



PROSPECT+

Capacity building for cities and regions - from learning to action!

Best practices for financing sustainable energy measures in the public sector:

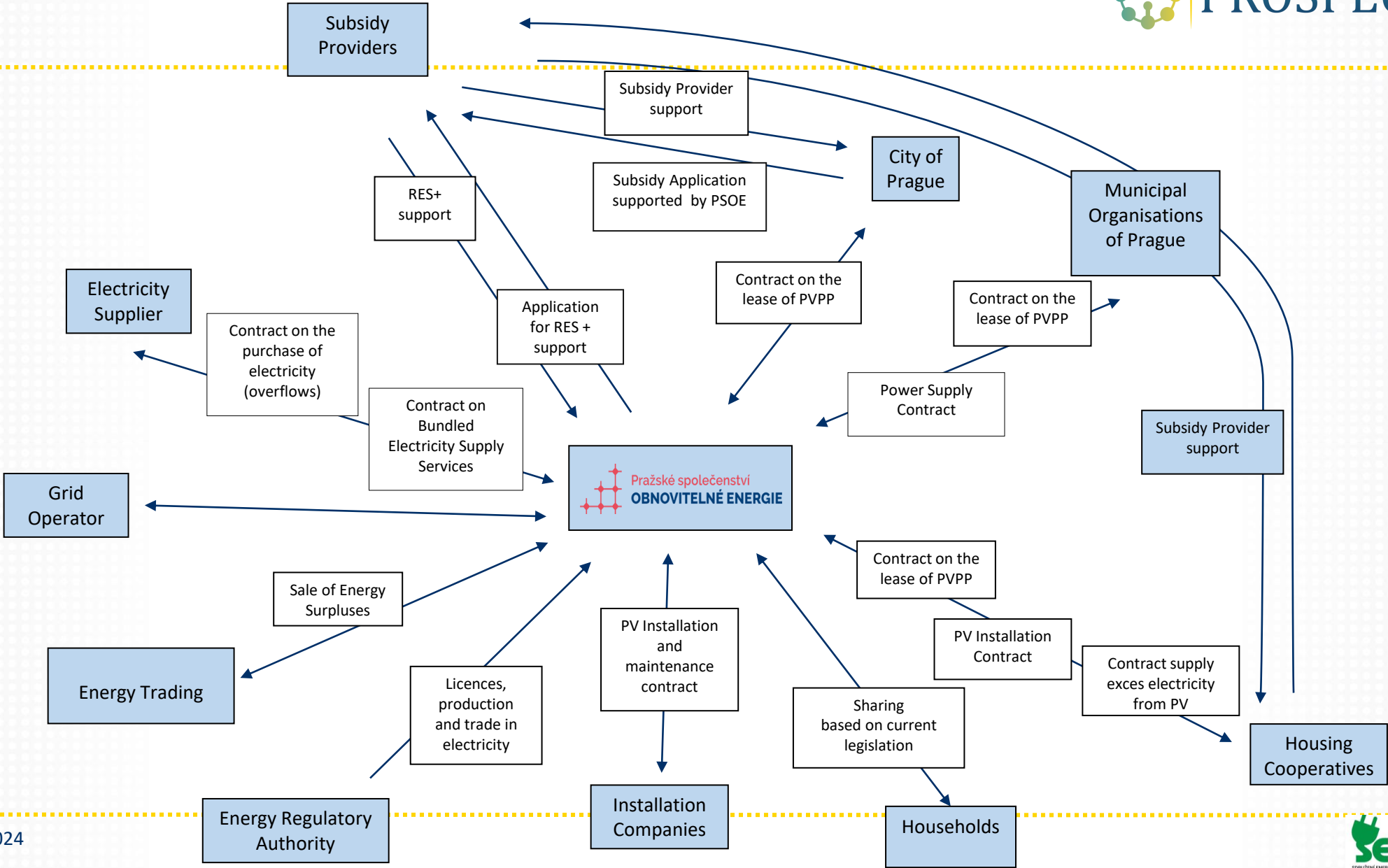
Prague Renewable Energy Community



The PROSPECT+ project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101023271



Prague Renewable Energy Community



Principles of Prague Renewable energy community (PSOE)



- PSOE - **Prague Renewable energy community** - municipal organisation
- Established – November 2021
 - City **have own organisational, personnel and professional background** to make RE happen, over 20 thousands PV plan
 - **Address electricity surpluses** between generation / supply and transmission points more efficiently (and more easily integrated into central purchasing)
 - **Open a community, support other energy communities**, i.e. growth of communities' number, One-Stop-Shop
- Full operation – **February 2022**
 - April 2024 – 550 kWp – municipal buildings (apartment buildings), Communal Services, Children Hospital

Main activities of Prague Renewable energy community (PSOE)



- Complete **preparation of new RES** plants (especially PV) on city buildings and other properties
- **Operation** of these plants, supply of energy and its sharing through the distribution system
- **Energy saving projects** on city buildings (incl. RES plants, EPC etc)
- **Subsidy** preparation and administration
- **One – Stop - Shop**

- Operational Costs
 - **Initial budget** – City of Prague – 800 thous. EUR
 - **External cost** – approved ELENA (EIB) – February 2022 – 1.8 mil. EUR
- Investment Costs
 - **Apartment buildings** - NZÚ program (**New Green for Savings**) - subsidy up to 50% + EUR 600 / 1 kWp installed + EUR 200 / connected housing unit
 - **Family houses** - NZÚ – up to 60% subsidy, basic installation of 2 kWp – EUR 1600 + EUR 400 additional 1 kWp
 - **Public buildings - Modernization fund** – up to 30% subsidy, EUR 300 / kWp capacity installed
- Other Financial Sources
 - Sale of Energy **Surpluses**
 - **Green Bonds**

- **City of Prague** (leadership) – initiator of the process
- **City of Prague** (administration) – involvement in processes, e.g. Heritage Dept.
- **Prague Renewable Energy Community** – managing whole process
- **Public building owners** – municipal organisations – available roofs
- **Private building owners** – members of EC – help with installations
- **Electricity distributor** – responsible for overflows and its price
- **Energy consultants** – evaluation of energy feasibility
- **Installation companies** – PV projects, engineering, operation
- **RES producers** – possibility to sell RE to Prague Renewable Energy Community

- Municipal organisation **responsible and managing** the whole process
- Usage of **external financing sources** (MoF, NZU, ELENA)
- **Different services for different stakeholders** (building owners, municipal organisations, RES producers, City of Prague administration etc.)
- **Simple adoption** of similar approaches in other cities
- **Different legal entity** in different countries usable for EC
- Similar municipal organizations **serve as motivator** – independence and value
- **External opportunity** – energy market developments

- **Innovative approach** vs. conformity
- **Strength of oligopolist** - energy companies
- ***Lack of legislative support*** – *slow implementation in the Czech Republic*
- **Lack of verified information** on individual level (citizens, administration)
- ***Lack of capacities and technologies on the market***



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Thank you!

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**Best practices for financing sustainable
energy measures in the public sector:**

Energy Performance Contracting (EPC)



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- Energy Contracting or EPC is a **contractual arrangement** between a **client** (e.g. a municipality, a company) and a service provider, a so-called "**Energy Service Company**" (ESCO).
- Typically, the **ESCO finances and implements energy investments**, however a variety of different financing types exist.
- The **ESCO guarantees the energy savings** in the contract.
- (Parts) of the investment and capital costs are **covered by the annual costs savings**.
- Typically, especially interesting for projects with high energy savings potentials and shorter payback times

ECP steps



Step 1 **Internal preparation phase**
Internal coordination, overview of data, first discussions with ESCOs

Step 2 **Rough analysis**
2-3 rough analyses (usually free of charge), possibly tender
Decision in favour/against the project

Step 3 **Selection of the ESCO**

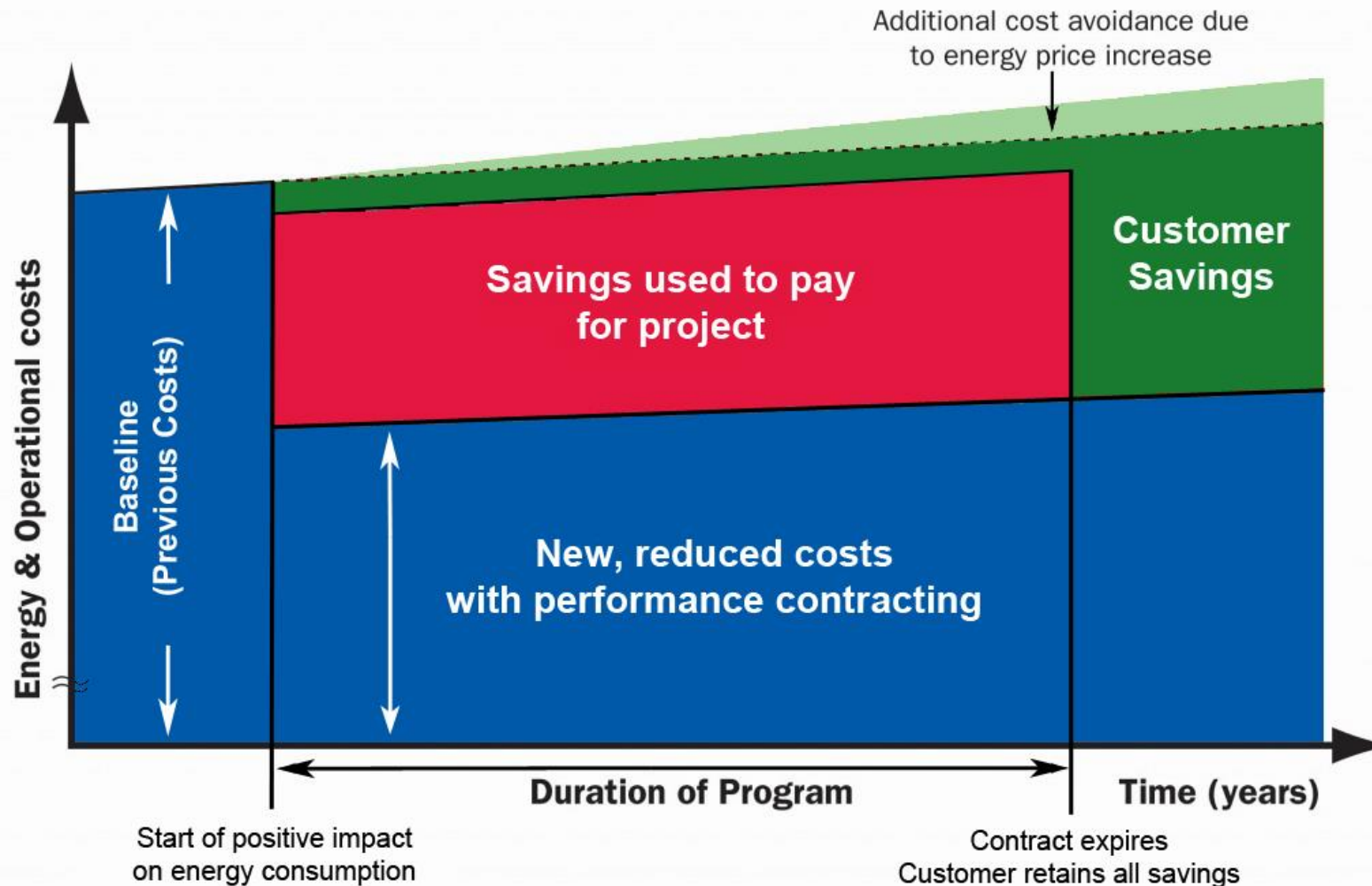
Step 4 **Detailed analysis**
ESCO develops a detailed analysis (technical planning of project)

Step 5 **Contract preparation**
Discussions about contract details, decisions of the contract content,
signing of the contract

Step 6 **Implementation of the measures**

Step 7 **Contracting rate**
Payment of contracting rate and annual billing

Success factors



Source: SanderMechanical.com

Key success factors

- Proper internal preparation
- Advice & support by third party which is independent from ESCO
- Exact definition of specifications & requirements (what exactly do you expect from the project, ex: quality standards, room temperature, involve own staff...)
- Compare ESCOs (more than one offer)
- Selection of the "right" ESCO
- Understand the contract, develop it in cooperation with external consultants
- Training, information & awareness raising of operators and users is very helpful

Results



Posuzované období		GU dle smlouvy	GU rok 2017	SU 2017	Nadúspora	Podíl na nadúspoře Klient	Podíl na nadúspoře ESCO
období od	období do	Kč bez DPH/rok	Kč bez DPH/rok	Kč bez DPH/rok	Kč bez DPH/rok	Kč bez DPH/rok	Kč bez DPH/rok
1.1.2017	31.12.2017	5 274 337	3 944 720	4 583 028	638 308	382 985	255 323

Posuzované období		GU dle smlouvy	GU rok 2018	SU 2018	Nadúspora	Podíl na nadúspoře Klient - 60 %	Podíl na nadúspoře ESCO - 40%
období od	období do	Kč bez DPH/rok	Kč bez DPH/rok	Kč bez DPH/rok	Kč bez DPH/rok	Kč bez DPH/rok	Kč bez DPH/rok
1.1.2018	31.12.2018	5 807 726	4 170 797	5 318 647	1 147 850	688 710	459 140

Posuzované období		GU dle smlouvy	GU rok 2019	SU 2019	Nadúspora	Podíl na nadúspoře Klient - 60%	Podíl na nadúspoře ESCO - 40%
období od	období do	Kč bez DPH/rok	Kč bez DPH/rok	Kč bez DPH/rok	Kč bez DPH/rok	Kč bez DPH/rok	Kč bez DPH/rok
01.01.2019	31.12.2019	5 807 726	4 458 344	6 064 143	1 605 799	963 479	642 320

EPC City of Litoměřice

- 2016-2018
- 13 buildings
- Heating system
- Lightings
- Regulations
- Use of waste heat
- Water savings
- Savings for 10 years
 - 58 mil. CZK
 - 2,4 mil. EUR



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Thank you!

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