

Bridging the Financing Gap in Africa's Off Grid Solar Sector Through Receivable Securitisation

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1. Context: Scaling Distributed Solar Platforms

Across Africa, distributed solar platforms have expanded rapidly as energy access priorities increasingly intersect with climate transition financing. Off grid solar home systems and mini grids have emerged as practical solutions for households and small businesses located far from national electricity grids. Pay as you go (PAYGO) financing models have played a critical role in enabling this expansion. Through small instalment payments collected via mobile money platforms, millions of households are now able to access solar systems without significant upfront costs. However, as distributed solar companies scale across multiple African markets, the financing constraint increasingly appears less related to electricity demand and more related to how lenders treat fragmented consumer receivable portfolios. While electricity demand remains strong across underserved regions, the financial architecture supporting these platforms has not evolved at the same pace as the underlying market expansion.

2. Market Structure of Off Grid Solar Financing

Distributed solar companies increasingly operate between two financial models. First, they manage infrastructure style assets in the form of installed solar systems deployed across thousands of households. These systems generate recurring energy service revenue streams and share characteristics with infrastructure investments. Second, the revenue generated by these systems appears on company balance sheets as consumer receivable portfolios created through PAYGO payment structures. Each customer payment represents a small receivable but collectively these receivables form large repayment pools. This dual structure creates a classification challenge for lenders. While the installed solar systems resemble infrastructure assets, lenders often treat the receivables as fragmented consumer credit exposures rather than infrastructure linked cash flows.

3. Structural Financing Constraint

The structural constraint therefore appears to sit less on electricity demand and more on how financial institutions evaluate thousands of small receivables appearing on company balance sheets. Traditional bank lending frameworks are typically designed for larger corporate exposures. Evaluating highly granular consumer repayment streams requires portfolio analytics, repayment performance data and monitoring systems that many lenders have not yet fully developed for this emerging asset class. Even where repayment performance remains stable, these receivable portfolios are frequently financed through venture capital funding or balance sheet lending rather than through structured credit markets. This gap between operational performance and financial structuring remains one of the central constraints shaping the expansion of distributed solar platforms across Africa.

4. Potential Structuring Direction: Receivable Aggregation

One possible direction for addressing this constraint lies in the aggregation of solar receivable portfolios across operators and their structuring into regional asset backed financing facilities. Through receivable aggregation, repayment streams from thousands of solar customers could be pooled into diversified portfolios across operators, markets and customer segments. These pooled receivables could then support structured credit instruments similar to asset backed securities commonly used in consumer finance markets. Such structures could potentially allow distributed solar platforms to move beyond venture style funding models and access larger pools of institutional capital.

5. Role of Development Finance Institutions

Development finance institutions could potentially anchor such structures through first loss guarantees or other credit enhancement mechanisms. By absorbing part of the underlying portfolio risk, DFIs could enable commercial lenders and institutional investors to participate in senior tranches supported by diversified repayment pools. Standardising receivable performance data and repayment histories across operators could further strengthen the bankability of solar receivable portfolios for climate finance investors and infrastructure investment funds.

6. Capital Markets Implications

Over time, financial structures of this nature could allow distributed solar portfolios to transition from venture style funding toward a more recognisable infrastructure asset class within African energy financing. By transforming fragmented consumer payment streams into diversified asset pools, receivable securitisation could help bridge the financing gap that continues to constrain the scale of off grid solar platforms across the continent. As distributed solar markets mature and repayment datasets expand, such structuring approaches may become an important bridge between energy access platforms and institutional capital markets.

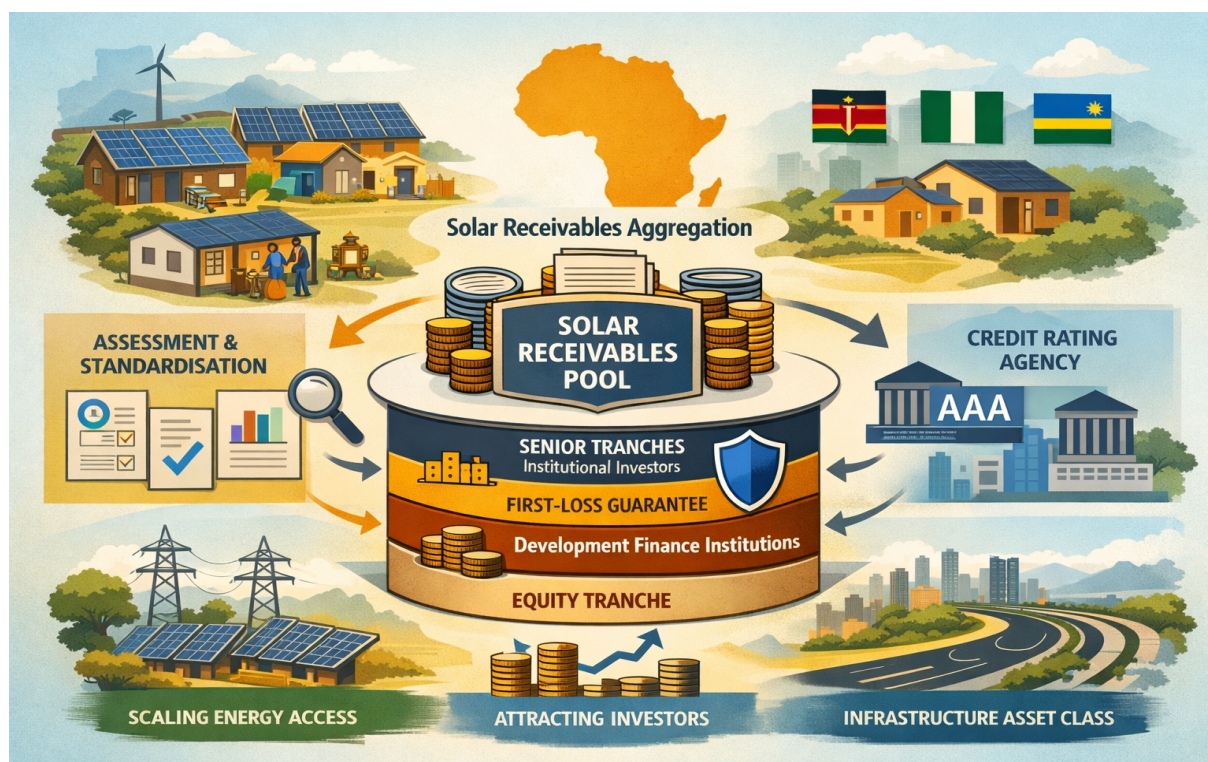


Figure: Conceptual illustration of solar receivable aggregation and blended finance structuring for African off grid solar markets.