

Investing in Renewable Assets in Emerging Markets

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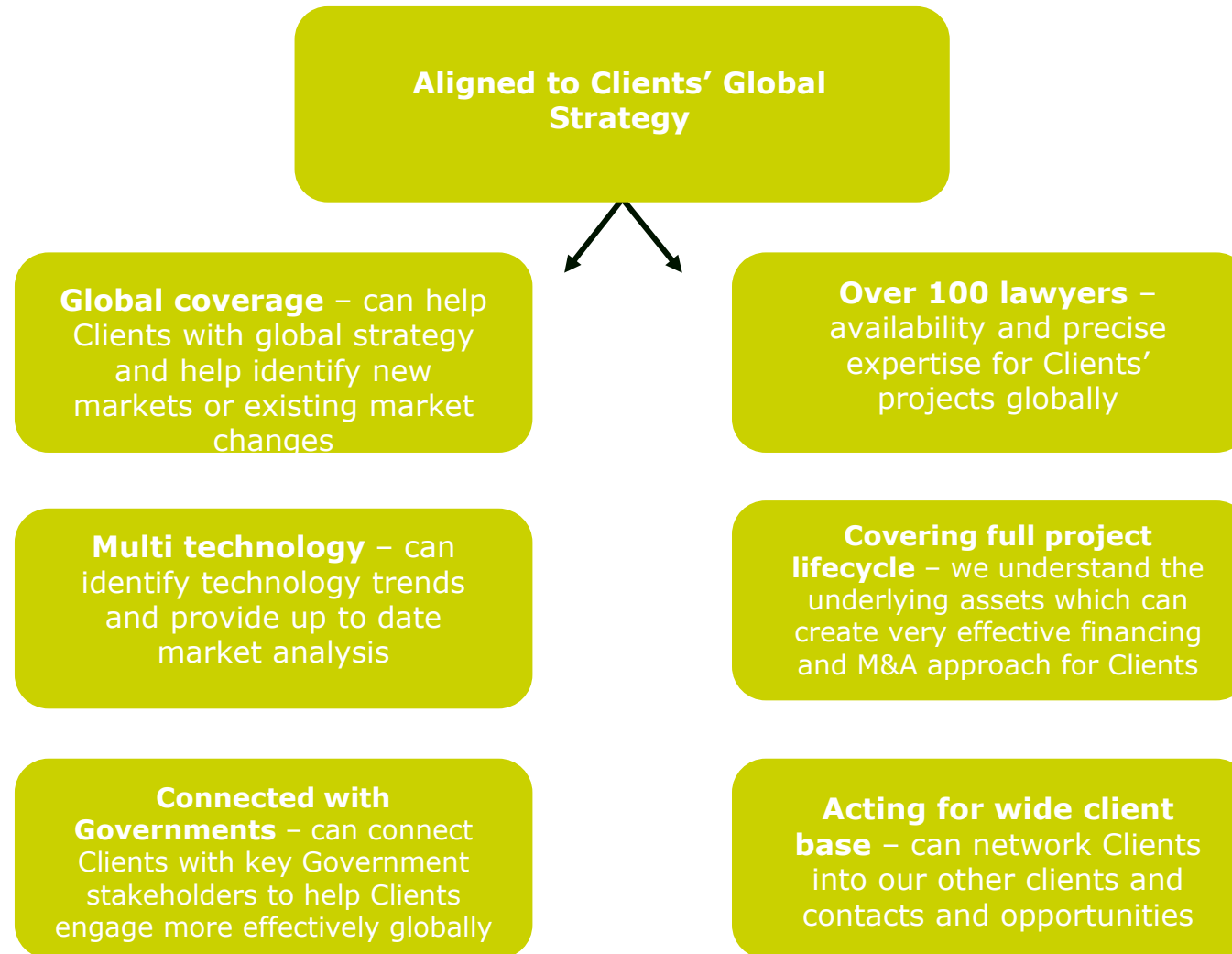
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- The global renewable energy market
- Development challenges and mitigating instruments
- Key requirements for financing projects
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Eversheds Sutherland Clean Energy and Sustainability – delivering value



Recognised by our Sector



Eversheds Hong Kong wins award
Named International Law Firm by
China Business Law Journal



Eversheds most active legal advisors to clean energy project and asset finance deals in 2014
Clean Energy Pipeline Global League Tables 2015



Middle East Law Firm of the
Year 2014 and Woman of the
Year 2014

More Lawyers named
in the Top 100 Legal
Power List 2016 – A
Word About Wind

Lower investments in renewable energy and lower costs in 2016

2016 showed a drop in new investment in renewables to US\$241.6 billion (cf to US\$285.9 billion in 2015)

Investment in new renewables capacity was roughly double that in fossil fuel generation in 2016

Two main reasons for the fall in investment: lower costs of technologies and slowdown in China, Japan & emerging markets

New investment in solar in 2016 totalled **\$113.7 billion**, while wind recorded **\$112.5 billion**

Record installation of renewable power capacity worldwide in 2016 reaching **138.5GW**

Renewable generation **costs continue to fall**, particularly in solar photovoltaics

Rapidly falling cost of batteries 35% decrease in 2015 from 2014

Proportion of global electricity coming from renewable sources rose from 10.3% in 2015 to **11.3% in 2016**

Source: Frankfurt School-UNEP Centre/BNEF 2016 & 2017. Global Trends in Renewable Energy Investment 2016 & 2017 <http://www.fs-unep-centre.org> (Frankfurt am Main)

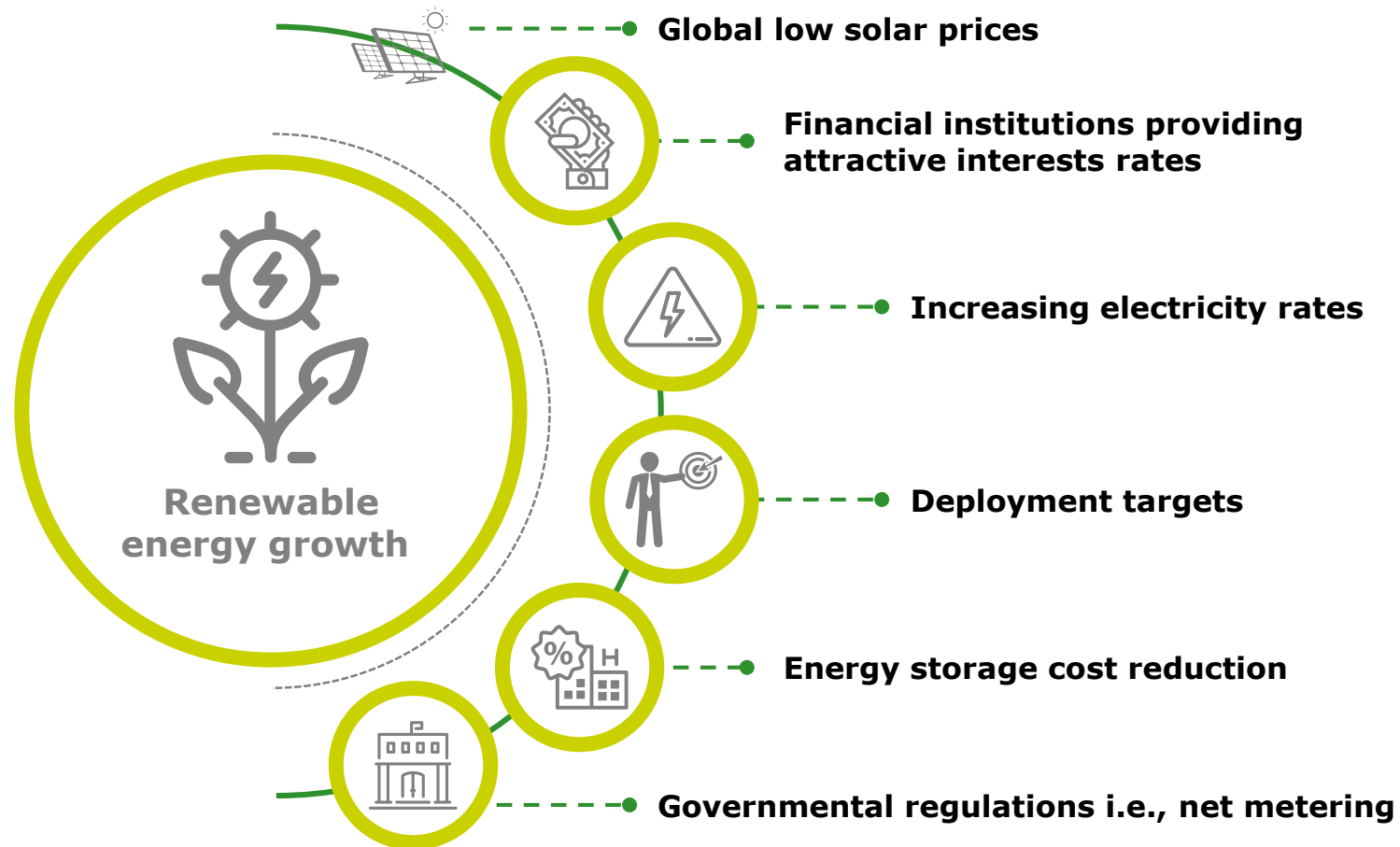
MENA scored lowest PV tariff rate globally

Record-low PV tariffs in the MENA region

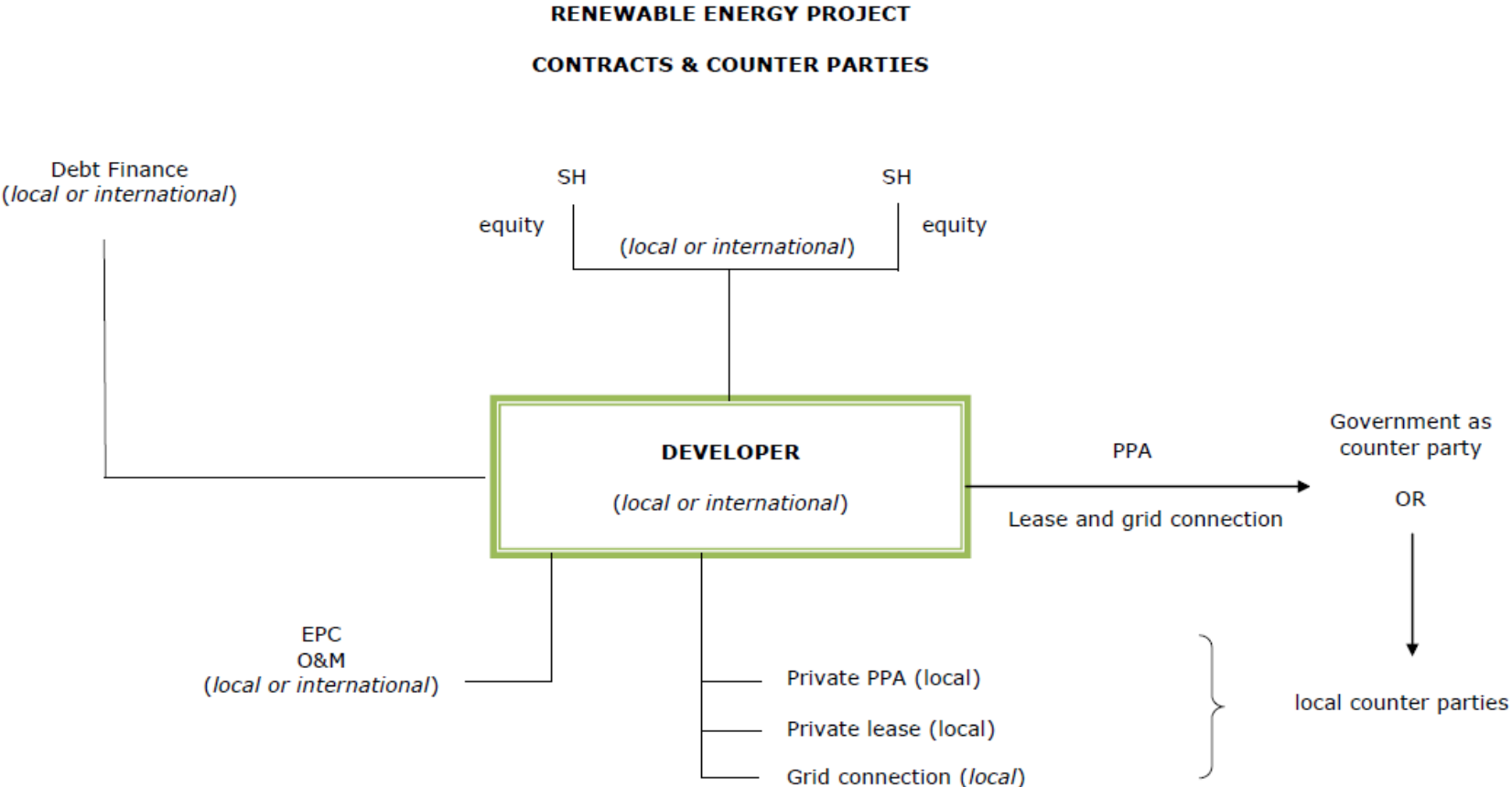
Project	MWe capacity	Awarded tariff	Developer/s	Country
DEWA Phase 3	800	US\$29.9/MWh	Masdar-led Consortium	UAE (Dubai)
ADWEA Sweihan	1,177	US\$24.2/MWh (JinkoSolar & Marubeni)	Unidentified Asian consortium	UAE (Abu Dhabi)
DEWA Shuaa	260	US\$56.1/MWh	ACWA Power	UAE (Dubai)
Mafrq	60.3	US\$61.3/MWh	ACWA Power	Jordan

Source: Research by new energy update (MESIA 2017)

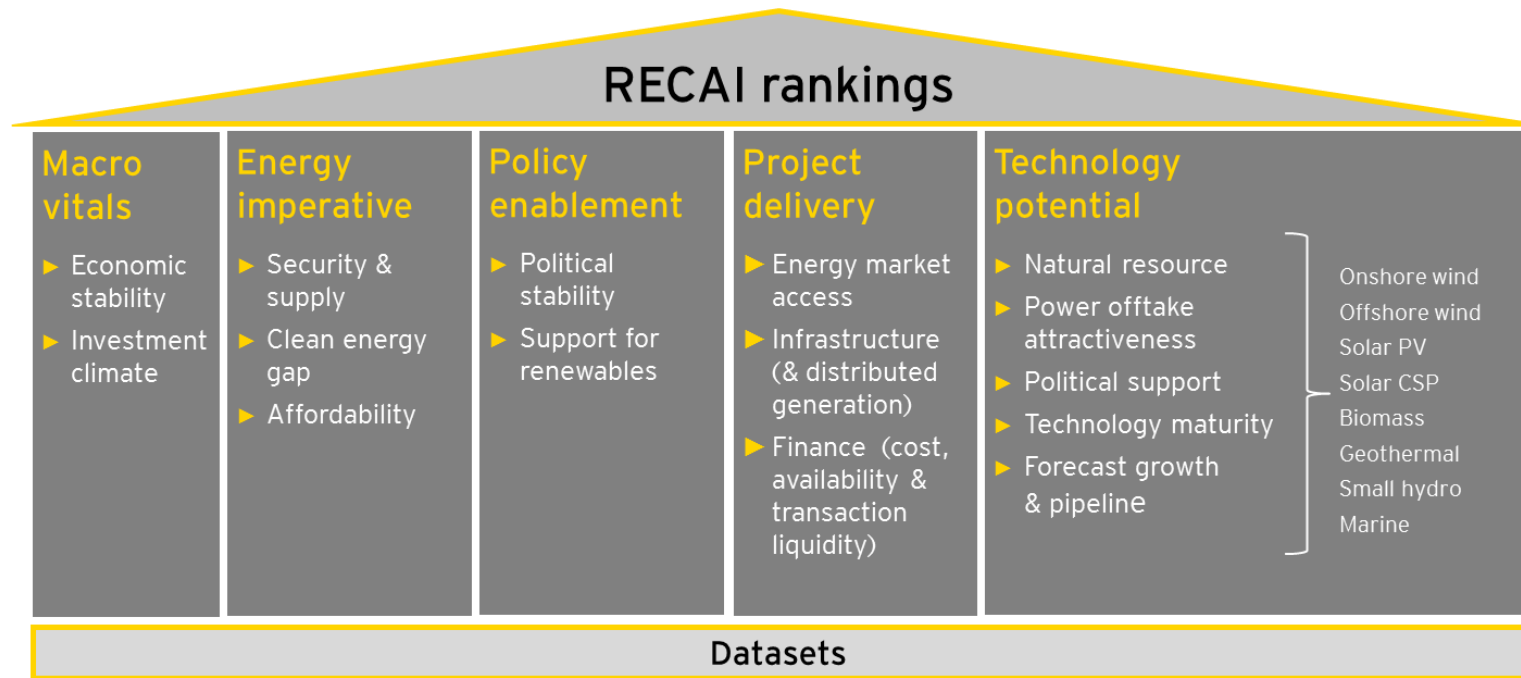
Driving factors for renewable energy growth in GCC



Typical Contracts & Counterparties

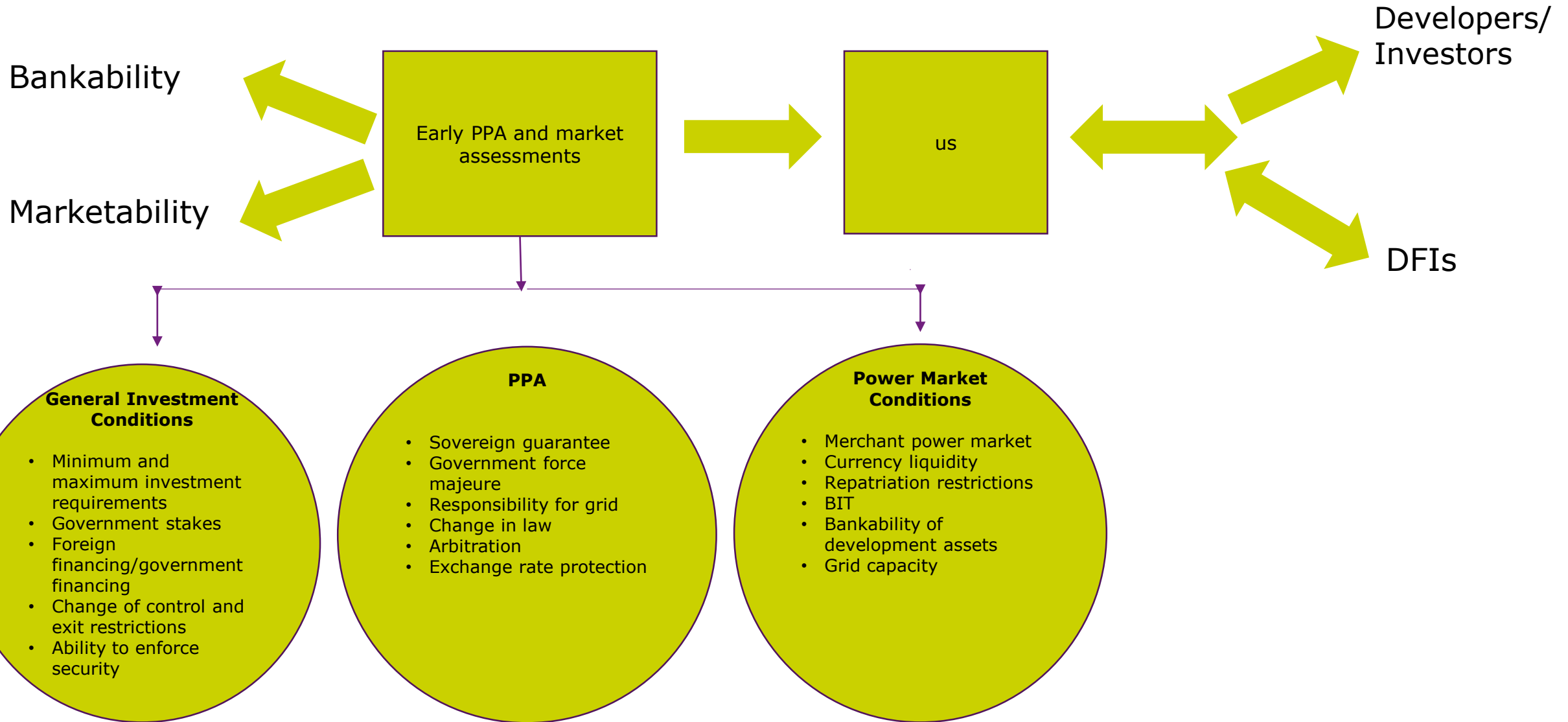


What makes a market attractive?



Creating the wave

Early Market Assessment



Risk Allocation - Pricing Impact

- Adequate identification, evaluation, allocation and management of project risks lies at the heart of effective design
- Risks should be borne by the party that is best able to manage them
 - Rationale: That party can bear the risks at the least cost
- How is the risk transferred?
 - Performance risk converted into a payment obligation under a contract;
 - Payment obligation may be structured as a financial incentive or penalty related to level of performance.
- What happens if risk is allocated to a party who is not able to manage the risk effectively?
 - Price of risk transfer increases; and
 - Risk may not be capable of being effectively managed
 - Risks not mitigated are borne by the consumer – higher tariffs
- Residual risks, such as political force majeure and regulatory risks, can be mitigated through guarantees and insurance

Key Risks and Mitigating Instruments

Risk	Type	Mitigation
Construction	<ul style="list-style-type: none"> - Cost overruns - Delays 	<ul style="list-style-type: none"> - Contractual arrangements (used fixed price turnkey contracts) - Impose warranties, liquidated damages <ul style="list-style-type: none"> - Penalties and incentives - Use experienced contractors - Contingency funds and lines of credit - Private insurance - Sponsor guarantees
Operation	<ul style="list-style-type: none"> - Revenue forecasts - Revenue build-up - Operating costs - Management failure - Service quality 	<ul style="list-style-type: none"> - Obtain long-term contracts (supply, off-take) <ul style="list-style-type: none"> - Use experience operators - Performance guarantees - Loan covenants and DSCR triggers - Contingency reserves - Insurance - Risk compensation devices
Market / Demand	<ul style="list-style-type: none"> - Demand 	<ul style="list-style-type: none"> - Long term contracts - Control over disbursements based on achieved/contracted revenues - Hedging/"contracts for differences"

Key Risks and Mitigating Instruments

Risk	Type	Mitigation
Interest, Inflation, FX	- Fluctuations	- Hedging - Match forex exposures - Use fixed interest rates - Pass through in contracts - Insurance/capital market instruments
Financial	- Debt/equity ratio - Return on capital - Risk reward ratio - Debt service cover - Taxation	- Do not allow excessive leverage - Do not allow excessive Equity IRR - Dividend constraints - Impose acceptable coverage ratios - Impose debt service triggers - Lenders syndicate their loan - Escrow accounts / Reserve accounts
Political	- Regime stability - Political intervention - Change in Law - Breach of Contract - Expropriation - Foreign exchange	- Clear regulatory regime - Political Risk Insurance (e.g. MIGA) - Government/local shareholder participation - Hard currency contracts - Neutral dispute resolution mechanism

Key Risks and Mitigating Instruments

Risk	Type	Mitigation
Legal / Regulatory	<ul style="list-style-type: none"> -Change in Law, pricing formulas, right of way, currency convertibility & transfers -Rule of law / judicial system/ access to justice & arbitration 	<ul style="list-style-type: none"> - Use experienced lawyers - Clear, simple documents and laws - Political risk insurance against breach of contract - Strong regulatory framework - International arbitration
Technical	<ul style="list-style-type: none"> - Performance - Safety 	<ul style="list-style-type: none"> - Obtain long-term warranties - Use proven technologies
Supplies	<ul style="list-style-type: none"> - Quality, quantity and price of raw materials/services 	<ul style="list-style-type: none"> - Minimize mismatch between supply and purchase contracts, either by contract or by hedging
Environmental & Social	<ul style="list-style-type: none"> - Pollution, resettlement, biodiversity 	<ul style="list-style-type: none"> - Public consultation and approval - Environmental Audit
Natural disasters & operational accidents	<ul style="list-style-type: none"> - Typhoon, earthquake, etc. - Injuries 	<ul style="list-style-type: none"> - Insurance

Key Requirements for Commercial Financing of Projects

Bankability

- Key prerequisite for any commercial financing
- Key requirements for bankability vary across countries and sectors
- Could benchmark off terms from more developed/mature markets to markets trying to do their first RE project

Affordability

- Still a major issue: projects are over-designed and over-capacity for what users and/or governments can afford
- Sources of revenue often unclear – demand may not be sufficient to support capacity/design
- Mechanisms for adjustment of tariffs/payments not predictable or tested; subject to political/social pressures

Government Support

- Government Guarantee - to address issues relating to counterparty risks (creditworthiness and performance)
- Viability Gap Funding – upfront Government contribution to buy down construction cost and help ensure reasonable return
- Availability Payments/Revenue or Demand Guarantee – address demand and liquidity issues

Maturer markets – how to access new growth

New
Development

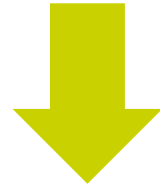


Extension of
life/repowering

Distributed
energy models

Non supported

Recycling of
capital



Refinancing

M&A

Securitisation and
bond markets –
accessing cheaper
capital earlier

New
technologies/products



Storage

Private PPA's

Policy and Regulation

Clarity on
Support and
Digression



Multiple
Points of
Access



Development
Assets



Clarity on Support and Digression Case Study

UK



Questions?



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