

Derisking energy efficiency finance

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EnergyPro Ltd

To achieve “66% 2°C” scenario
requires *average* investment into
energy efficiency > USD 1 trillion a
year between 2016 and 2050

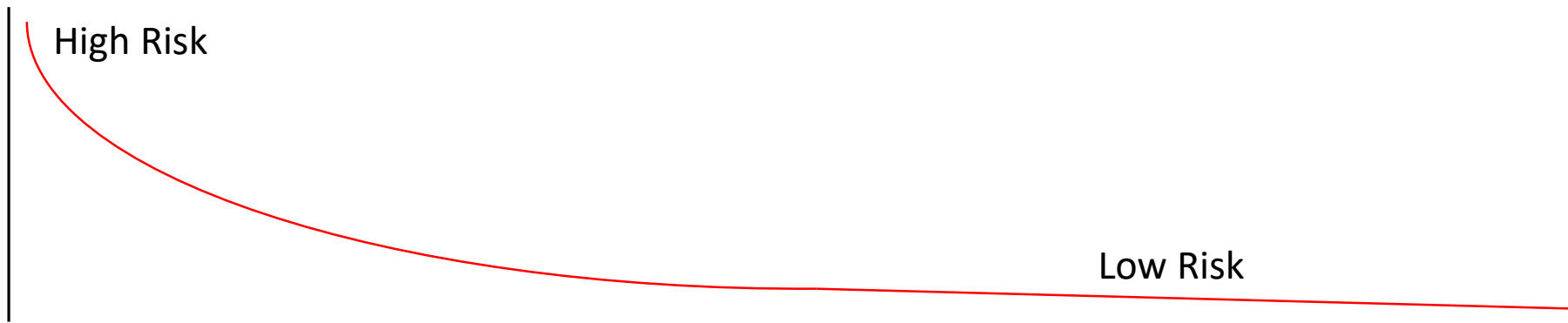
i.e. circa 5 x current level

Challenges to financing energy efficiency

- Small projects
- Lack of well developed bankable projects
- Lack of standardisation
- Hard to measure
- Uncertain results – the design gap
- Hard to meter
- Hard to monetize
- Complex contract forms
- Lack of capacity in the financial sector / demand side / supply side
- Split incentives
- Low energy prices
- Institutional barriers
- etc etc.

These apply to all sources of finance including balance sheet self-funding

The project life cycle



Development finance

- Equity
- Grant (PDA)

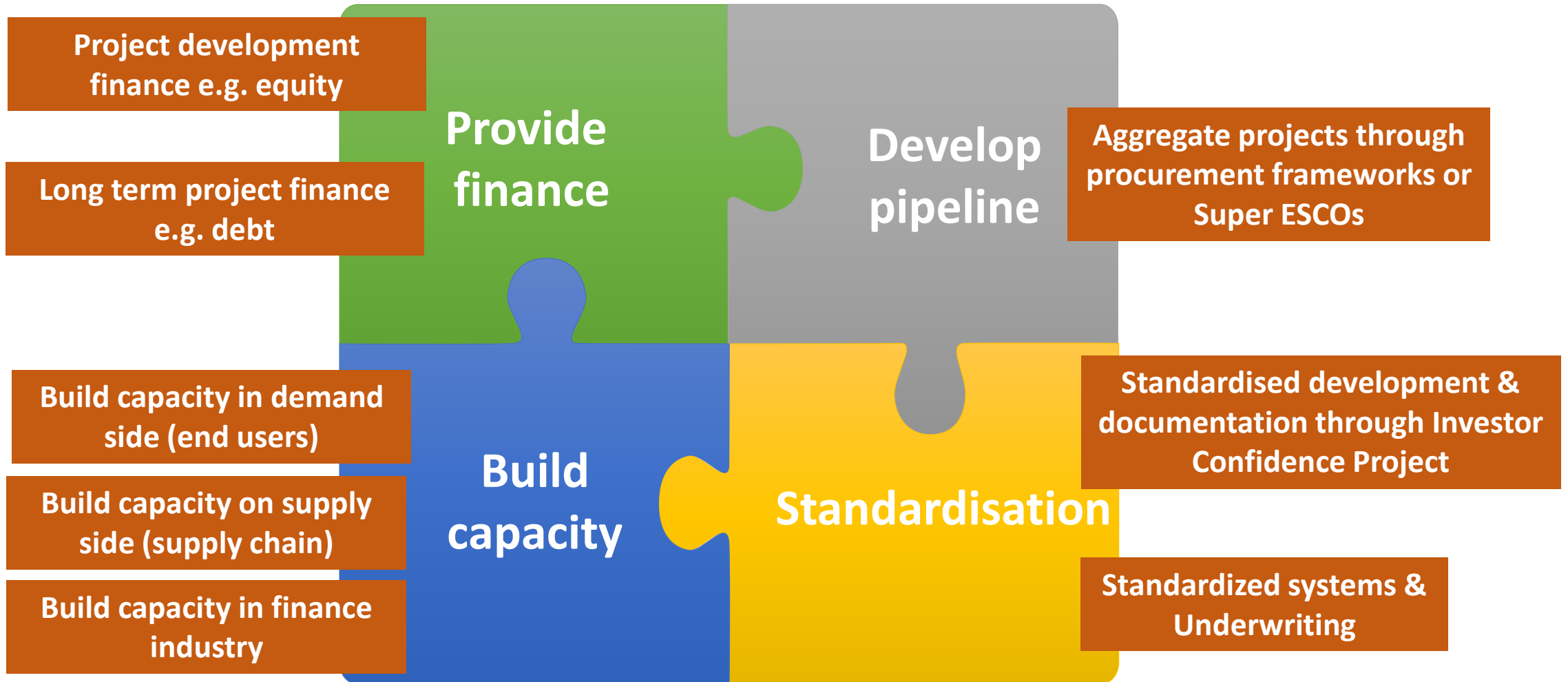
Scarce

Implementation finance

- Debt

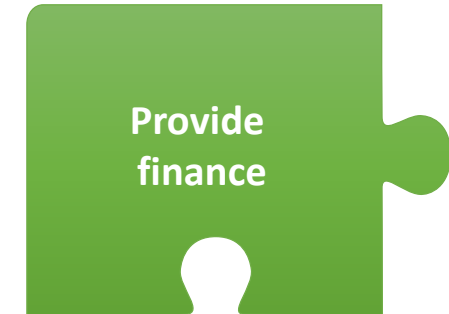
Abundant

To scale up we need to assemble the jigsaw of energy efficiency finance

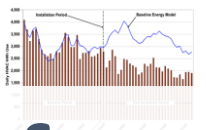


Mechanisms for financing EE

- Own capital
- Loans/mortgages – residential/commercial buildings
- Leasing
- Specialised energy efficiency Funds
- Property funds specialising in energy efficient buildings
- Financing of energy service contracts through ESCOs and Super ESCOs
 - EPC / Chauffage / ESA / MESA / MEETS / LaaS / P4P
- On Bill Recovery (OBR)
- Property Assessed Clean Energy (PACE)
- Guarantee funds
- Forfeiting funds
- Green bonds
- YieldCos



Lack of standardisation results in:



Greater performance risk



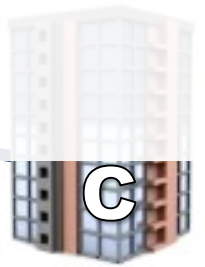
Uncertainty limiting demand

Higher transaction costs

Difficult to build capacity



Difficult to aggregate



The Investor Confidence Project: a route to standardisation

An international framework for reducing owner and investor risk, lowering due diligence costs, increasing certainty of savings achievement and enabling aggregation.



Investor Ready Energy Efficiency™ is the quality mark like BREEAM or LEED but for an **ENERGY EFFICIENCY RETROFIT PROJECT**



Ensures transparency, consistency and trust-worthiness through **best practice and independent verification.**

Available across EU for buildings, industry, street lighting and district energy projects.

These projects have received funding from the European Union's Horizon 2020 research and innovation programme under grant agreements No 649836 and No. 754056.

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The Investor Ready Energy Efficiency™ process



What types of projects can be certified as IREE™?



Buildings

- Apartment blocks
- Tertiary



Available for
US & all EU¹
countries



Industry

Available for
EU²



Street lighting upgrades

Under
development
for EU²



District energy systems



¹ Supported by Horizon 2020 grant Number: 649836

² Supported by Horizon 2020 grant Number: 754056

ICP reduces performance risk and transaction costs

“HSB does provide improved terms for energy efficiency projects that are ICP credentialed. The Asset Performance Insurance element of our cover (covering a shortfall in achieved savings) incorporates a “confidence factor” within the rating model. The highest confidence level is applicable to ICP credentialed projects. This contracts the performance parameters and reduces the premium. The exact reduction in premium depends on the nature of the project to start with.”

Paul Cullum

Alternative Distribution Manager, HSB Engineering Insurance Limited



Value and risk appraisal – the EEFIG underwriting toolkit



Introduction Financial Institutions & Energy Efficiency Financing Energy Efficiency The Project Life Cycle Value & Risk Appraisal Resources

EEFIG UNDERWRITING TOOLKIT Value and Risk Appraisal for Energy Efficiency Financing

A tool to assist financial institutions to scale up the deployment of capital into energy efficiency



Introduction



Financial Institutions and Energy Efficiency



Financing Energy Efficiency



The Project Life Cycle



Value and Risk Appraisal



Resources



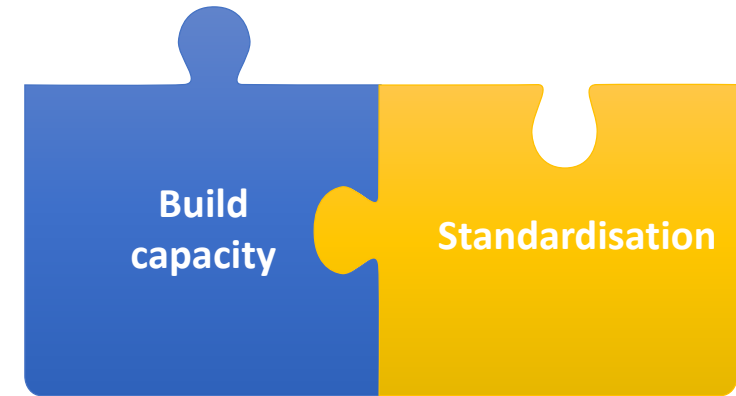
I strongly recommend this toolkit to project promoters, banks, financial institutions and anyone else interested in financing energy efficiency

Foreword by Maroš Šefčovič, European Commission VP



It will make it easier for financial institutions to carry out value and risk appraisals, for developers to attract capital, for businesses to fund projects

Foreword by Erik Solheim, UN Environment



The EEFIG Underwriting Toolkit

valueandrisk.eefig.eu



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Value and risk appraisal



Count all the sources of value

- Energy
- Non-energy

Non-energy benefits are often much more strategic and attractive to decision makers than energy cost savings

Financial appraisal needs to identify and value *all* benefits



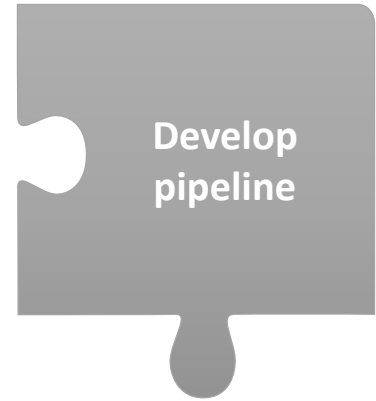
Acknowledge and understand all the risks

- Very little data on risks (DEEP)
- Better understanding of risk can bring more capital and product innovation

Performance risk has been neglected but is critical - even if you don't think you are taking performance risk you are

The need for “super developers”

- Energy Service Companies (ESCOs) don't develop projects
- ESCOs only respond to RFQs – they don't undertake early stage development
- “Super developers” take early stage development risk and aggregate demand
- Can be “Super ESCOs” or procurement frameworks



Wherever there is scale all the pieces are there



ENERGY EFFICIENCY SERVICES LIMITED



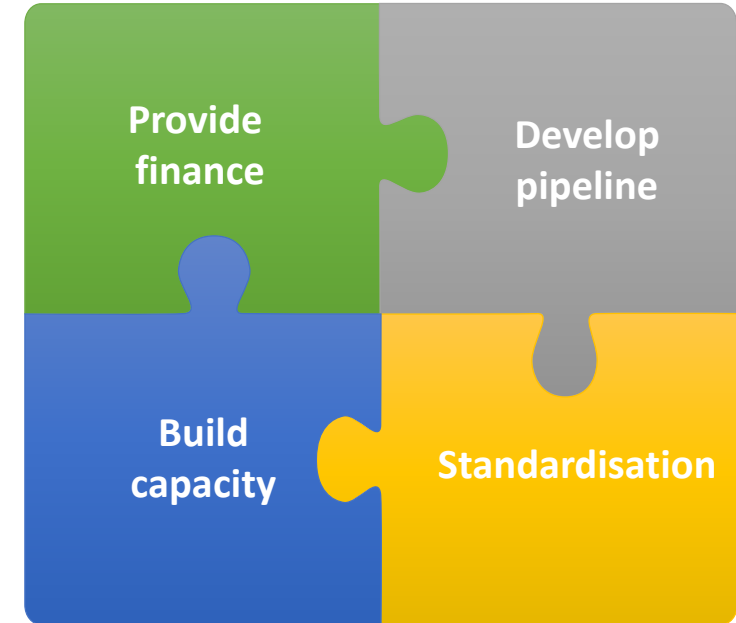
لخدمات الطاقة
Energy Services



The **CARBON & ENERGY FUND**

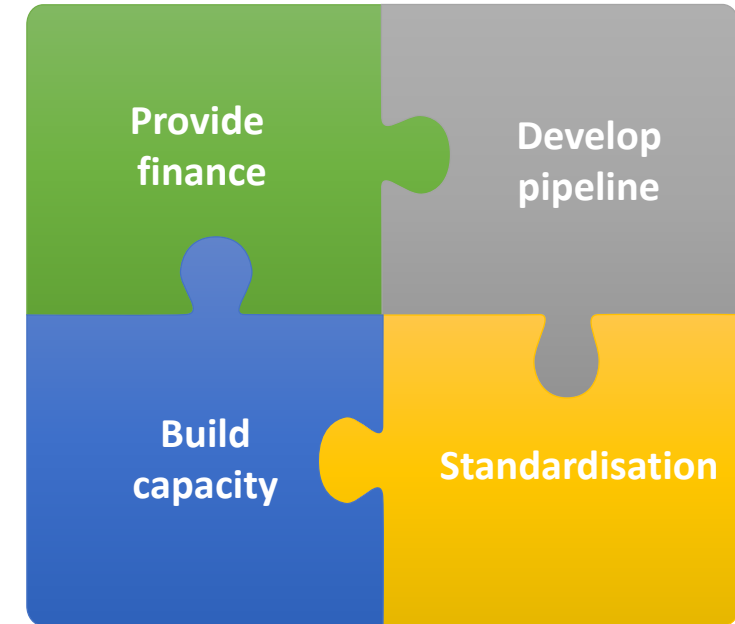


LONDON
ENERGY
EFFICIENCY
FUND



Derisking energy efficiency

- It is not just about the money
 - Need Finance, Pipeline, Standardisation & Capacity building to come together – [the EE financing jigsaw](#)
- Distinguish between development finance and project finance
 - Development finance = high risk = scarce
 - Implementation finance = low risk = abundant
- Many different types of mechanism to finance EE
 - Optimum will depend on market segment being addressed
- Derisk energy efficiency through
 - Standardisation through the ICP's [Investor Ready Energy Efficiency™](#)
 - Use tools like the [EEFIG Underwriting Toolkit](#)
- Super developers can
 - Develop and aggregate projects
 - Standardise
 - Access capital at scale
 - Build capacity



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