#### World Sustainable Energy Days 2023

Attitudes, Expectations, Possibilities of Energy Service Providers
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**ESCOs** on private market - housing cooperatives and housing associations

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ESCOs on public market –

local government units and state budgetary units

Expectations

Attitudes and Possibilities

Case study – City of Bytom

**Thesis and Conclusion** 









### **Energy Performance Contract and Energy Service Company**

**ESCO:** Energy service provider means a natural or legal person who delivers energy services or other energy efficiency improvement measures in a final customer's facility or premises;

**EPC: Energy performance contracting** means a contractual arrangement between the beneficiary and the provider of an energy efficiency improvement measure, verified and monitored during the whole term of the contract, where investments (work, supply and service) in that measure are paid for in relations to a contractually agreed level of energy efficiency improvement or other agreed Energy performance criterion, such as financial savings;

Directive 2012/27/EU on energy efficiency







# **ESCOs expectations on private market –** housing cooperatives and housing associations



- 1. The ESCO in its business activities deals exclusively with EPC projects.
- 2. An important part of the profit comes from a multi-year contract:
- from additional savings sharing,
- from an energy management service,
- from other technical services,
- 3. The ESCO prepares the complete EPC project for the customer.
- 4. Depending on the situation, the ESCO can guarantee the result in technical units or amount,

but liability for any shortfall in savings is mitigated by the annual report evaluation process.







## ESCOs attitudes and possibilities on private market – housing cooperatives and housing associations

- 1. The ESCO receives approval from the SM to prepare an EPC design.
- 2. The ESCO develops the author's set of technical changes and calculates the energy effect and investment cost.
- 3. The ESCO helps to configure a financial solution that is acceptable to SM, by putting together the elements, that cover the cost of the retrofit, such as:
- the estimated amount resulting from energy savings over the contract period,
- the amount of subsidy,
- other possibilities credit with write-off, White Certificates, documentation subsidy.
- 4. The ESCO, taking into account the combination of technical, financial and energy efficiency elements, chooses a contract period that minimises the customer's own contribution.
- 5. The ESCO provides a model contract, usually simple, describing realistically possible situations. The contract is not subject to formalities such as Public Procurement Law.
- 6. The ESCO usually does not have the possibility to organise the financing of the project through a loan.







## Case study of private market EPC project – HC Ulnowo Energy effect and project payback

#### Energy effect:

- heat consumption before modernization central heating 907 GJ/year; hot water: 99 GJ/year
- heat consumption after modernization

40 GJ/year;

ot water. Do Gjryco

#### Project financing:

- energy cost savings,
- Thermomodernization Bonus + RES Grant (both grants worth 55% of the ir
- repayment below 20 years, contract for 20 years

Investment value of the contract 1.0 MEUR.

During the contract period, the resident's monthly fee will be min. 15% lower than in 2022.















#### **HC Ulnowo scope of changes** - one building out of four:

- full insulation of the building (walls/ceiling/basement ceiling),
- replacement of windows and doors in common areas,
- local recuperators (36 units) in apartments,
- heat pumps 2\*14 kW + electric boiler 30 kW,
- PV power plant 50 kWp + battery 15 kW,
- hot water storage tanks with master heater control function,
- Energy Management System,
- power connection 50 kW for common parts.

(based on materials from eGIE Sp. z o.o. Opole)









### **ESCOs expectations on public market** – local government units and state budgetary units

- 1. An ESCO is most often a separate structure within a large company, such as a construction, energy or installation company and thus:
- can participate in public EPC proceedings in negotiated mode, with a duration of 6-12 months,
- can undertake high-value contracts,
- is able to accept quite complex EPC contracts for public entities, taking into account the requirements of the Public Procurement Law and the Public Finance Law, among others,
- has the ability to finance the project with a loan.
- 2. ESCO expects in public EPC projects:
- higher profit due to additional risks in the projects,
- less competition in the proceedings, due to the specificity of the contracts (guarantee of the effect),
- projects of considerable value, compensating for the cost of
- participation in the proceedings.









## **ESCOs attitudes and possibilities on public market** – local government units and state budgetary units

- 1. ESCO companies respond to the demand of the public market, that is, announced by public entities Invitations to participate in EPC projects under preparation.
- 2. ESCOs participate in the preparation project by the public entity and its advisors, only to the extent provided by the entity.
- 3. ESCOs, qualified for EPC proceedings by the public entity, participate in the in the negotiations, contributing ideas, demands and comments, which the public entity, together with its advisors, takes into account to its corresponding extent. The criteria for evaluating bids are known from the beginning of the proceedings.
- 4. After the negotiation stage, the public entity develops documents, enabling the preparation of offers and invites ESCO companies to submit them.
- 5. The selected ESCO company arranges financing of the project arranges and the public entity repay the contractual obligation in installments, during the energy management period.









#### Thesis and conclusion



#### Thesis:

ESCO companies develop EPC projects on private market, but Local government units develop EPC projects on public market,

#### **Conclusion:**

We observe in Poland different types of ESCOs, because of specific role that they are expected to play in private or public EPC projects.







#### **Marek Tobiacelli**

EKSPERT DS. ENERGY PERFORMANCECONTRACTS EXPERT ON ENERGY PERFORMANCE CONTRACTS tel. +48 (22) 626 09 10 • kom. +48 694 410 782 e-mail: <a href="mailto:mtobiacelli@kape.gov.pl">mtobiacelli@kape.gov.pl</a>

Krajowa Agencja Poszanowania Energii S.A. The Polish National Energy Conservation Agency

Centrum LIM, Al. Jerozolimskie 65/79, 00-697 Warszawa

www.kape.gov.pl

e-mail: kape@kape.gov.pl





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