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