THE ROLE OF INTERNATIONAL REGIMES IN THE IMPLEMENTATION OF THE PHILIPPINES' ENERGY SECURITY POLICY

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ABSTRACT

Regimes are institutions which provide a venue of cooperation for states to address issue-specific concerns. Intergovernmental organizations (IGOS) are more tangible entities designed to facilitate the implementation of a regime's objectives. The United Nations Framework Convention on Climate Change (UNFCCC) for example, is an IGO tasked to coordinate states in finding solutions related to the specific issue of climate change mitigation.

As a global environmental issue, climate change is strongly associated with greenhouse gases (GHG) emanating from fossil fuel extraction/refining, transportation sector, electricity and other energy-intensive industries. The UNFCCC is mandated to find ways to mitigate the impact of this impending global threat through the cooperation of member-states in curbing their own respective GHG emissions.

However, energy security is imperative in a country's economic growth and fossil fuels have historically played a role in any state's industrialization. The Philippines for example, acknowledges their importance as it undergoes its own economic development. It thereby faces a dilemma on how to maintain its economic trajectory while committing to reduce its GHG emissions when it ratified the 2015 Paris Agreement, a treaty conceived during the UNFCCC's 21st Conference of the Parties (COP21). Using the country's energy security policy as a case study, this thesis will explore to what extent has climate change mitigation regimes such as the UNFCCC, have either constrained or encouraged Philippine policymakers in the design and diffusion of the country's energy security policy. Alongside the country's direct compliance to ratify the Paris Agreement, this thesis will also look into the possible role

of informal governance (IG) (i.e. unwritten rules, shared expectations and norms) within the UNFCCC's Paris Talks as a practical option to heed to the dictates of climate change mitigation regimes. This framework structure present in the Paris Talks (i.e. non-binding, lack of penalties for failing to comply), enables the Philippines to utilize IG elements which ensures it of: 1) Flexibility in its energy security policy; 2) Lower Transaction Costs to commit to the treaty; and 3) Lower Sovereignty Costs attributed to the nonbinding nature of the treaty.

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I. Introduction

According to the World Bank, the Philippine economy is expected to grow by more than 6 percent in the next three years commencing in 2016.[1] This translates to an increased need for energy to support its burgeoning industries and to be able to sustain this trajectory. The importance of energy security is acknowledged in two official government policy documents including: 1) The 2011-2016 National Security Policy (NSP) of the National Security Council (NSC) and the 2) Philippine Energy Plan (PEP) 2012-2030 of the Department of Energy (DOE). Both policies reflect the government's overall vision of having affordable, reliable and sustainable energy sources. Energy security will ensure that the consumption needs of its population of 100 million[2] will be addressed ranging from electricity to transportation usage.[3,4]

A significant portion of the energy type used for the above applications is made up of conventional fuels or fossil fuels[5] which the DOE classifies as coal, oil and gas and natural gas.[6] Oil is primarily used in the transport sector and minimally for power generation while coal has both power and non-power applications.[7] In total, 76% of the country's power generation depends on these fossil fuels.[8]

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[1] World Bank, *Global Economic Prospects* (Washington, D.C.: The World Bank, 2016), 102.

[2] "Philippine Population, 2010," *Philippine Statistics Authority*, accessed May 2, 2017, https://psa.gov.ph/.

[3] National Security Council, *National Security Policy 2011-2016: Securing the Gains of Democracy* (Philippines: Government of the Republic of the Philippines, 2011), 23.

[4] Department of Energy, *Philippine Energy Plan 2012-2030 Executive Summary* (Philippines: Department of Energy, 2012), 3.

[5] "Conventional Energy," *Environmental Leader*, accessed May 15, 2017, http://www.environmentalleader.com/category/conventional-energy

[6] "Fossil Fuels," *Department of Energy,* accessed May 2, 2017, http://www.doe.gov.ph/fossil-fuels/.

[7] Department Of Energy, *Major Accomplishments for 2014* (Philippines: Department of Energy, 2014), 1.

[8] "2016 Philippine Power Statistics," *Department of Energy*, accessed May 2, 2017, https://www.doe.gov.ph/2015-philippine-power-statistic.

On a global scale, 80% of global energy consumption come from these fossil-fuel based sources which has environmental downsides.[9] Burning fossil fuels is responsible for greenhouse gas (GHG) emissions which drive climate change. The production of energy accounts for around two thirds of all GHG produced by human activity.[10] Brahim argues that in the Philippines' case, reliance on fossil fuels makes energy insecurity and increased CO2 emissions (which comprises the majority share of GHG emissions) the major energy-related issues for the Philippines."[11] The country's then president, Benigno Aquino, whose administration created the 2011-2016 NSP and the 2012-2030 PEP, was aware of the devastating effects of fossil fuel use. Acknowledging this concern, his administration approved renewable energy (RE) projects worth P171 billion (USD 4.6 billion) during his six year tenure (2010-2016) owing its benefits of lessening carbon footprint emanating from energy use.[12]

Alongside the development of domestic RE projects, Aquino served as Chairman of the Climate Vulnerable Forum (CVF), a South-South cooperation of countries that are highly vulnerable to a warming planet.[13] Working in the shadows of UNFCCC's 21st Conference of Parties (COP21) which brought the 2015 Paris Agreement to fruition, Aquino spoke on behalf of countries that bear "a disproportionate amount of the burden

[9] Aidan Rhodes, Jim Skea & Matthew Hannon, "The Global Surge in Energy Innovation," *Energies 7 no.* 9, (2014): 5602, doi:10.3390/en7095601

[10] Bill Gates, "Energy Innovation: Why We Need It and How to Get It," last modified November 30, 2015 https://www.gatesnotes.com/~/media/Files/Energy/Energy_Innovation_Nov_30_2015.pdf?la=en, 1.

[11] Sahara Piang Brahim, "Renewable Energy and Energy Security in the Philippines," *Energy Procedia* 52, no. Figure 2 (2014): 481, doi:10.1016/j.egypro.2014.07.101.

[12] Catherine Pillas, "P171 billion worth of RE projects approved by Aquino administration," *Business Mirror*, last modified March 11, 2016, http://www.businessmirror.com.ph/p171-billion-worth-of-re-projects-approved-by-aquino-administration/.

[13] "About the Climate Vulnerable Forum," Climate Vulnerable Forum, accessed August 14, 2017, https://thecvf.org/web/climate-vulnerable-forum/.

when it comes to climate change."[14] According to Yeb Saño, Director of Greenpeace Southeast Asia who also served as chairman in the government's Climate Change Commission (CCC) during Aquino's term, stated that the then-president signed an executive order requiring a "sweeping review" of the country's energy policy, specifically on coal energy use, as part of the preparations for the Philippines' submission to the (Paris) Agreement.[15]

The above actions of the Aquino administration appear to fully heed to climate change mitigation regimes. However, its other energy-related policies appear to contravene these same regimes. An example would be the DOE's announcement that new coal-based power plants are expected to be operational in 2020.[16] Even Aquino himself acknowledged that the country cannot wean itself completely from reliance on coal despite the associated environmental hazards.[17]

These sentiments were also echoed by Aquino's successor, Rodrigo Duterte who cited that discounting fossil fuels might "stunt" the country's industrialization efforts. Despite his expressed reservations of the Paris Agreement, Duterte has nonetheless formally ratified the treaty shortly after being elected in office.[18]

The actual actions of the Philippines might tend be inconsistent and vacillating towards climate change mitigation regimes. Using its policy of direct compliance and favorable informal governance characteristics in international treaties as starting points,

[14] Cited in John Nery, "In Paris talks, Aquino spoke for other countries too," *Inquirer.net*, last modified December 01, 2015, http://globalnation.inquirer.net/133055/in-paris-talks-aquino-spoke-for-other-countries-too.
[15] Interview with the author, February 15, 2017.
[16] Iris C. Gonzales, "23 New Power Plants to Go Online By 2020," *The Philippine Star*, last modified June 15, 2015, http://www.philstar.com/business/2015/06/15/1465896/23-new-power-plants-go-online-2020.
[17] Carlo S. Lorenciana, "PNoy: Philippines Cannot Totally Rid Of Coal-fired Sources," *The Philippine Star*, last modified January 11, 2016, http://www.philstar.com/cebu-business/2016/01/11/1541445/pnoy-philippines-cannot-totally-rid-coal-fired-sources.
[18] Cited in Leila B. Salaverria, "Duterte finally signs Paris Agreement on climate change," *Inquirer.net*, last modified March 2, 2017, http://globalnation.inquirer.net/153030/duterte-finallly-signs-paris-agrement-climate-change.

this research will explore how such regimes could have significantly made an impact on the decisions of Philippine policymakers responsible in the country's energy security policy. Utilizing interviews with these policy makers accompanied by document reviews, this project seeks to answer the question of: ***How are provisions in the UNFCCC interpreted or understood by Philippine policymakers in the context of implementing the country's energy security policy?***

This thesis is divided into 8 chapters. Chapter I provides an overview of the linkage between the Philippines' economy, energy situation and global climate change mitigation commitments. Chapter II discusses methodology used for this research which includes the use of qualitative methods and the corresponding data gathering methods which utilized interviews and document reviews. Chapter III discusses the theories of regimes and their tangible manifestations in the form of Intergovernmental organizations (IGOS). This section also discusses the corresponding governance framework structure found in each type and argue the tendency of its corresponding elements to overlap in either type of IGOS. Chapter IV examines the correlation between energy security and climate change mitigation regimes and the tendency of these spheres to be in conflict with each other. Taking a cue on the previous chapter, Chapter V is a specific discussion of the Philippines' own current energy situation and climate change mitigation policy. Chapter VI discusses the relationship of the Philippines with international regimes wherein it provides a glimpse of how international agreements influence the direction of the country's domestic energy policy. Chapter VII discusses the findings of the interviews undertaken with Philippine policymakers in the areas of energy and climate change mitigation. Chapter VII provides a summary of this thesis

alongside the discussion of the limitations of this research, a set of policy recommendations and a detailed agenda for future research on this topic.

The findings of this thesis yielded the fact that energy security for the Philippines is given utmost priority over its global climate change mitigation commitments. This shows through the acknowledgment that aspects of the IG framework structure of the UNFCCC's Paris Agreement provided the Philippines a window of opportunity to pursue its fossil fuel use as part and parcel of its energy security policy. The IG framework which includes noncompliance, nonbinding and the absence of penalties, have allowed the Philippines to pursue unilateral actions due to the absence of formal repercussions following the consequences of its actions. This research has also validated the claim of researchers that the elements of IG namely flexibility, lower transaction costs and lower sovereignty costs are not restricted to a certain type of IGOS. Such elements on the other hand, are also acknowledged as pertinent in the design and diffusion of the Philippines' energy security policy given the uniqueness of the present (and anticipated future) circumstances affecting this policy.

II. Methodology

This research will use qualitative methods whose two components are further discussed below:

a. The Research Tradition

Following the selection of a research design, Hays and Singh state that identifying a research tradition creates a solid foundation for one's chosen research

design.[19] This research will use the research tradition of case study. An advantage of a case study as a tradition is that it offers a distinctive benefit of case description, and thus many qualitative studies are case studies.[20]

Creswell states that a case study is used "when a researcher seeks to understand a phenomenon for which there is no in-depth understanding at that point in time."[21] In a qualitative case study, the questions may address a description of the case and the themes that emerge from studying it and these questions ideally begin with a 'how' and 'why'.[22,23]

Yin labelled case studies as "'bounded systems' where they have boundaries of time, place and other delineations."[24] Given the numerous possible delineations of a case study, the researcher tends to have multiple sources of data about the processes within it and these multiple decisions arise on how the researcher would approach data analysis.[25] Researchers can then implement an in-depth exploration to describe and interpret what is happening in this bounded system.[26]

This research fits the classification of a case study tradition for several reasons: First, there is no existing literature that explores in-depth on how the role of international regimes are interpreted in the implementation of the Philippines' energy policy at any

[19] Danica G. Hays,and Singh, Anneliese, A. *Qualitative Inquiry in Clinical and Educational Settings* (New York: Guilford Press, 2012), 44.
[20] Ibid., 47.
[21] John W. Creswell, *Qualitative inquiry and research design: Choosing among five traditions* (Thousand Oaks: Sage Publications, 2006), quoted in Danica G. Hays,and Singh, Anneliese, A. *Qualitative Inquiry in Clinical and Educational Settings* (New York: Guilford Press, 2012), 340.
[22] John W. Creswell, *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* (Thousand Oaks: SAGE Publications, 2013), 185.
[23] Hays and Singh, *Qualitative Inquiry in Clinical and Educational Settings,* 44.
[24] R.K. Yin, *Case study research: Design and methods* (Thousand Oaks: Sage Publications, 2008), quoted in Danica G. Hays,and Singh, Anneliese, A. *Qualitative Inquiry in Clinical and Educational Settings* (New York: Guilford Press, 2012), 340.
[25] T.A. Schwandt, *Dictionary of Qualitative Inquiry* (Thousand Oaks: SAGE Publications, 2001), quoted in Danica G. Hays,and Singh, Anneliese, A. *Qualitative Inquiry in Clinical and Educational Settings* (New York: Guilford Press, 2012), 340.
[26] Vicki L.Plano Clark and Ivankova, Nataliya V., *Mixed Methods Research: A Guide to the Field*. (Thousand Oaks: SAGE Publications, 2016), 146.

point in time. Second, the research question begins with a 'how.' Third, the research itself is bounded given that it will examine within the strictures of its energy security policies within the timeframe of the 2012-2030 Philippine Energy Plan (PEP) and climate change mitigation obligations centred on the Paris Agreement which are themselves confined within certain time periods. Lastly, the study of these policies have multiple sources of data led by interviews and document reviews. These factors provide a strong justification to classify my research in the tradition of a case study

b. Data Collection Methods

Due to the acknowledged importance of the different perspectives of policymakers on how international regimes are interpreted and understood in the context of the Philippines' energy security policy, semi-structured interviews using open-ended questions alongside document reviews were used.

Gill, Treasure and Chadwick state that semi-structured interviews "consist of several key questions that help define the areas to be explored, but also allows the interviewer or interviewee to diverge in order to pursue an idea or response in more detail."[27] Creswell adds that the questions can become broad and general so that the participants can construct the meaning of a situation, typically forged in discussions or interactions with other persons and thereby reinforcing the constructivist view of multiple participant meanings[28] and "the more open-ended the questioning, the better, as the researcher listens carefully to what people say or do in their life settings."[29]

[27] P K Stewart Gill, E Treasure and B Chadwick, "Methods of Data Collection in Qualitative Research: Interviews and Focus Groups," *British Dental Journal* 204, no. 6 (2008): 291, doi:10.1038/bdj.2008.192.
[28] Creswell, *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*, 4.
[29] Ibid., 8.

Reiterating the objective of this research in getting the perspective of different policymakers on the role of international regimes in the implementation of the Philippines' energy security policy, semi-structured interviews and open-ended questions are the most compelling way for these policymakers to express their viewpoints in an unfettered manner considering that the research itself seeks answers beyond mere 'yes' or 'no' responses.

Another significant potential contribution of interviews in general is that it can lead to a 'snowball effect' following the researcher's solicitation of participants based on referrals from previous participants.[30]

Document reviews on the other hand, provide an 'official' written representation of the policy being examined. These documents can also provide insight and information in understanding the participants' experiences of a phenomenon.[31] Being distinct from interviews themselves, official documents can offer a less invasive way to collect data especially if the topic itself is deemed sensitive.[32] Documents can also be used as secondary data collection when an important aspect of a study has been left unexamined or not understood without these documents.[33]

Semi-structured interviews were conducted with past and present policymakers, negotiators and advisers from different branches of government, private sectors and the academe who have been involved in policy-related work in the country's energy and climate change mitigation sectors during the time of the Aquino and Duterte administrations. These include individuals from the Climate Change Commission

[30] Ibid., 431.
[31] Hays and Singh, 284.
[32] Ibid.
[33] Ibid., 287.

(CCC), the Department of Energy (DOE), Department of Environment and Natural Resources (DENR), National Economic and Development Authority (NEDA), and the government's legislative branch. The 'snowball effect' was also anticipated to occur in the course of these interviews. Given the physical distance of these individuals and the researcher, communication through Skype and e-mail correspondence were primarily utilized.

A total of six (6) interviews were made lasting from 30-100 minutes. Interviews via Skype were shortly transcribed and manually coded alongside policy documents. Coding involved assigning categories for similar keywords or statements falling well within the context of the assigned category. Categories included the components that fall within the framework structure of IG such as noncompliance and nonbinding. A category for the elements of IG have also been created which includes flexibility, lower transaction costs and lower sovereignty costs (see Table 1).

Domestic policy documents that were reviewed include the DOE's 2012-2030 PEP, the NSA's 2011-2016 NSP, CCC's 2011-2028 National Climate Change Action Plan (NCCAP), NEDA's Socio Economic Report 2015 and Philippine Development Plan 2017-2022. Press releases and statements found in both local and international media were also included. For its policies related to Paris Agreement, this thesis will review the country's Intended Nationally Determined Contributions (INDC) submission to the treaty and the UNFCCC's "Paris Agreement" itself.

III. International Regimes and Their Governance Structures

Regimes in the context of international relations are defined as "sets of implicit or explicit principles, norms, rules and decision-making procedures around which actors' expectations converge."[34] Regimes are considered social institutions which govern the actions of states involved in specific sets of activities and, like such institutions, they showcase the accepted patterns of behavior or practice.[35] Keohane argues that one major function of an international regime is to "facilitate the making of specific agreements on matters of substantive significance within the issue-area covered by the regime."[36] This in turn leads to the creation of consistent expectation among governments which would have been otherwise difficult or impossible to attain if regimes did not exist.[37]

O'Neill adds that "the process in general of regime creation and strengthening over time helps create and spread shared norms of acceptable behavior among states, consensus over the significance and definition of a given problem, and knowledge about a given problem and its solutions."[38] In turn, "the practice of participating in regimes may come to change state preferences and identities themselves and the act of cooperation over time works to "socialize" states towards a more cooperative international system."[39]

Puchala and Hopkins' rigid classification of regimes can serve as a starting point to identify major differences between regimes. Regimes are classified into two kinds: 1)

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[34] Stephen D. Krasner, "Structural Causes and Regime Consequences: Regimes as Intervening Variables," in *International Regimes*, edited by Stephen D. Krasner (Ithaca: Cornell University Press, 1983), 2.
[35] Oran R. Young, "Regime Dynamics: The Rise and Fall of International Regimes," in *International Regimes*, edited by Stephen D. Krasner (Ithaca: Cornell University Press, 1983), 93.
[36] Robert Keohane, "The Demand for International Regimes," in *International Regimes*, edited by Stephen D. Krasner (Ithaca: Cornell University Press, 1983), 150.
[37] Ibid.
[38] Kate O'Neill, *The Environment and International Relations*, 76.
[39] Ibid.

"Formal" regimes are characterized as "legislated by international organizations, maintained by councils, congresses or other bodies and monitored by international bureaucracies."[40] 2) "Informal" regimes on the other hand "are created and maintained by convergence or consensus in objectives among participants, enforced by mutual self-interest and "gentlemen's agreements" and monitored by mutual surveillance."[41]

In more tangible terms, issue areas of regimes are addressed through different Intergovernmental Organizations (IGOS) wherein these IGOS can be utilized by states in varying degrees depending on their outlook and interests of the issue at hand.

These IGOS have the same elements found in the classification of regimes by Puchala and Hopkins. Vabulas and Snidal show similar characteristics between Formal Intergovernmental Organizations (FIGOS) and Informal Intergovernmental Organizations (IIGOS) vis-a-vis formal and informal regimes respectively. While the two authors are known for their work on IIGOS, defining and setting conditions what makes them as such, involved identifying the substantial characteristics of FIGOS at the outset. The authors adopted the classification of FIGOS from Pevehouse et al. wherein the latter identified the following characteristics present in such organization namely: (1) That it is a formal entity; (2) has states as members; and (3) possesses a permanent secretariat or other indication of institutionalization such as headquarters and/or permanent staff.[42]

IIGOS on the other hand, have the following opposite characteristics than that of FIGOS which include: (1) an explicitly shared expectation—rather than a formalized

[40] Donald J. Puchala and Raymond F. Hopkins, "International Regimes: Lessons from Inductive Analysis," in *International Regimes*, edited by Stephen D. Krasner (Ithaca: Cornell University Press, 1983), 65.
[41] Ibid.
[42] Jon Pevehouse, Timothy Nordstrom, and Kevin Warnke. "The Correlates of War 2 International Governmental Organizations Data Version 2.0." *Conflict Management and Peace Science* 21, no. 2 (2004): 103.

agreement—about purpose, (2) with explicitly associated state members who (3) participate in regular meetings but have no independent secretariat or other significant institutional support such as a headquarters and/or permanent staff.[43]

States have varying reasons to choose a FIGO over an IIGO or vice-versa as they see fit. Vabulas and Snidal identified trade-off elements found in either IGO which are summarized using the table below:

Table 3-1: The Trade-offs In Institutional Formality[44]

Informal IGO offers…	**Formal IGO offers...**
Greater flexibility	Binding commitment
Greater state autonomy	Stronger collective oversight
Closer control of information	Collective control of information
Low short-term transaction costs; speed in new arrangements	Low long-term transaction costs for on-going implementation
Minimal bureaucracy; low cost	Centralized capacity; stability
Management during high uncertainty (crisis)	Management during routine problems

Based on the classification between formal/informal regimes and FIGOs/IIGOS by Puchala and Hopkins and Vabulas and Snidal respectively, the trade-offs in either groups offer a clue on the type of governance elements that are present in each group. However, while this strict classification between FIGOS and IIGOS enables the researcher to identify corresponding types of governance, this classification is not black

[43] Felicity Vabulas and Duncan Snidal. "Organization without Delegation: Informal Intergovernmental Organizations (IIGOs) and the Spectrum of Intergovernmental Arrangements." *The Review of International Organizations* 8, no. 2 (2013): 197.
[44] Ibid., 211.

and white. Randall Stone's research would suggest that the corresponding governance structures are neither permanently hinged on either FIGO or IIGO.

Stone's study suggests a more flexible approach to IGOS and can be considered a continuum rather than a binary distinction between FIGOS and IIGOS. Citing several studies done on both formal and informal regimes (as manifested in the form of FIGOS and IIGOS), Stone stressed that "a number of anomalies have emerged that challenge the paradigm of explaining outcomes in terms of formal-legal treaty provisions, and scholars working in diverse areas have converged on an appreciation of the significance of informal governance (IG) in international organizations."[45] This includes the tendency of FIGOS to operate to some degree of variance with their formal rules which include standard operating procedures, voting rules, organizational chains of command, written policies.[46] These in turn, provide stable and predictable policy outputs.[47]

Westerwinter shares Stone's definition of informal governance as "unwritten rules, shared expectations, and norms that are not enshrined in formally constituted organizations and which modify or substitute legally binding rules."[48] Westerwinter expounds on the implications of this definition by providing an example based on his own study. He says that while policies are negotiated within the formal governance architecture of an organization, "these policies have no binding force and seek to affect the behavior of their addresses through coordination, harmonization and sharing of best

[45] Randall W. Stone, "Informal Governance in International Organizations: Introduction to the Special Issue," *The Review of International Organizations* 8, no. 2 (2013): 122, doi: 10.1007/s11558-013-9168-y.
[46] Ibid., 125.
[47] Ibid.
[48] Oliver Westerwinter, The Politics of Informal Governance, *Research Platform Alexandria*, 3 accessed May 17, 2017, https://www.alexandria.unisg.ch/248573/1/Westerwinter_Politics_of_Informal_Governance_18022016.pdf.

practices" to which effectively "combine formalized decision-making procedures with informal ones - i.e. voluntary outcomes."[49]

Stone and Westerwinter's definition and identification of characteristics pertaining to informal governance shares similar characteristics to that of IIGOS as identified by Vabulas and Snidal. For one, the attractiveness of controlling the outcomes of a given situation is more conducive to informal over formal arrangements. Stone further agrees with the argument of Vabulas and Snidal that states prefer informality in situations "when they value rapid decision making and confidentiality more than efficient implementation and consistency."[50] Westerwinter, on the other hand, also adds that the attractiveness of informality are due to its speed and flexibility of which it can be "negotiated and adapted" given the unpredictability of the state of the world.[51]

Global uncertainties significantly affects countries' attitudes towards environmental regimes including climate change mitigation regimes. As a consequence, compliance to treaties become direct challenges to states. O'Neill states that while states may want to comply with an agreement, they may find themselves unable to do which could be attributed to a state's lack of: 1) political will; 2) capacity or ability to comply; and/or 3) inadvertent non-compliance.[52] She further adds that "both will and capacity may wax and wane over time, as governments change hands, or country's economic conditions change."[53] As such, several studies on regime compliance examined how measures such as sanctions, incentives and the scope and fit of regime

[49] Ibid.
[50] Randall W. Stone, *Informal Governance in International Organizations: Introduction to the Special Issue*, 127.
[51] Oliver Westerwinter, *The Politics of Informal Governance*, 10.
[52] O'Neill, *The Environment and International Relations*, 115.
[53] Ibid.

obligations contribute to state's will and capacity to comply with treaty obligations over time.[54]

The capacity of states to comply with climate change mitigation regimes varies given their respective capabilities. This is further acknowledged in the Paris Agreement itself where states are given considerable latitude. While the treaty stated that "parties shall pursue domestic mitigation measures, with the aim of achieving the objectives of such contributions,"[55] it also stipulated that the agreement "will be implemented to reflect equity and the principle of common but differentiated responsibilities and respective capabilities, in the light of different national circumstances."[56]

In the case of the Philippines' energy security policy which faces the trilemma of security, affordability, and sustainability while ratifying the Paris Agreement at the same time, already presents a tug of war scenario. It would then further limit its ability to fully comply if it were imposed sanctions brought by strict and binding commitments.

However, as the recognition of the country's capabilities to comply to this international treaty comes to light, the flexibility factor that informal governance offers ensures that the country's energy security policy can still conform to the provisions of climate change mitigation regimes. Flexibility, at the same time, reflects the reality of the country's own reservations towards legally binding treaty compliance. IG also effectively brings an almost guaranteed retention of state autonomy and lower transaction costs (i.e. costs of committing to the treaty). Possible elements of IG found in the UNFCCC as it relates to the country's energy security policy, will be further examined.

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[54] Ibid.

[55] United Nations/Framework Convention on Climate Change, 21st Conference of the Parties, *Paris Agreement*, (2015),p. 3, available from http://unfccc.int/files/essential_background/convention/application/pdf/english_paris_agreement.pdf.

[56] Ibid.

IV. Energy Security and Climate Change Mitigation Regimes

Asif and Muneer define energy security as the consistent availability of sufficient energy in various forms at affordable prices and that any economy is dependent on secure supplies of energy.[57] Rhodes et al add that "ready access to cheap, abundant energy supplies is essential for the smooth operation and competitiveness of any modern economy."[58] Doriana, Franssen and Simbeck state that governments enhance their own country's energy security by ensuring a reliable supply of energy resources at reasonable prices to support their own domestic economies and industries."[59]

Historically, modern states have relied on fossil fuels to address their energy security needs. This has been in place for nearly two centuries and was only preceded by the wood-burning and deforestation era of the 1600s-1800s.[60] To date, the world heavily relies on fossil fuels to meet its energy requirements providing almost 80% of the global energy demand.[61] Rhodes et al emphasized that "transportation, heating, light and the electronic systems which drive modern economies all depend on global energy supplies of which are largely fossil-fuel based."[62]

Fossil fuels, like any other resources, are also finite and as such, presents critical challenges to policies centered on energy security itself. Rhodes et al suggested that

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[57] M. Asif and T. Muneer, "Energy Supply, Its Demand and Security Issues for Developed and Emerging Economies," *Renewable and Sustainable Energy Reviews* 11, no. 7 (2007): 1401, doi:10.1016/j.rser.2005.12.004.

[58] Aidan Rhodes, Jim Skea & Matthew Hannon, "The Global Surge in Energy Innovation," *Energies 7 no.* 9, (2014): 5603, doi:10.3390/en7095601

[59] James P. Doriana, Herman T. Franssen and Dale R. Simbeck, "Global Challenges in Energy," *Energy Policy* 34, no. 15 (2006): 1986, doi:10.1016/j.enpol.2005.03.010.

[60] Ibid.

[61] Asif et al., *Energy Supply, Its Demand and Security Issues for Developed and Emerging Economies*, 1389.

[62] Rhodes et al., *The Global Surge in Energy Innovation*, 5602.

such challenge lies in striking a balance within the trilemma of energy security, affordability, and management of its environmental impacts.[63]

RE technologies such as solar, wind and hydro have made headway in recent years to address the above trilemma and is even considered to be either at par or cheaper than fossil fuels.[64] However, the "lock in" factor to prevailing fossil fuels-based technologies have retained a foothold in the last two centuries. This development further prevents newer technologies from fully taking over the status quo. Gallagher et al argue that even economically viable new technologies typically face higher short-term adoption costs compared to established technologies. This is attributed to several factors including the involvement of an extended period of trial and errors, further corrective adjustments and the establishment of an industrial base for these newer technologies to become capable of competing with existing ones on a pure cost basis.[65]

Byrne et al further argue that high-carbon technologies, fuels and practices are often deeply entrenched in existing energy systems. These systems can include powerful vested interests thereby making "the politics of change far from being straightforward."[66] The authors further added that "developing low-carbon energy systems is not only a case of supporting new technologies but also a means of

[63] Ibid., 5603.

[64] Andrew Griffin, "Solar and wind power cheaper than fossil fuels for the first time," *The Independent*, last modified 4 January 2017 http://www.independent.co.uk/environment/solar-and-wind-power-cheaper-than-fossil-fuels-for-the-first-time-a7509251.html

[65] Kelly Sims Gallagher, Arnulf Grbler, Laura Kuhl, Gregory Nemet, and Charlie Wilson, "The Energy Technology Innovation System." *Annual Review of Environment and Resources* 37 (2012): 139, doi:10.1146/annurev.energy.30.050504.144321.

[66] Climate and Development Knowledge Network, *Innovation systems in developing countries*, (CDKN, 2012), 7.

dismantling and replacing old high-carbon technologies, and challenging the institutions, interests, market structures and social norms that go with them."[67]

However, the continued acceptance of fossil fuels as the global status quo has been causing adverse implications on the ecosystem and inflicting enormous impacts on the environment including climate change.[68] Holdren states that "global climate change is increasingly recognized as both the most dangerous and the most intractable of all of energy's environmental impacts."[69]

Developing nations who rely on fossil fuels for their burgeoning economies are aware of these concerns. The Association of Southeast Asian Nations (ASEAN), to which the Philippines is one of its 10 member states, acknowledges that 2015 and beyond marks a critical point for global energy markets as "countries around the world address challenges related to burgeoning energy consumption, and security of energy supply in a sustainable manner to address the environmental effects."[70] ASEAN further states that such a crucial time should be directed to "improve policy frameworks for encouraging responsible energy consumption, higher efficiency, and international standards for emissions, while supporting the growth of energy markets and ensuring security of supply."[71]

To address these concerns on emissions reduction brought by energy use and mitigate its adverse effects on the environment, the provisions of climate change mitigation regimes are being carried out by several IGOS such as the UNFCCC through

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[67] Ibid.
[68] Asif et al., *Energy Supply, Its Demand and Security Issues For Developed And Emerging Economies*, 1389.
[69] James P. Holdren, "The Energy Innovation Imperative Addressing Oil Dependence, Climate Change, and Other 21st Century Energy Challenges," *Innovations*, p. 9, accessed May 17, 2017, http://www.mitpressjournals.org/doi/pdf/10.1162/itgg.2006.1.2.3
[70] ASEAN Centre for Energy. *ASEAN Plan of Action for Energy Cooperation (APAEC) 2016-2025* (Jakarta: ASEAN Centre for Energy, 2015), 68.
[71] Ibid.

its COP21 mechanism that facilitated the 2015 Paris Talks. As part of a state's' intentions to adhere to this specific treaty, Intended Nationally Determined Contributions (INDCs) are submitted. These INDCs are the nationally determined pledges which may vary in scope but will contain, implicitly or explicitly, commitments relating to the energy sector and serve as the foundation of COP21.[72]

V. Philippines' Current Energy Situation

The Philippines' energy security policy as reflected in the 2012-2030 PEP shares the same global trilemma concern as identified by Rhodes et al. To address this concern, the DOE states that "the energy sector, mindful of its role in promoting better quality of life for the Filipino people, will ensure the delivery of secure, sustainable, sufficient, affordable and environment-friendly energy to all economic sectors."[73]

An independent study done by a local policy institute in the Philippines stated that "Philippine economic growth is expected to become inextricably linked to the growth of the energy sector."[74] The country, however has only modest indigenous energy resources[75] alongside low volume production capabilities for conventional fuels.[76] As such, the U.S. Energy Information Administration (EIA) classified the country as a net energy importer.[77]

[72] International Energy Agency (IEA), *Energy and Climate Change* (Paris: IEA, 2015), 11.
[73] Department of Energy, *Philippine Energy Plan 2012-2030 Executive Summary*, 1.
[74] Ateneo de Manila University, Striking a Balance: Coal Fired Power Plants in the Philippines' Energy Future: A Policy Brief (Quezon City, Philippines: Ateneo School of Government, 2015), 23.
[75] Asia Pacific Energy Research Centre (APERC). *APEC Energy Demand and Supply Outlook – 5th Edition* (Tokyo: APERC, 2015), 156.
[76] "Analysis - Energy Sector Highlights (Philippines)," *U.S. Energy Information Administration*, last modified December 2014, https://www.eia.gov/beta/international/country.cfm?iso=PHL
[77] Ibid.

To offset these deficiencies, it relies on imports which accounts for more than 40% of the country's energy needs. Oil and coal constitute majority of its imports (See Table 2).

Table 5-1: Philippines Energy Sources for 2013 (Source: DOE)[78]

Imported Oil	28.91%
Imported Coal	13.91%
Imported Biofuels	0.42%
Indigenous Energy	56.75% **<u>Broken down into:</u>** *Oil: 1.55%* *Natural Gas: 6.42%* *Coal: 8.32%* *Hydro: 5.54%* *Geothermal: 18.36%* *Biomass: 16.20%* *Solar/Wind: 0.01%* *Biofuels: 0.36%*

According to the APEC's Energy Demand and Supply Outlook, fossil fuels will continue to dominate the country's total power generation wherein "coal thermal alone is expected to provide almost 70% of its electricity generation by 2035, followed by natural gas with a 16% share."[79] It will also grow the fastest at an average annual rate of 6.5% during this period and by the end of 2025, coal is likely to exceed oil in the primary energy supply, mainly as a result of coal use for electricity generation.[80] Oil, on the other hand, "will continue to dominate the economy's energy mix from 2010–2025, accounting

[78] Department Of Energy*, Major Accomplishments for 2014*, 1.
[79] Asia Pacific Energy Research Centre (APERC). *APEC Energy Demand and Supply Outlook – 5th Edition*, 157.
[80] Ibid., 161.

for one- third of its total primary energy supply."[81] This is mostly attributed to the growth of the transport sector during that period which will consume more than 60% of the economy's total oil supply.

In its own outlook scenario encapsulated in the 2012-2030 PEP, the DOE acknowledged that "oil will still be the major fuel accounting for an average share of 43.5 percent of the total energy demand."[82]

Amidst these scenarios where fossil fuels will play a major role in the country's energy security, the Philippines nonetheless, is aware of its climate change mitigation obligations. The PEP, which "contains the policies, plans and programs that will significantly contribute to the country's transition towards a low carbon economy – an economy that generates minimal output of GHG emissions into the biosphere" acknowledges that the Philippines is "cognizant of the fact that the energy sector is the biggest contributor of greenhouse gas (GHG) emissions, accounting for about 49.0 percent of the country's total emissions."[83]

In its Climate Change Vulnerability Index (CCVI), Global risk and strategic consulting firm Maplecroft Verisk ranked the Philippines sixth in the most vulnerable countries to the effects of climate change in the next 30 years.[84] The Philippines being an archipelagic state, is ranked highest in the world in terms of vulnerability to tropical cyclone occurrence and third in terms of people exposed to such seasonal events.[85]

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[81] Ibid.
[82] Department of Energy*, Philippine Energy Plan 2012-2030 Executive Summary*, 4.
[83] Ibid., 2.
[84] "Climate Change Vulnerability Index 2011," Verisk Maplecroft, accessed June 1, 2017, https://maplecroft.com/about/news/ccvi.html.
[85] Climate Change Commission (CCC), *National Climate Change Action Plan, 2011-2028* (Manila: CCC, 2010), 2.

The acknowledgment of this vulnerability prompted the Philippines to formulate its framework strategies and actions towards climate change adaptation and mitigation.[86] Despite contributing a minimal amount of GHGs globally (see table 3), the country puts greater emphasis on adaptation as necessary to complement measures that reduce GHG emissions which acts as a "mechanism to manage risks, adjust economic activity to reduce vulnerability and to improve business certainty."[87]

Table 5-2: Carbon Dioxide ($C0_2$)* Emission Contribution in Million Tonnes (MT) 1990-2014[88]

Contributors	Total $C0_2$ Emission	Share to Total (%)	Annual Average Growth Rate (%)
Philippines	1,740	0.26%	3.81%
Global	670,656	100%	2%

**$C0_2$ is attributed to the majority of GHGs emissions at 76% followed by methane (16%) nitrous oxide (6%) and fluorinated gases (2%).*

The country's economic planning body, National Economic and Development Authority (NEDA), through its Philippine Development Plan 2017-2022, underscores the need to "balance between the rates, service reliability, and the environmental implications of the different technologies utilized" in the country's energy sector.[89] It further added that "too much intermittent renewable energy affects grid reliability, but reliance on cheaper fuels, such as coal, increases greenhouse gas emissions."[90] The NEDA further recommended that "an optimal energy mix is needed to provide maximum benefits at the most reasonable costs to consumers while safeguarding the sector from external shocks."[91]

[86] Ibid.
[87] Ibid.
[88] National Tax Research Center. Feasibility of Imposing a Tax on the Emissions of Carbon Dioxide in the Philippines. (Manila: Department of Finance, 2016), 27.
[89] National Economic and Development Authority, Philippine Development Plan 2017-2022 (Pasig City, Philippines: NEDA, 2017), 293.
[90] Ibid.
[91] Ibid.

VI. International Regimes and Philippines' Domestic Policies

a. Historical Involvement

The Philippines has a history of participation in IGOS encompassing multiple issue areas. This can be traced even before the formation of the United Nations (UN) when the country was one of the early signatories of the UN Declaration in 1942 which forms the basis of the UN Charter.[92] On a regional level, it was one of the founding member of the Association of Southeast Asian Nations (ASEAN). Albeit a regional organization, ASEAN has strong attachments to the UN as reflected in the organization's aims of promoting "regional peace and stability through abiding respect for justice and the rule of law in the relationship among countries of the region and adherence to the principles of the UN Charter."[93]

In the issue area of global climate change mitigation, the Philippines has held both formal and informal leadership positions in the UNFCCC since its inception. Yeb Saño of Greenpeace Southeast Asia and former government negotiator on climate change issues, stated that formal leadership roles included chairing roles in different committees and different work streams. These roles include positions in the Berlin Mandate, the Kyoto Protocol, the Bali Action Plan, the Paris Agreement process in 2011 and through the eventual adoption of the 2015 Paris Talks.[94] Informal leadership roles on the other hand, occurred during the negotiations themselves wherein the Philippines took up the cause of vulnerable countries and served as a bridge between other developing countries and negotiating partners. According to Saño, the country's

[92] Gerard Lim, "FAST FACTS: The Philippines' role in the United Nations," *Rappler,* last modified October 24, 2015, http://www.rappler.com/newsbreak/iq/110442-fast-facts-philippines-role-united-nations.
[93] "About ASEAN," *Association of Southeast Asian Nations*, accessed May 15, 2017, http://www.asean.org/asean/about-asean/.
[94] Interview with the author, February 15, 2017.

leadership roles enabled it to become a "further a credible voice in these negotiations."[95] Its leadership roles however, should not be construed as having a direct impact on the outcome of such negotiations, specifically the 2015 Paris Agreement itself.

b. Direct Compliance

Cortell and Davis argue that an international rule enjoys the greatest degree of domestic salience when the state "has made concrete alterations in its policy choices, or has incorporated formal procedures into its domestic processes in an effort to be in accordance with the rule's prescriptions."[96] The Philippines' own domestic policies and laws have incorporated the edicts of international regimes. In his inaugural address, President Aquino stated that the Philippines is ready to take its place "as a reliable member of the community of nations, a nation serious about its commitments and which harmonizes its national interests with its international responsibilities."[97]

The adherence of the Philippines to the provisions of climate mitigation regimes manifested itself through changes to its own various domestic policies. Examples include: the DOE's own PEP wherein its framework reflects the country's desire to participate in climate change mitigation through its "responsiveness to long-term global policy frameworks on energy such as the UN Sustainable Energy for All Initiative, the ASEAN Plan of Action for Energy Cooperation (APAEC) 2010-2015 and the Asia-Pacific Economic Cooperation (APEC) Green Growth Goals."[98] Another example is the country's National Framework Strategy on Climate Change which "takes into

[95] Ibid.
[96] Andrew P. Cortell and James W. Davis, "How Do International Institutions Matter? The Domestic Impact of International Rules and Norms," *International Studies Quarterly* 40, no. 4 (1996): 457, doi:10.2307/2600887
[97] Benigno S. Aquino III, "Inaugural Address of President Benigno S. Aquino III (English translation), June 30, 2010," *Official Gazette*, last modified, June 23, 2010 http://www.gov.ph/2010/06/30/inaugural-address-of-president-benigno-s-aquino-iii-english-translation/.
[98] Department of Energy, *Philippine Energy Plan 2012-2030 Overview and Executive Summary*, 2.

consideration and complies with the commitments of the Philippines in multilateral environmental treaties, specifically the UNFCCC."[99] Saño claims that even before the UNFCCC's inception in 1992, the country's then-president established an inter-agency committee on climate change in anticipation of its adoption and was one of its first signatories.[100] Several existing policy instruments contain various specific contributions in the country's pursuit of climate-resilient strategies. Jonas Leones, of the Department of Environment and Natural Resources (DENR) stated that in the area of energy, the Renewable Energy Act (Republic Act 9513) included the creation of a renewable energy trust fund, incentives for RE developers, increase in RE-based capacity and no subsidies on coal and other fossil fuels.[101] The Biofuels Act (Republic Act 9367) mandates the use of biofuels for transport wherein beginning in 2008, 5% bioethanol was mixed with gasoline which was further increased by 10% in 2010. For diesel fuel, 1% blend Biodiesel was required by 2006 and was further increased to 2% by 2008. The Environmentally Sustainable Transport (Administrative Order 254) mandated the country's transportation department to lead in formulating a national environmentally sustainable transport (EST) for the Philippines.[102] This policy included reducing emissions, cleaner fuels, low pollution and low carbon mass transportation system.[103] Leones also stated that an overall energy fuel mix policy towards cleaner and

[99] Climate Change Commission. *National Framework Strategy on Climate Change 2010-2022* (Manila: Office of the President, 2010), 7.
[100] Interview with the author, February 15, 2017.
[101] Interview with the author, February 25, 2017.
[102] Office of the President, Administrative Order No. 254, s. 2009 (Manila, Office of the President, 2009), 1.
[103] Ibid.

more efficient fuels and technologies for power generation is being reviewed in the hopes that it will be applied to the transportation sector as well.[104]

In its own INDC submission, the Philippines utilized "internationally accepted tools and methodologies" to help it identify possible mitigation options. This includes the 2006 Intergovernmental Panel on Climate Change (IPCC) guidelines for the GHG inventory alongside the utilization of the organization's software as one of the measurement tools.[105]

As if to galvanize its commitment in combating climate change, the country submitted its INDC ahead of the COP21[106], which eventually culminated in the ratification of the Paris Agreement by the country's president, Rodrigo Duterte.

c. Informal Governance and Flexibility

O'Neill previously indicated that states can exhibit apprehension in complying with environmental agreements considering that global uncertainties persist which can lead states to change their priorities. States therefore seek a degree of flexibility that can be found in the framework structure of IG present in FIGOs. The UNFCCC, despite having the characteristics that make up a FIGO, is still an attractive option for ratification of its 2015 Paris Talks by states who are in the process of undergoing domestic policy changes. Its nonbinding nature in effect, assures states that there is an option to defect. These options are available from the outset wherein the Paris Agreement

[104] Interview with the author, February 25, 2017.

[105] Republic of the Philippines. *Intended Nationally Determined Contributions* (Manila: Government of the Philippines, 2015), 3.

[106] "The Philippines Submit their Climate Action Plan Ahead of 2015 Paris Agreement, *United Nations Framework Convention on Climate Change,* last modified October 1, 2015, http://newsroom.unfccc.int/unfccc-newsroom/the-philippines-submit-their-climate-action-plan-ahead-of-2015-paris-agreement/.

acknowledged that states have different circumstances which are guided by the Convention's "principle of equity and common but differentiated responsibilities and respective capabilities, in the light of different national circumstances."[107] Should a state decide to defect, the Agreement states that "at any time after three years from the date on which this Agreement has entered into force for a Party, that Party may withdraw from this Agreement by giving written notification to the Depositary."[108]

While the Philippines has formally ratified the Paris Agreement signifying its desire to contribute its share in climate change mitigation, unpredictabilities have emerged connected to its growing economy which induced the country to increase its dependence on fossil fuels. The informalities brought by the nonbinding nature of the Paris Agreement ensures that flexible options exist which can be utilized by the Philippines as it addresses its domestic energy challenges. At the same time, it is assured that it will be relieved of any significant pressure imposed by climate change mitigation regimes to curtail its GHG emissions. Based on interviews with the country's energy policy makers, the IG framework of the Paris Agreement effectively acknowledges the need for flexibility. This mainly revolves around the issue areas of: continuous revision/tweaking of its energy policy, market forces involved in the country's energy distribution, capacity of fossil fuel use to address its own energy trilemma and uncertainty of foreign assistance to assist the country's climate change mitigation capacity. It also ensures that the Philippines undergoes low transaction and sovereignty costs for ratifying the Paris Agreement altogether.

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[107] United Nations Framework Convention on Climate Change, 21st Conference of the Parties, *Paris Agreement*, (2015). p.1, available from http://unfccc.int/files/essential_background/convention/application/pdf/english_paris_agreement.pdf.
[108] Ibid., 25.

VII. Findings

The Paris Agreement recognizes that to significantly reduce the risks and impacts of climate change, the global community should strive to maintain the global average temperature to well below 2°C above pre-industrial levels and pursue efforts to limit the temperature increase to 1.5°C above pre-industrial levels.[109] The Philippines has aspired to do its part to meet these targets, citing its intention to reduce GHG emissions by up to 70% by 2030, relative to its Business as Usual (BAU) scenario of 2000-2030 wherein "reduction of CO2 emissions will come from energy, transport, waste, forestry and industry sectors."[110] However, attaining this is contingent "on the extent of financial resources, including technology development & transfer, and capacity building, that will be made available to the Philippines."[111] In relation to the country's energy sector, technical inputs and assistance are considered critical for "grid efficiency improvement, standard development for energy and water efficiency, cost-effective renewable energy, alternative or high-efficiency technology for conventional power generation, among others."[112]

In its INDC, the Philippines indicated that it wants to address the challenge of pursuing economic development while simultaneously having to deal with the impacts of climate change and natural hazards.[113] However, the eagerness to solve two conflicting and extreme scenarios presents the impossible likelihood of achieving both at once and

[109] Ibid., 3.
[110] Republic of the Philippines. *Intended Nationally Determined Contributions*, 3.
[111] Ibid., 4.
[112] Ibid., 6.
[113] Ibid., 2.

necessitates the achievement of some balance between the country's energy security policy and its global climate change mitigation obligations.

As indicated on Table 1, Vabulas and Snidal identified the different degrees of institutional formalities found in both FIGOS and IIGOS. The authors rigidly classified formal and informal elements as belonging to FIGOS and IIGOS respectively. However, as Stone and Westerwinter argue, such rigidity is an anomaly since based on their own studies, informal governance exists in FIGOS as well. The UNFCCC, albeit a FIGO itself, has created an IG framework through its Paris Agreement. Based on the interviews conducted with energy and climate change mitigation policy makers of the Philippines, key IG elements that have been identified are as follows: 1) Flexibility, 2) Lower Transaction Costs and; 3) Lower Sovereignty Costs.

a. Flexibility

According to Koremenos et al, "flexibility is particularly desirable when states do not want to make strong commitments because of high uncertainty about future states of the world, severe distribution problems that cannot be fully anticipated, or when states do not need or want higher precision."[114] Vabulas and Snidal adds that states would prefer an institutional arrangement that binds them less strictly as it gives them "greater leeway to adjust to unanticipated outcomes as circumstances evolve."[115]

[114] Koremenos, B., Lipson, C., & Snidal, D. The Rational Design Of International Institutions, International Organization 55, no. 4 (2001) and Abbott, K., & Snidal, D. "Why States Act Through Formal International Organizations." Journal of Conflict Resolution, 42 no. 1 (1998) quoted in Felicity Vabulas and Duncan Snidal. "Organization without Delegation: Informal Intergovernmental Organizations (IIGOs) and the Spectrum of Intergovernmental Arrangements." *The Review of International Organizations* 8, no. 2 (2013): 210.

[115] Felicity Vabulas and Duncan Snidal, "Informal Intergovernmental Organizations (IIGOs)," (presentation, APSA Annual Meeting, Seattle, WA, August 2011), 29.

Accomplishing the Philippines' international commitments is contingent on having a greater leeway to make essential adjustments to its own domestic policies. These needed modifications are attributed to several circumstances surrounding the overall energy situation of the country:

a.1) Continuous Revision/ 'Tweaking' of the Country's Energy Policies

Philippines policymakers have acknowledged that the country's energy security policy is not static and that it needs to change as reflected on the changing circumstances that the country undergoes. This perceived necessity effectively affects its intended commitments to international arrangements as well. Carmencita Bariso, an official from the Department of Energy, stated that the PEP is "being updated from time to time as the administration sees the need to adjust the plan."[116] This is hinged to the fact that the constitution limits the term of the country's executive branch to 6 years in office.[117] Dave Yu, a policy adviser for the Philippine Legislative Branch, admitted that each incoming president assigns a different energy secretary who may have different ideas regarding the country's energy policy.[118] Current Philippine president Duterte emphasized that in his administration, he `will not micromanage` government agencies and will limit any intervention to `make recommendations` or if `there is trouble that comes up.'[119] Duterte's appointed energy secretary on the other hand, vows to prioritize

[116] Interview with the author, January 24, 2017.
[117] "1987 Constitution Of The Republic Of The Philippines," *Chan Robles Virtual Law Library*, accessed May 18, 2017,
http://www.chanrobles.com/article7.htm#.ws-ghevyviu.
[118] Interview with the author, March 15, 2017.
[119] Cited in Tarra Quismundo, "Duterte presents Cabinet," *Inquirer.net*, last modifed May 31, 2016, http://newsinfo.inquirer.net/788529/duterte-presents-cabinet

the continuity of energy programs of the previous administration by securing reliable power for the country in general.[120]

Bariso points out that while the country`s president and assigned cabinet secretaries come and go, the country's energy policy nonetheless transcends political boundaries "because energy projects take time and are long gestating projects."[121] While approved power projects are being constructed, the PEP is being updated annually and that every change involves continuous consultations of the energy department's directors with their nationwide constituents including Non-Governmental Organizations (NGOs) and environmental groups as part of the agency's "bottom up" approach.[122]

Legislative policy advisor Dave Yu, acknowledges that continuous tweaking is cognizant of the "inflexibility of the law" which "gives the executive branch enough room to maneuver and handle unforeseen developments in the field which makes the country's energy policy product of constant 'tweaking' and evaluation of what works and what doesn't."[123]

The DENR's Leones, acknowledges that the country's submitted INDC is still in the "process of revision" and that if the Philippines is to achieve the global call of the COP21 for a 1.5°C limit on global temperature increase, the Paris agreement must have a "rulebook that is equitable, balanced, and cohesive, and elaborated through a process that is inclusive, transparent and efficient."[124] Reflecting on the country's INDC as subject to revision, it further stated that based on fair share, it will "commence a broad

[120] Danessa Rivera, "Incoming energy chief sets top priorities," *The Philippine Star*, last modified June 30, 2016, http://www.philstar.com/business/2016/06/30/1597895/incoming-energy-chief-sets-top-priorities.
[121] Interview with the author, January 24, 2017.
[122] Ibid.
[123] Interview with the author, March 15, 2017.
[124] Interview with the author, February 25, 2017.

consultative process to determine the propriety of the need to peak its emissions taking into consideration the country's economic growth and development. This in turn, can help facilitate the country's transition into a clean energy-driven economy."[125]

The INDC's provisions to undertake its objectives reflects the flexibility characteristics which are enshrined in the Paris Agreement as well. One of the primary objectives of the agreement is guided by "the principle of equity and common but differentiated responsibilities and respective capabilities, in the light of different national circumstances."[126] The agreement also recognizes the individual situations of developing countries such as the Philippines as having special needs given its vulnerability to the adverse effects of climate change.[127]

The Agreement also acknowledges the need for certain countries to peak emissions as part of the process to "undertake rapid reductions thereafter in accordance with the best available science." At the same time the Agreement admitted that peaking "will take longer for developing country Parties" which effectively favors the Philippines given its current status as a developing country.[128] The agreement encourages developing country parties to continue enhancing their mitigation efforts and encouraged to move over time towards economy-wide emission reduction or limitation targets. However, the Agreement recognizes that these are to be done "in light of different national circumstances."[129]

While the Paris agreement has a transparency framework which includes progress tracking and monitoring of adaptation actions based on submitted INDCs, the

[125] Republic of the Philippines. *Intended Nationally Determined Contributions*, 1.
[126] United Nations Framework Convention on Climate Change, 21st Conference of the Parties, *Paris Agreement*, 1.
[127] Ibid.
[128] Ibid., 4.
[129] Ibid.

agreement nonetheless includes a "built-in flexibility." This stems from the acknowledgment of each country's varying mitigation capacities and that further flexibility is given to developing country Parties "that need it in light of their capacities."[130]

a.2) Market Forces Working Against RE

Distribution of Philippine energy is market-based. The Electric Power Industry Reform Act of 2001 (EPIRA) effectively led to the deregulation of the country's power sector. It also enabled the sector to wean itself from a "regulation-based and inefficient industry to a market-based and efficient one."[131] However, this market-based policy presents challenges to the country's domestic energy policy to be in sync with climate change mitigation agreements since the private sector and the accompanying market forces determine energy development (i.e. control of electricity distribution and construction of power plants). According to former climate change negotiator Yeb Saño, the 2001 EPIRA basically allows market forces to determine the country's energy development.[132] He further adds that "what the government can only do is monitor and forecast demand and has very little say in what kind of technology is used in the construction of any power plant. As such, the governance structure in the electricity sector poses big challenges for the country's energy policy makers."[133]

Gilbert Olfiña, an Economic Development Specialist at the government-run National Economic Development Authority (NEDA), states that the construction of new coal-fired power plants is not a deliberate policy of the government but as a result of

[130] Ibid.,16.
[131] Epictetus E. Patalinghug, An Analysis of the Philippine Electric Power Industry (presentation, International Conference on the "Challenges to Development: Innovation and Change in Regulation and Competition," Manila, 13-15 October 2003), 3.
[132] Interview with the author, February 15, 2017.
[133] Ibid.

having a market-based sector and the country's lack of a mandatory fuel mix policy. Olfiña then adds that "any company that applies for a permit or a certificate is allowed as long as they meet the (minimum) necessary environmental or technical requirements."[134] The World Wildlife Fund (WWF) further clarified that the country's "current government policy and decision making prioritizes providing energy at least cost, with exclusion of cost of externalities (i.e. health and environmental costs)."[135]

Another climate change adviser recognizes the "inherent advantages" of coal over RE under the country's current pricing regime that does not have any existing carbon tax to cover externalities thereby "the lowest cost power supply option will always be favored."[136] The adviser further added that "fossil-fuel plants are secure investments providing continuous revenue streams, since the proponents could avail themselves of automatic pass-through of their fuel costs to consumers" while "RE projects are considered to be high risk investments as the resources fluctuate widely from year to year."[137]

Costs of building power-generating plants are also at play here. Legislative policy advisor Dave Yu argues that coal power plants require a low initial investment cost compared to other technologies, particularly RE which has high initial investment costs.[138] While the country's Renewable Energy Act of 2008 was mandated to accelerate the "exploration and development of renewable energy sources,"[139] RE investors nonetheless still face barriers which lead to the increase in upfront costs.

[134] Interview with the author, February 13, 2017.
[135] World Wildlife Fund - Philippines (WWF-Philippines). *Strategy for Philippine Low Carbon Pathway 2014*. (Manila: WWF-Philippines, 2014), 33.
[136] Pete Maniego Jr., "A Struggle between Coal and Renewable Energy in the Philippines," *Heinrich Böll Foundation North America*, last modified June 17, 2016, https://us.boell.org/2016/06/17/struggle-between-coal-and-renewable-energy-philippines.
[137] Ibid.
[138] Interview with the author, March 15, 2017.
[139] Congress of the Philippines, *Republic Act No. 9513*, (Manila: Congress, 2008), 1.

According to a study done by the Asian and Pacific Centre for Transfer of Technology, the lack of local technical knowledge on the implementation of RE technologies (RETs) makes renewable energy projects to be considered as "very uncertain, whether they are economically practicable or not."[140] This in turn, "causes investors to be very careful in financing RE activities in the Philippines.[141] The study further adds that this "same lack of knowledge in RETs also extends to the financial institutions, which may provide loans to RE developers, but the inadequacy of appropriate funding poses a hindrance to RE promotion and utilization."[142]

The lack of local technical know-how on REs makes the country dependent on imported technology. Despite the good intention of REs, dependence on imported technology and lack of "sufficient experience in its development and operations" alongisde consequent reliance on foreign contractors makes RE project costs higher in the country compared to Europe and the U.S.[143]

In another study done by the International Renewable Energy Agency (IRENA), administrative barriers can also make a financial impact on the overall costs of RE projects in the country. It stated that "administrative costs indirectly affect soft cost components such as capital costs and profit. High administrative costs indicate risks, which reduce the predictability and cost security of the renewable energy project. Financing institutions thus usually demand a risk premium, which will raise capital

[140] Asian and Pacific Centre for Transfer of Technology Of the United Nations – Economic and Social Commission for Asia and the Pacific APCTT-UNESCAP, *Philippines Renewable Energy Report* (New Delhi: APCTT-UNESCAP, date unknown), 63.
[141] Ibid.
[142] Ibid.
[143] Pete Maniego Jr., "A Struggle between Coal and Renewable Energy in the Philippines."

costs."[144] The IRENA study also added that while "local commercial banks are recognising the business potential of RE and are becoming more open to lending to RE projects, the high risk perception associated with renewables means lending terms for renewable energy projects are still conservative, especially for new renewable energy players still establishing their financial track record."[145]

Financing institutions on the other hand, "are very familiar with coal plant development, and power companies are well-versed in their construction and operations" as opposed to RE projects, therefore funding for conventional fossil-fuel plants are easily accessible as opposed to RE projects.[146]

Given the barriers faced by REs in the country, NEDA's economic specialist Olfiña states that sources that are able to address the baseload requirements is fundamentally the government's priority to address the country's energy security which coal-fired power plants are able to efficiently provide.[147] Legislative policy advisor Yu also argues that as the Philippines' grid is suffering from very low reserves, the "intermittency of renewable options coupled with the maintenance requirements of the power plants result in an absence of reliable baseload options. Thus, as the current system lacks viable base load options, fossil fuel plants, particularly coal, continue to be attractive to meet baseload options."[148]

a.3) Uncertainty in the Delivery of Foreign Assistance

[144] International Renewable Energy Agency (IRENA). *Renewables Readiness Assessment: The Philippines*. (Abu Dhabi: IRENA, 2017), 27.
[145] Milo Sjardin, M. K., Renewable Energy in the Philippines: Financial Flows and Barriers for Investment (presentation made during the interim workshop for the Analysis and Investment for Low-Emission Growth (AILEG) Project for the Philippine Government, Manila, 2013) in International Renewable Energy Agency (IRENA). *Renewables Readiness Assessment: The Philippines*. Abu Dhabi. 2017.
[146] Pete Maniego Jr., "A Struggle between Coal and Renewable Energy in the Philippines."
[147] Interview with the author, February 13, 2017.
[148] Interview with the author, March 15, 2017.

Based on the country's ratification of the Paris Agreement, the Philippines is a willing partner in climate change mitigation. However, to be able to meet its targets, it needs foreign assistance to do so. Such condition requires a degree of flexibility on the Philippines' end as failing to receive the assistance the country needs effectively prevents it from undertaking its necessary climate change mitigation goals.

As explicitly stated in its INDC, "financial resources, technology transfer and capacity building support for adaptation will ensure that the country's committed mitigation INDC will be attained."[149] Full implementation of its INDC requires "support in the form of adequate, predictable and sustainable financing" and that external assistance is required to enable the development and adoption of the most appropriate technologies to improve adaptive capacities and resilience.[150]

Yu contends that the country's commitment "is based on the availability of fund transfers from developed countries but there are now significant questions regarding the availability of these said funds as donor countries have struggled to pledge the amount that is needed to finance the program."[151]

Anticipation of the absence of external assistance is effectively accommodated in the Paris Agreement itself. The acknowledgment that countries have different capacities necessitate different accommodations to meet their respective targets. This couldn't be more fitting to the situation of the Philippines itself where foreign assistance is necessary to meet its climate change mitigation targets. The absence of this guarantee that capable countries will not renege on their pledges necessitates that the Agreement provides flexibility to anticipate such emerging contingencies.

[149] Republic of the Philippines. *Intended Nationally Determined Contributions*, 4.
[150] Ibid., 6.
[151] Interview with the author, March 15, 2017.

a.4) Capacity to address the energy trilemma

Achieving energy security involves balancing the disparate elements of the energy trilemma, which once again refers to security/reliability, affordability and sustainability. While RE could significantly bridge these gaps, the DOE acknowledges that "even with the dawning of renewable energy development, it recognizes the fact that the country will remain dependent on conventional fuels for many years to come to address its growing energy requirements."[152]

Antonio La Viña, government negotiator to the COP21, stated that energy options have been laid on the table including various technologies including RE to find ways to find a balance in addressing this trilemma.[153] NEDA's Olfiña on the other hand, stated that the government places importance in addressing first the country's baseload demand to ensure that there is sufficient supply of energy which these (fossil fuel) plants provide for that objective at the moment.[154] Fossil fuels are also a necessity owing to the fact that the country came from a critical period of having insufficient supply of electricity. Olfiña further indicated that "anything (type of plant) that comes in, as long as it meets the requirements (i.e. environmental), it is accepted by the government."[155]

The DOE also echoes NEDA's sentiments further stating that there are technologies now that can clean up coal while being able to maintain a 70% base load capacity.[156] The energy agency also indicated that while it does not discount the role of RE in the energy mix, it might not be the total answer to the country's energy security.[157] As such, the country needed options prompting the present administration's adoption of

[152] Department of Energy, *Philippine Energy Plan 2012-2030 Executive Summary*, 3.
[153] Interview with the author, December 14, 2016.
[154] Interview with the author, February 13, 2017.
[155] Ibid.
[156] Interview with the author, January 24, 2017.
[157] Ibid.

a “technology neutral policy” in which all options of energy, for the purpose of building up the economy “will be taken into consideration but with due consideration on the environment as well.”[158]

b. Lower Transaction costs

Transaction costs are defined as the general costs involved when making a deal.[159] Weimer et al., point out that when “transaction” is used as a unit of analysis, it can apply to varying scenarios including “the execution of a contract specifying a sequence of actions to complete a series of related exchanges over a long period of time.”[160] These contracts can range from formal (i.e. legal documents) to informal (i.e. norms and other customary practices).[161]

Fulfilling environmental commitments can place a burden on a state, which makes informal agreements easier to abide by. As indicated by O’Neal and Westerwinter, binding commitments can be hard for states to abide by given the uncertainty of the state of the world. Vabulas and Snidal further maintain that “informal arrangements can be concluded more quickly and with lower negotiation (i.e. transaction) costs because the commitments are less binding and permanent.”[162]

In the course of the “execution” of the Paris Agreement, signatory states are not penalized should any of them fail in their emission reduction targets. It is in the absence of such penalties that lower transaction costs emerge which serve as a form of incentive for states to adhere to this commitment. In the process of adhering, as O’Neill argues,

[158] Ibid.
[159] Paul R. Krugman and Robin Wells, *Macroeconomics* (New York, NY: Worth Publishers, 2013), 483.
[160] David Leo Weimer and Aidan R. Vining, *Policy Analysis*. 5th ed. (Boston: Longman, 2011), 310.
[161] Ibid.
[162] Felicity Vabulas and Duncan Snidal, *Organization without Delegation: Informal Intergovernmental Organizations (IIGOs) and the Spectrum of Intergovernmental Arrangements*, 211.

the overall participation of states in regimes enables them to be socialized in a more cooperative international system.[163]

Given that the commitment by the Philippines to the Paris Agreement is contingent on several conditions including the acknowledgment of the unpredictability of the future, IG elements found in the Agreement makes it convenient to pursue its energy agenda thereby incurring lesser transaction costs of committing to such global obligation. As legislate adviser Yu has explicitly stated: "It should be noted that the pledge of the Philippines is not an ironclad commitment as far as the country is concerned, as there is no noted penalty if the Philippines fail to honor its commitment."[164] Former climate change negotiator Yeb Saño, stated that despite the ratification of the Paris Agreement which also serves as an opportunity for the country to "pursue coherence between energy security and addressing climate change globally," there is nothing that can bind the Philippines to limiting its energy sources despite the cognizance of climate change as an important issue.[165]

The very nature of the Paris Agreement is by itself a voluntary arrangement. It allows parties to "choose to pursue voluntary cooperation in the implementation of their nationally determined contributions to allow for higher ambition in their mitigation and adaptation actions."[166] The agreement also allows a member of the Party to withdraw from the Agreement at any time after three years the Party has entered it into force.[167]

The Paris Agreement's nonbinding nature, absence of penalties for failing to meet expected emission reduction targets and the open provision of allowing states to

[163] Ibid.
[164] Interview with the author, March 15, 2017.
[165] Interview with the author, February 15, 2017.
[166] United Nations/Framework Convention on Climate Change, 21st Conference of the Parties, *Paris Agreement*, (2015), p. 7.
[167] Ibid., 25.

withdraw from the agreement altogether provide lower transaction costs for abiding by the treaty. In the case of the Philippines, lower transaction costs enable the country to have a freehand in making the necessary adjustments to its energy policy. This has never been emphasized in the Duterte administration's adoption of a technology-neutral policy which allows it to pursue its fossil fuel use agenda without fear of any penalties. The lesser costs involved in committing to a non-binding international treaty can further incentivize states to execute such contracts since in effect, there is really nothing to lose for ratifying it as it enables these states to become, in the words of O'Neal "socialized towards a more cooperative international system."

c. Lower Sovereignty Costs

Another benefit of having an IG as part of a FIGO framework structure is that it enables states to retain their independence and "sacrifice less autonomy when they choose informal arrangements." [168] This contrasts to the appeal of adhering to binding legal arrangements where Abbott and Snidal argue that accepting such obligation especially when it entails delegating authority to a supranational body, would be costly to states."[169] The authors stated three conditions wherein sovereignty costs could impact a state's attitudes towards regimes if their sovereignty would be affected: First, sovereignty costs can be relatively low when states simply make international legal commitments that limit their behavior in particular circumstances and accepting these

[168] Felicity Vabulas and Duncan Snidal, *Informal Intergovernmental Organizations (IIGOs)*, 28.
[169] Kenneth W. Abbott and Duncan Snidal. "Hard and Soft Law in International Governance," *International Organization* 54, no. 3 (2000): 436.

costs enable them to achieve better collective outcomes.[170] Second, greater sovereignty costs emerge when states accept external authority over significant decisions when international agreements insert (implicitly or explicitly) international actors (who are neither elected nor subject to domestic scrutiny) into a country's national decision procedures.[171] Third, sovereignty costs are at their highest when "international arrangements impinge on the relations between a state and its citizens or territory."[172]

The potential threat of high sovereignty costs on states drive them to select arrangements that are "non-binding or imprecise or do not delegate extensive powers. Most often, states protect themselves by adopting less precise rules and weaker legal institutions."[173]

The Paris Agreement explicitly states that the Convention's transparency framework aside from "recognizing the special circumstances of the least developed countries and small island developing States," its own transparency arrangements will be "implemented in a facilitative, non-intrusive, non-punitive manner, respectful of national sovereignty, and avoid placing undue burden on Parties."[174]

The Philippines is mindful of its own sovereignty during the negotiations leading to the Paris Agreement and that it is also aware that the UNFCCC respects its individual decisions. Former climate change negotiator Saño says that the UNFCCC never gave advice regarding sovereign decisions on using specific energy sources. This is due to the fact that the UNFCCC also "embodies the right of sovereign nations and sovereignty is a very important principle of the UN and therefore any advice on a country's national

[170] Ibid., 437.
[171] Ibid.
[172] Ibid.
[173] Ibid., 439.
[174] United Nations/Framework Convention on Climate Change, 21st Conference of the Parties, *Paris Agreement*, (2015), p. 16.

energy policies is deemed as a disrespect of sovereignty."[175] Kat Coballes of the NEDA's Environment Division, also agrees stating that the UNFCCC gives the country its own executory right and that it doesn't prescribe a particular domestic regulation or policy.[176] Dave Yu of the legislative branch stated that the "UNFCCC recognizes the independence of states and their sovereign rights in deciding how to achieve their energy security and climate change goals" and that it did not raise any issue regarding the Philippine's planned capacity mix.[177] The DENR, the lead agency for the country's delegation in the COP21, stated that its engagement with the UNFCCC mainly dealt with the preparation and submission of the country's National Communication which is an obligation by the Philippines government to the Convention.[178] Alongside this, the UNFCCC Secretariat also assisted the Philippines with the "enabling activities necessary to undertake an improved national greenhouse gas (GHG) inventory, to plan for actions for the mitigation of climate change and adaptation to its potential impacts of climate change."[179]

The nonbinding nature of the Paris Agreement enables the Philippines to undertake lower sovereignty costs as it further pursues its domestic fossil fuel use vis-a-vis its climate change mitigation commitments. Such arrangements gives it assurance that its energy trilemma will be addressed in the quickest way possible while at the same time being assured of the absence of pressures from global commitments.

VIII. Discussion

[175] Interview with the author, February 15, 2017.
[176] Interview with the author, February 13, 2017.
[177] Interview with the author, March 15, 2017.
[178] Interview with the author, February 25, 2017.
[179] Ibid.

Given the continuous changes that countries of the world undergo, global binding commitments make it difficult for states to abide by. This is no more prominent than in the area of environmental protection such as climate change mitigation. While states would openly express their desires to contribute their share of curtailing their respective carbon emissions, they are nonetheless encumbered by their domestic priorities. These include the need to continually utilize fossil fuels in order to support their industrialization efforts despite the universally accepted fact that utilizing such fuel type exacerbates the negative effects of climate change.

In the case of the Philippines, the need to continue using fossil fuels is at the forefront of its energy security policy as it enters a period of industrialization. However, this presents a dilemma as it also ratified the Paris Agreement, which effectively expressed its desire to be part of the global community doing its share to protect the environment. While contradicting as it may appear, the framework structure of IG in the Paris Agreement ensures that while the Philippines chose to comply to this treaty, it still has considerable leeway to proceed with a fossil-fuel based energy security policy. This in turn, enables it to find a balance to address its domestic trilemma of security, affordability and environmental sustainability.

IG elements found in the UNFCCC Paris Agreement effectively enables the country to attain: 1) Flexibility in its energy security policy, 2) Lower Transaction Costs to commit to the treaty and 3) Lower Sovereignty Costs attributed to the nonbinding nature of the treaty.

Flexibility ensures that the Philippines has a “maneuvering room” to pursue its energy security policy. Continuous “tweaking” has been acknowledged as necessary

since several factors come into play here. These include changes in the elected officials holding office, continuous consultation with stakeholders including environmental groups and the general anticipation of unforeseen developments that the country continually faces especially as it undergoes a period of economic growth.

The role of market forces also plays a significant role in the need for flexibility. While REs as a viable clean energy source and have made significant strides in the country's energy scene, it nonetheless still faces enormous challenges. This is due to the fact that the RE industry, being a new player in the country, faces financing challenges compared to well-established fossil fuel energy players who have already set an indelible mark decades ahead of their RE competitors. This makes RE investments, in the eyes of financial institutions, "riskier" compared to its counterparts. The dependence of the RE industry on foreign contractors further downplays its competitiveness owing to the lack of experience in the development of its own domestic development and operations. Given these circumstances, conventional fuel sources, due to their "tried and tested" reputation to meet base load demands and easier funding access compared to REs, provide a "bang for the buck" investment which is conducive in a deregulated energy market such as the Philippines.

Commitment by the country to the Paris Agreement necessitates the provision of foreign assistance for it to be able to meet its targets to the global cause of climate change mitigation. However, as David Yu of the legislative branch contends, this pledge might not come to fruition at all.[180] It is therefore incumbent for the Philippines to have a

[180] Interview with the author, March 15, 2017.

slew of options to be able to get out of a possible conundrum should this pledge gets reneged by the country's expected benefactors.

The IG framework structure in the Paris Agreement assures the country of having lower transaction costs in making international commitments. Commitment to a nonbinding treaty translates to low transaction costs. Given its voluntary nature, the absence of stringent penalties in the treaty anticipates the possible shortcomings of member-states to meet their emissions reduction targets. Joining a treaty with lower transaction costs can be an incentive for states to sign up. For the Philippines, given its historical involvement in the United Nations as a whole, it would further reinforce its standing in the "brotherhood of nations" as a policy adviser puts it, without the caveats of legal repercussions if it fails to meet its it emissions targets or decide to withdraw altogether from the treaty if it chooses to, down the road.

The flexibility in the Paris Agreement provides the Philippines with a level of security and comfort to address its domestic energy trilemma while at the same time allowing it to keep up with its international commitments on climate change mitigation at its own pace while keeping international pressures at bay. This flexibility is managed and kept in bounds by the member states through the parts that contribute to the framework structure of IG as identified in this thesis.

The researcher fully acknowledges certain limitations of this research. Given that the number of individuals willing to be interviewed is limited to 6 policymakers divided across the issue areas of energy security and global climate change mitigation, their participation may not be enough representation for the conclusion used in this research.

It is thereby strongly suggested to proceed with caution when drawing conclusions given the small number of interviewees.

Nonetheless, these 6 interviewees, who belong to the limited number of participants willing to share their viewpoints, cover key perspectives across all sectors affecting energy security vis-à-vis environmental protection. These include the executive and legislative branches of the Philippine government, the NGOs and academe who regularly participate in the government's 'consultative process' with the public on its domestic policies. Interviewees from these two specific entities have also played significant roles in the preparation and eventual ratification of the Paris Agreement.

The limited number of individuals willing to participate is not the only barrier faced by the researcher. Certain pertinent government agencies and departments who played significant roles in either the country's energy security policy or climate change mitigation negotiations that would have otherwise contributed immensely to this undertaking, have declined to be interviewed. Their contributions could have added a different layer of perspective from the rest of the participants.

The use of qualitative methods also has its limitations. As participants' perspectives are given more emphasis, this research acknowledges the fact that their subjective experiences form the crux of this research. It is also acknowledged that any individual being interviewed about his role in a certain occupation especially those who dedicated their professional lives to, will not self-deprecate nor undervalue their contributions or the role they played. Policymakers therefore, are no exception.

There are several policy recommendations that can be suggested following the findings of this research. First, domestic energy security trumps over the Philippines' obligations to the global cause of climate change mitigation. As such, the country should stay on course of its priority unless it wants to risk its economic growth which would be preposterous to think of given that the evolution of the now-industrialized countries started in the same path.

Second, since the IG framework structure of the Paris Agreement comprises nonbinding and lack of penalties if a state fails to meet its emission targets, the Philippines is placed in a favourable position to pursue further its fossil fuel use. It therefore needs to take advantage of such framework to be able to further address its domestic energy needs.

Third, the Paris Agreement's IG framework structure coupled with the Philippines' actual miniscule global carbon footprint (see Table 3) places it in a surreptitious advantage wherein it can still aggressively pursue its fossil fuel use while at the same time avoiding being accused as a major carbon emitter in the world stage. Before the country gets "blamed" for its GHG emissions, much larger emitting countries such as China, India and the United States would be criticized first.

Fourth, while IGs' framework structure remains in place in the Paris Agreement and implies that the Philippines can aggressively pursue its fossil fuel use, it also gives it ample time to improve the policies surrounding its RE sector to become more competitive in a deregulated domestic energy market.

Fifth, the Philippines needs to aggressively pursue RETs as it leads to the reduction of its reliance on fossil fuels. While it acknowledges that fossil fuels will be

part and parcel of its energy composition in the years to come, aggressive pursuit of RETs can make it one of the eco-friendly 'model countries.' This can give a signal to the rest of the world that it is aggressively pursuing ways to wean itself off fossil fuels. As an economically growing country, albeit susceptible to climate change, it needs to convince other countries to cooperate on the increased reliance on RETs to curtail the harmful effects of climate change.

There has been no existing study of how climate change mitigation regimes impact the design and diffusion of the Philippines' energy security policy especially within country's changing economic landscape. Albeit this research is timely given the mentioned circumstances, it would be interesting to think of a similar research being conducted in the future wherein past instead of present policymakers would be interviewed. Given that this research heavily relies on policymakers' perspectives within the last 6 years, the passage of time might prove worthwhile to conduct another project. If such project comes to fruition, previous policymakers might have changed their perspectives owing to the fact that any pressure on their professional capacities back then, have long abated by the time such future research is undertaken whenever that might be.

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ASEAN	The Association of Southeast Asian Nations
CCC	Climate Change Commission
COP21	21st Conference of the Parties
CVF	Climate Vulnerable Forum
DENR	Department of Environment and Natural Resources
DOE	Department of Energy
FIGOS	Formal Intergovernmental Organizations
GHG	Greenhouse Gas
IG	Informal Governance
IGOS	Intergovernmental Organizations
IIGOS	Informal Intergovernmental Organizations
INDC	Intended Nationally Determined Contributions
IRENA	International Renewable Energy Agency
NEDA	National Economic and Development Authority
NGO	Non-Governmental Organization
NSC	National Security Council
NSP	National Security Policy
PEP	Philippine Energy Plan
RE	Renewable Energy
RETs	Renewable Energy Technologies
UNFCCC	United Nations Framework Convention on Climate Change

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