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**Title:** Fostering social innovation towards carbon neutral spatial heating through policy co-design

**Theme:**

2. Co-Production of knowledge, solutions & services

**Sub-theme:**

2.2 Participatory and transdisciplinary methodologies

2.3 Community-based and participatory governance

**Keywords:** design-thinking, spatial heating, integration, Paris 2015

**Abstract of presentation:**

Objectives, methods, results and conclusions

In line with the Paris Agreement of 2015, Austria committed to achieve carbon neutrality, by 2050. In order to mainstream mitigation and adaptation policies, an integrated approach is necessary to create synergies and win-win-solutions. Furthermore, the integration of adaptation into decision-making are key to overcome the gap between the planning policy level and the implementation level. A vertical and horizontal integration is necessary throughout policy institutions and societal levels. The climate energy model region programme (KEM), funded by the Austrian Climate and Energy fund aims to foster regional implementation of green energy and energy related measures and acts, in many cases, as a niche for social innovation. However, in many cases an implementation gap remains between the policy and implementation level. We therefore aim to identify challenges to successful implementation in those regions as well as provide innovative solutions through policy co-design.

To this end in-depth stakeholder interviews were conducted in the KEM region of Baden, Austria, to identify challenges to implementation on a regional level as well as institutional framework conditions necessary for successful implementation. These interviews were analysed using a qualitative data analysis approach. Three challenges emerged to be the most prevalent: spatial heating, mobility and diverging interests of influential interest groups. In cooperation with local partners, the spatial heating topic chosen to be the focus of the design-thinking process. This process aimed at developing innovative solutions to reach carbon neutral spatial heating in 2050 by increasing the use of green energy and decreasing energy demand and vulnerability to cold weather through improved insulation. Participants developed solutions for four building types: public buildings, small and medium enterprises, single-family homes and apartment buildings.

Solutions to the challenges further identified in cooperation with building type owners included the inclusion of energy advisors and energy considerations in early architectural processes as well as providing relevant training and trained staff to engineering offices. In regards to the green growth in small and medium enterprises, one suggested solution was to establish specialised green growth advisors for regional commerce associations. Finally, addressing issues of lacking motivation and behavioural changes, a solution was proposed which included the introduction of consumption-based emission accounting at a household level, and to introduce carbon taxes. In this case the tax revenues would be re-invested in regional adaptation measures. Participants agreed that political commitment and binding regulations are crucial to the success of all proposed measures.