Accelerating the UK’s energy efficiency finance market - the role of the Investor Confidence Project

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European Commission Disclaimer

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Europe’s Climate and Energy Goals and Costs

• 2050 Roadmap Goals
  – 79-82% overall economy-wide GHG-reduction
  – 88-91% building sector GHG-reduction

• Costs
  – Building sector reductions will cost:
    • €3.5 trillion
    • €95 billion annually¹

¹) Europe’s Buildings Under the Microscope, Building Performance Institute of Europe, 2011
Status report on EE financing

• Scale of market *potential* recognized ✔
• Co-benefits increasingly recognized ✔
• Growing interest from institutional investors ✔
• Slow development of the EE financing market – leading to frustration ✗
A healthy European energy efficiency market would have:

- Strong demand by owners and investors
- Highly skilled and accredited workforce
- A mix of financing products at attractive rates
- Standardized tools for tracking and quantifying savings
- Active secondary market
The Energy Efficiency Capital Gap

Projects

• Untapped Market Opportunity
• Healthy Returns
• Established Industry
• Excess Capacity

Investors

• Search for yield
• Risk/Return
• Growing emphasis on Impact Investing
• Growing interest in EE
UK market context

• UK homes and places of work are some of the oldest and traditionally constructed buildings in Europe

• Approximately 1.8 million non-domestic premises and 5.6 million flats in the UK (lowest in Europe excluding Ireland and Norway)

• Energy efficiency has become a political priority due to energy prices and fuel security concerns

• There is over 80 TWh of outstanding cost-effective energy efficiency potential in this sector, mainly in non-domestic buildings

• UK energy efficiency market is worth more than £18 billion annually, and employs 136,000 people
Top 5 UK market trends

1. Minimum Energy Performance Standards choice editing worst performing stock from 2018

2. Green Deal policy designed to provide financed retrofit works (additional incentives required!)

3. UK Green Investment Bank providing pari-passu lending for energy efficiency programmes through specialist fund managers

4. Growth of national and regional refurbishment programmes e.g. SALIX, RE:FIT and RE:NEW and CEF

5. Energy Saving Obligation Scheme (ESOS) requiring mandatory audits for large businesses by 5th December 2015
The Main Barriers Today
“From a financier's perspective, energy efficiency projects entail high transaction costs and are perceived to be risky due to the difficulty of predicting accurately energy cost savings. Sufficient experience with underwriting energy efficiency loans and standardized evaluation methods for measuring and verifying energy savings is still lacking. The lack of secondary markets to provide exit opportunities for investors, or further liquidity to the investments is another important barrier.”

Citigroup conclusions

Energy efficiency is in a category by itself. With the exception of one company packaging energy efficiency, energy efficiency projects do not yet meet the requirements of capital markets. The industry is just too disaggregated. No two projects or contracts are alike. Securitization is not practical or possible under these circumstances. Say you have 1,000 energy efficiency projects, Standard & Poor’s would have to read 1,000 documents to assess the risk. Fees won’t pay for that level of review.

Michael Eckhart
Managing Director & Global Head of Finance and Sustainability at Citigroup
Lack of Standardization = Greater Risk

Greater performance risk
Higher transaction costs
Cannot build capacity
Cannot aggregate
Standardization Drives Finance

Table 3: EEFIG ranking of key drivers affecting supply of energy efficiency investment by market segment.

<table>
<thead>
<tr>
<th>Buildings Sector</th>
<th>Commercial</th>
<th>Public</th>
<th>Public Rental</th>
<th>Owner Occupied</th>
<th>Private Rental</th>
<th>Average Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standardization</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1.6</td>
</tr>
<tr>
<td>Regulatory Stability</td>
<td>1</td>
<td>4</td>
<td>2</td>
<td>4</td>
<td>3</td>
<td>2.8</td>
</tr>
<tr>
<td>Increased Investor Confidence &amp; Change in Risk Perception</td>
<td>2</td>
<td>5</td>
<td>7</td>
<td>5</td>
<td>4</td>
<td>4.6</td>
</tr>
<tr>
<td>Transaction costs / simplicity</td>
<td>7</td>
<td>10</td>
<td>6</td>
<td>2</td>
<td>1</td>
<td>5.2</td>
</tr>
<tr>
<td>Measurement, Reporting &amp; Verification (MRV) and Quality Assurance</td>
<td>4</td>
<td>2</td>
<td>4</td>
<td>10</td>
<td>8</td>
<td>5.6</td>
</tr>
</tbody>
</table>

Table 2: EEFIG ranking of key drivers affecting demand for energy efficiency investment by market segment.

<table>
<thead>
<tr>
<th>Buildings Sector</th>
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<th>Public Rental</th>
<th>Owner Occupied</th>
<th>Private Rental</th>
<th>Average Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standardization</td>
<td>6</td>
<td>3</td>
<td>1</td>
<td>11</td>
<td>2</td>
<td>4.6</td>
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<tr>
<td>Clear Business Case</td>
<td>1</td>
<td>7</td>
<td>9</td>
<td>9</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>Effective enforcement of regulation</td>
<td>4</td>
<td>6</td>
<td>6</td>
<td>8</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Awareness at Key Decision Maker Level &amp; Leadership</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>12</td>
<td>13</td>
<td>6.2</td>
</tr>
</tbody>
</table>
Energy financing

- **Standardized**
  - Mainstream
  - Large volume
  - Multiple sources

- **Not standardized**
  - Not mainstream
  - Small volume
  - Few sources
Investor Confidence Project
Addressing the barriers
Investor Confidence Project Europe

• Our Mission is to enable a market for investment in quality energy efficiency projects by reducing transaction costs and engineering overhead, while increasing the reliability and consistency of savings.

• Background
  – Provide open source tools and resources to help all energy efficiency market participants to improve project performance and investment attractiveness
  – European Commission and private investor funded
  – Broad participation from investors, engineers, programs, energy service companies, and building owners
  – Builds on 4 years of work in North America
Investor Confidence Project Outcomes

Increase deal-flow

- Increase confidence in savings
- Reduce transaction costs
- Streamline origination process

Reduce risk and cost

- Develop data to manage performance
- Attract project finance investors
- Enable portfolios and securitization
- Reduce cost of capital
Initial Focus: North America and Europe

Key Strategies
1. Create the tools to standardize the market
2. Take the tools to market through partnerships
3. Be a catalyst for scale
Programs like the Investor Confidence Project will “facilitate a global market for financings by institutional investors that look to rely on standardized products.”

– International Energy Agency

[Recommends creation of an] “EU Investor Confidence project supporting standard processes and open-source energy usage database”

– Energy Efficiency Financial Institutions Group
ICP North American Market Momentum

1/3 of GDP and 27% of population
ICPEU structure

Europe Steering Group
- Advises ICP Europe staff on program development and deployment
- Ensures that products and services are market-ready & industry-relevant

Ally Network
- Publicly support the ICP Protocols as a standard approach to engineering Investor Ready Energy Efficiency projects
- Benefit from informal networking among other market leaders and investors

Technical Forum
- Industry-leading technical advisory group
- Assists in the development and maintenance of Energy Performance Protocols

National Steering Group
- Dissemination of the project concept and results
- Ensuring adoption of the Protocols within the country.
ICP Europe Steering Group
European Ally Network Members

EMVC Solutions

CLIMATE & STRATEGY PARTNERS

Association for the Conservation of Energy

Green Investors

Decarbon Capital

Sea

ABRAFO NEGAJOULE

Verco

SIEMENS

British Energy Efficiency Federation

economienergy

CQ Estates

iveas Independent Verifiers of Energy Efficiency Savings

RdA CLIMATE SOLUTIONS

ecoProsperity Capital Ltd

abundance

Green Investment Bank

eeVs

mpw

EnergyPro

sefaira

Huber Dixon Insurance Services Ltd

The Crowd

Lenders Commercial Finance

GEOCAPITA

Joule ASSETS

BPIE

iRT surveys
Investor Confidence Project Europe

CREATE TOOLS
- Protocols
- Accreditation
- Labels
- Open data

TAKE TOOLS TO MARKET
- Private investors
- Public programmes
- Developers
- Property owners
- Utilities

BE A CATALYST FOR CHANGE
- Inspire action
- Connect projects to capital
- Create working examples
Key Strategy 1: Developing the tools
Investor Confidence Project

Key Strategies

1. **Create the tools to standardize the market**
   - *Shared protocols* based on existing (but varied) engineering standards
   - *Accreditations* that work across markets
   - *Labels* to easily identify “investor-ready” projects
   - *Open data* infrastructure, to empower new entrants
ICP Energy Performance Protocols

Baselining

- Existing Building
- Drawings
- Weather File
- Energy Usage
- Energy Rates
- Occupancy

Savings Projections

- Model File
- Calibration Data
- Bid Packages
- Certifications

Design, Construction, Commissioning

- Cx Plan
- Cx Authority
- Test Procedures
- Facilities Req.

Operations, Maintenance, Monitoring

- BMS Points
- Fault Plan
- Maintenance Plan

Measurement & Verification (M&V)

- M&V Model
- Regression Model
- Adjustments
- Impact
- Baseline Adjustments
Energy Performance Protocol Framework

- Baselining
- Savings Projections
- Design, Construction, Verification
- Operations, Maintenance, Monitoring
- Measurement & Verification (M&V)

**Elements**
- Standards
- Data Elements
- Qualifications

**Procedures**
- Best Practice Workflow
- Standard Industry Practices

**Documentation**
- Standard Documentation Package
- Itemized Outputs Required
ICP European Protocols

• Build 6 protocols based on European and National standards by February 2016
  – 3 for Non-domestic buildings
    (Large: over €1 million, Standard, Targeted)
    • offices;
    • educational buildings;
    • hospitals;
    • hotels and restaurants;
    • sports facilities;
    • wholesale and retail trade services buildings;
  – 3 for Apartment Blocks
    (Large: over €1 million, Standard, Targeted)
ICP Protocol Development

Organize market leaders to provide input into the development of the protocols

- Financiers
- Building owner groups
- Developers, installers, ESCOs
- Government agencies
- Utilities
INVESTOR READY ENERGY EFFICIENCY™

Project Development and Engineering

Software Provider

Project Lifecycle Management

Quality Assurance Provider

Third Party Verification

INVESTOR CONFIDENCE PROJECT

INVESTOR CONFIDENCE PROJECT

Energy Performance Protocol
LARGE COMMERCIAL v1.2
INVESTOR CONFIDENCE PROJECT

INVESTOR CONFIDENCE PROJECT
Project Development Specification

- Integrated with protocols
- Detailed coverage of topics, methods, best practices
- Comprehensive and interactive resource list
Key Strategy 2: Taking the tools to market
Investor Confidence Project

Key Strategies

2. Take the tools to market through partnerships

- **Governments**: mayors, national agencies, “green banks” and the European Commission
- **Private sector**: engineering firms, ESCOs, real estate portfolios, developers, banks, other investors, and potential new entrants
- **Utilities**: forward-thinking utilities and energy providers
ICP Tools to Market Partnerships

• Demand-side protocol adoption and technical assistance
  – Investors and banks
  – Owners
  – Government and utility programmes

• Supply-side capacity building
  – Developers and contractors
  – Quality assurance agents

• Market activation
Assistance to Demand-Side

• Incorporate protocols into diligence for active investors and owners
  – Institutional investors (Cassie de Depots, Deutsche Bank Wealth)
  – Private banks (ING, Deutsche Bank)
  – Public banks (EIB, Green Investment Bank, KfW)
  – Owners and Asset Managers (British Property Federation)

• Assist public renovation programs move to market
  – Covenant of Mayors
  – Energy efficiency obligation (16 countries)
  – Utilities (E.ON, EDF)
Supply-Side Assistance

• Adoption of protocols by supply chain
  – Developers (ARUP, Siemens, Schneider, eu.ESCO)
  – Quality assurance agents (EVO, DNV GL)
  – Contractors (REHVA, British Energy Efficiency Federation)
  – Manufacturers (EuroACE, PU.Europe)
Focus on Five Countries to Launch ICP Europe

- UK
- Germany
- Austria
- Bulgaria
- Portugal
National in-country advocate activities

• Form national steering groups of key stakeholders
• Adapt and translate protocols
• Identify key programs for protocol adoption
• Capacity- and market-building
  – Technical assistance to renovation programs
  – Training for developers and quality assurance agents
Key Strategy 3: Catalyst for scale
Investor Confidence Project

Key Strategies

3. Be a catalyst for scale
   - *Inspire others* through strong communications and marketing of success
   - *Connecting projects* to capital markets
   - *Create high visibility examples* of a healthy efficiency market by bringing pieces together
Energy financing – the future

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- Mainstream
- Large volume
- Multiple sources

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Thank you

The Partnerships, People, and Resources to tap Global Capital Markets
Contact

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