

# *Approaches to address the hesitance of municipal staff to engage in EnPC*

## *Insights and suggestions from the H2020 PDA – PRODESA project within 4 Greek municipalities*

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# Contents

- Identified major obstacles for EnPC uptake in the Greek Local Authorities
- Solutions developed by the PRODESA project
- Suggestions for further EnPC uptake

# PRODESA in a nutshell

**Financed: H2020 – PDA (Project Development Assistance)**

**Partners: 13 (GR & B), Duration: 2017 – 2022**

**Scope: 7 municipalities** located in the metropolitan area of Athens, joined forces to:

- **renovate** 96 municipal buildings to nZEB standards and improve 12000 luminaires of street lighting achieving 63% savings
- **bundle** smaller projects into larger ones for cost reduction; €21 million overall investment projects
- utilize **public grants to leverage private financing through EnPC**; the project resulted in 4 different contract types for buildings and 2 for street lighting

# PRODESA aimed to address barriers resulting from:

- **Non-developed EnPC market**

- 🔍 Very few EnPC projects in the private sector
- 🔍 A few EnPC on streetlighting but none on public **building energy renovations**
- 🎯 **PRODESA** produced real large scale EnPC projects as data evidence to instill confidence and facilitate market uptake

- **Municipalities' hesitance about new financial mechanisms**

- 🔍 Lack of clear procedures and fear of the unknown
- 🎯 **PRODESA** developed new approaches for EnPC project development, and tender and contract templates to contribute to removing hesitance
- 🎯 EnPC project development **assistance through coaching and webinars** to a network of 39 municipalities

# Difficulties that have impacted EnPC Contract Choice

| Technical  | Market  | Financial   | Administrative and Legal   |
|--|---|---|--|
| <ul style="list-style-type: none"> <li>• Lack of reliable energy consumption data (e.g. many missing entries, quarterly billing not concurrent with heating and cooling seasons);</li> <li>• Relative low energy consumption of certain building use types e.g. schools as they operate 200 days per year</li> </ul> | <ul style="list-style-type: none"> <li>• Lack of experience in the field leading to uncertainty how effectively a project can be implemented</li> </ul> | <ul style="list-style-type: none"> <li>• Limited access to bank financing for EnPC projects</li> <li>• Difficulty in pooling public grants available through funds such as the Cohesion Fund or the National Development Fund with private financing through EnPC.</li> </ul> | <ul style="list-style-type: none"> <li>• Many regulatory issues e.g. difficulties caused by the Higher Technical Committee towards the <b>Service</b> procurement tender</li> <li>• Hesitance to enter into a long term contract</li> <li>• EnPC perceived as a potentially costly option and subject to opposition criticism</li> </ul> |

# Parameters taken into account for EnPC tender development



# The approach followed in PRODESA

## Type of procedure for EnPC tender: Open procedure

Municipalities were not willing to follow a two-step procedure (e.g. competitive dialogue) since they were:

- unfamiliar with such procedures,
- it was perceived overly challenging to handle by the Municipal services and
- very time-consuming

## Preparatory work before the EnPC tender

- Energy Audit identifying baseline consumption, the technical solution, the actual energy savings and the corresponding energy upgrade of the building class level (e.g. from class D to B+)
- Detailed design study of the Energy Efficiency and RES measures
- Basic elements of the Measurement and Verification Plan (M&V)
- Issuance of the Energy Performance Certificates of the buildings

The preparatory work was outsourced following an open tender

# EnPC types and financing

## ➤ Model

- **Guaranteed savings model:** The ESCO guarantees to achieve a minimum level of **energy savings and RES production measured and verified through mainly the equipment performance**, and of **cost savings** over the duration of the contract

## ➤ Tender and contracts

- **The ESCO is paid with fixed operational payments** given that the guaranteed levels are met
- PRODESA developed tender and contract templates consolidating the requirements of a work and/or supply contract, while also incorporating the necessary clauses to account for the services provided by the ESCO

## ➤ Financing schemes

- Financing sources brought together in PRODESA involved **public grants, equity and ESCO financing**
- Grants from the National Strategic Reference Programme (NSRF) were available for a works or supply contract but **not for an EnPC**



## EnPCs – Buildings

| Municipality           | Investment (m€) | Financing scheme/ Contract type  |
|------------------------|-----------------|--|
| City of AAK            | 5.3             | <p>Split into two investments</p> <ul style="list-style-type: none"> <li>- <b>4.4 m€</b> (19 building) procured as <u>mixed work, supply and service contract</u>, <b>financed at 73% by the ESCO and 27%</b> by public grant and municipality's equity; 10-year <b>Guaranteed Savings model contract</b>; M&amp;V Program, with penal clauses for not reaching the guaranteed savings</li> <li>- <b>0.9 m€</b> (4 buildings) procured as a work contract and financed at 72% by a grant and 28% by municipality's equity</li> </ul> |
| Vari Voula Vouliagmeni | 1.4             | <p>Split into two investments</p> <ul style="list-style-type: none"> <li>- 1.2 m€ procured as a mixed supply and service contract, <b>financed 100% by the ESCO</b>; a 5-year <b>Guaranteed Savings model contract</b>; M&amp;V Program, with penal clauses for not reaching the guaranteed savings</li> <li>- 0.2 m€ financed by equity procured as a work contract covering building insulation</li> </ul>   |
| Ag. Dimitrios          | 4.2             | <p>PVs in 36 buildings procured as <u>a service contract</u>, <b>financed 100% by the ESCO</b>; <b>10-year Guaranteed Performance</b> model contract, minimum performance level of the installed PVs; Self-consumption with surplus electricity covering virtually streetlighting consumption.</p>   |
| Alimos                 | 2.4             | <p><u>procured as a work contract (10 buildings)</u>, <b>with financing coming from a grant (81%) and municipality's own equity (19%)</b>; <b>5-year Guaranteed Savings model</b> that requests from the Contractor to achieve certain energy class upgrade according to the national building code (KENAK)</p>  |

# The EnPCs – streetlighting

- ✓ Mixed supply and service
- ✓ Guaranteed savings
- ✓ 10-year Contract Duration

| Municipality | Investment (m€) | Financing scheme  |
|--------------|-----------------|---|
| City of AAK  | 4.7             | <b>10-year Guaranteed Savings EPC, 70%</b> paid upon completion and 30% through annual installments conditional to energy efficiency target                   |
| Alimos       | 3.1             | <b>10-year Guaranteed Savings EPC,</b> 100% paid upon completion against <b>50% guarantee</b> to be annually released conditional to energy efficiency target |

# Major contributions of PRODESA

- ✓ **Real case examples** of energy efficiency projects through EnPC
- ✓ **Tools and useful material** for all steps such as:
  - set of easy – to – use **EXCEL tools** for the economic assessment of various financial schemes
  - **templates for procurement procedures and tender documents**
  - model contract, including **M&V Plan**
  - **replication guidelines**
- ✓ A network of replicators with 39 municipalities supported through **coaching and webinars**
- ✓ Cooperation with the ‘Consignments and Loans Fund’ to **provide guarantee of payments** to the ESCO during the whole EnPC duration
  - **The Fund is empowered to do so (Law 4643/2019, art. 28) but under a new financing Programme, ELECTRA**
- ✓ Proposal to the Ministry of Environment and Energy for the amendment of the PV net-metering regulation **for allowing through virtual net-metering to offset electrical consumption by other municipal uses, e.g. street lighting**
  - **(Law 4951/2022, art. 100)**

# Lessons learnt and suggestions

- **Engage all relevant actors** from the municipality's side from the very beginning to ensure that all actors understand the **basic features of the EnPC concept** and how to incorporate them **in their business-as-usual processes**
- **Openness to new mechanisms** such as EnPC, and **commitment from higher hierarchy level** (i.e. Mayor) to proceed with EnPC is very crucial for having a positive outcome
- **National and European grant programmes** should allow leveraging private financing through EnPC; public grants are essential for the sustainability of building energy efficiency projects, especially when including building envelope measures.
- **Include** EnPC in the law for public procurement to standardize the procedure
- **Capacity-building is** absolutely needed for the technical, financial and procurement Services staff
- **Provide incentives** for EnPC, e.g. funding for development phase of building energy renovations.