Smart-BEEjS Project Update

ISSUE NO 2 | JULY-AUGUST 2021

ACHIEVEMENTS

In **WP3**, the ESRs are finalising key tips for citizens to address energy justice and poverty issues. These will form the basis of a booklet and video, for D3.3.

In **WP6**, we are in the process of completing the second round of foresight interviews (D6.3) – ethics application and interview guide have been agreed.

In **WP4**, deliverables D4.3 and D4.4 on techno-economic analysis of PED infrastructure requirements and pathways for achieving them, are at an advanced stage of design.

In **WP5,** D5.2 defines a practical method and a set of KPIs to evaluate the impacts of PED from three dimensions: Environmental; Economic; Social. In parallel, D5.3 presents a collection of key issues to be considered at the policy design stage related to PED development. It will be submitted by the end of July.

JOURNAL PUBLICATIONS

Caballero, N; Della Valle, N (2021) Tackling Energy Poverty Through Behavioural Change: A Pilot Study on Social Comparison Interventions in Social Housing Districts. Frontiers in Sustainable Cities;
DOI: https://doi.org/10.3389/frsc.2020.601095

Frondel, M., Marggraf, S. Sommer und C. Vance (2021), Reducing vehicle cold start emissions through carbon pricing: evidence from Germany. Environmental Research Letters 16 (3)
DOI: 10.1088/1748-9326/abde06

Hearn, A.X., Sohre, A. and Burger, P., 2021. Innovative but unjust? Analysing the opportunities and justice issues within positive energy districts in Europe. Energy Research & Social Science, 78, p.102127.
DOI: https://doi.org/10.1016/j.erss.2021.102127

WORK FOR FURTHER PUBLICATIONS

Submit & participate in min 1 conference per ESR during 2021.

Prepare a 3-min video-presentation of your research, to be included on the website & social media.

ISSUE NO 2 | JULY-AUGUST 2021

WORK PLAN

a) **D6.3**, the foresight interviews deliverable, is almost finalised. We are currently waiting for the UK, Italy and Netherlands regions to complete the remaining interviews of the second round.

b) **D6.5**, the open source online tool to promote new user led ventures, builds on the work done in our first deliverable and is also work in progress.

c) **D5.2 & D5.3** are currently in the last phase of editing and will be ready for submission by the end of July and mid-August, repsectively.

TRAINING ACTIVITIES 2021/22

We are designing the Writing Retreat, 1-5 November, and the 3rd Winter School, for February 2022. These are the key training activities for the coming academic year.

We believe that the gradual easing of travel, with the assistance of the extended vaccination programme across Europe, will allow us to organise these events in a physical format.

Farewell to Adrian

"It is with both excitement for a new beginning and sadness, that I am saying goodbye to the project, as I am going to start a new academic role, from September. I would like to thank everyone for making this such a valuable and enjoyable experience and wish everyone the best of luck."

Adrian Axinte.

KEY PRIORITIES:

01

D3.3. - Prepare the script and produce the video presenting the 'Help me to achieve' tips

02

Writing Retreat Design

03

3rd Winter School Design

04

Work on and submit relevant conference papers

COLLABORATIVE OUTPUT AIM

Minimum, two collaborative papers to be designed for the Writing Retreat, from material produced during the WP activities and a further six-eight as part of the individual PhD activities.

Preparation for the Writing Retreat 14 September 2021.

ISSUE NO 2 | July-August 2021

Business Techno-economic aspects and pathways towards positive energy districts

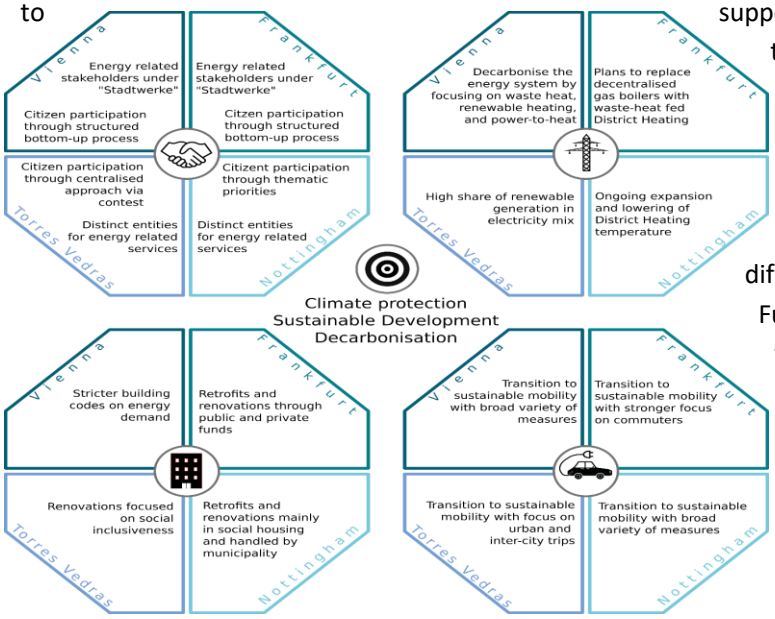
Status quo and framework conditions as a basis for developing techno-economic pathways in selected case studies (D4.2)

By Akhatova, Ardak; Bruck, Axel; Casamassima, Luca; Arslangulova, Botakoz; Ackrill, Robert; Galanakis, Kostas; Kranzl, Lukas

The implementation of PEDs faces several challenges in relation to the local energy infrastructure context, such as social, technical, and economic context of energy generation and use, building stock condition, policy framework at the national and regional levels, perceptions and awareness of stakeholders, and the needs that derive from emerging users, such as electrified mobility.

This study aims to present the framework conditions for the development of PEDs in a selection of European cities chosen as our case studies: Frankfurt am Main, Germany; Vienna, Austria; Nottingham, UK; and Torres Vedras, Portugal. By "framework conditions" (from the German "Rahmenbedingungen"), we refer to the business, technical and regulatory contexts in which governments, citizens, and economic actors operate and interact to achieve a specific goal. For consistent and simple analysis, these framework conditions were structured along five dimensions, namely (1) Policy Framework – regulatory, planning and coordination, (2) Built Environment – building stock conditions, (3) Energy System – energy supply and consumption, (4) Mobility and the transition to sustainable mobility; and finally the cross-cutting dimension of (5) Stakeholders – institutions and citizen participation.

The thorough analysis of the cases shows that the municipalities have different starting points and priorities in the transition towards PEDs, but also similarities. The figure summarises these findings with regards to the five dimensions ("policy framework" between the cases is consistent and is, thus, placed in the center of the diagram). Overall, all actions taken in recent years are essential and provide fertile soil for PED growth. However, in the years to come, it is increasingly important to have a more integrated and multidisciplinary approach to the decarbonisation process. Increasing the EV fleet alone will not be enough if the electricity does not come from renewable energies. Electrifying the heating system is essential, but careful consideration must go into the building stock to lower heat demand and shift heat loads in order to put less strain on the grids that will already have to support electric mobility from renewable energies. Hence, from a technical standpoint, it is clear that a holistic view of the system will become increasingly necessary.



The results of this work provide local policymakers (e.g., city and town councils) with examples of recent attempts of cities or districts to decarbonise and to raise awareness about different approaches to implement aligned objectives. Furthermore, in the coming stages of the Smart-BEEjS project, this work will be the basis for the techno-economic models of the relevant districts. These models will explore some of the different aspects discussed in this report and present potential scenarios of pathways for the transition of a district towards an operational PED.

You can access deliverable D4.2, here

MARIE CURIE ACTIONS
European Commission | Horizon 2020 European Union funding for Research & Innovation

This project has received funding from the European Union's Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie Actions, Innovative Training Networks, Grant Agreement No 812730

Smart-BEEjS Human-Centric Energy Districts
smart-beejs.eu