

Commercial Bank Financing of Residential and C&I Solar Projects in Ghana:

Barriers, Bankability, and Strategic Priorities

Executive Summary



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RESIDENTIAL AND C&I SOLAR PROJECTS IN GHANA:
BARRIERS, BANKABILITY, AND STRATEGIC PRIORITIES**

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&

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About This Publication

This publication is produced by the Ghana Chamber of Clean Energy (GCCE), in partnership with the International Perspective for Policy and Governance (IPPG). It synthesizes the key insights and recommendations from a closed-door Banking Sector Roundtable on Clean Energy Finance, held in March 2026 and attended by senior representatives from Ghanaian commercial banks and selected GCCE member companies. The roundtable examined the opportunities and constraints affecting financing of Ghana's distributed renewable energy market by commercial banks, with a particular focus on residential and commercial and industrial (C&I) solar financing, and generated evidence to inform GCCE's advocacy and policy engagement.

About GCCE

The Ghana Chamber of Clean Energy (GCCE) is a non-profit and the nation's premier industry association committed to advancing the growth, competitiveness, and long-term impact of Ghana's clean and renewable energy sector.

The Chamber operates with a dual focus: first, it provides a unified platform for clean energy businesses to promote, protect, and strengthen their collective interests and second, it champions the strategic role of clean energy in accelerating Ghana's just energy transition and contributing to inclusive job creation, socio-economic development, and climate resilience.

About IPPG

The International Perspective for Policy & Governance (IPPG) is an independent international development think tank dedicated to strengthening policy implementation, governance, and sustainable development across Africa. IPPG provides policymakers with data-driven policy recommendations to foster effective governance, informed decision-making, and socioeconomic progress. Drawing on research, comparative policy learning, and strategic partnerships, IPPG adapts global best practices to African contexts to help shape a more prosperous, resilient, and inclusive future for the continent.

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Disclaimer

The views, analysis, findings, and recommendations expressed in this report are those of the author. They are informed by discussions held during the Banking Sector Roundtable on Clean Energy Finance, hosted by GCCE in March 2026, together with supplementary research undertaken by the author. They do not necessarily reflect the views or positions of the individual participants, their respective institutions, GCCE, IPPG, their affiliates, or any organization supporting their work. While every effort has been made to ensure the accuracy of this publication, any errors or omissions are deeply regretted.

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Executive Summary

1. Purpose and Strategic Context

Ghana's distributed renewable energy (RE) market is experiencing growing demand, driven by rising electricity costs, increasing electricity demand from households and businesses, growing corporate sustainability commitments, and the need to decarbonize business operations. Coupled with Ghana's high solar irradiation, these factors continue to create strong market opportunities for residential and commercial and industrial (C&I) solar investments.

A major challenge, however, is access to finance. Households and businesses require financing to invest in solar systems, while solar companies and developers need capital to expand their operations and also develop projects for clients. Although commercial banks are already financing residential and C&I solar projects in Ghana, their participation remains limited relative to the sector's growing financing needs. With the conclusion of the Sustainable Use of Natural Resources and Energy Finance (SUNREF) programme in January 2026, the role of domestic commercial banks has become even more important.

Recognizing this opportunity, the Ghana Chamber of Clean Energy (GCCE), in partnership with the International Perspective for Policy and Governance (IPPG), convened a Banking Sector Roundtable, bringing together senior executives from Ghanaian commercial banks and selected GCCE member companies to examine the opportunities, constraints, and strategic priorities for expanding commercial bank financing of residential and C&I solar projects in Ghana. This report synthesizes the perspectives shared during the roundtable and sets out practical recommendations for government, the Bank of Ghana (BoG), and commercial banks to strengthen financing for the sector.

2. Ghana's Residential and C&I Solar Market: Opportunities and Challenges

The roundtable provided important insights into the current state of Ghana's residential and C&I solar market, highlighting both the opportunities supporting continued growth and the challenges affecting market development as summarized below:

- **Growing Market Demand:** Demand for residential and C&I solar continues to grow, supported by Ghana's high solar irradiation, rising electricity tariffs, growing electricity demand, and increasing sustainability and decarbonization requirements from multinational companies and their supply chains.
- **Financing Gap:** Innovative financing models introduced by specialized clean energy financiers, including lease-to-own and power purchase agreements (PPAs), have been undermined by foreign exchange (FX) challenges arising from hard-currency financing and cedi-denominated payments. The subsequent exit of several of these specialized financiers has created a financing gap, presenting commercial banks with an opportunity to play a larger role in financing the sector.
- **Regulatory and Market Challenges:** The market is, nonetheless, plagued by weak market enforcement, informal market activities, inconsistent product quality, and limited post-installation oversight. These challenges are further compounded by the movement of imported solar equipment to other West African markets and the activities of unlicensed installers.



- **Market Data Gaps:** The absence of comprehensive registration and reporting for solar installations limits the availability of reliable market data, making it difficult to accurately assess market size, monitor deployment, and support commercial bank product development.
- **Net Metering:** While the Net Metering Code (2023) represents an important step towards supporting residential and C&I solar, implementation challenges including delays in meter installation and the treatment of unused electricity credits are unfavourable to project economics and financing for residential and C&I solar consumers.
- **Implications for Commercial Banks:** Collectively, these market and regulatory challenges influence commercial banks' confidence in the sector and their willingness to expand lending for residential and C&I solar investments.

3. Barriers to Commercial Bank Financing of Residential and C&I Solar Projects

The ability of commercial banks to expand financing for residential and C&I solar consumers is constrained by five key factors including:

- **Limited Understanding of RE Economics:** Banks often focus on the high upfront capital cost of solar installations rather than the long-term, predictable electricity cost savings, and improved cash flow that support debt repayment.
- **Insufficient Internal Technical Capacity:** Many banks lack the in-house expertise to assess RE technologies, project risks, and their operational characteristics. This is in stark contrast to the internal capacity that banks have developed in Environmental and Social Risk Management (ESRM).
- **Perceived Market and Technology Risks:**
 - **Market Acceptance:** Despite growing demand, bankers remain uncertain about the maturity of the residential and C&I solar market and its readiness for large-scale deployment.
 - **Fear of the Unknown:** A lack of long-term performance data from installed residential and C&I solar systems, together with uncertainty regarding the long-term reliability of key components, particularly batteries and inverters, has led many banks to adopt a cautious "wait-and-see" approach.
 - **Quality Assurance:** Concerns about product quality, vendor accountability, and inadequate after-sales

support further undermine confidence negative experiences shared by C&I solar consumers.

- **Reliance on Conventional Banking Models:** Banks continue to apply traditional lending frameworks and credit assessment approaches that are not tailored to the characteristics of solar and other renewable energy investments.
- **Financing Mismatches:**
 - **Tenor Mismatch:** Residential and C&I solar projects need 7–10-year financing, but banks are generally limited to just about 5 years due to their own margin and profitability considerations.
 - **Currency Mismatch:** Most residential and C&I solar projects require funding in foreign currency, while loan repayments depend on cedi-denominated payments from residential and C&I consumers. This creates a currency repayment mismatch and FX risk that banks prefer to avoid.

4. Financing Needs of Solar Companies and Project Bankability

Solar companies and developers often require three distinct forms of financing and capital to support their operations: (1) working capital for project development and pipeline growth, (2) financing for project execution, and (3) growth capital. Banks assess each financing need differently according to its risk profile, repayment structure, and overall bank appetite.

- **Working Capital:** Banks are generally more cautious because repayment depends on the company's ability to convert future opportunities into successful projects rather than a contracted source of repayment.
- **Financing for Project Execution:** This represents banks' preferred entry point for financing because repayment can be linked to a specific project, creditworthy offtaker, and contractual payment arrangements.
- **Growth Capital:** Banks generally become more willing to provide growth capital after companies have successfully delivered previously financed projects, enabling lenders to build confidence in the company's capabilities, track record, and long-term business performance.

For project execution financing, the area where banks are generally most willing to lend, the bankability of residential and C&I solar projects is assessed based on five key considerations:

- **Corporate Governance and Management**

Oversight: The quality of management, governance structures, and decision-making processes of the clean energy company or developer, including the experience and capability of the management team to deliver the project.

- **Commercial Viability:** A credible business model for the residential or C&I project in question, supported by predictable project cash flows, a creditworthy offtaker, and a clear repayment plan.

- **Technical Capability:** The developer's or Engineering, Procurement, and Construction (EPC) contractor's technical expertise, implementation experience, track record, and ability to construct, operate, and maintain the project over its lifetime.

- **Collateral and Security:** The availability and quality of security, together with the developer's financial commitment to the project through its equity contribution (what the bankers call the developer's "skin in the game").

- **Legal Viability:** Well-structured, enforceable contractual agreements for the project that clearly define the rights, obligations, and risk allocation among the parties.

Improving Project Bankability:

- **Early Engagement:** Involving commercial banks early in project development helps improve project structuring, financing arrangements, and overall financing outcomes.

- **Understanding the Nuances of Commercial Bank Lending:** A better understanding of how commercial banks assess projects and make lending decisions enables solar companies and developers to prepare stronger financing proposals, engage banks earlier in the project development process, and improve project bankability.

5. Existing Residential and C&I Solar Financing Models: Structures and Experience

The roundtable examined how commercial banks are currently financing residential and C&I solar in Ghana and the experiences that have emerged from existing financing arrangements.

- **Limited Dedicated Financing:** Dedicated residential and C&I solar financing products remain limited. Most commercial banks continue to support the sector through conventional lending products rather than specialized solar or green finance facilities,

although new dedicated products are currently under development.

- **Financing Structures:** Commercial bank financing for residential and C&I solar is currently supported through two principal sources of capital: commercial banks' own balance sheets, which primarily finance solar companies and developers, and climate finance facilities provided by Development Finance Institutions (DFIs) and other international partners, which largely finance residential and C&I consumers through participating banks.

- **Banks' Experience with Solar Companies and Developers:** Successful financing from banks for solar companies and developers is closely linked to meeting bankability requirements discussed in section 4 of this report. Where these conditions are satisfied, banks have been flexible to better align financing with project implementation, including the use of deferred letters of credit to reduce financing costs during equipment procurement and installation.

- **Banks' Experience with Residential and C&I Consumers:** Financing for residential and C&I consumers remains closely linked to conventional credit assessment. For homeowners, existing debt obligations often reduce borrowing capacity, making it difficult to finance complete residential solar installations. For small and medium-sized enterprises (SMEs), inadequate financial records, audited accounts, and other lending documentation often prevent banks from assessing businesses as credible offtakers, even where the underlying solar project is commercially viable.

- **Foreign Exchange (FX) Risk:** FX risk remains a major challenge for banks regardless of whether financing is provided from commercial banks' own balance sheets or through climate finance facilities. Because solar equipment is imported in foreign currency while borrower revenues are largely earned in cedis, exchange rate movements increase repayment burdens and are routinely priced into lending margins, reducing the affordability of financing.

- **Increasing Access to Climate Finance:** Engagement by DFIs and other climate finance institutions with Ghanaian banks is increasing, together with opportunities to access climate finance for residential and C&I solar. As a result, the principal challenge is increasingly shifting from the availability of funds to creating the conditions necessary for its effective deployment.

- **Interest Rate Margins and Facility Competitiveness:** The competitiveness of some climate finance facilities can decline over time. Pricing ceilings and floors

attached to these facilities may adjust lending rates as market conditions change allowing conventional lending products link Ghana R competitive than dedicated climate finance facilities.

6. The Role of Bank of Ghana (BoG) in Expanding Commercial Bank Financing of Residential and C&I Solar

Banks do not consider the BoG's current regulatory framework to be a barrier to residential and C&I solar financing. However, the roundtable identified four key regulatory and market development measures that the BoG can implement to further support the expansion of commercial bank lending to the sector. These include:

- **Collateral Recognition:** Reviewing the treatment of installed solar energy assets as collateral could improve their recognition as loan security and reduce reliance on additional collateral.
- **Capital Charges:** Reviewing the treatment of capital charges for residential and C&I solar lending could better support commercial bank financing while maintaining prudent supervisory standards.
- **Guarantee Mechanisms:** Providing regulatory recognition for eligible guarantee mechanisms to support residential and C&I solar investments could encourage greater commercial bank lending.
- **Capacity Building:** Expanding the BoG's existing capacity-building programmes for banks beyond ESG and climate risk to include project appraisal for solar projects, financing structures, and investment risks could strengthen banks' ability to finance the sector.

7. Strategic Priorities for Scaling Commercial Bank Financing of Residential and C&I Solar Projects

Beyond broader policy and regulatory reforms, the banks identified four strategic priorities that they consider fundamental to scaling commercial bank financing of residential and C&I solar projects. These include:

- **Patient Capital:** Banks identified greater access to long-term patient capital as the most important requirement for expanding financing for the sector. Existing commercial banking models are constrained by relatively short lending horizons, while most residential and C&I solar projects require financing tenors of seven to ten years. Greater access to long-term capital from government, DFIs, and climate finance institutions was therefore considered critical.
- **Addressing Foreign Exchange (FX) Risk:** Banks also identified FX risk as a key constraint to expanding financing for the sector. A government-backed FX risk-sharing or hedging mechanism was considered important to reduce banks' exposure to exchange rate fluctuations.
- **Strengthening Project Development:** Banks emphasized the need for stronger project development to increase the pipeline of bankable residential and C&I projects. An industry-wide technical advisory unit was proposed to support project development and provide independent technical expertise to commercial banks.
- **Building Investment-Ready Developers:** Banks also highlighted the need to strengthen the investment readiness of solar companies and developers. Improving developers' understanding of commercial bank requirements, together with stronger financial and institutional capacity, would improve the bankability of both companies and projects.

8. Recommendations

The report concludes with a set of recommendations for government, the BoG, and commercial banks. The recommendations are organized into short-term (1–2 years) and medium-term (2–4 years) actions.

Stakeholder	Short-Term Recommendations (1–2 Years)	Medium-Term Recommendations (2–4Years)
Government	- Strengthen enforcement of renewable energy standards, licensing, and market oversight, including post-installation inspections, equipment traceability, enforcement against unlicensed installers, and enhanced consumer protection. - Accelerate implementation of the Net Metering Code by expanding accredited installers, reducing meter installation delays, and reviewing the treatment of unused electricity credits.	- Establish a government-backed FX risk-sharing or hedging mechanism to support residential and C&I solar projects, and other clean energy investments. - Mobilize long-term patient capital for the sector through government-backed financing vehicles and partnerships with DFIs. - Lead by example through solar deployment across government buildings and infrastructure. - Strengthen coordination across power sector institutions to support renewable energy deployment and grid integration.
Bank of Ghana (BoG)	- Develop clearer regulatory guidance on green finance and eligible solar and other clean energy investments. - Expand capacity building initiatives with banks to include solar and other clean energy project appraisal, financing structures, and investment risk management.	- Introduce regulatory measures that encourage commercial bank financing of residential and C&I solar projects. - Review the treatment of solar assets as collateral to improve their recognition as loan security. - Review the treatment of capital charges on lending for residential and C&I solar projects while maintaining prudent supervisory standards.
Commercial Banks	- Strengthen in-house technical capacity for residential and C&I solar financing. - Develop dedicated financing products tailored to residential and C&I solar project characteristics. - Strengthen trust, confidentiality, and early engagement with solar companies and developers during project development.	- Mobilize long-term patient capital through DFI partnerships and the use of capital market instruments. - Strengthen institutional commitment to residential and C&I solar financing through dedicated strategies and performance monitoring. - Support the development of more investment-ready solar companies and developers through capacity building and improved engagement. - Participate in policy dialogue and industry initiatives to strengthen the enabling environment for solar and clean energy finance.

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