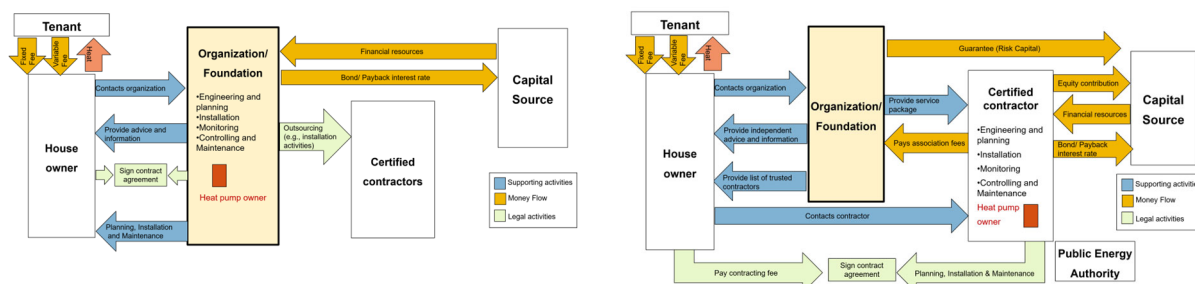


Solution 3.2: Multi-family building fuel switch: business models and strategy for the public sector



Issue / Challenge

Multi-family houses represent the largest residential heating demand in Switzerland. Air-to-water heat pumps (HP) are crucial for the decarbonization of this sector, but their adoption has been very slow due to a series of barriers. Amongst others excessive risks for investors and contractors have been identified: insufficient experience & lack of standardization; lack of structures to allocate inherent risks adequately; lack of attractive business models for investment. This work package aims to find solutions how a public organization can mitigate these risks and accelerate the adoption process.

Description:

Elaboration of decision-making tool for public institutions to effectively support the transition to heat-pumps in MFB.

- Main focus: innovative PPP business models, defining role of the public, and involvement of SMEs, enabling adequate risk-sharing
- Stakeholder analysis: barriers and drivers to HP adoption in non-renovated multifamily buildings (investors, contractors, public agency, etc.).
- Business models blueprint: different business model strategies for public agencies that can help accelerate the adoption of HPs
- Different (policy) frameworks: description and assessment of different business models in response to different framework conditions with focus on risk management, risk sharing for stimulating the development of a complex, not yet functioning market. Synthesize decision-making tree.
- Funding opportunities and public guarantees: evaluate funding opportunities, possibly involving public guarantees, to facilitate the switch to HP (e.g. pension funds). Elaborate best practice.

Type of solution:

- ☐ Service ☐ Tool ☒ Other: Decision-tool plus concrete strategy for SIG
☐ Product ☒ Guidelines

Involved partners

- Research: ZHAW INE, HSLU
- Implementation: SIG - Services Industriels de Genève
- Others: Ethos (mandated by SIG), representatives of investors, property owners, SMEs, and banking

Implementation and Distribution

End users / Added value

Short term, regional scale

- **SIG and Etat de Genève**, within the framework of their Cantonal program for massive fuel-switch, here with key focus on MFB with no practical possibility for district heating (DH) network access. MFB solutions will be useable also for decentralized DH networks suffering from similar risks.

Medium-term, national scale

- **Public authorities (including utilities, communes, policy makers)**, which decide on fuel-switch market/sector organization and business-model facilitation, including direct participation
- **Building owners**: benefit from transparent solutions with known financial performance/reliability
- **HP manufacturers, SMEs**: benefit from development of a market valuing performant & reliable solutions, where they can focus on their technical role; risks being allocated adequately to others
- **Energy Service Companies (ESCOs)**, which can integrate such solutions reliably and with a focus on their strengths, with solutions for risks in place

Implementation

Results from the first phase of the project (stakeholder analysis and business model blueprints) are already informing our partner SIG. In the present project phase PPP models are collaboratively elaborated and assessed with SIG and local stakeholders from Geneva. The results of this analysis will directly be used by SIG, summarized in a guideline, as well as in a scientific paper. In the mid-term, the guidelines will be disseminated to diverse public stakeholders (utilities, cantons, Renowave partners).

Ownership and Distribution

Ownership:

- ☐ Single owner ☒ Multiple owner ☐ Other: ...

Type of distribution

- ☒ Free ☐ Monetarized ☐ Other: ...

Status of development

Achieved so far (May 2024)

- Stakeholder analysis: barriers and drivers to HP adoption in non-renovated multifamily buildings
- SWOT analysis: main risks and opportunities of the development of HP for multi-family houses
- Business model blueprints: different institutional structures
- Fuel-switch “Landscape”: Map of decision making and implementation process, with focus on responsibilities, costs, risks, information flow
- Workshop with SIG and local stakeholders from Geneva: technologies, market, policy framework

To be done

- Scientific publication (stakeholder analysis, business model blueprint, business ecosystems) as a basis for the elaboration of the guidelines
- Systematic analysis of the “Landscape”: identify business model options with focus on PPP and the role of utility SIG: aligned incentives, adequate risk allocation, funding and roles
- Report of key risks and opportunities for each option and concrete guidelines how to address them
- 2nd Workshop with SIG and stakeholders: refine business model “Menu”; select prioritized model
- Pilot implementation: multiple buildings in Geneva, together with SP 2.1.
- Dissemination: publication as tool/guideline in specialist magazine(s); publish scientific paper(s); workshop with additional regions