



TRANSFAIR - Low-carbon transition in Austria: Exploring social, financial and ethical dimensions of ambitious climate policy

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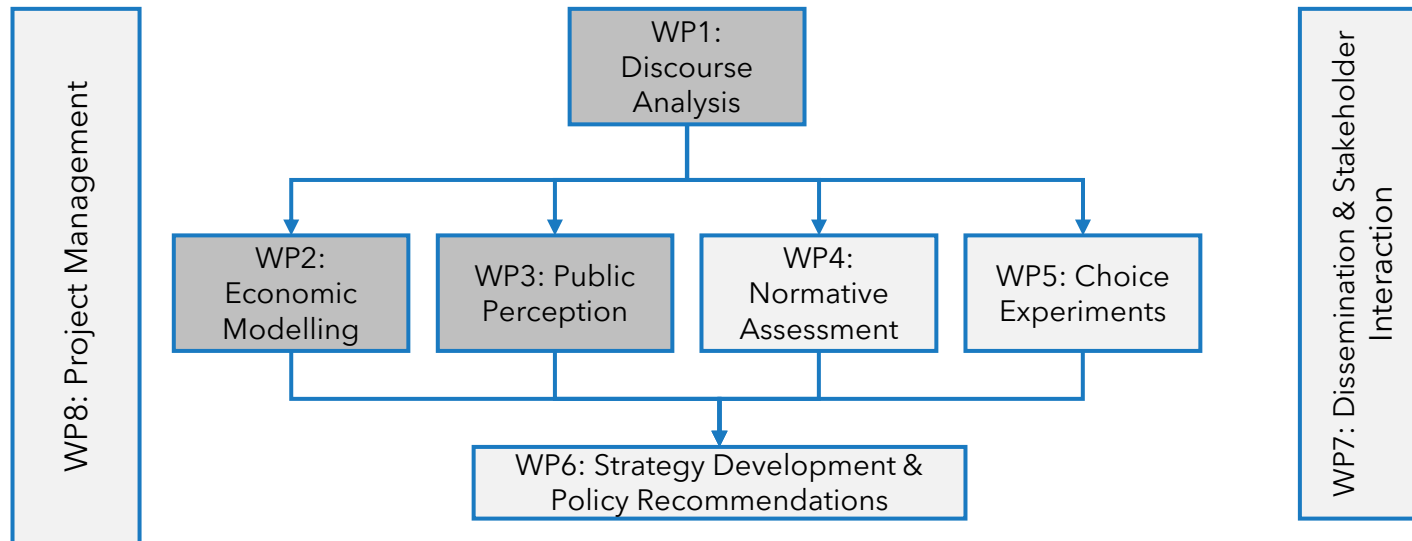
Background, project aim and project consortium



- **Transition from a fossil-fuel based towards a low-carbon economy**
 - policies that effectively reduce carbon emissions
 - measures that ensure that these policies are equitable and socially acceptable
 - Positive overall socio-economic impact
 - Adverse effects for some groups particularly in the short term
- Analysis of the nature and scope of adverse effects of climate change mitigation policies
- Exploration of adequate support measures
 - nonfinancial impacts on well-being and subjective perceptions
- **Project consortium:** Brudermann T., Bednar-Friedl B., Meyer, L., Kriechbaum M., Nabernegg S., Trimmel K., Lackner T., Lazou R., Obersteiner P., Stalzer J.
- **Scientific advisory board:** Karen Pittel, Herman Vollebergh, Sigrid Stagl, Ilona Otto, Adrian Martin, Jan Urban, Leena Ilmola-Sheppard, Andreas Homburg
- **Stakeholder support:** LK Styria, AK Vienna, NGO Südwind, interest groups for specific firms and enterprises, representatives of local and regional entities

The key objective of this project is to explore the structure of adverse social effects of ambitious climate policy in the context of Austria and to develop strategies to mitigate them.

Project Framework & Methodology



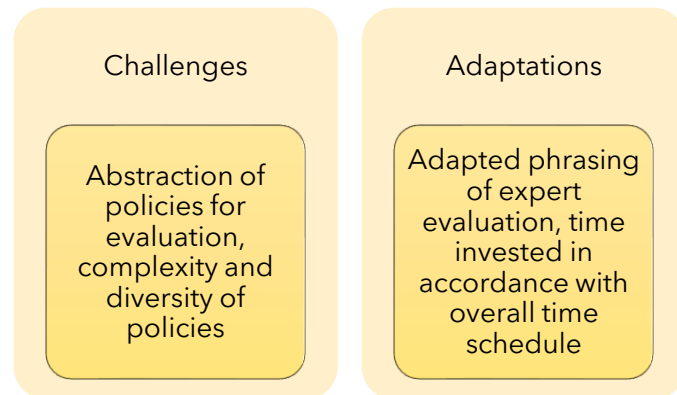
Work Package	Employed Methods
WP1	Discourse analysis (Dryzek 2013, Hajer 2005)
WP2	Computable general equilibrium (CGE) model (Bachner et al. 2015, Bachner and Bednar-Friedl, 2019)
WP3	Q Methodology (Watts & Stenner 2012, Stephenson 1936)
WP4	Normative Assessment with legitimate expectations theories, i.e. wide reflective equilibrium (Rawls 1951, 197, Daniels 1979)
WP5	Discrete choice experiments (e.g., Tabi and Wüstenhagen 2017; Awad et al. 2018)
WP6	Multi-criteria mapping (MCM) interviews (Stirling 2010; Coburn et al. 2019)

Work Package 1: Discourse Analysis



Progress

- Identification of discussed policies through analyzing national newspapers
- Selection of fields of action based on (i) media attention and (ii) expert assessments in terms of controversy/emission reductions
- Iterative analysis of storylines in newspaper articles and associated social media entries



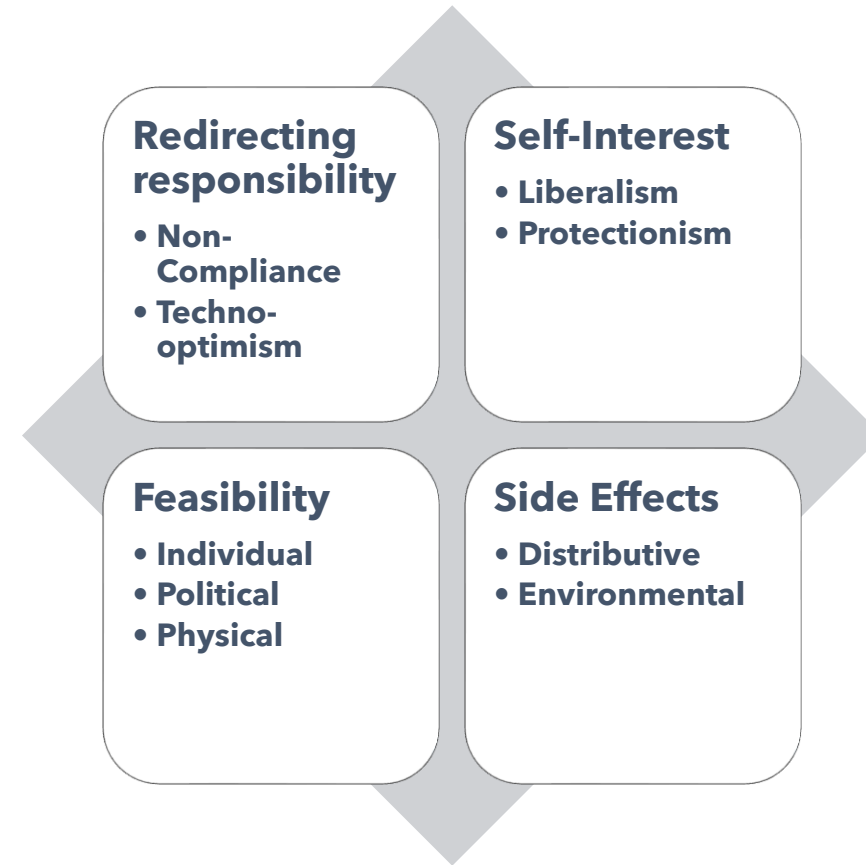
- Cross-Sectoral: Carbon Tax
- Cross-Sectoral: Carbon Budget
- Mobility: Private Car Use
- Mobility: Provision of Infrastructure
- Housing: Fossil Fuel Phase-Out in Heating Systems

Work Package 1: Discourse Analysis

Results

Points of convergence and divergence between print and social media

- Convergence:
 - Direct effects as well as macro-economic concerns are portrayed
- Divergence:
 - Disapproval of revenue recycling*
 - Level of distrust in political system⁺
 - **Prevalence of perceived lack of available and accepted alternatives** – what is appropriate?
 - Partisan Antagonism/Climate Denial/Conspiracies



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Michael Kriechbaum
Thomas Brudermann

Transfair-Framework
(adapted from
Lamb et al. 2020)

*(Beuermann & Santarius 2006, Mildenerger et al. 2022, Dütschke et al. 2022, Ewald et al. 2022)

+(Ewald et al. 2022)

Work package 2: Economic Evaluation

Birgit Bednar-Friedl
Teresa Lackner
Stefan Nabernegg



Phase-out of fossil fuels in housing

Austrian policy framework

Erneuerbare-Wärme-Gesetz (EWG)

- Regulatory policy for space heating (complementing carbon tax)
- Targets property owners
- Phase-out of oil, liquid gas and coal until 2035
- Phase-out of non-liquid gas until 2040

Subsidies for social compatibility (UFG)

- Basic subsidies for all (“Raus aus Öl und Gas”, “Sanierungsoffensive”)
- Additional social subsidy program (“Sauber heizen für alle”)

Challenges

Emerging energy crisis, opportunity to focus on the oil and gas phase-out in private heating systems

Adaptations

Decision to include household microsimulation of fossil fuel heating system phase-out

Evaluation

Literature Review,
Interview legal expert

Legal framework & rental market

- Privileging phase-out as maintenance in residential property law (WEG) and tenancy laws (MRG, ABGB) necessary to implement EWG
- Ensure protective mechanisms to prevent unfair rent increases via adjustment of reference rent (MRG), tax reliefs (ABGB), subsidies (WGG)

Cumulative investment

- Phase-out incl. thermal renovation of multi family houses with decentral fossil heating systems (mainly gas)
- Total investment estimate of ~27 bn euro [17 – 37 bn euro] to be shared between home owners, tenants and government (subsidies)

Microsimulation
based on HBS

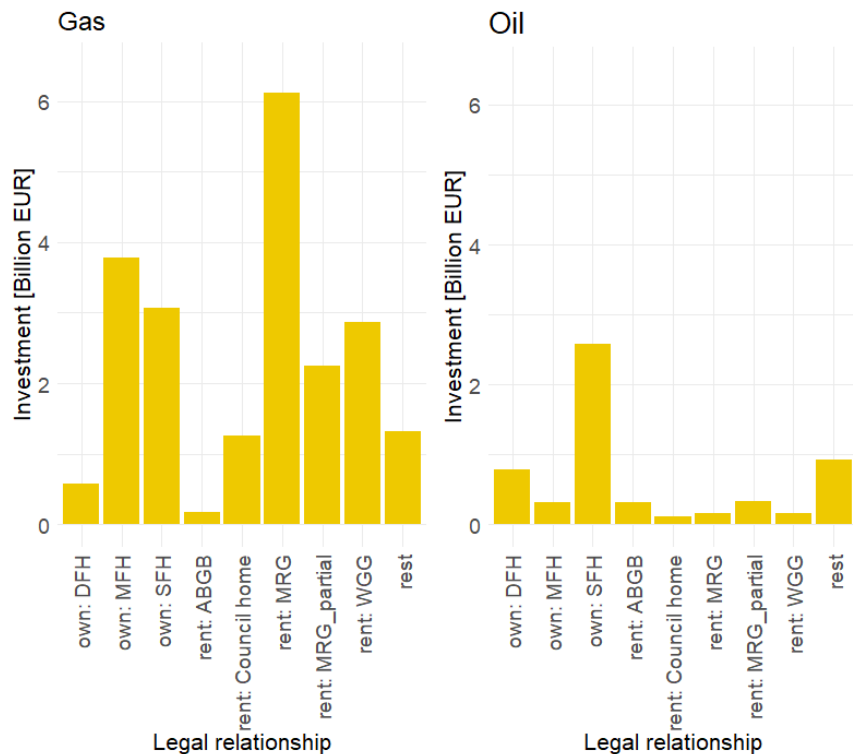
Distribution across household groups

- Gas: tenants in pre-WW II residential buildings (MRG) and homeowners of multi and single family houses
- Oil: homeowners of single and double family houses most affected
- Distribution of investment is strongly regressive without subsidies

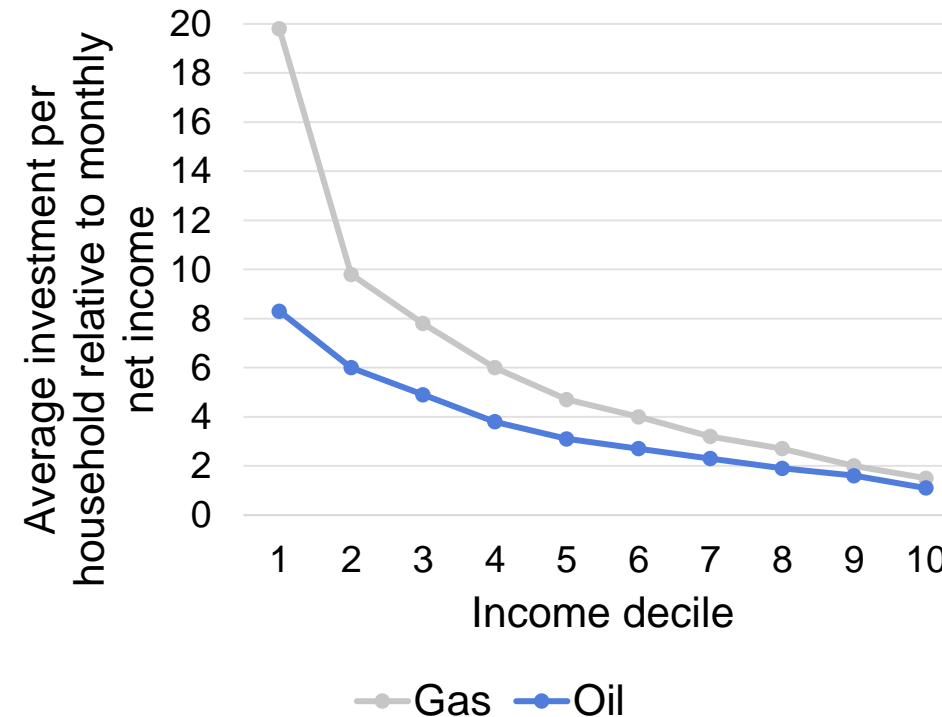
Investment & affected household groups



Distribution of cumulative investment across users of residential buildings



Regressive distribution of investment among home owners (subsidies not included)



Work package 3: Public perception



Results: Re-evaluation of infrastructure projects – case study Lobau

From the analysis three factors with eigenvalue > 1 emerged, with one factor being the dominant one. This factor had positive (Factor 1) and negative loadings (Factor 4). A total of four perspectives was derived:

- Factor 1a: Pro-Environmental Regime-Testing Highway Opponents
 - Main message: new highway leads to induced traffic, is therefore not compatible with climate goals, harms the environment and promotes capitalist growth idea; not adequate to the problem and outdated; laws can be changed;
- Factor 2: Pragmatic Highway Sceptics
 - Main message: pragmatic support for the project, but not as it is currently planned; support for alternative routing without tunnel; climate change awareness is given; connection of existing city road is necessary; the dispute is perceived to be primarily about politics and not about the best solutions; compromise between motorized individual transport and public solutions; roads can be used multimodally;
- Factor 3: Routinist Regime-Compliant Highway Advocates
 - Main message: project should still be built as the last section in freeway ring and as a new Danube crossing; it is necessary for traffic relief and urban development; cancellation would be anti-democratic; freight traffic would be diverted and more space would be created for other motorists;
- Factor 4: Liberal Regime-Compliant Highway Advocates.
 - Main message: existence of a right to drive, highway is necessary because of urban growth, does not preclude environmental protection but can even be beneficial, does not induce new traffic but redistributes it, necessary to maintain economy and prosperity; road law is to be obeyed;

Challenges

Recruiting of participants for Q studies, substantial time requirements for participants

Adaptations

Expansion of recruiting strategies

Presentations, Publications & Dissemination



○ Presentations

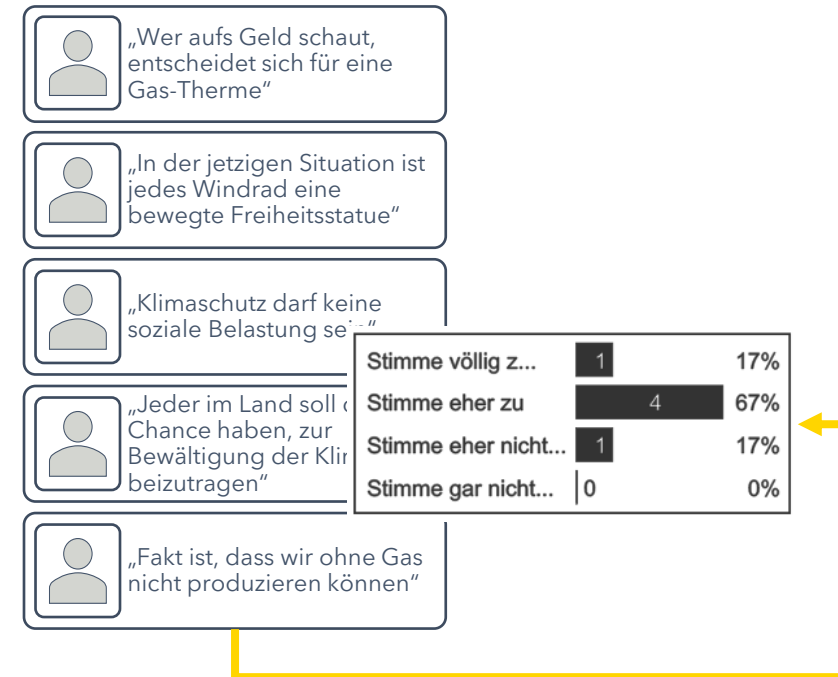
- IST - International Sustainability Transitions Conference (Stellenbosch University, Monash University and Georgetown University Scientific Presentations, 21.11.2022.): oral presentation
- Symposium Konsum Neu Denken (Universität für Bodenkultur Wien, 23.09.2022.): oral presentation
- ECPR - European Consortium for Political Research general conference (Charles University Prague, 04.-08.09.2023): abstract accepted for oral presentation

○ Upcoming planned publications

- Manuscript for WP1 describing counter-storylines or "discourses of delay" in the Austrian policy landscape is currently finalised for publication submission
- Working Paper on WP2 focusing on the phase-out of fossil heating systems in residential buildings (financial implications for heterogeneous households, evaluation of subsidy programs and legal framework)
- Paper on the macroeconomic effects of (controversial) climate protection measures (cf. WP1) with a focus on "sequenced assistance policies"
- Two papers on public perception of contested policies (energy systems and infrastructure conflicts)

○ Dissemination & others

- Ongoing collaboration with ACRP-TRANSFLIGHT (Alfred Posch et al.) on employed methodologies and administrative work
- Stakeholder workshop (15.06.2022, n=6)
- Stakeholder interviews WP1 (n=16)
- Stakeholder interviews WP3 (n=14)
- Academic Workshop (04.05.2022)
- Scientific Advisory Board Meetings (01.12. and 07.12.2022)



Project outlook for year two and beyond

- WP1 - Discourse Analysis: Paper submission
- WP2 - Economic Evaluation: Completion of analysis, publication of working paper, paper submission
- WP3 - Public Perception: Completion of analysis and interpretation, manuscript writing and submission
- WP4 - Normative Assessment: Normative analysis of the previously identified policies
- WP5 - Choice Experiments: Empirical research on the acceptance of selected policies
- WP6 - Strategy Development: Aggregation of the multi-disciplinary results of the individual work packages into policy recommendations (2024)
- WP 7 - Dissemination and Stakeholder Interaction: Dissemination of results to participants of WP1 and WP3, scientific advisory board meetings, presentations and paper submissions, publishing of interim results on project website

