



Energy Performance contracting on public buildings in Austria

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**promotes
energy
efficiency and
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services to
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implements
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The EPC facilitation services in Upper Austria

- The regional government of Upper Austria started its first programme to support EPC market development more than 10 years ago
- Two fold approach:
 - financial support for contracting projects
 - facilitation service by the regional energy agency
- more than 200 contracting projects supported
 - about 100 in municipalities, 50 in companies, 50 in institutions
 - areas: street lighting, EPC in buildings and industry, renewable heat)
- more than 30 ESCOs offer services in the region
- more than 60 mio Euro investments triggered
- EPC has found its place in the portfolio of sustainable energy solutions



Example: Land OÖ

Pooling projects

- 15 Contracting projects
- 40 buildings renovated (public administration buildings, school buildings, care homes, maintenance depots, museums, etc.)
- Combination of measures: e.g. optimisation of heat control, insulation, switch to renewables
- Investment: in total about 4,845,000 € (60,000 bis 1,100.000 €/project)
- Total savings (15 projects):
4,500,000 kWh/a, 340,000 €/a,
1,450 tons CO₂/a
- ESCOs: Cofely, Siemens



Example: Office building of the Red Cross

Deep renovation project

- deep renovation of an office and service building with EPC
- insulation of the building envelope, new windows with triple glazing, external shading, connection to district heating
- investment 520,000 €, partly financed by the savings and partly by the building owner
- guaranteed savings of 50% of previous energy costs (215,000 kWh/a, 14,700 €/a, 54 to CO₂/a)
- Contract duration: 15 years



Example: Streetlight-EPC

Municipality of Bad Schallerbach

- Municipality in Upper Austria: 3440 inhabitants
- Renovation of entire street lighting system
- **Investment costs:**
 - 354,600 € total investment
 - 196,400 € financed by the EPC project
- **Subsidies:**
 - 39,300 € (regional EPC programme)
 - 20,900 € (environmental subsidy)
- **Total savings:**
 - electricity costs: 19,500 €/a
 - maintenance costs: 20,000 €/a
 - reduction of el. consumption: 130,900 kWh/a
 - CO₂ reduction: 60 tons/a
- ESCOs: local electrician



Streetlight-EPC: 40 implemented projects!

- **IEE project: Streetlight-EPC, www.streetlight-epc.eu**
Triggering the market uptake of energy performance contracting through street lighting refurbishment projects in 9 regions
- **30 EPC projects implemented**, 10 more projects implemented with other financing or operational models, more projects in the pipeline!
- Facilitation services in 9 regions developed, 10+ new ESCOs
- **A variety of EPC models** (depending on the contexts of each region and project), but **2 core aspects** defined:
 - Contractually guaranteed savings
 - Financial consequences if these are not achieved
- **Other aspects can vary greatly!**



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A variety of EPC models...

Variable aspects are, for example:

- different financial consequences if savings are not achieved:
 - withholding/reducing payment to the ESCO
 - bank guarantee from ESCO which can be drawn by the client
 - retention of a % of payment until assessment shows savings to be achieved
 - ESCO must adjust/replace the equipment until savings are achieved
- who finances; who performs audit
- who designs system; who does refurbishment work
- who does maintenance
- project size
- project completely or partly financed by EPC
- maintenance cost savings included in the contract or not
- calculation of ESCO fee & billing schedule
- how changes in energy prices are taken into account
- who benefits from "extra" energy savings
- duration of contract
- ownership issues after end of contract
- provisions in case of bankruptcy of ESCO or client.....



Lessons learnt: Facilitation works!

- **EPC: high interest, low knowledge:** "explain, explain, explain"
- **Know-how and trust are key**
ESCOs need knowledge in technical, contractual and financial aspects
clients need to understand and trust EPC and the ESCOs
- **Developing EPC facilitation services**
 - deep technical, financial & contractual know-how within the organisation
 - "quality approach": better fewer, but convincing projects
- **Good project preparation is key:**
 - meaningful inventories of existing systems and good quality audits
 - procurement issues need to be clarified early on with specialists:
often there are solutions if there is a will
 - financing experts tend to underestimate the technical delivery of the saving guarantee ("an ESCO is not a bank")





**Thank you very much for
your attention!**

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