



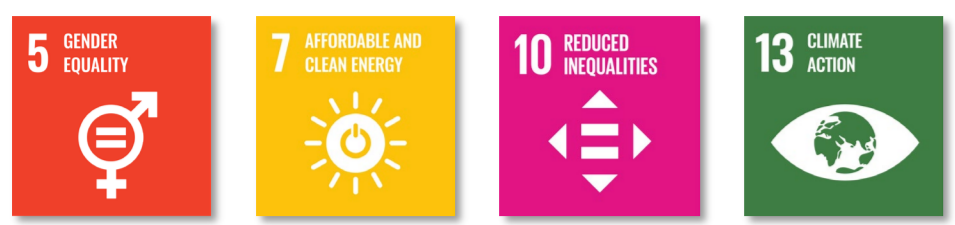
A Comprehensive Analysis of Future Residential PV Development in Austria

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<https://futures-pv.wifo.ac.at/>



Analysis of the future role of prosumers in the Austrian energy system from an integrated perspective

Combination of a choice experiment, a technology diffusion model and a macroeconomic model will deliver insights into drivers of residential PV adoption, possible diffusion pathways as well as macroeconomic and distributive impacts

Main objectives

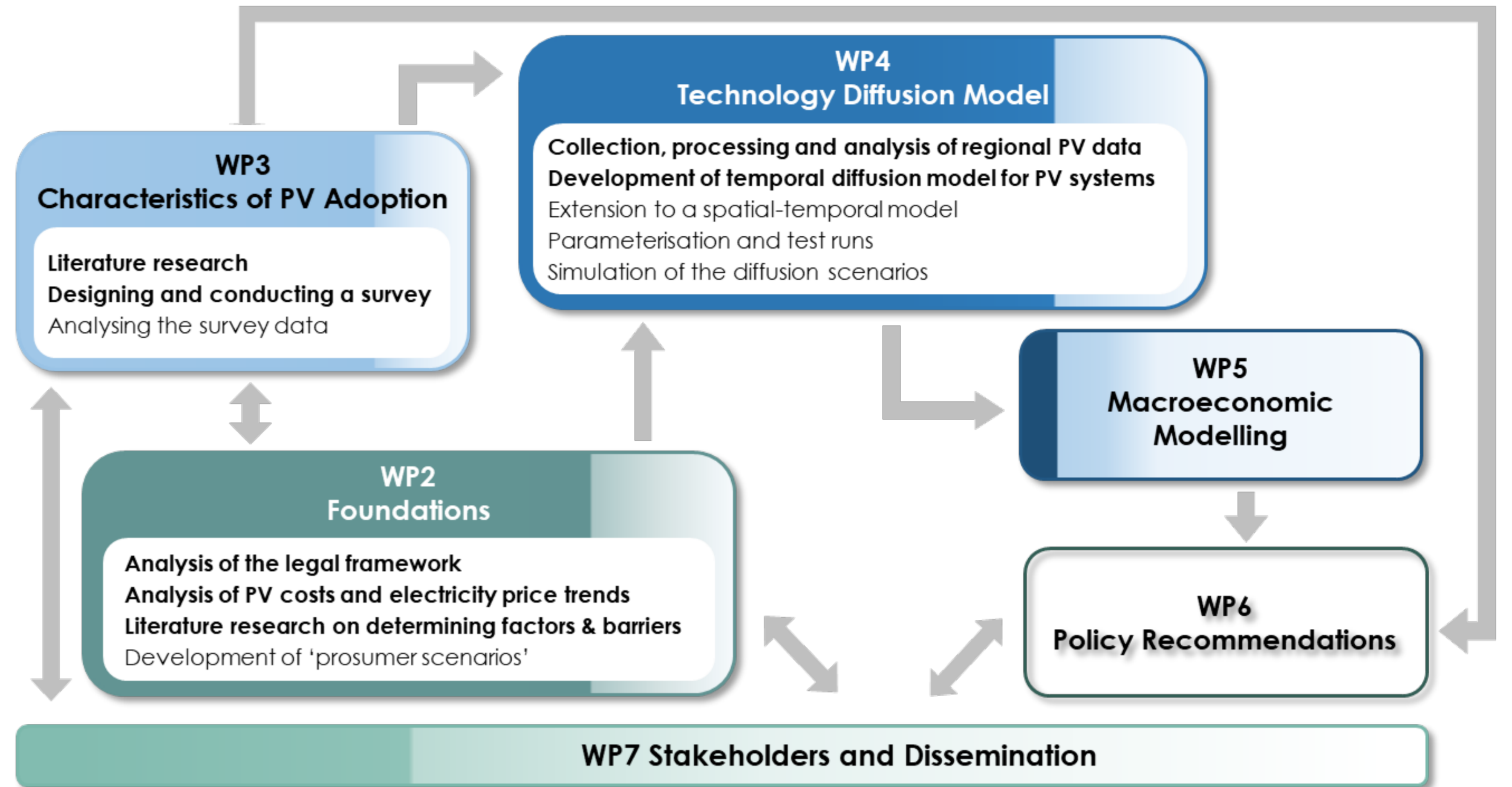
- Simulation of household PV investment scenarios in Austria with the technology diffusion model
- Evaluation of macroeconomic & distributive effects of prosumer scenarios on socio-economically differentiated household groups
- Development of policy recommendations for vulnerable groups to participate in energy transition



Novel scientific contributions

- For Austria, both the choice experiment on residential PV investment and the PV diffusion model
- Identification of options enabling vulnerable households to participate in energy transition via PV systems

Current status of the project

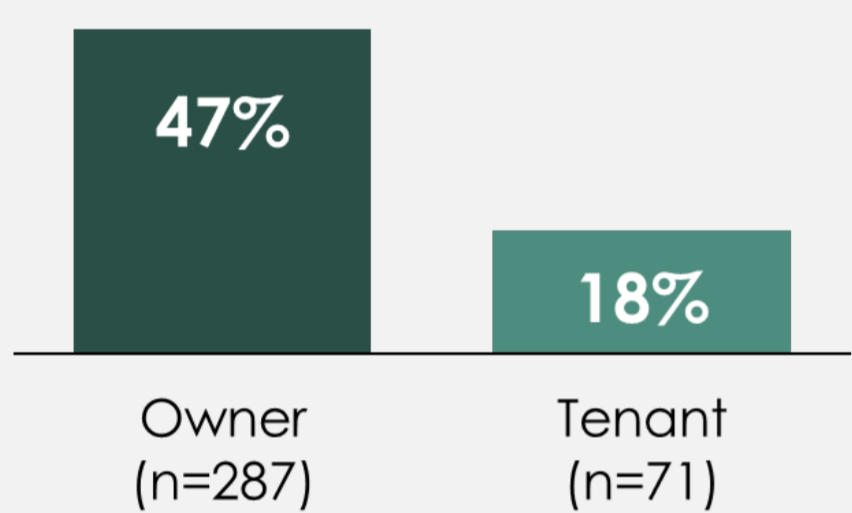


Sub-goals

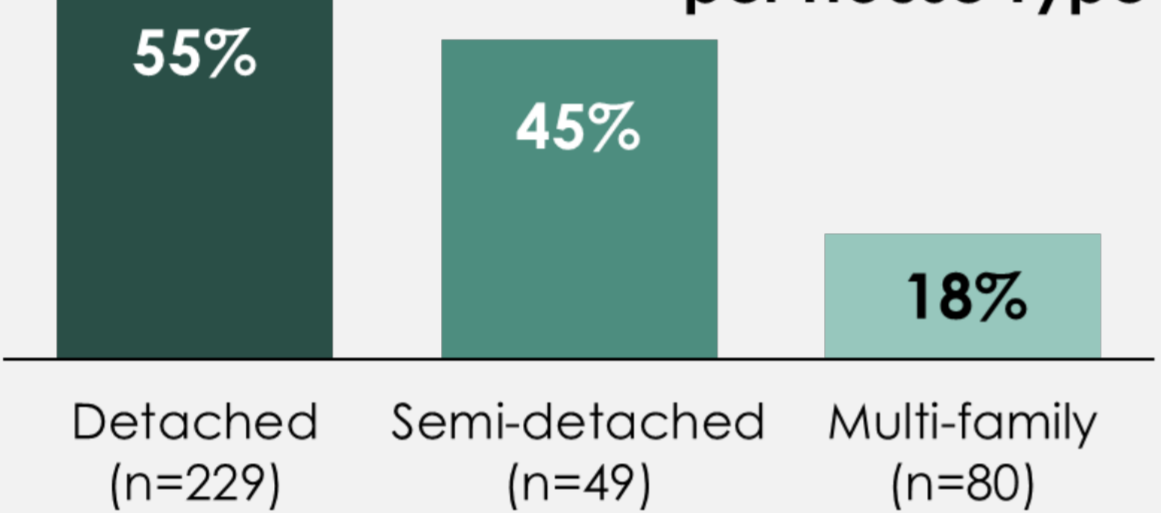
- Identification of motives for household PV adoption in Austria
- Identification of factors determining adoption of household PV systems (with & without battery storage)
- Identification of non-financial barriers for adopting a residential PV system
- Development of a technology diffusion model for household PV systems & integration into macroeconomic model DYNK
- Simulation of diffusion scenarios for residential PV systems

First results of the Survey

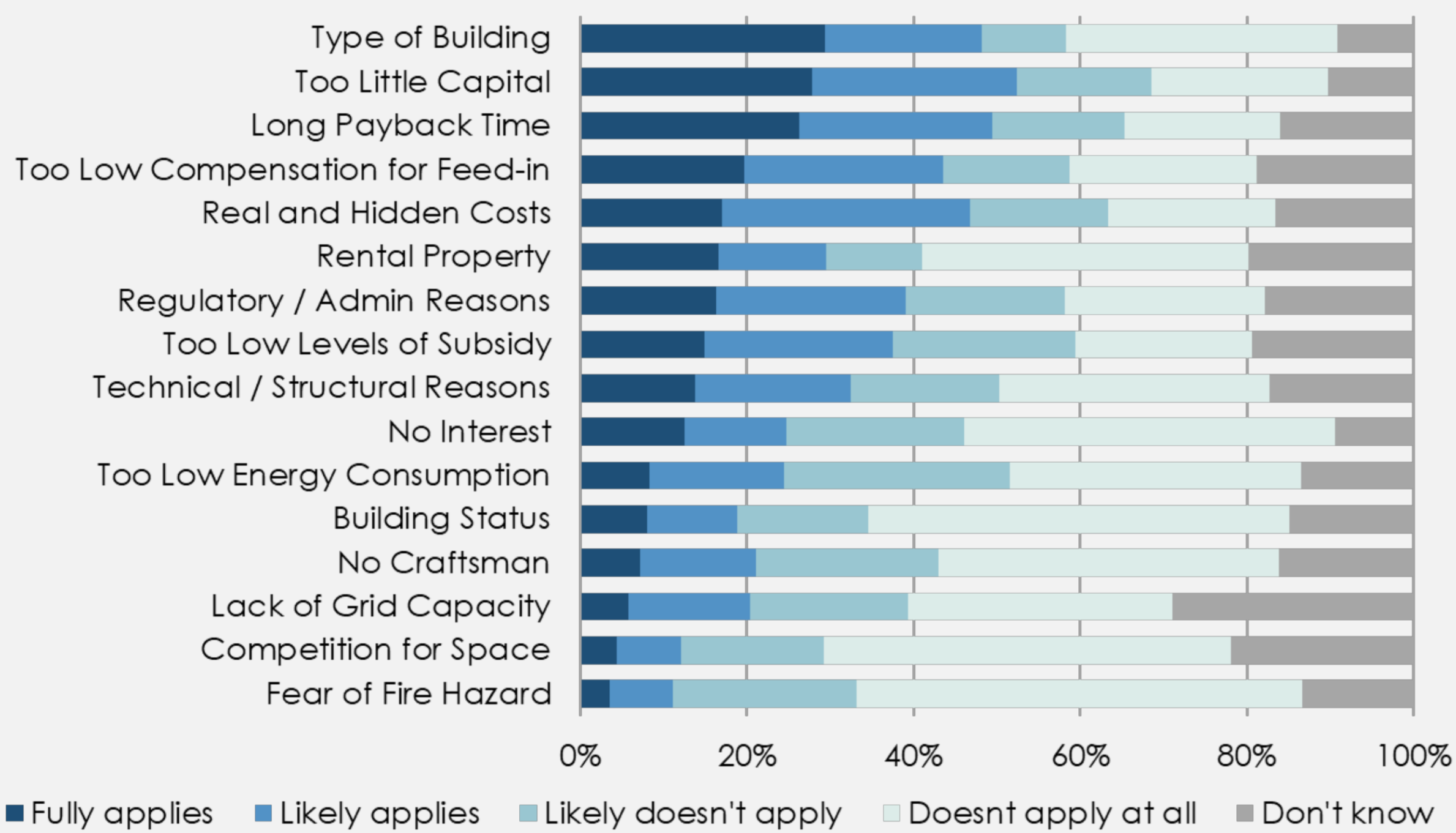
Share of PV Adopters per Ownership Status



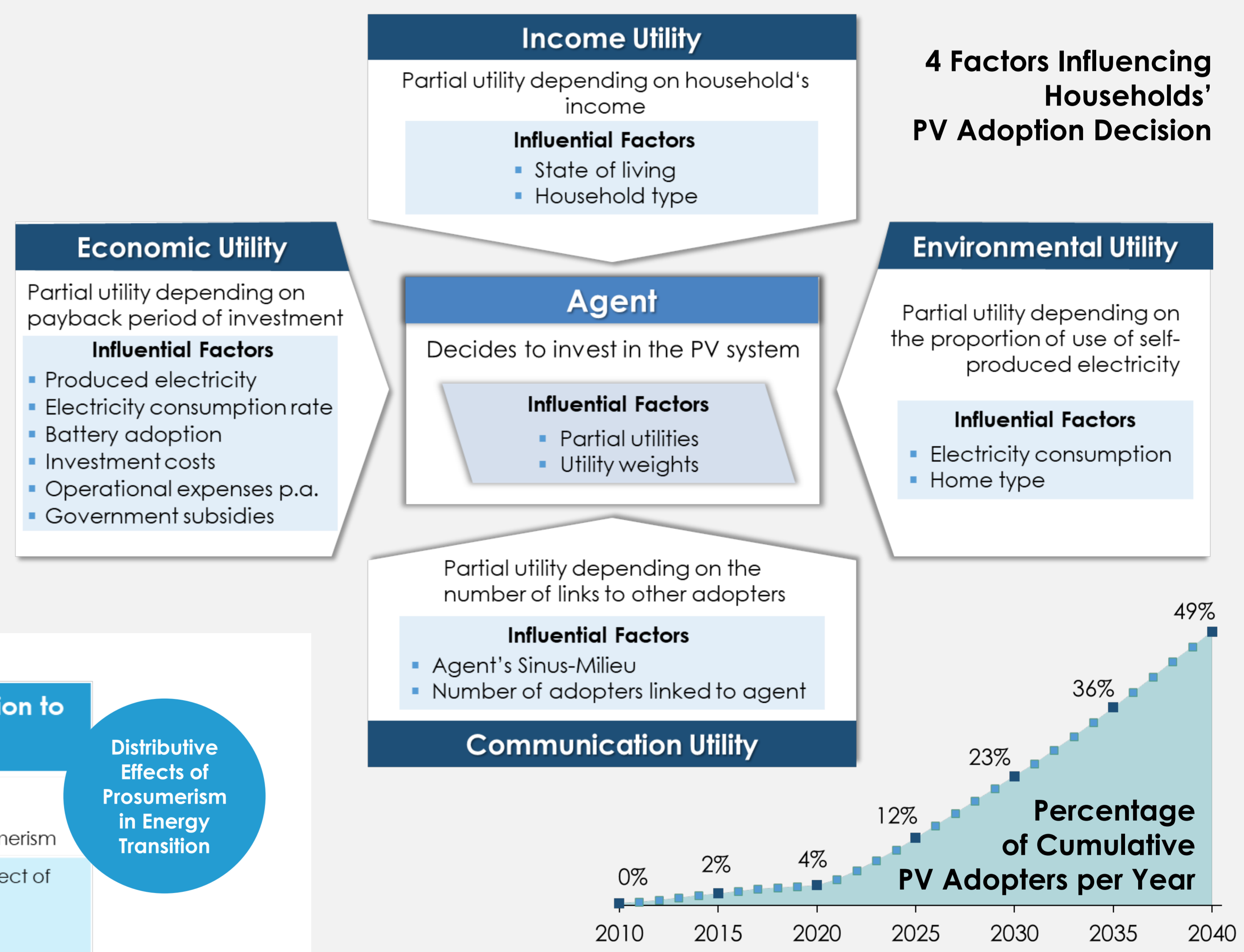
Share of PV Adopters per House Type



Barriers for Non-Adopters



Progress of Diffusion Modelling as of March 2025



Links and Synergies to other Projects

Pre-Projects			Contribution of / Relation to FutuRes-PV
Acronym	Focus	Methodology	
START2030 (ACRP)	Economic incidence and social impacts of RES-E transformation	Linking DYNK and an electricity system model	Refines distributive impacts on different household groups of electricity transition and prosumerism
TransFair-AT (ACRP)	Policy scenarios achieving full decarbonisation of housing and mobility in Austria by 2040	Linking DYNK with vehicle choice, transport demand, & building stock model	Contributes in detail to the aspect of (household) electricity supply
CEDC (ACRP)	Scenarios for a circular economy focusing on buildings, electricity supply, and mobility	Linking a biophysical CE model and DYNK	Can build on derived investment and operation cost structure for PV systems
NetZero2040 (ACRP)	Decarbonisation options for Austria at an aggregate level	Linking the energy system model TIMES and the power market model MEDEA	Focus on distributive impacts of the electricity transition & prosumerism on different household groups Provides macroeconomic effects
Integrate (ACRP)	Decarbonisation options for Austria at an aggregate level	Energy system model Euro-Calliope & macroeconomic model WEG-DYN	Refines distributive impacts of electricity transition and prosumerism on different household groups
Fair-Grid (OeNB)	Distributional impacts of grid expansion for different household types	Linking DYNK with an electricity market model	Information regarding prosumer perspective

Distributive Effects of Prosumerism in Energy Transition

First Outputs

- Legal Framework for household PV and electricity storages in Austria. Research Brief. https://futures-pv.wifo.ac.at/outputs/FutuRes-PV_ResearchBrief_20240624.pdf
- Kostenprognose von PV-Systemen und Stromspeichern bis 2040. Fact Sheet. https://futures-pv.wifo.ac.at/outputs/FutuRes-PV_FactSheet.pdf

Outlook to the next Project Phase

