

Economic and Social Commission for Western Asia

Financing the Upscaling of Building Energy Efficiency Programs in the Arab Region

Toolkit for Building Energy Efficiency Financing Instruments

3 December 2020



UNITED NATIONS

الأمم المتحدة
ESCWA

Shared Prosperity Dignified Life



Dr. Steven Fawkes

Managing Partner, EnergyPro Ltd

Agenda

The need to increase investment into EE.

Scale of the EE opportunity.

Multiple benefits.

Multiple barriers.

Elements of EE financing instruments.

Types of EE financing instruments.

Examples.

Lessons learnt.

Contextual derisking tools.

Proposed instruments.

The Need to Increase Investment into EE

Global investment into energy efficiency c.\$240 billion in 2018.

To meet IEA Sustainable Development scenario investment has to reach c.\$825 billion per annum 2019-2050 (x3.4).

Modest overall progress on energy efficiency in the Arab region but not on track to meet global EE targets.

Need to increase availability of modern energy services especially in LDCs in line with SDG7.

Investment into EE in Arab region estimated at \$17 billion:

- 2.7% of Gross Fixed Capital Formation compared to 5-15% in countries with well developed EE policies.

Therefore urgent need to increase rate of investment into EE in the region.

Scale of the EE Opportunity in Buildings

Buildings in Arab region account for 28% of TPES (21% of TFEC)

- GCC: 15%; Mashreq: 29%; Maghreb: 18%; Arab LDCs: 15%

Building energy intensity in Arab region growing.

Growing demand for cooling – increased energy consumption and peak demand.

Potential in buildings in Arab region to reduce energy use by over 30% by 2050.

Building EE can be a major factor in reaching INDCs and SDG 7.

Policies and programmes need to address retro-fit of existing buildings as well as new buildings.

Financing instruments are needed to unlock investment flows.

Multiple Benefits of Building EE

Multiple benefits at different levels

- Reduced costs to consumers.
- Enabling access to additional energy services.
- Reduced need for capex in supply side.
- Reduced local air pollution.
- Reduced GHG emissions.
- Etc.

Generic Barriers to Financing Building EE

Small project size.

High transaction costs.

Lack of a revenue stream – savings are against a counter-factual.

Performance gap – real and perceived.

Split incentives between landlords and tenants.

Distributed decision making e.g. in apartment blocks.

Low energy costs.

Lack of capacity within the finance sector.

Regional Barriers to Financing Building EE

Energy price distortion.

Monopoly utilities hiding costs of inefficiency.

Immature energy efficiency policies.

Poor governance and enforcement of regulations.

Importance of least first cost often means low efficiency appliances.

Need to improve energy access.

Conflict regions.

The Roles of Financing Instruments

Dedicated energy efficiency financing instruments can:

- Directly support energy efficiency policies and targets.
- Address INDCs and SDGs.
- Bring additional capital into energy efficiency.
- Build capacity within the finance sector to understand energy efficiency.
- Build capacity within the supply chain.
- Help to derisk investing in energy efficiency.
- ‘Crowd-in’ private capital.

Elements of EE Financing Instruments

Capital Provider	Financial Intermediary	Capital instrument	Derisking Tools	Transaction Enablers
Government	Banks	Debt	Payment mechanism	Standardization
MDBs	Dedicated EE funds	Quasi equity	Performance contracting	Project Development Assistance
Institutional Investors	Grant providers	Equity	Insurance	Project Development Unit
Others		Grant	Guarantees	Procurement framework(s)
			Subordination	Super-ESCO
			Securitisation	Aggregation

Types of EE Financing Instruments

CHARACTERISTICS

Credit Line

Specific lending facility made available through existing banks.

Debt

Dedicated EE fund

Dedicated vehicle with one or more investor. Defined mandate & targets.

Debt / quasi- equity / equity

Other

Focused on development. Overlaps with transaction enablers.

Debt / equity

EXAMPLES

KfW energy efficiency loans (Germany)

EIB PF4EE (EU)

CVDB Municipal EE (Jordan)

European Energy Efficiency Fund (EU)

Kredex Revolving Fund for Apartments (Lithuania)

EcoCasa (Mexico)

Etihad Super ESCO (Dubai)

Tarshid (KSA)

Examples: European Energy Efficiency Fund (EU)



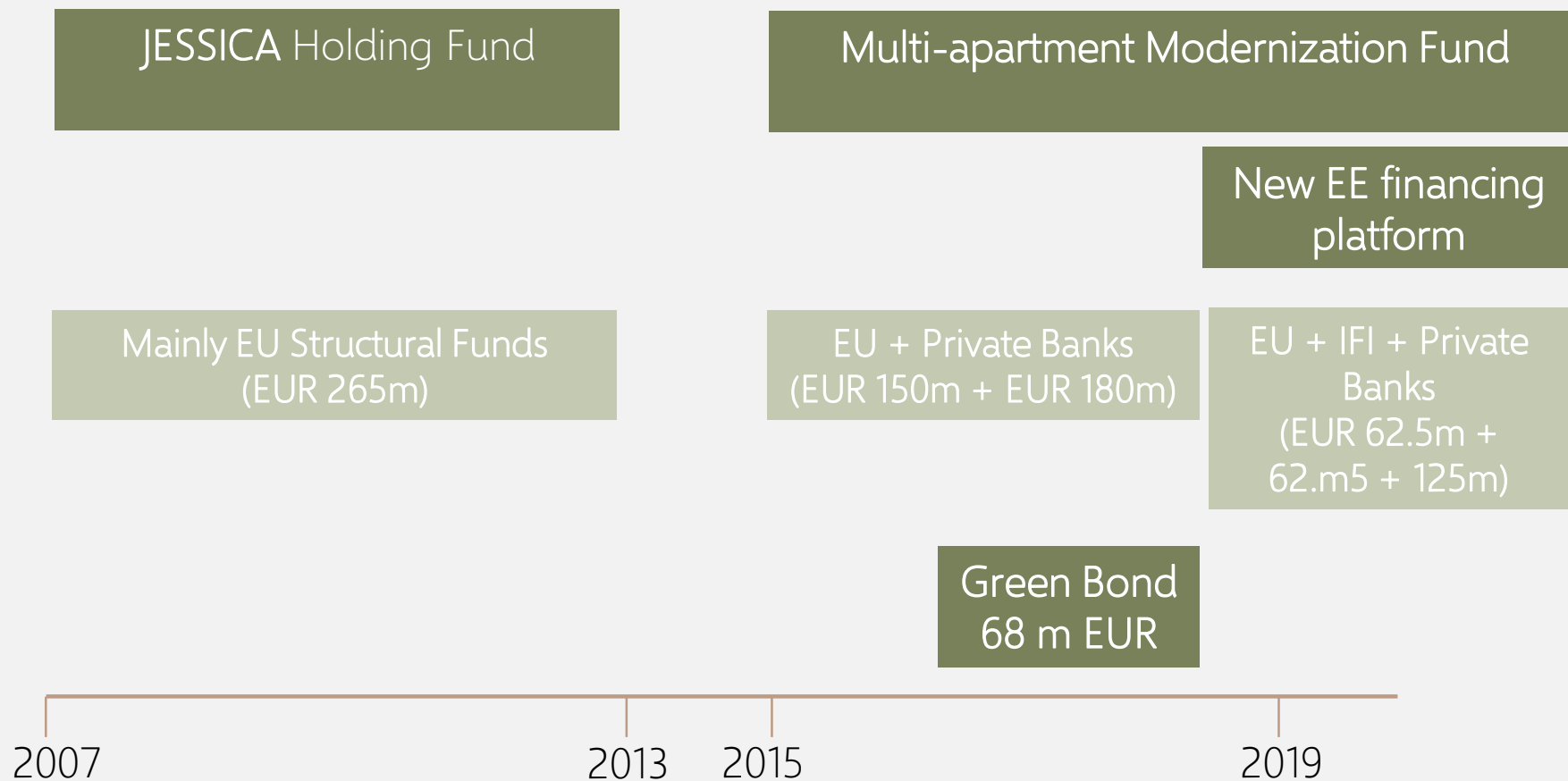
- Dedicated EE fund.
- Focus: municipal, local & regional authorities & private entities serving them e.g. ESCOs.
- EE, small scale RE and transport.
- €265m capitalisation from: EC, EIB & CDP.
- Provides debt, equity, quasi equity.
- Term: 12 to 15 years.
- Has its own Technical Assistance Facility.

Examples: Multi-Apartment Modernization Fund (LT)

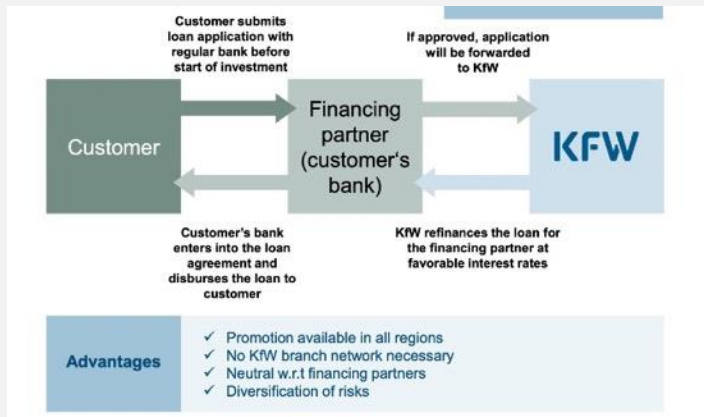


- Focus: renovation of multi-apartment blocks.
- Managed by VIPA, Public Investment Development Agency.
- 100% grant for project development.
- Loan rebate dependent on performance as measured by Energy Performance Certificate.
- Fixed interest rate: 3%.
- 2 year grace period.
- Provides debt, equity, quasi equity.
- Term: 20years.

Examples: Evolution of financing instruments in LT

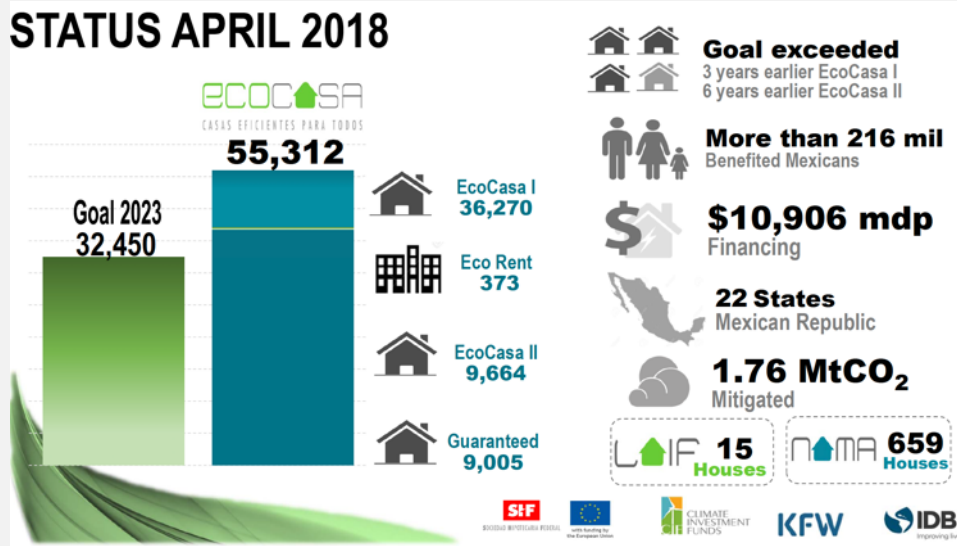


Examples: KfW energy efficiency loans (DE)



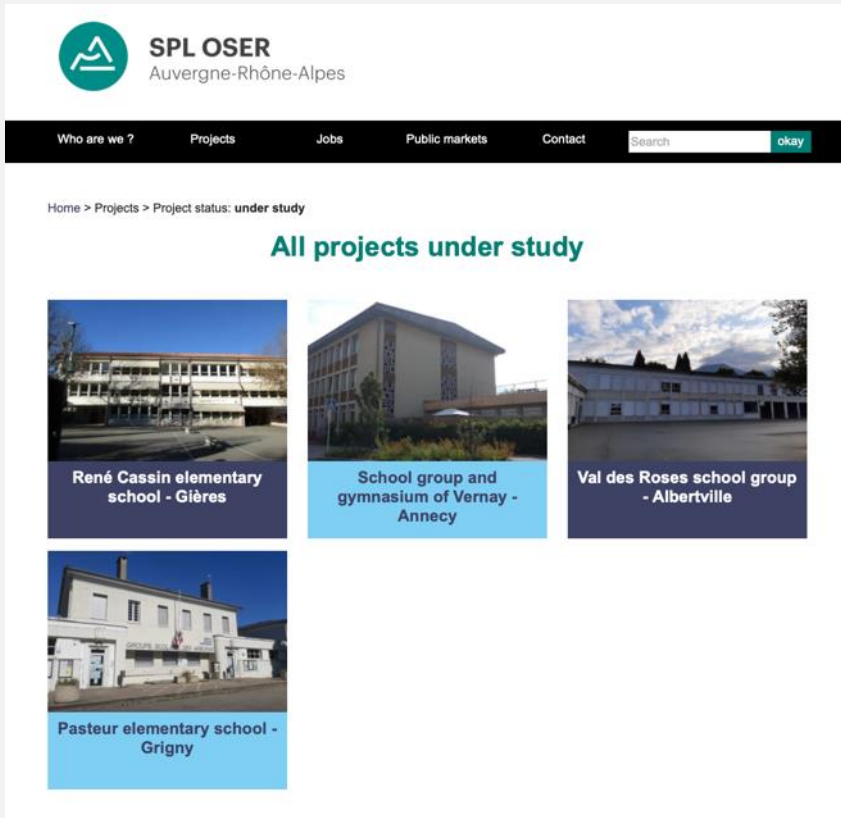
- Focus: building retrofit.
- Credit line to purchase energy efficiency loans from banks.
- National promotion through banks.
- 20 year term loans.
- Interest rate 1.66%.
- Variable debt relief based on energy performance relative to national standards.
- Support for 5 million housing units since 2006.
- More than €300 billion investment triggered.

Examples: EcoCasa (MX)



- Focus: new build, low income housing.
- \$396.16m deployed (April 2018).
- Soft loans to intermediaries & housing developers.
- Technical Assistance.
- EE houses at same price as conventional.

Examples: SPL OSER (FR)



The screenshot displays the SPL OSER website interface. At the top left is the logo, a green circle with a white stylized 'A' shape, followed by the text 'SPL OSER' and 'Auvergne-Rhône-Alpes'. A navigation bar below the logo contains links for 'Who are we?', 'Projects', 'Jobs', 'Public markets', and 'Contact', along with a search bar and an 'okay' button. Below the navigation bar, the breadcrumb trail reads 'Home > Projects > Project status: under study'. The main heading is 'All projects under study'. Four project cards are shown, each with a photograph of a building and a caption: 'René Cassin elementary school - Gières', 'School group and gymnasium of Vernay - Annecy', 'Val des Roses school group - Albertville', and 'Pasteur elementary school - Grigny'.

- Focus: public sector buildings, mainly schools & offices.
- Effectively a public-sector ESCO owned by municipalities who are customers.
- Partners: local Council, 21 municipalities, service providers & banks.
- Provides 10% (equity) of any project, 90% from participating banks.
- €50m total funding to date.
- Provides technical assistance.

Lessons Learnt from International Experience

Links to policy instruments important.

Transaction enablers are critical – deal flow is essential.

Critical factors that transaction enablers need to address:

- Development assistance through TA or similar.
- Standardization of processes, contracts etc. to reduce transaction costs and risks.
- Capacity building within customers / supply chain / finance sector is needed.

Marketing efforts are essential.

Contextual Derisking Tools

Need to create fora to bring together energy efficiency and finance e.g. Energy Efficiency Financial Institutions Group (EEFIG).

Need to build understanding of EE investment risks – widely ignored in the EE community.

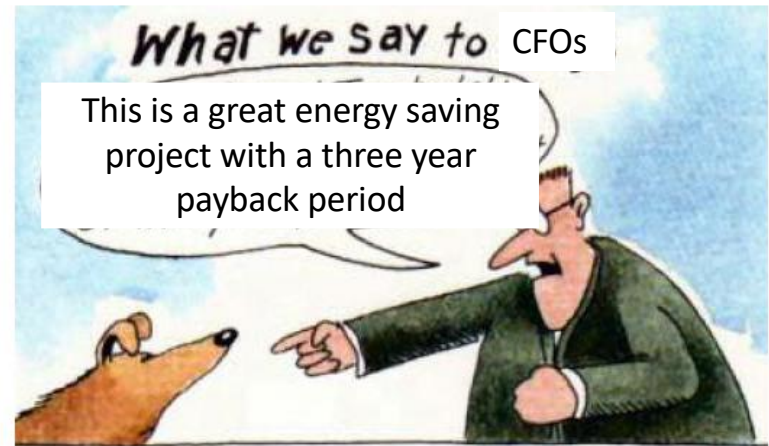
Need to collect & use data on EE investment types, performance & risks e.g. EEFIG Derisking Energy Efficiency Platform (DEEP) database.

- Ensure M&V and collect performance data from new programmes.

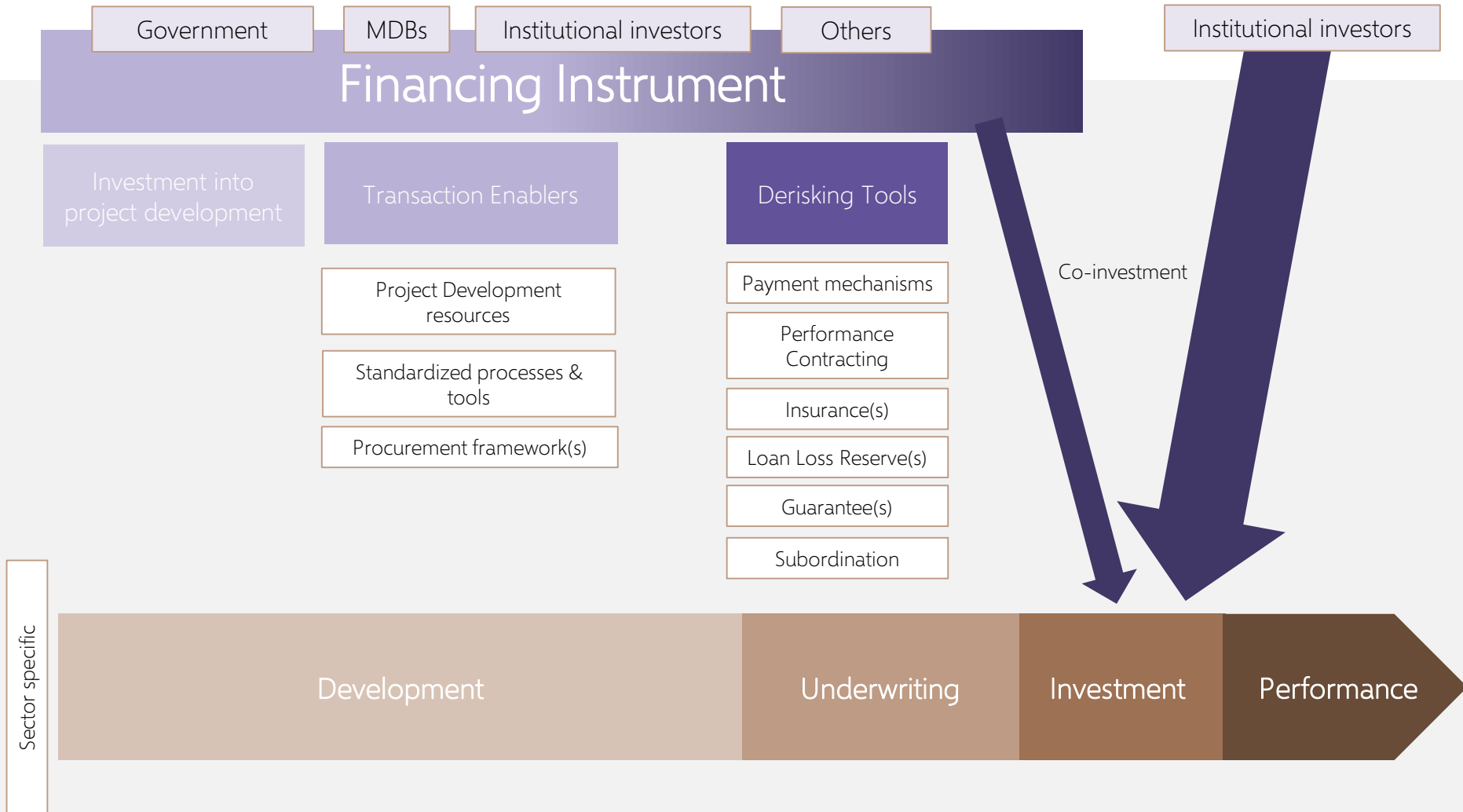
Develop and promote standards for:

- project development e.g. Investor Confidence Project,
- contracts etc.
- supply chain including Energy Service Companies.

Develop a Common Language



Proposed Instruments



Conclusions

Energy efficiency financing instruments can be designed in different forms but using several key elements is essential.

Transaction enablers are critical to get deal flow – focus on bridging the development gap.

Private investors will need derisking tools – at least at first.

Blended finance models can demonstrate the market and build capacity within the finance sector.

The balance between public & private capital, and the importance of the different elements will vary according to local and regional needs.

Local agencies are important e.g. municipalities and therefore a high level of stakeholder engagement is needed.

There are sufficient global models now to demonstrate that scaling-up is possible.



Shared Prosperity Dignified Life



Thank you

Dr. Steven Fawkes

steven.fawkes@energyproltd.com

+44 77 0223 1995

o