



LOCALISING RENEWABLE ENERGY VALUE CHAINS: COUNTY-LEVEL PATHWAYS TO SPUR RENEWABLE ENERGY ASSEMBLY AND MANUFACTURING IN KENYA

Faith Kemunto, Joel Onyango, Eric Magale, Joan Andega

African Centre for Technology Studies



Executive summary

Kenya's renewable energy expansion has not translated into domestic manufacturing or broad-based industrial development. Most renewable energy technologies are imported, limiting local value addition, technology transfer, and skilled employment. Without targeted localisation policies, county governments will continue to miss opportunities to strengthen renewable energy assembly, manufacturing, and inclusive economic development.

Kenya generates 81% of its electricity from renewable sources, yet most renewable energy technologies and components are still imported. ACTS

firm-level survey findings show that local companies remain concentrated in distribution, installation, and maintenance, with limited participation in assembly and manufacturing. They identify inadequate access to finance, industrial infrastructure, technology transfer, and technical skills as the main barriers preventing firms from moving into higher-value manufacturing activities, underscoring the need for targeted, county-level localisation policies.

This policy brief examines why Kenya's renewable energy growth has not deepened domestic manufacturing capability, and sets out a county-led pathway for closing that gap. We make the following recommendations:

- Establish county renewable energy assembly and manufacturing clusters and integrate localisation targets into County Integrated Development Plans (CIDPs), industrial strategies, and procurement frameworks.
- Introduce phased local-content requirements for publicly funded renewable energy projects and expand blended finance, investment incentives, and technical support for SMEs to upgrade into manufacturing.
- Strengthen skills development and technology transfer through partnerships among Technical and Vocational Education and Training (TVET) institutions, universities, research organisations, and industry

to build specialised manufacturing capacity.

- Establish a national–county coordination mechanism to align renewable energy, industrialisation, and investment policies, monitor localisation targets, publish annual progress reports, and facilitate knowledge sharing across counties.

The sequencing matters: manufacturing clusters and local-content requirements create the demand-side pull for domestic assembly, but without the skills development and finance measures that follow, county-led clusters risk being unable to supply what local-content rules would require of them.

1. Introduction

Local content requirements are among the most widely used industrial-policy instruments for turning renewable energy deployment into domestic manufacturing, with more than 140 applications recorded worldwide since 2008. A 2024 systematic review of the local-content-policy literature finds that most existing evidence still comes from the extractive sector, with renewable energy applications — including Kenya's — remaining comparatively under-researched. It calls for policy designs that link local-content targets explicitly to finance, technology transfer, and supportive institutional frameworks rather than treating local sourcing thresholds as sufficient on their own.¹

This is consistent with the pattern documented in this brief: Kenya has renewable energy deployment targets and general industrialisation ambitions, but no dedicated local-content or manufacturing-development instrument for the sector. International evidence suggests that such policies need finance,

infrastructure, and supplier-development support — support that county governments and firms currently lack.

The remainder of this policy brief is structured in four sections. Section 2 sets out the scale of Kenya's renewable energy growth and the localisation gap that limits domestic manufacturing. Section 3 reviews firm-level survey evidence and comparative country experience on localisation. Section 4 examines the policy pathways available for county-led localisation. Section 5 sets out recommendations for turning renewable energy deployment into domestic industrial development.

2. Import dependence, firm capability tiers, and the localisation gap in Kenya's renewable energy sector

Kenya's renewable energy sector is expanding rapidly, but domestic participation in renewable energy manufacturing remains limited.² Most renewable energy technologies and components are imported, restricting local value addition, technology transfer, and industrial growth. As renewable energy demand continues to rise, counties are missing opportunities to develop manufacturing industries, create skilled jobs, and strengthen local supply chains.

Addressing this gap is now a national priority: growing investment in renewable energy, increasing electricity demand, and Kenya's green industrialisation agenda present a time-sensitive opportunity to localise renewable energy value chains. Without targeted policy action, import dependence will persist, limiting the economic and employment benefits of the clean energy transition and weakening Kenya's long-term industrial competitiveness.

The limited localisation of renewable energy value chains affects SMEs, skilled workers, women, youth, and county governments across Kenya.³ Although the renewable energy sector is expanding, most local

firms remain concentrated in low-value installation, distribution, and maintenance services, with limited participation in manufacturing. Counties with high renewable energy potential — including Turkana, Garissa, Kajiado, Nakuru, and Makueni — capture limited industrial value from renewable energy investments. Women and youth, who face persistent barriers to technical training, finance, and enterprise development, remain underrepresented in higher-value manufacturing activities. Without targeted localisation policies, these groups will continue to miss opportunities for decent employment, business growth, and inclusive economic development.

Kenya has established several policy frameworks to promote renewable energy and industrialisation, including the Energy Act (2019), Kenya Vision 2030, the Bottom-Up Economic Transformation Agenda (BETA) 2022–2027, and the Kenya Energy Transition and Investment Plan (2023–2050). However, these frameworks place greater emphasis on renewable energy deployment than on domestic manufacturing and local value addition.

Weak implementation and enforcement of local-content provisions, limited access to finance for manufacturing SMEs, inadequate technology-transfer mechanisms, and poor coordination between national and county governments continue to constrain the localisation of renewable energy value chains.

Without targeted policy action, Kenya will remain dependent on imported renewable energy technologies, limiting domestic value addition and increasing exposure to global supply-chain disruptions and foreign-exchange pressures. Counties will continue to forgo manufacturing investment, skilled employment, and enterprise growth. The transition will expand clean energy access without delivering the industrial transformation and inclusive growth Kenya's development ambitions require.

This gap is now being addressed at the national level: the Local Content Bill, 2025, was published in November 2025 and has been under review by Parliament's Departmental Committee on Trade, Industry and Cooperatives since March 2026. It would require foreign-owned firms across all sectors —

including energy — to source at least 60% of goods and services from Kenyan firms, and would oblige them to help local suppliers meet international standards through technology transfer and capacity-building.⁴ For renewable energy specifically, this could mean foreign wind and solar developers being required to help local contractors meet the standards needed for foundation construction, tower assembly, or component fabrication.

The Bill's proposed Local Content Compliance Office would enforce quotas nationally, but has no defined role for county governments, leaving open exactly how the county-led clusters recommended in this brief would connect to national compliance monitoring.

3. Firm-level survey evidence and comparative country experience on localisation

Research by the African Centre for Technology Studies (ACTS) under the just energy transition (JET) project focused on renewable energy manufacturing, SMME capability development, and gender equity in Kenya. A survey was conducted between January and February 2026 and received responses from five firms engaged in solar, wind, and related renewable energy component value chains.⁵ It found that three of the firms were concentrated in low-skill assembly activities or the supply of basic materials, while only one was involved in the manufacturing and assembly of final products and one also participated in design, research, and development. In addition, four of the

firms reported that existing policies are largely ineffective in supporting their businesses, while two sourced less than 25% of their key inputs locally, indicating weak domestic supply-chain linkages. Firms also identified limited access to finance, inadequate industrial infrastructure, technology-transfer constraints, and shortages of specialised technical skills as important barriers to moving into higher-value manufacturing.

The concentration of firms in lower-value assembly activities is consistent with the global value-chain governance literature: Gereffi et al. argue that a firm's position within a value chain, and its ability to move into higher-value functions, is shaped not by policy intent alone, but by lead-firm coordination, capability requirements, and the extent to which transactions can be codified.⁶ This helps explain why Kenyan firms remain concentrated in distribution and assembly despite existing local-content policies. It underscores the need for coordinated interventions addressing capabilities, infrastructure, finance, skills, technology transfer, and market conditions together.

The national policy frameworks identified above all recognise industrial development as an important objective alongside renewable energy expansion. International evidence from the International Renewable Energy Agency and the International Labour Organisation,⁷ the International Energy Agency,⁸ and the United Nations Industrial Development Organization shows that countries combining renewable energy deployment with local manufacturing policies achieve higher employment creation, stronger technology transfer, and greater domestic value addition.

Country	Why it is relevant to Kenya	Lesson for Kenya
South Africa	The Renewable Energy Independent Power Producer Procurement Programme (REIPPPP) incorporated local-content and industrial-development requirements; a World Bank evaluation attributes its success to predictable, competitively bid procurement rounds with escalating local-content thresholds, enforced through contract penalties. ⁹	Renewable energy procurement can stimulate domestic manufacturing when linked to clear localisation targets and compliance mechanisms – the enforcement mechanism matters as much as the target.
Morocco	Combined large-scale renewable energy investment with industrial development and supplier participation.	Long-term industrial policy can increase local value addition alongside renewable energy deployment.
Ghana	The Renewable Energy Act and local-content initiatives promote private-sector participation, local skills development, and domestic involvement in renewable energy value chains.	A supportive regulatory framework and targeted local-content measures can strengthen domestic participation while attracting investment.
India	Supported domestic solar manufacturing through production-linked incentives, local-content measures, and targeted manufacturing investment.	Strategic incentives and predictable policy frameworks can accelerate domestic manufacturing capacity and investor confidence.

Consultations with county governments, local renewable energy SMEs, industry associations, development partners, civil society organisations, and community representatives indicate strong support for localising renewable energy value chains. Stakeholders identified limited access to finance, inadequate industrial infrastructure, weak technology transfer, and shortages of specialised technical skills as the main barriers to manufacturing. They emphasised the need for stronger county procurement policies, supplier-development programmes, and collaboration with institutions such as the Kenya Bureau of Standards (KEBS), the Kenya Industrial Research and Development Institute (KIRDI), the

National Industrial Training Authority (NITA), the Kenya Investment Authority (KenInvest), and the Kenya Association of Manufacturers (KAM) to build competitive local industries.

4. County-led pathways for renewable energy assembly and manufacturing

Policy option	Key features	Advantages	Disadvantages	Feasibility
Status quo (no change)	Continue prioritising renewable energy deployment with limited focus on manufacturing.	Low implementation cost	Continued import dependence and limited local value addition.	High
Recommended option: county-led localisation	County manufacturing clusters, local-content measures, SME financing, and national-county coordination.	Creates jobs and strengthens local supply chains.	Requires coordinated investment and institutional capacity.	High
Alternative 1: national manufacturing hubs	Concentrate manufacturing in a few industrial zones.	Economies of scale	Benefits concentrated in a few regions.	Moderate
Alternative 2: private sector-led approach	Rely mainly on private investment.	Lower public expenditure	Weak incentives for localisation and SME participation.	Moderate

The county-led renewable energy localisation strategy is the preferred option because it aligns with Kenya's devolution and industrialisation agendas. By combining local-content requirements, manufacturing clusters, targeted SME support, and skills development, counties can attract investment, expand supplier networks, and create skilled employment. Unlike the status quo, this approach directly addresses the barriers identified through ACTS research — limited access to finance, inadequate industrial infrastructure, and weak technology transfer — and distributes economic benefits more equitably across counties than a national hub model, while offering stronger support for SMEs than a purely market-driven approach.

A caution from Kenya's own experience is worth flagging: Achiba's study of the Lake Turkana Wind Power project found that local employment and

civil-works contracting did not, on their own, translate into local ownership or benefit-sharing, and ultimately fuelled land disputes with host communities.¹⁰ County-led localisation clusters should therefore be designed around community ownership stakes and benefit-sharing agreements, not employment quotas alone.

5. Towards change in policy and practice

5.1 Establish county renewable energy manufacturing clusters. The Ministry of Investments, Trade and Industry, the Ministry of Energy and Petroleum, and county governments should establish county renewable energy assembly and

manufacturing clusters and embed localisation targets within County Integrated Development Plans, county industrial strategies, and procurement frameworks. These initiatives should be financed through national and county allocations, public–private partnerships, and development-partner support.

5.2 Strengthen local content and SME competitiveness. The National Treasury, the Public Procurement Regulatory Authority, and the Kenya Development Corporation should introduce phased local-content requirements for publicly funded renewable energy projects and expand support for SMEs to upgrade into higher-value manufacturing. This includes expanding eligibility for Financing Locally-Led Climate Action (FLLoCA) funding to qualifying grassroots and SME-level renewable energy enterprises, which ACTS sub-national dialogues found are currently excluded.¹¹ It also means establishing clear access pathways to development-finance instruments such as the Kenya Development Corporation's industrial financing facilities and the enterprise-support provisions of the Micro and Small Enterprises Act.¹²

5.3 Develop skills and technology transfer. The Ministry of Education, the Technical and Vocational Education and Training Authority (TVETA), universities, KIRDI, NITA, and the Ministry of Energy and Petroleum should strengthen partnerships to develop specialised manufacturing skills and promote technology transfer. This should be funded through education budgets, research grants, industry partnerships, and development-partner support.

5.4 Strengthen national–county coordination. The Council of Governors, the Ministry of Energy and Petroleum, and the Ministry of Investments, Trade and Industry should

establish a coordination mechanism to align renewable energy, industrialisation, and investment policies, monitor localisation targets, publish annual county progress reports, and facilitate knowledge sharing across counties.

Localising renewable energy value chains requires upfront public investment in industrial infrastructure, SME financing, workforce development, and institutional coordination. These interventions involve initial implementation costs, but are expected to generate substantial long-term returns by increasing domestic value addition, reducing reliance on imported technologies, strengthening county industrial ecosystems, improving the resilience of domestic supply chains, and increasing the participation of SMEs, women, and youth in Kenya's green economy.

Endnotes

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