

Energy Access & Off-grid

Source Metadata

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CPI Definition & Scope

Energy Access and Off-grid in CPI's GLCF framework captures finance directed toward extending clean energy services to underserved populations, primarily through decentralized renewable energy systems. CPI tracks investments in solar home systems, mini-grids, productive use appliances, and clean cooking solutions that leapfrog fossil fuel-based energy infrastructure. This category bridges climate mitigation and energy poverty alleviation, tracking both public and private capital flows.

Subsectors & Examples

- **Solar Home Systems** — pay-as-you-go solar kits, standalone PV systems
- **Mini-grids** — renewable-powered community-scale generation and distribution
- **Clean Cooking** — improved cookstoves, biogas digesters, electric cooking appliances
- **Productive Use Equipment** — solar water pumps, solar cold chains, agri-processing
- **Rural Electrification** — last-mile grid extension with renewable integration

Mitigation & Adaptation Classification

Energy access is classified as **dual-benefit** in CPI's framework. Mitigation comes from displacing kerosene, diesel generators, and traditional biomass with clean alternatives. Adaptation benefits arise from strengthening

energy resilience in climate-vulnerable communities, enabling climate-adaptive livelihoods such as solar-powered irrigation, and reducing indoor air pollution from traditional cooking fuels.

LATAM Relevance

While Latin America has relatively high electrification rates compared to other developing regions, significant energy access gaps remain in remote and indigenous communities. Colombia's Zonas No Interconectadas (non-interconnected zones) in the Pacific coast, Amazon, and insular regions are prime targets for off-grid solar and mini-grid investments. Peru's rural Amazon communities rely heavily on diesel generators, creating opportunities for clean energy leapfrogging. Costa Rica has near-universal access but supports regional clean cooking initiatives in Central America.

Cleantech Taxonomy Crosswalk

Maps to Cleantech Taxonomy sector **ES** (Energy Systems) for off-grid energy. Cross-references with **XS** (Cross-Sectoral) for just transition and energy equity, and **AF** (AFOLU) for productive use in agriculture.

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