



Catalysing Retrofit Finance and Investing in Commercial Real Estate

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About the Project

A multi-stakeholder project to unlock finance & investing in energy efficiency in real estate



Allianz

Arup

BASF

Deutsche Bank

General Electric

Greenprint Foundation

Hirco Group

Jones Lang LaSalle

Marsh McLennan

Siemens

Skanska

Urban Land Institute

UNEP

US Dept of Energy

US Green Building Council

Main Findings

1. **Retrofitting is in its infancy**, no real “markets” yet
2. **Demand is growing**, some markets are taking off
3. **Companies want clear policy signals** and a predictable policy environment
4. **Many stakeholders can play a key role** in scaling up the retrofit market but need government to enable them
5. **Government plays the central role** in sparking demand through policy action

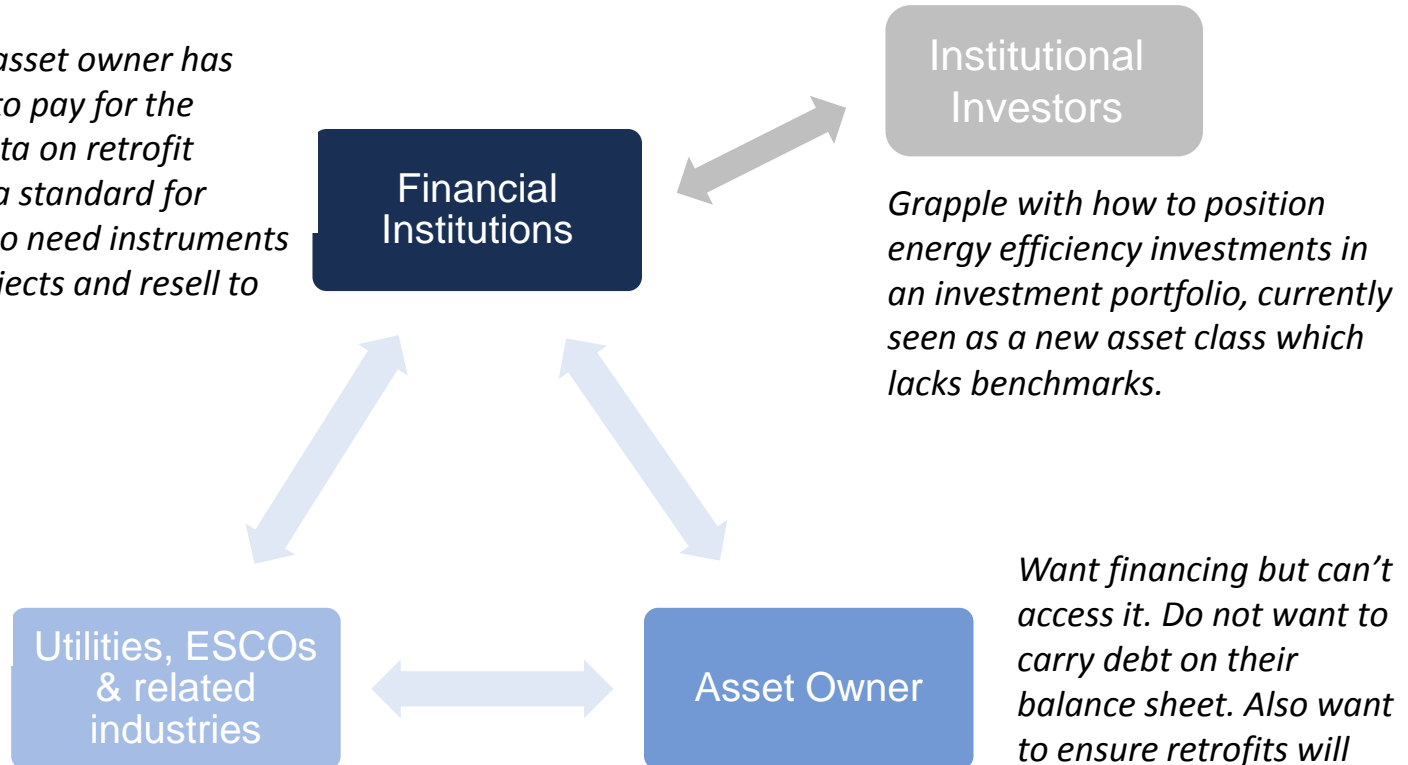
Engaging stakeholders

Solving the financial “Love Triangle”:

Each stakeholder is stalled. Without external action, the relationship does not work.

Want to know that the asset owner has good credit and is able to pay for the retrofit. Lack reliable data on retrofit investments, and want a standard for collateralising debt. Also need instruments to securitize retrofit projects and resell to the secondary market.

They hold raw data, but have no structure or incentive to share it. Utilities are not incentivized to promote energy efficiency, and the current ESCO model is not widely trusted and scalable.



Grapple with how to position energy efficiency investments in an investment portfolio, currently seen as a new asset class which lacks benchmarks.

Want financing but can't access it. Do not want to carry debt on their balance sheet. Also want to ensure retrofits will increase or protect value.

Stakeholder
perspectives

**Government action is key to unlock action and to engage
the range of stakeholders to participate**

Building Owners



Motivated by mandatory disclosure and government-backed asset efficiency rating systems

Banks



Need credit enhancements, loan guarantees to “de-risk” investments

Institutional Investors



Drawn to tax credits and jurisdictions with efficiency targets

Utilities



Need regulatory approval to provide on-bill finance

ESCOs



Need a third party or government to build trust through verification

Equipment Mfrs



Want governments to engage in equipment lease finance

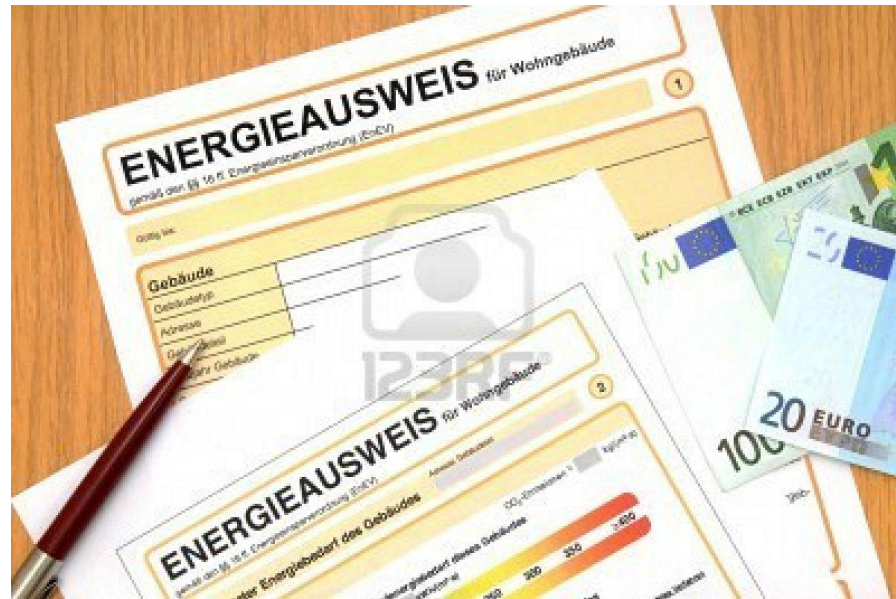
Regional Snapshots - Australia

- Most mature retrofit market, but only in A class
- NABERS rating system and mandatory disclosure have catalysed the market by forcing transparency around energy use and creating tenant demand
- Entrepreneurial policy environment (testing carrots/sticks) has helped



Regional Snapshots - Germany

- Mandatory disclosure per the EU Energy Performance Certificate directive
- State KfW Bank offers discounted loans for EE projects
- Budding retrofit market due to demand from corporate tenants and risk-averse owners
- Building owners increasingly using green leases



Regional Snapshots - United States

- Fragmented landscape of emerging state and city policies, signature building retrofits
- California and New York leading with mandatory disclosure
- California utilities required to provide on-bill finance
- Biggest retrofitting opportunities in middle of country



Greener, Greater Buildings Plan

Buildings dominate New York City's carbon footprint. Approximately 75 percent of New York City's carbon emissions stem from energy used in buildings, and today's existing buildings will make up 85 percent of all real estate in 2030.

Regional Snapshots - United Kingdom

- Active policy environment
- “Paralysis of action” by stakeholders due to lack of clarity of policies and how they interact
- 2010 *Mandatory Energy Efficiency Scheme* ranks largest 5,000 companies by emissions

CRC ENERGY EFFICIENCY SCHEME

WHAT IS THE CRC ENERGY EFFICIENCY SCHEME?

The CRC is a mandatory scheme aimed at improving energy efficiency and cutting emissions in large public and private sector organisations.

These organisations are responsible for around 10% of the UK's emissions.

The scheme features a range of reputational, behavioural and financial drivers, which aim to encourage organisations to develop energy management strategies that promote a better understanding of energy usage.



Regional Snapshots - China

- Aggressive country-wide EE targets and new mandatory disclosure scheme
- Energy Efficiency tax incentives for ESCOs have drawn institutional investors
- Opportunity for disclosure policies and connected building standards to build long-term retrofiting framework



Regional Snapshots - Japan

- Cultural value of resource efficiency
- 2011 Tokyo Municipal Cap and Trade programme for 1,400 largest emitting buildings
- Need to see how it rolls out as the country was still operating in post-disaster mode following the earthquake

Tokyo Cap-and-Trade Program

World's first urban emission trading program



Tokyo Metropolitan Government

Recommendations

1. Foundational recommendations for government to spark demand

- Mandatory Disclosure → Australia, EU, Japan, China, UK, New York, California
- Asset Efficiency Rating System → Australia, UK
- Centralized Database → Portugal, New York, Germany

2. Next steps by government: “Carrots & Sticks”

- Efficiency Targets + Cap & Trade → Tokyo, China
- 3rd Party institutions to provide credit enhancements, loan guarantees, loan loss reserves, and ESCO verification → Germany’s KFW Bank, Low Carbon Australia
- Utility Finance Enabling Legislation → California
- Tax credits, breaks → China
- Government pass-through taxes → PACE Finance in US, EUAs in Australia
- Green Bonds → Euro Investment Bank (renewable energy), USA (brownfields)

3. Blue sky ideas

- White Certificates to trade across borders → EU
- Connected Building Standards → Bangalore, India; Lavasa, India

For more information or to download report

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