



# Contractual Arrangements to Enable Bankable Projects

Workshop on Support for Renewable Energy to Enable the Energy Transition

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# Bankability - Key Issues

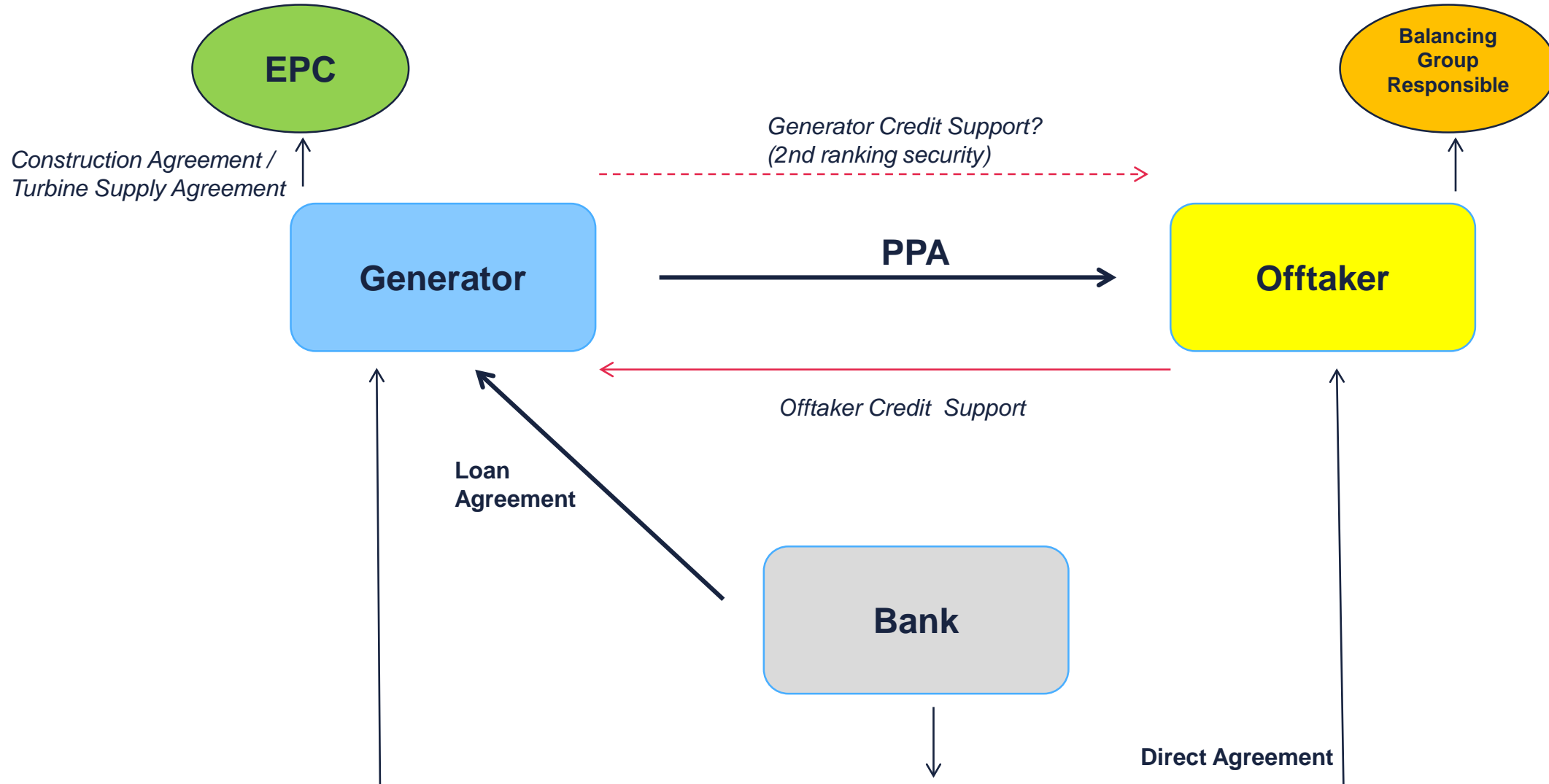
## General Points

- Type of contract: Physically settled vs financially settled
- Volume commitment: fixed volume/baseload vs. pay as produced
- Compensation of reduced installed capacity or reduced availability, interaction with turbine supply or O&M warranties/guarantees
- Fixed vs. floating elements, market disruption, negative pricing
- Balancing regime and cost allocation
- Delivery point, risk of connection line failure, connection agreement turn down or disconnection
- Environmental attributes transfer and pricing
- Force majeure / change in law generator risk events
- Termination events and termination payment based on market liquidity and ability to obtain a replacement contract
- Credit support and performance assurance
- Reliance on legislation for scheme, governing law, dispute resolution

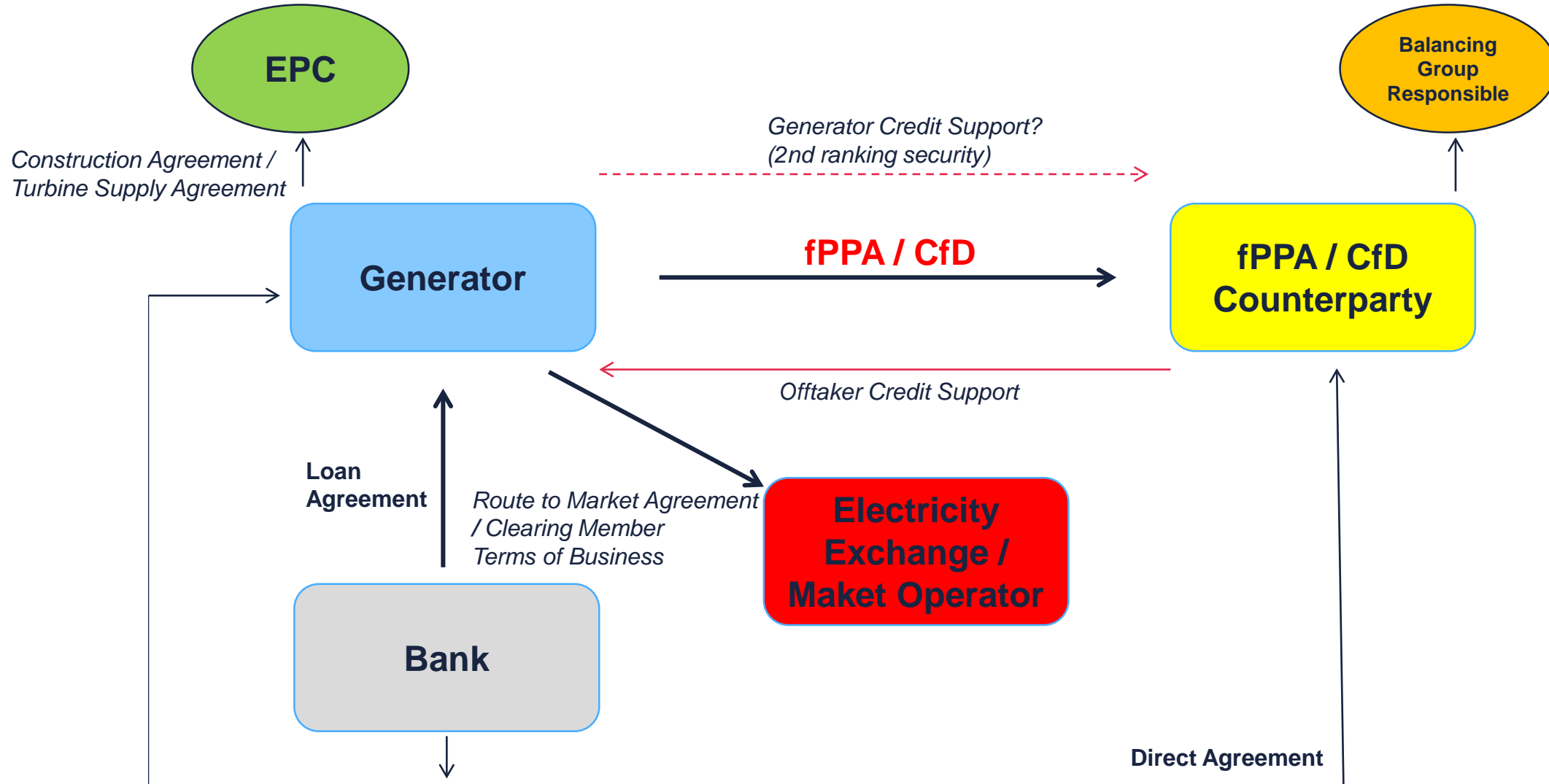
## Additional EnCom Points

- State ownership of offtaker and impact on state aid clearance for PPA and credit support and enforceability
- Tenure of connection offers / agreements, trip or turn down risks
- Perception of regulatory risks and intervention, additional requirements on generator force majeure or change in law risk events / deemed availability
- Relative illiquidity of short term markets and impact on termination loss calculation
- Interaction of state support law and changes thereto on validity of the underlying PPA
- Evolving balancing regime
- Adequacy of local law as governing law (lack of comparable cases)
- Investment protection, impact of EU BIT and ECT arbitration limitation on EnCom, EnCom DRC
- EnCom target model of financially settled contracts (CfD) for support and transition issues for PPAs

# Physical PPA Structure



# Financial PPA Structure



# Availability Guarantee

## Pay as Produced

### Generator

Operate and maintain facility to achieve maximum availability and metered output

Minimum availability guarantee provision aligned to the turbine supply and maintenance agreement performance regime.

Pay liquidated damages in case of a compensation unavailability event

Energetic availability is calculated usually on a per turbine basis

Unavailability liquidated damages not be payable in respect of metered output not delivered in any season in excess of the seasonal production target

Unavailability liquidated damages are often capped up to a maximum per contract year

Exclusions from unavailable production (including FM, events caused by the offtaker's non-performance, grid related events, maintenance, curtailment requested by the offtaker, environmental site conditions)

# Change in Law

## Triggers

Renders it impossible or unlawful to give effect to the PPA

Renders any material matter required to be ascertained under the PPA impossible to ascertain

Causes the provisions of the PPA to become inconsistent with applicable laws

Introduces, replaces, modifies or extinguishes any bidding or price areas relevant to floating price calculation

Introduces, replaces, modifies or extinguishes any scheme which confers benefits (e.g. green benefits, capacity markets)

Materially and adversely affects the benefit of the PPA to either or both of the parties

# Change in Law (cont'd)

## Consequences

Regulatory risks intentionally allocated to one of the PPA parties

Neither party shall be liable for a failure to perform any obligation

Each party shall try to minimise and mitigate the consequences on the performance

Negotiation in good faith to preserve economic benefit of the PPA

Expert determination (in case of failure to agree)

Scope of amendment (change in price / non-price)

Termination

# Force Majeure

## Events

Failure of communications / computer systems preventing delivery / acceptance

Delivery, acceptance or disregard suspension regarding scheduling

Suspension, failure or malfunction of the transfer systems

Suspension, failure or malfunction of the certificate registries

Non-issuance of electricity/certificates due to a curtailment of the output due to order of a competent authority

Labour and material unavailability?

## Possible Carve Outs

Economic hardship and lack of funds

Curtailment of facility due to non-compliance with connection agreements, permits law // mechanical failure from defects, normal wear and tear

Failure to uphold required governmental approval for the operation and maintenance of the facility

Lack of materials required to develop, construct or maintain the facility (except where the material lacking is due to an event of FM)

Strike, slow down or labour disruptions

Risk allocation for environmental conditions (site and generation)



# Force Majeure (cont'd)

## Consequences

Release from obligations, with (generally) no compensation due to the other party

Release from delivery and acceptance obligations

Notification and mitigation of force majeure

Right to refuse electricity / certificates, interdependency of different products

Long stop date  
Termination

Application of insurance proceeds, offtaker right to participate?

# Termination Regime / Payments

## Either Party

### 'Fault'

- Failure to perform a material delivery or acceptance obligation for electricity and certificates
- Non-payment
- Failure to provide credit support / performance assurance
- Insolvency / winding-up
- Conditions precedent
- Warranties, representations, permit

### 'Non-fault'

- Force majeure
- Change in law (unless risk assumed by a party as a risk event)
- Non-fault termination of a material agreement

## Offtaker

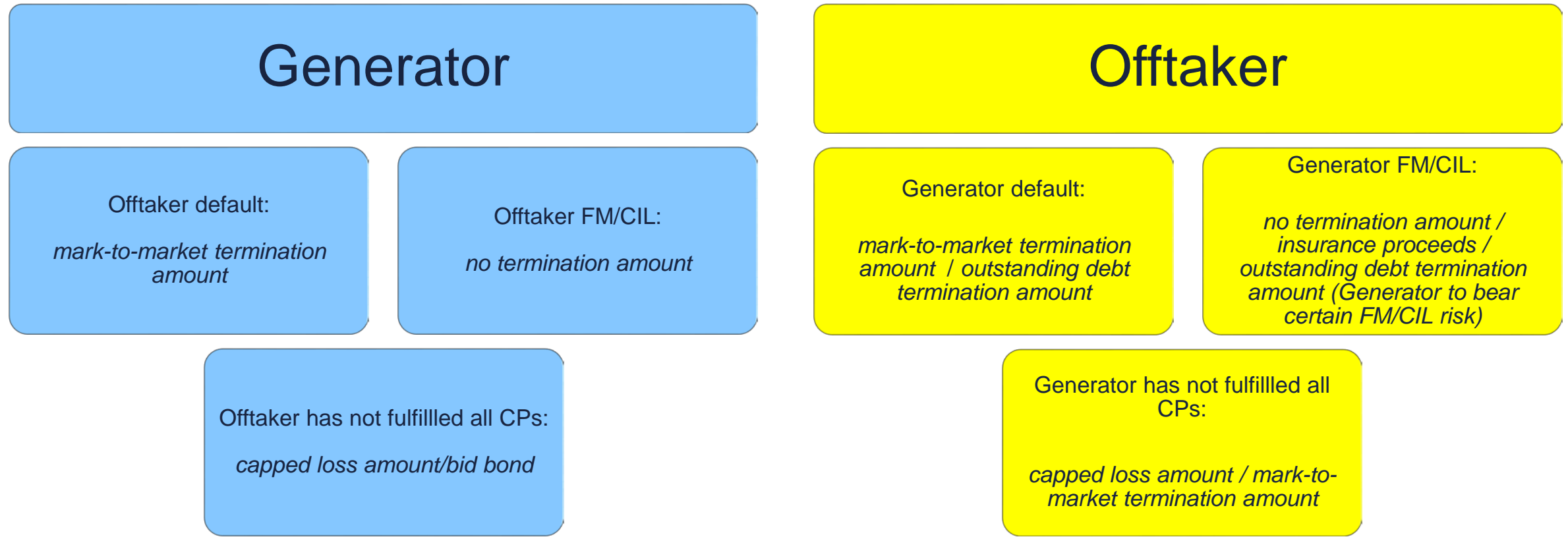
- Permit not obtained / expired and not replaced / revoked
- Change in creditworthiness
- Change in ownership
- Breach of concession / development agreement

## Generator

- Permit not obtained / expired and not replaced / revoked
- Generator breach of a material contract required for generation or delivery (e.g. O&M, connection agreement)
- Failure to achieve minimum capacity or maintain minimum availability
- Change in ownership
- Acceleration of the loan / breach of finance agreement (subject to direct agreement)

# Termination Regime / Payments (cont'd)

## Generator / Offtaker - Payments



# Credit Support

## Generator

PCG / BG / LoC not typically provided for physically settled PPAs, may be required for financially settled PPAs

May require bid bond / performance guarantee from offtaker to cover development obligations

2nd ranking securities over assets becoming more common

MAC – performance assurance?

## Offtaker

PCG, BG or LoC with typically 12 - 18 months of projected electricity payments in liquid markets

Step-down over contract duration common

May require trilateral payment support agreement or sovereign guarantee in emerging markets

MAC – performance assurance?

# EnCom Projects – Stakeholder Challenges

## Investor / Generator

- Limitation to floating prices, market illiquidity, market disruption
- Availability of connection offers and tenure
- Evolving balancing regime and cost allocation between parties
- Delivery point, risk of connection line failure, connection agreement turn down or disconnection
- Uncertainty on availability and transfer of environmental attributes
- Perception of higher regulatory risks, desire for offtaker or government to take certain risks events
- Unusual documentation (e.g. standard terms)
- Illiquidity of short term market and risk of stranded investments
- Degree of reliance on legislation, investor protection, governing law and dispute resolution
- Implications of financially settled PPAs on EMIR clearing thresholds and MiFID II exemption position for EU investors

## Offtaker / Government

- Effective bidding on price / negative experience with overcompensating projects
- Capacity to assess non-price terms or conditions to offers, optimising comparability of bids and flexibility on terms
- Limited creditworthiness of national offtakers, limitations on ability to offer state guarantees or alternative payment support agreements
- Commitments of bidders to see projects through to realisation / lock-in of investors until successful operations
- Limited pool for lenders to projects in EnCom jurisdictions, being 'hostage' to bankability considerations
- Implications of legacy contracts
- Budgetary and structural limits to socialisation of higher support costs
- Transition phase in market reorganisation, on-going legislative process

# Contacts

If you have any questions in relation to this presentation, please do not hesitate to contact us.

The following slides provide a brief summary of relevant experience in relation to RE scheme design, developing standard documentation for the market or conducting reviews on key market regulatory and design issues.

To find out more about our Energy and Natural Resources sector please visit our [website](#).

We would be delighted to discuss any of this experience in more detail with you.



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# Recent RE Scheme, PPA and Standard Contracts Work

- Advising the Energy Community on a review of capacity market mechanisms in the Western Balkan countries of the Energy Community
- Advising EBRD on the development of renewable energy (wind and solar) tendering schemes and all related documentation for Albania
- Advising EBRD on the development of a renewable energy tendering (wind) scheme for Moldova
- Advising the European Federation of Energy Traders (EFET) on the development of a standard PPA for physically or financially settled transactions (<https://www.efet.org/standardisation/cppa/>)
- Advising EFET on the updating on the EECS master agreement for the trading of GoOs
- Advising RECS International and EFET on the classification of GoOs and financially settled PPAs under MIFID II
- Advising the Ministry of Energy and Water of the Government of the Islamic Republic of Afghanistan on a tendering scheme and PPA and Project Support Agreement documentation for solar, gas and hydroelectric generation units
- Advising the I-REC Foundation on the development of a global renewable energy certificate scheme (I-REC)
- Advising the World Bank on the design of a renewable energy certificate scheme for Argentina
- Advising a joint venture between a municipality and an infrastructure developer on a floating solar demonstration project in an EnCom jurisdiction
- Advising a Swiss infrastructure fund on the financing of several wind parks in Norway and Sweden on the basis of financially settled PPAs
- Advising a global IT company on the conclusion of financially settled PPAs

# Selected Renewable Energy Experience in Europe



## WIND EXPERIENCE – EUROPE

### BELGIUM

- Vleemo 3 - Phase 3
- Belgian North Sea Wind Farm - 294 MW

### BENELUX

- Rabobank - 27 MW

### POLAND

- EDP Renewables Wind Farms Acquisition - 570 MW
- EBRD and Relax Poland Wind Farm - 120 MW
- Wento Wind Farm Projects - 149.5 MW
- EDP Renováveis Wind Farm Projects - 270 MW
- Dong Energy Wind Farm Projects Acquisition - 555 MW
- Iberdrola Renewables Polska Wind Farms - 1200+ MW
- ERG S.p.A Portfolio Wind Farm Projects - 100 MW

### DENMARK

- LM Wind Power Acquisition - EUR 1.5 billion
- Vleemo 2 - 18x 54MW

### FRANCE

- Project Brie - 20 MW
- Haute Normandie & Nord Pas de Calais - 22.5 MW
- Guadeloupe - 16 MW
- South of France - 80 MW
- Dunkerque Offshore Wind Farm - 600 MW
- ERG Wind Projects - 750 MW
- Perles Wind Projects - 12 MW

### NORWAY

- Project Magpie - 450 MW
- Hennøy, Okla and Lutelandet Wind Power Projects - 100 MW
- Fosen Vind (the biggest onshore wind farm in Europe) - 1000 MW
- Project Raudfjell/Kvitfjell - 300MW

- Guleslettene (Funders) - 300 MW
- Tonstad (Funders) - 200 MW

### SPAIN

- Tarragona Wind Farms
- Vineyard Wind Offshore Wind Project - 1600 MW
- Dong Energy Wind Parks Acquisition - 750 MW
- Spanish Power Wind Farms (acquisition in Sweden) - 300 MW

### GERMANY

- PingAn Wind Park
- Linda Windpark Acquisition - 21.6 MW
- Skogaby and Bohult Wind Projects - 20+ MW
- B Capital Partners Portfolio Onshore Wind Farms - 100 MW
- Potrfolio Wind Farms - 60 MW

### BULGARIA

- Suvorovo Wind Farm - 60 MW

### UKRAINE

- West Crimea - 900 MW
- Opic Wind Farm - 500 MW
- EDF Energy Nouvelles Wind Plants Sale
- IVPC Power 3 Wind Power Plant Acquisition - 112 MW
- Swartvallsberget Wind Farm - 20 MW

### SWEDEN

- Project Celsius - 50 MW
- Project Lotus - 120 MW
- Grimas - 46.8 MW
- Project Pegasus - 500 MW
- Nord/LB Project financing - 46.8 MW
- Valhalla Wind Farm - 375 MW
- BlackRock Wind Farm - 46.2 MW
- Alide & Brattmyrliiden Wind Farms - 115 MW
- OX2 Wind Farm Acquisition - 21.6 MW
- Orrberget Wind Power Project - 33 MW
- NTR 2 Wind Farms Projects
- Tranemo and Gislaved Wind Farm Project - 50 MW
- Porftolio Wind Farms - 475 MW

### ITALY

- Financing Butera & Siculiana Wind Park - 18 MW + 16.5 MW
- Wind Farm Ceringola - 1 MW
- Serra Carpaneto - 16 MW
- GDF Suez - ERG Wind Park Portfolio - 636 MW
- Sigma Energy Wind Farm Acquisition - 20 MW
- Westwind Wind Farm Acquisition - 39 MW
- Basilicata Wind Farm - 16 MW
- EON Wind Farms Settlement - 328 MW
- Calabria Region Wind Farms - 32 MW
- Basilicata Wind Farm - 30 MW
- Melfi Wind Plant - 28.8 MW
- Monte d'Aria Wind Project - 8 MW
- E-Vento Cirò Wind Project Acquisition - 30 MW
- Sardinia Wind Power Plant Acquisition - 100 MW
- Tuscany Wind Farms Acquisition - 120 MW
- IVPC SAS Wind Projects - 169 MW
- IVPC SAS Wind Projects Sale - 650 MW
- Carpinone Wind Park Sale - 24 MW
- Girifalco Wind Power Project - 30 MW
- Eurowind Wind Farm Refinancing - 80 MW
- Rocchetta Wind Farm - 84 MW

### ROMANIA

- PNE Wind Farms - 102 MW

### PORTUGAL

- Trustenergy Wind Project - 490 MW

### FINLAND

- Ykspihlaja Wind Farm - 14.4 MW
- Project Earth - 312 MW
- Project Swan - 30 MW
- Ribäcken Wind Farm - 16.5 MW



# Selected Renewable Energy Experience in Europe



## SOLAR EXPERIENCE – EUROPE

### UK

- Refinancing of Islip and Springhill Solar Projects - 10 MW
- Brilliant Harvest - 1.9 MW
- First Solar (Joint Venture) Portfolio Solar Project - 80 MW
- Equitix Infrastructure IV - Solar Acquisitions - 20 MW
- ReneSola Solar PV Plants - 100+ MW
- Owls Hatch Solar Power Park - 50 MW
- Barclays Solar Parks Acquisition - 25 MW
- Equitix Cowdon and Canworthy Projects - 80+ MW
- Belectric Portfolio Solar Projects Acquisition - 80MW
- GES Rooftop Solar PV Projects
- Ancala 2 Solar Portfolio Projects Financing
- Unilever Rooftop Solar Facilities PPA

### BENELUX

- HSH Nordbank AG - 100+ MW

### GERMANY

- Project Younicos
- ICE 5 GmbH Solar Plants - 34 MW
- German Private Equity Fund Solar Power Plants - 43.65 MW
- First Solar Joint Venture Solar Projects - 100+ MW
- First Solar Moroccan Solar Project

### SPAIN

- First Renewable Solar PV Development Sites Disposal - 10 MW
- Ciudad Real Solar Farm - 9.4 MW
- Albacete Solar Farm - 10 MW
- Andalucia Solar Farm - 4 MW
- Florida Power & Light Solar Projects - 50 MW

### ROMANIA

- Thesan Photovoltaic Plants Project - 9 MW

### FRANCE

- Valevo and Mirova-Eurofideme 3 - 1818 MW
- Green Africa Power LLP - 20 MW
- Glennmont Partners PV Plants - 55 MW

### ITALY

- Financing ALPS Energy - 7.5 MW
- Blue Elephant Energy AG - 22 MW
- First Solar - 900 MW
- 9REN PV Portfolio Plants - 21.7 MW
- Abruzzo PV Plants - 2 MW
- Sungem Holging Photovoltaic Plants - 31 MW
- Virdis Energia Portfolio PV Plants Acquisition - 22 MW
- Sicily Concentrated Solar Plants
- ESU Photovoltaic Plants Sale

### PORTUGAL

- Project Sunflower - 1 MW
- Aura Power Solar Project - 300 MW
- Eef Solar Project - 5.6 MW

- Sunflower Italy S.r.l. Photovoltaic Plants Sale - 17.06 MW
  - Guidonia Montecelio Photovoltaic Plants Acquisition - 3 MW
  - Lazio Region Photovoltaic Plants - 16.44 MW
  - Apulia Photovoltaic Plants Acquisition - 6 MW
  - Calabria Photovoltaic Plant Sale - 40 MW
  - CEP Photovoltaic Plants
  - Calabria, Campania and Lazio Photovoltaic Plants Acquisition - 48 MW
  - Sardinia Photovoltaic Plants Acquisition - 4.3 MW
  - Sicily Photovoltaic Plant - 7 MW
  - Apulia Photovoltaic Plants Acquisition - 3 MW
  - Gottex Sicily Photovoltaic Plant - 3 MW
  - Sunflower Sustainable Investments Photovoltaic Plants - 59 MW
  - 9REN PV Portfolio Plants - 21.7 MW
  - Abruzzo PV Plants - 2 MW
  - Sungem Holging Photovoltaic Plants - 31 MW
  - Virdis Energia Portfolio PV Plants Acquisition - 22 MW
- ### NETHERLANDS
- HSH Nordbank Solar PV Project - 10 MW
  - Scaldia Solar Park - 50 MW
  - Major Dutch Bank Solar Project - 20 MW
  - Portfolio Ground-Mounted Solar PV Projects - up to 256 MW
  - Emmen Solar Park - 14 MW

Thank you