

# ***“Developing RE investments in the absence/lack of adequate policy and regulatory environments: Lessons learnt from previous experiences”***

A presentation by:

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Organized by:

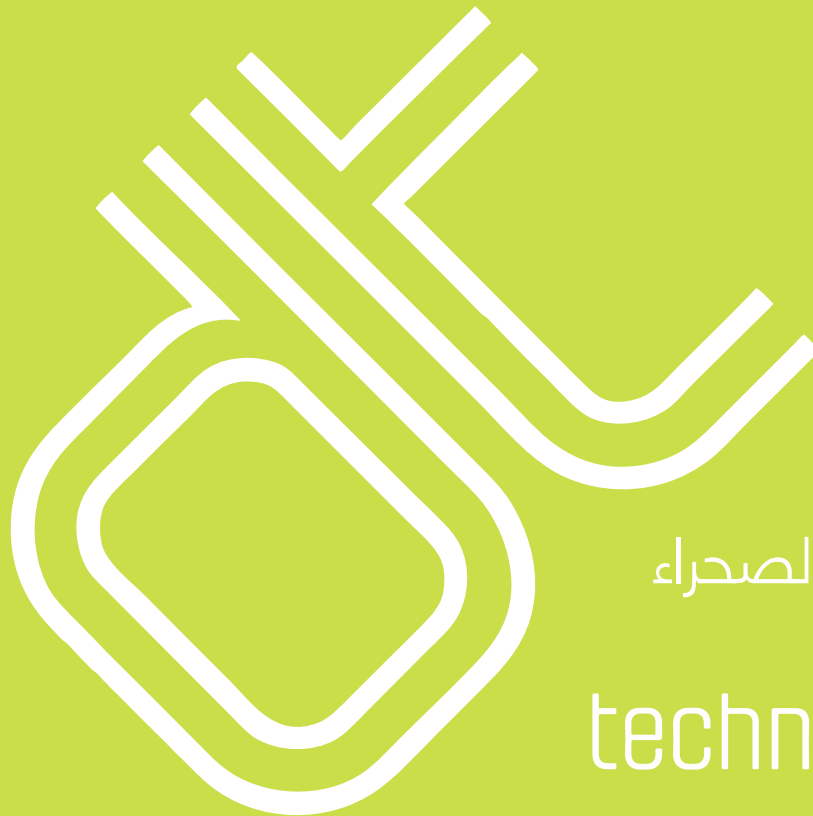


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تكنولوجيات الصحراء  
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technologies

clean energy clean water

# Integrated Renewable Energy and Clean Water Business

Synergies, Integration and Hybrid technologies are at the core of our strategy



Development



Manufacturing  
& Assembly



Engineering,  
Procurement &  
Construction



Operation &  
Maintenance

Each division feeds into the others, ensuring a commitment to excellence at every stage



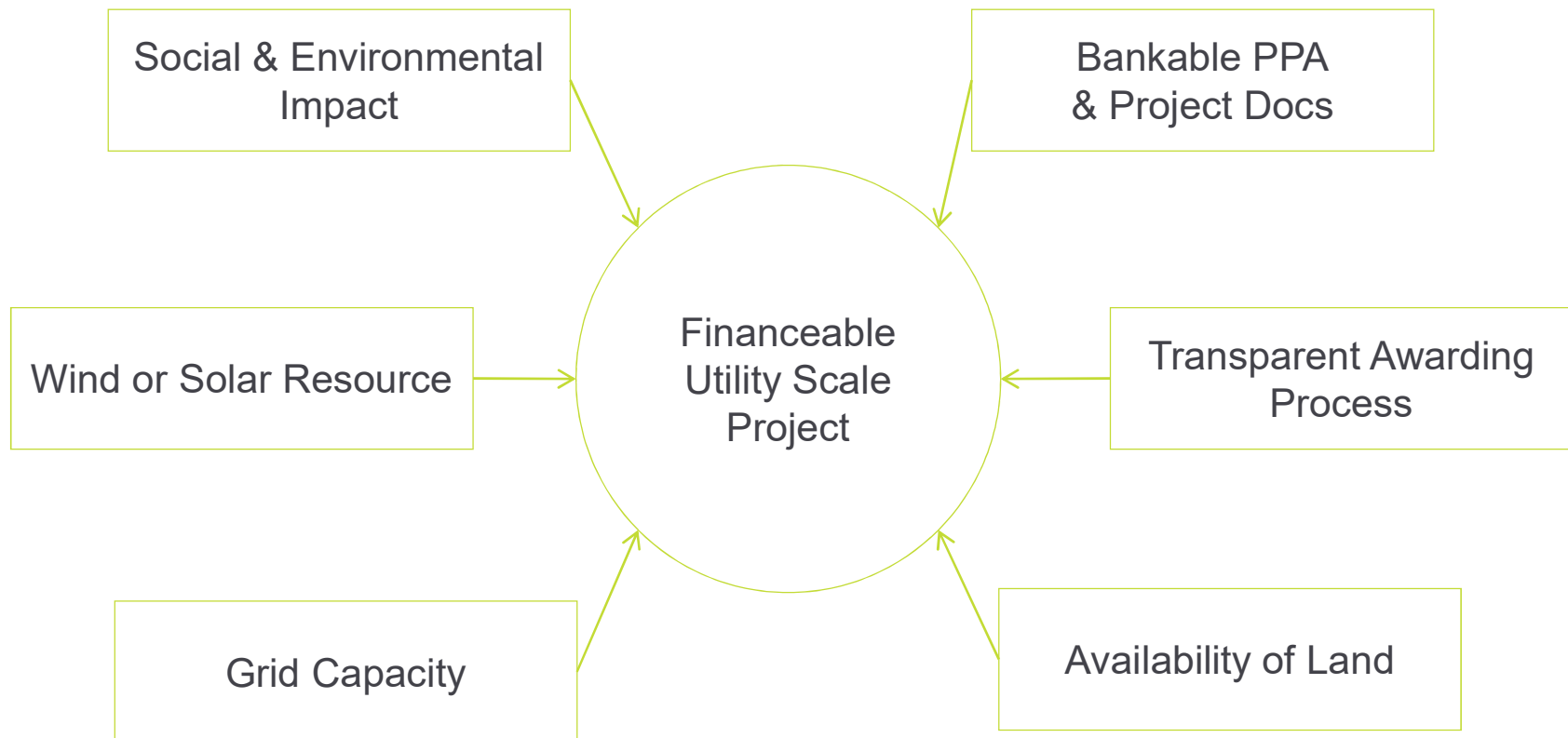
## DT's work with the IFC in PV, the gold standard for emerging markets project finance, has given us a rigorous approach

Project	Size	Role	Country	Financing
Falcon	21 MWac	Developer, EPC Investor	Jordan	 IFC International Finance Corporation <small>World Bank Group</small>
Shamsuna	10 MWac	EPC	Jordan	 IFC International Finance Corporation <small>World Bank Group</small>
ARC	50 MWac	Developer, EPC Investor	Egypt	 IFC International Finance Corporation <small>World Bank Group</small>
Winnergy	20 MWac	Developer, EPC Investor	Egypt	 IFC International Finance Corporation <small>World Bank Group</small>
Arinna	20 MWac	Developer, EPC Investor	Egypt	 IFC International Finance Corporation <small>World Bank Group</small>



# There are no shortcuts: the absence of policy or adequate regulation does not change the developer's role

If anything, it is harder since the responsibility lies with the developer to ensure that the correct standards are being met.



## **The Power Purchase Agreement the most important element of any bankable renewable energy deal**

- Take and Pay (deemed delivery in case of curtailment)
- Certainty of tariff
- Foreign exchange protection
- Convertibility and exportability of capital
- Change in Law/ Change in Tax Protection
- Force Majeure Provisions
- Assignment to Lenders
- Termination and Termination Payments
- Off-taker Liquidity Guarantee / Sovereign Guarantee
- International Arbitration / Dispute Resolution



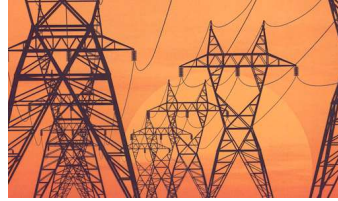
## Policy instruments for promotion of RE

	Name of Instrument	Primary responsibility	Objective of Intervention
1	Fiscal interventions		
a.	Indirect Taxes, Exemption from VAT/ Sales Tax & Electricity Duty, Exemption from Import/ Excise, Sovereign Guarantee, etc.	Ministry of Finance (MOF), Ministry of Energy (MOE)	Lower the gap between RE based power and conventional power
b.	Direct Tax exemptions/ Tax Holidays	MOF	Provide direct tax exemptions which incentivize RE based power generation
2	Carbon Trading	Ministry/Authority of Environment	Provide a financial incentive for carbon mitigation, thereby encouraging clean power generation
3	State RE Policies (including issues such as development of transmission networks to connect RE projects, and wheeling & banking, Third Party Sale)	MOE	Provide a policy framework for encouraging RE investment in the state

## Regulatory framework for promotion of RE

	Type of regulation	Primary responsibility	Objective of the regulation
1.	Tariff related		
a.	Feed in Tariffs (FIT)/ Preferential Tariffs	MOE, Electricity Regulator (ER), Transmission (T)	Provide an assured price for RE projects feeding into the grid
b.	Terms and conditions for determination of tariff	MOE, ER, T	Provide an assured price for RE projects feeding into the grid
2.	Renewable Purchase Obligations/ Renewable Portfolio Standards	ER	Provide a target of RE share in power generation and distribution to encourage RE generation
4.	Regulations addressing systemic issues such as open access, development of transmission networks to connect RE projects, and wheeling & banking, Third Party Sale	MOE, ER, T	Facilitate development of RE plants, and allow RE generators flexibility in generation and sale of power

# A key challenge is getting all stakeholders to collaborate and cooperate without a framework



## Lenders

- Require a Bankable Project technically and contractually
- Performance standards must be met
- Social Impact in case of DFIs

## Local community

- Landowners need reasonable price expectations
- Must see benefit of the project
- Project must be a “good neighbor”
- Should provide employment, but with realistic expectations

## Off-taker

- Must have grid capacity
- Interconnection conditions need to be clear
- Must agree to key elements of a bankable PPA (see next slide)

## Ministry of Finance

- Often needs to provide liquidity and/or support to Off-taker
- May need to sign a Sovereign Guarantee

## Environment Agency

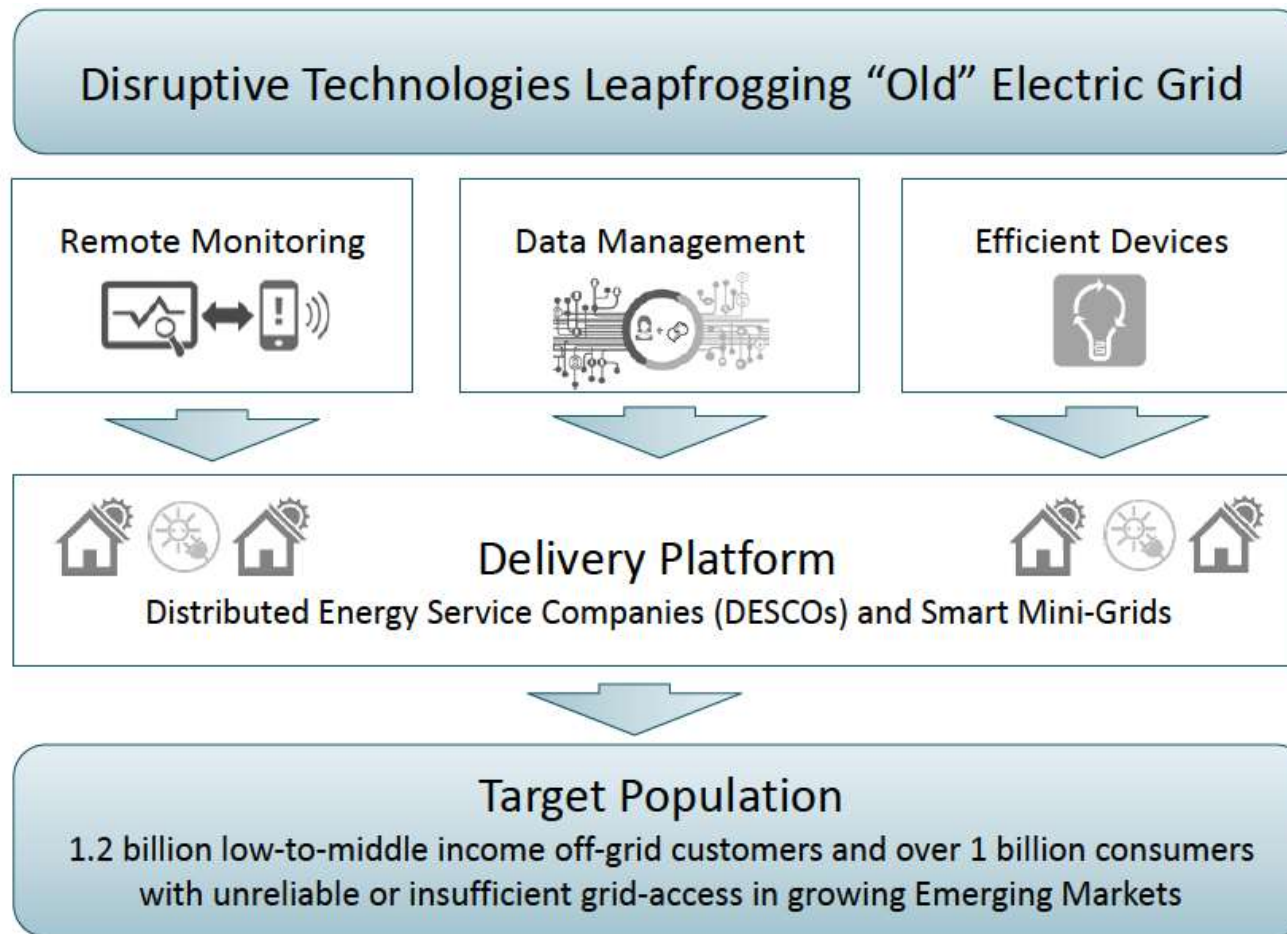
- Must sign off on land use and environment impact
- Archeological Impact
- Flora/Fauna
- Decommissioning plan at the end of the project life



**...and of course, we all have to satisfy our shareholders!**

# The mix of high difficulty with great opportunity in Africa is creating a boom in innovation

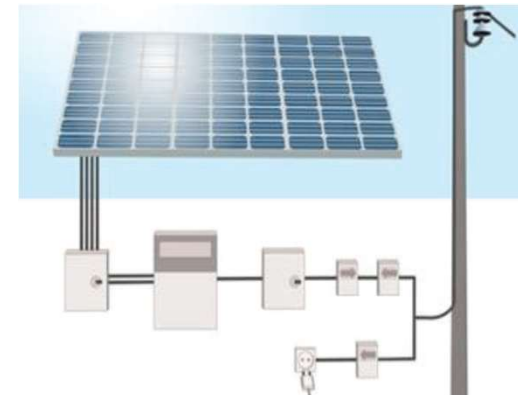
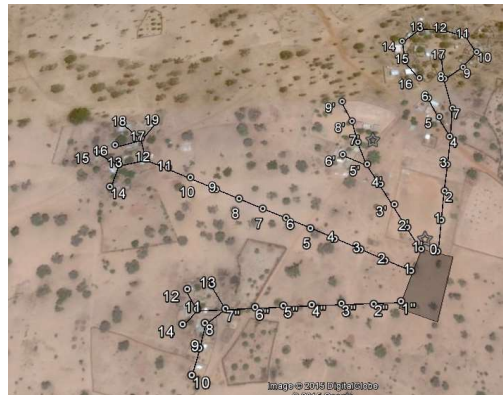
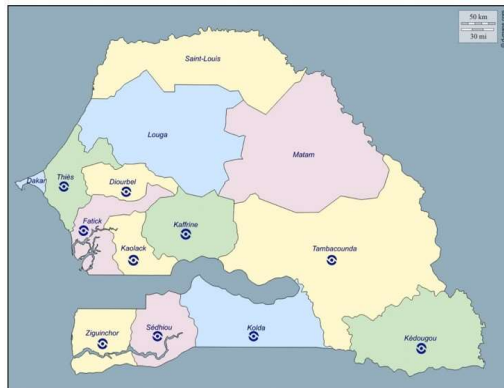
In nations where the business model is not imposed upon you, the developer must be creative in finding the best solution to suit the market





# Senegal: example project overview

Multi utility-scale PV projects in Senegal with 25 years PPA signed with the Minister of Energy at a price of EUR 0.20 per kwh



**Phase 1**  
January 2018

- ✓ 9 MWp
- ✓ 65 villages
- ✓ 70,000 people
- ✓ USD 34m investment

**Phase 2**  
March 2018

- ✓ 16 MWp
- ✓ 116 villages
- ✓ 125,000 people
- ✓ USD 60m investment

**Phase 3**  
June 2018

- ✓ 15 MWp
- ✓ 105 villages
- ✓ 115,000 people
- ✓ USD 56m investment



40  
MWp

286  
Villages

310,000  
People

USD 150m  
Investment

[www.desert-technologies.com](http://www.desert-technologies.com)

THANK YOU!

