

ENSAMB

Norway – Sør Østerdal

OWNERSHIP	PUBLIC
Program authority	Regional Council of Sør Østerdal <ul style="list-style-type: none">• Elverum• Engerdal• Stor-Elvdal• Trysil• Åmot Hedmark County Council
Program Delivery unit	ENSAMB (= virtual project team, not a separate legal entity)
Implementation Model	Energy Performance Contracting (EPC)
Operating Services	Marketing Aggregation Facilitation Financial advice Assessment
Type of projects	Energy Efficiency (building retrofits)
Ambition/targets	11,2 million € investment in energy efficiency in buildings to achieve 25% savings, representing 11 GWh/year.
Beneficiaries	Public sector (municipalities)
Funding Vehicle	Property Owners Financial Institutions
Financial Instruments	Equity/Own funds Loans Grants

Summary

ENSAMB (Energy Saving in Municipal Buildings) is a EU financed project through the IEE-program MLEI (mobilising local energy investments). The project started in June 2012 and ended in October 2015.

ENSAMB is a cooperation between a grouping of 5 small municipalities in rural areas of Norway (Elverum, Engerdal, Stor-Elvdal, Trysil and Åmot) that are planning to achieve at least 25% energy savings in all their 133 municipal buildings, representing 11 GWh/year and a foreseen investment of 11,25 M€. The Regional Council for Sør Østerdal organises a part of the energy work in the municipalities, who have also signed the Covenant of Mayors and have a goal of saving up to 25% in municipal buildings in the adopted Energy and Climate Plans.

The Sør Østerdal covers 5 Municipalities, with 35.000 inhabitants. There are 133 municipal buildings covering a surface of 260.000 m², with an energy consumption of 45 GWh/year. Most buildings are from the period 1950 - 80 (when energy costs were very low).

It lays in Hedmark County which is a minority (7%) partner in the project. Secondary schools and some healthcare buildings are managed at the Hedmark County level.

The starting point for the project was the approval of Sustainable Energy Action Plans (SEAP) and the signature of the Covenant of Mayors. With the municipalities having limited resources, the motivation for financial savings dominates.

They are using EPC (Energy Performance Contracts) as a work tool for most measures.

Investments are being bundled into 5 packages:

- EPC for most of the buildings belonging to Elverum Municipality, covering most of the city's municipal buildings
- EPC (similar) for Engerdal, Stor-Elvdal, Trysil and Åmot Municipality
- Conventional (separate contractor based) implementation of measures for buildings belonging to the Hedmark County
- Conventional implementation of measures in the remaining buildings belonging to the municipalities
- Integrated project, i.e. the energy saving part of buildings undergoing a major upgrade

Activities for each bundle include: analysis, preparatory work, inquiry, evaluation, negotiation and contract.

The project also includes training for operating personnel, and documentation for copying and motivation for other similar players/organizations.

Funding for the projects comes from the municipalities and/or banks.

They signed contracts for the first phase (analysis phase) in the EPC for the 4 municipalities Trysil, Engerdal, Åmot and Stor-Elvdal with Norsk Enøk og Energi (NEE). The analysis for the buildings was finished in May 2013. The realization phase started in 2014, and they are now in the beginning of phase 3 (the warranty period).

Some key numbers:

- The contract includes 71 buildings with total area of about 115.000 m²
- Estimated energy savings are about 26 % which represents more then 60.000 €/year (6 million NOK/year)
- The total investment will be approximately 3 million € (30 million NOK)
- The first phase (analysis phase) with NEE has a value of approximately 60.000 € (600.000 NOK)

How does it work?

The methodology that is put into practice covers 3 key tasks:

1. Providing technical assistance and technical training
2. Modelling inter-municipal cooperation Contracts (EPC)
3. Initiate Conventional and Integrated EE investments

The project includes following steps:

1. Find out current situation of energy consumption
2. Suggest contract strategy for each building
3. Bundling into larger packages
4. Initiate financing. (Making the measures bankable)
5. Initiate investments/actions
6. Negotiate, Procurement
7. Training of the operational staff
8. Documentation, Information and Motivation

Buildings with the same challenges are being bundled (or pooled) for collective purchasing procedures. The categories in the bundling are:

- EPC-contracts
- Conventional purchasing
- Integrated project (Mayor refurbishment with an energy part)

Methodology for EPC

Bundling criteria for EPC's are:

1. Time schedule (progress in political processes)
2. Volume (optimally between 1-5 M€)
3. Willingness to agree on common criteria
 - a. Calculation interest rate
 - b. Calculation energy price
 - c. Selection principles
 - d. Other contract details

For the EPC projects, they use a negotiated procedure. The process includes an investigation of 2 to 4 pilot buildings, for which the ESCO is asked to provide fixed prices. For the remaining buildings the ESCO is supposed to provide estimated prices.

In the ENSAMB schem, the various phases of an EPC project (from Audit to Approval) typically takes 18 to 27 months, whereas implementation typically takes 1 to 2 years.

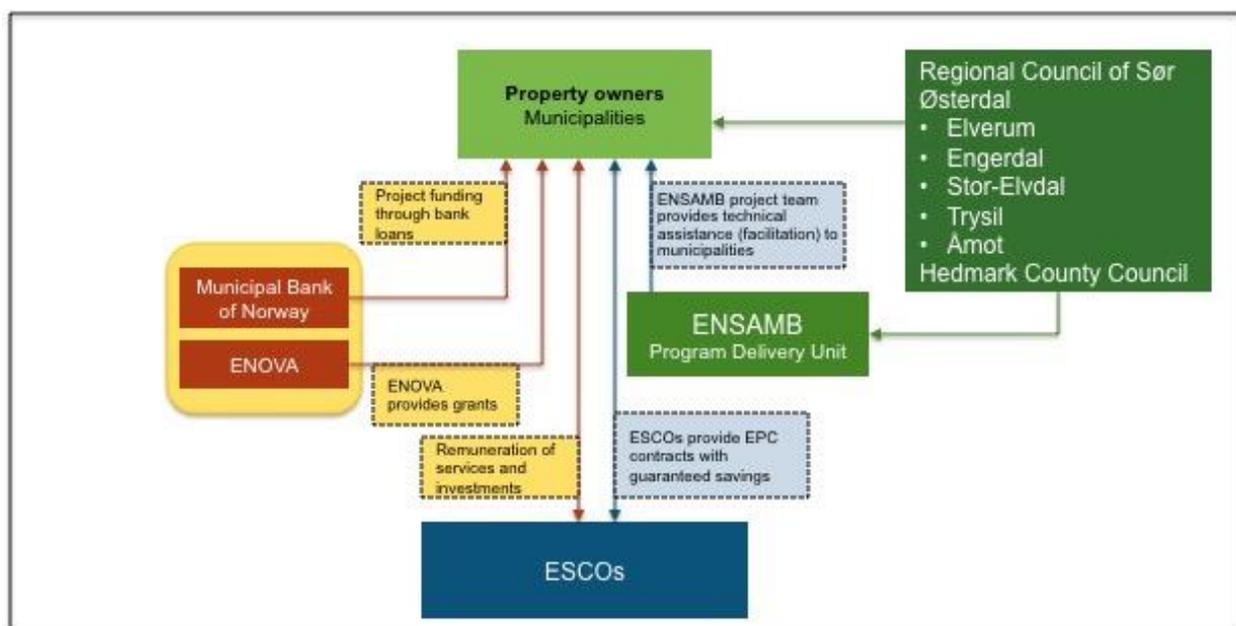
A strong emphasis is put on separate training of the building operators, so that they know about the principles of EPC, the ESCO's obligations and the content of an EPC contract.

The national standardized ESCO contract (Norsk Standard NS 6430:2014) did not exist for this contract (as it was signed early in 2013), but the work is done in close cooperation with the national standardisation authorities. Experience from Sør-Østerdal is reflected in NS 6430.

Financing comes from a mix of sources:

- Municipal Budgets (mostly)
- Some subsidies (ENOVA) (ca. 10%)
- Bank loans in the Municipal Bank of Norway (“green” interest rate 0,1% below nominal)
- Supplier and/or third party (considered not competitive)

Fig 1. Operational and financial model



The program delivery unit

The technical assistance to the municipalities is organized from within the Regional Council from Sør Østerdal.

The EU-program Intelligent Energy Europe covers 75% of the project costs, while Enova (state agency) covers approx. 15%. The rest comes from the partners.

The Program Delivery Unit (PDU) consists in fact of a “virtual” organization made up of 6 project managers from the various stakeholders:

- Municipality of Trysil (leader)
- Municipality of Elverum
- Municipality of Stor-Elvdal
- Municipality of Åmot

- Municipality of Engerdal
- Hedmark County Council

This team is completed with a team of 2 ENSAMB project coordinators from the Regional Council of Sør Østerdal.

Legal structure	Not applicable
Shareholder description	Not applicable
Equity	750 k€ (project funding)
Shareholders	Regional Council of Sør Østerdal and Hedmark County Council
Program dedicated staff	8
Program operational costs	unknown

Organization and partnerships

Not applicable

Beneficiaries

Beneficiaries	Public sector (municipalities)
Type of projects	Energy Efficiency (building retrofits)
Operational support	EPC Projects facilitation through the program delivery unit
Financial support	Facilitation of loans through the Municipal Bank of Norway Facilitation of grants through the ENOVA energy agency

Funding mechanism

Program delivery unit funding	750 k€ grant from the IEE MLEI program
Projects Funding	Projects are funded on municipal budgets, through bank loans (from the Municipal Bank of Norway) and subsidies from the ENOVA energy agency.
Funding Vehicle	Property Owners Financial Institutions
Fund size	Not applicable
Fund type	Not applicable
Fund sources	Not applicable
Financial Instruments	Equity/Own funds Loans Grants

Results

2 EPC projects were implemented with the following results :

Municipalities	Elverum	Engerdal, Stor-Elvdal, Trysil and Åmot	
Buildings	39	71	
Surface	Ca. 97.000 m2	Ca. 115.000 m2	
Investment	4,3 M€	4,0 M€	6,0 M€
Number of measures	Ca. 300		446
Energy Savings	23%	26,5%	32,5%
Payback	9 years	6,8 years	9,5 years
NPV (15 years)	2,3 M€	3,1 M€	3,4 M€
Stage	Contract	Bid	Contract

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Factsheet

General Info

Country	Norway
Model Name	ENSAMB
Date of creation	2012

Model Description

Ownership	Public
Program authority	Regional Council of Sør Østerdal <ul style="list-style-type: none">• Elverum• Engerdal• Stor-Elvdal• Trysil• Åmot Hedmark County Council
Program delivery unit	ENSAMB (= virtual project team, not a separate legal entity)

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Beneficiaries	Public sector (municipalities)
Geographical coverage	Regional/Local

Financial Mode Description

Project funding	Public Private
Project funding vehicle	Property Owners Financial Institutions
Financial instruments	Equity/Own funds Loans Grants
Repayment model	Guaranteed Savings Agreement

Project risk Profile

Performance risk	ESCO
Recourse	Not applicable
Financial risk	ESCOs

Model Requirements

Staff Requirements	Moderate Less than 10 FTE
Equity or funding requirements	Low Less than 1 million €

Model Key indicators

Investment volume since creation	11,25 million €
Size of project (or project portfolio)	4 - 6 M€
Level of average energy savings	23% - 32,5%

Development maturity

Development/implementation stage	Growth
Operational development maturity	Growth
Financial development maturity	Growth

Model Qualification

Level of establishment	Few examples
Growth of potential	Large
Scalability of the model	High

Replicability of the model	High
Impact on public balance sheet	High

Sources

<https://ensambprosjekt.wordpress.com/english-summary/>

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