

# Renewable Energy & Energy Efficiency: A Measure of Good Governance



## QUICK LOOK BACK

Confronted with enduring power supply crises, The Philippines remains to have one of the highest electricity rates in Asia and even the world to this day. Aside from its dispersed geography, the country's dependence on imported fuel for fuel generation and issues relating to transmission, distribution, and the entire regulatory framework, explain its exorbitant energy cost. Another factor is the swelling energy demand that is projected to exceed the country's energy supply in the coming years.

Shortage has been characteristic of the Philippine energy landscape since the 1970s, with pronounced episodes in the 1990s, 2006, 2010, and 2014-2015. More recently, for instance, Luzon grid dealt with significantly thinning reserves in 2019 and powerplant outages were one of the major culprits. Old power plants, usually having unscheduled outages, need more frequent maintenance and repairs.

Based on the Department of Energy (DOE) and Energy Regulatory Commission (ERC) data, as of 2018, 72% of 126 Luzon power plants were 16 years old or older. To resolve the country's energy generation and distribution capacity crisis, it cannot simply just build more power plants. Climate crises are overwhelming in frequency and intensity and as a developing archipelagic country, the Philippines is one the most vulnerable to pertinent hazards. It is wise for the country to tap an arsenal that targets both energy security and ecological wellbeing.

## Renewable Energy and Energy Efficiency and Conservation: A Three-pronged Solution



Use of renewable energy is deemed as a potent supply-side solution. The Renewable Energy Act of 2008 sought to promote the development, utilization, and commercialization of green alternatives. It called for the institutionalization of development of national and local readiness and installation of necessary infrastructure and mechanisms. The shift to renewable energy is proven to reduce GHG emissions. However, renewable energy sources, according to the government, are only expected to comprise 30 percent of the country's total energy mix; hence, harnessing renewable energy is not an adequate solution to the country's energy problem.

A demand-side solution is a good complement for clean energy use. Empirical evidence around the globe shows that energy-related challenges can be addressed by stabilizing or cutting down the demand. To break the idea down, this solution entails efficiency and conservation. Energy efficiency is the manner in which energy consumption is managed and restrained resulting in more services delivered using the same energy input or same amount of services delivered using less energy input, i.e. getting rid of incandescent bulb and shifting to light-emitting diode (LED) or compact fluorescent light (CFL) bulbs. Energy conservation, on the other hand, is the reduction of energy consumption, i.e. turning off lights when not in use.

Energy efficiency and conservation (EE&C) is a solution that is economically and environmentally rewarding. After decades of adoption delay, the Philippine Congress finally enacted RA 11285 or the EE&C Law. This legislation laid down the groundwork for retrofitting the country's energy measures.

Just last year, the DOE said the government saved approximately 31 gigawatt-hours in electricity use—equivalent to Php 365 million - in the first quarter. This electricity savings is much higher compared to Php 205 million in the first quarter of 2023. DOE maintained that the EE&C strategies deployed by the government lead to substantial savings, create jobs, and ultimately reduce carbon emissions.

## EE&C and SGLG

Globally, EE&C has been proven to be one of the most effective measures in achieving or improving energy security, which also translates to reduced impacts of climate change. Both developed and developing countries which have implemented EE&C policies, like the USA and Bangladesh, can attest that this demand-side solution delivers results. The Philippines, itself, also has its success story to tell.

A decade prior to the enactment of the EE&C Law, ADB financed a USD 31.1 million loan project, executed by the DOE, which targeted to: 1) retrofit 135 buildings, around 4,000 public parks, and streetlights with energy efficient lighting; 2) distribute 8.6 million compact fluorescent lamps nationwide; and 3) creation of an eco-labelling system for buildings. After the retrofitting, which ran from September 2012 to June 2013, the government buildings saved a third of their average energy consumption per year.

Provided the EE&C Law is effectively implemented, the country is estimated to save up to Php 37.8 trillion among energy end-use sectors by 2040.

The law mandates the DOE to lead the EE&C implementation and the local governments to formulate, develop, and implement their own EE&C Plan, which must be incorporated into their local development plans. Following the enactment of the subject legislation, the DOE organized the Inter-Agency Energy Efficiency and Conservation Committee (IAEECC) to evaluate and approve government EE&C projects and provide strategic direction for the government energy management programs.

The IAEECC, through the Resolution No. 4 s2021, decided to include and adopt EE&C as a criterion in awarding the "Seal of Good Local Governance (SGLG)".

The SGLG, institutionalized by RA 11292, is an award and incentive program for local government units that are committed to continually improve their performance in the following assessment areas: 1) financial administration and sustainability; 2) disaster preparedness; 3) social protection and sensitivity; 4) health compliance and responsiveness; 5) sustainable education; 6) business-friendliness and competitiveness; 7) safety, peace, and order; 10) youth development. With this recognition, the government hopes to encourage local government units (LGUs) to excel in their mandates, encourage outcome-based performance, and reward local governments for their effort in pursuing the general welfare of their constituency and in enforcing existing laws.

The Council of Good Local Governance, chaired by the DILG and composed of representatives from the identified nine national government agencies and a representative from the basic sectors nominated by the National Anti-Poverty Commission, acts as a policy-making and advisory entity to ensure proper implementation, primarily on: (a) promulgating performance standards of the criteria; and (b) deliberating final assessment results to determine acceptability of prior to approval of the Council Chairperson.

Subsequent to the addition of EE&C to the SGLG criteria in 2021 is the drafting of guidelines and set of performance indicators by the DOE and the DILG.

Pending the release of the performance indicators, the World Wide Fund for Nature Philippines (WWF-Philippines) conducted research on the energy situation in various LGUs, also taking their pulse on the addition of EE&C to the SGLG criteria. The research findings were presented to the other partners, key stakeholders, and decision makers at the national level in a roundtable discussion.

**WWF-Philippines is working with local governments to strengthen their political leadership, capacity building, and public engagement towards sustainable development and 1.5°C alignment.**

Last January 2024, another global program of the WWF network was implemented locally in three local government partners namely San Fernando City in La Union, Ormoc City in Leyte and Dipolog City in Zamboanga del Norte, to bring about a swift uptake of rooftop solar and efficient cooling in tropical countries. The **"Cool & Solar Initiative (CSI)"** focuses on two parts: to increase access of efficient cooling solutions and to catalyze the uptake of solar rooftop PV. In the Philippines, CSI has an overall goal for select cities in the country to reduce their emissions through: a) actions on a city's own buildings (application of solar use and energy efficiency measures) and b) through better training and mobilization of the multi-stakeholders.

The CSI outcomes are expected to inform future policy directions that support both the effective implementation of the Energy Efficiency Act and the country's broader climate and sustainable development goals.

## RESEARCH APPROACH

WWF-Philippines applied a mixed-method approach in coming up with this policy brief. Desk research and focus group discussions were used in data-gathering. The breadth of data on national energy policy and across three LGUs presents a detailed picture of how EE&C development in the country is a slow, non-linear process. LGUs have unique EE&C priorities, challenges, and milestones.

Focus group discussions were conducted with the governments of Dipolog City in Zamboanga del Norte, Ormoc City in Leyte, and San Fernando City in La Union. Research participants are mainly from these offices: planning and development; environment and natural resources; engineering and maintenance; education; and leagues of barangays. Findings and recommendations offer variations according to the specific context of these governments. An overall set of recommendations will also be presented.

## KEY FINDINGS



## Dipolog City

Dipolog City government has set up several EE&C measures in place. Solar energy is its major RE source and plans to explore other alternatives. It plans to augment its energy initiatives but complains of funding capacity.

It has reservations about EE&C being included in the SGLG criteria. Unless a capital investment or a seed fund is made available for the LGU, Dipolog City officials feel it will not be able to meet the still unseen criteria indicators. It also wishes for the SGLG financial incentive of Php 15 million to be increased to help the local governments to implement more enabling policies that meet the SGLG targets. What the Dipolog LGU is sure about is that the EE&C progress is a multi-sectoral function. The city government needs the cooperation of the schools, businesses, investors, transport service providers, and the community.

## MILESTONES

- No Car Day along the major boulevard
- Tree-planting and forest enrichment program, i.e. bamboo plantation
- Creation of an arboretum
- Green spaces: parks and walkways
- Adopt-a-Street Program (private sector sponsored street clean-up and beautification)
- AC- and Lights-Off Policy
- Solar-powered schools
- Solar-powered street lights
- Feasibility studies on electric vehicles
- Earth Hour participation



## CHALLENGES

- Lack of funding opportunities for EE&C and RE initiatives
- Climate-change related phenomena, i.e. urban heat index
- Mismatch in economic and environmental considerations in terms of RE projects



## PRIORITIES

- EE&C information and education campaign on the barangay level
- Advocacy campaign for the education sector
- Creation of green spaces and vertical gardens in high residential areas
- Improved No Car Day Policy
- Application of carbon calculation in schools
- Conversion of biowaste to energy in slaughterhouses and landfills
- Use of natural shade and cooling from trees
- Cultivation of resilient tree species along the Boulevard
- Strengthened Gulayan sa Paaralan Program
- Utilization of Tourism fees for energy-related developments
- EE&C information and education campaign on the barangay level
- Advocacy campaign for the education sector

## KEY FINDINGS



## Ormoc City

The development of the local energy code, although pending approval, reflects the level of commitment of the city government of Ormoc to fuel their clean transition, temper energy demand, and mitigate climate change impacts. At present, the city's energy program is RE-heavy, leaving more room for EE&C measures. The LGU identifies the lack of financing options as a major hurdle in boosting its energy initiatives.

The city government welcomes the IAEECC move to include EE&C in the SGLG criterion, saying that the city has relevant ordinances and programs planned for the next five years. It believes the drafting and finalization of criteria indicators duly take time lest the committee issue an unsubstantiated checklist of requirements that might just be a burden to LGUs. Officials also argued that incentives, on top of those stipulated in the EE&C Law, will be a good motivation for compliance.



## MILESTONES

- Drafting of the Local Energy Code
- Ordinance granting tax incentives to households using renewable energy (proposed to be expanded so as to cover businesses)
- SGLG incentive to be used for solar panel installation (to power Fencing Hall)
- Solar-powered business establishments
- Solar-powered street lights
- AC- and Lights-Off Policy
- Earth Hour participation

## CHALLENGES

- Lack of available financing options
- Misinformation about and lack of understanding on RE and EE&C
- Procurement of substandard solar lights and panels

## PRIORITIES

- Eventual passage of Local Energy Code
- Expansion of solar photovoltaics system in the City Hall and Superdome
- Installation of more barangay street lights
- Creation of more green spaces
- Establishment of more charging stations for electric vehicles
- Putting private solar power supply generated by households and businesses on grid to increase renewable energy in mix

## KEY FINDINGS



## San Fernando City

The City of San Fernando has invested heavily in RE projects, as exemplified by its solar-powered schools and street lighting system and biowaste to energy study. Its proposed 50-hectare solar farm project, under its Climate Action Plan, is promising but confronted with issues in funding and land conversion. EE&C initiatives will serve as a good complement to all these RE developments in the city.

The city government is in favor of EE&C inclusion in the SGLG criteria. It is confident that this policy will help LGUs refine their own energy policies, plans and programs. It claims that a more attractive compliance motivation scheme in the form of both fiscal and non-fiscal incentives than what is already inherent in the current SGLG award will be a highlight.



## MILESTONES

- RE initiatives in most 59 barangays
- Solar-powered schools
- Solar-powered street lights
- Completed study on biomass energy
- Earth Hour participation

## CHALLENGES

- Lack of legitimate space for solar farms away from the sea
- Lack of LGU budget for environmental projects

## PRIORITIES

- Making the City Hall fully solar-powered
- Completion of the 50-hectare solar farm project
- Making installation of solar panels in low-cost housing mandatory (in cooperation with Pag-Ibig and Department of Human Settlements and Urban Development)

## CONCLUSION

Energy efficiency and conservation delivers a host of benefits to both private and government end-users. It is a demand-side solution as it concerns the management of energy consumption given the same input and reduction of use while achieving the same output. It can easily be misconstrued with renewable energy as a technologically driven but ecological solution to energy problems.

Renewable energy resources have no upper limit in terms of usage and it is central now to the country's clean energy generation agenda. Using certain RE sources, however, fall under the EE&C scope. A consumer - a household, a government office or an industry - who opts for solar power in order to consume less energy from the grid is observing EE&C.

Recognizing the importance of institutionalizing EE&C, the government enacted the EE&C Law in order to lay down a legal framework for adoption of policies. It mandated a lead agency, the DOE, to create, update, and develop a national plan and minimum energy performance standards for industrial, commercial, and transport sectors. The law requires LGUs to develop and implement their own EE&C plan, which must be integrated into their local development plan. Consequently, the LGUs are urged to intensify EE&C efforts by implementing the energy management program.

To boost the role of LGU's in the EE&C implementation, the Inter-Agency Efficiency and Conservation Committee decided to make EE&C an SGLG criterion. Some LGUs see it as a motivating force, others think it poses additional pressure on them. LGUs covered in this research have EE&C measures in place and in the pipeline. Major challenges in pursuing more robust EE&C include lack of awareness and funding. Financing as a key barrier is characterized with limited capital access and low loan familiarity.

The LGUs believe that a more attractive incentive program must be built upon the current SGLG award in order to encourage sustainable EE&C development.

They anticipate the release of a scrupulously crafted set of criteria indicators for EE&C. The DOE and DILG are formulating the performance indicators which will then be approved by the IAEEC and endorsed to the Committee on Good Local Governance for roll out.

**Renewable energy resources have no upper limit in terms of usage and it is central now to the country's clean energy generation agenda.**

## Policy Insights

The initial step towards effective implementation of EE&C, especially at the local level, is to understand how energy efficiency and energy conservation works. Vigorous information, education and communication campaigns promoting EE&C technology to effect higher energy savings both for the consumer and producer are in order.

Partnership between LGUs and the private sector in implementing energy efficiency programs through voluntary agreements needs to be strengthened.

Ultimately, LGUs need to integrate EE&C in their plans and programs aligned with the national energy security and sustainability goals and conduct monitoring and evaluation to assess and ensure effectiveness. Prerequisite to the proper implementation of these plans and programs is capacity. To increase EEC capacity, LGUs may request training from DOE through provincial government sponsorship.

With respect to the inclusion of EE&C in the SGLG criteria, guidelines are still pending and might take much longer to be finalized considering the SGLG assessment has been deferred this year to align with a new three-year cycle. During this transition, according to the DILG, the SGLG will shift from assessing mere presence or absence of requirements to focusing on outcome-level performance. Moreover, the current 10 governance areas will be consolidated into five outcome areas: innovation, fiscal management, public safety, social protection, and local administration. Energy efficiency and conservation indicators might

be subsumed under the 'public safety' outcome area, alongside environmental management, peace and order, and disaster preparedness.

Recent policy developments that seek EE&C advancement in the country include the DILG Memorandum Circular 2025-515 and the IAEECC Directive on Shifting to DOE-certified products.

Through Memorandum Circular 2025-515, the DILG requires LGUs to craft the EE&C Plan that must outline conservation strategies, target cost reductions, and motor vehicle inventories. The LGUs, except barangays, are encouraged to establish an EEC office, to be funded under the general appropriations. The policy prods local chief executives to issue an executive order or memo to formalize EE&C protocols in government buildings and facilities.

The IAEECC Directive, on the other hand, mandates all state departments, bureaus, agencies, GOCCs, SUCs, and LGUs to exclusively use products following the DOE's Minimum Energy Performance for Products (MEPP) standards and the Philippine Energy Labelling Program (PELP) guidelines — to lower electricity use, reduce operating costs, and limit greenhouse gas emissions.

To streamline compliance, the DOE is working with the Procurement Service of the Department of Budget and Management to align government supply catalogs with PELP standards, in which only DOE-certified products bearing the official energy label will be available for procurement.

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