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Challenges and Opportunities for Implementing Sustainable Wind Strategies in the Dominican Republic

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Walden University

College of Management and Technology

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Virgil J. Pérez

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Walden University
2022

Abstract

Challenges and Opportunities for Implementing Sustainable Wind Strategies in the Dominican Republic

by

Virgil J. Pérez

MBA, Cambridge College, 2015

BS, Cambridge College, 2013

Doctoral Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Business Administration

Walden University

October 2022

Abstract

The difficulties utility managers in the Dominican Republic have implementing sustainable wind strategies threaten the ability to diversify the energy supply and reduce dependence on imported fuels. Grounded in Rogers's diffusion of innovation theory, the purpose of this qualitative single case study was to explore strategies utility managers use to implement renewable wind energy in the Dominican Republic. The participants were five wind energy managers in the Dominican Republic. Data were collected using semistructured, face-to-face interviews and a review of company documents. Three themes emerged through thematic analysis: deconstructing the existing regulatory legal framework for renewable energy development, the fusion of hybrid technologies into utility operations, and securing land access and stakeholders integration. A key recommendation is for utility managers to work with government agencies to encourage renewable energy development and eliminate regulatory barriers. The implications for positive social change include the potential for successful change initiatives that positively impact employment and economic health and contribute to a cleaner environment.

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Dedication

I dedicate this doctoral study to my wife Mirtha.

Acknowledgments

I want to unambiguously thank Dr. Marilyn K. Simon, my chair, and mentor, for her teachings, inspiration, and support throughout the doctoral mentoring and completion progressions. She has been the pillar bestowing guidance and aim from the prospectus to this final study phase. I am privileged to have you as my mentor and leader. *Un billon de gracias*.

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I am grateful for my parents Dante and Leda, the endured encouragement of my children, Christopher, Kara, Eric, Nicole, and Frank, the boost from the First Calvary Baptist Church, and the Simon scholars who offered insights and inspiration along the way.

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Section 1: Foundation of the Study

Renewable energy (RE) sources such as solar, wind, and hydroelectric energy are widely considered sustainable. RE is the energy that meets current energy needs without compromising the ability to meet future needs (Kutscher et al., 2019). Most developing countries have abundant RE resources and can manufacture the labor-intensive systems needed to harness these power sources (Guerrero-Liquet et al., 2016). A framework for assimilating solar and wind resources in a grid throughout the Dominican Republic can drive adoption for years to come (National Renewable Energy Laboratory, 2015). The Dominican Republic's RE generation accounted for 21.7% of all energy generated in 2019 (D.R. Ministerio de Hacienda, 2020). Using RE offers multiple advantages over fossil fuel electricity, such as a more negligible environmental impact and cost-effective electricity production (Mostafaeipour et al., 2022).

Background of the Problem

The Dominican Republic (D.R.) Congress adopted the Renewable Energies Incentive Law 57-07, (D.R. Comision Nacional de Energía. Law 57-07, 2007) to promote RE production. The law grants stimuli and tax exemptions on and facilities for applying for renewable energy technologies (RET), 100% exemption from the import taxes on equipment, machinery, and accessories needed for the power generation from RE sources (Law 57-07). Through Law 57-07, the Dominican Republic sought to reduce environmental pollution and procure a stable electricity supply. The adoption of Law 57-07 has led to changes in the electricity sector in the Dominican Republic. These changes

have placed a burden on utility managers to develop strategies for generating RE (D.R. Organismo Coordinador del Sistema Eléctrico Nacional Interconectado [SENI], 2022).

Law No. 57-07 formulated incentives for RE in the Dominican Republic, potentially supplying 25% of the country's electricity needs by 2025. Wind energy accounted for about 4%, with an installed capacity of 7% as of September 2021 (SENI, 2022). These efforts align with the government of the D.R.'s efforts to support RE sources power projects as per Law 57-07. However, if electric utility managers do not implement strategies to produce electricity from renewable sources, they could lose up to 44% of power sector potential by 2030 (International Renewable Energy Agency [IRENA], 2016). Therefore, it is important for utility managers to have policies and strategies to execute RET.

Problem Statement

The Dominican Republic relies on fossil fuel imports to meet domestic energy consumption (D.R. Ministerio de Hacienda, 2020). Fossil fuel imports are predisposed to volatile oil prices; 85% of Dominican Republic's energy comes from fossil fuels, costing the country 8% of the gross domestic product (GDP; Donastorg et al., 2020). The general business problem is the challenge of renewable power realization faced by electric utility managers in the Dominican Republic. The specific business problem is that some electric utility managers in the Dominican Republic lack strategies to initiate and sustain wind power generation.

Purpose Statement

The purpose of this qualitative single case study was to explore strategies that electric utility managers in the Dominican Republic use to initiate and sustain wind power generation. The target population was electric utility managers of the online wind power generation project in the Dominican Republic with experience in using strategies to enhance wind power generation. The implications for positive social change include (a) the continued sustainment of RET in the Dominican Republic, (b) maintaining employment in this industry, and (c) financially addressing social issues such as poverty in communities while helping the ecosystem.

Nature of the Study

The three most common scholarly research methods are qualitative, quantitative, and mixed methods (Osuagwu, 2020). The method for this study was qualitative. Researchers use the qualitative method to study real-life conditions, answer questions, realize singularities and encapsulate human involvement (Runfola et al., 2017). Qualitative researchers seek to gather data to suggest explanations for a problem lacking an effective solution (Paradis et al., 2016). Using the qualitative design, researchers encapsulate data regarding the phenomenon from documents and other written communications and the participants' opinions, experiences, and formal presentations from organizational executives (Meloncon & St. Amant, 2019). Qualitative researchers secure exclusive insight into the participants' ecosystem through innovative and original data gathering methods (Halcomb, 2016).

In quantitative methodology, researchers focus on questions of *who*, *how much*, *what*, *where*, *when*, and *how many* and seek to examine relationships among variables using numerical data to generalize from a sample (Apuke, 2017). Hence, the quantitative methodology was not applicable to this study. Mixed methods researchers collect, analyze, and use quantitative and qualitative data (Venkatesh et al., 2016). Since only qualitative data were analyzed, a mixed methods approach was inappropriate for this study.

Qualitative researchers can select distinctive design options such as ethnography, phenomenology, and case study. By using the ethnography design, researchers can identify and clarify the culture of a group (Amuomo & Odoyo, 2020). Since the purpose of this study was not to explain a group's culture, ethnographic design was not appropriate for this study. Phenomenological design is used to explore a phenomenon by studying it from the participant's experiences with the phenomenon (Rahiem, 2021). This was not the intent of this study; therefore, using the phenomenological design was not suitable.

In multiple case design, each case is analyzed as if it is a single case design and is then contrasted to the other case (Gustafsson, 2017). The analysis of each following case is constructed on the data reached in the analysis of preceding cases. However, the intent of this study was not to explore how electric utility managers' strategies in two or more companies use strategies to initiate and sustain wind power generation in the Dominican Republic therefore, using a multiple case design was not suitable.

In contrast, single case studies are ideal for revelatory cases where an observer may have access to the previously inaccessible phenomena (Yin, 2018). A single case study is economical for all resources (i.e., money, human resources, time, and effort), especially when researching outside the United States (Eckstein et al., 2009). As only a small number of private companies take part in wind power generation in the Dominican Republic, it would be difficult to conduct a multiple case study. Furthermore, selecting one of the RE's newest companies grounded in the industry's best practices could help utility managers profit from the lessons learned from existing wind projects and strategies already verified. After careful consideration, a single case study design helps focus the research within the confines of space and time on a specific case. A single case study offers the chance to get an in-depth look at an organization or individual and the inner workings and interactions of that organization or individual (Yin, 2018). The case study results could serve to instruct others about leadership styles and processes.

Research Question

What strategies do electric utility managers in the Dominican Republic use to initiate and sustain wind power generation?

Interview Questions

1. As a management team member, what strategies do you use to realize sustainable wind power strategies?
2. What challenges or barriers did you face in initiating strategies to obtain wind power as a substitute to reduce electricity costs?

3. How did you identify effective strategies for realizing sustainable wind power utilization measures to advance operational productivity?
4. What factors do you feel influence wind power exploitation, and how worthy is each factor in your strategy to initiate and sustain wind power generation?
5. What policies do you feel need to be revised, reformed, or enhanced to address challenges or barriers to carrying out your strategies to initiate and sustain wind power?
6. What strategies are you applying to tackle these challenges or barriers?
7. What factors for investing in wind power vary from those capitalizing on fossil fuels?
8. What are the benefits and shortcomings of your strategies to increase wind power resource production in the Dominican Republic?
9. What other insights regarding strategies to execute sustainable practices to increase and improve wind power execution in the Dominican Republic would you like to share?

Conceptual Framework

The conceptual framework for this study was Rogers's diffusion of innovation (DOI). In 1962 Rogers formulated the DOI theory to clarify how innovation disseminates across a social system over time. According to the DOI theory, an idea or product gains impetus over time. The DOI theory diffuses through a specific population or social

system that includes an awareness of the need for innovation, the decision to adopt the innovation, the initial use, and the continued innovation (Rogers, 2003).

Rogers (2003) posited that adoption relates to the professed advantage, compatibility, complexity, trialability, and observability of innovation to the adopting group. According to Rogers, researchers and experts who scrutinize these elements could recognize the benefits and shortcomings of espousing innovation. Innovation focuses on nurturing the progress of analytical inputs used to enlarge the system elasticity to assimilate solar and wind power (IRENA, 2019). Thus, DOI theory served as a lens for observing the strategies electric utility managers in the Dominican Republic use to initiate and sustain wind power generation.

Operational Definitions

A feed-in tariff (FIT): A feed-in-tariff- is a strategy method created to encourage the deployment of renewable electricity technologies (Energy Information Administration [EIA], 2020).

Fossil fuels: Fossil fuels are an energy source produced from decomposed organic material in the Earth's crust. Conventional fossil fuels are petroleum (oil), coal, and natural gas (U.S. Environmental Protection Agency [EPA], 2019).

Renewable energy (RE): Renewable energy is energy from a source that does not deplete when used, such as wind or solar power (EIA, 2020).

Renewable energy resources (RER): Renewable energy resources are virtually infinite in length but limited in the volume of available energy per unit of time (EIA, 2020).

Renewable energy technology (RET): Renewable energy technology is the technology that enables the creation of electricity, heat, and fuel from renewable sources such as wind, solar, geothermal, hydropower, and various forms of biomass (EPA, 2015).

Assumptions, Limitations, and Delimitations

This section contains the assumptions, limitations, and delimitations necessary to explore the phenomenon. The next subsections explain assumptions, limitations, and delimitations that may impact this study.

Assumptions

Assumptions are uncorroborated assertions treated as fact (Yin, 2018). Assumptions are fundamental issues, ideas, or opinions found anywhere between the launch of a study strategy and the outcome that researchers take for granted and perceive as rational (Theofanidis & Fountouki, 2019). The first assumption was that those participating in the study have the required training, skill set, and experience to respond to the interview questions. Since purposeful sampling was used, this assumption was met. The second assumption was that the participants would respond truthfully. Since participation was voluntary and confidentiality was assured, this assumption was also likely met.

Limitations

A study's limitations involve potential vulnerabilities that are typically out of the researcher's control and linked with the selected research strategy, statistical model restraints, or other elements (Theofanidis & Fountouki, 2019). The first limitation in this study was the focus on participants within the chosen utility; therefore, the results may

not mirror other similarly situated wind projects. The second limitation was that the participants may not want to share their experiences of successes fully and may withhold details. Researchers should select the research design that provides the best answer to the research question while considering the strengths and limitations of each possibility (Yin, 2018).

Delimitations

Delimitations are limitations set by the researcher. Delimitations are concerned with what the researcher has defined and decided to set as the study's objective limits (Theofanidis & Fountouki, 2019). The results from this qualitative study could advance knowledge of a specific RE project, which indicated that delimitations were required. The first delimitation was selecting the most recent project connected to the Dominican Republic's electrical system rather than a more established project. Other delimitations included the participants' criteria: (a) electric utility managers of a wind power project, (b) electric utility managers in the RE trade, and (c) electric utility managers geographically located in the Dominican Republic.

Significance of the Study

Electric utility managers in the Dominican Republic may profit from the findings of this research by acquiring strategies to restructure working capability policies and design more sustainable RE strategies. An operational business strategy is dynamic to an organization's success. In this study, I explored the strategies electric utility managers use to sustain wind power generation. The study findings may increase the knowledge and understanding of the business strategies employed by electric utility managers in the

Dominican Republic. To gain a competitive advantage, electric utility managers should launch strategies that, once founded, function as decision-making practices spirited to realize objectives (Kang & Na, 2020).

Contribution to Business Practice

This study may be a factor in the body of knowledge of evolving RE markets by closing the gaps in advancing successful RE generation projects. Qualitative research provides understanding of how individuals undergo or recognize a given singularity (Cleary et al., 2014; Johnson et al., 2020). Through this research, electric utility managers in the Dominican Republic may increase insight into dynamic elements and strategies to advance successful strategies to develop wind power generation and reduce profit and prospect costs in wind power projects. Progressing wind energy projects in the Dominican Republic may yield profits via lease fees to landowners and provide employment opportunities while benefiting the environment. In addition, wind energy aims to reduce emissions and provide clean and efficient energy for future generations (Razmjoo et al., 2021).

Implications for Social Change

Effective implementation of RET could cause multiple positive outcomes for society. Rogers (2003) posited that the first to adopt an innovation (the innovator) is inclined to do so for thrill over newness or eagerness to be unrestricted by social standards. The next group to adopt (early adopters) do so because a precise evaluation of the innovations' benefits offset the drawbacks (Dearing & Cox, 2018). Employing RET in electricity generation could positively impact the economy of the Dominican Republic.

The adoption of Law 57-07 has led to new fuel and power production projects (D.R. Ministerio de Hacienda, 2020). But the coronavirus (COVID-19) pandemic has caused an unprecedented global economic and social crisis that has negatively affected all aspects of life, including the stability of fuel prices in the energy sector (Nicola et al., 2020).

In the RE sector, developers of solar and wind power projects have understood the burden of the COVID-19 impact through project delays (IRENA, 2020). In addition, the pandemic caused attention to RE, such as how low carbon infrastructure is a footpath to invigorate the economy, boost employment, and lower pollution (Khanna, 2020). Thus, the COVID-19 pandemic may lead to a benefit for RE in the Dominican Republic by increasing technological strategies.

Electric utility managers could use tactics that effectively implement RET thus improving social change. If electric utility managers can effectively formulate and contrast social innovation in a general context, they can create a stronger and richer perception of the dynamics that shape the guidelines and conversion strategies to foster the adoption of RET innovations (Hoppe & De Vries, 2018). Thus, the findings of this research could benefit the Dominican Republic's power sector stakeholders by postulating strategies to advance practical wind power generation projects. In addition, the findings may be used to close financial gaps the D.R.'s government encounters, thus boosting electricity generation capacity and improving people's wellbeing.

A Review of the Professional and Academic Literature

This literature review aimed to align key contributions from the literature with a comprehensive and structured perspective on strategies to execute RE. The literature

review adheres to consistent guidelines in organized searching, sifting reviewing, evaluating, construing, synthesizing, and reporting of findings from multiple publications on a theme of interest. aims to advance knowledge in a field, close gaps where knowledge exists, and identify areas for future research (Baker, 2016; Pati & Lorusso, 2018). Thus, conducting a literature review involves developing a plan to conduct a comprehensive review of the topic under investigation (Schirmer, 2018). Conducting a literature review involves developing a plan to conduct a comprehensive review of the topic under investigation (Cooper, 2017; Schirmer, 2018).

Relevant research and qualitative studies were examined to offer a theoretical foundation to the research question. I chose Rogers's (2003) theory of diffusion innovation as the conceptual framework for this study. The research question was "What strategies do electric utility managers in the Dominican Republic use to initiate and sustain wind power generation?" DOI is the process of dispersing innovation over time throughout specific communication channels among participants of a given social system. Furthermore, Rogers explained that diffusion is a style of social change in which fast-tracked changes in the makeup and purposes within the social system result in accepting or rejecting an innovation.

This single case qualitative research study may yield practical uses for electric utility managers to initiate and sustain wind power generation. In addition, the outcomes could help update practices and policies for enhancing organizational job performance, fulfillment, and engagement. This literature review included a significant discussion of the background of the relevant literature, including articles on sustainable RE, managers'

proficiencies, and energy progress in the Dominican Republic. The review offered a sturdy foundation for the problem statement.

This literature review consisted of broad and centered searching of various databases to locate scholarly journal articles, books, and electronic media across multiple disciplines. The sources involved online library databases such as Google Scholar, Thoreau, ScienceDirect, ProQuest, EBSCO, Sage, and ResearchGate. In addition, I used keywords and phrases such as *renewable energy, feed-in tariffs, diffusion of renewables, fossil fuels, barriers to implementing renewable energy technologies, diffusion innovation theory, electric utility, renewable energy sources,* and *strategies for executing renewable energy*. The literature review section included 275 references, about 85% of which are peer-reviewed sources, with 173 (63%) sources published between 2018 and 2022.

Conceptual Framework Background

A theoretical framework plays a critical role in advancing academic and practical knowledge (Lindgreen et al., 2021). DOI theory was the conceptual framework that guided this study. Using the DOI theory could offer discernment regarding how, over time, an idea or innovation gains momentum and spreads through a specific population or social system (Rogers, 1962). By exploring the ability of electric utility managers to use resources to attain a competitive advantage, the study results could reveal strategies to advance successful strategies and potentially increase profits of wind power projects in the Dominican Republic.

Diffusion research is within the systemic context, and innovative technologies usually undergo a process of evolution, from invention, through innovation and diffusion;

in this broad classification, innovation is the multiple procedures that improve the realized features of a technology as it evolves from invention to widespread diffusion (Grubb et al., 2021). Energy technology innovations development impacts RET costs and other variables in the system as technology diffusion and technical performances (Elia et al., 2021). Recognizing these influential dynamics and where these elements are chosen is significant for the early stages of diffusion (Tidd & Bessant, 2013). Early adopters will follow the innovative users and the remainder of the potential adopting population will follow. (Rogers, 1962). Innovative methodology fits exploring leadership styles, building relationships, and motivating employees (Okyere, 2017). Workers envisage leaders to execute principles, have a vision, and offer direction toward converging structural objectives (Northouse, 2018). Therefore, using DOI could aid with improving strategies.

Diffusion of Innovation Theory

Rogers (1962) formulated the DOI theory to explain how an idea, practice, or project is adapted over time. Rogers outlined innovation as an occurrence, progression, technology, or element contributing to a social system. Rogers noted the various features of innovation help define the rate of adoption. Significant components of DOI are innovation and complexity (how straightforward the innovation is to be recognized), compatibility (the measure of the innovation to prove conditions of realizing the same goal), observability (the scope to which outcomes can be perceived), and trialability (the scope to which the adopter must promise to full adoption). Other significant components of DOI include the adopter, the social system, the system's configuration, and the individualistic adoption.

Through the DOI theory, Rogers (2003) posited that the technology, the adopter, and social system features are persuasive in adopting a new system. The DOI theory serves as a framework to reveal reasons for hesitancy in adopting RE. Such a framework is significant for marketing purposes to reduce the chances of innovation failing in the marketplace (Fry et al., 2018). Therefore, the DOI theory serves as a valuable framework for recognizing what are inducing views and attitudes towards RE, and what causes stalling adoption. Nonadopting or rejection is a principal component of the DOI theory but is usually dismissed in the literature because of the bias regarding practical innovations (Rogers, 2003). Rogers posited that adoption does not need to be total and may be partial, such as through a trial period.

Rogers (2003) also posited that the DOI theory and the adoption decision entirely use innovation as the best path of action accessible in an organization. When determining whether to adopt innovative technologies, managers can use the DOI theory to measure features and anticipated net advantages (Gianluca & Volpe, 2017). Investigating the literature and performing the strengths, weaknesses, opportunities, and threats analysis (SWOT) can reveal setbacks and progress resulting from adopting these technologies. In addition, understanding the SWOT analysis may offer insight into practical ways to increase wind power generation.

Justification of the Theory

Researchers use theories from different lenses to view complex questions and social issues, focus on the data's respective viewpoints, and stipulate a framework to run an analysis (Johnson & Christensen, 2017). For example, researchers have used the

business model concept and disruptive innovation theory to study the fossil fuel sector and the transition to RETs. A suitable business model must answer the following three basic questions: (a) who are the consumers? (b) what is beneficial to the business? and (c) how can that benefit be offered at a fair price? (Drucker, 2012). The DOI theory refers to the process as people adopt a new idea, product practice, or philosophy. In multiple cases, limited people are open to a new idea and adopt the process. As these early innovators share information, more people become open to the idea, leading to a process (Beausoleil, 2018).

Competition involving cost and productivity does not help with business growth (Schumpeter, 1939, as cited in Croitoru, 2017; Graça Moura, 2017); however, what counts are the challenges of new business and innovative technologies and new business models. Although electricity generators are used for innovation schemes to cope with the shifts in the energy marketplace, there is a gap concerning financing and adapting to the impact of increases in variable RE (Bryant et al., 2018). If each typology adapts to increasing levels of RE by offering substantial contributions to customers, rather than competing in a commodity market, energy utility and utility entities could start to shape robust niches and shift the way the energy market functions.

Disruptive innovation theory is a novel value proposition derived from niche technologies with disruptive potential in a system (Geels, 2018; Zubizarreta et al., 2021). For instance, Rosenbloom (2019) explored the theory in Ontario, Canada, as the province moved toward decarbonization, resulting in significant environmental sustainability improvements. The disruptive innovation theory applies to an existing or expected

change in energy at the general level. Hence, disruption innovation theory is used to recognize the ways disruption in various contexts should occur. Some contemporary technological advances improved due to disruption innovation include electric vehicles and electronic cigarettes (Guttentag & Smith, 2017; Johnstone et al., 2020). However, researchers have claimed the term lacks clarity, is awkward, and is vague (Weeks, 2015).

Regardless, following the assessment of other potentially suitable theories, the DOI theory emerged as the most suitable for this study. Rogers (2003) suggested that factors persuading the rate of innovation adoption are the relative speed by which individuals adopt an innovation in a social system. Applying Rogers's DOI theory to electric utility managers presents an inclusive framework supporting the exploration of electric utility managers' strategies to implement RET.

Relevance of the Literature

Researchers use a theoretical framework to contextualize formal theories into research as a guide (Ravitch & Carl, 2016). A theoretical framework guides research and links to the research problem under study (Ravitch & Carl, 2016). Scholars have used multiple theories to investigate RE's adoption in the fossil fuel industries, particularly RE's adoption by an electric utility. For example, the growth, conservation, feedback, and neutrality hypotheses are only a few examples of theories proposed to explain the energy consumption–economic growth connection (Said et al., 2022).

Reyes-Mercado (2017) integrated DOI with cognitive frameworks for determining the factors that influence the adoption of solar energy technologies for urban households in Mexico. As a result, business leaders can use DOI to promote interpreting

how, why, and the rate of RE diffusion. Furthermore, the study offered methods for exchanging innovative ideas such as energy productivity and RE use in the social system and offering a set of attributes that understand the customer's decision to adopt RE (Rogers, 2003).

Other theories used by researchers include the customer value theory, the theory of reasoned action, and the information-deficit model. Sangroya and Nayak (2017) used customer value theory to identify the elements that advance green energy trade consumers' links by exploring the impact of several factors of customer value on perceived changing costs in the green energy market trade.

Zahari and Esa (2016) used the theory of reasoned action to identify the drivers stimulating the adoption of RE and the results offered that environmental concerns and relative advantages have a further impact than consumer belief and knowledge in the adoption of RE. Furthermore, theory of reasoned action affirms that the expectation of implementing a specific behavior depends on individual norms and views toward the behavior (Hai et al., 2017). Finally, Bidwell (2016) showed that information-deficit model (IDM) influenced changes in attitudes toward RE. Business leaders can use IDM to clarify the public understanding of science via links between scientific knowledge in general and science and technology general perspectives (Bidwell, 2016; McDivitt, 2016).

Successful leaders of corporations find it challenging to adopt technologies, as this entails making challenging adjustments to fundamentally new technological systems, prospects, and outlooks (Ringberg et al., 2019). Scenario planning is a valuable tool for

advancing strategies to enable electric utility managers to seize prospects and offset the risks of technology changes (Quiceno et al., 2019).

Companies can be affiliated and efficient in management adaptation to environmentally friendly energy technologies with a balance of the two technologies (Ossenbrink et al., 2019). Although managers have increased the acceptance of RE business models, scholarly attention to business models continues to be lacking. Concentrating just on technologies and business models only partially uses the theory (Wilson & Tyfield, 2017). Only business models cut the value of existing organizational assets and competencies to enhance pressure for business leaders to renew the business models (Lindberg et al., 2018). There is also no consensus regarding the RE business model's definition, structure, and properties in academic fields (Cai et al., 2019). In the current study, Rogers's (2003) adoption of innovation served as a comprehensive outline for exploring strategies that electric utility managers might use to execute RET.

Technology Acceptance Model

The technology acceptance model examples how individuals accept and use a technology (F. D. Davis, 1986; Wang et al., 2019). Researchers use technology acceptance model to scrutinize and clarify technology approval, such as user demographics and psychographic factors (Dhagarra et al., 2020). Researchers using technology acceptance model focuses on technology and user activities, whereas those using the DOI theory focus on innovative technology and social conduct (Zubizarreta et al., 2021). The elements discussed in Rogers's theory center uniquely on technology-related contributing factors (Blut et al., 2016; Ongena & Ravesteyn, 2020). DOI

progression can go through innovation advancement to shaping user viewpoints and conducting a final adoption or dismissal evaluation (Rogers, 2003). Therefore, after reviewing other theories, I determined that the DOI theory aligns with the study. Furthermore, adopting innovation is where individuals choose, reject, execute, and validate the innovation (Rogers, 2003). Thus, adopting innovation could aid with strategies electric utility managers could use to execute wind power expertise in the Dominican Republic.

Rate of Adoption of Renewable Energy Technologies

Rogers (2003) determined how issues within an innovative technology could cause business owners to be reluctant to utilize the innovation. The method for researching RET's compatibility, relative advantage, complexity, trialability, and observability of underlines drawbacks and reasoning to utilize the technology (G. Smith et al., 2022). Therefore, when crafting tactics to execute RET, electric utility managers look for tactics to decrease barriers and concentrate on RET's profits.

Comparative Advantage

Diversified features can be factors when comparing different types of innovation. Ricardo (1817) developed the theory of comparative advantage. The author claimed that a nation or a company could boost economic growth by focusing on the industry with the most substantial measures for comparative advantage. Tactics for comparative advantage include reviewing if an innovative technology or system increases income and reduces man-hours instead of the previous system used (Kant et al., 2018). Comparative advantage can be obtained by using an innovation that aligns with the adoption rate.

Rogers (2003) noted that comparative advantage is the most noteworthy feature prompting adoption.

Comparative advantage is not a stagnant theory. Comparative advantage is what company leaders strive for while reducing costs. For example, if a utility company is an excellent energy generator and has a remarkable electric utility manager team, the utility can maintain a comparative advantage. That is because the utility will make more money as an energy generator. However, generating energy with high-quality at a reduced cost is the utility's comparative advantage. The utility company would give up low-cost electric utility manager's positions to gain well-paid energy generation (Marshall, 1920).

Financial Dynamics

Renewable energy sources are significant to attaining sustainable growth. (Guerrero-Liquet et al., 2016). In comparison to fossil fuels, RE is clean, endless, and eco-friendly. Therefore, improving the financing of an ecosystem in RE projects is central (Raghutla et al., 2021). However, the risks in power generation financing come from diverse sources and can be considered multi-dimensional based on the dependency of different project stakeholders' perspectives (Ioannou et al., 2017). SWOT analysis is used to realize the internal and external risks in establishing wind energy projects (Rolik, 2017). The researcher determined that risk is characterized by project risk, market risk, and management risk. Since financiers must review various criteria, understanding the risks linked to their decision-making helps make informed decisions (Rolik, 2017).

Exploiting RET to displace fossil fuel technologies in generating electricity requires financing (Saygin et al., 2018). This energy evolution stems from technological

innovation, especially in the RE field. New add-ons of installed RE capacity have led to price decreases and increased affordability, primarily for wind and solar power electricity (Gielen et al., 2019). The authors suggested that an example of failures and successes in energy changeover indicates that energy transitions built on energy strategy structures produced by governments such as Brazil, Germany, and Denmark can hasten energy changeovers. These transition strategies reflect energy system features and incorporate energy supply and demand (Gielen et al., 2019).

Germany's Energiewende, is the product of a domestic compromise to end nuclear power generation could ensure continued economic growth and reduce greenhouse gas (GHG) emissions by 80% by 2050 via the increased acceptance of renewables (Morris & Jungjohann, 2016). While the Energiewende remains a power segment policy shift, it has had little effect on coal-fired energy production plants and made buildings and transportation more energy conscious (Kemfert, 2017). Countries like Brazil, Germany, and Denmark engage in energy conversion processes for renewables and energy effectiveness (Gielen et al., 2019).

Loss of Alternative Income

A significant issue with renewable plants (solar and wind farms) is the massive land area needed to generate energy. Land-use of wind power depends on the turbines' spacing and sitting (Hamed & Alshare, 2021). The authors suggested that land-use includes groundwork, construction, transmission lines, and access roads. Compared to other energy systems, wind energy has a nominal land footprint. Nevertheless, the visual effect on the landscape may affect the worth and uses of adjacent lands (Hamed &

Alshare, 2021). Hence, there is a need to foster large-scale RE plants; however, this requires a sizeable land area. This massive amount of land, comprised of farmland, should be transformed into structures, highways, or other substructures supporting RE projects. In realizing this, farming, tourism, and fishing may be disturbed (Nesamalar et al., 2017).

Lack of Skilled Professionals

The transition from fossil fuels to RE sources needs the solid underpinning of proficient personnel (Seetharaman et al., 2019). The authors posited the need for informative RE curriculum and appropriate training for skill development is necessary to install and succeed in RE projects. The lack of a proficient workforce to design, finance, structure, operate, and continue RE projects are significant in advancing RET (Karakaya & Sriwannawit, 2015). Rogers (2003) noted how incentives could encourage the adoption of an innovation. Rogers further suggested that adopters could use incentives to boost the assimilation of innovation among potential adopters' (Tanye, 2017). Incentives (e.g., money, upward mobility, etc.) are used to increase the apparent relative advantage of an innovation. Because sustainable product innovation creates newness and ecological benefits, sustainable products may have a relative advantage over existing products (Rogers, 2003) and be appealing to early adopters that respect the ecosystem (Paparoidamis et al., 2019). Relative advantage is related to the rate of adoption of an innovation.

Relative Advantages of Implementing RET

The potential relative advantages of implementing RET are reliant on multiple elements. RE is energy from resources naturally restocking but has a limited flow. In contrast, renewable resources are inexhaustible in time but limited in the volume of energy obtainable per unit of time (EIA, 2020a). Relative advantage is the most significant feature affecting adoption (Rogers, 2003). Moreover, economic factors, market opportunities, and business opportunities are various advantages to electric utility managers who execute RET.

RE Operational Competence

Electric utility managers need to adjust to transformations in RE source's obtainability. An *electric utility* is an entity involved in generating and delivering energy to customers in a particular jurisdiction (EIA, 2019). Therefore, the ongoing transition to a renewables-based system and electric utility managers' role could evolve to react to new energy system structures and strategies (IEA, 2017).

Decisions on adaptation and financing strategies involve recognizing how fast the transition will occur, which technologies will succeed, and how the ultimate energy mix will appear after the change (Fattouh et al., 2019). After the outbreak of the COVID-19 pandemic, organizational leaders modified their strategies by integrating resources built over time (Rafiq et al., 2021). Innovative organizations will not endure unless operational competence is applied to the structure (Verma & Gustafsson, 2020).

Strategic Business Planning

Strategic planning is an accepted strategic management tool. Strategic planning as the first step in a model positioned in the direction of the breadth and assessment of results (Biondi and Russo, 2022). Strategic management is an expanded field that spans from analyzing strategies in businesses to that of strategy in the public sector (Bolland, 2020). R. K. Thomas (2021) proposed that strategic planning is *a* recognized, continuing process for advancing goals and employing activities to align the organization in the market while harmonizing existing resources with market prospects. Borowski (2021) recommended that it is possible to tweak, revolutionize processes, and realize innovative solutions to attain the assumed strategic plans. Collaborative roles of stakeholders could cooperate to encourage sustainability adoption in enterprises and recognize how these roles influence overcoming barriers to adoption (Journeault et al., 2021). Strategic business planning is the first step in growing a business.

A business plan is a document of potential challenges and viable solutions. Business plans are used to identify and establish business objectives, develop strategy, create appropriate structures, define activities and responsibilities, and measure potential results for investors (Henriques et al., 2022). A business plan consists of viable financial, statistical, and economic data permitting an entrepreneur to recognize the system where the company will operate (Brinckmann et al., 2019). failure of infrastructural projects correlates with operation, and reliability on organization to yield value (Ongbali et al., 2021).

Strategic planning is an organizational management activity used to set priorities, increase assets, bolster operational abilities, ensure stakeholders and employees work for joint objectives, and align goals within a changing ecosystem (Wolf & Floyd, 2017). Moreover, Ginter et al. (2018) suggested that economic, social, political, technological, and viable changes force company leaders to evaluate their business pursuits and decide the next steps. Finally, Bryson et al. (2017) suggested that managers execute operational strategies to tackle the mutable business ecosystem.

Electric utility managers can increase success by constantly assessing the business ecosystem, products, and services. Leaders must adjust to and manage ever-changing conditions and creativity for businesses to thrive (Birasnav & Bienstock, 2019). Furthermore, Nguyen (2017) suggested that successful company leaders design long-term business strategies centered on fostering employee knowledge and skills. Therefore, poor execution of a business strategy decreases the chances of business success.

Leadership Strategies

A business cannot thrive without leadership proficiencies. Managers reassess business progress from distinctive vantage junctures to improve working proficiency (Palmi et al., 2018). Leadership for organizational compliance involves aiding workers with handling change and uncertainty (Uhl-Bien & Arena, 2018). The focus on leadership is on how leaders can improve the variables within the ecosystem. The linking process is about forming and improving relationships. Electric utility managers should seek to link individuals and concepts sequentially to advance and scale innovation and assimilate it into the operational system.

Success and Sustainability of Utilities

Leaders and managers hold various roles in organizations. Managers uphold and supervise businesses, while leaders seek to overtake them (Ali & Anwar, 2021). Organizational leaders often fail due to a lack of operating expertise, leadership skills, and progression strategies (Mueller & Shepherd, 2016). Managers confront various challenges, and these challenges are viewed to be reluctant to contemplate sustainability (Borg et al., 2020). Silvius and Schipper (2020) revealed that managers possess diverse stimulus patterns considering sustainability. Managers tend to be intrinsically motivated, task-driven, and pragmatic, grounded on values and assertiveness. Magano et al. (2021) suggested that it makes sense to explore how managers recognize the role of projects and project management in the sustainable advancement of businesses and society.

The progression of high-quality professional training of managers within the framework of the latest global challenges, including COVID-19, needs thorough reconsideration of the competency model of a successful manager (Bondarenko et al., 2021). Due to complexity, changes, and antagonism in the ecosystem, which causes risks, managers need to use suitable risk management strategies to appraise, manage, and maneuver risks (Kabirifar et al., 2020). In addition, improving managerial behavior could help improve personnel's moral and work quality (Okyere, 2017).

Effective managers must be attentive to government regulations, ethics, and social responsibility to safeguard organizational sustainability (Kolk, 2016). Managers must always be involved in the innovation process and execute strategic planning as part of the business model (Taneja et al., 2016). Electric utility managers in the Dominican Republic

with appropriate training could decrease failure in the development of wind energy generation. Managers yield positive results when they become aware of their failures and learn from them (Omorede, 2021). Managers are better suited with more expertise and knowledge from previous engagements, making better decisions for future actions and responsibility. Electric utility managers can perform strategically with education, innovative leadership, and guidance. Realizing and maintaining business success lies within organizational and managerial strategies accessible to businesses (Nwachukwu & Chládková, 2019).

Strengths, Weaknesses, Opportunities, and Threats Analysis

Identifying new opportunities to empower survival requires a vision beyond the corporation's direct network (Thomas & Douglas, 2021). Using a SWOT in the business world helps to review data available to managers during decision-making process (David et al., 2017; Rozmi et al., 2018; Wu, 2020). Managers should use various strategies to improve strategic plans, describe the mission statement, and realize competitive advantage. Strengths characterize the establishment's internal control, while weaknesses disparity in internal competencies (Mondal, 2017). Opportunities are an organized set of ideal stipulations permitting an establishment to realize desired results. The last component is external negative over which managers have no control, including lack of policies and strategies, lack of mandatory standards, and weak public and private partnerships (Salim & Dabous, 2022). A SWOT analysis aims to pinpoint a proper business strategy considering the establishment's resources and capabilities (David et al.,

2017) posited that. Therefore, devising a business strategy is a central element of business growth.

Complexity

Complexity is the recognized extent of inconvenience in grasping and applying an innovation by a prospective adopter (Rogers, 2003). Complexity is one of the most widely used features in influencing adoption. The diffusion rate of RETs is still substandard compared to conventional fossil fuels (Verdolini et al., 2018). Today, dependence on generating energy is fundamental for energy security. RE can play an indispensable role in reaching this goal, offering an important reason for investing in it (Hamed & Bressler, 2019). Transitioning towards RE can similarly solve the issue of improving the living conditions of rural populations (Sen & Ganguly, 2017). One key reason for the sluggish diffusion is that RETs are not as economical as conventional energy technologies, which are still developing and surpass RE in various aspects such as adeptness, initial cost, steadiness, and availability (Seetharaman et al., 2019; Verdolini et al., 2018).

Developers can use the DI to make the persuasion stage more complete. DI is a novel value proposition derived from niche technologies with disruptive potential in a system (Geels, 2018) described. A contrary view on how managers can disrupt existing actor-networks, something they associated with a reconfiguration path Matschoss & Heiskanen, 2018). Also, Lazarevic and Valve (2020) connected disruption to reconfiguration by underlining how niches reorganize multiple techniques to recognize their disruptive potential.

Following DI, the value of technology splits into two dimensions, when the main ideas of previous work become hidden by random uses of terms and leaders utilize poor strategies (Christensen et al., 2015). When DIs enters a market for the first time, innovation brings a conceptually and qualitatively new dimension (Y. Zeng et al., 2018). RET is dynamic when solving the energy quandary; however, the diffusion of RET is yet inadequate. The slow diffusion of RETs is still not as viable as conventional energy technologies. Inadequacy in developing RETs in the initial cost is typically higher than conventional energy technologies (Y. Zeng et al., 2018). Therefore, leaders can use the DI theory as an alternative to current technologies, outlining the competition on a leveled basis.

RET has two groupings suitable for consuming energy and providing independence from the grid as an energy facility (Y. Zeng et al., 2018). To overcome barriers, electric utility managers may engage in strategies to reduce reluctance to implement an innovation that could allow proficiency in RET (Berlo et al., 2017; Downie, 2017). As a result, using RETs plays a notable role in shifting the planet toward a cleaner and more viable energy system (Li et al., 2019).

Compatibility

Compatibility is how innovation is considered compatible with the end-users' current beliefs, expectations, and requirements (Ullah et al., 2021). Rogers (2003) explained technology diffusion as how an individual or decision-maker decides to adopt or decline a new process. Rogers further noted that diffusion includes two singular actors, such as a business or association that will adopt the innovation or innovative technology

and individuals doing the same. Therefore, the compatibility of innovation is built on if the innovation aligns with current business processes (Rogers, 2003).

Shared innovation unavoidably has risks, such as opportunistic conduct, data asymmetry, and inadequate knowledge sharing (Cai et al., 2019). These risks consequently influence innovation system execution. For example, Rogers (2003) posited that customers adopt processes to implement innovative technology based on obtained the innovation knowledge. Therefore, electric utility managers should continually update strategies to execute RET to keep up with new advancements.

Need for Engendering RE at a Minimal Cost

The energy mix of a country is an essential element of its energy security, and it has multiple inferences for energy transition and climate strategies (Rubio-Varas & Muñoz-Delgado, 2019a). The use of fossil fuels puts human health at serious risk. Coal use has driven human evolution and altered society; however, the effects of fossil fuels on the ecosystem and human health, including ecological pollution, anthropogenic climate change and shrinking resources are substantial (Finkelman et al., 2021). Electricity savings and RE generation deliver the basis for assessing energy efficiency and RE's benefits to the electricity system, emissions, public health, and the economy (EPA, 2018a).

Intelligent electrification methods must ensure the model works using innovative business models and market intentions (IEA, 2017). Moreover, converting electricity to mechanical work is very efficient, whereas the efficiency of fuels going through the thermodynamic cycle is limited. Similarly, multiplicity, profuse ease of use, and RET

elasticity are significant for assembly strength and security (REN21, 2017). Fossil fuels are usually subsidized, notwithstanding adverse side-effects such as GHGs and changes to the ecosystem (Zimm et al., 2019). Electric utility managers may recognize the financial and ecological challenges linked to fossil fuels for generating electricity, and the managers may use fossil fuels with economic technologies.

RE in Contrast to Natural Gas, Coal, and Oil

Oil is the first fossil fuel that, over time, should be replaced by other sources in the generation of electricity (Kåberger, 2018). RE from solar and wind is cheaper than crude oil and exhibits the possibilities of replacing fossil fuel with RE. Natural gas is the least harmful fossil fuel. Numerous gas-fired electricity plants worldwide have low use only during peak price periods (Kåberger, 2018). Coal remains a leading energy source for electricity generation worldwide; however, coal combustion is challenging to control power output and pollution (Kåberger, 2018). Therefore, using RE could increase social and economic advancement and reduce harmful effects on the ecosystem and health.

Stakeholder Engagement

Stakeholder engagement is substantial to advancements in RE. Scholars have recognized that stakeholders have significantly influenced project results (Oppong et al., 2017). This confirmation by researchers of stakeholder engagement in RE-related industries is central to realizing RE's widespread use (Wehn et al., 2017). Effective communication networks are central between project managers and stakeholders (Sadhukhan et al., 2018) stressed that. Dialogue is ordinarily a successful strategy for expanding stakeholder support. Additionally, Project management is the basis of any

construction project since projects are constantly evolving, a well-planned process to ensure their success (Lalmi et al., 2021). Therefore, RE strategies should be intentionally resourced as an alternative to the make-it-up-as-we-go-along strategy.

Review of Methods and Previous Practices

Some business managers recommend RE sources to power production facilities to make the production process cleaner (Kealy, 2020). Executing RE strategies could generate savings on electric bills and decrease toxic CO_2 emissions (Vazquez-Hernandez et al., 2019). Sustainable business progress begins with sound decision-making and leads to embracing changes needed to improve the ecological harm a business could cause (Kealy, 2020). Electric utility managers must efficiently manage financial and RET resources to attain business goals (Nijhof et al., 2019). Investment in RET must benefit the community and business entity's economic, social, and ecosystem components (Cubas-Diaz & Martinez Sedano, 2017).

Observability

Observability refers to the visibility of the results and benefits obtained by adopting an innovation (Rogers, 2003). For example, the average consumer does not fully understand how electricity turns on a light bulb by flipping a switch, even though they can benefit of using electricity. However, if customers cannot perceive the results of adopting innovation, these customers might be incapable of motivating others to use the innovation. Adopting innovation occurs when consumers are likely to hold strong viewpoints about the technology usage's perceived benefits and risks. (Featherman et al.,

2021). Rogers (2003) described observability as how others recognize the outcome of innovation.

In the United Kingdom, various electric utility managers executed RET without drastically changing the utility's business models (Shomali & Pinkse, 2016). The authors proposed that a conventional business model for delivering energy involves engaging in the extraction, supply, and burning of nonrenewable fossil and fissile resources by large, centralized energy providers. Furthermore, existential threats caused by climate change and rapid cost reduction of intelligent decentralized energy systems pose a direct challenge to this business model.

Business leaders in the energy field recognize new business models that may fundamentally modernize energy generation, delivery, and consumption (Brown, 2018). Real-world models of innovative local energy business models involving both the generation and the self-depletion of RE, although the more innovative model remains theoretical (Hall & Roelich, 2016).

New business models with new value sources can create new or enhanced revenues and reserves for consumers to distribute a more extensive nonfinancial value system. Thus, when improving strategies to realize RE, electric utility managers consider the experiences ascertained from additional utilities and form strategies connected to the utility functions (Shomali & Pinkse, 2016). However, despite the possibility of business success, not all electric utility managers are enthusiastic about changing the business model (Shomali & Pinkse, 2016). Therefore, electric utility managers may have issues within a business model when incorporating innovative technology.

Trialability

Trialability is when likely adopters evaluate an innovation (Rogers, 2003). Trialability decreases insecurity for business leaders attempting to implement an innovation. Rogers indicated that the methodological incapacity to seek innovation might influence the choice to adopt innovation. Individuals require the option to evaluate a new service or product to understand the potential value, profits, and ease of use.

As electricity is a commodity parallel to other supply chain managers, fossil fuel, natural gas, and energy supply chain manages substantial amounts of physical assets (Nakajima, 2018). Additionally, Haugom et al. (2018) verified that electric utilities confront high price instabilities due to geopolitical concerns. Moreover, future energy prices influence location prices and forward risk payments, as electricity stockpiling is not cost-effective, unlike other commodities (Nakajima, 2018). Traditionally, electric utility managers emphasize maintaining a consistent and even electricity resource.

Transition and Summary

Section 1 includes the background of the problem, problem statement, purpose statement, and nature of the study, research and interview questions, conceptual framework, operational definitions, assumptions, limitations, delimitations, and significance of the study. Section 1 concluded with a review of the professional and academic literature.

In Section 2 I restate the purpose statement, explain the researcher's role, discuss the eligibility of participants, and explain the research method and design, population and sampling, ethical research, data collection tools, data collection technique, data

organization technique, data analysis, and reliability and validity. Section 3 includes an overview of the study, a presentation of the findings, application to professional practice, implications for social change, and recommendations for action and further study. Finally, section 3 will include the researcher's reflections and conclusions.

Section 2: The Project

Section 2 includes an in-depth analysis of the method I used for this study on strategies that electric utility managers in the Dominican Republic use to initiate and sustain wind power generation. Section 2 consists of the study's purpose, the researcher's role, participants, research method and design, population and sampling, ethical research, data collection instruments, data collection technique, data organization technique, data analysis, and reliability and validity. I also include the steps I followed to ensure the study outcomes' validity, reliability, and confidentiality.

Purpose Statement

The purpose of this qualitative single case study was to explore strategies that electric utility managers in the Dominican Republic use to initiate and sustain wind power generation. The target population was electric utility managers of the online wind power generation project in the Dominican Republic with experience in using strategies to enhance wind power generation. The implications for positive social change include (a) the continued sustainment of RET in the Dominican Republic, (b) maintaining employment in this industry, and (c) financially addressing social issues such as poverty in communities while benefiting the ecosystem.

Role of the Researcher

The researcher's role is to define phenomena, explain the relationships between phenomena, evaluate the phenomena, and aid the advancement of strategies (generative; Chai et al., 2021). In addition, a qualitative researcher undertakes the role of a data collection instrument (Marshall & Rossman, 2016). I was the interviewer and central data

gathering tool in this qualitative case study. The data collection process entailed interviewing participants. I purposely selected the participants initially via phone and email. I maintained participants' confidentiality honoring their right to withdraw during the research process. The participants' enthusiasm to partake in a study hinge on their link to the subject matter and capability to work in collaboration with the interviewer (Santos, 2016).

A researcher is also responsible for recognizing any form of bias that may stem from individual experiences and standards that have the potential to sway the analyses during data collection (Marshall & Rossman, 2016). I am familiar with the research topic since I have worked as a consultant in the power generation industry for 12 years for an independent RE firm in the Dominican Republic.

Because researchers should avoid predetermined positions that may lead to incorrect research results (Yin, 2018), I was therefore mindful of personal bias. In addition, there are ethical principles and guidelines for protecting human participants involved in research. These guidelines are important because there is a distinction between research and practice. Researchers should utilize three principles to ensure the ethical conduct of research involving human subjects: (a) respect for persons, (b) beneficence, and (c) justice (National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research, 1979). To ensure this study complies with Walden University and U.S. federal regulations' ethical standards, I requested Walden University Institutional Review Board (IRB) approval before recruiting participants (IRB no. 12-08-21-00640048).

Further, I was receptive to new and conflicting evidence from the analyzed data to ensure the findings reflected only the collected data. I ensured credibility by using multiple data sources and interviewing the utility managers. To decrease the chances of bias during my study, I used pre-script interview questions and avoided preconceived notions that may direct the interpretation of data from a personal standpoint. Using an interview protocol aids with modeling the interviews with the study participants and generating a chronological order during data collection (DeJonckheere & Vaughn, 2019).

Well-structured interview protocols aid researchers in augmenting the quality data gathered from interviews and the reliability of the interviews (Castillo-Montoya, 2016). Therefore, I developed an interview protocol that I applied all the participants in this study (see Appendix A). I also used member checking to ensure that the data collected is precise and does not include my inferences or opinions. Member checking involves having the participants review the interpretation of the recorded interview to ensure their answers to the interview questions were interpreted accurately (Varpio et al., 2017). Anticipating ethical considerations throughout the research process is significant to completing the study (Honig et al., 2017).

Participants

The participants for this study were managers of a utility that has developed wind energy generation in the Dominican Republic. I used purposive sampling to gain participants. Using purposive sampling ensured the applicable selection of participants population size, collection criteria, the familiarity with the subject matter, and eagerness to deliver data that furthers the research (Yin, 2018). Participants in this study met the

following criteria: (a) were over 18 years of age, (b) held a position making strategic decisions in RE strategies executions, and (c) experienced in business ventures for at least 3 years. The criteria used to select participants for any research study must connect with the research question and design (Yin, 2018). The link between participants and the researcher has a remarkable impact on the relative reality of research and helps interpret the data (Blumling et al., 2021). Researchers use qualitative research to gather details from participants based on their experiences to explore how these experiences impact decisions (Yin, 2018).

I provided a letter to the executive director of the business seeking approval to interview electric utility managers for the research study. Each participant was invited to participate in the study and received an email requesting consent. The email included the purpose and details of the face-to-face interview period of 45 to 60 minutes. I contacted the potential participants via email to gauge their eagerness to participate in the study. Researchers need to develop a rapport with their participants to gather quality data (Yin, 2018). Therefore, I established a working affiliation with the participants via candidness and communication. I provided the participants with a synopsis of the study, explained the eligibility criteria to participate, explained the research concept of confidentiality, and discussed the informed consent process.

Since the beginning of the COVID-19 pandemic, researchers have faced new obstacles in conducting research. It is common for researchers to use Zoom, Skype, WebEx, and other technologies to facilitate individual and personal contact with participants (Gray et al., 2020). Using these different methods of collection aids

researchers because each technique provides: (a) ease of use, (b) improved personal interface to deliberate topics, (c) accessibility, (d) time savings, and (e) no travel. I conducted the face-face interviews. I also informed the participants of what to anticipate during the research process, such as the duration of time, the objective, and participant criteria (see DeJonckheere & Vaughn, 2019).

Research Method and Design

The purpose of this study was to explore strategies that electric utility managers in the Dominican Republic use to initiate and sustain wind power generation. Determining a research design relies on how thoroughly it allows the analysis of a specific research question (Patnaik & Pandey, 2019). I chose the qualitative research method to explore the strategies that electric utility managers in the Dominican Republic use to initiate and sustain wind power generation. Qualitative research is used to study the nature of phenomena and is appropriate for resolving questions of *why* something is (not) observed, evaluating complex multi-module interventions, and focusing on intervention advances (Busetto et al., 2020). The case study design explores single or multiple cases of observable complex singularities controlled by clearly identifiable boundaries (Turnbull et al., 2021). In this case, a single qualitative case study was most suitable to explore strategies that electric utility managers in the Dominican Republic use to initiate and sustain wind power generation.

Research Method

Researchers can choose from one of three research methods: (a) quantitative, (b) qualitative, and (c) mixed (Yin, 2018). Qualitative researchers engage in real-world

settings to generate detailed patterns and themes (Yin, 2018). Researchers use the qualitative method to explore research in a natural venue, permitting researchers to grasp the vivid information quantitative or mixed methods do not offer (Roger et al., 2018; P. R. Smith, 2018). Researchers conduct qualitative studies when the research question connects participant views, actions, and values (Jameel et al., 2018). Qualitative researchers use observations, interviews, focus groups, and content analysis (Kılıçoglu, 2018; Mandal, 2018a; Yin, 2018). Therefore, I used the qualitative methodology to explore the strategies that electric utility managers in the Dominican Republic use to initiate and sustain wind power generation. The focus of this study was grounded on acquiring an in-depth perception of how individuals react to social or human issues. Therefore, the qualitative methodology was the most suitable method.

Quantitative methods are designed to address rational questions shaped by the variables of the study (Taherdoost, 2022), and mixed methods are the relation of multimethod research in which either qualitative methods or quantitative methods are linked (Schoonenboom & Johnson, 2017). Both were not suitable to this research. The qualitative method was most appropriate for exploring the strategies that electric utility managers in the Dominican Republic use to initiate and sustain wind power generation,

Research Design

Qualitative researchers can choose between design options like phenomenology, narrative, ethnography, and case study. I chose the case study design for this research study. A case study design is the process of exploring societal and evolving disciplines

(Yin, 2018). Therefore, I selected the case study design to conduct this research. I used open-ended questions to probe the participants to gather details on their experiences.

The phenomenology design is used to explore events lived by an individual in the world (Neubauer et al., 2019). The phenomenological design was not suitable for this study as the focus of the study is not centered on an individual's lived events in the world. Narrative research design offers a framework to reconstruct the incidents of life experiences (Hickson, 2016). The narrative design was not a fit for this study since the purpose was not to explore the incidents of life experiences. Finally, researchers use ethnography design to describe phenomena of culture and realities conducted through a general suggestive method (Kian & Beach, 2019). Ethnography was not suitable for this study since the purpose was not to produce a narrative account of culture.

Researchers use case studies to ensure that exploratory questions are solved (Yin, 2018). Researchers conducting case studies use observations and interviews to explore a singularity, gather data, and reiterate the practice with multiple participants until data saturation is attained (Saunders et al., 2018). When using the case study design a researcher uses assorted data sources, such as interviews, file reviews, archived documents, annotations, participants, and observations (Yin, 2018). I used interviews and document evaluations for this case study. Since I used the processes outlined by Yin, a case study was the appropriate design choice for my study.

Single case studies confirm or challenge a theory or represent a unique or extreme case (Yin, 2018). The Dominican Republic has a strong law overseeing electricity provision; however, the area lacks incentives and directives for executing RET (Ochs et

al., 2015). Therefore, investigating the strategies that electric utility managers in the Dominican Republic use to initiate and sustain wind power generation requires rich and in-depth data to answer the research question. I did not select a multiple case design since I was not going to explore the strategies that electric utility managers in the Dominican Republic use to generate wind power in two or more different wind energy companies. Case study researchers explore one or more events, organizations, activities, or methods to gather insights related to a phenomenon. Case study research takes place in a natural ecosystem which could be in a specific location and over a precise period (Houghton et al., 2013; Yin, 2018).

Additionally, the researcher must ensure data saturation in selecting the appropriate research design. Data saturation ensures no new themes are found (Fusch & Ness, 2015). Furthermore, data saturation denotes when a researcher has gathered and analyzed adequate data and will not identify new data or themes and no further coding is needed (Fusch & Ness, 2015; Ran et al., 2017; Saunders et al., 2018). Case studies enable researchers to confirm data saturation among the deep and wide-ranging data sources (Smith, 2018).

Achieving data saturation is reached by as little as five interviews contingent on the sample size of the population in a research study (Guest et al., 2006). It is essential to observe that studies are distinctive from one another, and hence sample sizes needed to achieve data saturation will be different from one study to the other (Fusch & Ness, 2015). However, researchers should be sure to choose the best sample size for participants accessible to them to assure data saturation.

Population and Sampling

The population for this qualitative single case study was electric utility managers with experience using strategies to enhance wind power generation. I selected the participants through purposeful sampling. Researchers use purposive sample because its characteristics delineate a purpose that is relevant to the study (Andrade, 2020). Purposive sampling stems from the choice of opulent cases for comprehensive studies (Sarkar et al., 2018). A low participant sample size aligns with purposive sampling, where the researcher builds the use of controlled assets (Moser & Korstjens, 2018). Fewer participants extend and strengthen the data amassed via singular analyses and are constant with the qualitative method for case study research (Yin, 2018). In purposive sampling, the researcher is intuitive and formulates selections in response to empirical findings and logical research progress (Gutterman, 2016).

Qualitative research projects aim toward a modest sample and the researcher should concentrate on the sample attributes rather than on a sizeable quantity of data (Turner, 2020). The fundamental elements of qualitative sampling include (a) intentionally choosing the participants, (b) inclusion and exclusion criteria may change or the sampling sites may be diverse, and (c) the sample operates under abstract conditions and not primarily by representativeness (Moser & Korstjens, 2018).

Thematic saturation in qualitative case studies usually occurs between five to 12 interviews (Beskow et al., 2014). Researchers use data saturation to validate sample size in qualitative research (Vasileiou et al., 2018). Prearranging a participant sample volume that assures data saturation ahead of data gathering is a topic of dispute among

researchers (Blaikie, 2018; Saunders et al., 2018; Weller et al., 2018). Depleting resources during data collection does not mean data saturation occurred (Fusch & Ness, 2015). Furthermore, when, and how a researcher achieves data saturation differs from study strategy to study strategy. But researchers agree on various universal opinions and concepts, including no new themes, no new data, no new coding, and the ability to replicate the study after data saturation (Fusch & Ness, 2015). I was able to reach data saturation with five participants.

Ethical Research

Maintaining ethics during all phases of the research process and integrating procedures to maintain ethical protocols to safeguard the participants is an integral part of conducting a study. A critical ethical portion to consider is using updated materials such as the consent letter (Mallia, 2018; Manti & Licari, 2018). Informed consent is the procedure of alerting participants concerning the likelihood of risk when participating in a study (Mallia, 2018; Perrault & Keating, 2018). A researcher's fundamental responsibility is to ensure the participants recognize the objectives and potential risks of participating in a study while maintaining ethical principles (Mallia, 2018; Manti & Licari, 2018).

Ethical research involves affirming that the outcomes stem from producing research significant to society without harming individuals (Doody & Noonan, 2013). I remained ethical while conducting the research to safeguard the participant's privileges. Once I received permission to conduct the research and obtain permission to contact the participants, I drafted a letter of cooperation. The letter of cooperation assured the

Walden IRB that the collaborating entity offered permission for research activities to be organized and safeguarded the participants linked with the cooperating entity. I adhered to the procedures set forth by the IRB to use ethical observance in the research. Ethical conduct and veracity are central to research reliability (Israel, 2015).

Participation in this study was voluntary and did not involve minors or children. Therefore, I did not use incentives to encourage individuals to participate. I did provide a summary of my conclusions based on each participants response. Prior to seeking consent, I disclosed any risks linked with participation, a clarification of the participants' right to withdraw, confidentiality measures, and the data storage protocol. I also informed the participant(s) that to withdraw, they could contact me or simply just withdraw, and I would delete all data obtained from the participant(s).

Based on *The Belmont Report*, a researcher should have methods to shield the participant's discretion and privacy (National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research Subjects of Research, 1979). Therefore, the required steps I used and maintained all participants' confidentiality. Furthermore, the data will be securely stored for 5 years to protect the confidentiality of the participants and destroyed after that timeframe.

Participants were informed that the gathered data would be securely locked in a safe for 5 years. I am the only person with access to the safe. I informed the participants that after 5 years, I would destroy the data by shredding documents and deleting digital files. The participants' identities in the study will be kept confidential. The consent form includes the confidentiality measures to classify the participants' names from responses

using alphanumeric codes. Yin (2018) suggested using numeric identifiers as an alternative to the participant's names. Using codes (P1, P2, P3, P4, and P5) served as identifiers for each participant. The researcher must protect each participant's privacy throughout the research process (McLaughlin & Alfaro-Velcamp, 2015). I removed business names and locations from the research findings. Finally, I rendered my results to all study participants via an executive summary.

Data Collection Instruments

The data collection stage included the following steps: (a) determining who will do what, (b) when, and (c) where (Paradis et al., 2016). After obtaining approval from the Walden IRB, I began data collection. I conducted face-to-face semistructured interviews with electric utility managers in the Dominican Republic to discuss the strategies used to initiate and sustain wind power generation. Interviews are the universal form of data gathering in qualitative case study research to explore the research question (Fusch & Ness, 2015). Doody and Noonan (2013) posited that open-ended questions increase the depth and validity of the data.

A researcher can rely less on participant honesty by using document review (Yazan, 2015). Therefore, I viewed the company's website, social media pages, and published records as a supplemental data source. I also reviewed the corporation's clean energy strategies and the utility's cohesive assets plan, pinpointing the methods of generating the utility and proposing to advance RET strategies.

Interviews allow researchers to obtain invaluable data and insights and are an excellent method of gathering high-quality personal data (Ma et al., 2021). I secured

contact information for participants from the company or business directories websites. I emailed participants an introductory email requesting that they participate and provided the consent form as an attachment. One week after my initial email, I followed up with participants via email to schedule the face-to-face interviews.

After obtaining consent from the participants, I emailed the participants a copy of the interview questions and confirmed the date and time. The interviews transpired at a time agreed with the participants. I began the interviews by thanking participants for their time, reviewing the consent process, and offering participants a synopsis of the purpose of the study. Furthermore, I confirmed participants' consent to participate and reminded them of the right to withdraw. During the interview, I asked open-ended questions. Open-ended questions allow participants to articulate easily, reveal acumens and involvement, and offer thorough answers (Tran et al., 2016). I asked the questions in the same order to all participants. In addition, I asked probing questions to gather comprehensive data and took notes of verbal and nonverbal communication as described in the interview protocol.

Audio recording interviews so the researcher can remain focused and attentive (Doody & Noonan, 2013). Therefore, I took minimal notes during the interviews and relied on the interview recording transcript to echo and systematize the topics, ideas, and themes. After the interviews, I uploaded all the participant interviews to my laptop. Next, I uploaded the audio recording of the interviews for transcription into a software program. After transcribing the interviews, I participated in member checking with the participants. Member checking is a validation method used to enhance qualitative research value where participants can verify the researchers' interpretations of their

answers (Houghton et al., 2013). The process of member checking requires the writing of each interview question and the perception of the researcher's comprehension of the participant's responses (Birt et al., 2016; Blut et al., 2016).

Data Collection Technique

I was the primary instrument for data collection. Williamson and Johanson (2018) recommended that case study researchers use multiple data collection techniques to study a phenomenon. I conducted face-to-face interviews, and the COVID-19 protocol did not affect the interviews. As a qualitative researcher, I gathered data from the interviews, documents review, and observed the participants during the interviews as recommended by Elmustapha et al. (2018). I asked the electric utility managers to discuss their strategies to sustain wind power generation. To conduct face-to-face interviews, I pursued measures delineated in the interview protocol (see Appendix A).

At the beginning of each interview, I clarified the purpose and allowed participants to ask questions relating to the study. I conveyed to participants that their identification and data were confidential and advised the participants of their right to withdraw from the study at any time. Face-to-face and telephone interviews are primarily suitable for acquiring data for a qualitative case study (McGonagle et al., 2015). The timeframe for the interviews was 45 to 60 minutes. I transcribed the data through the interview as a text. There were electronic recordings of each interview in the study by using an iPhone11. Interviews conducted using iPhone Voice Memos the built-in application for audio recording allows users to record and edit voice memos. Voice Memos App allows audio recording, editing, deletion, etc. (J. Zeng et al., 2019).

Using member checking promotes the safeguarding the reliability and validity of the data gathered during the interview (Birt et al., 2016; Blut et al., 2016; Harvey, 2015). After transcribing the interviews, I participated in member checking. Member checking is a verification technique used to enhance qualitative research quality (Blut et al., 2016). I sent each participant my interpretation of their replies to the interview questions and requested confirmation of the accuracy of my interpretations. Participants have the right to appeal to fill out missing pieces or changes if their interview potentially augments the accuracy of the data (Birt et al., 2016).

Data Organization Technique

Effective data organization is worthy of qualitative research's use (Nowell et al., 2017). After the interviews, I transcribed all the audio-recorded electronic data. I used an interview log to document the date, time, and identification code assigned to protect the identity of the participants. I uploaded the audio-recorded file of each participant's interview to my laptop computer into a single folder for each participant, tagging each file with the code number from the interview log. The organizing continued with inputting data to ATLAS.ti 22 software and an Excel spreadsheet.

Following the recommendations of Fusch et al. (2018), Gaikwad (2017), Smith (2018), and Yin (2018), I stored, tracked, and interpreted the information gathered into themes and employed careful color-coding for data to connect applicable information with emergent themes. I applied Ross et al.'s (2018) techniques by scanning pertinent papers into PDF format and transcribing audio-recorded interviews. In addition, I labeled

each audio recording with the interview code designation. Finally, I used tags to label interviewees and organizations as posited by Yin (2018).

I stored all data on a USB flash drive with a PIN in a storage safety box to safeguard the participants. I hold the only access to the USB flash drive storing the files. Following Mamonov and Benbunan-Fich (2018), I saved the password-supported PDF files in a safety box. After 5 years, I will permanently delete all electronic data saved in the USB flash drive by using the software called Eraser from SourceForge and shred any hard copies of the data to safeguard the confidentiality of the participants.

Data Analysis

Data analysis denotes the process of gathering, exhibiting, and adapting data to emphasize valuable data, suggesting conclusions, examining strategies, and reaching decisions (Guler, 2015). Researchers participating in case study research help ensure the credibility and validity of their study by using various data gathering and analysis (Symon et al., 2018). This is known as methodological triangulation. Using this type of triangulation strengthens the credibility of data collected and helps develop a comprehensive understanding of phenomena (Fusch & Fusch, 2015; Fusch et al., 2018; Fusch & Ness, 2015; Mandal, 2018a; Symon et al., 2018).

Researchers use a single case study to collect, analyze, and evaluate data related to a research problem regarding novel or expensive interventions (Busetto et al., 2020). I interviewed electric utility managers about their strategies to ensure sustainable wind energy. I also reviewed company documents related to the subject matter to get supplementary data and facts to help ensure the study's credibility. Yin (2018) noted that

case study data analysis involves examining, classifying, arranging, testing, and recombining evidence to produce findings. Organizing data gathering, data analysis, data expansion, and the corroboration of references in an intuitive course is a process in qualitative research (Saunders et al., 2018).

The ideal method for conducting a case study analysis is to link the relative analysis and offers ideas to steer the data analysis (Clark & Vealé, 2018). Therefore, after compiling the data, I transferred the data into ATLAS.ti 22 and manually disassemble, reassemble, and analyze the data to identify key themes. This data were transferred into ATLAS.ti 22 software aided with disassembling, coding, interpretation, and theme development.

The process of data coding helps to secure themes, related topics, and other significant data from the interviews and documents obtained through the data analysis progression. I used ATLAS.ti 22 software to identify themes. Once themes were extracted, I assembled all the information from the decoded phase. I reviewed the interview data, documents, and results of member checking to corroborate or rectify data. I also mined the central codes and themes from the interview and archival data to compare emerging themes with the current literature and the conceptual framework for this study.

Reliability and Validity

A key difference between quantitative and qualitative researchers is that qualitative researchers typically use four criteria to confirm that their study is dependable and valid: dependability, credibility, transferability, and confirmability (Mandal, 2018b;

Moser & Korstjens, 2018). Therefore, qualitative researchers need to add qualitative validity checks to support the trustworthiness, credibility, accuracy, and truthfulness of research outcomes (Brigitte, 2017). The concept of reliability and validity is also essential to quantitative researchers to ensure the stability and accuracy of scientific outcomes to be applied to solve real-life questions (Brigitte, 2017; FitzPatrick, 2019). Reliability occurs through member checking by asking the participants to review and confirm the researcher's interpretations of the interview data (Levitt et al., 2018; Mandal, 2018b).

Reliability

Reliability shows the homogeneity and replicability of research outcomes and rests with dependability (Bengtsson, 2016). Dependability is a degree of distinction and the firmness of the information gathering and investigation conducted over time (Gill et al., 2018; Moser & Korstjens, 2018). I verified the reliability of the data via member checking. Member checking is an adequate reliability strategy where participants review interpretations of their answers to the interview questions (Varpio et al., 2017; Yin, 2018).

To assure the trustworthiness of this research, I interviewed managers from the RE trade for a rigorous case study as postulated by Aldiabat and Le Navenec (2018), Castleberry and Nolen (2018), Ospina et al. (2018), Smith (2018), and Teagarden et al. (2018). Transcriptions of audio recordings are a criterion of data gathered in a qualitative study (DeVaney et al., 2018). Member checking is a technique of affirming participants' responses corroborating a qualitative study's credibility, exactness, and conveyance (Malave et al., 2019; Tingle et al., 2019).

Considering Aldiabat and Le Navenec (2018), Chase (2017), and Roger et al. (2018), I performed member checking to offer the participants the opportunity to corroborate or amend results. Moreover, by performing member checking, researchers prevent partiality by corroborating that the data amassed came from the participants (Aldiabat & Le Navenec, 2018; Chase, 2017; J. Davis et al., 2018).

Dependability

Dependability refers to recording all the changes to produce an accurate and reliable record of the emerging research (Saunders et al., 2018). Evaluating the dependability of study findings requires the researcher to decide soundness based on the application and appropriateness of the methods used for data collection (Noble & Heale, 2019). I provided each participant with a copy of my interpretations to establish dependability. Sharing this information with the participants provided them an opportunity to ensure the information was accurate and relevant to the study. Mitigating threats to dependability includes providing a complete description of data gathering methods, analysis, and interpretations (Cope, 2014).

Validity

Researchers should provide accurate data with validity. Researchers should establish proficiency and determinations to ensure certainty within the research findings (Marshall & Rossman, 2016). Apprehensions concerning the validity and accuracy of results are prevalent in social sciences (Abdalla et al., 2018). Researchers realize credibility through tenacious analysis and triangulation to endorse validity (Mandal, 2018a). *Validity* is a continuous process confronted from the start of the research until the

end (Hayashi et al., 2019). Member checking is significant for validation in qualitative research because it determines if the researcher accurately reported the participant's statements (Varpio et al., 2017). I used member checking as a process for validity. I helped ensure the study's trustworthiness through data triangulation of multiple data sources. According to Joslin and Müller (2016), by triangulating, researchers may be able to overcome the flaw or inherent biases and the setbacks that stem from research designs using a single data source. I established conveyance by supplying readers with evidence that the research study results may be relevant to other conditions, times, populaces, and settings.

Transferability

Transferability is the applicability of research outcomes to other frameworks (Marshall & Rossman, 2016). Transferability is a test for a research project (Daniel, 2018; Mandal, 2018a). Transferability is enhanced when researchers can deliver enough detail to framework the analyses (Gill et al., 2018; Levitt et al., 2018). In contrast, qualitative researchers tend to focus on one subject or population, and the findings of a study may not apply to a larger population. Instead, qualitative researchers can enhance transferability by offering in-depth comprehension and significance of a phenomenon, thereby helping readers understand how the findings might relate to their own experiences (Carminati, 2018). For example, I purposefully sampled five electric utility managers who have worked in a wind generation project for at least 3 years. Moreover, suppose researchers choose to conduct a research study compared to this case study. They

can expect different results if applying it to a different business, a more prominent organization, or different data collection methods.

Confirmability

Confirmability is a model linked to researchers' interest in open-mindedness. Following Abdalla et al. (2018), I confirmed that the outcomes of my research arise from the interview data and company documents and not from my subjective preconceptions, deeds, or partialities. I attained confirmability by using data triangulation. I compared the data from the various organizational documents for triangulation. Researchers use audit trails to add to the honesty of the study by allowing others to examine the process by which a researcher can offer a faithful depiction to the reader (Houghton et al., 2013). I used a structured protocol to ask questions and record answers during the semistructured interviews with the participants (see Appendix A). I also ensured that the data gathered were well transcribed and detailed and kept notes safeguarding the research findings and conclusions that ensured the confirmability of this study. Dependability and confirmability are models linked to a researcher's review of triangulation; the review is grounded on the researcher's perspective to creating a contrasting data analysis (Abdalla et al., 2018; Gill et al., 2018).

Data Saturation

Data saturation includes collecting and evaluating the data until no new topics emerge in the information amassed. Data saturation is a topic of deliberation among scholars, and most scholars cannot ensure data saturation before info gathering (Saunders et al., 2018; Weller et al., 2018). The progression of data saturation stems from the data

gathering process and is, in this manner, detached from the method of data analysis (Saunders et al., 2018). A researcher must have customary information, but this single-handedly is not adequate to guarantee saturation and is first enabled by sampling (Morse, 2015). I used the interview protocol and probing questions to confirm data saturation for this single case study until no new themes emerged and no new conclusions were obtained.

Transition and Summary

Section 2 clarifies the assessment and the purpose concentrating on the researcher's responsibility. Similarly, I reflected on the study's participants, research technique, purpose, population, sampling, ethical research, data gathering, reliability, validity, and analysis. Finally, Section 3 contains the research results with the lack of strategies to initiate and sustain wind power generation to improve the Dominican Republic's operational efficiency. Moreover, I considered the call to professional practice, inferences for social change, suggestions for execution, and additional research suggestions.

Section 3 includes a summary of the study and presented the findings. The section also contains professional practice applications, implications for social change, and recommendations for action and further study. Finally, Section 3 includes my reflections and conclusion.

Section 3: Application to Professional Practice and Implications for Change

Introduction

The purpose of this qualitative single case study was to explore strategies that electric utility managers in the Dominican Republic use to initiate and sustain wind power generation. The DOI theory introduced by Rogers (2003) was the conceptual framework guiding this study. In analyzing my data, I identified three themes, which can structure the basis for probable recommendations that can assist electric utility managers with strategies to realize RET.

The first theme that emerged is that managers need to deconstruct the existing regulatory legal framework for RE development. If managers can modernize the present legal structure of the country, they may be able to help create prospects for the company, country, and society. The second theme is that managers should fuse hybrid technology into utility operations.

If managers can leverage technologies and design innovative tactics to avoid fossil fuel investments until the integration of RET would be advantageous to the grid. The third theme is securing land access and stakeholders' integration. If managers can implement supporting strategies to advance land title certifications for landholders, this support may help electric utility managers successfully progress and integrate RET.

Presentation of the Findings

In this single qualitative case study, I sought to answer a central research question: What strategies do electric utility managers in the Dominican Republic use to initiate and sustain wind power generation? To answer this question, following the

directive of Walden University regarding the COVID-19 pandemic, I conducted face-to-face interviews at the company's facility with five leaders of the wind energy company headquartered in the Dominican Republic. I also reviewed relevant company documentation and its website. The company is a midsized wind energy company with between 250 and 350 employees in 19 countries. In addition, the company has a subsidiary office in Santo Domingo, Dominican Republic, with approximately 35 employees and agents throughout the country.

Five electric utility managers of the company accepted invitations to participate in the study. The criteria for selecting the participants involved individuals who have worked for the company in senior positions who grasped the company's strategies and contributed to employing these strategies successfully. All five individuals who accepted invitations to participate in the interviews took part despite their hectic schedules' complexity in securing appointments.

All the participants worked at the subsidiary office in Santo Domingo. Study participants' positions ranged from the company's CEO, engineer, business analysts to corporate managers. I achieved data saturation after the third interview as no added information was forthcoming. Data saturation is when a researcher has gathered sufficient information and is unlikely to identify added information or themes upon conducting additional interviews (Saunders et al., 2018).

I conducted and audio-recorded, with permission, the face-to-face interviews using an iPhone11 at the company's facility. The five participants responded to the nine open-ended interview questions listed in the interview protocol (see Appendix A).

Interviews were between 20 and 45 minutes. During the face-to-face interviews, participants shared perspectives, individual experiences, and insights from their workplace regarding the strategies used to initiate and sustain wind power generation. Throughout this process, I referred to all participants using separate aliases, such as P1, P2, etc.

After each interview, I thanked the participants for their involvement in the study. I then transcribed and translated from Spanish to English the recorded interviews and sent the transcripts to the participants to review for accuracy. I followed up with calls when I needed clarification. Finally, I conducted member checking with the participants using emails and telephone calls. The member checking process involved providing participants with a synopsis interpretation of their responses to the interview questions. The purpose was to confirm that my interpretations were accurate, and representative of the strategies electric utility managers use to generate wind power in the Dominican Republic. This process also allowed participants to share additional information about the research topic, enabling me to achieve data saturation.

Case study research includes methodological triangulation, which involves gathering data from multiple sources (Noble & Heale, 2019; Roulston, 2018). Examples include interviews, participant observations, company documentation, and online information (Yin, 2018). I corroborated the data collected during the face-to-face interviews by reviewing company documents. The documents included the company website, social media, and PDF documents on company activities.

After completing the data collection process, I followed Yin's (2018) 5-step process for qualitative data analysis that included compiling, disassembling, reassembling, interpreting, and concluding. I started this process by transferring the translated interview data into a Microsoft Word document, and I manually coded and analyzed the data to identify key themes. After analysis throughout each qualitative data file and acquainting myself with the subject, I embarked on open coding, disentangling the data into significant sections described as codes. The sections were phrases, sentences, or paragraphs related to the general concept of strategies that electric utility managers in the Dominican Republic use to initiate and sustain wind power generation in successful implementation in the wind energy sector. I then transferred the data into the ATLAS.ti version 22 qualitative analysis software program for computer-aided coding, interpretation, and theme development.

I compared the themes stemming from the manual analysis and the computer-aided processes. I identified three themes from the interviews and company documents: (a) deconstructing the existing regulatory legal framework for RE development; (b) fusion of hybrid technologies into utility operations; and (c) securing land access and stakeholders integration. All three themes validated common themes from the literature review for this study.

Six hundred and seventeen data segments and twenty-seven open codes were extracted from the data (see Table 1). Following Yin's (2018) 5-step process for qualitative data analysis I performed a thematic analysis using the five-step qualitative

data analysis method to answer the research question above. First, I began by merging all data files into a single folder.

Table 1

Open Code List of the Overall Successful Implementations of Strategies in the Wind Energy Sector

Code	Number of participants (N = 5)	Number of data segments included
Deconstructing regulatory framework	5	103
Lessen duplication of policies and regulations	5	85
Creation of legal strategies framework	5	92
Eliminating barrier for advancement of RE	5	72
Government support	5	110
Applying hybrid technologies	5	20
Prioritization in upgrading grid	5	15
Strategies for hybrid projects	5	53
Continuity of fusion	5	11
Eagerness to integrate	5	4
Lessening fossil fuel dependency	5	52

After effectively performing open coding, I dealt with axial coding, which included grouping open codes that suggested similar implications and delegating them an identifying name. Seven axial codes were extracted from the data. The seven axial codes extracted from the data, which later formed the key themes in this study, are displayed in Table 2.

Table 2

Axial Codes List of the Overall Successful Implementations of Strategies in the Wind Energy Sector

Axial Code	Open Code
Deconstructing regulatory framework	Revise strategy based on external factors
	Revision overall laws
	Update the framework strategy
	Evaluating risks of strategy revision
	Lessen duplication of policies
Government support	Regular coordinated efforts
	Develop government support
	Interagency collaboration
	Less red tape among agencies
Manage Risk of Change	Manage Risk of Change
	Eliminate barriers to develop RE
	Directed communication to participating teams
Identify stakeholders	Identify stakeholders
	Decide on best technology
	Evaluate hybrid technology
	Create a resolute implementation team
	Clear functioning leadership
Evaluate Risks and Costs	Containment of Security Threats
	Proper Titling of land
	Analyze potential barriers
	Assessment of legal costs
	Analysis of fitting legal elements
Eagerness to integrate	Background assessment
	Develop business plan
	Assess business needs and requirements
	Analyze the substance of RE
	Analyze issues facing the project

All the participants' feedback reinforced Rogers's (2003) characteristics of DOI theory: (a) relative advantage, (b) compatibility, (c) complexity, (d) trialability, and (e) observability. All five participants mentioned that RE has advantages over fossil fuels as global fossil fuel depletion and the ecosystem depreciation continues (Peng et al., 2021). The participants also indicated that the wind energy resolutions are not complex but easy to use.

Theme 1: Deconstructing the Existing Regulatory Legal Framework for RE Development

Table 3 is an illustration the thematic network supporting this theme. Under this theme, there are six subthemes: Deconstructing regulatory framework, lessening duplication of policies, eliminating barrier for RE, government support, creation of legal strategies framework, and lessening cost of electricity. All participants indicated the need to carefully assess the and deconstruct the existing regulatory framework for developing RE and all elements needing RE execution taking into consideration current and future goals for RE projects. Table 5 is a display of the subthemes of theme one and frequency of use by participants

Table 3

Coding of Participants' Responses Related to Theme 1

Subthemes	Participants[a]	Responses[b]
Deconstructing regulatory framework	5	75
Lessening duplication of policies	5	85
Eliminating barrier for RE	5	50
Government support	5	60
Creation of legal strategies framework	5	92
Lessening cost of electricity	5	20
Total	30	382

Note. [a] Number of participants who contributed responses linked to the subthemes.

[b] Number of interview questions for which participant responses related to the themes.

The emergence of energy reforms in the electricity sector aims at eradicating the oligopoly power in the energy sector and promoting cooperation by offering opportunities to producers (Raj et al., 2021). In developing and integrating a new legal framework for RE electric utility managers may also create opportunities with the technologies. Utility managers may also explore industry best practices to assist with developing and integrating the legal framework into operation.

All participants noted that the Dominican Republic is dependent on fossil fuels, and the electricity price is high compared with other countries. More than 60% of installed capacity operates on fossil fuels (Molina-García et al., 2021). The regulatory framework of the Dominican power system includes a variety of requirements and incentives to integrate renewables Congress adopted the General Electricity Law 125-01

(D.R. Congreso Nacional, 2001). Law 125-01 and Law 57-07. The participants also noted that different administrations have sought to reduce the cost of electricity by applying energy policies. Therefore, the policy failure in the Dominican energy sector demands analysis in the legal framework of policy deconstruction. Participants noted that more than one institution participates in granting permission to develop RE projects leading to fragmentation and duplication. P3 stated,

> "Taking steps to reform the laws is essential complementing them with a more efficient scheme that is up to date. The fact that we have these challenges is something we must try to tackle, presenting it to the government to take care of that. A strong group of developers must bring the issue to the table."

P3 emphasized, "A lengthy, complex approval process and time delay in decision-making integrates additional impediments for RE penetration." The administrative practice is exceedingly difficult, and there is a list of permits a developer must procure before the first review of their project. At least 15 or 20 government institutions grant permission or approval for developing a project. Because of that type of infrastructure, there is no dialogue between governmental agencies. P3 also revealed that the practice is "What they say, but not what they do, the government falls short in planning." The government has not yet provided any help in the discussion. There is no alternative but to privatize that kind of mechanism.

P1 corroborated that this mechanism worked as a barrier. Not having a centralized communication complicates the issues of developing strategies for realizing projects since permits are overseen by the respective agencies creating chaos. P4 stated, "I think

there can be resistance in the Dominican Republic to conduct strategies well. Renewing the law based on other mechanisms would be important." P5 confirmed that the first challenge was the government's bureaucracy. Specific barriers in applying the law have not yet been evident since 2000.

P5 pointed out that when the law was enacted in 2007, it did not contemplate a protocol for power purchase agreements, which is the mechanism of payment established to sell and buy the energy generated by renewable sources. They also expressed that RE projects must always have the government's support since electricity generation is state security; you cannot turn off a country. Electric utility managers believe the government must support the investment projects to generate a reasonable closing price or proportionate to the investment. RE is a viable resource to conventional energy resources that rely on fossil fuels (Yusaf et al., 2022). P3 insinuated that formulating policies is accomplished in a top-down manner. The participation of a wide range of experts, producers, and engineers is limited. Energy business stakeholders are a well-organized group; however, their remarks are not considered when making relevant policies.

P3 stated, "Public participation in RE development is poor." P4 pointed out that RE, a potential primary alternative, is not well viewed at the policymaker's level due to its intermittency. A lack of prioritization hinders the decisions towards the up gradation of existing grid networks for integrating intermittent renewables that limit the penetration level. The study results show that electric utility managers who include consistent cognizance as part of their strategies increase the adoption of RE. This increases in the development and execution of wind projects. All the participants revealed that strategy

creation is an essential precursor to creating a strategy to increase the adoption of wind energy. P1 also mentioned that after securing the legal framework, one could see the country's potential at the level of sustainable winds and the level of production the park would have.

The company's documentation reviewed confirmed that the company has strategies designed to create awareness of the legal construct to work with public organizations and companies concerned in this transition by accompanying their transformation. These tools include providing an in-depth understanding of market mechanisms and government officials to discuss policies affecting the implementation of RET strategies. The company's websites also highlight the outcomes and benefits of wind solutions to customers and potential customers alike.

Theme 2: Fusion of Hybrid Technologies into Utility Operations

Table 4 illustrates the thematic network supporting this theme. I found five organizing subthemes supporting the fusion of hybrid technologies into utility operations. Fusing and integrating RE hybrid technologies into utility undertakings offers electric utility managers with prospects to reduce fossil fuel dependance while safeguarding revenue necessities and showing renewable control to stakeholders. In developing and integrating RET into utility operations managers may also generate prospects with the technology. Electric utility managers may also explore the use of strategies to develop hybrid projects, the integration of RE technologies, implementing RE strategies to lessen fossil fuel dependency, minimize impact on electricity rates, eagerness to integrate best

technologies, continuity of fusion, and risk reduction in implementing hybrid technologies. Discussion of these organizing themes is not necessary.

Table 4

Coding of Participants' Responses Related to Theme 2

Subthemes	Participants[a]	Responses[b]
Strategies for hybrid projects	5	42
Lessen duplication of policies	4	4
Eliminating barrier for RE	5	29
Resources for Developing projects	5	26
New technologies	5	15
Total	24	116

Note. [a] Number of participants who contributed responses linked to the subthemes.

[b] Number of interview questions for which participant responses related to the themes.

P1 noted the importance of technology, "Control of the technology is the best strategy of use as a resource. Keeping up with innovative technology and navigating the legal framework as is presented to us." P2 pointed out that utility managers can use strategies to create hybrid projects. P2 added that the government had emitted a new resolution to advance hybrid projects, allowing electric utility managers to inject wind and solar energy through the network. Electric utility managers may also explore the industry's best practices to develop and integrate technologies into the operations.

P3 avowed, "The country attracted us because of its high potentiality. We saw the Dominican Republic had a fossil energy matrix; we thought the real solution is wind and solar farms generating power to supply the system's energy demands." P3 clarified that

attractiveness refers to the project's location, size, technology, and tariff. In addition, Rogers's (2003) noted that the ability to trial a technology increases the likelihood of adoption. However, it is not financially feasible for managers to experiment with RET for a brief period because of the costs factor, as Rogers suggested in the definition of the trialability characteristic.

Managers of this electric utility are implementing RET to reduce the country's dependency on fossil fuels. P3 suggested, "The strategy for continuity over time in providing wind energy depends entirely on technical production. Since renewable resources are not continuous, the main factors, as I understand, are technological." Participants further suggested that in reducing the dependency on fossil fuels, the utility may minimize the future impact on electricity rates, impact on the environment, and improve the system's reliability.

Kersey et al. (2021) implied that decision-makers in countries like the Dominican Republic quickly transition to using RE for electricity generation because of the volatility of fossil fuel prices. The authors further implied, that the Dominican Republic, since 2007, has completed a regulatory reorganization and introduced a feed-in tariff, tax incentives, investment incentives, and a renewable portfolio.

These electric utility participants are cognizant of the need to tackle fossil fuels' economic and ecological challenges in electricity generation. According to of Rogers's (2003) definition of the characteristics of compatibility, if electric utility managers can recognize the need for RET, they will be eager to implement the technologies. Developing and integrating RET into the utility undertakings allows electric utility

managers to reduce dependency on fossil fuel technologies. This opportunity aligns with Rogers's compatibility trait. The need for electric utility managers to minimize the impact of fossil fuel technologies is a driver for developing and implementing RET.

Participants of the electric utility are exploring the industry's best practices by researching technologies and employing lessons learned in the utility framework. P2 stated, "We looked for the best turbines, with the best multipliers at a speed level to boast greater generation. We strive for a strategy always performing at a high technical level." P3 noted that the real solution is wind and solar farms generating power to supply the energy the system demands.

Rogers (2003) documented that the ability to observe innovations increases the likelihood of adoption. Aligning with Rogers's observability attribute, the managers of this electric utility can link the observations from other utilities to sustain development and start realizing the technologies. Rogers (2003) expressed that the relative advantage of an innovation extensively inspires its adoption.

The participants identified that implementing hybrid technologies could be an economic benefit to the utility and country even without incentives for RE. P4 added that electric utility managers should encourage the hybridization of wind farms with other types of energy. For example, when the production of a solar park is high during the day, which permits the power to fluctuate with diverse types of technology, one could use batteries to accumulate power and then introduce it to the grid.

P4 emphasized that it is significant to establish technologies that increase turbine production, generating more energy without building a new park. Incentives and

strategies for prosperous RET have proven to be helpful in supporting the realization of RE projects; the optimal design of incentives is points at utility managers, companies, and governments (Qadir et al., 2021).

Due to technological advancements, the overall costs relating to RE production have decreased significantly in recent years (IRENA, 2019). The participants suggested that hydrogen technology may create a new industry and thus create employment for people within the country. Hydrogen can be used as a clean energy source as an alternative to fossil fuel (Singh et al., 2020). P3 concurred with the findings of Baykara (2018) that the energy generated from hydrogen does not harm the ecosystem. P3 noted that the real solution is in hydrogen. Hydrogen stored in containers can be sold later as fuel for trucks, buses, or cars. This form of energy decreases the carbon footprint, and scientists are looking to introduce hydrogen as airplane fuel.

P3 added, "We believe that we are in a transition phase, we do not know how long it will last, but the problem is real." P5 stated, "Innovation occurs every day because the electricity sector is constantly renewing itself correctly; in years to come, we will see specific types of energy, such as fusion and hydrogen energy." Combining RE systems and hydrogen techniques will positively play a role in the energy sector's shift to a carbon-free generation (Karapekmez & Dincer, 2021).

The electric utility managers of this company indicated that they would begin by executing the technologies on a modest scale allowing these managers to pilot the technologies and reduce investment risk while generating benefits to the utility, customer, and country. Therefore, the participants of this electric utility align with regulatory and

government strategies and support and advise customers to build community encouragement for RET.

Theme 3: Securing Land Access and Stakeholders Integration

Table 5 is an illustration thematic network supporting this theme. I found four organizing subthemes supporting the need of securing land access and stakeholders' integration. The four organizing subthemes are that the RE law 57-07 delineate the steps to for RE projects in the Dominican Republic, the need to procure land is essential in building RE projects, the prerequisite for the landowners to attain title deeds for the land where the projects are located, the integration of stakeholders into project development creates a clearer view of the industry and the encouragement of community projects.

The RE law 57-07 and its regulations stipulate the main regulatory framework for deploying RE infrastructures in the country. The law states the minimum requirements that land-use contracts for RE developments should incorporate**.** The National Energy Commission (CNE) regulates the process from initial exploration to transmission of electricity of securing land access; of course, this varies from project to project. The CNE issues provisional and definitive land concessions to developers that meet the requirements to explore and generate electricity. Upon issuing the provisional concession, the developer must attain land-use permits from landowners; by purchasing or leasing methods. Once land access is secured, developers apply for a definite concession with the CNE.

The participants in this study suggested executives need to make sure during the early part of the process that the project they are fostering is attractive for the host

country, landowners, and the sector. They further explained that desirability refers to the location, technology, size of the project, and the tariff. The participants' company acquired the project land monitoring not only compliance with national regulations but also supporting the landowners acquire clear title deed to the property.

P3 stated, "We secured the project land following local legislation.…As a result, we met the expectations of the host government, the local community, and the equity investors." P3 also asserted on the alignment with the host government's strategic RE laws. They claimed that such alignment comes from a mutual understanding of project risks and must start with creating capacity within the government.

Table 5

Coding of Participants' Responses Related to Subthemes of Theme 3

Subthemes	Participants[a]	Responses[b]
RE law 57-07 framework	5	83
Procurement of land and deeds	4	43
Integration of stakeholders	5	20
Community projects	5	30
Total	19	176

Note. [a] Number of participants who contributed responses linked to the subthemes.

[b] Number of interview questions for which participant responses related to the themes.

Participants also indicated that the land hosting their project is on private properties. The landowners are unofficial settlers or *colonos* that for years have occupied and used the grounds for harvesting crops and cattle, typically for subsistence. These

landowners were allotted small parcels of lands as long-term usufructuary rights and a transitional process to assign definite property rights. However, according to Registro Inmobiliario (D.R. Registro Inmobiliario, 2005), they cannot sell or transfer usufruct rights since the lands technically remain under state property. As a result, landowners had different experiences subject to the nature of their land title. Nevertheless, for these landowners, these parcels of land represent an essential source of their livelihood.

Participants agreed that procuring land is an essential hurdle in budding RE infrastructures, such as wind turbines. Within the purview of community acceptance and stakeholder engagement, well-recognized strategies promote higher acceptance levels and successful RE developments (Prehoda et al., 2019). Meaningful engagement with local communities and stakeholders can build faith in RE and developers; trust is also a prerequisite to project support (Simpson, 2018) suggested.

P1 stated, “Early convergence with the municipalities and potential landowners is necessary.” P1 also added that divergent from other infrastructures, wind farms rarely entail physical dislocation of people. P2 stated, “Land is the most valuable resource depending on where you develop the project; location is significant.” P3 stated that a fundamental problem for developers, unlike solar projects, wind projects are developed in different areas of hills or windy zones, and it is exceedingly difficult to find a landowner who has a title of ownership on such locations. Given this institutional situation and land tenure structure, the utility had to negotiate land-use contracts with each landholder whose land would be affected by the project. According to P3, the utility agreed to

negotiate and pay a land lease fee to landowners within the project, regardless of whether they had clear land titles.

Through developing years, the company spent between $120,000 to $130,000 in legal fees to title the parcels of land occupied by peasants. P3 stated as follows regarding the title fees paid by the company:

> "The utility will continue to do so until the project is completed. The utility seeks to get the title deeds, so peasants have not just a piece of land. They will have an asset to maintain, a parcel of land with legal title of ownership because these peasants have occupied the land belonging to the state for 20 to 30 years."

P5 stated, "Landowners continue to develop their land. It is a contribution because the project only uses a perimeter of approximately ten thousand square meters per turbine." The landowners have the right to farming and to develop livestock outside the perimeter. The added income from wind turbines aids in keeping people on their land, even if there is a low yield or commodity prices. P3 also added that wind development supports long-term local operations and management jobs throughout the project's life having a multiplier effect as workers spend earnings at local businesses near wind farms. P3 indicated that wind energy development could help agricultural communities increase their employment base and keep economic stability during times of economic downturn.

Integration of stakeholders may create a more sweeping view of the RE industry. Wind power growth increases the understanding of the rural community about RE and makes them look for more RE sources like solar encouraging the notion of community wind projects. This strategy has a positive impact on their adoption decisions and a

positive effect on the profitability of the wind energy utility. The utility company in this study has responded to Rogers's (2003) theory of innovation by constructing strategies adopting the characteristics of DOI and increasing getting peasants their land title certificates.

Findings Related to the Conceptual Framework

Using Rogers's (2003) theory of DOI helped guide this study in exploring strategies that electric utility managers use to ensure and maintain the viability of the business. Based on this theory, innovation can only spread among people within a social system if it has the following characteristics: (a) relative advantage, (b) compatibility, (c) complexity, (d) trialability, and (e) observability (Rogers, 2003). Users are likely to adopt such commodities when a product shows benefit and offers additional value above existing commodities (Elmustapha et al., 2018).

Elmustapha et al. (2018) suggested that the adoption rate is likely to improve when the innovation is consistent with the users' experience and social values. For example, when the new commodity is easier to use and less complex when compared to an existing commodity, the rate of adoption will surge (Kapoor & Dwivedi, 2020). Likewise, when users can realize the value of innovation around them, it will boost the acceptance and adoption rate. Study participants corroborated the DOI theory.

The company in this study has satisfied Rogers's (2003) theory of innovation by crafting strategies that address the characteristics of DOI to the Dominican Republic. The results have been the advancement of a valuable wind project. The participants in the

study were able to identify new opportunities and methods to initiate and sustain wind power operations.

Applications to Professional Practice

The specific business problem for this study was that some electric utility managers in the Dominican Republic lack strategies to initiate and sustain wind power generation. Therefore, the findings from this study could be of value to business leaders of wind energy companies who are unable to develop strategies while developing a project. In addition, the findings can be applied to advancing professional practice because they incorporate specific ideas for increasing the adoption of wind energy strategies by electric utility managers.

Centered on the participants' responses to the semistructured interview and a review of company documents, electric utility managers must improve business practices by considering creating strategies for wind energy to erratic and unreliable electricity generation from the grid. The government takes a fundamental role in executing significant objectives of RET transition (Milovic et al., 2020). The authors stated that determinations taken at the government level motivate business strategies. Therefore, the government plays an essential and versatile role in energy and environmental planning.

Other suggestions included using various hybrid technologies to improve the supply of electricity. Hybrid technologies have government and community support, which is fundamental to keeping these systems functional over the project lifetime. Other important recommendations include the expedition and updating the certification of title deeds for landowners who do not have a certified legal title to the land they occupy

because of the inability of the government to change their status from the usufruct standing to legal ownership.

The findings point to the relevancy of improving business practice by conveying strategies used by other researchers, such as Khan et al. (2021a), Khan et al. (2021b), and Johl and Toha (2021); these authors posited that adopting green innovation improves the level of transparency and engender stakeholder's poise in boosting the firm's viable execution. Awareness about wind energy products increases the adoption decision (Simpson et al., 2021). Energy providers and consumers are appropriate prosumers in the electric energy market (Strielkowski et al., 2021). The authors focused on the impact of renewables on the utility and their benefits for the grid.

Implications for Social Change

Implications for social change are associated with a successful or unsuccessful transition to RET. Electricity is a commodity critical to any society's social and economic development. The findings from this research support the findings of Levenda et al. (2021) that policies ranging from financial incentives, up to date regulatory methods, strategic planning, codes, and tariffs, should be implemented nationally. Creating hybrid technologies, will result in employment opportunities for individuals and reducing costly fossil fuel which result in high electricity rates. The strategy will not lead to the closure of businesses or increased unemployment and will not create energy poverty.

The implications for positive social change include easing the negative impact of climate change. Climate change is one of such changes in the ecosystem that seriously effects the existence of humankind (Raimi et al., 2021). When electric utility managers in

the wind energy business construct strategies that ensure multiplying wind energy solutions, global warming may be reduced, and the effect on climate change could be mitigated (Eitan, 2021).

Recommendations for Action

The themes identified from the data collected in this case study supported strategies that electric utility managers can use to realize successful RET. Under Theme 1, the consensus in the legal framework design is the first requirement for implementing reform policies for promulgating RE. The suggestions for action are for electric utility managers to create goals for renewables by deconstructing or reforming energy policies to help recognize the reasons for the hindrances of those policies. Based on the findings, the framework of deconstructing the legal framework, the political, economic, and public trust in policymakers are the main elements that prompt breakdown in restructuring policies in the Dominican energy sector. A better analysis of the affecting elements of the failure of reorganizing policies in the energy sector stipulates conditions to design and modernize policies for successful energy strength and reducing the share of fossil energies in the economy of the Dominican Republic.

Another recommendation for action derived under Theme 2 is integrating hybrid energy systems with excellent potential using RE sources that are free of charge and environmentally friendly compared to fossil fuel energy. The Dominican Republic generates electricity from diesel generators. Conversely, a hybrid system will be composed of solar panels, wind turbines, hydrogen, and batteries to meet the power load with excess electricity generation. The minimum renewable power supply placement is

feasible and cost-effective and exhibits greater confidence. Therefore, the energy policies should foster the use of a hybrid system with a variety of RET because it could reduce the heavy dependence on fossil fuels, lower the cost of electricity, and curtail the greenhouse effect**.**

The final recommendation for action, generated from Theme 3, is for RE developers to become social engineers in aiding the landholders in attaining a property deed. Wind energy offers an opportunity for landholders to supplement their incomes with rents/leases. When energy developers arrived in the region searching for land to develop wind farms, the land was under individual control; however, its legal tenure was unclear. The Dominican government intervened by granting usufruct rights to allow local actors to benefit from the land. The government has not interceded in granting land titles due to a political understanding between the state and landholders. A clear land title is a start for developers to secure the project; albeit, the process is complicated, lengthy, and costly, and landholders are financially limited in paying legal fees. The findings indicate that land titles are central to wind energy production, and local actors are interested in getting rents/leases to supplement their incomes. Thus, property rights are an integral concern of both the landholder and the RE developer.

Recommendations for Further Study

I conducted a single case qualitative study to explore strategies that electric utility managers in the Dominican Republic use to initiate and sustain wind power generation. To further boost the understanding of the strategies of the wind energy business, I recommend future research to address the significant limitations of this study: geographic

location and sample size. The participants I interviewed worked at a wind energy company headquartered in the Dominican Republic. Future researchers could extend the geographical location to other governments in Latin America and the Caribbean. Electric utility managers working in other regions may have different strategies for effectiveness worth exploring. Also, the results of this study may not apply to other wind energy companies, enterprises, and individuals.

Future researchers could also use a larger sample size which may give the prospect of encapsulating more insights than achieved in this study. Finally, I recommend that future researchers may also consider broadening the research scope beyond a qualitative, single case study and conduct a mixed methods study to gain diverse perspectives from a measurable stance and potentially further understand successful RE strategies implementation through an amalgamation of contrasting prospects. For example, they could continue to explore the effectiveness of strategies used by electric utility managers as there are still prospects to advance more acumens as technology advances, laws change, and the operational ecosystem progresses.

Researchers could also employ purposeful sampling to identify electric utility managers who can efficiently tackle the subject matter. Future researchers may use a quantitative approach or mixed methods to integrate empirical data on the research topic. They could also gather data from the wind energy business personnel using focus groups or surveys to ascertain their points of view on strategies their electric utility managers use for the business's success. Collecting data from company personnel can help validate or counteract standpoints from the utility managers.

Reflections

In this study, I explored strategies that electric utility managers in the Dominican Republic use to initiate and sustain wind power generation. I quickly learned that RE practitioners use various strategies to ensure success and long-term growth. The participants in this study used various managerial tactics that turn out to be sustainable strategies. During this research, I found that interacting with governmental agencies is fundamental to realizing success in the RE industry. I managed roadblocks in trying to get interviews from the participants due to time constriction of their newly developed solar endeavor. I discovered, however, that in the Dominican Republic, it is not easy to gain access to executives, particularly those in the energy sector. Email and phone calls were insufficient to persuade electric utility managers to make time and reveal practices to researchers. Face-to-face interaction was indispensable for these electric utility managers' interest, confidence, and trust. One primary takeaway from the study is that interactions and trust are significant in achieving organization success. I recommend that future studies in this area be conducted to incorporate the perspective of personnel.

In sum, this doctoral process posed challenges, but it is truly gratifying to contribute data to support strategies to develop and sustain wind energy production within the electric utility. It is also rewarding that I can add knowledge to my field of practice and gratifying that this research study can impact social change. The successful evolution of RE generation has a global impact: It can underwrite the economic, ecological, and social advancement of a country.

Conclusions

Ensuring the acceptance of wind energy success is vital for a wind energy project and helps reduce the negative impact of climate change (Fatima et al., 2021; Olabi & Abdelkareem, 2022; Olabi et al., 2022). The purpose of this qualitative single case study was to answer the research question: What strategies do electric utility managers in the Dominican Republic use to initiate and sustain wind power generation? Five business leaders in one wind energy company in the Dominican Republic participated in semi-structured face-to-face interviews to address this question. I correlated the interviews by reviewing company documents, websites, and social media data.

Three themes emerged following data collection and analysis: (a) deconstructing the existing regulatory legal framework for RE development; (b) fusion of hybrid technologies into utility operations; and (c) securing land access and stakeholders integration. The findings showed that electric utility managers must pay attention to the growth in the RE world due to its link with government forces that affect the implementation of RET.

Electric utility managers must adapt their business strategy to a continually shifting ecosystem. Electric utility managers should implement various approaches, strategic tools, and policies to drive their long-term objectives and realize their goals. Successful strategies enable management to position their company in its ecological niche, satisfy customers, employees, and stakeholders, compete successfully, and develop lucrative business performance. Therefore, sustainability results in long-term growth, competitive advantage, and profitability, despite the market threat. Changes in strategy

become necessary only when achieving a strategic goal is either impossible or no longer desirable.

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Appendix A: Interview Protocol

Interview Protocol	
What the researcher will do	What the researcher will say (script)
Introduce the interview and set the stage	Hello (Face-to-face interview) _____. Thank you for your participation in this case study. This interview will take about 45-60 minutes. Is that still good for you? As a reminder, I am Virgil J. Pérez a doctoral student at Walden University, and I will go ahead and provide you with a copy the consent form you previously signed. As the consent form indicates, the purpose in talking with you today is to learn from your thoughts, state of mind, and experience as an electric utility manager executing RE strategies. I will ask you a series of questions on this topic, and I invite you to respond with as much detail and information as appropriate. Before we begin, do you have any questions or concerns related to the consent form you signed or to the interview process in general? Thank you. At this time, I will go ahead and turn on the audio recorder to capture our conversation. I would like to introduce Participant X_, who is conducting a semi structured interview for this case study on the _____ day of _____ in the year 2021. The current time is _____.
Watch for nonverbal cues Paraphrase as needed Ask follow-up probing questions to get more in-depth	1. As a member of the management team, what strategies do you use to realize sustainable wind power strategies? 2. What challenges or barriers did you face in initiating strategies to obtain wind power as a substitute to reduce the cost of electricity? 3. How did you identify effective strategies for realizing sustainable wind power utilization measures to advance operational productivity? 4. What factors do you feel influence the exploitation of wind power, and how worthy is each factor in your strategy to initiate and sustain wind power generation?

	5. What policies do you feel need to be revised, reformed, or enhanced to address challenges or barriers to carry out your strategies to initiate and sustain wind power? 6. What strategies are you applying to tackle these challenges or barriers? 7. What factors for investing in wind power vary from those capitalizing in fossil fuels? 8. What are the benefits and shortcomings in your strategies to increase production of wind power resources in the Dominican Republic? 9. What other insights regarding strategies to execute sustainable practices to increase and improve the execution of wind power in the Dominican Republic would you like to share?
Wrap up interview thanking participant	This concludes our interview. I would like to thank you for participating in this interview and, as a reminder, do not hesitate to reach out to me using the contact information in your consent form if you have follow-up questions or concerns
Schedule follow-up member checking interview	I will transcribe our interview and provide it for your review soon, so you can confirm that it accurately reflects our conversation today. After that, I will briefly summarize my interpretations for each question and would appreciate the opportunity to revisit with you for a short follow-up video interview. What day and time works best for you for this follow-up video interview?

Follow-up Member Checking Interview Protocol	
What the researcher will do	What the researcher will say (script)
Introduce follow-up interview and set the stage	Thank you for the opportunity to revisit with you to follow-up on our previous interview. As a reminder, after our previous conversation, I reviewed the transcripts and briefly summarized my interpretations for each interview question. The purpose of this follow-up interview is to give you an opportunity to review my interpretations to determine if any information needs to be corrected, and to share any additional information or insights
Share a copy of the succinct synthesis for each individual question Bring in probing questions related to other information the researcher may have found – note the information must be related so that the researcher is probing and adhering to the IRB approval. Walk through each question, read the interpretation, and ask: Did I miss anything? What would you like to add?	At this time, I will provide you with my interpretations for each individual question, and you will have an opportunity to review them and provide feedback one at a time. 1. Question #1 and succinct synthesis of the interpretation 2. Question #2 and succinct synthesis of the interpretation 3. Question #3 and succinct synthesis of the interpretation 4. Question #4 and succinct synthesis of the interpretation 5. Question #5 and succinct synthesis of the interpretation 6. Question #6 and succinct synthesis of the interpretation 7. Question #7 and succinct synthesis of the interpretation 8. Question #8 and succinct synthesis of the interpretation 9. Question #9and succinct synthesis

	of the interpretation
Wrap up follow-up interview by thanking participant	This concludes our follow-up interview. I would like to thank you, again, for participating in this process. I will send you a summary of the findings electronically of the study if you are interested. Thank you for your time

Appendix B: Letter of Invitation to Potential Participants

Dear Invitee,

My name is Virgil J. Pérez. I am a doctoral student at Walden University's Doctor of Business Administration Program. I am kindly requesting your participation in a doctoral research study that I am conducting titled: The study is entitled" Challenges *and Opportunities for Implementing Sustainable Wind Energy Strategies in the Dominican Republic."* The purpose of this qualitative single case study is to explore strategies that electric utility managers in the Dominican Republic use to initiate and sustain wind power generation.

This research will require about 45 to 60 minutes of your time. During this time, you will be interviewed about your experiences executing strategies to enhance wind power generation. The interviews will be conducted face-to-face and will be tape-recorded.

Participation is completely voluntary, and you may withdraw from the study at any time. The study is completely anonymous; therefore, it does not require you to provide your name or any other identifying information.

If you would like to participate in the study, please read the Informed Consent Letter attached herein. To begin the study, you must execute a copy of the consent form and email it to me at: virgil.perez@waldenu.edu, the letter will be part of the records for the study.

Your participation in the research will be of great importance The implications for positive social change include the continued sustainment of RET in the Dominican Republic, maintaining employment in this industry, and financially addressing social issues such as poverty in communities while benefiting the ecosystem.

Thank you for your time and participation,

Respectfully,

Virgil J. Pérez

Doctoral candidate