

Program for BEHAVE 2020-2021 6th European Conference on Energy Efficiency and Behaviour Change

21-23 April 2021

Co-organisers: [EnR \(European Energy Network\)](#)
[Copenhagen Centre on Energy Efficiency](#)

Conference Format: Online virtual conference

* Timezone CEST (Central European Summertime)

21 April 2021 (Wednesday)		
9:00-10:00	Opening Plenary Session	Chaired by Copenhagen Centre on Energy Efficiency Keynote speakers (TBC)
10:00-10:30	Coffee break	
10:30-12:00	Session 1a: Applying behavioural insights in the private sector, organisations and business models (5 presentations, 10 min. each, with 30 min. of Q&A at the end)	Moderator: Ruth Mourik 413. Empowering intermediaries to train agro-food companies in tackling organisational, cultural and behavioural barriers for energy efficiency measures. (Suzanne Brunsting) 414. Industries and energy efficiency awareness campaigns: assessment of energy savings from the Italian experience. (Michele Preziosi) 419. Barriers And Enabler For Property Owners Of Premises As Organisations. (Jenny Palm) 490. Analysis of energy savings and behavioural trends from the application of the mandatory energy audits mechanism in Italy: focus on energy management systems in four different economic sectors (Claudia Toro) 492. Can we make our office buildings more responsive? Energy-efficiency and behaviour in the post-pandemic office (Alessandra Luna-Navarro and Isabella Gaetani)
10:30-12:00	Session 1b: Hard-to-reach energy users in residential and non-residential sectors and financing (5 presentations, 10 min. each, plus 20 min. of Q&A at the end abstracts)	Moderator: Sea Rotmann 418. An In-Depth Review Of The Literature On 'Hard-To-Reach' Energy Users. (Sea Rotmann) 430. Stimulating homeowner energy-saving behaviour through local authorities' actions. (Minyoung Kwon) 440. Are tenants willing to pay for energy efficiency? Evidence from a small-scale spatial analysis in Germany. (Steven März)

	<p>One individual presentation on Innovative projects and research on applying behavioural insights for energy efficiency</p>	<p>465. To What Extent Has COVID-19 Impacted Hard-to-Reach Energy Audiences? (Sea Rotmann)</p> <p>452. Effective Policies Promoting Energy Conservation and Sufficiency in Line with the Paris Agreement Goals (Paolo Bertoldi)</p> <p>1. NUDGE project (Stratos Keranidis (DomX), Filippos Anagnostopoulos (IEECP) (20min)</p>
10.30-12.00	<p>Session 1c</p> <p>Behavioural insights and their application in the developing world</p> <p>(6 presentations, each 10 min. presentations, plus 30 min. Q&A)</p>	<p>Moderator: Babette Never</p> <p>410. Lighting and Occupancy Behaviour of Preschool Classrooms: a Field Study in Brazil. (Natalia Giraldo Vásquez)</p> <p>422. Understanding Occupants' Behaviour And The Mixed-Mode Strategy In Office Buildings In Southern Brazil. (Ricardo Forgiarini Rupp)</p> <p>433. Sustainable and Liveable Cities for People - Insights in Energy Consumption Patterns, Sustainable Buildings and Neighbourhoods in Phnom Penh, Cambodia. (Ravi Jayaweera and Annalena Becker)</p> <p>473. An empirical assessment of sociotechnical factors that influence residential electricity use in India. (Rajat Gupta)</p> <p>487. Understanding Barriers for a Transformation to Electric Vehicles in India: A Case Study of Hyderabad. (Talat Munshi)</p> <p>494. Energy policy mixes with behavioural insights in informal markets. (Babette Never)</p>
12.00-13.00	Lunch break	
13.00-14.30	<p>Session 2a</p> <p>Behavioural insights and effective communication for climate change mitigation</p>	<p>Moderator: Giorgios Koukoulakis</p> <p>408. Public Engagement, Social Media, and the Renewable Energy Transition in Spain. (Daniel Wuebben and Juan Romero-Luis)</p> <p>439. How an Ecosystem of Stories Can Play a Role in the Transition to a Low Carbon Future. (Noam Bergman and Katy Janda)</p>

	(6 presentations, 10. min. each, plus 30 min. of Q&A at the end)	<p>449. The impact of COVID-19 lockdown restrictions on domestic energy consumption in GB. (Ellen Webborn)</p> <p>451. Optimising Energy Feedback Messages Using fNIRS. (Wendell Grinton)</p> <p>471. Factors Affecting Public Awareness and Acceptance of CO2 Capture, Transport and Storage: A Transnational Comparison. (Spyridon Karytsas)</p> <p>479. Social Influence in the Adoption of Digital Consumer Innovations for Climate Change. (Emilie Vrain)</p>
13.00-14.30	<p>Session 2b Behavioural insights for end-use energy efficiency in buildings</p> <p>(6 presentations, 10. min. each, plus 30 min. of Q&A at the end)</p>	<p>Moderator: Rahul Raju Dusa</p> <p>435. DESIGNING TAILORED INTERVENTIONS -A pragmatic segmentation approach to change energy behaviour in residential buildings. (Annika Sohre)</p> <p>458. Human-driven Energy Efficiency in Historic Buildings. (Giorgia Spigiantini)</p> <p>466. Apartment related energy performance gaps and occupant behaviour in two multi-apartment buildings – What we can learn for heating regulation devices. (Simon Moeller)</p> <p>474. A Gap Analysis of the Literature on Energy Saving Behaviours in the Commercial Sector. (Matt Chester)</p> <p>478. Reducing energy consumption in a tertiary building using Nudges. (Rabab Akkouché)</p> <p>483. Housing Choice Behaviour and Location Efficiency in North American (A Case Study). (Kurt Borth)</p>
13.00-14.30	<p>Session 2c Energy agencies supporting households and communities through the energy transition with a focus on behaviour change and advice delivery (by EnR - European Energy Network)</p>	<p>This special session showcases best practices implemented by energy agencies. It aims to demonstrate how they are using behavioural insights to design their programmes and to address energy-related behavioural change at individual and collective levels of different target groups.</p> <p>The EnR members will present an overview of awareness-raising, educational and community engagement programmes/interventions implemented toward energy transition in different sectors. They will share information on developing and evaluating the programmes, present tools and resources adapted to different target groups, and discuss challenges and lessons learnt.</p>
14.30-15.00	Coffee break	
15.00-16.30	Session 3a - Digital Solutions for Behaviour Change	Moderator: TBC

	(5 presentations, 10. min. each, plus 30 min. of Q&A at the end) abstracts)	<p>405. Triggers Behind Human-Building Interactions From A User Perspective: Results And Effectiveness Of Capturing Motivations In Real-Time. (Verena M. Barthelmes)</p> <p>420. Probabilistic Machine Learning for Occupancy Prediction based on Sensor Fusion. (Amirreza Heidari)</p> <p>447. Same, Same But Different: Academic and Commercial Perspectives on APP-Based Energy Behaviour Change. (Devon Wemyss)</p> <p>459. Social Power Plus: Empowering households to energy sufficiency through co-designed app-based community energy challenges. (Francesca Cellina)</p> <p>481. Enhancing user engagement in local energy initiatives using smart local energy engagement tools. (Rajat Gupta)</p>
15.00-16.00	<p>Session 3 b - Behaviour Interventions for the integration of Energy Efficiency and Renewable Energy</p> <p>(6 presentations, 10. min. each, plus 30 min. of Q&A at the end) abstracts)</p>	<p>Moderator: Ellen Matthies</p> <p>448. Social and market acceptance of photovoltaic panels and heat pumps in Europe: A literature review and a survey. (Diego Peñaloza)</p> <p>454. DER Customer Insights: a values-based approach to motivate new DER customers. (Danielle Alexander)</p> <p>455. DER Customer Insights: Lessons from the customer journeys for new DER customers. (Scott Dwyer)</p> <p>484. A User-Centered Design Approach To Identify Behavioural Biases In Household Solar Pv Adoption. (Nelson Sommerfeldt)</p> <p>476. Exploring the role of stakeholder dynamics in residential photovoltaic adoption decisions: A quantitative survey in Germany. (Soren Graupner)</p> <p>423. The role of cognition and energy literacy in consumers' response to energy labels – insights from the Netherlands and China. (Shutong He)</p>
15.00-17.00	<p>Session 3c Improving energy programmes in enterprises: behavioural insights and barriers</p>	<p>Organiser: LEAP4SME</p> <p>LEAP4SME is a H2020 funded project made up of 9 National Energy Agencies, all belonging to the EnR network. The main aim of LEAP4SME is working to disseminate and improve energy policies for SMEs in Europe.</p> <p>Speakers from National Energy Agencies in the EU area, Universities (background in behavioural energy issues), EU funded projects related to energy & behaviour in non-residential sectors.</p>

		<p>Behavioural aspects and issues related to energy efficiency in enterprises appear at present to be less investigated than the residential sector. Moreover, difficulties in quantifying the effects of behavioural changes in terms of saved energy make sometimes these benefits not properly taken into account.</p> <p>The session will present case studies from the private sector, provide a snapshot on the state of the art of energy audit/efficiency policies and programmes for SMEs in 9 European area Countries.</p>
22 April 2021 (Thursday)		
9.00-10.00	Plenary session	<p>Chaired by Copenhagen Centre on Energy Efficiency</p> <ul style="list-style-type: none"> ▪ Keynote speakers (TBC)
10.00-10.30	Coffee Break	
10.30-12.00	<p>Session 4a Users behaviour in transport and mobility and business models</p> <p>(5 presentations, 10. min. each, plus 30 min. of Q&A at the end) abstracts)</p>	<p>Moderator: Luis Mundaca</p> <p>403. Sharing vehicles or sharing rides - what influences the acceptance of shared mobility services in Germany?. (Uta Burghard)</p> <p>404. Choice architecture design affects preferences for EV smart charging. (Maria Lagomarsino)</p> <p>446. Buying green cars? Determinants of purchase intention for energy-efficient cars in Switzerland. (Dorothea Schaffner)</p> <p>486. Determinants of car-sharing self-efficacy. (John Magnus Roos)</p> <p>431. What can entrepreneurs and their business models contribute to accelerating the energy transition?. (Ruth.M.Mourik)</p>
10.30-12.00	<p>Session 4b Behaviour integration into energy modelling for policy development -1</p> <p>5 presentations, 10. min. each, plus 30 min. of Q&A at the end) abstracts)</p>	<p>Moderator: Marta Lopes</p> <p>409. How I see me – A meta-analysis investigating the association between identities and pro-environmental behaviour. (Alina Mia Udall)</p> <p>428. Role of online information sources in energy-efficient renovations: perspectives of house owners in Finland and Sweden. (Gireesh Nair)</p> <p>429. Energy and Behaviour: A multi-faceted perspective towards a low carbon future. (Marta Lopes)</p> <p>436. Investigation of the Impact of Occupants Behaviour on Residential Electricity Consumption. (Dilek Sumer)</p>

		442. The Influence of Energy Policy Instruments upon the Promotion of Solar Thermal Technology in Greece. (Theni Oikonomou)
10.30-12.00	Session 4c The road to net zero: what can energy agencies learn from behavioural science (by EnR - European Energy Network)	<p>This interactive session aims to bridge the gap between energy agencies and behavioural scientists, to better understand how energy-related behaviour change programmes can be strengthened and support people through the energy transition.</p> <p>Within this area, there is much that energy agencies can learn from the behavioural and social sciences to strengthen the work they do. Therefore, this session will offer the opportunity for both sides to share knowledge and encourage joint-up thinking so that behaviour change programmes are as effective as they can be.</p> <p>Although energy practitioners face many challenges, this session will focus on some key challenges in designing behaviour change programmes.</p> <ul style="list-style-type: none"> • Designing programmes that achieve the desired goal and avoid any unintended outcomes like rebound effects and negative spill-overs. • Changing not only behaviours but also attitudes and values. • Engaging with vulnerable target groups who have specific needs.
12.00-13.00	Lunch break	
13.00-14.30	<p>Session 5a</p> <p>Behaviour integration into energy modelling for policy development -2</p> <p>(6 presentations, 10. min. each, plus 30 min. of Q&A at the end) abstracts)</p>	<p>Moderator: Marta Lopes</p> <p>437. Process Perspective on Home Retrofit Decisions: A Qualitative Meta-synthesis. (Yekatherina Bobrova)</p> <p>438. Integrating discrete choice experiments and bottom-up energy demand models to investigate the long-term adoption of electrical appliances in response to energy efficiency policies. (Tim Mandel)</p> <p>443. A systematic time-use based approach for estimating residential energy consumption. (Mate Janos Lorincz)</p> <p>461. An agent-based model of retrofit diffusion. (Giulia Chersoni)</p> <p>462. The Effect of Information Nudges on Energy Saving: Observations from a Randomized Field Experiment in Finland. (Ruokamo Enni)</p> <p>491. The Spectrum of Residential Cooling Demand - Modeled Demand Versus Occupants' Real-life Needs. (Julia Mittermüller and Farzan Banihashemi)</p>
13.00-14.30	Session 5b	Moderator: TBC

	<p>Multidisciplinary approaches to energy behaviours for achieving the SDGs</p> <p>(6 presentations, 10. min. each, plus 30 min. of Q&A at the end)</p>	<p>411. Mitigation of Energy Poverty through consumers behaviour: pilot actions in Italy. (Anna Realini)</p> <p>463. Evaluation of energy resilience and adaptation: An economic efficiency analysis. (Andrea Gatto)</p> <p>477. Sustainability and coherence of actions aimed at a behavioural change in energy consumption. (Lolita Rubens)</p> <p>480. Ecological Education. (Viviana Deruto, Alessandro Bertirotti and Mario Moschi)</p> <p>475. Determinants of residential photovoltaic adoption intention – A meta-analysis. (Emily Schulte)</p> <p>482. The impact of personal, housing, and neighbourhood factors on personal wellbeing. (Gesche Huebner)</p>
13.00-14.30	Session 5c - C2E2 special session on Danish private sector behaviour solutions for climate neutrality	
14.30-15.00	Coffee break	
15.00-16.30	<p>Session 6a Energy Communities and Related Behaviour Strategies to Energy Efficiency</p> <p>(6 presentations, 10. min. each, plus 30 min. of Q&A at the end) abstracts)</p>	<p>Moderator: Louiza Papamikrouli</p> <p>400. Social innovations in the energy field – an empirical enquiry. (Irmeli Mikkonen)</p> <p>415. Understanding Preferences For Characteristics Of Renewable Energy Communities. (Darja Miahilova)</p> <p>432. ENERGY COMMUNITIES IN ITALY. Analysis on the internal national gap between North and South. (Monica Musolino)</p> <p>444. Determinants of Citizens' Participation and Investment in Energy Community Initiatives. (Spyridon Karytsas)</p> <p>464. Energy Communities and Energy Conservation. (Stephan Sommer)</p> <p>472. Actions to Boost Energy Efficiency and Indoor Air Quality. Case studies in Italian schools. (Mario Diana)</p>
15.00-16.30	<p>Session 6b</p> <p>(6 presentations, each paper lasts 10 min.,</p>	<p>Moderator: Mariagiovanna Gaglione</p> <p>407. Overcoming Defaults: Cognitive Biases and Consumer Engagement with Local Energy in a Multiple Supplier Model. (Nicole Watson)</p>

	with 30 min. of Q&A at the end)	<p>450. Promoting energy efficiency through competitive tenders. Comparing auction schemes and end-user activation in Germany, Portugal, Switzerland and Taiwan. (Kurt Bisang)</p> <p>456.A Systems Approach to Off-grid Hydropower for Community-led Flood Resilience. (Spyros Schismenos)</p> <p>467.A micro-scale analysis of attitudes and behaviours towards sustainability and domestic energy saving in Italy. (Nicola Rainisio)</p> <p>468. Learning from Failures as a Support for Energy Transition. (Irmeli Mikkonen)</p> <p>489.Identification of Everyday Food-related Behaviour Patterns with High Potential for Energy Savings: KTH Live-in-Lab Explorative Case Study. (Elena Malakhutka)</p>
15.00-16.30	<p>Session 6c Innovative projects and research on applying behavioural insights for energy efficiency</p> <p>(Collection of individual presentation + poster proposals)</p> <p>1 abstract presentation, the paper lasts 10 min., with 20 min. of Q&A at the end)</p>	<p>Moderator: Paolo Bertoldi</p> <ol style="list-style-type: none"> 1. Information Campaigns for Residential Energy Conservation, Mark A. Andor, Andreas Gerstery, Jorg Peters (20 min.) 2. Low Energy Inclusive Appliances (LEIA) programme (Dr Gill Davies, Energy Saving Trust, 20 min.) 3. Energy poverty and the ASSIST model (Marina Varvesi AISFOR – Italy, Marta Garcia, ECOSERVEIS – Spain) (20 min.) <p>453. How to unlock the human potential for promoting energy efficiency? A review on the barriers and levers (10)</p>
23 April 2021 (Friday)		
9.00-10.30	<p>Session 7a. Collective action for the energy transition – emergence, perceived benefits and potential for scaling</p>	<p>The special session will combine insights from four European research projects on social innovation and collective action in the energy transition (SONNET, COMETS, SocialRES, NEWCOMERS).</p> <p>The session will focus on how collective action evolves, on the potential for wider adoption among EU citizens, the benefits that members of collective action initiatives experience as well as their potential for scaling. It will be discussed how collective action initiatives can contribute to behavioural change for the clean energy transitions. Each of the four project contributes one presentation. In the final plenary discussion the following questions will be raised:</p> <ul style="list-style-type: none"> • What drives the development of collective action initiatives?

		<ul style="list-style-type: none"> To what extent do collective action initiatives have the potential to trigger behaviour change at the individual level? What is the potential of collective action initiatives to shape the energy transition? <p>(Alessandro Sciullo, Hangjian Wu, Tanja Kamin, Adélie Ranville)</p>
9.00-10.30	<p>Session 7b - special session (TBC)</p> <p>(Collection of individual presentation + poster proposals)</p>	<p>Moderator: Xianli Zhu</p> <ol style="list-style-type: none"> What does an energy efficiency agency learn from barometers on behaviour change? (Dr Didier Bosseboeuf, ADEME France) (20 min.) Behavioral insights from the user-oriented control systems in buildings (Arlinda Bresa) (15 min.) Recovering lost energy: The role and the impact of EU market surveillance on energy efficiency. A gap analysis with findings from the EEPLIANT trilogy of EU projects (Dr Kyriakos Papazoglou, PROSAFE) (20 min.) Technology and behaviour change for medical waste management and climate change mitigation (Andrea Romaoli Garcia) (20 min.)
9.00-10.30	<p>Session 7c</p> <p>. The H2020 project - SMARTEES (1)</p>	<p>The special session is expected to last for 180 minutes (brief introduction, nine presentations+discussion). The session spreads over two consecutive 90 minutes slots with a break in the middle. The session will be chaired by the project coordinator Christian A. Klöckner (NTNU).</p>
9.00-10.30	<p>Session 7d. ASSIST model and the SUITE project</p>	<p>The presentation will focus on energy poverty and the ASSIST model and the “business” scalability plan of the model considering public / private /public-private financial mechanisms.</p> <p>The side event will present the ASSIST model and the SUITE project and will then illustrate the possible delivery and scalability models. An interactive Q&A session to answer questions and to collect feedback from the participants will close the event.</p> <p>(Marina Varvesi, Marta Garcia, Eva Suba, Frances Ribera, Anna Wierzcholowska)</p>
10.30-11.00	Coffee break	
11.00-12.30	Session 8a	<p>Panel discussion: Is energy efficiency (fe)male? The role of gender for sustainable energy use</p> <p>(J. S. Clancy, M. Hultman, I. Thronicker, J. Tröger, A. Wågström, J. P. Wesche and S. Preuß)</p>

11.00-12.30	Session 8b - IEA Users TCP session will focus on hard-to-reach (HTR) energy users	<p>Moderator is Dr. Sea Rotmann (Operating Agent of the HTR Annex by Users TCP by IEA) and the speakers include experts from Sweden, the US, New Zealand, Spain and the UK.</p> <p>This session focuses on hard-to-reach (HTR) energy users in the residential and non-residential sectors. The speakers will discuss international findings and elicit audience feedback on:</p> <ul style="list-style-type: none"> • Who these audiences are and how many of them we think are out there not being successfully engaged • How we can best identify, define and target them • What we know about their demographics, psychographics, barriers and needs • How to reach or engage them better using behavioural insights, and <p>How to facilitate multi-stakeholder collaboration and follow a robust research strategy when designing, implementing and evaluating behaviour change interventions targeting these HTR energy users.</p> <p>427. A Collaborative International Approach to Characterising "Hard-To-Reach" Energy Users. (Sea Rotmann)</p>
11.00-12.30	Session 8c - The H2020 project SMARTEES (2)	
11.00-12.30	Session 8d. IEA special session on its Energy Sector Behavioural Insights Platform	<p>Coordinated by Elisabetta Cornago</p> <ul style="list-style-type: none"> • Presentation of the work of the Energy Sector Behavioural Insights Platform of the Users TCP, with key findings from the environment scan and open questions, Elisabetta Cornago <ul style="list-style-type: none"> ◦ Followed by Q&A • Two presentations of innovative BI applications to energy policy from policy makers in different countries [TBC] <ul style="list-style-type: none"> ◦ Each presentation would be followed by Q&A with audience • Broader Q&A – audience to presenters, but also questions to the audience via Mentimeter
12.30-14.00	Lunch break	
14.00-15.00	Closing Plenary session	<p>Chaired by Copenhagen Centre on Energy Efficiency</p> <ul style="list-style-type: none"> ▪ Reflections to the conference output, TBC ▪ BEHAVE 2022 - the way forward ▪ Copenhagen Centre on Energy Efficiency (C2E2) closing remarks