

Electrifying Africa

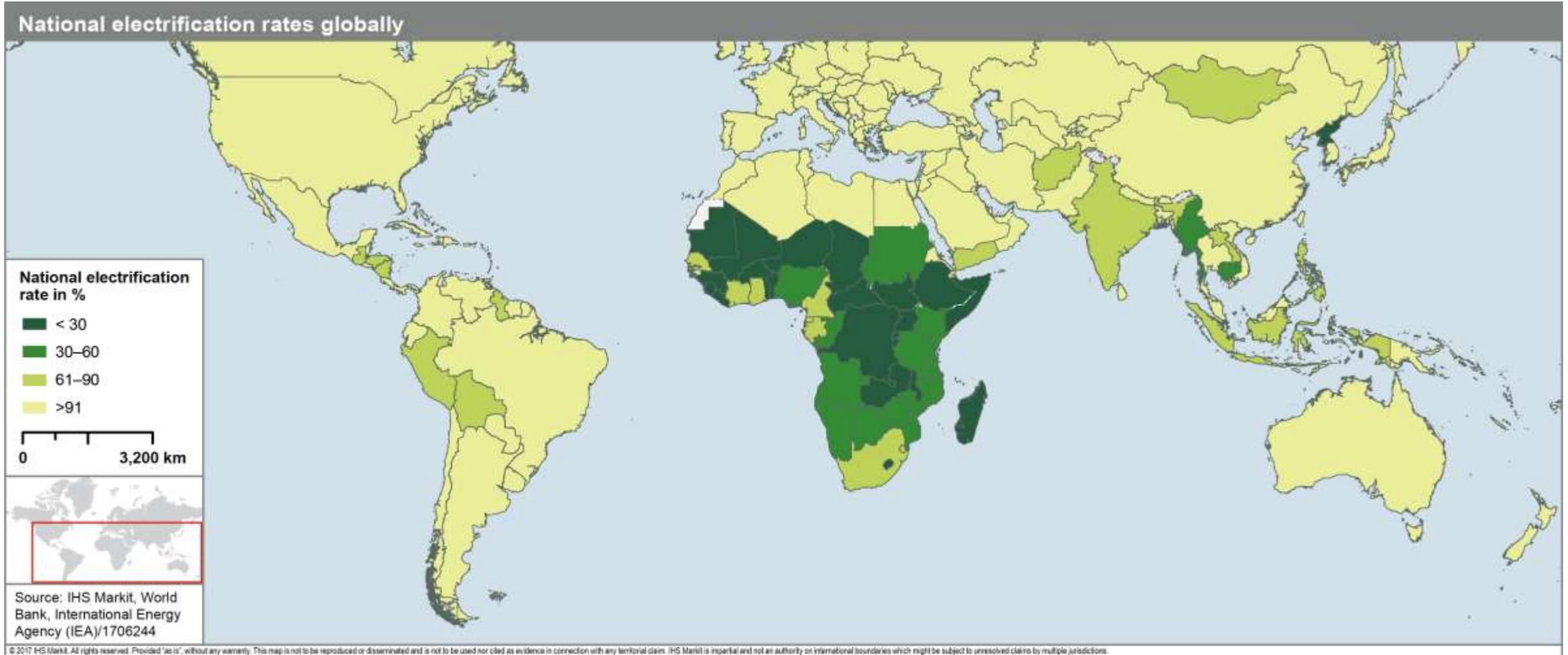
Risks and opportunities in securing a renewable future

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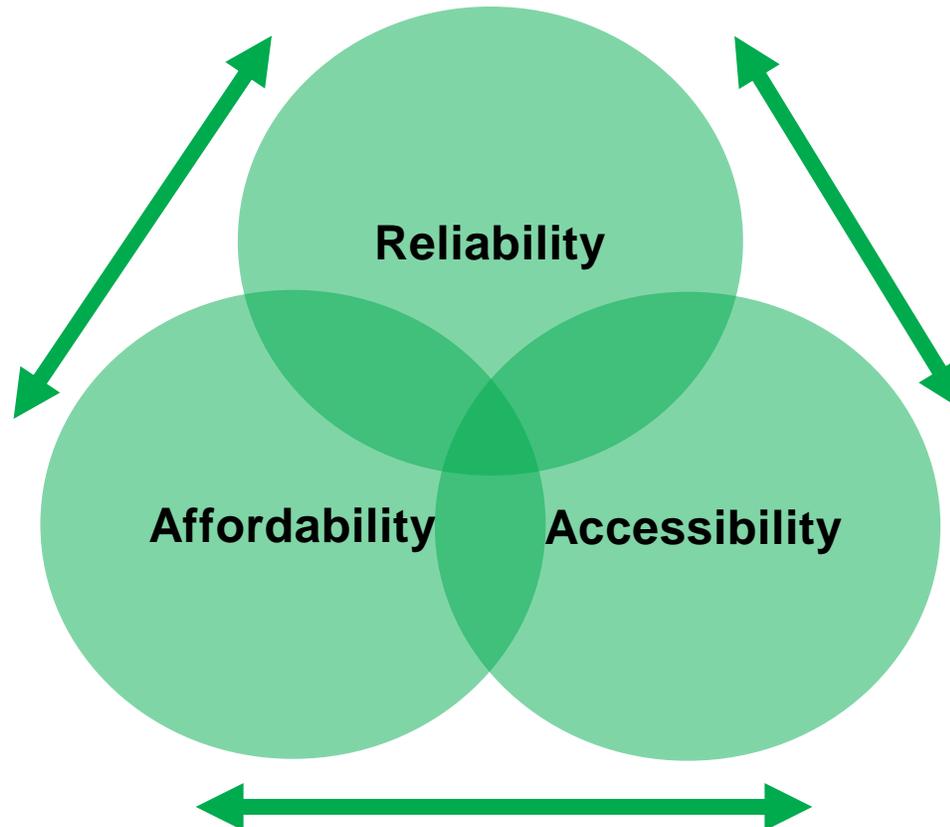
Electrifying Africa: Stifled resource potential



Electrifying Africa: 'Trilemma' between key targets

Power system

Is there a mismatch between demand and supply projections in the current plans?
What are the opportunities for regional integration?



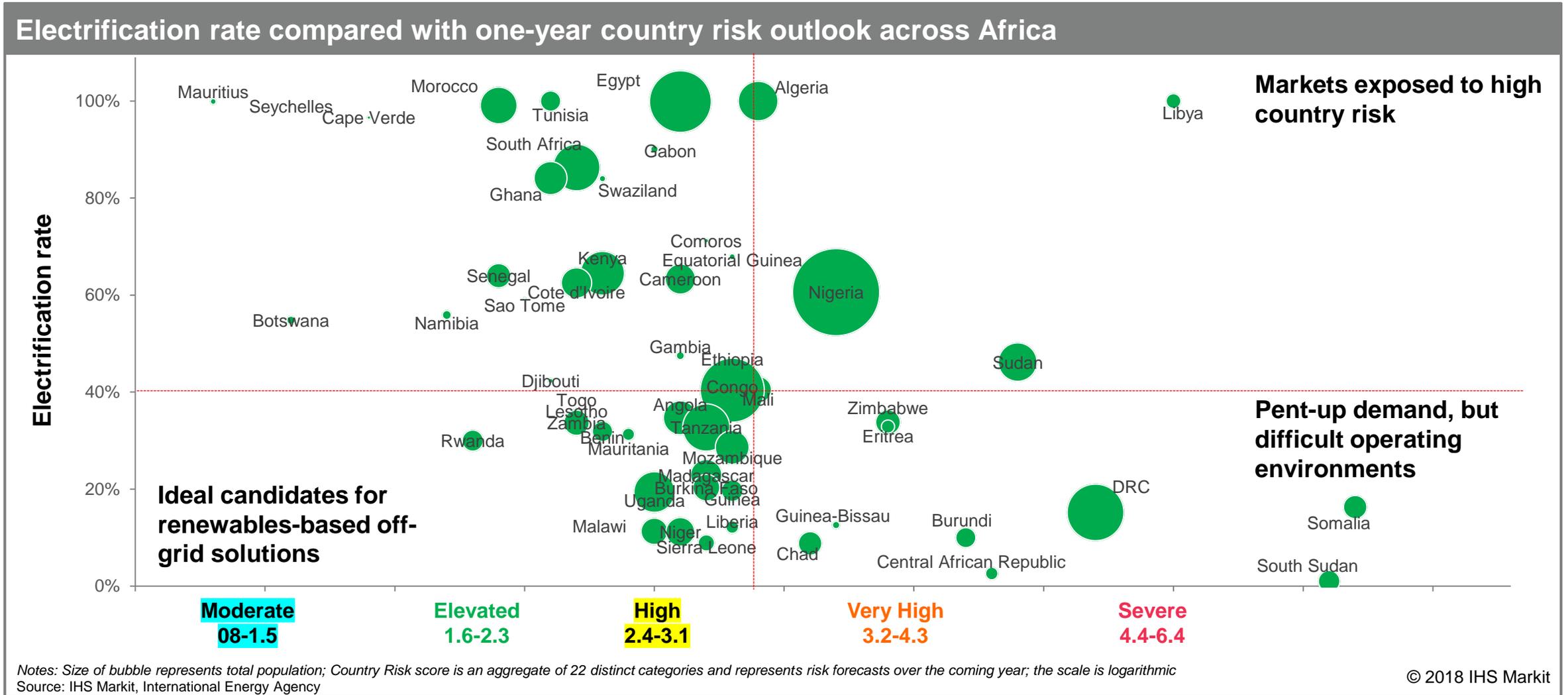
Policy & regulatory framework

Can indigenous resources be better exploited?
Is there an appropriate focus on renewables?

Institutional setting

Are the arrangements with multi/bi-lateral donors optimal in terms of facilitation, transparency and costs?

Electrifying Africa: Attractiveness of regional markets

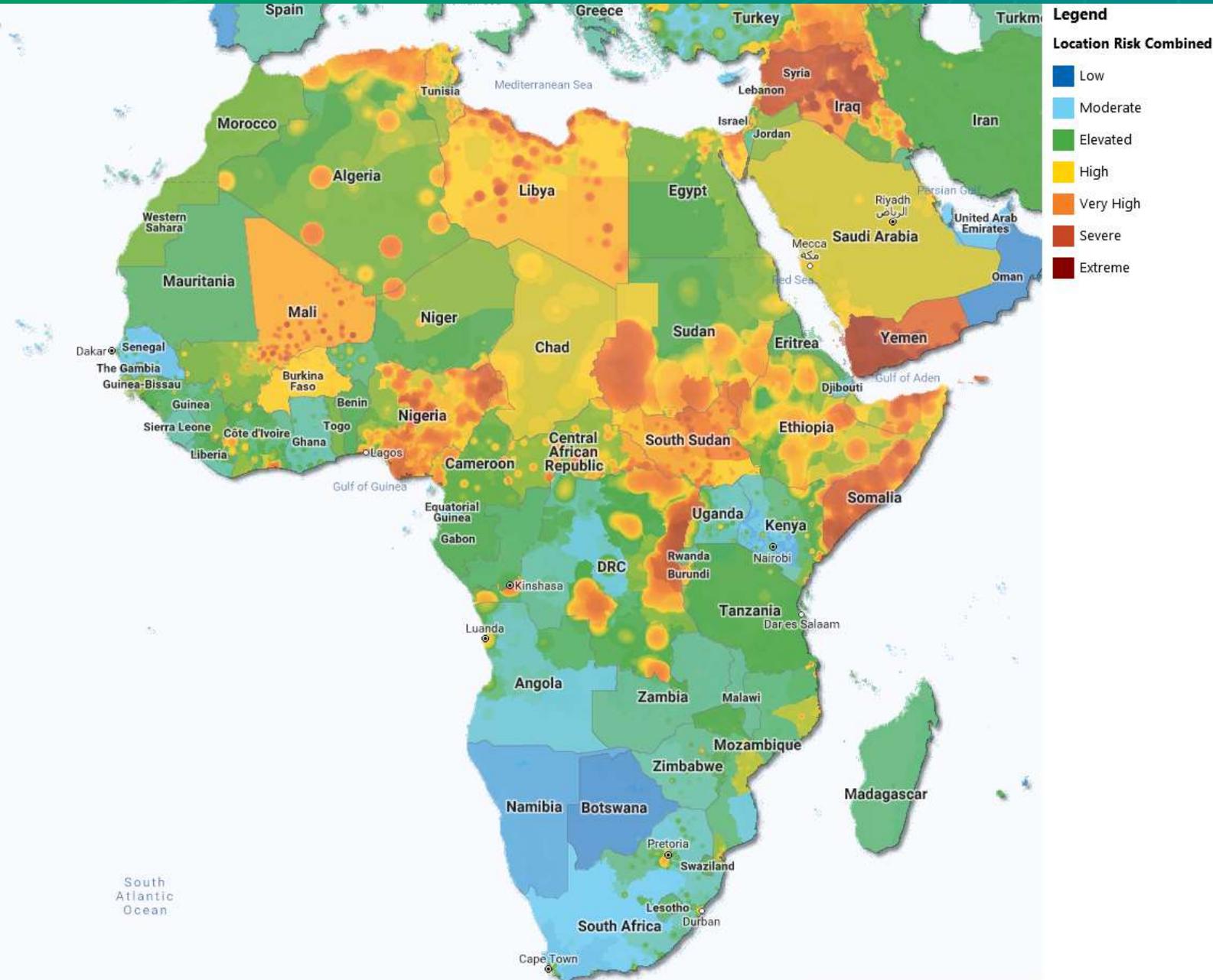


Electrifying Africa

Geography of security risk

Combination of forward-looking risk layers

- terrorism
- civil unrest
- war
- plus heatmap of geo-coded risk indicators



Electrifying Africa: Drivers of microgrid development

Drivers of renewable microgrid deployment*

Parameter	Africa	Asia	Latin and Central America
Electricity access	●	●	●
Demand dispersion	●	●	●
Presence of remote C&I customers	●	●	●
Security of supply and status of T&D infrastructure	●	●	●
Policy framework	●	●	●
Reliance on diesel-based microgrids	●	●	●

*High-level assessment of market drivers in the regions under study. Conditions at the country level and project sites highly affect the attractiveness of green microgrid projects.

Source: IHS Markit

Legend: ● Attractive ● Moderately attractive ● Not attractive

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addressing regulatory uncertainty and limited cost competitiveness against fossil fuel solutions is key to help the market take off

Electrifying Africa: Public intervention options

Public intervention in support of off-grid microgrid deployment

Tax incentives/ subsidies

- Import tax exemptions/reductions
- Subsidies (initial investment cost [capital subsidies], operating, capital and operating costs [**output-based subsidies**], direct tariff to the customer)

Financial risk mitigation

- **Credit line** to local banks for loans to remote communities
- **Risk-sharing facilities**
- **Loan funds:** government or utility funds to offer loans and more favorable terms
- **Loan buy-down programs** to local banks to reduce loans' interest rates
- **Dedicated public funds** specific to microgrid projects (i.e., channeling multidonors' funding)

Support with defaults

- **PPPs:** hybrid models with government and private sector participation
- Inclusion of **nonpayment clauses** in PPAs (e.g., central bank backing)
- **Guarantees** to project loans, utilities' payment
- Allow companies to adopt **tools against customer nonpayment** (i.e., collection schedules, use of local agents, limit on load and prepaid metering)

Facilitate contracting

- **Public service concessions:** awarding exclusive rights for a fixed term over a defined area
- Standardized PPAs

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