

USER-CENTRED ENERGY SYSTEMS TECHNOLOGY COLLABORATION PROGRAMME (Users TCP)
STRATEGIC WORK PLAN (2020 – 2025)

Users TCP's Vision

To be the world-leading international collaboration platform for policy-relevant socio-technical research on user-centred energy systems.

Users TCP's Mission

To provide evidence from socio-technical research on energy use and production, to inform policy making for clean, efficient and secure energy transitions.

Strategic Context

The energy sector is undergoing an unprecedented period of change. The environmental imperative to decarbonise requires a rapid increase in demand-side energy efficiency, alongside growth of intermittent distributed renewable generation at the grid edge, placing energy in the heart of communities. Simultaneously, digitalisation is changing wider social expectations of service, value and usability. These social and environmental forces are turning the energy system inside out, making it imperative that technology designers and policy makers properly understand how people permit, adopt and use new energy technologies.

People use technologies to convert energy into the services they want. To do this, technologies need to be useable - and their services must satisfy users' needs. Poorly designed technologies throughout the supply chain (hardware, software and business models) that are not used as intended, and do not satisfy user needs, lead to 'performance gaps' which are both energy and economically inefficient. Policies that do not take account of user behaviour hold back the energy transition. Adopting a 'systems perspective' makes *people*—technology designers, policy makers, intermediaries and end users—as integral as hardware and software to delivering an energy system that meets our wider social, environmental and economic goals. This 'socio-technical' approach is core to the User-Centred Energy Systems TCP.

Rationale for the Users TCP and its role in the IEA Energy Technology Network

There is a need both for better understanding of the role of users within energy systems, and for this understanding to be brought together with expertise in technologies to accelerate the energy transition. The IEA Technology Collaboration Programme comprises over 6000 technology experts - complementing this expertise, the Users TCP provides a home for international networks of social researchers, economists, political scientists and policy makers to work collaboratively on policy-relevant sociotechnical energy issues. The objectives for 2020-2025 focus on areas where user choices and actions play a large role in determining both the variability and overall level of power and energy use.

Objectives for 2020-2025

- Provide impartial, reliable and authoritative research, guidelines and recommended practices to policy/decision makers and implementers based on international evidence.
- Establish at least four international networks of expertise on socio-technical aspects of energy use.
- Work with other TCPs to provide multi-disciplinary research on key energy transition topics.

A set of actions

The Users TCP's Annexes are the delivery mechanisms of our Strategy. The following set of actions contains Annexes that the Users TCP will undertake and other likely topics of future work.

Information provision: The role of digitalisation in socio-technical systems change

- Developing a common framework for creating the social licence to operate in automated consumer-centred flexibility markets through the Social Licence to Automate Annex
- Leading global knowledge sharing through the Global Observatory on Community Self-Consumption and Peer-to-Peer Energy Trading

Interfaces design: The role of design in socio-technical systems change

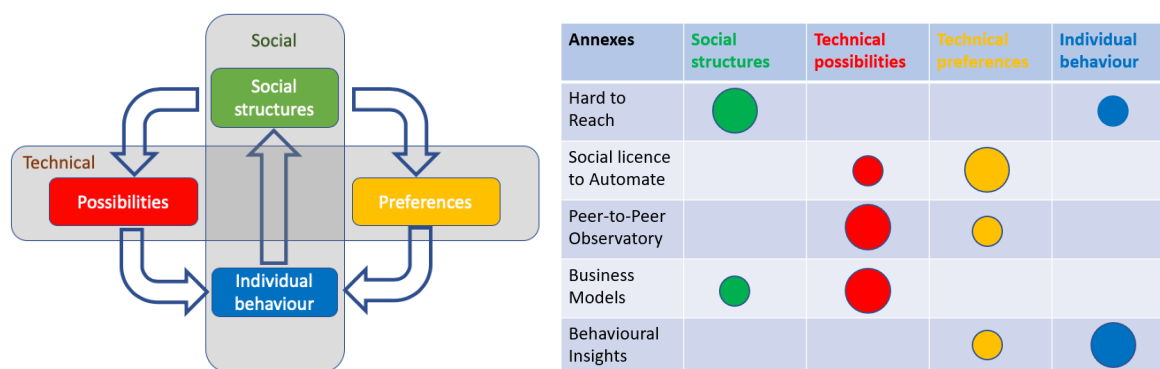
- Potentially undertaking new work on energy technology interface design and usability for key end user technologies such as heating and cooling.

Behaviour change: The users' response to the changing energy system

- Applying the TCP's Behaviour Changer framework in hard to reach sectors of the community, for example within fuel poor households and small businesses through the Hard-to-Reach Energy Consumers Annex
- Enabling the sharing of expertise between government behavioural insights practitioners through the Energy-sector Behavioural Insights Platform

Systems change: The systems' response to the changing expectations of the user

- Fostering the uptake of energy services through comparative analysis and training on successful business models through the Business Model Strategies Annex
- Setting out the regulatory conditions for energy efficiency interventions to be rewarded in future energy markets in which performance can be more accurately measured
- Potentially undertaking new work on systems change, social innovation and energy transitions



Developing the Users TCP's networks of socio-technical expertise will enable us to collaborate on multi-disciplinary projects with other TCPs focussed on technologies. We will seek to work with ISGAN on the digitalisation related Annexes and with other TCPs where appropriate.

The DSM University* will build upon the success of the first 50 webinars, providing a valuable dissemination tool for this and other TCPs, as well as the broader international energy community.

The Users TCP is fully resourced to take forward the planned work programme. It is adopting a more strongly member country led model for initiation of new Annexes and strategic development of the TCP. It is actively recruiting new members - focussing on countries and sponsors that could make a significant contribution to Annexes and bring in new ideas. We will work with the IEA Secretariat to identifying new opportunities to collaborate both within and beyond the IEA community.

* N.B. The name will change to reflect the new name of the TCP.