

Supporting Romania's National Energy and Climate Plan (NECP)

New trends in financing Renewable Energy

Energy Financing Workshop – Romania

Cristina Span, EIB OPS

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Corporate vs non-recourse/limited recourse lending for RE

Corporate lending	Non-recourse/Limited recourse lending (Project Finance)
<ul style="list-style-type: none">▪ Lending against the company's <u>balance sheet</u>▪ Financial projections extrapolated from <u>past performance</u>▪ <u>Secured on corporate assets and cash flows</u>	<ul style="list-style-type: none">▪ A <u>Special Purpose Vehicle</u> (the Project Company) is create with the only purpose of implementing the project (the SPV has no past activity, no assets)▪ Lending against <u>project's cash flows (income streams)</u>▪ Typical security includes pledges of <u>shares of the SPV and project assets, PPA revenues</u>
<p><u>Investors/Promoters:</u></p> <ul style="list-style-type: none">❖ Utilities and power generators with large balance sheets, specialised in the sector	<p><u>Investors/Promoters:</u></p> <ul style="list-style-type: none">❖ Investors and power generators with limited balance sheets, looking to diversify/leverage

Why Project Finance for RE ?

Equity Investors/Promoters	Long-term Lenders (e.g. banks, investment funds, pension and insurance funds)
<ul style="list-style-type: none">▪ Leverage investors' returns▪ Build more projects, recycle capital▪ Share risk▪ Attract larger pools of private finance at competitive rates	<ul style="list-style-type: none">▪ Long-term predictable revenue streams▪ Ring-fenced cash flows▪ Step in rights
<p><u>Some of the challenges:</u></p> <ul style="list-style-type: none">❖ Requires highly specialised skills❖ Complex contractual arrangements❖ Long-term contracts that need to be monitored	

What underpins Project Finance for RE?

Support schemes/subsidies	Power Purchase Agreements (PPAs)
<p>Support/subsidy schemes keep evolving:</p> <ul style="list-style-type: none">▪ Feed-in Tariff (FiT)▪ Feed-in Premium (FiP)/Contract for Difference (CfD)	<p>There can be many types of PPAs, such as:</p> <ul style="list-style-type: none">▪ PPAs with utilities▪ PPAs with corporations (corporate PPAs)▪ Physical PPAs▪ Synthetic/Virtual PPAs
<ul style="list-style-type: none">▪ Investors and lenders are generally only exposed to <u>performance risk</u>	<ul style="list-style-type: none">▪ Investors and lenders may be exposed to electricity <u>market price risk</u>
<p>❖ Depending on the risk profile of the project, Project Finance may allow for 60-85% of debt leverage</p>	

EIB's support to RE generation in the EU

POLAND SOLAR POWER PROJECTS PROGRAMME LOAN



- EIB's Programme Loan dedicated to supporting small to medium-size, geographically dispersed, land-based photovoltaic (PV) plants in Poland of a total capacity of 250 MW.
- Implementation over 2018-2022
- Size of the total investment EUR 200 mil.
- The Programme Loan allows streamlined procedures for EIB lending.

❖ Projects are receiving support under the Polish auction system for Feed-in Premium/CfD for 15 years (inflation indexed)

- The total amount to be financed by EIB is around EUR 100 mil.
- Focusing on non-recourse (PF) lending.
- Installations up to 1 MW and above with a total capacity portfolio of 40-60 MW.
- Each project is implemented via SPV.
- The EIB tranche for a project represents up to 50% of the senior debt.
- The EIB loan facility's term can go up to 16 years.
- Lenders' legal, technical, insurance, and financial model due diligence required prior to financial close.

EIB's support to RE generation in the EU



LORDS LB 66 MW SOLAR PV PORTFOLIO

- The project is financed under **the Poland Solar Power Projects Programme Loan**



- Comprising a portfolio of 66 independent, small scale, land based PV plants with an average, individual nominal capacity of ≤ 1 MW, totaling to ~ 66 MW.
- EIB PF loan of cca. EUR 18 mil., the equivalent of 50% of the senior debt.
- EIB's loan with a tenor of 16 years and a fixed interest rate, backed by an EFSI guarantee.
- Debt:equity approx. 70:30
- Long-term loan facilities are disbursed after the completion of the construction.
- The SPV receives two types of financial proceeds: (a) from selling all generate electricity on the market through a "route-to-market" PPA, and (b) from covering a negative balance, if any, by the government-owned Settlement Operator for the volume of electricity declared in the auction bid.
- If the balance is positive, the excess is applied towards covering the negative balance in the subsequent months. If the balance remains positive at the end of the support period, it will have to be refunded to the Settlement Operator.

EIB's support to RE generation in EU



LE Pomerania Wind Farm

- 94 MW onshore wind farm located in the northern part of Poland, approximately 50 km from the coastline of the Bay of Gdansk.
- One of the largest on shore wind developments in Poland
- The Borrower is an SPV 100% owned by Ignitis Group (state owned company), the largest utility group in Lithuania.
- Ignitis Group is the second largest wind power producer in the Baltic countries.

- Investment value of approx. EUR 134 mil.
- EIB providing EUR 60 mil., under a 17 years PF facility.
- The project is receiving support under the Feed-in Premium auction in Poland.



Why corporate PPAs ?

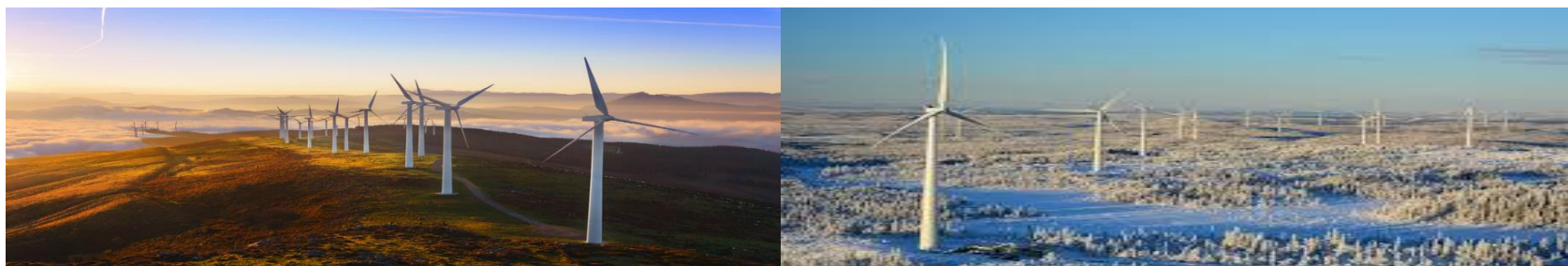
Power generators/Investors	Corporate off-takers	Long-term lenders
<ul style="list-style-type: none"> ▪ Stable revenues to ensure equity return and debt service ▪ Price level closer to retail prices may improve profitability 	<ul style="list-style-type: none"> ▪ Secure stable volumes and lower electricity prices ▪ Meet green objectives ▪ Lenders' interest in the project provides a "safety net" 	<ul style="list-style-type: none"> ▪ Predictable cash flows able to service debt in the long-term
<p><u>Some of the challenges:</u></p> <ul style="list-style-type: none"> ❖ Regulatory risk ❖ Interface risk ❖ Market liquidity for PPAs 		

EIB's support to RE generation in the EU



The North Pole (Markbygden) wind farms – a project implemented without subsidies

- The project consists of a 650 MW wind park comprising three windfarms in North Sweden.
- Helped increase Sweden's installed wind generation capacity by 12.5%



- The power generated from the windfarms was purchased by a subsidiary of Norsk Hydro under a 20-year PPA, fixed volume, fixed price.
- The investors provided EUR 300 mil. in equity.
- The project's debt of EUR 500 mil. was raised via bank loans partly guaranteed by Export Credit Guarantees of the Federal Republic of Germany.
- EIB PF loan of EUR 179 mil. (100 mil. Backed by an EFSI guarantee), with a term of 23 years.
- Norsk Hydro –the PPA off-taker, achieved a fixed price for a significant portion of the electricity demand for their Nordic aluminum manufacturing facilities, which produce around 100,000 tonnes of aluminum each year.

EIB's support to RE generation in the EU



Norther Offshore Wind Project

- 70 MW offshore wind park in the Belgian North Sea, approximately 23 km from the Port of Zeebrugge.
- Value of the investment approx. EUR 1.1 billion
- The project debt of approx. EUR 825 mil. is provided by a consortium consisting of the EIB, the Danish export credit agency (EKF), and 9 commercial lenders.
- The 19 years EIB loan amounts to EUR 438 mil., (40% of the total investment cost), half of a which is backed by an EFSI guarantee.
- The project benefits from the Belgian subsidy regime (CfD approach).
- The wind farm owner (the SPV) is remunerated via two 15 years PPAs for the entire volume of energy (wholesale price) and the sell of green certificates to the grid operator.



EIB's support to RE generation in the EU



Large solar PV plants financed outside renewable energy auctions



Talazol: a 300 MW Solar PV plant in Extremadura, Spain

- Total investment of EUR 230 mil.
- EIB PF direct loan of EUR 70 mil., backed by an EFSI guarantee.
- The plant was developed on the basis of a corporate PPA without government support for approx. 80% of production for 10 years.
- The electricity generated from the project is sold in the open market for the current market power price. The PPA hedges the risks associated (acts as a financial power swap) with fluctuating electricity market prices.

Cabrera Solar Project: four 50 MW solar PV plants

- The plant will operate without any form of government support and will entirely rely on revenues generated from the sale of electricity.
- The SPV entered into a PPA with Amazon Energy Eoraip Ltd., a subsidiary of Amazon.com Inc, which hedges the off-take price for a significant volume of the energy production.

Risk assessment in Project Finance

- It is necessary for project promoters and off-takers to involve lenders early in the process of designing a PPA.
- Risks need to be allocated to the parties that can best manage them.
- The risks' allocation must be reflected in the clauses of the financing and PPA contracts as well as in the other underlying contracts associated with the transaction.
- Some key elements in the risk assessment of a PF transaction for RE generation:

✓ Strategy for mitigation of merchant price risk	✓ Price indexation	✓ Termination rights
✓ Off-taker credit standing	✓ % Production contracted	✓ Termination payments
✓ Pricing of electricity	✓ Delivery profile/capture rate	✓ Force majeure
✓ Interfaces	✓ Sub-contracts (EPC, O&M, major suppliers)	✓ Security package

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Questions & Answers