



Institute For Economic Justice Renewable Energy Localisation Factsheet



BRIDGING THE GAP AND ALIGNING SOLAR PV POLICY WITH THE REALITIES OF GHANAIAN FIRMS

In Brief

- ✓ Ghana's solar PV market is expanding, but local firms remain concentrated mainly in sales, installation, systems integration and maintenance.
- ✓ Existing policies recognise finance, technology and skills as key constraints, yet enterprise support has not been sufficiently tailored to the specific needs of solar firms seeking to upgrade.
- ✓ Most firms remain small, local sourcing is limited, investment in productive capabilities is weak, and international partnerships do not consistently result in technology or skills transfer.
- ✓ Ghana needs a more targeted approach that links enterprise development, accessible finance, structured partnerships, market access and skills development to clear firm-upgrading pathways.



This factsheet is based on research on Ghana's solar PV sector and the accompanying policy brief.

Participation is growing, but upgrading remains limited

Ghanaian firms already participate actively in the solar PV market, particularly in system design, sales, installation, integration and maintenance^{1,2}. However, participation has not yet translated into significant movement into higher-value activities. A survey of 16 licensed solar PV firms shows that:

50% employ between 1 and 10 workers, while a further

43.8%

employ between 11 and 49 workers.



62.5%

operate mainly as solution providers or systems integrators.



12.5%

undertake assembly or light manufacturing.



Nearly half source less than

25%

of their key inputs locally.



More than half invest in areas such as design, marketing, logistics and research, while only

20%

invest in production efficiency or quality systems



This suggests that firms are strengthening their commercial capabilities faster than their productive and technological capabilities. The challenge is therefore not simply increasing Ghanaian participation. It is enabling firms to upgrade, deepen their capabilities and retain more value locally

Why firms struggle to upgrade



Finance remains difficult to access: Firms require capital not only for operational expenses, but also for equipment, certification, technology, quality systems and productive capacity. Although development finance institutions provide longer-term finance through participating financial institutions, many firms continue to face high interest rates and demanding eligibility requirements³. The challenge is therefore not only the availability of finance, but whether firms can actually access finance appropriate to their size, business model and upgrading needs.



Enterprise support is not targeted: Ghana has institutions that support micro, small and medium enterprises, including the Ghana Enterprises Agency. However, general business-development programmes may not address the specialised requirements of solar firms. Solar enterprises may need support with engineering and technical capability, certification and quality management, financial management and investment readiness, technology acquisition, supplier development, digital systems and preparation for larger contracts^{4,5,6}. Existing interventions are often short-term and broad-based rather than organised around these specific upgrading requirements⁷.



Partnerships do not automatically build capability. International partnerships are already common. Four in five surveyed firms had some form of international partnership, ranging from supplier relationships to formal partnerships and joint ventures. Yet these relationships frequently provide access to products and markets without necessarily transferring engineering, production, management or technological capabilities to local firms⁸. Partnerships therefore need to move beyond product distribution towards deliberate capability development.



Training remains largely reactive: Skills development is widespread, but it is often informal. While about 93% of surveyed firms provide training when required, fewer than half operate formal training programmes. This limits the accumulation of specialised skills within firms and across the wider industry. As the market develops, firms will increasingly require skills not only in installation but also in system design, battery systems, quality assurance, operations and maintenance, project management, manufacturing processes and recycling.



Local participation rules are not enough on their own: Ghana's local-content framework creates an important basis for increasing domestic participation in the renewable energy sector⁹. However, requiring local participation does not automatically create firms capable of competing successfully¹⁰. A firm that lacks finance, certification, technology or production capability may still be unable to take advantage of opportunities created through local-content requirements. The policy challenge is therefore to connect market opportunity with enterprise capability. Local-content policy should be supported by practical mechanisms that help Ghanaian firms become more productive, technically capable and competitive.

What needs to change?



Establish a Solar Enterprise Development Programme:

Create a dedicated programme that identifies solar firms at different capability levels and provides support according to their specific upgrading needs. The programme should begin with a mapping and capability diagnostic of licensed firms and use this to identify realistic upgrading pathways. Support could include business and financial management, engineering support, certification and quality systems, digitalisation, technology acquisition, investment preparation, and production and operational improvement.



Make finance usable for solar firms:

Development finance should be designed around the actual financing needs of solar enterprises. A mix of instruments may be required, including credit guarantees, concessional loans, equipment leasing, working-capital facilities and results-based grants. Finance providers should also work directly with solar firms to strengthen financial records, ESG systems and preparation of bankable proposals. Financial support should be linked to clear investment and capability milestones.



Structure partnerships around learning:

International partnerships should be used deliberately to build domestic capability. Government and industry bodies can help match Ghanaian firms with credible technology providers and provide legal and commercial advisory support to smaller firms entering partnership arrangements. Joint ventures, supplier-development agreements and other partnerships should include measurable commitments relating to technology transfer, engineering capability, skills development, management systems and local supplier development.



Connect capable firms to market demand:

Firms are unlikely to invest in new capabilities if they cannot see a

credible market for those investments. A verified supplier directory should therefore identify firms that meet relevant technical and quality standards. Government and industry should also publish market opportunities, provide tender-readiness support and organise supplier-development and buyer-matching arrangements involving public and private purchasers. This can help capable local firms move from isolated project opportunities towards more predictable commercial relationships.



Build skills with industry, not separately from it:

Training institutions, universities and firms should jointly identify the capabilities required as Ghana's solar sector develops. Modular programmes can be developed in areas including installation and system design, battery systems, project management, quality assurance, operations and maintenance, manufacturing fundamentals, and recycling and end-of-life management. Training should respond to real industry requirements and provide pathways for skills to accumulate within firms rather than remaining project-specific.

The opportunity for Ghana

Ghana's growing solar market creates opportunities beyond increasing renewable electricity deployment. It can also support stronger domestic

firms, deeper technological capability and greater local value capture.

But this will not happen automatically.

Without targeted support, local firms may remain concentrated in downstream activities while technology, equipment and a large share of the economic value continue to be imported. A more deliberate approach to enterprise upgrading can help Ghana move from local participation towards local capability.

The question is therefore not only whether Ghanaian firms participate in the solar market, but whether they become progressively more capable of competing, investing and capturing value within it.

Endnotes

1. Edze, P. (2025) 'Local content requirements for the transfer of knowledge and skills in the solar photovoltaic industry in Ghana', *Energy for Sustainable Development*, 85, article 101682. <https://doi.org/10.1016/j.esd.2025.101682>
2. International Finance Corporation (IFC) (2021) *Ghana distributed solar market assessment*. Washington, DC: IFC. (Accessed 7 June 2026)
3. Sackey, D.M., Owusu-Manu, D.G., Asiedu, R.O. and Jehuri, A.B. (2020) 'Analysis of latent impeding factors to solar photovoltaic investments in Ghana', *International Journal of Energy Sector Management*, 14(4), pp. 669–682. <https://doi.org/10.1108/IJESM-08-2019-0005>
4. Edze, P. (2025) 'Local content requirements for the transfer of knowledge and skills in the solar photovoltaic industry in Ghana', *Energy for Sustainable Development*, 85, article 101682. <https://doi.org/10.1016/j.esd.2025.101682>
5. Kuada, J. and Mensah, E. (2020) 'Knowledge transfer in the emerging solar energy sector in Ghana', *Contemporary Social Science*, 15(1), pp. 82–97. <https://doi.org/10.1080/21582041.2018.1510132>

6. Sackey, D.M., Owusu-Manu, D.G., Asiedu, R.O. and Jehuri, A.B. (2020) 'Analysis of latent impeding factors to solar photovoltaic investments in Ghana', *International Journal of Energy Sector Management*, 14(4), pp. 669–682. <https://doi.org/10.1108/IJESM-08-2019-0005>
7. Ofori, C.G., Osman, M.S. and Djangba, R.M. (2026) *Just energy transition: Ghana renewable energy policy scan—Critical insights and questions for localisation and decent employment*. Cape Town: Institute for Economic Justice. (Accessed 7 June 2026).
8. Edze, P. (2025) 'Local content requirements for the transfer of knowledge and skills in the solar photovoltaic industry in Ghana', *Energy for Sustainable Development*, 85, article 101682. <https://doi.org/10.1016/j.esd.2025.101682>
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10. Ofori, C.G., Osman, M.S. and Djangba, R.M. (2026) *Just energy transition: Ghana renewable energy policy scan—Critical insights and questions for localisation and decent employment*. Cape Town: Institute for Economic Justice. (Accessed 7 June 2026)

