



World Bank experience on Performance Based Grants: Nigeria

PERFORMANCE BASED GRANTS

NIGERIA ELECTRIFICATION PROJECT



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Mini-Grids Partnership Meeting
Accra, Ghana
July 8, 2019

Nigeria Electrification Project Overview

US\$350 million project with 4 components

Objective: Increase access to electricity services for households, public educational institutions, and micro, small and medium enterprises throughout Nigeria



Component 1: Solar Hybrid Mini Grids for Rural Economic Development

- Minimum subsidy tender
- Performance-based grants on rolling basis

Component 2: Standalone Solar Systems for Homes, Enterprises

- Output Based Grants for SHS installed and verified
- Market scale up challenge fund for rapid market expansion

Component 3: The Energizing Education Programme (EEP)

Support the construction and operation of solar hybrid mini grids for federal universities and adjoining teaching hospitals under Phase II of the Programme.

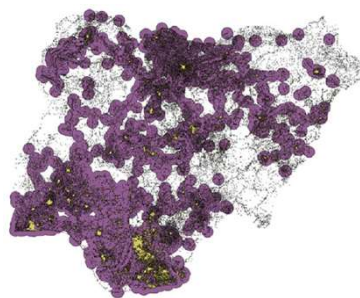
Component 4: Technical Assistance

Support project implementation, broad-based capacity building, and help develop a framework for scaling up rural electrification.

Nigeria Electrification Project Component 1: Mini Grids

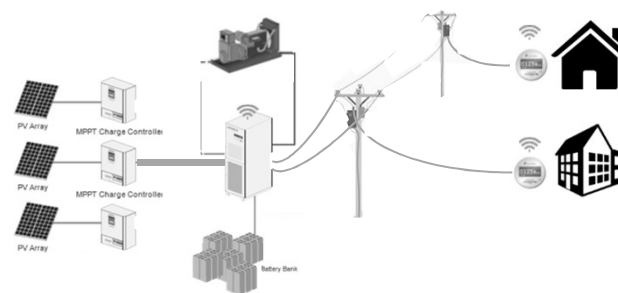
Minimum Subsidy Tender \$70 Million

- 250 pre-selected mini grid sites clustered into lots (by state) to encourage economies of scale in procurement and operations
- Bidders compete on lowest subsidy (per connection) to build, own, and operate a portfolio of mini grids
- Detailed economic and geospatial data will be made available to developers
- First phase will consist of ~57 sites across 4 states. The remaining sites will be concluded in subsequent phase(s)

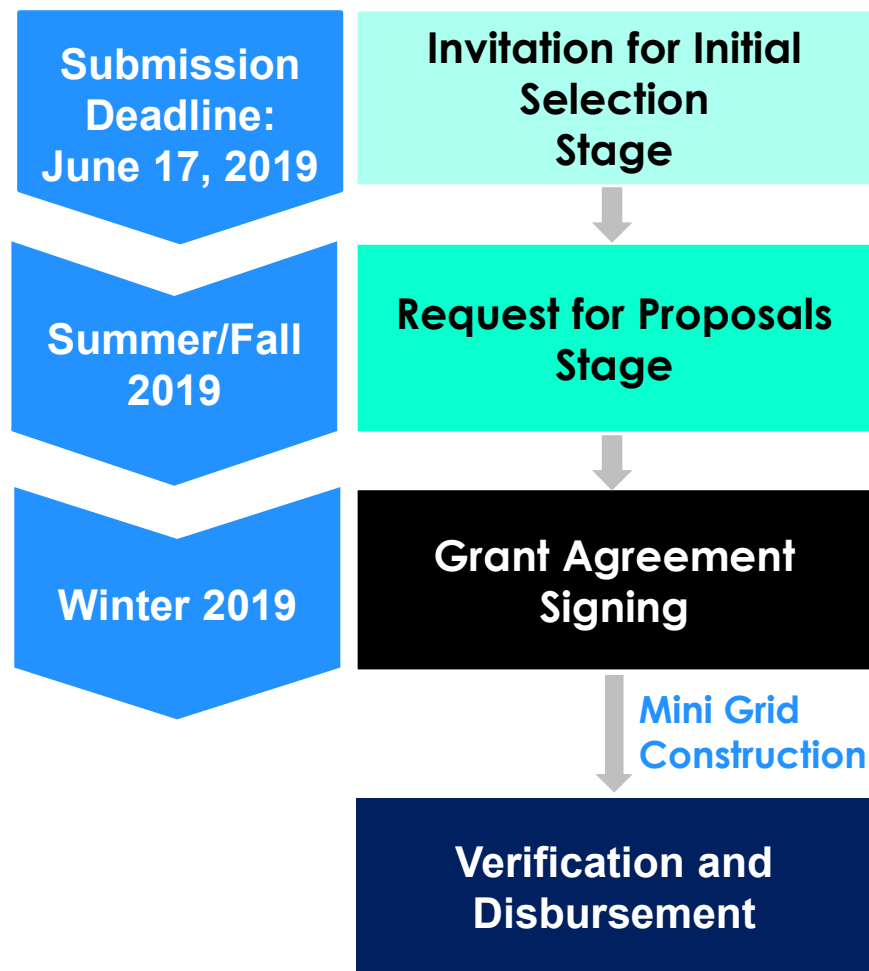


Performance Based Grant \$80 Million

- \$350 for each new connection to a mini grid
- Developers choose the mini grid sites
- Applications assessed on a rolling basis
- 100% payment made after connection
- Grant disbursement on first-come first-served basis
- Eligible projects: solar and solar-diesel hybrid mini grids in unserved areas

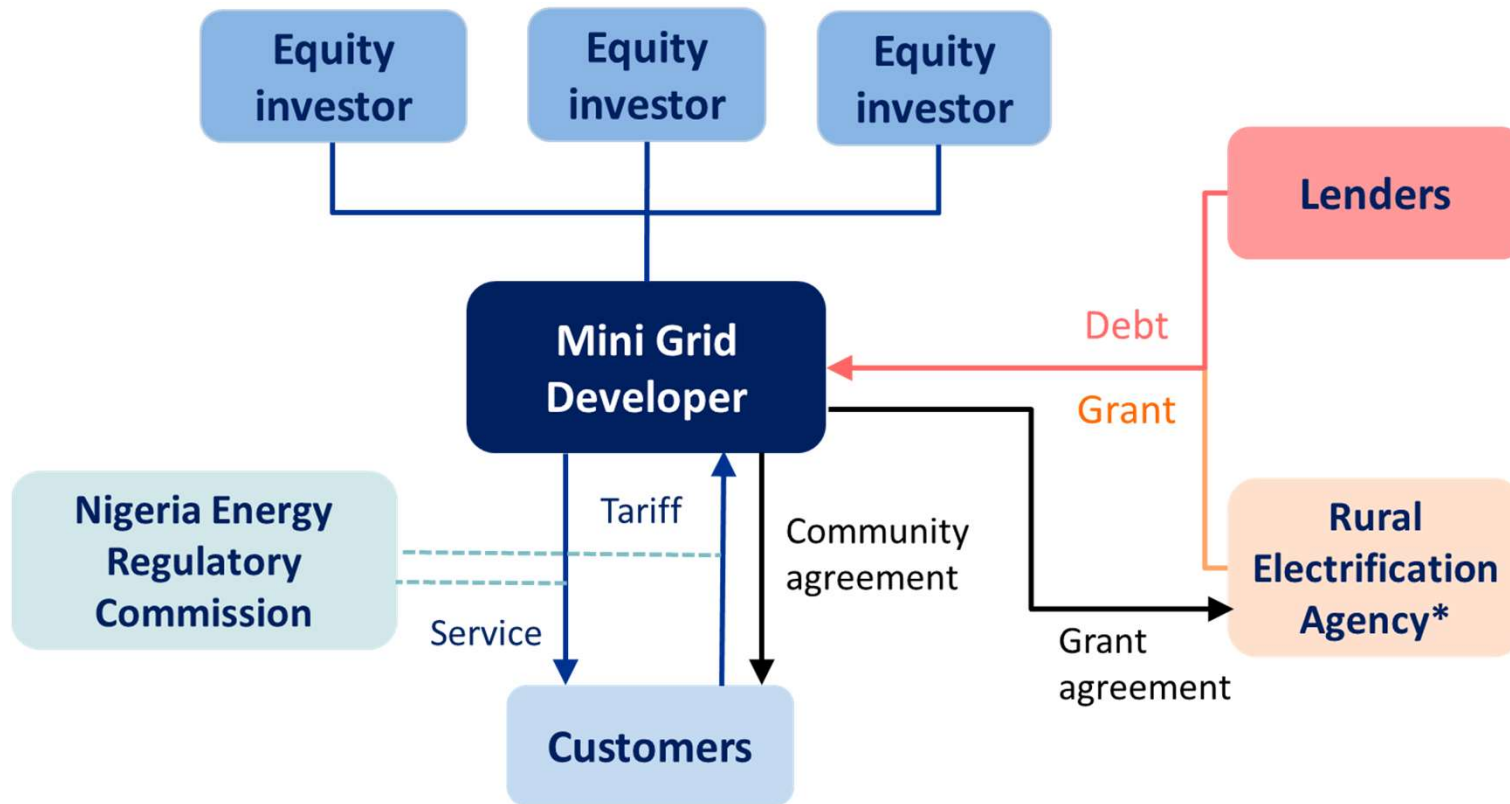


Minimum Subsidy Tender



- Invitation for Initial Selection issued on April 12, and deadline for submission recently passed on June 17.
- 230+ downloads of initial selection documents
- 47 initial selection applications
- The RFP stage is expected to open in late July 2019 and will be hosted on the Odyssey platform.

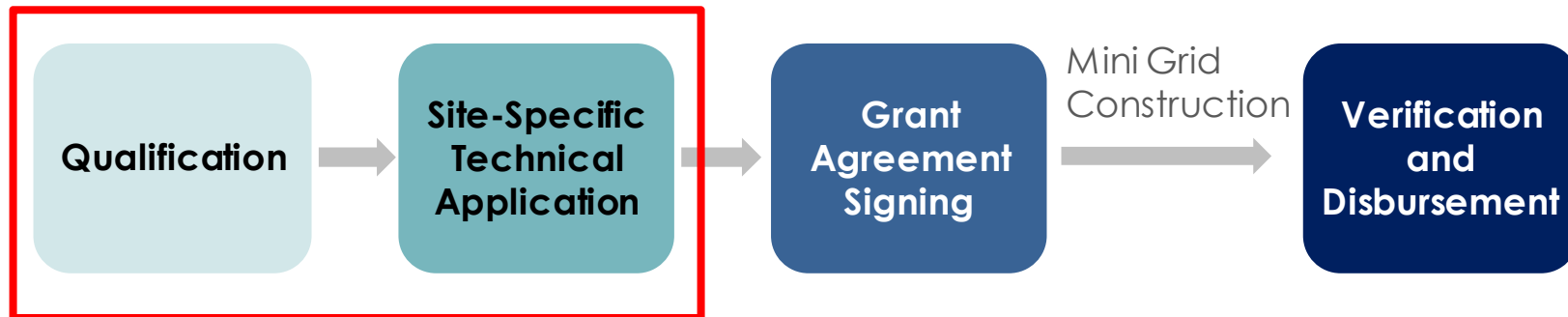
Performance Based Grant Program Overview (1/2)



Performance Based Grant Program Overview (2/2)

- Performance based grant of **\$350** per new mini grid customer connection
- **\$350** per connection grant based on financial analysis of mini grid sites assessed for the minimum subsidy tender and assumptions on tariffs, CAPEX requirements, etc.
- Minimum subsidy tender expected to result in price discovery on the viability gap for mini grids in the states that are included in the tender(s)

Performance Based Grant Application Process



- The application process will be in two stages, on a rolling basis:
 - 1) **Qualification stage** (started April 15, 2019) where developers are admitted into the program by meeting the eligibility requirements and on the strength of their business plans
 - 97 downloads of application documents to date; 5 qualification submissions so far
 - 2) **Site-specific technical design verification stage** starting July 2019, during which each mini grid project is assessed against the minimum technical specifications of the program
 - # of customer connections to be made by the mini grid will be indicated here and subsequently noted in Grant Agreement
- Application process hosted on the Odyssey platform

Performance Based Grant Qualification Criteria

Integrity

- No conflicts of interest
- Environmental and social compliance
- Not under receivership, not blacklisted, no criminal conviction, etc.

Financial Capacity

- Financial solvency
- Ability to secure equity (liquid assets of >\$25,000 AND raised >\$25,000 in equity)
- Ability to secure debt (\$75,000)

Technical Capacity

- Experience developing mini grids (at least 1 built after Jan 2014)
- Experience operating mini grids (at least one operated after Jan 2014)

Qualified developers evaluated on the basis of a comprehensive business plan populated on the Odyssey platform.

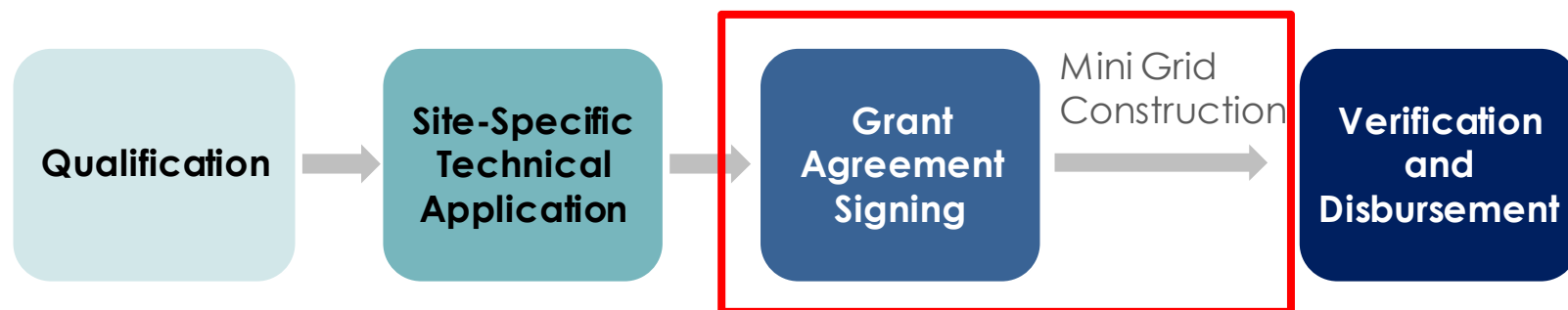
Performance Based Grant Technical Standards

- Mini grids must comply with all prevailing regulatory requirements, including compulsory permits from the regulator for mini grids above 100kW
- Mini grids must be built up to grid code to allow for potential connection to the national grid in the future
- 60% renewable energy fraction (on annual energy output basis) required
- Pre-paid metering technology required; smart meters that enable remote monitoring preferred (which will result in less onerous verification requirement for the developer)
- Minimum technical requirements for components differentiated according to system architecture:

Type 1	Type 2-A	Type 2-B	Type 3
Small DC-coupled	Modular single phase, one battery per inverter cluster	Modular three phase, one battery per inverter cluster	Large modular or central three-phase inverter, multi string central battery system

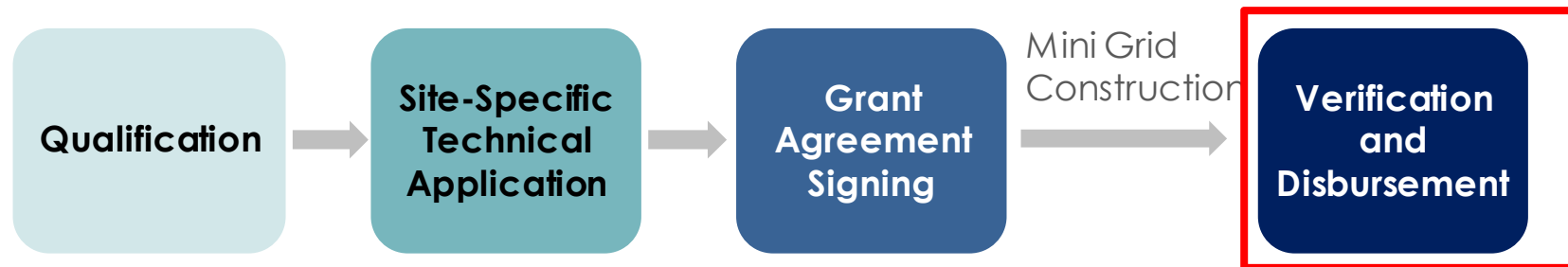
- Service standards adapted from NREL Quality Assurance Framework for mini grids

Performance Based Grant Agreement



- **Grant Agreement Signing:** Once the Applicant's application has been approved, the REA and the Applicant will sign a grant agreement
- **Mini Grid Construction and Customer Connection:**
 - Once the grant agreement is signed, the grantee will build the mini grid.
 - Grantee will have 12 months from contract signing to commission the mini grid
 - Grantee will have 21 months from contract signing to connect targeted # of customers; connections achieved after this deadline will not be eligible for grants

Performance Based Grant Verification and Disbursement



- **Verification and Disbursement:**
 - Grants will be disbursed upon verification that customers have been connected to the network and have been provided satisfactory service for at least 3 months
 - Grant disbursement frequency of once per month for connections achieved in the preceding month
 - Remote verification via smart meters as well as manual verification by Independent Verification Agent will be utilized as applicable

Questions for RBF Stakeholders

- **How are subsidy values to be determined?**
- **What service standards to require of projects in order to receive subsidies?**
 - **>20 hours of electricity service per day?**
 - **Should there be any minimum power allocation or energy consumption requirements?**
 - **Other quality standards, e.g., allowed service outages, etc.?**
- **What is needed to leverage RBF subsidies and attract other investors?**

THANK YOU

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