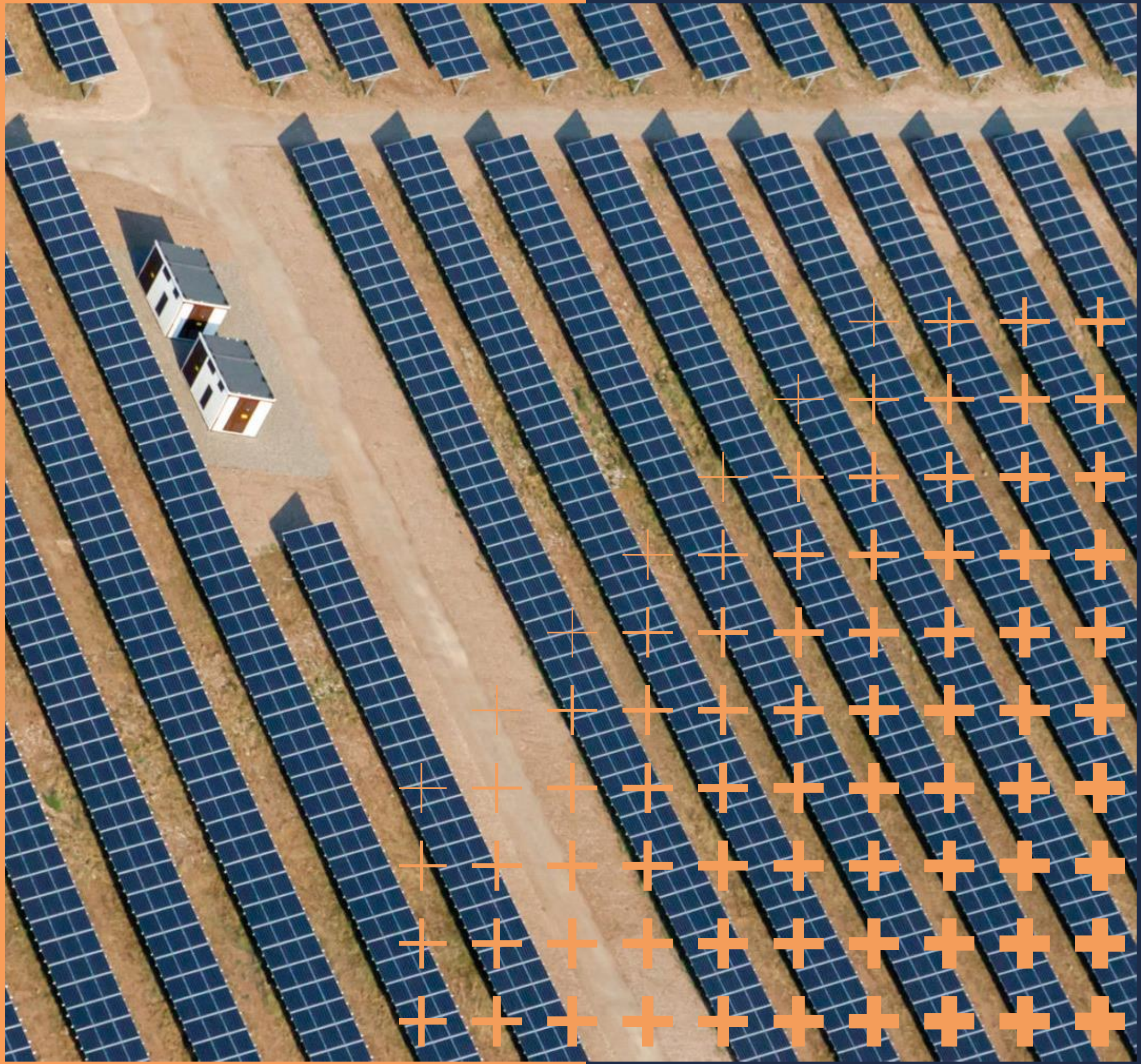
WEBINAR



Mitigating foreign exchange risk for solar projects in emerging markets

Wednesday 10 November 2021

www.solarpowereurope.org

SolarPower Europe

Supported by: GET.invest Mobilising Renewable Energy Investments

AGENDA

Welcome and introduction

- Máté Heisz, Director of Global Affairs, SolarPower Europe

Foreign exchange risks in Sub-Saharan Africa & Financial Systems Development Cluster (FSDC) pilot initiative

- Sebastian von Wolff, Head of Finance Advisory, GET.invest

Country/regional case study

- Dr Patrick Tolani, CEO, Community Energy Social Enterprise ltd

IPPs' (or Private developers') perception of foreign exchange risk and best practices for mitigation

- Silvia Piana, Head of Regulatory Affairs, Enel Green Power

DFIs' support to manage foreign exchange risks in emerging markets

- Eric Kaleja, Vice President, AfricaConnect, DEG

Strategies to mitigate foreign exchange risks in emerging markets

- Per van Swaay, Senior Vice-President, TCX Investment Management Company

Panel discussion and Q&A with the audience

Mitigating foreign exchange risk for solar projects in emerging markets

Sebastian von Wolff

Head of Finance Advisory, GET.invest

Dr Patrick Tolani

CEO, Community Energy Social Enterprise ltd

Silvia Piana

Head of Regulatory Affairs, Enel Green Power

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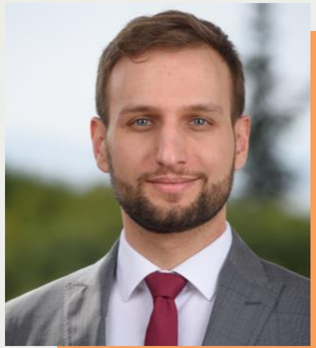

Máté Heisz

Director of Global Affairs, SolarPower Europe

Moderator

SolarPower Europe

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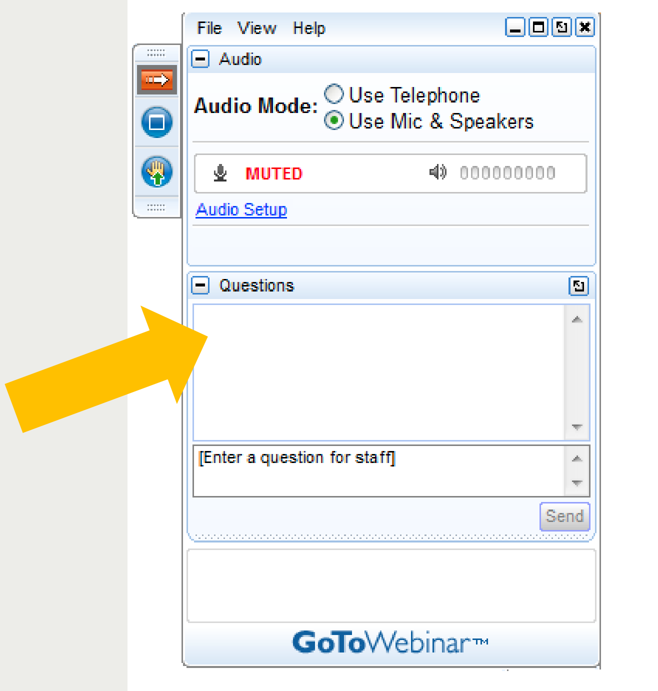
Q&A SESSION: HOW TO SEND WRITTEN QUESTIONS

Do you have any questions to the presenters? Please send them during the webinar through the questions function in the control panel.

1. Search for the control panel. If it is not visible, use the hide/show button to display it.

2. Type in the question box and click on the send button. A selection of questions will be answered at the end of each presentation.



Máté Heisz
Director of Global Affairs, SolarPower Europe

Welcome and introduction

SolarPower Europe

Sebastian von Wolff

Head of Finance Advisory, GET.invest

Foreign exchange risks in Sub-Saharan Africa & Financial Systems Development Cluster (FSDC) pilot initiative

SolarPower Europe

SEBASTIAN VON WOLFF
Head of Finance Advisory

GET.invest
Mobilising Renewable Energy Investments

Capacity Development for Domestic Financiers (CDDF)

Mitigating Foreign Exchange Risks
SPE, 10 November 2021

GET.invest is supported by

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Sweden
Sverige

Ministry of Foreign Affairs of the Netherlands

AUSTRIAN DEVELOPMENT COOPERATION

What is GET.invest?

- **European** programme **mobilising investment** in renewable energy, **building a pipeline** of investment-ready projects
- **Supports all relevant delivery models**, incl. on- and off-grid electricity, clean cooking, also productive use
- **Broad partner network** incl. many financiers as well as industry associations and others
- **Fully established** in the market with proven competence, credibility and track record
- **Active in Sub-Sahara Africa**, the **Caribbean** and the **Pacific**

© Alliance for Rural Electrification

© Tom van der Linde

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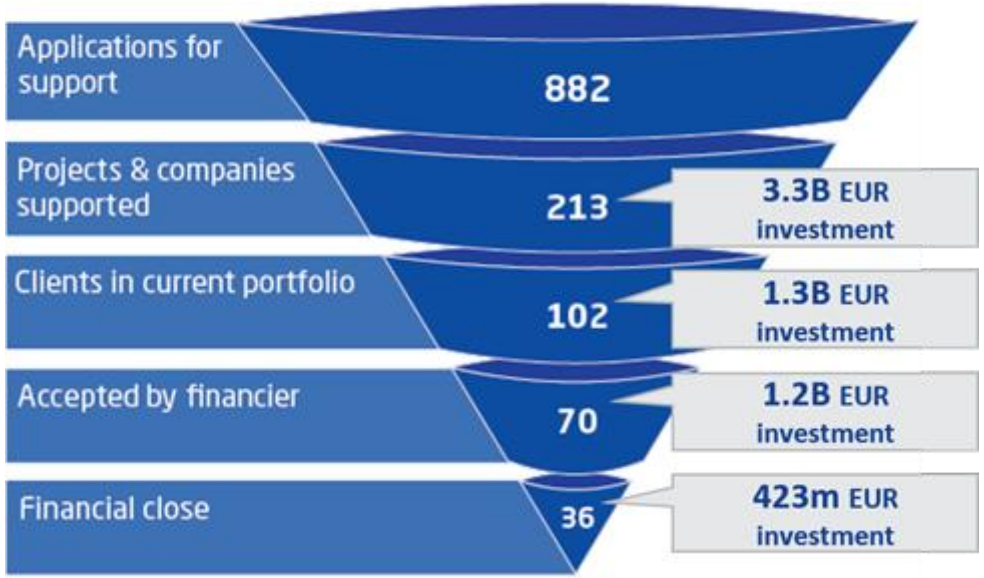
Building a Pipeline for Financiers

The GET.invest Finance Catalyst is a leading, open, scalable, and flexible TA facility providing **on-demand** advisory to **get projects and business ready for finance** and to **link them with financiers**

- Simple application process, “level playing field” access
- 25+ expert advisors that coach and support towards investment-readiness
- Support covers improving business case, financial structuring, finding the right finance, negotiations
- Builds pipeline in particular for EU instruments such as ElectriFI and others

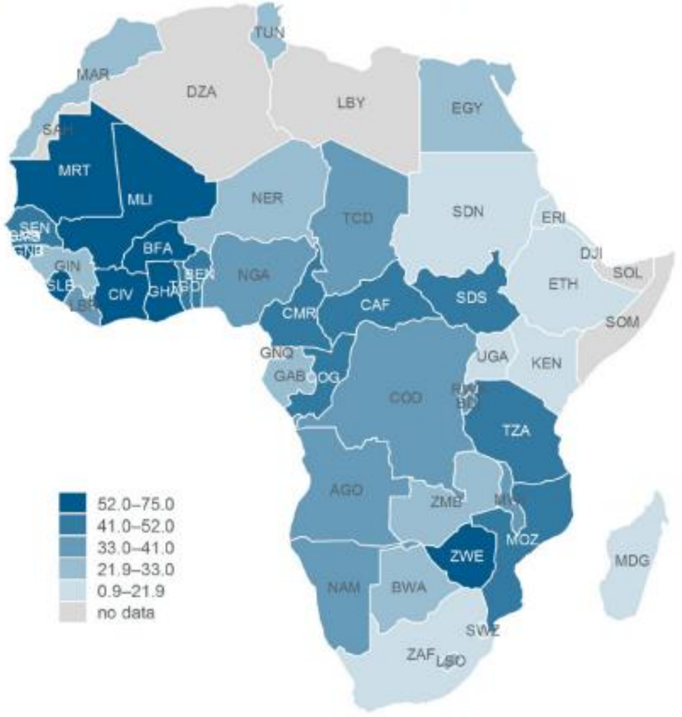


“Funnel” from *intake* to *outtake.*
GET.invest and predecessor program (2016-09/2021)

Finance gap persists in SME and distributed energy sector

- Funding mostly driven by outside capital and in foreign currency
- Risk of foreign currency exposure and high costs
- Fragmented financiers landscape, difficult to grasp for businesses
- Often rather single deals than long term relationship
- Generally large finance gap for SMEs

Share of MSMEs for which access to finance is a major obstacle, in per cent.



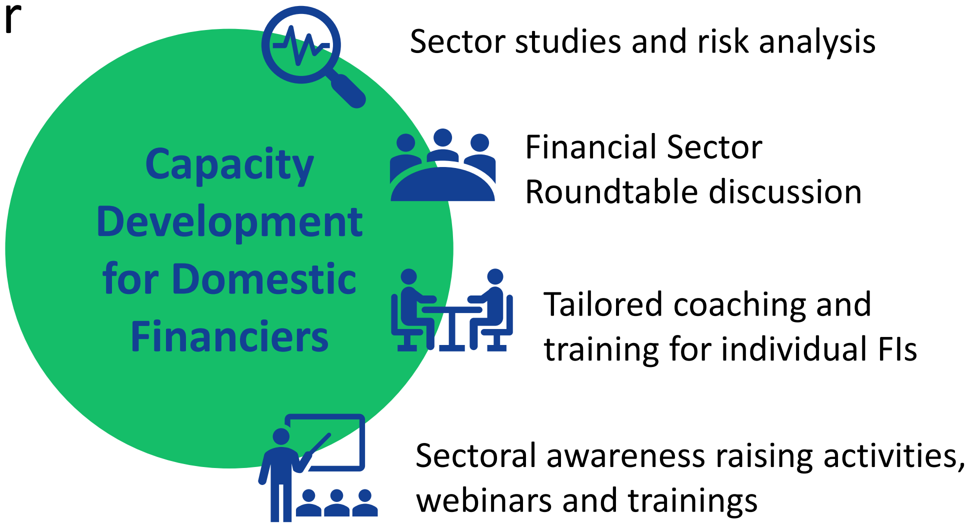
Source: World Bank Enterprise Surveys, 2006–2018.

Role of the domestic financial sector

- Mobilizing private finance for SMEs key enabler for achieving the SDGs
- Domestic financial sector to play a catalytic role
    - Providing local currency for investment and working capital
    - Offering dedicated financing products
    - Establishing long-term relationship for growth
    - Able to utilize guarantees, hedging instruments, concessional funding
  - Window of opportunity after risk adjustment due to COVID experience
  - Increased interest of domestic banks in renewable energy

GET.invest supporting domestic Financing Institutions (FIs)

- Initial pilots in Mozambique and Rwanda in 2021
- Phased approach leading to tailored coaching for selected FIs
- Using real showcase projects, providing specific assessment tools and portfolio review
- In Rwanda, also capacity building on renewable energy as asset class for the financial sector, jointly with banking association
- Cooperation with GIZ Financial Systems Development Cluster



Participating institutions

Mozambique

FIs in Roundtable: 12

FIs responding to survey: 7

FIs selected: 4

Rwanda

FIs in Roundtable: 18

FIs responding to survey: 4

FIs selected: 2

RBA sector Workshops: 4

Going forward

- Pilot phase until 2022
- Evaluation and upscaling in scope and region
- Supporting role also for hedging instruments
- Some countries require much broader FSD support
- For GET.invest, high potential in linking banks with Finance Catalyst services and vice versa (linkage of supply and demand side)
- Potentially supporting banks in accessing EU finance and guarantees

Thank you for Your Attention!

SEBASTIAN VON WOLFF
Head of Finance Advisory

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GET.invest is supported by

Dr Patrick Tolani

CEO, Community Energy Social Enterprise ltd

Country/regional case study

SolarPower Europe

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Head of Regulatory Affairs, Enel Green Power

IPPs’ (or Private developers’) perception of foreign exchange risk and best practices for mitigation

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Mitigating Foreign Exchange Risk for Solar Projects in Emerging Markets

Solar Power Europe
10 November 2021

Silvia Piana, Head of Regulatory Affairs Africa, Asia and Oceania – Enel Green Power

Green Power

Enel Green Power: where we are

Solar	5.95 GW
Wind	15.13 GW
Hydroelectric	27.83 GW
Geothermal	0.91 GW
Biomass	0.06 GW

21 Countries with active projects **6** Countries with developing projects **> 1,200** Plants **49.9 GW** Total capacity

Source: www.enelgreenpower.com (figures updated as of 30 June 2021)

KPIs to assess PV potential: what to look for

Macroeconomic / demographic trends in emerging countries clearly suggest that all efforts should be made to unlock its renewable energy potential.

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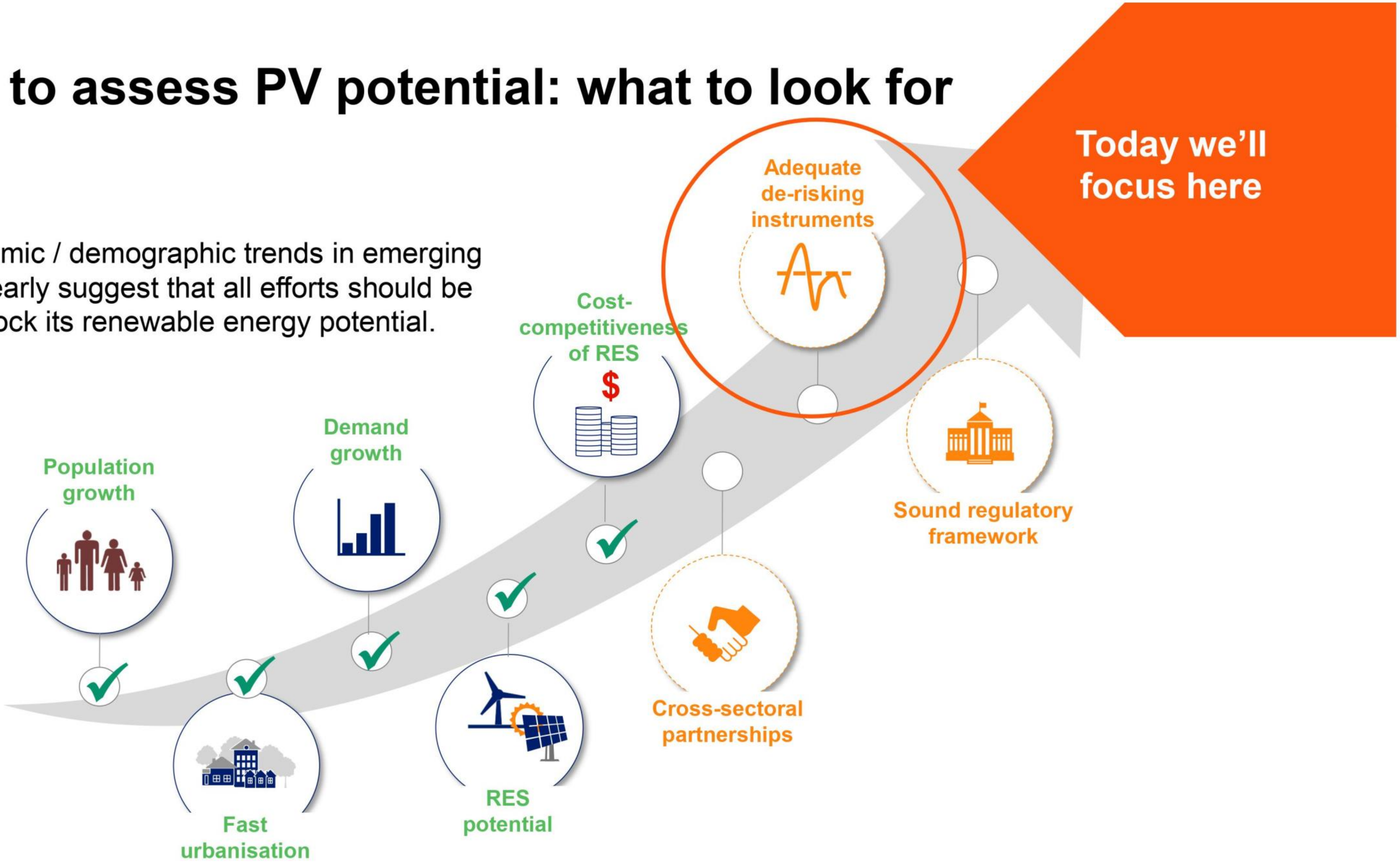
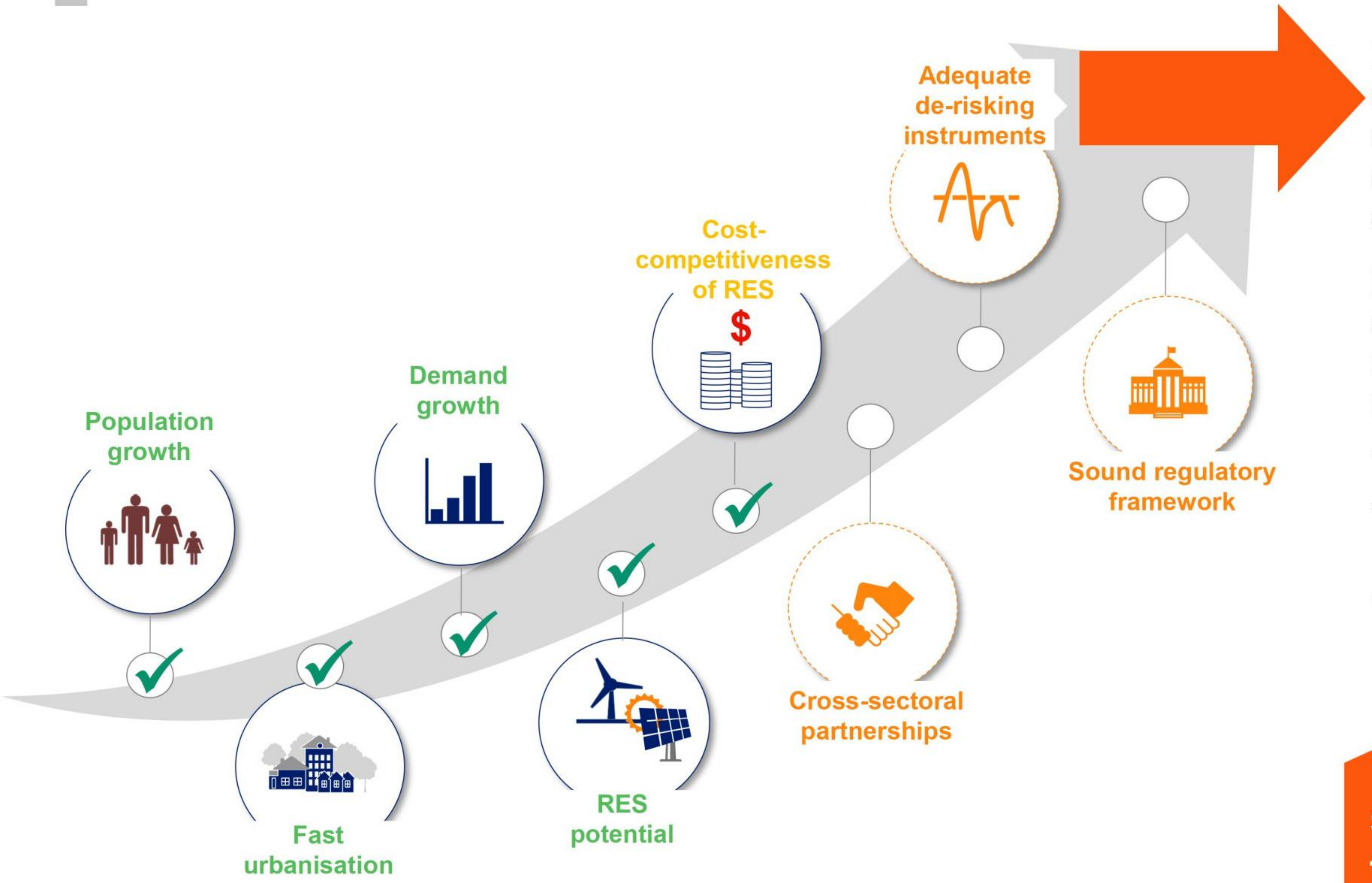


KPIs to assess PV potential: what to look for



High cost of project financing in emerging countries → need to correctly assess the project risks from construction to operation and to have appropriate mitigation in place.

Project risks not appropriately allocated / mitigated will have a negative impact on the bankability and may result in:

- Project delay or interruption
- Increase of the overall costs of the financing
- Higher recourse to the sponsors

Need of a bankable PPA + a solid project finance structure that optimally shares the risks

Financial risk mitigation

Counterparty risk

Financing availability

Interest rate risk

Exchange rate risk

Currency convertibility / transferability

Inflation and tax risk

Financial risk mitigation

enel Green Power

Financial mechanisms for risk mitigation

Counterparty risk

Financing availability

Interest rate risk

Exchange rate risk

Currency convertibility / transferability

Inflation and tax risk

When financing a RE project by a foreign loan, the mismatch between the currency of debt obligations and the tariff revenue in local currency, exposes the project to the risk of devaluation of the local currency. This could imply lower returns for the project and the reduction of investments in the country.

- Offtaker's payment obligations denominated or linked to the exchange rate of the same currency of the power producer
- Hedging solutions, usually in form of financial derivatives on OTC markets (but they can be limited in availability and expensive in emerging countries, increasing the financial cost of debt and therefore offsetting the initial benefit coming from cheaper foreign loans)
- Governments need to recognize the role of currency hedging mechanisms could play in expanding RE capacity and contribute to develop currency markets accordingly.

Financial risk mitigation

Counterparty risk

Financing availability

Interest rate risk

Exchange rate risk

Currency convertibility / transferability

Inflation and tax risk

Financial mechanisms for risk mitigation

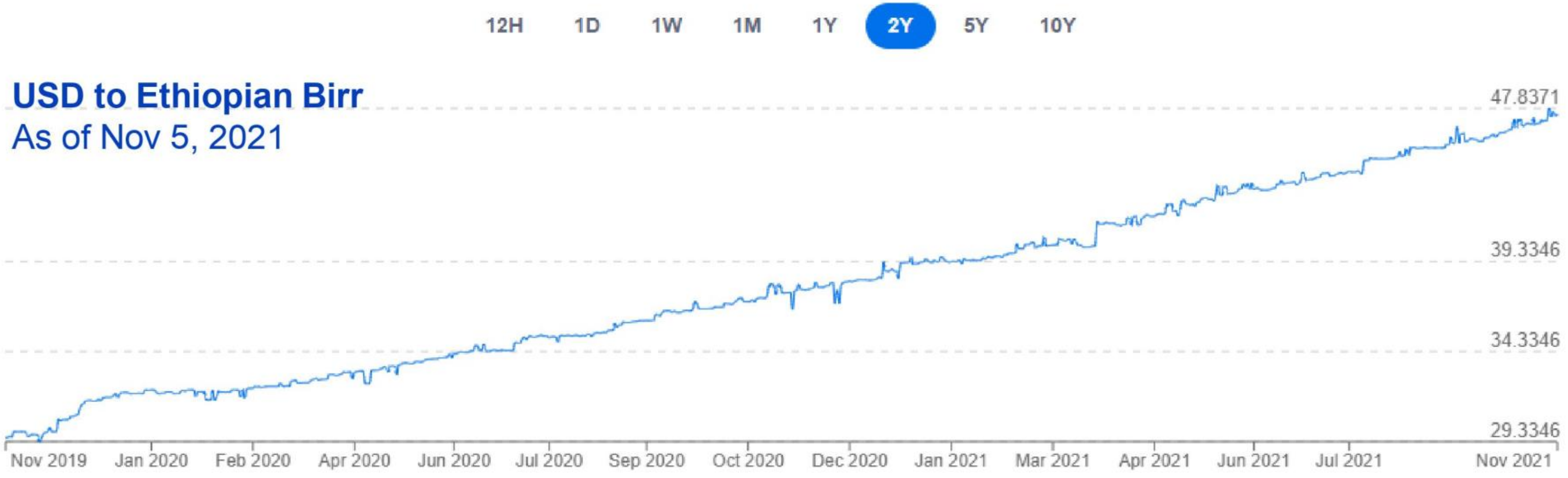
- Enter into commercial agreements providing revenues denominated or indexed in the functional currency.
- Providing **convertibility guarantees**
- → Government could allocate some amounts of foreign currency at commercial banks. If banks fail to avail the foreign currency, the Gov will take up the responsibility both for foreign currency availability and for allowing capital repatriation.
- Co-guarantee by Gov and international institutions such as World Bank/IFC

Case study Ethiopia

FX scarcity is one of the main barriers to foreign investment in the country. Exports reached USD680 million in June 2019, compared with imports at USD3.6 billion during the same month.

Forex risk

Strong devaluation of Ethiopian Birr vs hard currency



Currency Convertibility and Transferability

Foreign investment in power sector have the lowest priority for currency convertibility.

In Scaling Solar 2019, project agreements unilaterally modified, and currency convertibility eliminated; currency transferability controlled by Ethiopia National Bank.

2 years later…

MoF is reconsidering the request of foreign investors in PPP arrangements to be able to repatriate profits, dividends, and capital without going through formal waiting lists.

Some amount of foreign currency will be allocated at commercial banks. If banks fail to avail the foreign currency, the MoF will take up responsibility.

Case study Kenya

In March 2021 the President of Kenya launched a Task Force for the **revision of PPAs** with IPPs (all technologies).

Most of existing PPAs are denominated in USD or €.

The government bears the responsibility for hard currency availability, while the offtaker (→ ultimately the consumers) covers the exchange rate and inflation fluctuation risks.

The Taskforce recommended that all future PPAs should be denominated in Kenya Shillings.

The monetary policy implementing agency will be required to ensure macroeconomic stability to avoid fluctuations in the local currency and erosion of real value of money.

Stability of local currency will enhance bankability of projects.

Conclusions

Unlocking private investments

Green Power

Among financial risks, where investors and public sector stakeholders do agree is on inflation, tax and exchange rate risks. The fallout from Covid-19 in several cases induced rounds of currency erosion and raised the specter of renewed instability.

A local currency tariff structure would favour local economy (eg increase of domestic investors participation; promoting growth of local developers...) but must be balanced with investors' requirements in terms of bankability (convertibility and transferability guarantees).

Some very general recommendations:

- Continue the effort toward socially-balanced macroeconomic stabilization
- Introduce (partial) indexing of bankable PPAs to foreign currencies
- Maintain the convertibility/transferability guarantee as a standard element of a PPA

Thank you!

Green Power

Eric Kaleja

Vice President, AfricaConnect, DEG

DFIs’ support to manage foreign exchange risks in emerging markets

SolarPower Europe

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DEG: More than finance

DFIs’ support to manage foreign exchange risks in emerging markets

November 2021

KFW DEG

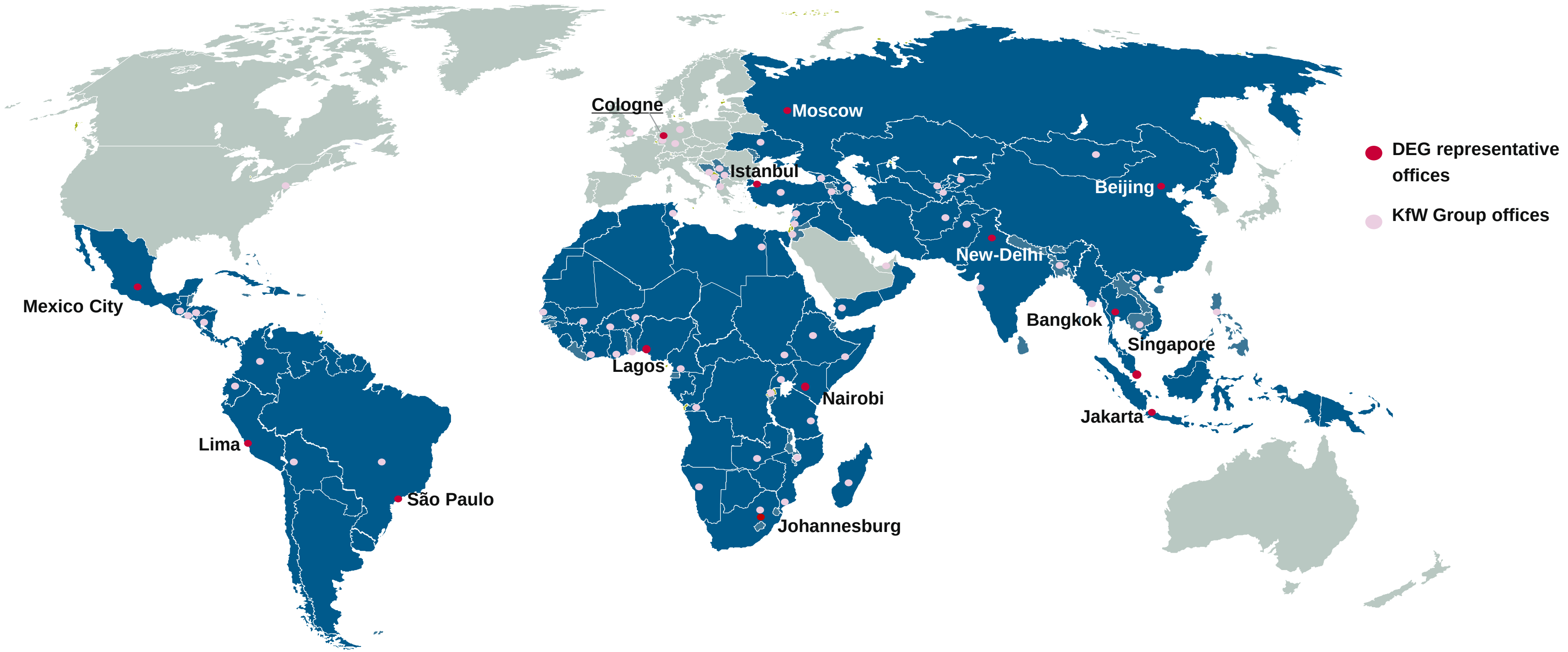
DEG at a glance
Facts and figures

Founded	1962
Employees	650
Headquarters	Cologne
Shareholder	KfW, Frankfurt
New business	EUR 1.4bn
Portfolio	EUR 8.5bn
Equity	EUR 2.2bn
Balance sheet total (2019)	EUR 6.4bn

Photo: DEG/Andreas Huppertz

Worldwide presence of KfW Group and DEG

Approx. 80 offices and representations with regional experience and networks



- Contacts in **key regions and main foreign markets**
- Close cooperation and physical proximity for **optimal advisory and support**
- **Exchange of knowledge and experience** beyond country borders – for your benefit

Operating in a network

European Development Finance Institutions (EDFI)

EDFI

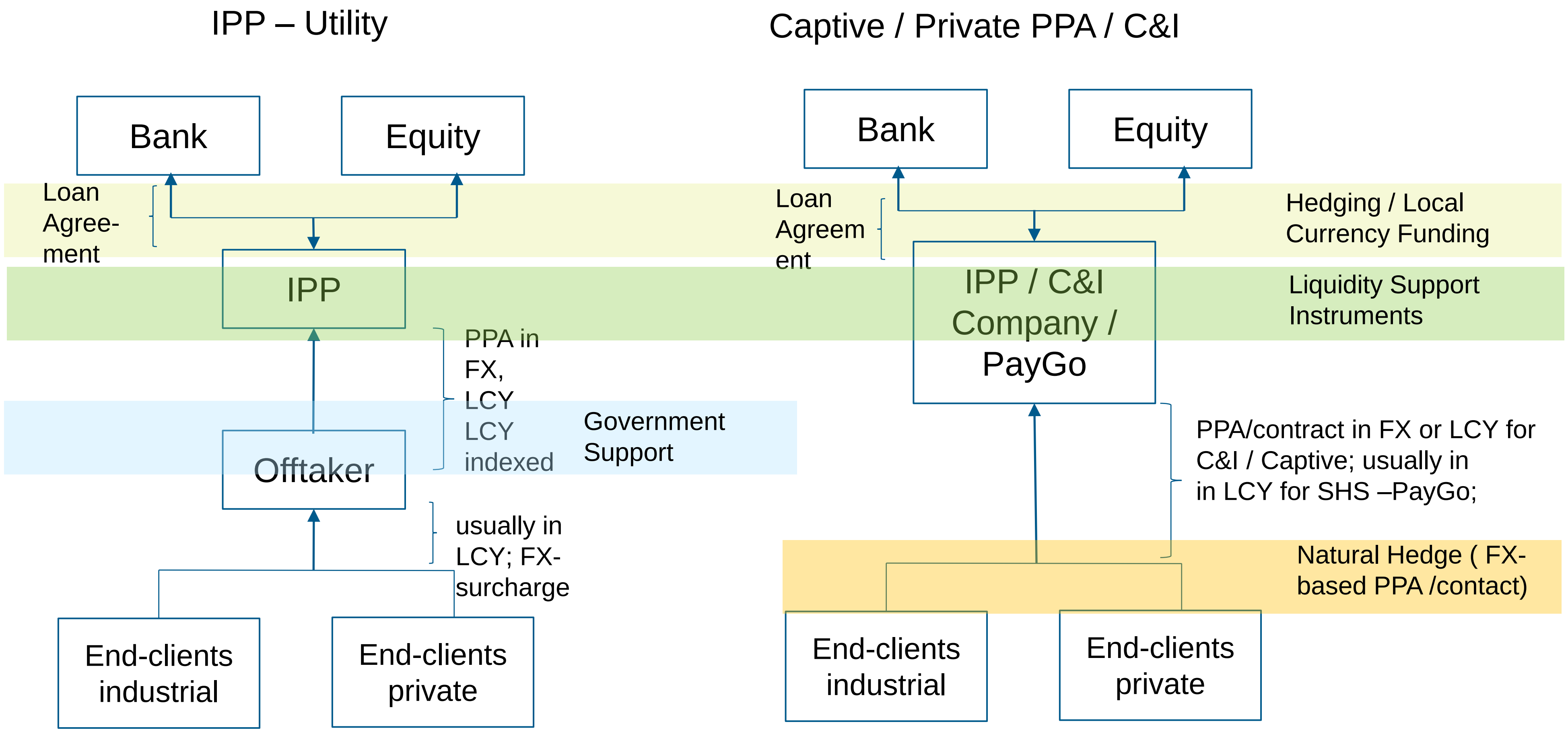
DEG is one of 15 members of the European Development Finance Institutions (EDFI), based in Brussels.

The benefits

- Larger financing volumes
- Shared risks
- Harmonised standards
- Efficient, joint due diligence
- Structuring of complex finance
- Further strong partners, such as International Finance Corporation (IFC), regional development banks

Cash-flows in Solar Projects with International Funding

Different Levels of Risk Mitigation are possible



Relevance of Local Currency Funding

Different Types of Offtakers and Power Purchase Agreements (PPAs)

Specifics	*Utility - IPP*	*Private PPA/Captive Power*	*Distributed Solar (C&I)*	*Distributed Solar Solar Home Systems (PAYG)*
Offtaker	(para)-statal utility	Large private project / company (eg. mine, cement plant)	Small – large private corporates	Households
Tenor	Long (up to 20+ years)	Medium – long (ca. 7-15y)	Medium - long (ca. 7-15y)	Short (1-3y)
Contract - Currency	LCY or FX	LCY or FX	LCY or FX	LCY
Natural Hedge for Offtaker	**Usually not available**	Possible (eg. from commodities or linked to USD-prices)	Depends on portfolio mix of C&I company	**Not available**

→ **depending on the contract currency hedging solutions are required in all sub-sectors of solar projects**

FX risk in PPAs – Who takes the risk…

….and how can it be mitigated?

Specifics	***FX (USD, EUR)-based PPA***	***LCY-based PPA (indexed to FX)***	***LCY-based PPA or PAYGo / Lease-Contract***
FX-Risk *(Devalutation of LCY)*	With offtaker	With offtaker	With IPP / C&I- / PaYGo-Company
Convertibility Risk	With offtaker	With IPP	With IPP / C&I- / PaYGo-Company
Transfer Risk	With offtaker	With offtaker	With offtaker / end-consumer
Risk Transfer /Mitigation	Usually to end-consumer via FX-surcharge	Gov. can provide C/T guarantee to mitigate C/T risks for IPP/financiers	Pot. via FX-surcharge; in practice FX-risk stays with IPP / C&I company
Additional Risk Mitigation Instruments	• FX-Reserve Account • Regional Liquidity Support Facility (ATI)	• FX-Reserve Account • Regional Liquidity Support Facility (ATI) • EU T&C Facility • Hedging	• LCY from local banks • Hedging

LCY-products offered by DEG

Specifics	*„Established“ Emerging Market Currencies*		*„Exotic“ Emerging Market Currencies*
Product	Classic (Deliverable)	FX-Linker (Non-Deliverable)	GIIG (Non-Deliverable)
Available currencies	CNH, INR, MXN, PHP, RUB, TRY, ZAR	IDR (South American currencies in testing phase)	All currencies offered by TCX (except for CNH)
Maturity	Depending on fx-markets (eg. ZAR up to 18 years)	Up to 10 years	Usually according to DEG loan tenor via Global Impact and Investment Facility („GIIF“)
LCY Interest Rate Base	Only fixed, except for MXN, ZAR	Only fixed	Fixed or Floating depending on TCX
Eligibility Criteria	• None	• None	• Have to be met (also USD 20m max)
Settlement Currency	LCY	EUR	USD
C/T Risks	Transfer Risk remains with IPP/client	• Remains with IPP/client	• Remains with IPP/client
Example	• Redstone, RSA		• Yellow Door, Jordan

Your contact

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Strategies to mitigate foreign exchange risks in emerging markets

SolarPower Europe

Mitigating FX risk in EMFM

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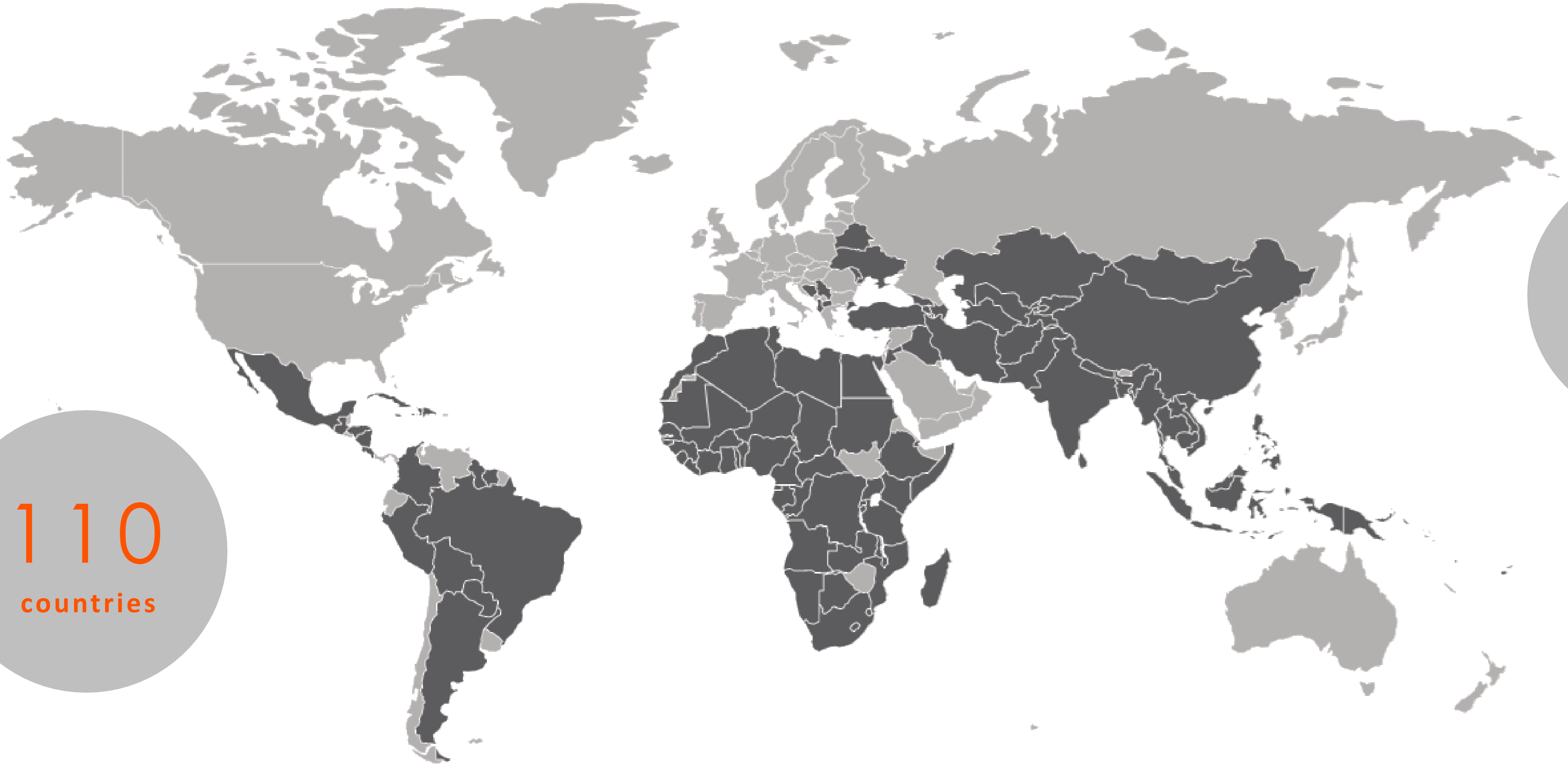
TCX investors

TCX regions and currencies

TCX provides global coverage



110
countries

95
currencies

The energy sector

On-grid:

PPA based, tariff regulation

PPAs in EM tend do be in LCY (RSA, Colombia): LCY debt/hedging required

PPAs in FM tend to be in USD (Rwanda, Honduras): USD debt required

Off-grid:

No utility, consumer leasing, no tariff/financial regulation

LCY revenue, but a business and its lender can decide on USD or LCY debt

The message

On-grid:

EM: LCY PPA: LCY debt/hedging required: available at all tenors/volumes

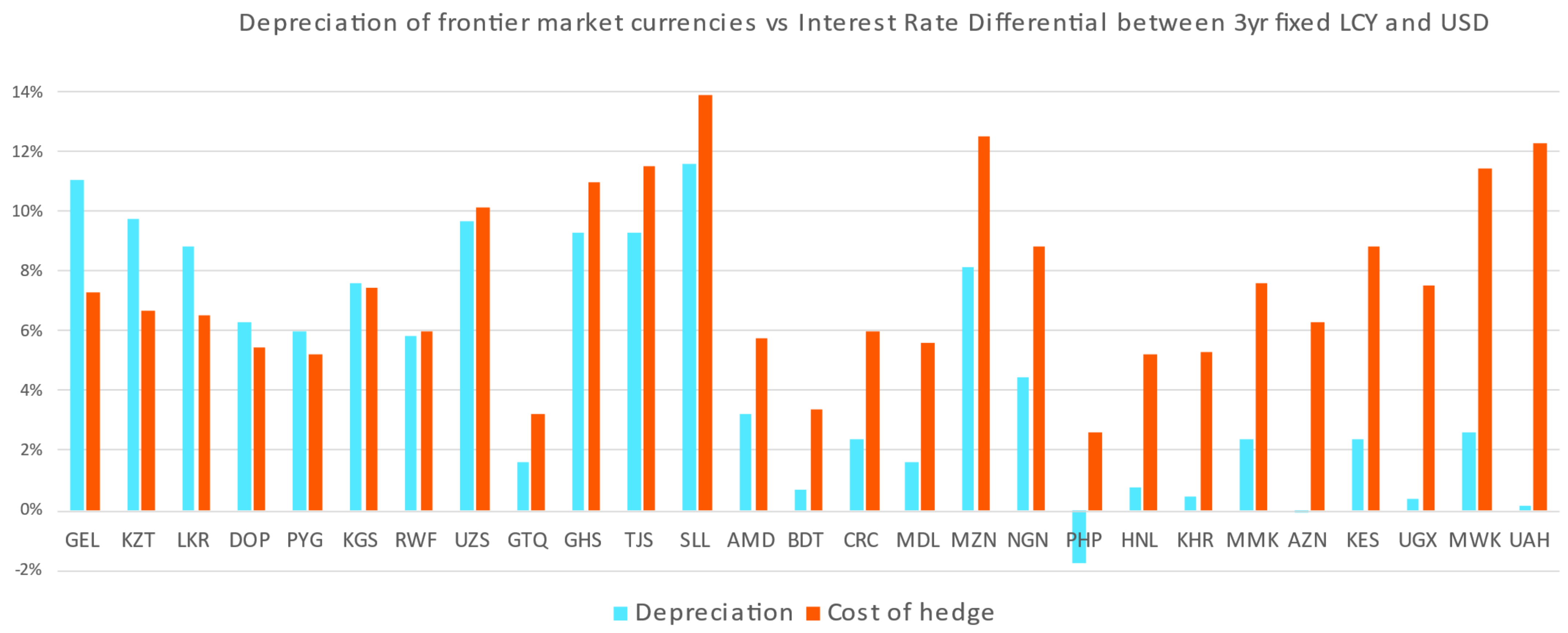
FM: USD PPA: you are covered, USD debt no issue

Off-grid:

PAYGO: no tariff indexation: borrow LCY! Available at all tenors/volumes

Minigrid: tariff indexation?? If yes, shame, if not, borrow LCY!

The “cost of LCY” for the period 2018 – 2021 (3)



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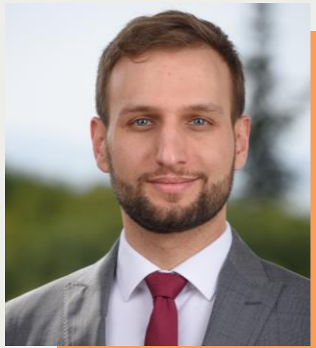

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Enhance your digital presence with our online opportunities including:

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- **Podcasts**
- **Newsletter**
- **Online reports**
- **Executive interviews**

Our team of experts will help you tailor these opportunities to your marketing needs.

Please contact Manuele Poli for more information: m.poli@solarpowereurope.org

UPCOMING EVENTS

- 18 November – Webinar: **Report launch: solar investment opportunities in the MENA region**
- 23 November – Webinar: **Solar & Storage: the perfect solution for rooftop and large-scale solar**
- 7-8 December – Online event: **Solar Quality 2021**
- 13 December – Online report launch event: **SolarPower Europe EU Market Outlook 2021-2025**

SolarPower Europe

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