# 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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