Grid & Distribution

Source Metadata

Field	Value
source	cpi
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sector	Energy Systems
subsector	Grid & Distribution
mitigation	Y
adaptation	Y
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CPI Definition & Scope

Grid and Distribution infrastructure in CPI's GLCF 2025 framework covers investments in electricity transmission and distribution networks that enable integration of clean energy sources. The 2025 edition specifically expanded tracking to include power grids as a distinct category. CPI captures finance flowing to grid modernization, smart grid technologies, interconnection infrastructure, and distribution network upgrades needed to accommodate distributed energy resources and variable renewables.

Subsectors & Examples

- **Transmission Infrastructure** — high-voltage lines, cross-border interconnectors
- **Distribution Network Upgrades** — smart meters, automated distribution, voltage regulation
- **Smart Grid Technologies** — demand response systems, grid management software, SCADA upgrades
- **Grid Interconnection** — renewable energy evacuation lines, substation upgrades
- **Microgrids** — community and industrial microgrids with renewable integration

Mitigation & Adaptation Classification

Grid infrastructure is classified as **dual-benefit** (mitigation and adaptation) in CPI's framework. Mitigation benefit comes from enabling renewable energy integration and reducing transmission losses. Adaptation benefit arises from increased grid resilience against climate impacts such as extreme weather, flooding, and heat waves that threaten power infrastructure.

LATAM Relevance

Grid modernization is a critical bottleneck for Latin America's energy transition. Colombia's ambitious renewable targets require substantial transmission investment to connect remote wind and solar zones (La Guajira, Cesar) to demand centers. Peru faces grid integration challenges as it scales Andean solar and Amazon hydropower. Costa Rica's regional interconnection via SIEPAC enables cross-border clean energy trading in Central America.

Cleantech Taxonomy Crosswalk

Maps to Cleantech Taxonomy sector **ES** (Energy Systems) under grid and distribution nodes. Cross-references with **IC** (ICT) for smart grid digital solutions and **BU** (Buildings) for building-integrated distributed energy management.

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