



One-stop shops in Public Buildings: The role of ESCOs and EPC

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**The European Commission's
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Background

- The most frequently cited reason for local authorities (LAs) not engaging in comprehensive building retrofit and energy efficiency activities is a perceived "lack of capital".
- The truth of the matter is that even cash starved local governments can take advantage of different financing methodologies to get the work done from pre-feasibility analysis to monitoring and verification of energy savings.
- It is simply a matter of knowing whereto look for the capital- and how to structure the form that the capital will take in the transaction that will best suit LAs unique needs.

Cause of Financing Barrier

- Problem not caused by a lack of available funding capacity in many/most local markets.
- Caused by an inability of EEPs to access existing funds due to a “disconnect” between traditional Asset-based lending to corporations versus Cash Flow-based project financing to EEPs.
- Solution to problem difficult because energy efficiency markets are not developed enough to motivate local banks to invest in setting up an EEP lending infrastructure.

Difficulty” of Financing EEPs

Local Financing Institutions (LFIs) typically:

- Are accustomed to providing “asset-based” lending at 70%-80% of the market value of assets being financed, or other collateral.
- Do not recognize the Cash Flow generated by EEPs as a new asset to be valued in the financing structure (credit enhancement).
- Are not familiar with the intricacies of financing EEPs - creating a perceived high-risk lending profile for EEPs.
- Do not have the internal capacity to properly evaluate EEP risks/benefits nor to structure their financing in market-acceptable ways.
- Are unwilling to invest the time and resources needed to develop lending infrastructure due to relatively small dollar size of each EEP.
- Experience market conditions that preclude commercially-viable financing to EEPs (high interest rates and short repayment terms).

Financing Options

LAs have several options before them in terms of how they seek to finance building energy retrofits. These include:

- 1) Own Source Revenues;
- 2) Direct Borrowing;
- 3) Third Party Financing;
- 4) Innovations and Future Options;

Capital Structure

Debt Financing		
On-balance-sheet	Off-balance-sheet	
Bank loan	ESCO	Leasing

Security behind the loan		
Collateral	Guarantees	Insurance

Equity Financing			
Internal sources		External sources	
Cash	In-kind contribution	Investor	Revenue
			EU funding
			Carbon finance

Direct Borrowing

LAs can usually obtain long-term debt at a low cost through the issuance of **General Obligation Bonds** (GOs). The risk associated with GOs is that the issuer is at financial risk, it affects the balance sheet directly, and there is a chance that the proceeds of the bond issuance could go "stale" while a program lags in development.

Loans are an obvious method for which LAS could draw on available funds from eager financial institutions. Funders would look at the credit risk of the LAs and offer a rate of interest reflecting the cost of capital, swap costs to hedge interest risk, and a profit margin which varies depending on the lending institution, the municipal client, and the perceived risk. Loans tend to be more costly to LAs, and they put the municipal corporation directly at risk.

Third Party Financing

- Perhaps the easiest way for LAs to undertake comprehensive building energy retrofits is to allow someone else to provide the capital and to take the financial risk. With these alternative methods of financing, one can expect a **higher cost** to reflect the fact that the debt resides on someone else's balance sheet.
- Nonetheless, as it should become clear, the interest rate is only one factor among many that should be considered in determining the suitability of a project financing vehicle.

Off-balance sheet financing

- **Operational leasing**
- **ESCO – Energy Service Company and EPC**
- **Forfeiting**
- **Public Private Partnership**

BOOT - Build, Own, Operate and Transfer of infrastructure projects, promoted and financed by the private sector, whereby the promoter builds, owns and operates the project and only after a specified number of years does it transfers it the ownership back to the public sector.

Concession - An understanding between a company and the host government that specifies the rules under which the company can provide service locally.

Energy Service Companies (ESCOs)

Financing is arranged so that the energy savings cover the cost of the contractor's services and the cost of the energy efficiency equipment. Repayments are often through lease purchase arrangements on equipment. The repayment options are negotiable and include the following:

- "*shared savings*" agreement in which the contractor takes a fixed percentage of the energy savings for a predetermined length of time;
- "*first out*" agreement in which the contractor receives all the energy savings until either the end of a specified time period, or the cost of the project is paid off;
- "*chauffage*" agreement in which a building owner is guaranteed a fixed energy cost savings over a period of the contract;
- "*energy savings*" agreement, in which the buildings owner pays a flat fee each month for the energy needs covered in the contract.

Definitions

ENERGY SERVICES (ES)

The physical benefit, utility or good derived from a combination of energy with energy efficient technology and/or with action, which may include the operations, maintenance and control necessary to deliver the service, which is delivered on the basis of a contract and in normal circumstances has proven to lead to verifiable and measurable or estimable energy efficiency improvement and/or primary energy savings (Directives 2006/32/EC, 2012/27/EU)

ENERGY SERVICE COMPANY (ESCO)

A natural or legal person that delivers energy services and/or other energy efficiency improvement measures in a user's facility or premises, and accepts some degree of financial risk in so doing. The payment for the services delivered is based (either wholly or in part) on the achievement of energy efficiency improvements and on the meeting of the other agreed

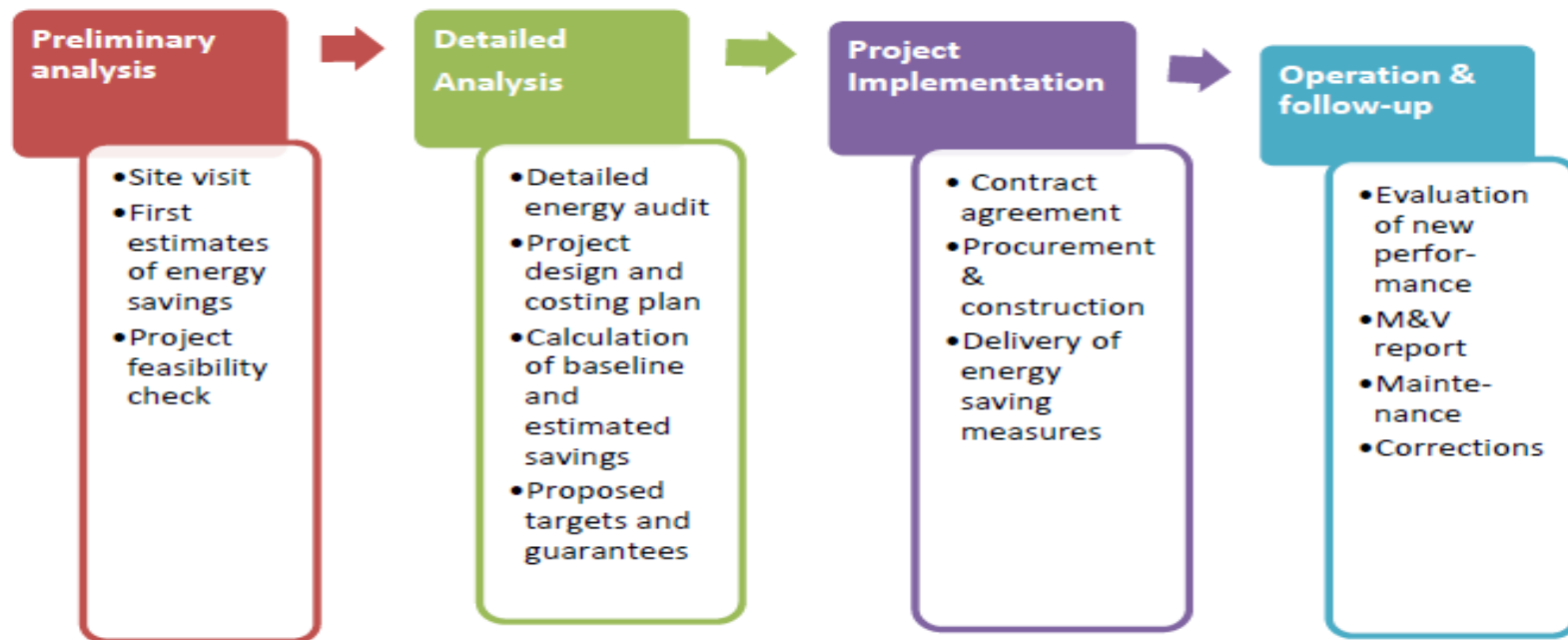
ENERGY PERFORMANCE CONTRACTING (EPC)

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 or service) in that measure are paid for in relation to a contractually agreed level of energy efficiency improvement or other agreed energy performance criterion, such as financial savings (Directive 2012/27/EU)

ENERGY SERVICE PROVIDER

A natural or legal person that delivers energy services and/or other energy efficiency improvement measures in a final customer's facility

Typical ESCOs activities



Benefits of EPC

From the Beneficiary (public administrator or client) point of view an EPC project offers the following opportunities:	From the Contractor (EPC provider) point of view:
<ul style="list-style-type: none">• involvement of private funds for a public project, which is excellent especially if the public body is limited in budget;• can be a cheaper solution (but not always!) than in-house project management;• transfer of technical and often financial risk;• receiving complex renovation package (if wanted);• no need for sophisticated in-house expertise;• project management overtaken, thus ability to focus on core activities;• possibility to get involved in more projects (liquidity issues resolved).	<ul style="list-style-type: none">• long term projects possible (usually);• reliable partner, including payment (usually);• large projects, often pooled;• dissipation effect (among public sector bodies and to the private building owners);• baseline available (usually).

Some Examples



LOCAL PARTNERSHIPS

Local Partnerships is jointly owned by



HM TREASURY



INTRODUCING RE:FIT

Public sector bodies



Partnership

Energy
Performance
Contract

Partnership

Partnership



Framework of
providers



Expert teams

Guaranteed energy and water savings

A BRIEF HISTORY OF RE:FIT

Re:fit 1 Piloted in 2008, launched in 2009 by the Mayor of London.

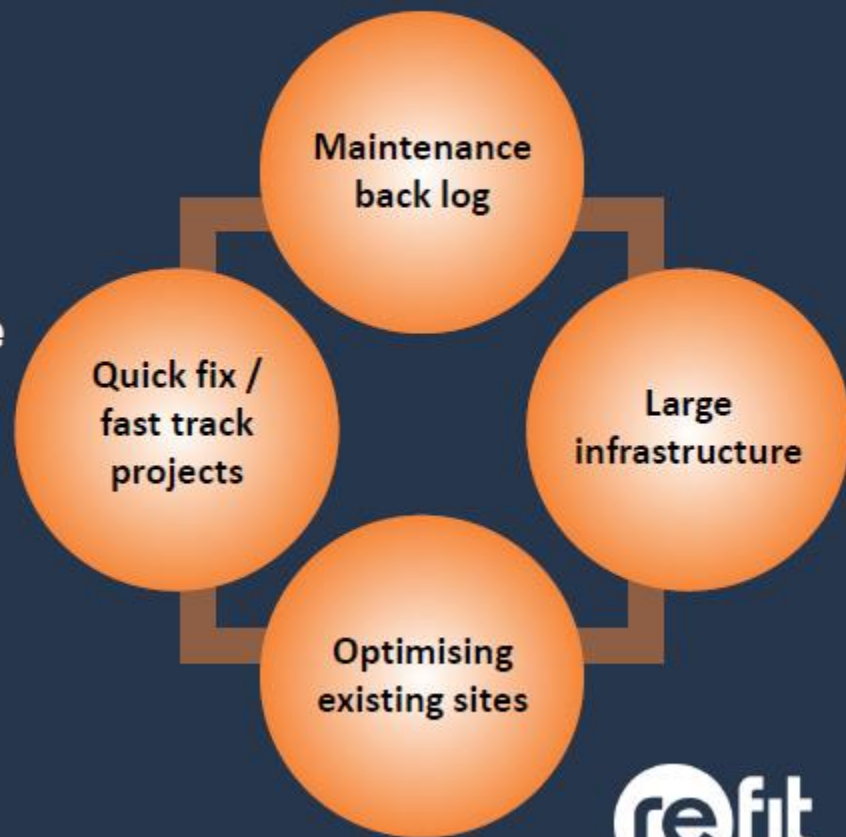
Re:fit 2 GLA procured and launched second Framework, Local Partnerships began supporting organisations in England in 2014

Re:fit 3 Local Partnerships, GLA and CCS procured and launched third iteration of the Framework in 2016. Re:fit Cymru supported by Welsh Government



PROJECTS NORMALLY SUPPORTED?

- **New and improved equipment**
- **Reduction of maintenance backlog & reactive costs**
- **Improved systems and building knowledge**
- **Energy security**



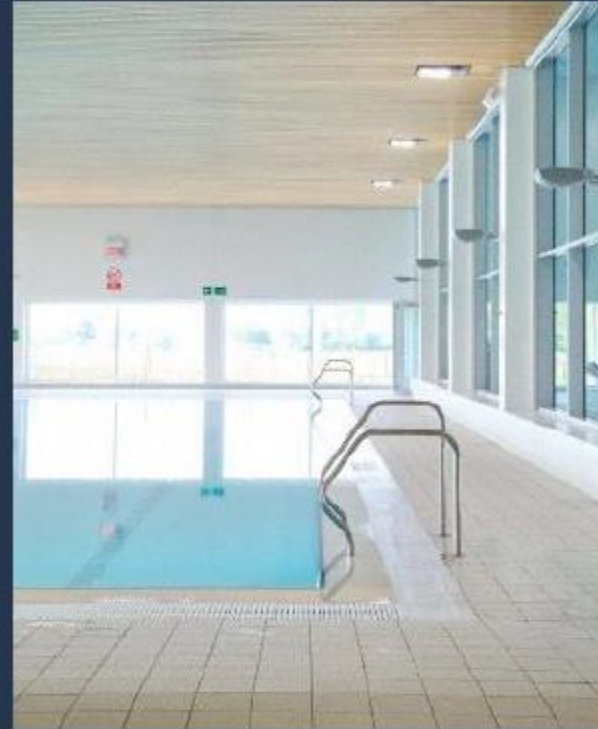
HOW RE:FIT WORKS

Re:fit National it's a simple seven step process



SOLUTIONS

- Lighting upgrades and controls
- Boiler upgrades and replacement
- Combined heat and power (CHP)
- Heating controls
- Heat recovery
- Cooling and air-conditioning systems
- Building management systems
- Voltage optimisation
- Variable speed drives
- Building fabric improvements
- Street lighting
- District heating
- Large scale energy plant solutions
- Solar – photovoltaic panels
- Water saving measures



RENOWATT

• 2017



RenoWatt is partner of the H2020 project



GRE Liege – Reconversion economic agency of Liege province

Groupement
Redéploiement
Economique



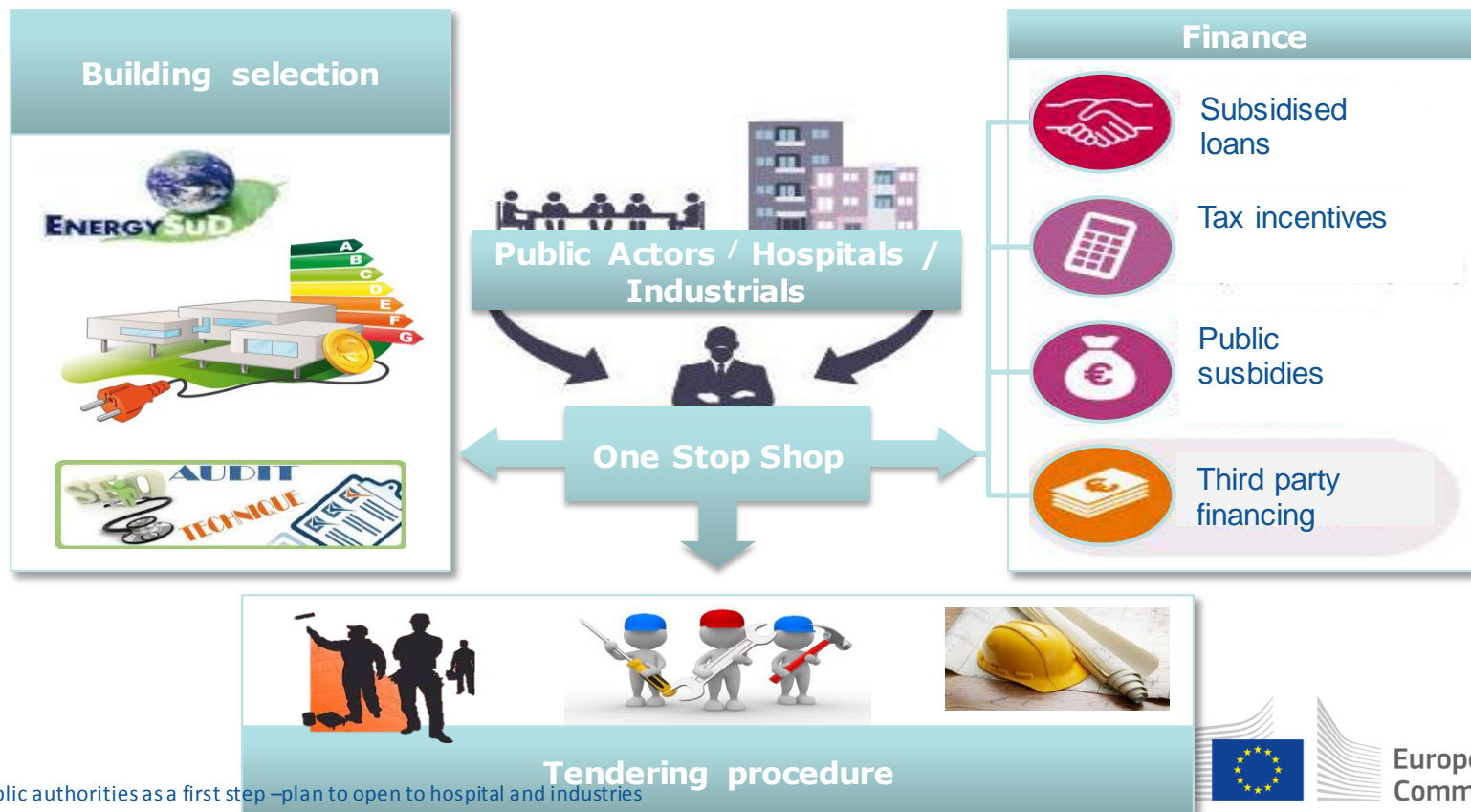
- Develop conditions to create sustainable jobs for the future generations
- Created in 2004, following the announce of Arcelor Mittal [closure](#)



Energy renewal offers real potential for jobs creation and businesses in Wallonia

- If 60% of the buildings in Wallonia are renewed, there is a potential for
 - 30 billion euro
 - Maintenance / creation of 500,000 jobs (if everything is done at once), or 16,000 jobs if the investments are spread over the next 30 years
 - For Liège, maintenance / creation of more than 4000 jobs
- 93% of the energy consumption in Wallonia is imported

Support beneficiaries (local authorities, hospitals, industrials...) in their energetic retrofitting projects through a one-stop-shop



Grouping buildings into different pools / lots comprising multiple buildings

- Grouping multiple buildings, depending on the potential energy savings within a single project
- The buildings may belong to a single public body or to multiple public bodies

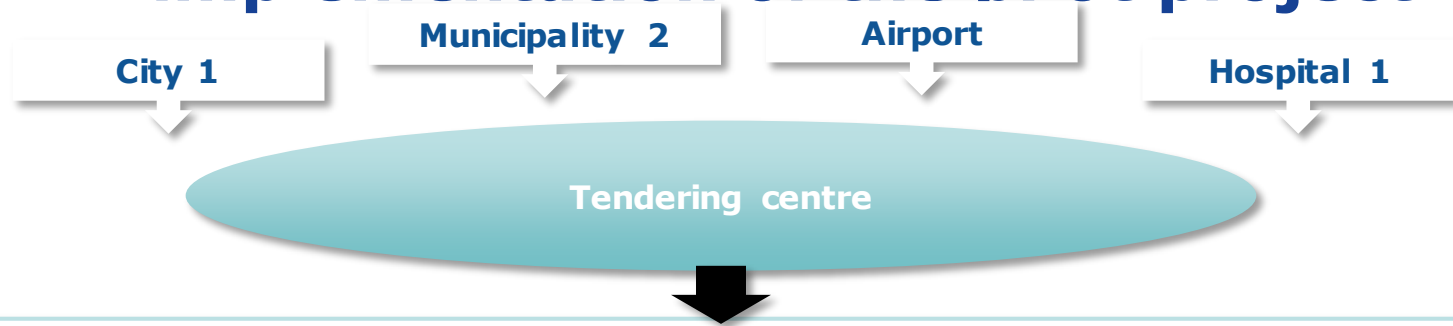


- Achieving an **adequate size for** the EPC
- **Diversifying the risk** for financiers (and obtaining more attractive financing conditions)
- Reducing the number of contracts (and transaction costs)

RenoWatt' approach for the EPC

- Global solution (conception, works and maintenance)
- A guarantee on your forecasted energy savings
- Win-win approach between the public authorities and the ESCO (both parties have a profit in case of extra energy savings)
- Financing possibility support
- Included in the country debt - No third party investment as too expensive for municipalities

Launching a tendering agency: implementation of the pilot project



Selection guides for
qualitative
candidate selection

Selection of
candidates for
each of the
tenders

Tenders from
tenderers pre-
selected

Successful
tenderers
chosen

Thank you for your attention!

DG Joint Research Centre (JRC)

Directorate C.2 Energy, Transport and Climate
Energy Efficiency and Renewable Energies Unit

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