

Dominican Republic: Identifying Sectoral Approach

Sub Sectors



- Identified subsector focus on energy efficiency (EE) in commercial & industrial (C&I) sector, in line with govt's NDC and other govt policies and programs.
 - **Dominican Republic's NDC:** 25% reduction from 2013 national baseline emissions by 2030 (conditional on external finance)
 - **NDC Action Plan** seeks to increase EE and participation of non-conventional renewable energies (solar, wind, biomass)
 - Alignment with Ministry of Energy and Mines (MEM) **draft bill on EE goal:**
 - 13.2% energy consumption reduction by 2030.
- **Key Stakeholders**
 - **Government partners:** Ministry of Energy, Superintendence of Electricity, National Energy Commission, Electricity Distributor of the South, Dominican Corporation of Electricity Companies, Climate Change Commission
 - **Development partners:** GIZ, IADB and national development banks, US Department of Energy, United Nations
 - **Industry partners:** AIRD (the national association of industrials), EcoRed, Electricity Cooperative, Large DR Corporations, EE Project Developers, Local Banks
- **Challenges identified and to be addressed:**
 - Dependency on imported fossil fuel; high energy costs; lack of effective policy and regulatory environment for EE.

Dominican Republic: Examples of Progress to Date

Capacity Building with Government Partners

- In conjunction with AIRD (the national association of industrials), conducted training with **C&I companies** on EE investment business case, methodologies, and tools for replication (July 2019)
- GIZ's Dominican Republic office, brought key gov't reps in April 2019 to a **2-day workshop** at the National Renewable Energy Laboratory (NREL) in Golden, Colorado.
 - Gov't agencies attending: MEM, Superintendence of Electricity, National Energy Commission, Electricity Distributor of the South, and Dominican Corporation of Electricity Companies
 - Trainings included: 1) Tools for RE deployment; 2) Policies to support distributed generation and community solar; and 3) Approaches to grid integration studies for variable RE.
- Held February 2018 **resiliency planning training** with MEM in Santo Domingo, given recent and expected future hurricanes.
- Participated in December 2017, GIZ/IKI-sponsored, **three-day, Santo Domingo workshop on Carbon Pricing**, RE, and EE development in Latin American and the Caribbean (LAC).

Scoping Net Metering Work

- Provided detailed scope of work to various stakeholders in Dominican Republic interested in analysis of compensation mechanisms, and analysis of distributed RE generation's benefits. **Developed draft analysis currently under consultation with government partners.**

Establishing Partnerships with AIRD (the national association of industrials)

- Developed Terms of Reference for **partnership among NREL and AIRD** for working with member companies to build capacity for energy efficient investment implementation. Gathered data from industry group member-companies to assess EE business case

Dominican Republic: Learning

Energy Efficiency: EE investment underutilized despite multiple drivers (i.e. high energy prices).

- Govt/public institutions driven -- Mostly from: **lack of national planning, incentives, mandates, performance standards, building codes**, etc.
- Private sector driven -- Mostly from: 1) Developers' working capital deficiencies, 2) **Lack of capacity** to accurately value and assess EE project risks, 3) Recent structural challenges in energy sector, 4) **High interest rates**, 5) **Bank skepticism of longer-loan terms**, and 5) Overall difficult investment environment.

Renewable Energy: Utilities have untapped opportunities to mobilize otherwise limited private sector investments by supporting (ID'd via our Distributed Generation Campaign Study Tour):

- **Interconnection processes and tariffs**,
- Advanced utility rate structures,
- Mechanisms to improve how much power utility distribution lines can convey efficiently,
- Ways to modernize the grid to enable increased penetration of distributed generation, and
- Facilitation of pilot project initiatives with customer sited resources.

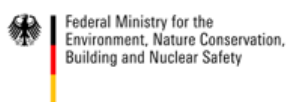


CLEAN ENERGY INVESTMENT ACCELERATOR

The CEIA is co-led by the **World Resources Institute (WRI)**, **Allotrope Partners**, and the **National Renewable Energy Laboratory (NREL)** working across emerging markets, including Vietnam, the Philippines, Indonesia, Mexico, and Colombia.



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Work centers on three essential elements to mobilizing finance for clean energy at scale

Opportunities for and Benefits of Corporate Procurement

- **Opportunity**

- Over **200 multinational corporations have committed to go 100% renewable energy** through the RE 100 platform. Many other corporates, including regional and national suppliers and other companies also have significant clean energy goals.
- To meet just the RE 100 company goals, it will require **100 GW of new solar and wind and \$100 Billion in investment by 2030.**
- Corporates want to be able to **buy the renewable energy on the same grid** where they have their facilities

- **What is Corporate Procurement**

- Corporate procurement primarily describes procuring renewable energy **generation together with the environmental attributes.**
- Corporate procurement can take the form of **onsite solar or offsite solar or wind through power purchase agreements, utility green tariffs, or utility green pricing.** Secondary approaches include investing in projects, buying Renewable Energy Certificates, participating in community solar projects, etc.

- **Benefits**

- Corporate procurement can **mobilize investment towards NDC priority areas** in clean energy
- **Reduce the burden on utilities to invest in new generation capacity.** This is especially important in markets with quickly growing demand.
- **Ensure that companies are able to meet their sustainability targets,** which can affect their choice countries where they maintain operations.

Key Enablers for Corporate Procurement

- **Overarching**
 - **Clear, stable, and transparent policy regimes** that facilitate arbitration in internationally accepted markets
 - Information on medium-term **expectations for utility retail tariffs** (for monopoly power markets) that enable corporates to assess the business case for renewables
 - Mechanisms to enable **foreign investment**
- **Specific Measures**
 - Ability to utilize **third-party financing for on-site projects** (e.g., solar leases and power purchase agreements)
 - **Payment for excess generation** that is fed back into the grid (i.e., net metering or net billing)
 - Regulations to facilitate offsite procurement for **direct business-to-business deals**
 - **Utility green tariffs and/or utility green pricing**, which provide additional options to corporates
 - Robust **Renewable Energy Certificate registries** that facilitate tracking of procurements to specific, additional projects
 - **Efficient, integrated permitting processes** at subnational and national levels
 - **Allowance for large onsite and offsite projects** that can meet significant portions of corporates' energy demand

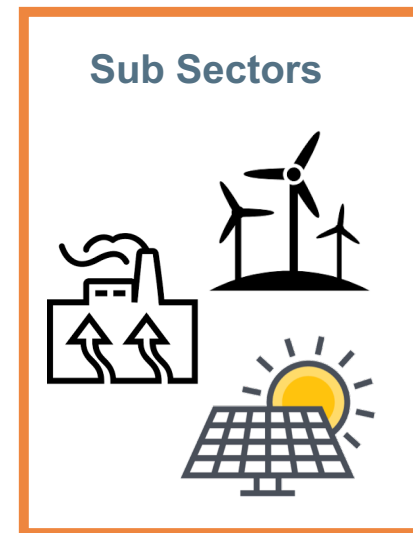


Philippines



Philippines: Identifying Sectoral Approach

- **Developed a subsectoral focus that adheres to the Philippines NDC and other national policies.**
 - Philippines NDC: Cut emissions by 70% below business-as-usual (BAU) by 2030
 - Renewable Portfolio Standards (RPS): RE equals 35% of total consumption by 2030
- **Key stakeholders:**
 - **Government and utility partners:** Department of Energy, National Renewable Energy Board, National Energy Association, Philippines Rural Electric Cooperatives Association, Climate Change Commission, Santa Rosa City Local Government Unit
 - **Development partners:** USAID Clean Power Asia, GIZ, ICLEI, Building Efficiency Accelerator
 - **Industry partners:** Santa Rosa companies, including several major multinational car manufacturers
- **Challenges**
 - Energy (general): Highest energy costs in Southeast Asia; must triple installed capacity in next 20 years; currently, rolling brownouts; 10 GW of new coal planned;
 - Previous RE subsidies were phased out; dry spells impact hydro; 120 distribution utilities to implement RPS



Philippines: Examples of Progress to Date

Capacity Building with Distribution Utilities/Rural Cooperatives to meet and exceed new RPS

- CEIA conducted multiple trainings with **electric cooperatives** in coordination with the Philippine Rural Electric Cooperatives Association to support the utilities in understanding renewable energy procurement pathways to meet RPS.
 - Focused on: 1) Contracting options, 2) Recent emerging policies, 3) Mechanisms for fast-tracking distributed generation deployments, and 4) Ways to incorporate grid services from RE into PPAs.
- CEIA also led the **Philippines' first public consultation webinar with the Philippines Department of Energy**, training participants on new Green Energy Option Program (GEOP) and new RPS and explore implications for private sector investment opportunities.

Supporting corporate procurement in Santa Rosa City

- CEIA Philippines team signed **Memorandum of Agreement (MOA) with City of Santa Rosa**. CEIA in March 2019 hosted 50 city officials and private business stakeholders in groundbreaking public-private Santa Rosa dialogue to inform of procurement opportunities and ways that businesses can work together via aggregated procurements to drive down RE costs.
- Issued a publicly available **Procurement Guidebook for the Philippines** targeted towards corporate RE buyers
- CEIA is currently initiating an aggregated project pool with a major multinational car manufacturer located within Santa Rosa City and its suppliers to support on and off-site aggregation towards its 100% by 2050 RE goal.

Philippines: Learning

- **Significant barriers remain for firms buying onsite generation** (i.e. net metering capacity cap which may be lifted. Third-party financed, onsite projects face significant regulatory and project risks: 1) Rapidly **changing policy environment**, 2) **tax incentive uncertainty**, 3) **different contract arrangements** for different buyer classes, and 4) **Cumbersome, complex regulations**.
- **Offsite opportunities are emerging**, but uncertainty persists and significant effort required to unlock offsite RE at scale.
 - Power wheeling previously limited to large-load customers. New GEOP policy allows wheeling for demands over 100kW but implementation date is uncertain and a lack of clarity in key policy details remain.
 - Current wheeling fees vary across distribution utilities and there is no retail supply-rates central platform for transparency, so lack of awareness will remain a major barrier once GEOP takes effect.
- **Cities can utilize environmental codes to promote corporate investment** within their districts as well as mandates on government buildings
- **Many distribution utilities are privately owned and are often important RE investors:** However, there are over 120 distribution utilities, many of which lack experience with renewable energy. Thus there is risk that the Philippines may not meet its RE goals unless significant capacity building is implemented.



POWERING VIETNAM'S CLEAN, SMART, AND SECURE ECONOMIC GROWTH

NGUỒN ĐIỆN CHO TĂNG TRƯỞNG
KINH TẾ SẠCH, AN TOÀN VÀ THÔNG MINH
TẠI VIỆT NAM



Vietnam



Vietnam: Identifying Sectoral Approach

Focusing on energy subsectors identified in Vietnam's NDC, Renewable Energy Development Strategy (REDS), Green Growth Plan, and other national policies

- Goal is to reduce greenhouse gas (GHG) emissions 8% by 2030 (Energy = Key mitigation sector):
 - With international support, goal increases to 25%.
- REDS: “increase the electricity output produced by renewable sources from approximately 58 billion kWh in 2015 to 101 billion kWh by 2020, and 186 billion kWh by 2030”

Key stakeholders:

- **Government:** Electricity and Renewable Energy Agency, Ministry of Industry and Trade (MOIT), Ministry of Planning and Investment
- **Development partners:** USAID, GIZ, GGGI, Partnership for Growth
- **Industry partners:** Renewable Energy Buyers Alliance, various multinational companies, developers, investors, industrial parks

Challenges

- Rapidly increasing electricity demand driven by economic growth; limited ability by state-owned utility to meet all investment directly; rapidly changing policy environment

Sub Sectors



Vietnam:

Examples of Progress to Date

Decision-makers developed specific investment mobilization measures for priority sectors

- Provided key technical input and market intelligence for **Rooftop Solar (RTS) Study for Vietnam's Electricity and Renewable Energy Agency (EREA)** in partnership with USAID's Vietnam Low Emissions Energy Program (V-LEEP). Study, informed by stakeholder interviews, is intended to help EREA understand existing barriers to investment in RTS, conducts: 1) Market, regulatory, and policy analysis; 2) SWOT analysis; and 3) case studies.

Pipeline for investment in specific priority sectors developed and expanded:

- **Supported AMATA industrial park with 100 kW RTS project.** Developed Request for Proposals (RFP) including technical requirements and bid procedures based on site and needs assessments. CEIA advised on bids and supported a final purchase decision.
- **Developed RFP for Unilever** for purchase of ~1 MW RTS system.
- **Developed RFP for DEEP C Industrial Zones for a 2 MW RTS system** and assessed bids
- **Developed Memorandum of Understanding (MOU) and workplan with Global Green Growth Institute (GGGI)** to collaborate on design of an innovative third-party project financing facility.

Relevant actors scale up and scale out innovation from emergent practice

- Presented on CEIA business model and capabilities at **Partnership for Growth (P4G) Summit**, met with project partners and investors on policy improvements, and provided inputs on the enabling environment for high level dialogues with Prime Minister of Vietnam.
- **Developed self-screening tool** for potential C&I buyers seeking to assess project viability at their facilities.

Vietnam: Learning

Onsite renewable energy generation for self-consumption:

- Onsite generation is currently the **only option** for corporate buyers in Vietnam, but it is limited by policy and other barriers.
- Retail and net metering tariff structures encourage onsite RTS systems **sized exclusively for “self-consumption”** so full roof space is rarely maximized.
- **Net metering is lacking:** Solar net metering passed in 2017, but Vietnam’s govt and national electricity company (EVN) implementation have been ineffective due to lack of EVN training and lack of accounting and tax clarity from Ministry of Finance (fewer than 5 C&I systems have successfully secured net metering benefits and these are individually negotiated deals).
- **Difficult to license and permit** RTS systems larger than 1MW
- **Lack of market information** limits ability to implement and scale onsite RE projects

Offsite renewable energy generation for self-consumption:

- **Offsite power purchasing is not yet available** to corporate buyers. Major policy changes still needed.
- **Wheeling is not allowed:** Using grid to wheel power from independent power producers to corporate off-taker isn’t permitted. EVN and subsidiaries are only legal power purchasers.
- No nationally-sanctioned RECs market exists. Only very few private RECs deals to date.

Backup Slides



Dominican Republic



**SOUTH
SOUTH
NORTH**
TOWARDS CLIMATE RESILIENCE



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Dominican Republic: Emerging Opportunities

PURCHASER ENGAGEMENT

- **Identify and aggregate project pipelines** by conducting selected energy audits and **work with regional and local banks to match-make financing products**
- **Develop coalitions of businesses** willing to commit to clean energy investments and facilitate dialogues with government to identify opportunities for joint efforts

POLICY ENGAGEMENT

- **Train government partners** on best practices for creating the legal and regulatory environment that can support private sector investments in clean energy
- **Provide deep-dive, objective clean energy policy technical assistance** in partnership with the GIZ Dominican Republic IKI-supported program
- **Work with public sector financial institutions to design EE finance facilities**

REPLICATION AND LEARNING

- **Support regional learning** in the LAC through partnership with Clean Energy Ministerial's distributed generation campaign, led by Mexico
- **Develop energy efficiency investment guidebooks and conduct trainings** to support replication among industry
- **Facilitate knowledge sharing among green financing programs** active in Latin America and the Caribbean to enable replication in the Dominican Republic

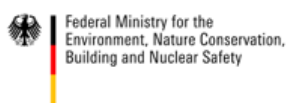


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Philippines: Emerging Opportunities

PURCHASER ENGAGEMENT

- **Support companies within additional municipalities - in partnership with new local government** units and building off of the Santa Rosa experience - to demonstrate additional aggregated procurement models
- **Train an additional 40 privately held co-opportunities** on best practices for RE development, contracting, and integration of variable renewable energy

POLICY ENGAGEMENT

- **Facilitate public-private dialogues** between businesses, city leaders, and national government entities on emerging policy opportunities and mechanisms for enabling greater private sector investment in clean energy
- **Develop a train-the-trainers program** to build capacity among rural cooperatives to meet and exceed the new RPS requirements and implement the GEOP

REPLICATION AND LEARNING

- Document and share learnings from Santa Rosa and other aggregated procurements, including **updated guidebooks and sample Requests for Proposal** that can enable replication and scaling
- Engage with **Building Efficiency Accelerator** to explore corporate investment opportunities that combine EE with RE
- Share learnings from Philippines across other SE Asian markets

Vietnam: Emerging Opportunities

PURCHASER ENGAGEMENT

- Disseminate market knowledge, **guide buyers through procurement process**, and facilitate onsite RTS pilot projects to facilitate new aggregated procurement models for single buyers across multiple sites, multiple buyers, and industrial parks.

POLICY ENGAGEMENT

- Continue to **bring corporate voices into policy process** to demonstrate demand, convey barriers, and promote balanced policies that improve investment.
- In collaboration with USAID V-LEEP, work to **support implementation of the direct power purchase agreement (DPPA) pilot**, review, and revisal and ultimate implementation of the full regulation for offsite procurement

REPLICATION AND LEARNING

- Continue CEIA working group (Previously “REBA Working Group”). **Brings together over 50 C&I companies (140+ representatives)**, developers, investors, and government officials to educate on procurement options, business models, lessons learned, and new regulations and policies.
- Develop a **Vietnam corporate buyers’ guidebook** and issue a **market assessment brief**