Financing Mini-Grid Projects in Nigeria – Mitigating the Risks

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The Nigerian power sector is generally acknowledged as an industry that requires significant capital investment to achieve its potentials and remain sustainable. Interestingly, immediately after the privatisation of the sector in 2013, the focus for most developers, investors and financiers was to finance and develop medium to large scale grid projects using different energy mix. While the market witnessed some success stories in that respect, the bulk of the on-grid projects have, for various reasons (market issues, regulatory concerns, government support, etc) been stalled. For instance, numerous gas-fired on-grid projects that were at the conceptualisation, initial contracting or early development phases have stalled, while about 14 solar projects that signed power purchase agreements with the government-backed utility (Nigerian Bulk Electricity Trading PLC) have not made much progress. One hopes that these projects will return to the market again (and soon) for the economic and social benefits that they portend.

Investments in the power sector have remained relatively constant notwithstanding the lull on the on-grid side of the market. However, investors seem to have shifted their focus to different project development models most of which are smaller in size, insulated from the grid associated risks, promise steady and reasonable returns, arguably easier to develop and have a shorter time to market. One of such models that has gained prominence lately and seems attractive to investors in the power space is the mini-grid model.

Unfortunately, the enthusiasm that initially drove the private-sector commercial funding of major grid-connected power projects appears to be missing for mini-grids.

While developers in Nigeria's mini-grid space are keen on entering the market and scaling their operations with access to low-cost and long-term capital, many fund providers seem focused on financing large projects, and aggressively minimizing risks to secure sufficient return on their investments.

Perhaps due to some of the risks associated with financing mini-grid projects, mini-grids are yet to substantially benefit from the pool of resources available in non-recourse project financing. In Nigeria, a good number of mini-grid projects are financed by developer's equity, corporate loans, contractor finance, grants and subsidies (which may be in the form of results-based funding), with a sprinkle of project finance. Irrespective of the financing mechanism adopted, the risks associated with financing mini-grid transactions remain largely the same. While these risks are by no means of the same magnitude as those associated with on-grid projects, the risks, nonetheless, tend to limit the universe of funding sources available to such mini-grid projects.

Below, we have briefly analysed five random risks associated with financing mini-grid transactions in Nigeria and offered some practical solutions that may be useful to developers and investors in the mini-grid space to allay investors' concerns and encourage project financing for mini-grid development.

Expansion of the National Grid

A major risk in financing mini-grid projects is the risk that the national grid could be extended or expanded to unserved areas (i.e., areas without an existing distribution system). If there is an expansion of the national grid to geographically unserved areas covered by a mini-grid permit, the Nigerian Electricity Regulatory Commission Mini-Grid Regulation, 2016 (the "**MG Regulation**") allows for (i) the conversion of an isolated mini-grid to an interconnected mini-grid (that is the mini-grid becomes integrated into the grid system that has just been expanded to the area hitherto covered by the mini-grid); or (ii) the transfer of mini-grid assets to a distribution licensee (a "**Disco**") in the area where the grid has been expanded to. For an investor, this could be a squeeze on the expected cash flow and financial projections for the mini-grid project. But the situation is not completely without remedy. The MG Regulation provides a regime that facilitates the payment of compensation to the mini-grid permit holder (developer) and the quantum of the compensation depends on the stage of the mini-grid project at the time that the national grid is expanded to, or arrives at, the geographical confines of the mini-grid project.

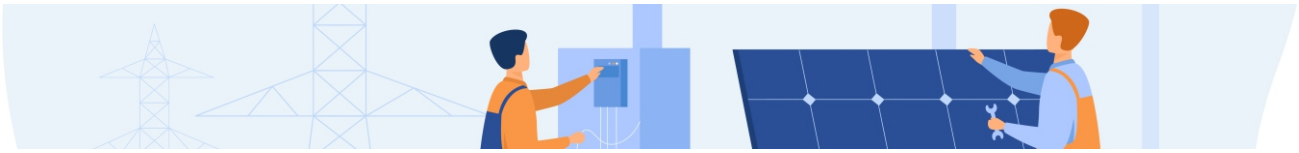
The compensation broadly covers the remaining depreciated value of the mini-grid assets and revenue generated from the mini-grid in the 12 months before the connection of the mini-grid to the national grid. The compensation may also include construction and development cost.

While the compensation regime is laudable, the adequacy or otherwise of the compensation is a matter to be decided on a case-by-case basis when the cost of financing and projected return is considered from an investor's perspective. A practical approach to addressing this risk will be to, where possible, construct the mini-grid in compliance with the national grid code standards to facilitate connection as an interconnected mini-grid developer as opposed to an outright transfer of the mini-grid assets.

It is perhaps worth mentioning that where the interconnected mini-grid is adopted, a restructuring of any facility advanced by a financier might be required to account for any reduced earnings based on revenues that will now be shared between the Disco and the mini-grid developer, and which might not have been contemplated in the initial financial model. If financiers are not inclined towards the developer converting to an interconnected mini-grid, the finance documents can allow for accelerated payments or early exit of the financiers by applying compensation proceeds towards debt repayment.

Apart from the foregoing, as an additional means of mitigating the grid expansion risk, investors can carry out extensive diligence and market research to fully appreciate the grid roll-out or expansion plans as it affects the geographical location of the mini-grid. Based on available business plans and information at the Nigerian Electricity Regulatory Commission (**NERC**) submitted by the Disco, it is sometimes possible to assess whether a Disco is likely to extend its network into a particular geography within a specific period. Thus, financiers can embark on this exercise as part of their due diligence and ascertain whether the Disco in the area has such plans and is committed to the plans. If no such plans exist, then the risk will most likely not arise.

The foregoing notwithstanding, it is crucial to highlight that mini-grid assets financed by grants are excluded from the assets subject to a compensation payment. Specifically, such assets are deemed to remain the property of the mini-grid community. In any case, this should not raise major concern for projects that are debt funded and not developed with available government or public grants.



Tariffs

As a closely regulated sector of the Nigerian economy, the power sector in Nigeria has its tariffs regulated by the NERC to ensure compliance with the Multi-Year Tariff Order (MYTO). By extension, mini-grid developers who generate above 100 kW and who hold mini-grid permits issued by NERC are required to use the MYTO methodology in determining their tariff and have their tariff approved by the NERC as opposed to a willing-buyer and a willing-seller approach.

Although the MYTO is based on certain principles and assumptions such as cost recovery/financial viability, it is likely that the tariff may not be sufficiently cost-reflective. This concern goes to the root of project financing as the repayment obligations on the developer are meant to be satisfied from revenue generated from tariffs levied on the mini-grid consumers. In the absence or insufficiency of cost-reflective tariffs, investors' appetite for financing mini-grid projects may significantly diminish. On 9th April 2021, the NERC released a new MYTO 2021 for mini-grids, it is yet to be seen whether these tariffs will sufficiently compensate, or deal with the economics of such projects.

However, investors can take comfort in the fact that the tariffs approved by the NERC can be reviewed if evidence exists that the actual costs incurred, or the actual revenue earned by the mini-grid developer varies from the cost and revenues stated during the tariff definition with the NERC.

Market/Demand

An inherent feature of mini-grid projects in Nigeria is that mini-grids are mostly located in non-urban areas where the cost of electricity is unevenly matched with the community's financial capacity and electricity demand. The uncertainty in revenue streams occasioned by the foregoing makes financing mini-grid projects a challenge, especially since project financing relies on certain and identifiable cashflow in the financial model. To mitigate this risk, developers can provide or partner with other entities to provide productive use items to members of the mini-grid community which will generate demand for the electricity produced by the mini-grid as well as additional income for the communities to pay for the electricity. On a related note, investors should consider a form of results-based financing such that financing will be provided when pre-agreed and verified results are achieved or demonstrably achievable. In this way, the financial model will be based on verified results that match existing realities. This will ensure that projected cashflow for the financing will be based on realistic expectations.

Licensing

The current licensing framework for mini-grids in Nigeria is silent on the term for which the Mini-grid Permit will be granted. In practice, permits have been issued for an initial period of five years with renewal being at the discretion and subject to the terms of the NERC. This short duration of the Mini-grid Permit stands in contrast to the long-term nature of loans in project finance. Understandably, investors will be concerned that the permit covering the developer's operations may not be extended after the initial term while the debt facility subsists. Although there is no sure-fire way to ensure that the NERC renews a Mini-Grid Permit, it is unlikely that the NERC will refuse to grant an extension to a Mini-grid Permit Holder who has complied with the conditions of the grant, especially while the area covered by the permit remains unserved by the national grid.

Related to the licensing point is the rather large amount of project permits that mini-grid projects that are structured or intended to comply with all applicable laws need to obtain. The permitting requirements are extensive and most of the rules under which they are to be obtained do not make any distinction between small projects like mini-grids and large on-grid projects. In other words, the fact that mini-grid projects, strictly speaking, need to obtain most of the permits that large projects also require, could be a disincentive.

Another risk for mini-grid financing is the currency mismatch between the debt facility to be obtained by the developer (usually foreign currency) and the revenue stream or currency of earning of the project (usually local currency). The revenue from which principal and interest payments will be made by the developer are not received in easily transferrable funds. As such, repatriation of capital, interest and profits will be largely dependent on the availability of foreign currency in the market, which availability will, in many cases, be limited in an economy where foreign currency illiquidity is not uncommon.

In view of the above, investors and developers may be forced to consider purchasing foreign currency from more expensive sources or putting in place different foreign currency risk mitigation mechanisms, all of which come at a significant cost to the project.

Conclusion

Despite the financing challenges faced by mini-grid developers in Nigeria, the mini-grid space remains a viable investment environment. In recognition of this, and as part of the economic recovery response to Covid-19, the Central Bank of Nigeria introduced the Framework for the Implementation of the Solar Connection Facility. The facility which will be administered through the Nigeria Electrification Project (NEP) as a ten-year low-interest facility with a tenor not exceeding 31 December 2030, seeks to increase local content in the off-grid solar value chain through various measures including the connection to mini-grids.

The government has taken a step in the right direction, the focus must now turn away from the regulators to the investors who must brace themselves and realise that the benefits of investing in the mini-grid space far outweigh the risks, which can be substantially de-risked to a great deal with result-oriented engagements, appropriate structuring, and proper legal advice. Private investors must understand the critical position they play in the mini-grid space if growth is to be seen. In the end, the involvement of investors in financing mini-grid projects is the "private participation" needed to complement governmental efforts in the mini-grid space, as is the case with most infrastructure developments.