Clemens Ploechl, Energy Changes Projektentwicklung GmbH (EC)

Energy Community – Energy Efficiency Workshop
Vienna March 20th 2018
Austrian Society for Environment and Technology (ÖGUT) – www.oegut.at

- Non-profit organization – platform for sustainable development (since 31 years)
- 100 organizations and institutions (business, administration, environmental advocacy).
- Topics:

Energy Changes Projektentwicklungs GmbH – www.energy-changes.com

- Finance/Engineering/Technical/Policy/Strategic Advice
- References in over 30 countries!
- Topics: renewable energy, energy efficiency and GHG mitigation activities
SEFIPA – Work plan
## Finance Labs

<table>
<thead>
<tr>
<th>Project Area</th>
<th>Financing/legal instruments</th>
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</table>
| 1. SE financial products for institutional investors | • Guidelines for Energy Efficiency in Real Estate Funds  
• Supporting interest parties to develop green bonds |
| 2. Increase attractiveness of EPC | • Quality guidelines and marketing for EPC facilitators  
• Accounting Rules for EPC (Maastricht, EU STAT Guidance) |
| 3. Incentives for investments in energy efficiency in buildings | • Monitoring of actual energy consumption  
• Tax incentives  
• Specific topics in tenancy law/ condominium law |
| 4. Increase investments in roof top PV in „multi parties“ buildings | • Business/ financing models |
| 5. Optimizing energy related subsidy system | • Combining investment grants with guarantees  
• Opening subsidies for ESCOs |
Finance Labs – Process

- Stakeholders: public administration, financial sector, business and consumer associations, energy service providers, NGOs
- Small working groups, public input, plenary sessions

Experience

- Keeping interest of participants high, face-to-face meetings are important!
- Adapting process to changing legal environment
- Separation of legal instruments vs. finance instruments not always practical - Finance Labs are topic-based (5 Labs instead of 2 tracks)
- Country specific
- Flexible for new ideas
Energy Efficiency in Real Estate Funds

- In 2016 additional **1.1 billion were invested** in 6 open real estate funds raising the total volume of these funds to EUR 6.7 billion (end of 2016).
- SEFIPA advices real estate funds applying sustainability criteria for their buildings
- Results:
  - **Fund volume EUR 734 Mio** will introduce some sustainability criteria in 2018.
  - **Fund volume EUR 85 Mio** will introduce the “Austrian Eco-Label for real estate funds” in 2018
- Specific target: develop **further guidelines** how to make buildings in real estate funds **more energy efficient**.
Financing PV at multi family houses by own consumption

- Suggestions for amendment of the Austrian Electricity law, by SEFIPA (June 2017)

- National wide information platform and advisory service for pilot projects together with Austrian PV-association

- 5 business models developed
## Business models for PV-own consumption at multi family buildings

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Landlord involvement</th>
<th>Residents' involvement</th>
<th>Company's role</th>
<th>Energy supplier's role</th>
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<tbody>
<tr>
<td>Model 1</td>
<td>&quot;PV plant as infrastructure&quot; (&quot;free power for residents&quot;)</td>
<td>Invests in PV and provides PV power free to residents (compared to joint laundry room or bicycle storage)</td>
<td>Invest in and operate PV-plant. Distribution of PV-power and costs by internal agreements. Legal form: E.g. founding of association</td>
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<td>Model 2</td>
<td>&quot;Residents organize PV-plant&quot;</td>
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<td>Invest in and operate PV-plant and leases a PV-contingent (allocation) to each household</td>
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<td>Model 3</td>
<td>Company leases PV-plant to residents</td>
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<td>Model 4</td>
<td>&quot;PV-supply-contracting&quot;</td>
<td>Contractor invests in PV-plant and sells PV-power to households by Cent/kWh own consumption</td>
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<td>Model 5</td>
<td>&quot;Full supply by energy supplier&quot;</td>
<td>Energy supplier invests and operates PV plant and supplies residents with a mix of PV-power and power of the net (all in one supplier)</td>
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The project leading to this application has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No 696008.
Financing PV at service and industrial buildings by PV-Contracting

- In Austria PV-Contracting not applied, due to high risk of fall away of the PV-consumer (e.g. insolvency, conversion of production)

Solution: Option to switch from own consumption modus to feed in tariff.

Working group elaborates suggestion for the next Eco Electricity Act (supposed autumn 2018)
Facilitators for Energy Performance contracting (EPC)

- Background: Clients (small municipalities or SMEs) often overstrained by complexity of EPC
- Solution: independent facilitators support clients at tender process
- Development of
  - quality criteria for facilitators
  - modular structure of service packages for clients
  - list of quality proved facilitators
published by regional energy agencies, Austrian association for energy service company (DECA)
Maastricht neutrality of Energy Performance contracting (EPC)

- Background: In Eurostat guidance note 7th August 2015 EPC was defined as depth increasing according Maastricht criteria

- Solution: Changes of Eurostat guidance note

- Meeting and discussion with Statistik Austria and responsible Austrian ministries with the request to argue for Maastricht neutrality of EPC at Eurostat

- End of 2017: change of Eurostat guidance note, EPC under certain framework Maastricht neutral

- Working group in AT: screening existing EPC model contracts and suggestion for amendments
Heat supply contracting - solution for the split incentive of tenant / landlord

- **Technical solution** of seasonal heat storage by deep drillings, solar and heat pumps, SPF >6

- **Organisational solution** by joint energy system for a block of building: economy of scale and gaining synergies (potentials solar, storage mass, peak load planning)

- **Economic solution**: Investment and operating by Supply contractor. High investment costs shared between landlord and tenant
Heat supply contracting – pilot project

- Block of 18 buildings, tenement houses
- High investments for geothermal, solar and heat pump, low energy costs.
- Phase I: 2 buildings, 20 apartments
  start of construction: spring 2018
  Phase II: 4 additional buildings
  (planned 2019 and 2020)
- Full cost: lower than district heating system
- 85% Energy savings (20 vs. 157 MWh/a)
Full costs for heating, hot water + moderate cooling for typical Viennese building, as at 07/2017

- natural gas and solar, central system: €3.47
- district heating: €7.43
- geothermal, hybrid solar, heat pump: €6.53

- costs air condition: €2.03
- subsidy by City Vienna: €2.42
- costs tenants, heating and hot water: €8.9
- costs landlord, heating and hot water, all investments: €14.0


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Heat supply contracting – full costs comparison by 20 years – investment sharing

cost distribution during contracting period of 20 years

- landlord investment
- tenant payments (basic rate + price p. kWh)
- contractor investment
- contractor energy costs
- contractor service, maintenance
Heat supply contracting – success factors

- comparison of full costs of heating systems (e.g. 20 years period)
- anergy-net across buildings and estates (5-25 °C), block of houses
- Fair share of investment costs between tenant and landlord
- Stable conditions, planning security for contractor
Combining Investment Grants (Ministry of Environment) with Guarantees (Ministry of Economy)

- hotel sector in AT: high investments needed in energy efficiency
- Existing environmental subsidy provided through MoE,
- but: banks / suppliers are reluctant to finance projects if the credit rating of the hotel (where the EE equipment shall be installed) is low. – tourism sector!
- due discussion and arguments of SEFIPA working group a combination of - federal environmental investment grant (provided through MoE) and - guarantee provided by Austrian promotional bank for the tourism (OEHT) became feasible.
■ Combining Investment Grants (Ministry of Environment) with Guarantees (Ministry of Economy)

Certain energy efficiency investments in hotels could be financially attractive due to the environmental subsidy provided through MoE, however banks and/or suppliers (of energy efficiency equipment) are reluctant to finance the hotel to purchase the equipment if the credit rating of the hotel (where the EE equipment shall be installed) is low. Until now project sponsors have not been permitted to combine a federal environmental investment grant (provided through MoE) with a guarantee provided by Austrian promotional bank for the tourism industry (OEHT)

Examples for applying this approach could be (taking into account either environmental investments only or mixed environmental and non-environmental investments):

Environmental only:
- Both (MoE und OEHT) subsidies within de-minimis regulations
- OEHT within de-minimis and MoE under environmental subsidy law and both under European General Block Exemption Regulations
- OEHT and MoE each its specific limits and jointly the higher of both limits of General Block Exemption Regulations

Mixed Project
- Combining KPC with OEHT dedicated credit line and guarantee if both jointly are within General Block Exemption Regulations limits

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