

Model 3

London's Building Retrofit Programme - RE:FIT

Greater London – United Kingdom

OWNERSHIP	PUBLIC
Program authority	Greater London Authority
Program Delivery unit	RE:FIT Programme Delivery Unit (PDU)
Implementation Model	Energy Performance Contracting (EPC)
Operating Services	Marketer Facilitator Aggregator Financial advisor Assessor
Projects Financed	Energy Efficiency (building retrofits)
Ambition/targets	By 2025: Reach 40% of public sector buildings, reach 11 million m ² , reach 400 Million £ investment Intermediary target by 2015: Retrofit up to 600 buildings, reach 1,6 million m ² and savings of 45,000 tonnes CO ₂
Beneficiaries	London based public sector organisations
Funding Vehicle	ESCOs Financial institutions Investment Funds Property owners
Financial Instruments	EPC Financing Loans Grants

Summary

RE:FIT, or the retrofitting of London's public sector buildings, is one of the pillars of the Mayor of London's strategic approach to climate mitigation in London. It is a programme designed to help public sector and charitable organisations achieve substantial financial savings, improve the energy performance of their buildings and reduce their CO₂ footprint based on the principle of Energy Performance Contracting (EPC).

The programme's ambition is to reach, by 2025, 40% of the public buildings, this would correspond to some 11 million m² and would represent an investment amount of 400M £. Its intermediary targets for 2015 are to retrofit 600 buildings corresponding to 1,6 million m² and representing CO₂ emission reductions of 45K tonnes.

The first RE:FIT framework to deliver the programme was created in 2010, building on experiences with pilot BEEP (Building Energy Efficiency Programme) which was in place from 2009 to 2010. It

streamlines the procurement process for energy services by providing pre-negotiated, EU-regulation-compliant contracts that can be used with a group of pre-qualified Energy Service Companies (ESCOs) for the design and implementation of energy conservation measures.

The second RE:FIT framework, OJEU (Official Journal of the European Union) procured by the London Authority, started in September 2011 for a period of 48 months. The 2nd RE:FIT framework, is operated by RE:FIT Programme Delivery Unit (PDU). PDU basically manages the RE:FIT framework of suppliers, facilitates the uptake by London's public sector organisations and supports the beneficiaries through all project stages.

In the summer of 2013 the GLA launched a specific RE:FIT School programme targeted to address energy efficiency in schools. The programme is supported by Salix, an independent, publicly funded company, dedicated to providing the public sector with loans for energy efficiency projects. Salix provides interest free loans to participating schools up to 100% of the project value.

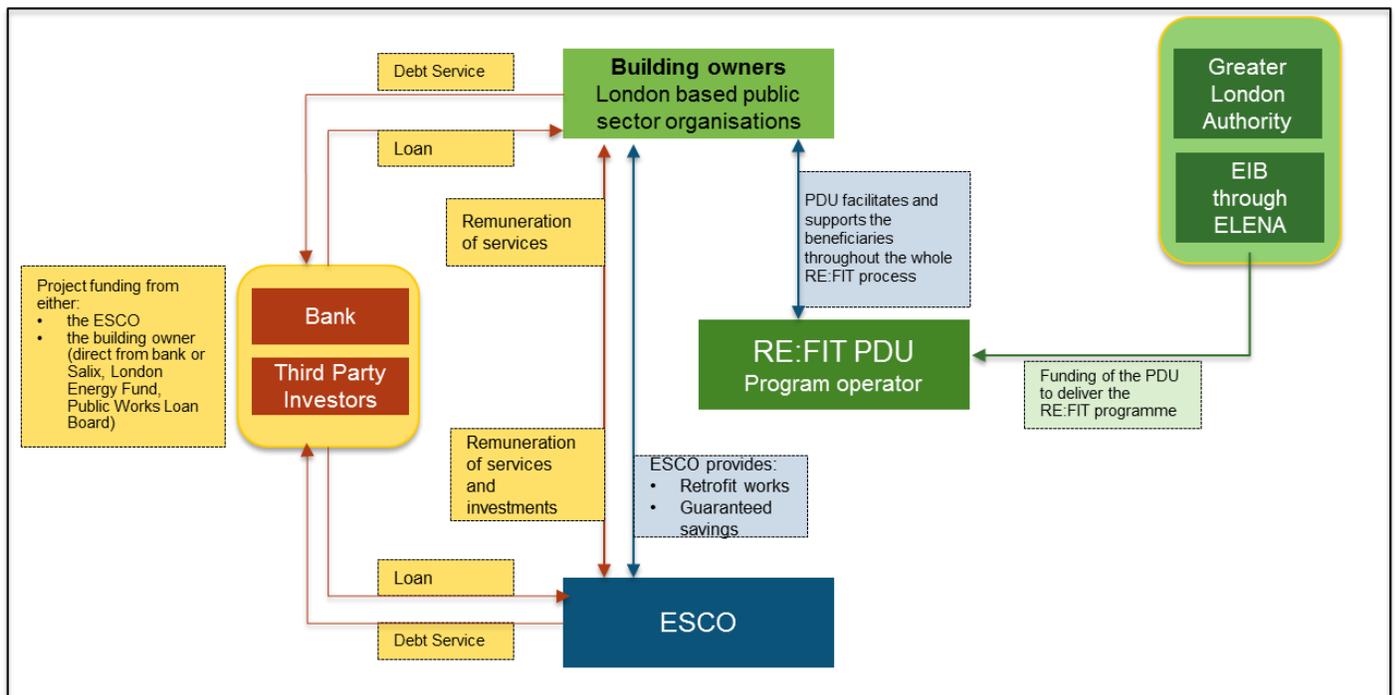
So far the PDU has been able to engage 199 public sector organisations in the programme, representing a total investment value of 68,6M £. About 460 buildings have been retrofitted or are in the process of being retrofitted.

How does it work?

- Public sector organisations interested in retrofitting their buildings based on the principle of EPC will first need to sign a Memorandum of Understanding to the RE:FIT programme. It indicates interest and commitment at senior level.
- This allows the PDU to develop a full retrofit project and support the organisation through the whole RE:FIT process in its role as facilitator and financial advisor.
- The following steps need to be considered:
 - Identification of the buildings to be retrofitted
 - Setting of target energy savings and the payback period
 - Decision on funding approach
 - Completion of project brief
- From this moment on an ESCO must be chosen.
- Under standard procurement rules a sometimes lengthy and cumbersome tender process needs to be initiated by the public sector building owner. The RE:FIT framework has simplified this procurement process by providing pre-negotiated, EU-regulation-compliant contracts that can be used with a group of 12 pre-qualified ESCOs. Here the building owner only needs to run a mini competition to select an Energy Service Company (ESCO) to carry out the works and guaranteed energy saving measures.
- The chosen ESCO installs the energy conservation measures, delivers the service and carries out measurement and verification during the agreed contract or payback period.
- Typical energy conservation measures include:
 - Equipment: Variable Speed Drive (VSD) on pumps and fans, heat recovery, insulation to pipe work, radiator reflector panels, PC control (automatic overnight computer shutdown), voltage optimisation, Building Management System (BMS) controls

- Lighting retrofit, relighting and controls
- Building envelope: draught proofing, cavity wall insulation, loft insulation, secondary glazing,
- Energy production: district heating, photovoltaic panels, solar thermal, combined Heat & Power (CHP)
- Funding of the projects can include the following: own funding by the building owner, borrowing directly from banks or from public financial institutions and funds such as Public Works Loan Board, Salix or London Energy Efficiency Fund, or can be financed through a third party (E.g. ESCO). The PDU, as financial advisor, can advise organisations on the types of funding available and how these are accessible.
- PDU was provided to the RE:FIT users at no cost as a result of the 2,4M £ ELENA funding and the almost 0,3M £ funding from Greater London Authority. Recently GLA has changed that policy and as from October 2015 full support will be given to organisations for a contribution of 2,500£ (excl VAT).

Fig 1. Operational and financial model



The program delivery unit

RE:FIT PDU is the program delivery vehicle of the energy retrofitting programme RE:FIT in London. It acts as the permanent energy efficiency management office of the programme under supervision of the Greater London Authority.

The role of the PDU is to manage the RE:FIT framework, to support RE:FIT users throughout the entire RE:FIT process (from management buy-in to service delivery and performance monitoring) , to drive and facilitate the uptake by London based public sector organisations and to develop best practice approaches, templates and standards. It acts as projects facilitator, marketer, aggregator and financial advisor.

The RE:FIT PDU has about 10 staff and is being run by Turner & Townsend under the supervision of the GLA programme director. Turner & Townsend, supported by PA Consulting Group, was appointed in September 2011 to run the RE:FIT PDU on behalf of the GLA for a 3 year period.

Since 2011 the PDU operations have been secured by a 2,67M £ funding. Of this funding amount some 90% or 2,4M £ have been provided by ELENA (European Local Energy Assistance run by the EIB) and some 10% or 0,27M £ by the Greater London Authority.

RE:FIT PDU aims to leverage its operating costs 25-36 times in delivered capital investment or minimum of 66Mio £ by 2015, but with aim of 96 Mio £

As the current RE:FIT framework will come to an end in the course of 2015 the GLA is working on putting a new RE:FIT framework in place. The necessary 2,5M £ to 3,0M £ funding for the next phase is still to be secured. It is expected that the bulk of funding will come from the GLA and from charges applied to organisations seeking support from the RE:FIT PDU.

Legal structure	N/A
Shareholder description	N/A
Equity	N/A
Shareholders	N/A
Program dedicated staff	Moderate - 10 FTE
Program operational costs	Moderate

Organization and partnerships

Greater London Authority (GLA): programme owner and political initiator. Supports part of the operating costs of the programme delivery unit.

RE:FIT PDU: is the permanent energy efficiency programme management office. It provides staff, procedures, tools and services for the program. It offers program delivery unit services such as marketing and engagement, project facilitation; aggregation and financial advice. Turner & Townsend, supported by PA Consulting Group, have been appointed to run the RE:FIT PDU on behalf of the Greater London Authority for a 3 year period.

- **Turner & Townsend:** professional services provider to businesses that invest in, own and operate assets in the public and private sectors.

- **PA Consulting Group:** is a consulting, technology and innovation firm

Public Financial institutions and Funds:

- **Salix:** delivers 100% interest-free capital to the public sector to improve their energy efficiency and reduce their carbon emissions. Salix was established in 2004 as an independent, publicly funded company, dedicated to providing the public sector with loans for energy efficiency projects
- **LEEF (London Energy Efficiency Fund):** invests in energy efficiency retrofit to public, private and voluntary sector buildings and infrastructure in order to make it more energy efficient and environmentally friendly. LEEF is one of three 'Urban Development Funds' (UDFs) procured by the European Investment Bank (EIB) on behalf of the London Green Fund
- **PWLB (Public Works Loan Board):** is a statutory body operating within the United Kingdom Debt Management Office, an Executive Agency of HM Treasury. PWLB's function is to lend money from the National Loans Fund to local authorities, and to collect the repayments.

International institutions:

- **European Local Energy Assistance (ELENA):** is part of the European Investment Bank's broader effort to support the EU's climate and energy policy objectives. This joint EIB-European Commission initiative helps local and regional authorities to prepare energy efficiency or renewable energy projects

ESCOs: 12 pre-qualified Energy Services Companies

Beneficiaries

Beneficiaries	London based public sector organisation and charities
Type of projects	Energy Efficiency (building retrofits)
Operational support	Project facilitation through the Project Delivery Unit
Financial support	Project facilitation costs free of charge until September 2015

Funding mechanism

Program delivery unit funding	RE:FIT has been funded by ELENA (2,4M £) and the Greater London Authority (0,27M £)
Projects Funding	Projects are being funded by the building owners and in some cases by the ESCO.
Funding Vehicle	Public ESCO Property owners
Fund size	Not applicable
Fund type	Not applicable
Fund sources	Unknown
Financial Instruments	EPC Financing Loans Grants Own funds

Achievements

To date the RE:FIT programme has achieved the following:

- 199 organisations engaged (Summer 2015) (31 of 33 London Burroughs, 25 NHS (National Health Service, UK's healthcare system) organisations and 143 other organisations (central government, museums and education)
- 440 buildings retrofitted or in the process of being retrofitted
- 68,6 Mio £ achieved capital investment (Summer 2015)
- 5Mio £ per annum of energy savings
- 34,5K tonnes CO₂ saved/year

Investment amounts range from less than 0,1M £ to over 6,0M £ and energy savings range from 7% to 47% with the bulk of energy savings between 15% and 30%.

The RE:FIT programme has won a number of awards in the fields of government and sustainability.

Local Partnerships, a joint venture between HM Treasury and GLA, working with the Department of Energy and Climate Change (DECC), is building on the success of the London RE:FIT scheme to support public sector organisations outside London implement RE:FIT across their buildings portfolio.

Some details:

RE:FIT users	Buildings	Investment M£	Energy Savings	CO2 reduction (tonnes)	Payback period
Pilot	42 buildings	7,00	28,0%	7.000	7
Enfield	council buildings	1,70	21,0%	1.700	7
Ealing	3 health facilities	1,04	29,0%	1.000	5
Newham	University hospital	0,40	9,8%	732	5
Kew	Royal Botanic Gardens	0,70	7,0%	760	6
Harrow	8 public sector buildings	1,00	38,0%	685	9,5
Goldsmiths	University of London	6,00	47,0%	3.000	12
Waltham Forrest	NHS	0,10	9,5%	139	5,5
Colville	Primary school	0,07	29,0%	50	7
Waverly	School	0,24	25,0%	163	8
London	LSE	2,30	18,0%	8.574	7
DECC	2 Grade II listed buildings	0,60	14,6%	159	12
Camden	19 buildings	1,40	28,0%	978	5
Croydon	18 buildings	1,70	15,0%	1.300	8,5
Tower Hamlets	TH College	0,90	26,0%	440	15
Newham	University Hospital	0,44	9,8%		5
West London Alliance	11 buildings	0,73	28,0%	595	7
Brent	15 council buildings	0,94	25,0%	645	8,5
Sutton	10 council buildings	1,07	20,0%	846	7

Olympic Delivery Authority	12 primary and secondary schools	0,55	35,0%	701	4
		28,88		29.467	

Contact details

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Factsheet

General Info

Country	United Kingdom
Model Name	RE:FIT London's Building Retrofit Programme
Date of creation	2009

Model Description

Ownership	Public
Program authority	Greater London Authority
Program delivery unit	RE:FIT Programme Delivery Unit (PDU)
Operating services	Marketer Facilitator Aggregator Financial Advisor Assessor
Implementation model	Energy Performance Contracting (EPC)
Types of projects financed	Energy Efficiency (Buildings retrofit)
Beneficiaries	London based public sector organisations and charities
Geographical coverage	Regional 8,63 Million inhabitants

Financial Model Description

Project funding	Public
Project funding vehicle	Property owners ESCOs
Financial instruments	EPC Financing Loans Grants Own funds
Repayment model	Guaranteed savings agreement

Project risk Profile

Performance risk	ESCOs
Recourse	n/a
Financial risk	Building owners ESCO

Model Requirements

Staff Requirements	Moderate to high 10 FTE
Equity Requirements	n/a
Funding Requirements	Moderate Less than 5M €

Model Key indicators

Investment volume since creation	68,6M £
Size of project (or project portfolio)	0,1M £ to +6,0M £
Level of average energy savings	20% - 30%

Development maturity

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

Model Qualification

Level of establishment	Well established
Growth potential	Large
Scalability of the model	High
Replicability of the model	High
Impact on public balance sheet	High - Most of the funding is own funding

Sources

<http://refit.org.uk/>

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