

IEA EBC Annex 61 Subtask B



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Objective of Subtask B

- Develop business models for deep energy retrofit/refurbishment of buildings and building groups using combined government/public and private funding to overcome existing hurdles and to support the necessary acceleration of the refurbishment activities

In broad outline, Subtask B anticipates completing the following tasks:

- Gather case study information on business models used in existing deep retrofit projects.
- Gather information on country-specific business practices for deep retrofit projects using mixed public-private funding
- Compare and contrast business models to highlight commonalities and develop three or four overarching categories
- Present results at Investor's Forum
- Develop "Investor's guide to deep energy retrofit projects"
- Develop risk assessment framework for deep energy retrofit projects
- Prepare final report

Phase I, October 2013 – March 2014

- In connection with Subtask A data collection, information will be collected from case studies regarding the business model of the case as well as from national practices and the governing legislation
- Data needs that can be covered in the case studies to benefit Subtask B are:
 - Total project cost
 - Financing framework
 - Energy savings
 - Contract model (Financier – ESCO – GC)

Phase II, April 2014 – December 2014

- Using the information gathered, various business models will be compared -> move from case studies to establish forms of business models
- Results will be presented to an Investor's Forum, which will be held in the second half of 2014
- Investor's forum will bring together active and potential investors, to whom investment in energy efficiency can be considered an attractive market

Deep retrofits in the US: US Army

- Combine a government-funded building renovation project with privately-financed energy savings performance contract
- For legal reasons, requires two different contractors and two separate projects – one for the energy retrofit, and one for non-energy-related renovation tasks
- Requires a government organization to act as “integrator” of the two construction projects
- A \$5.2 million project is under design at Fort Carson that will achieve 60-70% energy savings

Deep Retrofits in the US: General Services Administration (GSA)

- 10 projects being constructed across the US (and its territories) under GSA's National Deep Energy Retrofit program
- Total investment of \$177 million
- Energy savings range from 16% to 100%, with average savings of 38% over pre-retrofit energy use
- Uses conventional ESPC development process, i.e. not coupled with building renovation
- Need for deeper energy savings was stressed in a series of design charettes with ESCOs
- Established centralized project management office to “batch” the award process was able to minimize development time

What other countries can contribute case studies?

- Germany ...?
- Denmark ...?
- Finland ...?
- etc.
- Need to think also “why” these cases selected are relevant for the business model discussion

Objectives of Investor's Forum

- Bring together government representatives, technical experts, ESCOs, and financiers
- Review case studies of past and ongoing deep energy retrofit projects
- Review business models for achieving deep energy retrofits in government buildings
 - Financial risks
 - Technical risks
- Explore new business models and methods of reducing technical and financial risks to increase the number and magnitude of deep energy retrofit projects in government buildings
- Output: Report entitled “Investor’s guide to deep energy retrofit projects”

Thinking out loud on the investor's forum/roundtable

- We should be able to demonstrate that deep energy retrofits are attractive market for investors
- We should be able to attract "out-of-box" investors, not just the usual suspect
- We need to think what can create this required attractiveness:
 - Potential large projects?
 - Examples of successful financing schemes
 - Other?
- Location, location, location...

Presently, we have information on US deep retrofits, and little else

- Chances are, the forum will attract European investors and ESCOs
- We need information on European deep retrofit projects, no matter how they were funded
 - Building size, function and location
 - Energy use before/after retrofit
 - Energy costs before/after retrofit
 - Description of retrofits
 - Cost of retrofits
 - Method of funding

Other issues

- Annex 61 website operative at iea-annex61.org
 - Need photographs of participants
 - Need content
- Repository for working documents
 - Initially utilized Google Docs, but not all organizations could access the site
 - Now moved to a Dropbox folder accessible to all members