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Blaženka Pospiš Perpar

Eltec Petrol d.o.o.

District energy project management
Beltinci, 13.03.2013

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Blaženka Pospiš Perpar

Eltec Petrol d.o.o.

**A short presentation of the company with a
references of district energy**

Mission and slogan

Energy Of a Green Future



Our activities contribute to the reduction of energy and water consumption and environmental impact



Vision and strategy

To become the leading provider of integrated solutions in the South-East Europe in the fields of:

- district energy systems,
- water supply systems,
- efficient lighting,
- energy management.

Directed towards development and future, we are constantly improving the existing systems, developing high-quality products and services, incorporating the latest scientific achievements to meet the needs of the customers and to ensure mutual satisfaction and benefits.



District energy systems



Comprehensive solutions in the field of economic construction design, the renewal and management of production sources and the distribution and utilization of gas, heating and cooling.



Reference projects in district energy

- Energetika Ljubljana
- Beogradske elektrane
- Novosadske toplane
- HEP Toplinarstvo Zagreb, Sisak, Osijek
- Energetika Maribor
- Komunala Velenje, PE Energetika
- Centralno grijanje Tuzla
- Koper, Piran, Jesenice, Kranj, Celje, Murska Sobota, ...



Reference projects in district energy

- District biomass heating:
 - Železniki, Preddvor, Nazarje, Luče, Mozirje, Solčava, Postojna, Ribnica, Ivančna Gorica, ...
- Boiler rooms on biomass heating:
 - Besnica, Koper, Piran, Pivka, Gorje, Gorenja vas – Poljane, ...
- Co-production of heat and electricity:
 - Maribor 2 x, Kranj 3 x: total electric power
 - 270 kW, production 1.080.000 MWh electric energy



Reference projects in district energy

- Number of heat distributors: 33
- Number of heat stations: 9100
- Number of ELTEC SCADA systems: 29
- Number of buildings supervised with ELTEC SCADA system: 1200
- Number of ELTEC TERMIS systems: 22
- Complete power of ELTEC TERMIS systems: over 7500 MW





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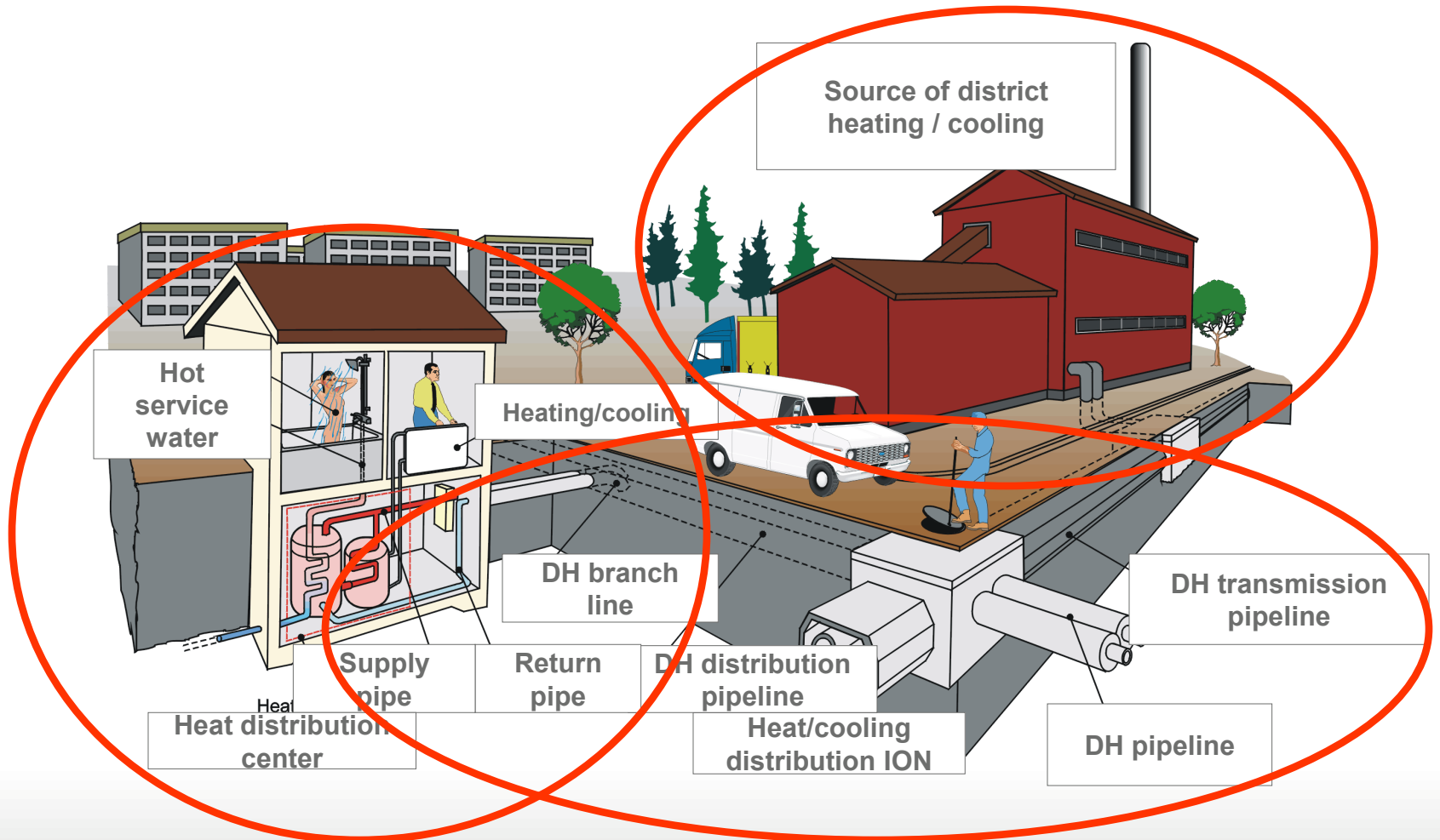
District energy project management

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What is district heating / cooling?



Advantages of district heating/cooling

- reliable supply,
- safe operation and easy maintenance,
- space saving in buildings (there is no boiler room, no tanks),
- lower investment costs,
- effective supervision and management,
- efficiency of the system is higher compared to individual heating systems,



District heating/cooling advantages

- no local emissions; total emissions of the system are lower,
- payment for actual energy consumption,
- price affordable.



When?

- Compact settlements, a group of houses (pipeline length/number of connections, energy consumption).
- Reliable consumption, willingness to connect (long term contracts).
- Availability of primary energy source.
- Implementation possibilities (building conditions).



When?

- District heating/cooling price must be lower compared to individual solutions!
- Choosing a business model - depends on the interests of local community and private partners.



Establishing of business model

- Choosing of business model depends on capabilities and objectives of the local community or private business partners
- According to Energy Act, district heating is a public utility service (Article 33), except if:
 - public utility service is not performed in the area,
 - heat production is mainly from renewable energy sources or from cogeneration of heat and electricity and



Establishing of business model

- in regard to the capacity of the system, maximum possible energy supply to all customers at the same time is under 1MWh/h.
- District heating as the public utility :
 - In a public company,
 - by giving the concessions
 - by investing public capital in to activities by entities of private law.



Project management

The rules of project management, project organization

- Project Manager (the local community)
- Project team (including all profiles)
- (Project Office)?
- Defining operating rules
- Allocation of competences
- Communication in the project team (meetings, reporting)



Project management

- Information system for monitoring and support
- Activities, time schedule
- Project budget
- Project closure



Stages of the project

- Project management - by whom
- System planning - verifying the conditions/rough feasibility assessment
- Business model setting up
- Verification of possible future customers, data bank, inquiries, data verification
- Feasibility study
- Arrangement of the relevant acts (depending on the business model)



Stages of the project

- Determination of conditions:
 - Standards which must be fulfilled
 - Compliance with LCCA
- Selection of the concessionaire, partner ... -
Implementation of public tender (depending on the business model)
- Preparation of the relevant acts (General conditions for connection, Tariff system, Price list, Contracts with customers)



Stages of the project

- Project engineering- detailed technical documentation, regulatory documents
- Implementation and supervision
- Starting the system, administrative licenses
- Efficient management of the system - use of different software tools in order to achieve optimum - guarantee for lower costs
- (control)

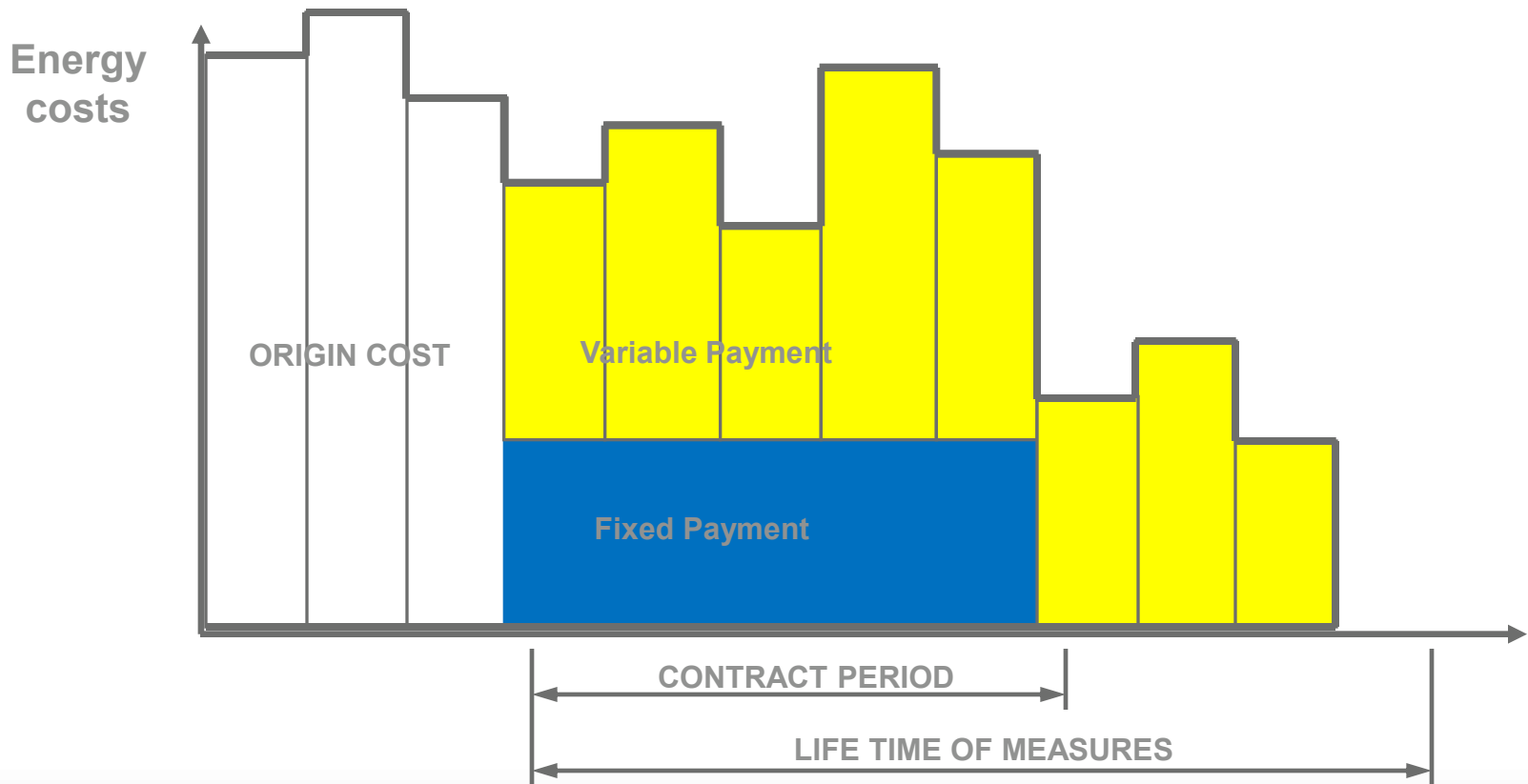


Energy Supply Contract – Concession model

- According to contract, the contractor is obliged **to implement a system** that will provide a reliable energy supply
- The Contractor guarantees for agreed quantity and quality of energy on the agreed location.
- Payment of the services - fixed component and variable component, depending on consumption
- Possible guarantee for the effectiveness!



Energy Supply Contract



Characteristics of ESC projects

- The Contractor takes the technical risk
 - baseline analysis,
 - savings achievement,
 - equipment quality – contracting period – lifetime,
 - evaluation of investments (turnkey solution),
 - maintenance costs.
- The Contractor takes the financial risk
 - payback period (financing costs),
 - Customer's "fate"



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Thank you for your attention

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