Light Manufacturing

Source Metadata

Field	Value
source	cpi
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source_id	CPI-IN-002
sector	Industry
subsector	Light Manufacturing
mitigation	Y
adaptation	N
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CPI Definition & Scope

Light Manufacturing in CPI's GLCF framework tracks climate finance directed at decarbonizing manufacturing sectors where emissions are primarily energy-related rather than process-based. CPI captures investment in electrification of manufacturing processes, on-site renewable energy for factories, energy efficiency in food processing, textiles, electronics, and automotive manufacturing, as well as clean technology manufacturing capacity (solar panel, battery, and EV component production). These sectors are more readily electrifiable than heavy industry.

Subsectors & Examples

- **Food & Beverage Processing** — efficient drying, cold chain optimization, waste heat recovery
- **Textile Manufacturing** — process efficiency, renewable energy, waterless dyeing
- **Clean Technology Manufacturing** — solar panel, battery, EV, wind component factories
- **Electronics Manufacturing** — energy efficiency, renewable-powered production lines
- **General Manufacturing Electrification** — replacing gas-fired processes with electric alternatives

Mitigation & Adaptation Classification

Light manufacturing is classified as **mitigation** in CPI's framework. The primary pathway is energy decarbonization through electrification, on-site renewables, and efficiency improvements. Unlike hard-to-abate sectors, light manufacturing emissions can largely be eliminated through clean energy and efficiency without fundamental process changes.

LATAM Relevance

Light manufacturing is a significant employer and emitter across Latin America. Colombia's food processing and textile industries in Antioquia and Bogota are exploring electrification and efficiency investments. Peru's agri-processing sector (fishmeal, coffee, cacao) has growing demand for energy efficiency. Costa Rica's export-oriented manufacturing zones (medical devices, electronics) are under pressure from international buyers to decarbonize supply chains. Regional clean tech manufacturing (solar panels, batteries) remains nascent but is growing.

Cleantech Taxonomy Crosswalk

Maps to Cleantech Taxonomy sector **IN** (Industry) for light manufacturing. Cross-references with **ES** (Energy Systems) for industrial renewable energy supply and **AF** (AFOLU) for agri-processing value chains.

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