulties in the decision-making as well as implementation processes, including legal challenges or specific processes such as EU directives of the NECPs. Specificities such as difficulty in communication and coordination among policymakers and policyworkers at different levels, scaling experimentation up to adoption, limiting project time frames, or lack of clarity about funding were also mentioned as learnings for the Associates. Insight into case studies reaffirmed the urgency and challenge of including societal understandings in order to make appropriate policy, as well as the difficulty of collecting the data needed for making policy. On a more general level, power balances, interests and strategies for trying to influence policy were noted as new insights with regards to policy processes.

Overall, Associates appreciated learning about energy policy challenges faced at the front line, from technological details, to the realities of engaging the public and establishing trust, or the proliferation of energy poverty. The real dilemma of wanting to speed up transition processes while involving citizens and leaving 'no one behind' is highlighted.

Seeing your research through new eyes

Often from discussing the new contexts their Fellows were working in, Associates emphasised how their conversations inspired them to reassess their own research work. For instance, one Associate felt intrigued to learn more about Eastern European experiences of energy transitions, remarking on their own bias towards Western Europe in this regard. Another Associate also confirmed this greater understanding of regional differences in Europe. Nevertheless, one of Katarzyna Dulko-Gaszyna's Associates stated that while differences are big, there are great opportunities for learning between the Global North and South in energy transitions.

Other Associates remark having re-evaluated the balance between academic and practical realities in relation to their work. One Associate observed how there are only limited best practice cases currently available on the topic of energy poverty, particularly in a way that they could be translated to other contexts.

Increasing empathy for the challenges of policywork

We remark that many Associates appear to have gained empathy for policy reality and organisational difficulties. They highlight new-found understanding and respect for the complexities and difficulties that policyworkers face in incorporating many different factors and interests in their work, particularly when endeavouring to feed SSH elements into their work, and persuading colleagues to incorporate it. One Associate called the work of policyworkers in the energy transition 'undervalued'.

Associates tended to use personal language to describe their interactions with policyworkers. In several cases, Fellows confided in the Associates with openness and honesty, which was appreciated by the Associates, e.g. discussion of political limitations and opportunities. Others remarked how they had found the passion with which policyworkers work on inclusion and participation to be 'heartwarming', or the hard work to reduce energy vulnerability 'inspiring'. The realisation that policyworkers are 'just like us', share the same concerns, and welcome feedback from the outside, motivated an Associate to become more pro-active in approaching policyworkers who might be interested in their work.

The influence of human emotions and traits on policy practice was also explicitly mentioned a few times. In one case, an Associate learned about the hesitation that the Fellow felt for engaging with citizens, due to resistance in her locality. Another Associate reflects on how policymakers often make policy based on their own assumptions, personal experience and catchy narratives. As a result they conclude that SSH needs to become better at communicating narratives in which their research findings are reflected.

Reflecting on roles and expectations

Apart from their personal sense of the interactions, Associates also shared reflections on the nature of their conversations with the Fellows. Some Associates mentioned how they were pleasantly surprised that there was no need to persuade the Fellow of the urgency of RES, and by the genuine interest in learning about the latest SSH research. One Associate recalled feeling as though they were talking to a fellow academic, and another was surprised by how many SSH insights are already being applied in policy practice. This opened up a more nuanced position for scholars and opportunity to be more analytical and critical towards some policies. In the first instance, an Associate expressed how many questions concerned 'how to do this and how to do that'. However, as discussed in Subsection 8.1, the questions of Fellows evolved in interaction with the Associates.

Other Associates expressed disappointment about the lack of knowledge about the relevance and need for SSH in wider policy organisations, or the degree to which policyworkers in general may be able to access academic literature. In many cases this was further informed by insights from the Fellows themselves around how SSH knowledge may, or may not, be sought or understood within policy contexts.

Another interesting notion is the relation between academic and policy language. As mentioned in Subsection 8.1.1 unpacking concepts was an important element in many interactions. However, there is a big discrepancy between critically and precisely defining concepts as is common in academia, and the way concepts are used in practice to serve particular policy agendas. This could be further explored in future discussions.

8.2.3. Reflecting on the Fellowship experience

Overall, Associates expressed great enthusiasm for the programme, and hope that more of such programmes will be initiated and replicated in the future. Associates highlighted the benefits of how their academic knowledge could challenge dominant preconceptions and spark creative insights. Several Associates

expressed the ambition to translate academic literature to specific policy contexts more structurally, a desire to meet the challenge of translating academic knowledge to actionable knowledge, and the wish to establish a better relationship with their Fellow for an even better exchange. One Associate stressed the need to overcome the 'consultancy dilemma', which describes how researchers must remain independent while also needing to be 'close' to policyworkers in order to provide SSH input. As will be further discussed in the third publication of this series, while there are plenty of ways in which the programme could be strengthened, it is obvious that the programmes such as this meet a need among both policyworker and researcher communities. Interestingly, the Human Capital thematic category, whose Fellows met with their Associates as

a group several times, particularly mentioned how they valued cross-disciplinary learning between Associates as well. According to them, meeting in a group several times, fostered a good discussion about the cases from multiple angles. This might point towards a need for fostering more interdisciplinary discussions, also across Associates, in the interactions.

All in all, the Energy-SHIFTS Policy Fellowship programe has been a vehicle for generating many new transdisciplinary policy insights for energy transitions, for both researchers and policyworkers. The next report in this series will continue these reflections, by highlighting what lessons have been learned in terms of organising research-policy dialogue, and opportunities identified by the Energy-SHIFTS team to strengthen these interactions even further.

9. Acknowledgements

Appendix: Additional Policy Associate biographies

Fellow Thomas Pellerin had to withdraw from the Energy-SHIFTS Fellowship programme due to the implications of the Covid-19 pandemic. The following matched Policy Associates had already sent written input on Thomas' policy brief, which was used in the introduction to the thematic category 'Social Acceptance'.

Christina Demski, Senior Lecturer, School of Psychology, Deputy Director Centre for Climate Change and Social Transformations (CAST), Cardiff University, UK. Christina's research interests concern issues of risk perception and communication, as well as examining public responses to emerging and complex socio-technical issues. She was invited to the programme due to her expertise in public attitudes and acceptance towards environmental and energy issues. In particular, she was asked for providing knowledge on acceptability of the whole energy system, including issues around supply (e.g. renewable technologies), and governance (e.g. demand-side management).

Cristian Pons-Seres de Brauwer, PhD Researcher, Department of Wind Energy, Technical University of Denmark, Roskilde, Denmark. Cristian researches how the design and implementation of renewable energy auctions incentivises (or hinders) the participation of localised forms of RE development. He was invited to the programme due to his interests in developing the relationship between the market and community pillars of social acceptance. His background in evolutionary and behavioural economics, policy innovation, and market studies was relevant to the policy challenge put forward.

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