

Characteristics of PV Adoption (Preliminary Descriptive Analysis)

25.02.2025

Stakeholder Meeting

Dr. Ayse Tugba Atasoy

Prof. Dr. Reinhard Madlener



Introduction and Motivation

- Despite decreasing costs and technological maturity, adoption remains limited due to:
 - Financial barriers (e.g., upfront investment costs)
 - Technical challenges (e.g., building structure limitations)
 - Regulatory & administrative hurdles (e.g., complex permission processes)
- This WP aims to identify motives and barriers behind PV adoption by conducting a representative survey questionnaire for the population in Austria.





Survey

Survey Overview

Web-based survey conducted in **January 2025** (N=1,001), **representative sample** of Austrian households by geographical location, age, and gender

• PV adopters (n=358, ~ 36%) and non-adopters (n=643, ~ 64%)

Survey Structure

Screening questions ensured a representative sample and household head responsible for energy-related decisions, **separate sections** for adopters & non-adopters

- PV adopters: Investment decision, utilization, complementary technologies
- Non-adopters: Potential interest, perceived barriers
- Socio-demographic data collected (income, education, employment status)

Key Question:

What are the barriers and motivators behind household PV adoption?





Share of PV Adopters Across Regions







Share of PV Adopters by House Type







Share of PV Adopters by Occupant Status







Share of PV Adopters by Income Groups







Share of PV Adopters by Age Groups







Perceived Relevance of Motivations for PV Adoption







Perceived Self-Assessment After PV Adoption







Thought of Installing a PV System?







Thought of PV Installations by House Types



Perceived Relevance of Barriers for Non-Adopters







Conclusions

- PV Adoption is Uneven Across Regions
 - Urban areas like Vienna have lower adoption rates, likely due to multi-family housing, ownership complexity, and regulatory barriers.
 - Rural regions show higher adoption, benefiting from detached homes with easier PV integration.
- Housing Type Plays a Major Role
 - Detached houses have the highest adoption rates, while multi-family buildings face administrative and technical challenges.
 - Shared energy communities remain a niche solution but could be key for urban adoption.
- Financial & Psychological Factors Matter
 - Non-adopters cite high upfront costs, long payback times, and low feed-in tariffs as key deterrents.
 - Feeling good about sustainability and energy independence is a strong motivator for adopters.







Thank you!

Dr. Ayse Tugba Atasoy

TAtasoy@eonerc.rwth-aachen.de

This project is funded by the Klima- und Energiefonds and carried out within the Austrian Climate Research Program (ACRP)



