

# Decarbonizing and Net Zero from the Philippines Perspective

## Climate Change and Philippine Impact

Climate Change is real.

Although the latest information from the European Union’s Joint Research Centre (EU JRC) in 2020 that the Philippines contributes 0.39 percent of global emissions[1], information from the NGO Germanwatch in 2021 indicates that we are the fourth most prone to long-term climate risks[2]. Filipinos would expect impacts from physical climate risks such as increased severity of typhoons and droughts, and increased levels of ambient temperatures.

This means that even if the country contributes less emissions globally as seen in Figure 1, the issue is on how to adapt and mitigate these impacts. In comparison, the top 5 carbon emitting countries (China, United States, India, Russia, Japan) and the European Union contribute more than 66 percent of global emissions[3]. Among the five largest countries under the Association of Southeast Asian Nations (ASEAN-5, composed of Indonesia, Malaysia, Philippines, Singapore, and Vietnam), the Philippines ranks fourth in terms of carbon emissions generated[4].

[1](Crippa, et al., 2021)  
 [2](Eckstein, Kunzel, & Schafer, 2022)  
 [3](Crippa, et al., 2021)  
 [4](Crippa, et al., 2021)

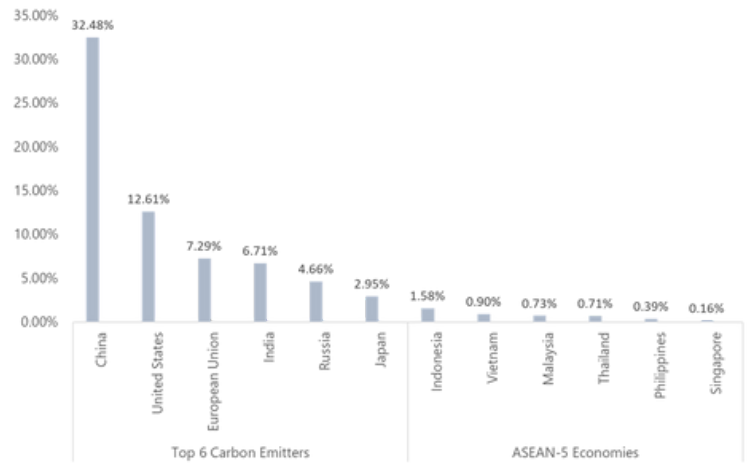


Figure 1. Percentage share of carbon dioxide emitted by selected countries in 2020. [5]

This is reflected in the statement from the Philippine Department of Finance (DOF) that approximately USD 10 billion was lost in the national economy from 2010-2020 due to climate-related impacts[6]. These include the increase in the period of droughts for the past three years, and increase in ambient temperatures every year.

Despite the losses, the Philippines continues to increase its share of contribution to global carbon emissions as the economy develops, as reflected on the country's energy consumption patterns from 1970-2020, as shown in Figure 2.

[5](Crippa, et al., 2021)

[6](Nicolas, 2021)

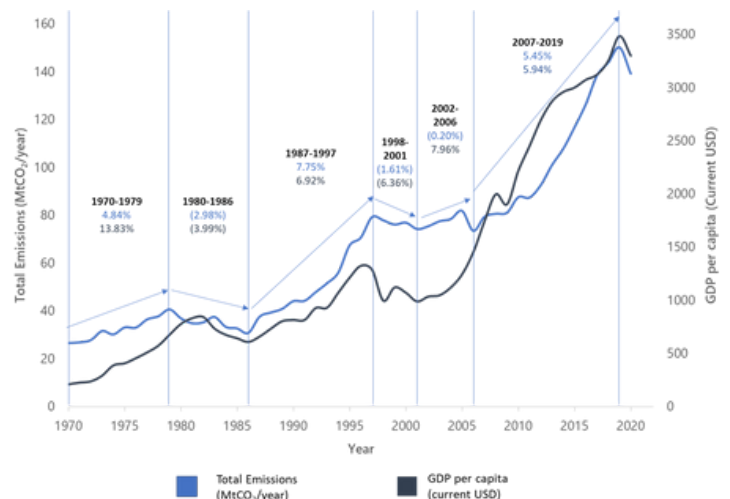


Figure 2. Total carbon emissions and current GDP per capita for the Philippines, 1970-2020. [7][8]

The trend from the figure shows that there is a correlation between total carbon emissions and current GDP per year. From 1970-1979, there was a slight increase in carbon emissions and GDP as the Philippines started to mechanize its industries. However, due to problems that may be associated to the economic policies during the Martial Law period (1980-1986), GDP and carbon emissions decreased. Both indicators increased significantly during the C. Aquino and Ramos administrations (1987-1997) as liberalization policies on the economy were implemented. The trend again decreased during the Estrada administration (1998-2001) because of the Asian Financial Crisis and the mismanagement of the economy. There was a slight increase in both indicators in from 2002-2006 as new economic policies by the Arroyo administration that were taking shape with the expansion of the service industry and the introduction of the Business Process Outsourcing (BPO) industries in the Philippines. Yet, increase in GDP and carbon emissions significantly increased from 2007-2019 with the expansion of more progressive economic policies of the B. Aquino III and Duterte administrations such as the Private-Public Partnership (PPP) and the Build Build Build (BBB) programs.

Broken down by sector in 2020, most of the emissions emitted by Philippine industry come from power generation and distribution, followed by transport, as shown in Figure 3.

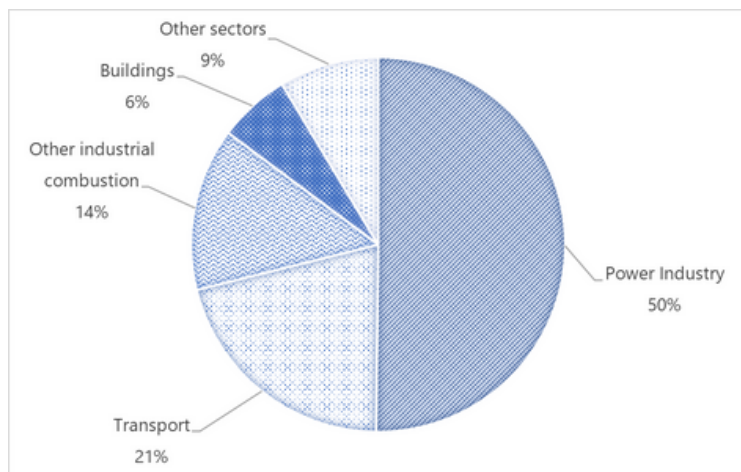


Figure 3. Breakdown of emissions by sector in the Philippines in 2020. [9]

As the power industry is the main generator of emissions in the country, there is a need to examine where those emissions come from. Information from the Department of Energy in 2021 as shown in Figure 4 spread over 11 years, grid-tied power generation in the Philippines is still dominated by coal at close to 59 percent. However, renewable energy sources are now the second highest grid-tied power source at 22% compared to natural gas sources at 18%. [10]

[9](Crippa, et al., 2021)

[10] (DOE Philippines, 2022)

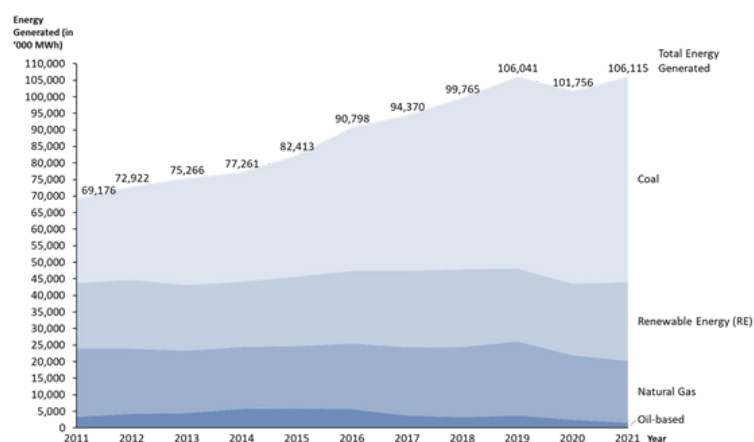


Figure 4. Breakdown of grid-tied power generation in the Philippines from 2011-2021. [11]

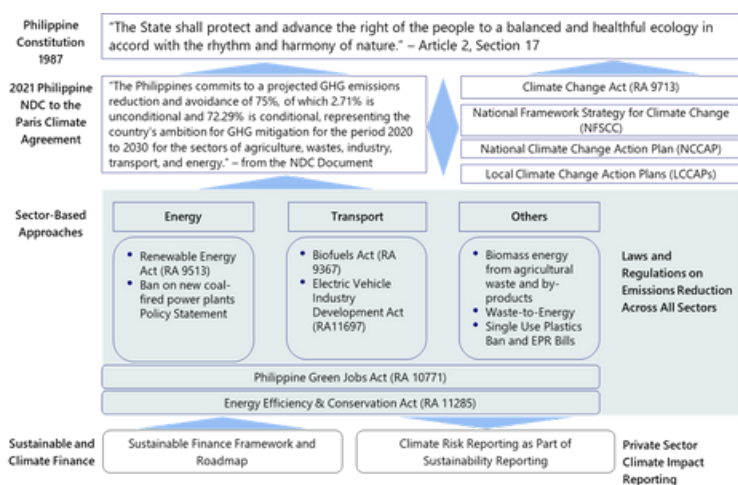
[7](Crippa, et al., 2021)

[8] (The World Bank)

## Philippine Government Policies on Decarbonization

The Philippine Government continues to be committed to the ideals of Environmental Stewardship, as outlined under Article 2, Section 16 (State Policies) of the 1987 Philippine Constitution, as shown in Figure 5. The various policies and programs of the government related to decarbonization are outlined in the said Figure, based on international commitments, national frameworks, and sector-specific actions. Such actions are subdivided into three major sectors: energy, transport, and others which include agriculture, wastes, and industry.

[11] (DOE Philippines, 2022)



Source: NRI Manila

Figure 5. Summary of national government policies on climate change and decarbonization.

The following policies and regulations that are in line with decarbonization initiatives are summarized in Table 1, as follows:

**Table 1.** Detailed description on Philippine government policies on climate change and decarbonization.

Policy/Law/Regulation	Year Enacted	Major Policy Points
<b>International Commitments</b>		
Philippine NDC to the Paris Climate Agreement	2021	<p>The Philippine Government committed to the following in accordance with the provisions of the Paris Climate Agreement 2015:</p> <ol style="list-style-type: none"> <li>Greenhouse gas (GHG) emissions reduction and avoidance of 75 percent compared to the projected baseline of 2020-2030               <ol style="list-style-type: none"> <li>2.75 percent is unconditional or government-funded</li> <li>72.29 percent is conditional or subject to funding availability from external sources (e.g., international agencies or private sector)</li> </ol> </li> <li>The commitment covers the sectors of agriculture, waste, industry, transport and energy</li> <li>Adaptation would be included in the overall mitigation strategy per the NFSCC and the NCCAP</li> </ol>
<b>Overall Laws and Policies on Climate-related Impacts</b>		
Climate Change Act (RA 9279)	2009	<p>The Act recognizes the role of the State to protect its people and environment, as outlined in the Philippine Constitution 1987, as well as international commitments through international agencies such as the United Nations Framework Convention on Climate Change (UNFCCC). The Act constituted the Philippine Climate Change Commission (CCC), tasked to coordinate, monitor, and evaluate the actions of the government. The CCC is also tasked to create the National Framework Strategy on Climate Change (NFSCCC) and the National Climate Change Action Plan (NACCP), as well as assist the local government units (LGUs) to create their own Local Climate Change Action Plans (LACCPs).</p>

Policy/Law/ Regulation	Year Enacted	Major Policy Points	Policy/Law/ Regulation	Year Enacted	Major Policy Points
National Framework Strategy for Climate Change (NFSCC 2010-2022)	2010	<p>The main objective of the NFSCC is to build the adaptive capacity of communities and increase the resilience of natural ecosystems to climate change, as well as to optimize mitigation opportunities towards sustainable development through a risk-based assessment. The assessments would then lead to strategies or activities or decisions to be made based on the cause, magnitude, and impact of risks.</p> <p>The latest NFSCC identifies Key Result Areas (KRAs) that the government intends to pursue in key sectors that are considered climate-sensitive through adaptation and mitigation, along the ideas of sustainable development.</p> <p>The KRAs for both adaptation and mitigation, with their respective strategic priorities are:</p> <ol style="list-style-type: none"> <li>1. Energy Efficiency and Conservation               <ol style="list-style-type: none"> <li>a. Establish a long-term reliable power supply system through reinforcement of current energy infrastructure, energy source diversification, and research and development</li> <li>b. Maintain a competitive investment climate</li> <li>c. Reduce GHG emissions from the emissions sector through alternative fuel sources and other energy conservation measures</li> </ol> </li> <li>2. Renewable Energy               <ol style="list-style-type: none"> <li>a. Increase the national renewable energy capacity to 9,000 MW in 2030</li> <li>b. Intensify the development and utilization of renewable and alternative energy sources and technologies</li> </ol> </li> <li>3. Sustainable Transport               <ol style="list-style-type: none"> <li>a. Encourage and support a low carbon transition in transport through alternative fuels and expansion of efficient mass transport systems</li> <li>b. Integrate climate change in energy and transport policies</li> </ol> </li> </ol>	National Framework Strategy for Climate Change (NFSCC 2010-2022)	2010	<ol style="list-style-type: none"> <li>4. Sustainable Infrastructure               <ol style="list-style-type: none"> <li>a. Create and implement guidelines for innovative climate-resilient and energy-efficient human settlements</li> <li>b. Promote green infrastructure</li> <li>c. Install energy-efficiency and climate-proofing mechanisms for public infrastructure, socio-economic infrastructure, and cultural facilities</li> <li>d. Develop energy-efficient and climate-resilient human settlements through housing programs and public awareness campaigns</li> </ol> </li> <li>5. National REDD + Strategy               <ol style="list-style-type: none"> <li>a. Review, harmonize, and formulate policies to aid to reduce emissions from deforestation and forest degradation</li> <li>b. Strengthen governance mechanisms in REDD+ coordination and implementation through institutional arrangements and stakeholder engagement</li> <li>c. Promote a critical approach towards REDD+ planning, implementation, and enforcement</li> <li>d. Establish a broad science-based REDD+ R&amp;D agenda</li> <li>e. Establish and implement a subnational REDD+ measurement, reporting, and verification (MRV) system</li> <li>f. Formulate and implement a national REDD+ communication plan and capacity building program</li> <li>g. Explore and capitalize on opportunities for financing REDD+</li> </ol> </li> <li>6. Waste Management               <ol style="list-style-type: none"> <li>a. Thoroughly implement the Ecological Solid Waste Management Act (RA 9003)</li> <li>b. Promote best practices in waste management</li> <li>c. Strengthen proper waste management advocacies</li> </ol> </li> </ol>

Policy/Law/Regulation	Year Enacted	Major Policy Points	Policy/Law/Regulation	Year Enacted	Major Policy Points
National Framework Strategy for Climate Change (NFSCC 2010-2022)	2010	<p>7. Enhanced Vulnerability and Adaptation Assessments</p> <ul style="list-style-type: none"> <li>a. Ensure the formulation of effective and efficient vulnerability, impact and adaptation assessment tools</li> <li>b. Improve mechanisms for addressing gaps and limitations of existing assessment and vulnerability approaches</li> <li>c. Increase access to climate change adaptation knowledge products and support services</li> </ul> <p>8. Integrated Ecosystem-based Management, through:</p> <ul style="list-style-type: none"> <li>a. River Basin Management</li> <li>b. Coastal and Marine Systems</li> <li>c. Biodiversity</li> </ul> <p>9. Water Governance and Management</p> <ul style="list-style-type: none"> <li>a. Reduce climate change vulnerability of water resources</li> <li>b. Mainstream climate change adaptation in water resources policies and development planning</li> <li>c. Promote water sector reforms that will address the weak and fragmented institutional and regulatory framework</li> <li>d. Study, design, and implement innovative financing and incentive systems</li> <li>e. Climate-proof water-related infrastructures</li> <li>f. Test and adopt "low-cost, no regrets" water sector climate change adaptation technologies</li> <li>g. Enhance institutional and community capacity for Integrated Water Resources Management (IWRM)</li> <li>h. Establish science-based water resources information, climate projections, climate change impacts on major water resources and infrastructure</li> </ul> <p>10. Climate-Responsive Agriculture</p> <ul style="list-style-type: none"> <li>a. Reduce climate change risks and vulnerability of natural ecosystems and biodiversity</li> <li>b. Increase the resilience of agriculture communities</li> <li>c. Improve climate change resilience of fisheries</li> <li>d. Expand investments in aquaculture and in other food production areas</li> <li>e. Strengthen the crop insurance system as an important risk sharing mechanism to implement weather-based insurance system</li> <li>f. Strengthen sustainable, multi-sectoral and community-based resource management mechanisms</li> </ul>	National Framework Strategy for Climate Change (NFSCC 2010-2022)	2010	<p>11. Climate-responsive Health Sector</p> <ul style="list-style-type: none"> <li>a. Assess the vulnerability of the health sector to climate change</li> <li>b. Improve climate-sensitivity and responsiveness of public health systems and service delivery mechanisms to climate change</li> <li>c. Establish mechanisms to identify, monitor and control diseases brought about by climate change</li> </ul> <p>12. Climate-Proofing Infrastructure</p> <ul style="list-style-type: none"> <li>a. Establish baseline data and benchmarks for climate change as basis for adaptation actions in the infrastructure sector</li> <li>b. Collaborate and integrate climate change adaptation plans for infrastructure with other stakeholders</li> <li>c. Rationalize climate change adaptation in infrastructure policy, planning and programming</li> </ul> <p>13. Disaster Risk Reduction</p> <ul style="list-style-type: none"> <li>a. Adopt a responsive policy framework to serve as an enabling environment for reducing losses from natural disasters, including climate change-related risks</li> <li>b. Use the best available and practicable tools and technologies from the social and natural sciences as decision aids and support systems</li> <li>c. Enhance institutional and technical capacity to facilitate the paradigm shift from disaster response to disaster preparedness and mitigation</li> <li>d. Enhance national monitoring, forecasting and hazard warning systems</li> <li>e. Mainstream climate and disaster risk-based planning in national and local development and land use planning</li> </ul>
		<p>The NCCAP supports the NFSCC by detailing the strategies that are needed to address the national framework. Specifically, it intends to:</p> <ul style="list-style-type: none"> <li>1. Provide key actions to enhance adaptive capacity</li> <li>2. Adopt total economic valuation of natural resources while ensuring biodiversity conservation</li> <li>3. Recognize the competitive advantage of putting value on direct, indirect, use and/or non-use of natural resources and the environment</li> </ul>			National Climate Change Action Plan (NCCAP 2011-2028)

Policy/Law/Regulation	Year Enacted	Major Policy Points
National Climate Change Action Plan (NCCAP 2011-2028)	2011	<p>The Action Plan Lists six priorities, which along with the main outcomes per priority are:</p> <ol style="list-style-type: none"> <li>1. Food Security               <ol style="list-style-type: none"> <li>a. Enhance CC resilience of agriculture and fisheries production and distribution systems</li> <li>b. Develop resilience of agricultural and fishing communities during climate change</li> </ol> </li> <li>2. Water Sufficiency               <ol style="list-style-type: none"> <li>a. Create water governance that is restructured towards a climate and gender-responsive water sector;</li> <li>b. Ensure sustainability of water supply and access to safe and affordable water</li> <li>c. Create knowledge and capacity of the water sector to adapt to enhanced climate change</li> </ol> </li> <li>3. Ecology and Environmental Sustainability               <ol style="list-style-type: none"> <li>a. Protect, rehabilitate, and restore ecological services</li> </ol> </li> <li>4. Human Security               <ol style="list-style-type: none"> <li>a. Implement climate change adaptation and disaster risk reduction at all levels of government</li> <li>b. Create health and social protection delivery systems that are responsive to climate-related risks</li> <li>c. Develop, adopt, and promote climate-adaptive human settlements and services</li> </ol> </li> <li>5. Climate-Smart Industries and Services               <ol style="list-style-type: none"> <li>a. Promote, develop, and sustain climate-smart industries and services</li> <li>b. Create sustainable livelihoods and jobs from such industries and services</li> <li>c. Develop, promote, and sustain green cities and municipalities</li> </ol> </li> <li>6. Sustainable Energy               <ol style="list-style-type: none"> <li>a. Promote and implement energy efficiency and conservation</li> <li>b. Enhance the development of sustainable and renewable energy</li> <li>c. Promote and adopt environmentally sustainable transport</li> <li>d. Climate-proof, rehabilitate, and improve energy system infrastructures</li> </ol> </li> <li>7. Knowledge and Capacity Development               <ol style="list-style-type: none"> <li>a. Unlock access to relevant information and localizing it from the Philippine perspective</li> <li>b. Creating a good data management and reporting system and disseminate relevant information</li> </ol> </li> </ol>

Policy/Law/Regulation	Year Enacted	Major Policy Points
National Climate Change Action Plan (NCCAP 2011-2028)	2011	Implementation of the Action Plan involves the setting up of national and local implementation systems, climate financing, and adaptation financing. Evaluation of the progress is done every three years, with annual monitoring conducted for each priority
<b>Sector-based Approaches to Addressing Climate Impacts</b>		
<b>Multisectoral</b>		
Philippine Green Jobs Act (RA 10771)	2016	<p>The Act calls for the creation of jobs that can provide products and/or services that are both profitable and benefit the environment, ensuring sustainable development and a green economy transition.</p> <p>Green jobs are defined by the Act as:</p> <p><i>"...employment that contributes to preserving or restoring the quality of the environment, be it in the agriculture, industry or services sector. Specifically, but not exclusively, this includes jobs that help to protect ecosystems and biodiversity, reduce energy, materials and water consumption through high efficiency strategies, decarbonize the economy, and minimize or altogether avoid generation of all forms of waste and pollution."</i></p> <p>Under the Act, companies can enjoy the following incentives:</p> <ol style="list-style-type: none"> <li>1. Special deduction from the taxable income equivalent to 50 percent of the total expenses for skills training and research development expenses</li> <li>2. Tax- and duty-free importation of capital equipment if the capital equipment is, directly and exclusively used in the promotion of green jobs of the business</li> <li>3. Incentives that are granted under the Act are in addition to fiscal and non-fiscal incentives already granted or provided under existing regulations.</li> </ol>

Policy/Law/Regulation	Year Enacted	Major Policy Points	Policy/Law/Regulation	Year Enacted	Major Policy Points
Energy Efficiency and Conservation Act (RA 11285)	2021	<p>This Act aims to:</p> <ol style="list-style-type: none"> <li>1. Institutionalize energy efficiency and conservation</li> <li>2. Promote and encourage the development and utilization of efficient renewable energy technologies and systems</li> <li>3. Reinforce related laws and other statutory provisions for a comprehensive approach to energy efficiency, conservation, sufficiency, and sustainability</li> <li>4. Ensure a market-driven approach to energy efficiency, conservation, sufficiency, and sustainability</li> </ol> <p>The Act, for the private sector, need to work on the following:</p> <ol style="list-style-type: none"> <li>1. Assign or hire Certified Energy Conservation Officers and Certified Energy Managers</li> <li>2. Comply with the regulations on energy performance standards and labelling for products and infrastructure.</li> </ol> <p>Incentives that come out from this Act includes:</p> <ol style="list-style-type: none"> <li>1. 10-year investment incentives as stipulated by the Board of Investments (BOI), for energy efficiency projects that fall under the Board's Annual Investment Priorities Plan</li> <li>2. Awards and recognition for achieving energy efficiency and conservation best practices</li> <li>3. Technical assistance from government agencies on the development of energy efficient technologies</li> </ol>	Renewable Energy Act (RA 9513)	2008	<p>Programs or initiatives under this Act include the establishment of the:</p> <ol style="list-style-type: none"> <li>1. Feed-in-Tariff</li> <li>2. Renewable Energy Markets</li> <li>3. Green Energy Option Program</li> <li>4. Net-metering for Renewable Energy Development</li> <li>5. Development of Transmission and Distribution Systems for Renewable Energy Systems</li> <li>6. Off-Grid Renewable Energy Systems in areas where missionary electrification is warranted (with provision for granting Renewable Energy Certificates (RECs))</li> </ol> <p>Incentives granted under the Act, both financial and non-financial, include the following:</p> <ol style="list-style-type: none"> <li>1. Income tax exemption for the first seven years of operation for renewable energy developers, plus other tax exemption and incentives when there is further project development</li> <li>2. Importation of machinery, equipment, and materials related to renewable energy generation are exempted from customs importation duties for 10 years</li> <li>3. Payment of corporate tax rate is set at 10 percent on its net taxable income provided that the developer lowers its power rates to consumers</li> <li>4. Power or fuel generated from renewable energy sources are subject to zero percent value-added tax (VAT)</li> <li>5. Sales of carbon credits related to renewable energy generation are tax-exempt</li> </ol>
<b>Energy</b>					
Renewable Energy Act (RA 9513)	2008	<p>The Act declares that the Government will aspire to accelerate renewable energy technologies to all sectors of society and economy, increase renewable energy utilization at all levels, encourage more Filipinos to develop and shift to renewable energy resources, and establish the mechanisms and infrastructure for renewable energy systems.</p> <p>The Act established the National Renewable Energy Board (NREB) that sets the minimum percentage of generation from renewable energy sources.</p>	National Renewable Energy Program (2020-2040)	2020	<p>The Program outlines specific strategy details on the programs and initiatives outlined by RA 9513 for the next 20 years.</p> <p>One of the latest programs that picking up momentum in 2022 is the Green Energy Option Program (GEOP), an initiative that allows electricity end-users to choose their electricity supply from preferred renewable energy power suppliers. GEOP is open for end-users with an average peak demand of 100 kW and higher for the past 12 months and can be done through a direct contract with its chosen renewable energy supplier at an agreed price.</p>

Policy/Law /Regulation	Year Enacted	Major Policy Points	Policy/Law /Regulation	Year Enacted	Major Policy Points
National Renewable Energy Program (2020-2040)	2020	<p>A similar initiative to GEOP is the Green Energy Auction Program (GEAP), which opens an additional renewable energy market through competitive bidding of generated capacities, with the first set of bids called by the DOE on 9 February 2022 through a First Notice of Auction.</p> <p>Technology-wise, the Program also calls for the commissioning of electric storage systems and smart grids in the Philippines to aid in optimizing the supply and demand of renewable energy power.</p> <p>In terms of targets, the Program calls for a target of at least 35 percent of the total power generation mix by 2030 and at least 50 percent by 2040, through the following goals:</p> <ol style="list-style-type: none"> <li>1. Energy Security</li> <li>2. Sustainable Development</li> <li>3. Climate Change Mitigation</li> <li>4. Capacity Building</li> <li>5. Inclusive Growth</li> </ol> <p>To achieve the targets, the Philippine Department of Energy (DOE) projected that the following capacities should be aimed at by 2030 (in GW):</p> <ol style="list-style-type: none"> <li>1. Solar – 27.162</li> <li>2. Wind – 16.650</li> <li>3. Hydro – 6.150</li> <li>4. Geothermal – 2.500</li> <li>5. Biomass – 0.364</li> </ol> <p>Financing renewable energy projects under the Program can be done through:</p> <ol style="list-style-type: none"> <li>1. Private sector-led green bonds</li> <li>2. SMART Financing Programs of the Land bank of the Philippines</li> <li>3. Green Financing Program by the Development Bank of the Philippines</li> </ol>	Philippine Energy Plan 2020-2040	2020	<p>This is broken down to (in GW):</p> <ol style="list-style-type: none"> <li>1. Solar – 46.1</li> <li>2. Wind – 11.8</li> <li>3. Hydro – 20.1</li> <li>4. Others – 3.5</li> </ol> <p>The Plan also announced the implementation of the moratorium on new coal-fired power applications and the gradual decommissioning of older coal-fired power generation facilities.</p> <p>It also lifted the moratorium on gas and oil exploration in the West Philippine Sea, to provide indigenous and alternative sources of energy that is lost through the depleting reserves from the Malampaya Gas Field that is estimated to be completely depleted by 2024.</p>
		<b>Transport</b>			
Philippine Energy Plan 2020-2040	2020	<p>The Plan's main objective is to chart a direction for a clean energy future for the country for the energy sector, in line with AmBisyon Natin 2040, through the development of alternative and indigenous sources of energy and the dependency reduction of traditional sources.</p> <p>Under a Clean Energy Scenario and based on the Government's commitment to increase installed renewable energy generation capacity to 50 percent of total power generation in the country by 2040, 81.5 GW of power generating facilities should be installed.</p>	Biofuels Act (RA 9367)	2006	<p>This Act was passed as part of the Philippine Government's aim to reduce dependence on imported fuels, and to enhance the government's measures on public health, environment, and ecology.</p> <p>The Act mandates the following actions:</p> <ol style="list-style-type: none"> <li>1. Phasing out of harmful gasoline additives</li> <li>2. Liquid fuels in the Philippines are now required to be blended with bioethanol and biodiesel, based on the levels set by the Philippine Government</li> </ol> <p>Financial incentives include:</p> <ol style="list-style-type: none"> <li>1. Zero import tax on biofuels components</li> <li>2. Value added tax exemption of raw materials used in biofuels production</li> <li>3. Exemption on wastewater charges for water effluents generated from the production of biofuels</li> <li>4. Financial assistance in the development of biofuel development</li> </ol> <p>The Act called for the mandatory blending of 20 percent bioethanol and 10 percent biodiesel into all vehicles by 2020, though the current blend set as of 2021 is at 10 percent bioethanol and 2 percent biodiesel due to difficulties in supply.</p>



Policy/Law/Regulation	Year Enacted	Major Policy Points	Policy/Law/Regulation	Year Enacted	Major Policy Points
Electric Vehicle Industry Development Act (RA 11697)	2022	<p>The Act determines the policies on the manufacturing, assembly, importation, construction, installation, maintenance, trade and utilization, research and development, and regulation of electric vehicles.</p> <p>A Comprehensive Roadmap for the Electric Vehicle Industry would be released by the Government, composed of actions aimed to accelerate the development, commercialization, and utilization of electric vehicles.</p> <p>The Act mandates that the at least 5 percent of the following sectors' fleets must have electric vehicles:</p> <ol style="list-style-type: none"> <li>1. Industrial and commercial companies</li> <li>2. Public transport</li> <li>3. LGUs, National Government Agencies (NGAs), and Government Owned and Controlled Companies (GOCCs)</li> </ol> <p>Financial incentives include:</p> <ol style="list-style-type: none"> <li>1. Tax and investment benefits for manufacturing of EVs, subject to review by the Department of Trade and Industry (DTI) and the Board of Investments (BOI)</li> <li>2. Tax benefits for completely built and imported EV units</li> <li>3. Tax exemption of importation of completely built EV charging stations from 2022 to 2030</li> <li>4. Discounts of 30% for battery EVs and 15% for hybrid EVs from the payment of the Motor Vehicle User's Charge from 2022-2030</li> <li>5. Financial assistance from banks and other institutions</li> </ol> <p>Non-Financial incentives includes:</p> <ol style="list-style-type: none"> <li>1. Priority registration and renewal of registration by the LTO</li> <li>2. Exemption from number coding schemes by either the MMDA or LGUs</li> <li>3. Faster processing of applications by the LTRFB for public transport vehicles</li> <li>4. Faster processing of importation permits by the Bureau of Customs</li> </ol>	<b>Others</b>		
		Waste-to-Energy Guidelines for Municipal Solid Wastes (DENR Administrative Order 2019-21)	2019	<p>The Department Administrative Order (DAO) provides the conditions to allow the establishment and operation of a Waste-to-Energy (WtE) facility:</p> <ol style="list-style-type: none"> <li>1. Fulfillment of an Environmental Impact Assessment per PD 1586</li> <li>2. Proper documentation with the LGU for feedstock sources</li> <li>3. Submission of an Environmental Technology Verification Statement and Report</li> </ol> <p>Operational guidelines for the operation of a WtE Facility, particularly on waste delivery, storage, and environmental monitoring.</p>	
		Biomass-to-Energy Conversion (DOE Department Circular 2022-02-0002)	2022	<p>Under the Department Circular, Biomass-to-Energy facilities are encouraged as part of Philippine Government commitments under the Renewable Energy Act, and in compliance with existing environmental regulations.</p>	
		<b>Climate Finance and Reporting</b>			
<b>Climate Finance</b>					
Sustainable Finance Framework (BSP Circular 1085)	2020	<p>Under this Circular, banks are required to embed sustainability principles in their operations, particularly in environmental and social risks, corporate governance, risk management, and strategic objectives.</p> <p>Under this Circular, the inclusion of environmental and social risks in their portfolio through an Environmental and Social Risk Management System (ESRMS) should be included as part of a bank's operations</p>			

Policy/Law/Regulation	Year Enacted	Major Policy Points
Environmental and Social Risks Management System (BSP Circular 1128)	2021	<p>This Circular supplements measures from BSP Circular 1085, and includes the following:</p> <ol style="list-style-type: none"> <li>1. Integrating environmental and social risks, including climate-related risks, into the responsibilities of the Board of Directors and Senior Management of banks</li> <li>2. Integrating environmental and social risks into the risk management-related procedures</li> </ol>
Sustainable Finance Roadmap	2021	<p>The Sustainable Finance Roadmap aims to support the goal of the government for climate and disaster-resilient communities with equitable and sustainable development.</p> <p>The Roadmap has three pillars each with its own detailed pathways to achieve the success of the overall policy, namely:</p> <ol style="list-style-type: none"> <li>1. Creating a Conducive Environment (Policy)</li> <li>2. Mainstreaming Sustainable Finance (Financing)</li> <li>3. Developing a sustainable pipeline (Investment)</li> </ol> <p>Measures on sustainable finance, including climate-related financial measures, will be based on the Roadmap moving forward.</p>
<b>Climate Reporting</b>		
Climate Risks and Opportunities in Sustainability Reporting (SEC Memorandum Circular 4-2019)	2019	<p>The Philippine Securities and Exchange Commission (SEC Memorandum Circular) mandated that companies that are publicly listed in the Philippine Stock Exchange are required to disclose their non-financial performance as part of their Annual Report submission. Part of the submission is a disclosure on climate risks and opportunities through the recommendations set by the Task Force for Climate-related Financial Disclosures (TCFD), which includes measures on how private companies are decarbonizing or reaching carbon neutrality.</p>

## Challenges in the Philippines about Decarbonization and Net Zero

Despite the recent policy shifts by the national government, there are three major issues that needs to be addressed for companies in the Philippines to initiate decarbonization.

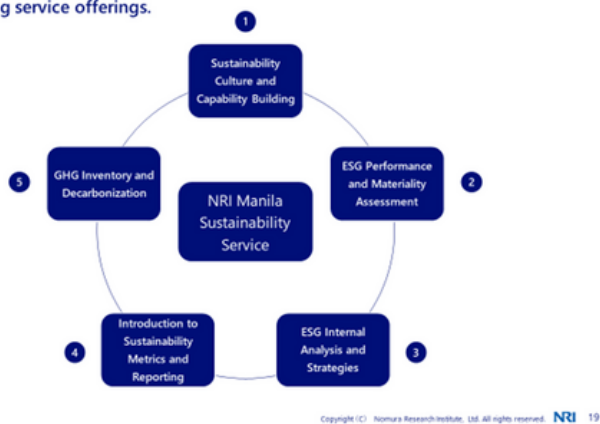
First, some companies in the Philippines have yet to understand how they are contributing to the overall emissions problem by setting up their emissions and energy management and measurement systems, assess their climate risks and opportunities, and integrate them into their sustainability or operational framework for the long term. This may seem difficult to begin with, however, a thorough understanding of operations and integrating systems thinking into identifying the problems would lead to breakthroughs in this matter.

Second is the need for these companies to know the implications of the new policies, including the possible incentives that would be to their advantage. Knowing the legal and regulatory risks of upcoming policies on climate change would help them become more proactive in their decisions.

Lastly, the need to align a company's actions on climate change and sustainability through sustainability and TCFD reporting, including an alignment with climate change scenarios that are science-based, and set the appropriate targets to fully achieve decarbonization and reach net zero.

## How NRI Manila can help companies in decarbonization and net zero

4. How NRI Manila can help companies improve – NRI Manila Sustainability Service  
 NRI Manila helps companies in developing their Sustainability/ESG systems through the following service offerings.



Source: NRI Manila

Figure 6. Summary of offerings for the NRI Manila Sustainability Service.

NRI Manila launched its sustainability service offerings as part of its commitment to share the next values. Part of the offerings is the GHG Inventory and Decarbonization service that aims to help companies integrate GHG inventory and accounting and set carbon reduction targets, no matter what the size is.

The Service offerings[MT1] include an introduction to GHG Inventory and Accounting and setting up net zero targets and reporting parameters such as TCFD reporting, with the end goal of setting up strategies to reduce a company’s carbon footprint.

NRI Manila looks forward to working with companies that are eager to develop their strategies on decarbonization and contribute to a net zero or even a carbon-positive world.

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## About the Contributor



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He is also the cohost and researcher of the Sustainarumble! Podcast, the first podcast in the Philippines that talks about issues on sustainable development. He is also 2022 Island Innovation Ambassador, 2022 European Climate Pact Ambassador for the Philippines, Climate Reality Leader and a member of the Society of Sustainability Practitioners and Sustainable PH.

He is a Registered Chemist of the Philippines (RCh) since 2015. He graduated with a degree of BS Chemistry at the University of the Philippines Los Baños in 2015, and MSc Renewable Energy and Resource Management at the University of South Wales in 2017.



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