Introduction to Panel 1
Energy consumption and wellbeing

Panel leader: **Marlyne Sahakian**
Department of Sociology
University of Geneva
Switzerland
marlyne.sahakian@unige.ch

Panel leader: **Marta Lopes**
Polytechnic of Coimbra & INESC Coimbra
Portugal
mlopes@esac.pt

Introduction

Energy services have become entangled with almost every aspect of everyday lives, from preparing meals, to getting around, and staying warm. Providing minimum energy services is critical for ensuring a decent life and addressing energy poverty, yet unbridled energy usage relies mostly on non-renewable resources that are unevenly distributed and a main contributor to the current climate crisis. This leads to reflections on upper limits to consumption, posing the question: how much energy is enough for living a good life? This year's theme – *energy consumption and wellbeing* – focuses on the opportunities for 'less can be better' forms of energy usage, making explicit the link between energy, sufficiency, and wellbeing. Slowing down energy usage may require disruptive changes, which might manifest themselves at the individual to the collective level, involving citizens and other stakeholders in cities and regions. The (semi)confinement measures around the pandemic may provide insights on how changes in energy usage could be better understood. We welcomed contributions on how to 'fast forward' to reduced energy usage and increased wellbeing, through the amplification of existing or introduction of new initiatives, new measurements, or policy recommendations. The different contributions we received attested to the growing interest in the theme of energy and wellbeing, as well as interest in how to bring about social change towards reduced energy usage. We summarize some of the key themes below, along with brief introductions to the different contributions.

Energy services and wellbeing, a growing field of inquiry

Linking energy services to wellbeing is a growing area of research, which raises conceptual and methodological questions: how can the good life be understood? What does it mean to different people? How does it relate to energy services in different contexts? And how can it be measured? Ramirez-Mendiola et al (peer-reviewed paper 1-097-21) take up the capabilities framework in examining the power requirements in the UK residential sector, questioning what an acceptable level of energy demand is and underlying the importance of moving beyond top-down, national studies. Cass (peer-reviewed paper 1-080-21) tackles the critical question of high-income consumers and flight travel in the UK, discussing what is reasonable or excessive when it comes to private energy usage. He demonstrates how flying has become normalized in people's lives, tied to notions of freedom, novelty and distinction – but in excess of meeting basic needs.

A shift from changing people to changing practices and systems

Tackling the over-consumption of energy and associated impacts is not about changing people for many contributors to our panel, but rather focusing on the systems of (energy) provision and the things/infrastructures that lead to some forms of consumption being privileged over others. By looking at systems (of living, working, distributing energy), inequalities and unbalances emerge and can be tackled. Baltruszewicz et al (extended abstract 1-010-21) consider final household energy footprints in Nepal, Vietnam and Zambia, uncovering how much energy is required to end multiple deprivations towards a good life. While operationalizing wellbeing can be tricky, particularly in a comparative study, findings point to the importance of systems of provision – rather than changes in consumption patterns. Vogel et al (extended abstract 1-029-21)

discuss socio-economic conditions for satisfying human needs at low energy use, identifying a link between public services and need satisfaction outcomes. They find that current regimes are not affective at satisfying human needs with low energy. Mikova et al (peer-reviewed paper 1-157-21) consider the effect of new social trends – such as digitalization and sharing – on energy demand in European countries through a modeling approach.

Energy consumption, justice and sufficiency

Linking energy to wellbeing also means reflecting on sufficiency, or how much is enough, and what might be considered to be excessive. The notion of "consumption corridors" is relevant here, as upper and lower limits to energy usage that also account for social justice and need satisfaction. This leads to questions regarding who gets to decide on what is excessive and for whom, and through what process (much more work on this is needed) – and in turn, to turning a gender lens on energy issues and social justice (particularly in contexts of greater gender inequalities). Khalid & Foulds (peer-reviewed paper 1-032-21) draw on data from Pakistan's domestic energy sector to uncover deep gender inequalities, including in energy decisions and finances, which tend to be male dominated, as opposed to domestic shores that use energy. They underline the importance of moving beyond gender neutrality in energy policies and studies, as well as examining non-energy policies, such as those related to health and wellbeing, to understand their implications for energy usage. Realini et al (peer-reviewed paper 1-019-21) consider energy poverty in relation to home heating in Italy, finding that the inability to purchase a minimum set of energy services has consequences for wellbeing, based on an analysis of building types, climatic zones, weather data, and comfort settings. Marignac et al (peer-reviewed paper 1-221-21) provide a bottom-up modeling approach to help scale-up energy sufficiency on a European level, based on national trajectories and a set of 600 indicators and through a collaboration with 20 European countries at present, aiming for the integration of harmonised national scenarios into an ambitious net-zero European vision. Verbeeck & Bosserez (peer-reviewed paper 1-131-21) consider how buildings can be renovated with a consideration for sufficiency-based principles.

Understanding how social change takes place

Change takes place in many different ways, through communities of practice or through changes infrastructures, or through shocks – such as the Covid-19 pandemic. A diversity of approaches would be necessary toward enabling change, including more transdisciplinary work, involving non-scientific actors, and tackling: the materiality of energy usage (and how this is changes through automation and digitalization) and the collective conventions/normative assumptions that are often the 'elephant in the room' when it comes to energy usage. For example, conventions around clothing can be linked to notions of comfort and energy demand, as exposed in an exploratory study by Morley (extended abstract 1-179-21). Participatory approaches were discussed, including a round-table on energy sufficiency and wellbeing, towards recognizing diversity in a paper by Sejer Damgaard et al (extended abstract 1-185-21). Different challenges need to be overcome, such as the terminology (e.g., language, focus on households), data (e.g., availability, sensitivity, quantitative/qualitative approaches), and translating learning into practice. Hiteva & Foxon (peer-reviewed paper 1-172-21) use the example of a Library of Things in the UK to discuss how borrowing changed during the pandemic and how this relates to energy demand and wellbeing, demonstrating how having a sense of belonging to a community was critical to people. In a study based on rural France by Flipo et al (peer-reviewed paper 1-071-21), the role of intermediaries (or people who navigate between civil society organizations and public administration) in an energy transition was seen as critical. Their study demonstrates the diverse agendas of stakeholders in public administration, and the responsibility for change that rests on the shoulders of community associations. Another study by Morton et al (peer-reviewed paper 1-049-21) showed the limits of an ICT-based intervention towards social change, whereby people were not so keen on gamification and more interested in having straightforward information about energy.

The stories that we tell ourselves and share with others

The stories we use are important. As different from narratives, stories can be told around sharing (rather than buying), heating people's bodies (rather than spaces), promoting rural mobility options … all stories that we tell each other at conferences, but which could become part of a wider societal discourse on what it means to live the good life in an energy transition. Sahin & Schilcher (extended abstract 1-190-21) share insights on how visual language can be used to communicate more directly with energy poor households, developed through a process of co-creation. Palm & Ambrose (extended abstract 1-120-21) present a compelling method which involved walking through district heating and waste facilities, with different groups of people – from homeowners to migrant populations, underlining the surprising and unexpected exchanges that can take place in such a format. In a contribution by Bergman & Janda (peer-reviewed paper 1-169-21), the authors outline the significance of stories as an eco-system, with different meanings rather than a single narrative – whereby different stories might compete for dominance, or – as is the case with the caring story – can be under-represented. They argue that the eco-system model of stories could help us move beyond not just the dominant narrative, but the very idea of domination – towards respect for diversity.