



21st November 2013

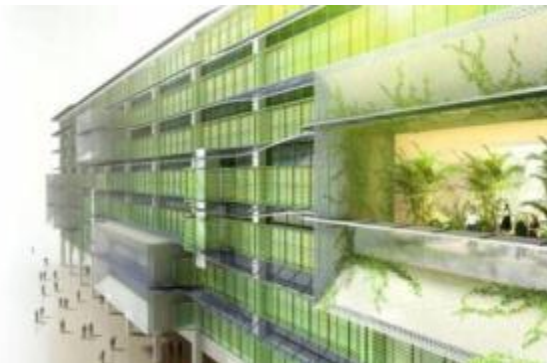
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RE:FIT

case study - YORprocure energy workshop

RE:FIT – background

- ❑ framework contract (open to entire public sector – UK wide)
- ❑ overseen by the GLA
- ❑ EPC - retrofitting of public buildings to save energy (& water)
- ❑ politically endorsed (central gov, DECC, DfE, etc)
- ❑ LCC have conducted 3 'phases'



benefits of using RE:FIT

- ❑ reduced procurement lead times/costs
- ❑ spending to save
- ❑ availability of various financing routes (PWLB, Salix, internal reserves, etc)
- ❑ flexible payback periods
- ❑ buying-in expertise
- ❑ **transfer of risk – contractually – for achieving savings**
- ❑ more cost efficient than single technology procurements
- ❑ added value (environmental policy/strategy, CRC, & maintenance)



application of RE:FIT improvements



1. selection of buildings

- process of elimination based on:
 - asset life
 - higher energy consumption
 - minimal energy efficiency works already undertaken
 - availability of site to undertake works
 - levels of recent investment
 - other planned works

2. key project challenges

- building issues (asbestos, broken plant, protected species, unforeseen changes, etc)
- site engagement
- ensuring fair repayment mechanism



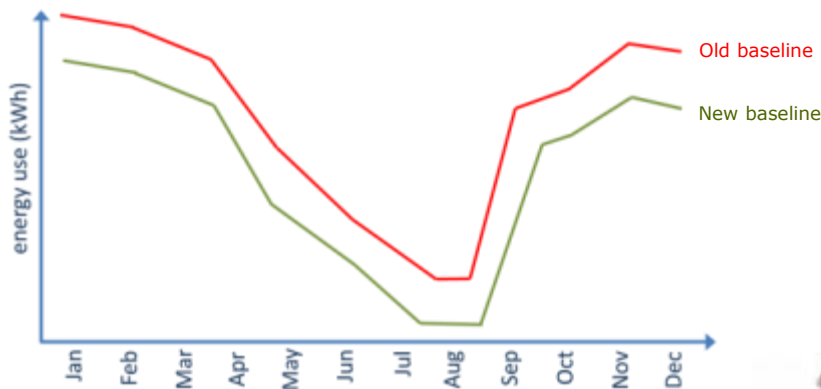
common measures

- boiler optimisation/replacement
- voltage optimisation
- air handling unit upgrades
- BMS controls
- insulation
- lighting upgrades
- radiator controls
- air source heat pumps
- pool covers & controls
- microCHP
- microgeneration



RE:FIT achievements – past & present

scheme	capital	no. of sites	min. % saving	% saving offered	max. payback period	payback period offered
LCC (phase 1)	£1m	9	23%	27%	7 years	5.9 years
LCC (phase 2)	£1m	7	19.5%	21%	7 years	5.3 years
Leeds schools	£500K-£800K	9	20%	? %	7 years	? years



example of a financial return

A. Capital costs (£)	1. Energy conservation measures (materials & labour combined across portfolio)	£725,000
	2. Project prelims across all buildings in portfolio	£10,000
	3. Internal council fees (project management, CDM, site supervision, etc.)	£85,000
	4. Total investment grade proposal costs	£30,000
	5. Cost of finance for prudential borrowing	£150,000
	6. Total capital cost [=sum(A1:A5)]	£1,000,000
B. Annual charges/revenue (£)	1. Measurement & verification costs across portfolio	£25,000
	2. Maintenance (costs and/or savings)	£7,500
	3. Revenue (e.g. revenue from microgeneration)	-£5,000
	4. Total annual charges/revenue [=sum(B1:B3)]	£27,500
C. Gross energy cost savings £ (0)		£190,000
D. Net guaranteed cost savings £ (= C-B4)		£162,500
E. Payback period (=A6/D)		6.2 years
F. Net % cost reduction against baseline (=D/H)		21.7%
G. Return on investment (ROI) based on 7 year contractual term [= (D*7)/A6]		113.8%

H. Overall baseline costs (£)	£750,000
I. Gas unit rate	3.785p
J. Electricity unit rate	9.761p
K. Guaranteed gas savings	2,774,120 kWh
L. Guaranteed electricity savings	870,810 kWh
M. Guaranteed gas cost savings	£105,000
N. Guaranteed electricity cost savings	£85,000
O. Overall guaranteed energy cost savings	£190,000



who needs to be in the project team?

- project management
- procurement
- corporate property (asset) management
- property maintenance
- energy unit (or team)
- corporate finance
- site representation
- project sponsor
- ICT



key lessons learnt

for a successful project, you must:

- ❑ create a multi-disciplinary team
- ❑ identify dedicated internal resources
- ❑ choose buildings carefully
- ❑ engage site managers from the outset
- ❑ make sure building information is detailed
- ❑ don't be overly ambitious
- ❑ proactively manage the process
- ❑ remember that RE:FIT projects are not easy!
- ❑ use available help

Lessons
Learned

support available from Local Partnerships



questions

