Facilitating the ESCO market

Results from the Streetlight-EPC project

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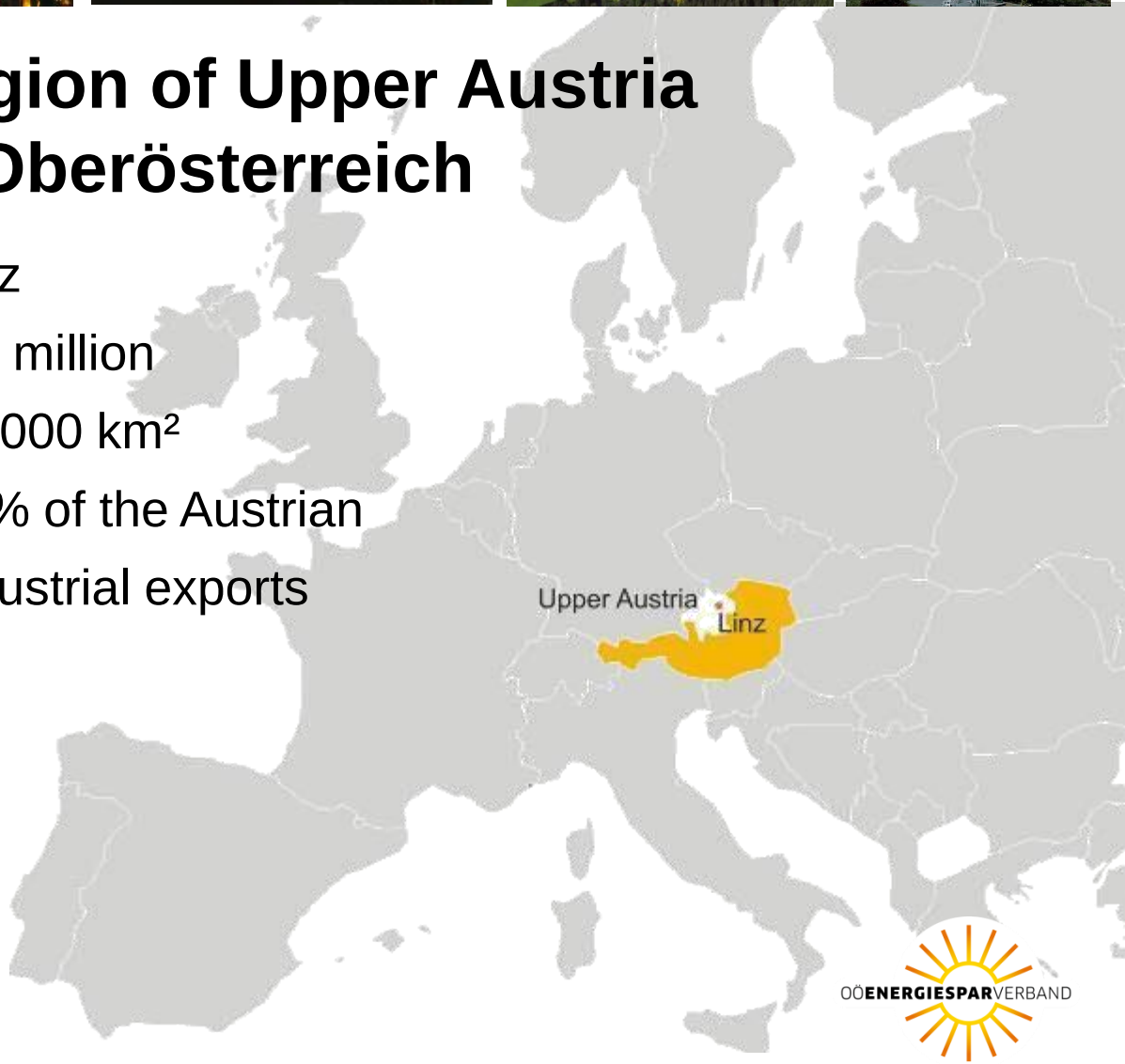
The Region of Upper Austria
Oberösterreich

Capital:	Linz
Population:	1.4 million
Area:	12,000 km²
Economic activity:	25% of the Austrian industrial exports



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The Energy Agency of Upper Austria
OÖ Energiesparverband

promotes energy efficiency and renewable energy

provides services to households, businesses & municipalities

develops & implements policies & manages programmes

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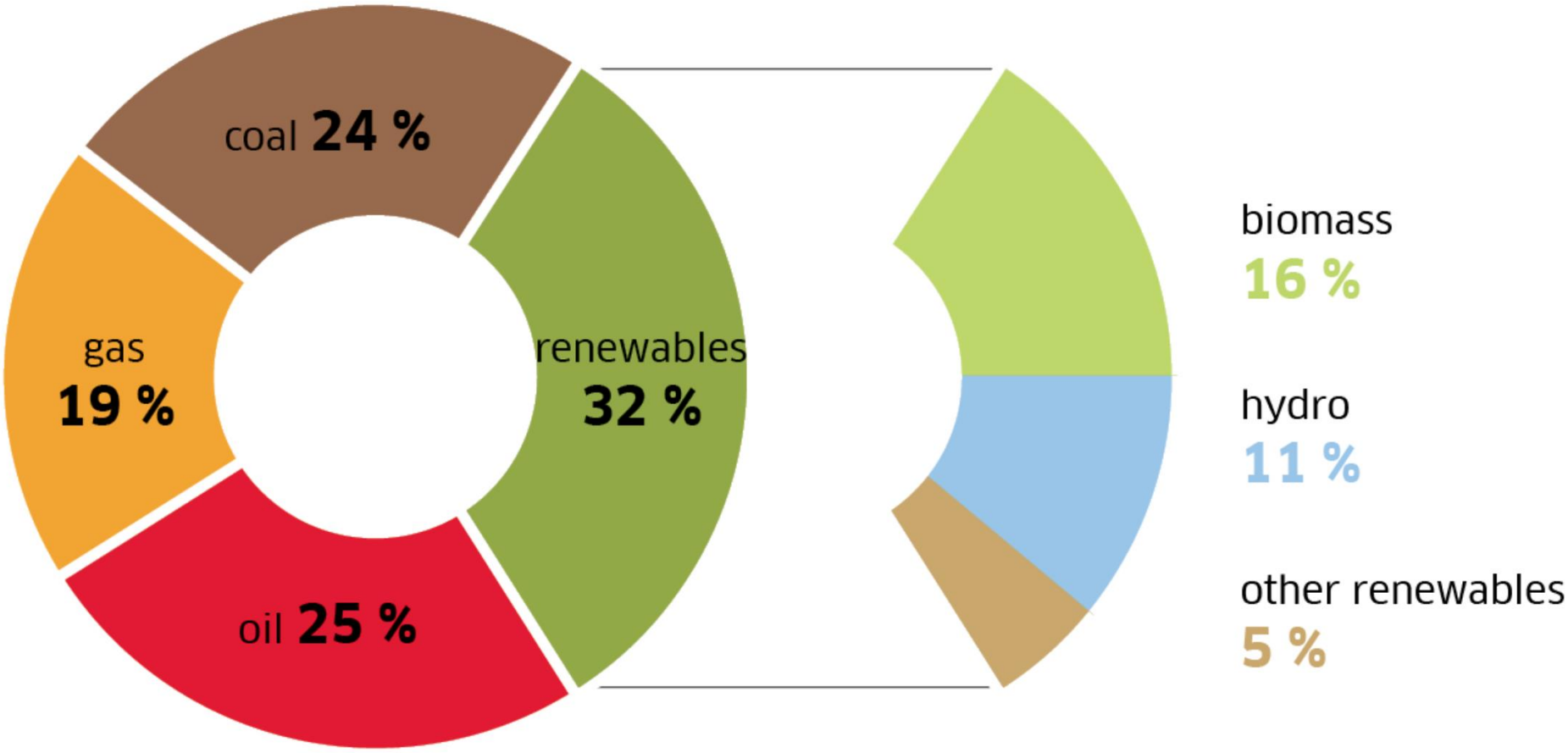
Energy production in Upper Austria



Gross domestic energy consumption by energy source, Upper Austria, 2014
Source: Energiebericht des Landes OÖ

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 contracting)
- more than 30 ESCOs offer services in the region
- the first years were challenging and
  the programme started very slowly
- EPC has found its place in the portfolio of
  sustainable energy solutions in Upper Austria

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A challenge for municipalites - an opportunity for EPC!

In many European regions, EPC (energy performance contracting) markets are not yet well developed.

- ✓ due to phasing out of 80 % of the street lighting lamps, municipalities are under pressure to act
- ✓ new LED technologies offers high savings with comparatively short payback times
- ✓ street lighting is a good "learning and testing ground" for EPC (lower technical and economic complexity)

This creates an opportunity:

- to establish EPC markets
- to support the market introduction of efficient lighting technologies

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IEE project

Triggering the market uptake of energy performance contracting through street lighting refurbishment projects in 9 regions

Streetlight-EPC

Project duration: 1 April 2014 – 31 March 2017

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Streetlight-EPC

- creates demand and supply for EPC projects in 9 regions by **setting up regional EPC facilitation services** (providing comprehensive support both to municipalities and SMEs as potential ESCOs)

- performs **real-life procurement of EPC (street) lighting projects** during the project life, creating knowledge and trust in LED and the EPC model

- The project team: 9 regional agencies/organisations (providing the EPC facilitation services), 9 municipalities (committed to implementing EPC projects) and FEDARENE

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Streetlight-EPC - Project Partners

- 19 partners in 9 countries
- coordinator: OÖ Energiesparverband

Region	Regional partner	City/county partner
Upper Austria	OÖ Energiesparverband	Wels
North-West Croatia	REGEA	Zagreb County
South Bohemia/Czech Republic	ECCB	T. Sviny
Pomerania/Poland	BAPE	Gdansk
Carlow & Kilkenny County/Ireland	CKEA	Kilkenny County
South East Sweden	ESS	Kalmar
Podravje/Slovenia	ENERGAP	Maribor
Macedonia	MACEF	Skopje
North/Central Spain	ESCAN	Santander

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The EPC facilitation service

- key element in EPC market development
- **interests and connects** actors
- identifies promising "**candidate projects**"
- comprehensive **support** to municipalities and to SMEs (potential **EPC clients**) and potential **ESCOs** in **project development and implementation**:

  - initial assessment of technical and economic viability
  - support in project audits
  - guidance on procurement rules, contractual and technical issues and financing

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Developing the EPC facilitation service - our strategic aproach

Step 1: Increasing internal know-how and preparing tools

- analysis of the current regional situation
- meetings with financing organisations
- developing tools

Step 2: Identifying and reaching out to potential projects

- information events and bi-lateral meetings
- initial assessment of technical & economic viability of projects
- identifying the most promising projects ("candidate projects")

Step 3: Supporting specific project development and implementation

- advice on technical and financial aspects of EPC
- support in project audits
- guidance on procurement rules and contractual issues

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Quick-checks, guides and FAQs

Available at www.streetlight-epc.eu in 10 languages:

- **Quick-checks** for a first initial assessment of the suitability of EPC street/indoor lighting refurbishment
- **Guide** on implementing streetlight-EPC projects
- **FAQs** on streetlight-EPC
- Examples of implemented projects

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www.streetlight-epc.eu

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Activities of the facilitation service

Identifying and reaching out to potential projects in 9 regions:

- 52 regional events held with over 1,500 participants
- 163 "quick-checks" completed
- over 380 enquiries answered and documented
- more than 255 FAQs available
- 51 bi-lateral meetings held with financing bodies

Supporting specific project development and implementation:

- 75 projects supported
  (50 street lighting, 25 indoor lighting projects)

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The challenges differ

Banks that do not understand the business model

Ownership issues

No/few (good) ESCOs

Lack of information by municipalities

- the ESCO will make too much money
- I have to fire the maintenance staff (municipal staff/local electrician)
- the ESCO will go bankrupt
- I can build new street lighting with an EPC project
- who pays what to whom and when

Low electricity prices

Public procurement rules (perceived or real barriers)

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Facilitation works: 40 implemented projects!

- **30 projects already implemented using a variety of EPC models**
- 10 more projects implemented with other financing or operational models
- more projects in the pipeline!
- 10+ new ESCOs

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Examples of projects implemented in Upper Austria

Name of project	Street lighting in Bad Schallerbach		Pink, gas station and restaurant		Fischer Brot, bread producer	
	Before	After	Before	After	Before	After
Capacity (kW)	55	23	18	6	99	43
Annual electricity consumption (kWh)	227,300	96,400	231,100	172,700	514,000	222,400
Annual electricity cost (Euro)	34,000	14,500	30,000	22,400	74,500	32,300
Investment (Euro)	354,600 55 % financed by EPC		62,400 100 % financed by EPC		385,000 100 % financed by EPC	

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A variety of EPC models (1)

EPC can take many forms (depending on the legal, economic and social contexts of each region and project)

2 core aspects defined in the project:

- Contractually guaranteed savings
- Financial consequences if these are not achieved, e.g.:
  - withholding/reducing payment to the ESCO
  - bank guarantee from ESCO which can be drawn by the client if savings are not achieved
  - retention of a percentage of payment until assessment shows savings have been achieved over time
  - ESCO must adjust/replace the equipment until savings are achieved

Other aspects can vary greatly!

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A variety of EPC models (2)

Variable aspects are, for example:

- 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
- etc.

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Some key findings (1)

- **EPC: high interest, low knowledge**
  "explain, explain, explain", also to overcome prejudices

- **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
  - work very closely with individual municipalities
  - "quality approach": better fewer, but convincing, projects

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Some key findings (2)

- **Good project preparation is key**:
  - meaningful inventories of existing systems (but not so detailed that costs become prohibitive) and good quality audits
  - LED: offers choice, requires knowing your needs, choosing quality products is key
  - projects are often prepared by engineers who tend to overestimate the contractual challenges
  - 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")

- **Great potentials in indoor lighting EPC projects**
  Strongly dependent on the country context, also combination of different measures in different buildings

- **Facilitation works!**

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Facilitating the ESCO market now is the time to get active!

www.streetlight-epc.eu

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