National College of Ireland

Project Submission Sheet

Student Name:	Nathan Morgan		
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Submission of Thesis and Dissertation

National College of Ireland
Research Students Declaration Form
(Thesis/Author Declaration Form)

Name: Nathan Morgan

Student Number: x20484826

Degree for which thesis is submitted: BAHBMDWP4

Title of Thesis: "To what extent and why does Irelands energy utility industry vary in its approach to sustainability in corporate strategy?"

Thesis supervisor: Robert MacDonald

Date: 19/07/2024

Material submitted for award

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Thesis

“To what extent and why does Irelands energy utility industry vary in its approach to sustainability in corporate strategy?”

Nathan Morgan - X20484826

BAHBMDWP4

Lecturer – Robert McDonald

Module – Capstone Project

Word count – 14,637

Contents

To what extent and why does Irelands energy utility industry vary in its approach to sustainability in corporate strategy?

1. Abstract

With the first publication of the Climate Action Plan in 2019 Ireland entered a new period of sustainability and sustainable focus, the likes of which had never been seen in the country. In the following 5 years Ireland has made huge strides in renewable technology and development as well social sustainability, signing up for frameworks such as the UN sustainable development goals. With a target of being Net Zero by 2050, there is a huge effort here needed by all sectors. The energy sector in particular has published many corporate strategies in recent years showcasing their own roadmaps to be Net Zero. This study uses a qualitative method of interviews with industry professionals and academics to understand the how and why the energy utility industry in Ireland may vary in its approach to these corporate strategies. The study found that there is a huge range of challenges, unique reasons and opportunities facing the sector that underscore the need for a variance in approach. These range from huge emissions from fossil fuel generation promoting the need for renewable development, security of supply and customer affordability issues – in particular will intermittent renewable energy be enough? And the energy industry being ahead of other industries due to the nature of the business. Likewise, there is also geographic considerations at play for energy utilities in Ireland, with Ireland being perceived as behind in sustainability thinking, while the countries utilities also have to deal with policy issues around planning as well as Climate Action Plans and more high-level EU policy on renewables. This study suggests that within the energy utility industry in Ireland there is a high level of variance associated with sustainability, mainly based against other sectors such as agriculture as well as due to geographic and cultural norms associated with Ireland.

2. Introduction

In today's modern climate sustainability has risen steadily over the past couple of years, becoming an integral part of many business areas, particularly in corporate strategy. Sustainability is an incredibly important topic to consumers. According to the WEF (2023) 66% of people and 75% of millennials said they consider sustainability when purchasing. With the increased levels of sustainable awareness, particularly in younger people it can be assumed that sustainable awareness will continue to grow and become and exponentially important issue for companies to face as younger populations grow older.

The growing worldwide level of awareness of sustainability entered new heights in Ireland with the introduction of the Climate Action Plan in 2019. The plan set out by the Government for the first time outlined a roadmap for the tackling of the current climate crisis in the country,

aiming for a 51% reduction of emissions by 2030, an incredibly ambitious target (Gov.ie, 2021). Perhaps these targets were and remain somewhat too ambitious, with both the Climate Change Council and the Environmental Protection Agency in recent years doubting the ability of the country to meet these targets with the current level of action (Flecther, 2023) (O'Sullivan, 2023). In any event, the Climate Action Plan and subsequent updates have all contained important actions that specific sectors must take such as reductions in emissions, within this a heavily focused upon sector is that of the electricity sector within which the countries energy utilities operate.

As such utilities not just in Ireland but worldwide are facing an incredibly uncertain future, with huge infrastructure and business model changes needed for these companies to remain viable in the future (Guerra-Mota et al, 2018). With sustainability targets mostly focused on the longer term i.e., 2030 and 2050 targets in the case of Ireland this means that corporate strategy is the perfect vehicle to ensure utility companies reach their targets. However, due to the size and complexity of these organizations and the industry it is likely that the industry differs very much to other large polluters within the Irish economy such as agriculture. It can also be correctly assumed that no one size fits all approach to sustainability strategy is to be expected across the sector, coupled with a lack of research within the specific Irish centric industry utilities must develop unique corporate level strategies that they will use to guide the company to deliver the energy transition.

Due to the increasing levels of awareness, developing a sustainable strategy and approach to business can be a huge boon for companies both currently and in the future. According to a review of the Warsaw Stock Exchanges top 20 companies by Matuszewska-Pierzynka (2022) the stability of revenues for sustainable companies is higher than for non-sustainable companies, it is not a stretch to assume that this same pattern is repeated worldwide. As companies become more sustainable revenue streams become more stable, employees become happier and work harder, consumers are satisfied with the company's approach and buy more, and companies will not face penalties for environmental breaches.

It is because of these reasons that this research asserts that it is obviously a huge advantage for utility companies to incorporate sustainability into their corporate strategy for three reasons 1. To keep customers engaged and buying new products/services well into the future and 2. To improve revenues and benefits for companies and stakeholders and finally in order to adequately plan for a low carbon sustainable future and to weather an uncertain market that is likely to change quiet drastically in coming years utilities should have a north star corporate strategy that lays out its goals, commitment and purpose (Guerra-Mota et al, 2018). According

to Matakanye et al (2021) there is growing concern among stakeholders for companies' sustainability report to include sector specific ESG (Environmental, Social, Governance) indicators. Again, Matakanye et al (2021) states how some industries face greater public pressure than others and companies within differing industries have varying priorities in order to deliver on stakeholder demands.

From this we can assume that in order to develop strong strategic management practices and meet sector/industry specific sustainability goals, industries must differ in their approach to sustainability as part of its strategy. In particular this study assumes that due to the unique nature of the energy utility industry and the work it is involved in creation of energy and large-scale infrastructure projects, that this sector will significantly contrast with other sectors in its approach to sustainability in corporate strategy. This research will aim to answer the following research question in order to understand this 'To what extent and why does Irelands energy utility industry vary in its approach to sustainability in corporate strategy?'.

It is the hope of this study that the research will present important findings on the levels of variance within the utilities sectors approach to sustainability, contrasted against other sectors as well as peer companies within the sector. This research will hopefully play an important role in putting focus on the concept of integrating sustainability within energy utility corporate strategy so that the area can possible be improved upon in the future while also contributing to Irelands long term sustainable goals.

3. Literature Review

3.1 Introduction

The right corporate strategy is a highly valuable asset in any and all business environments. Strategy acts as the "Guiding star" of most companies, informing decision making, employee behaviour and purpose and values. With the general rise of sustainability and sustainable practices in recent years many of these approaches are becoming a particularly important pillars of modern corporate strategy, with companies focused and opting in for binding targets in these areas. As we can see above, there isn't a huge amount of value in a one size fits all approach to sustainability in corporate strategy as sectors are faced with unique challenges and issues that require a custom approach to delivering value through a sustainable corporate strategy. This may be most prevalent in the energy utility industry in particular due to the nature of environmental impacts from the large % of these businesses that remain fossil fuel focused. Due to this, the main aims of this research will be to explore how and why the energy utility industries approach to sustainability in corporate strategy differs, exploring the unique challenges and focus areas of the industry.

3.2 The Environmental Pillar

Environmental sustainability is “the ability to maintain an ecological balance in our planet’s natural environment and conserve natural resources to support the wellbeing of current and future generations” (Microsoft, 2023)

When thinking of sustainability, the topic that will come most quickly to most people’s mind is the environmental aspect. According to Hedstrom (2018), the main focus of sustainable work within the past 30 years has focused on the environmental aspect with climate degradation and resource limits in particular being a huge focus. It stands to reason then that because the environmental pillar receives the most attention, that it will play a large role in any business that has strong sustainability approaches. The paper by Wolniak et al. (2023) in particular comprehensively examines the link between environmental sustainability and business. The paper notes the particular advantages and disadvantages of companies adopting environmental sustainability as part of their strategies. Notable advantages include Environmental Conservation, improved brand reputation and Long-Term Resilience, while important disadvantages include implementation costs, supply chain challenges and complexity of reporting.

The paper uses a qualitative approach to break down the differing approaches to sustainability, including Energy Efficiency, Green Building Design and Water Conservation. This work is important to as it shows the difference in approach that many larger companies take (even within the same industry) when looking at environmentalism. The companies within this study are extremely important when understanding the diversity in approaches. Likewise, from this we can assume that energy utilities will vary in approach to companies such as Google due to the aforementioned unique challenges.

Ensuring that environmental sustainability is ingrained effectively into corporate strategy is an imperative for long term strategic success (Wolniak et al. 2023). This study describes how environmental sustainability fits into the corporate business strategy of energy utility companies and the value this can provide. This source will be used when delving into the environmental pillar of sustainability in this context to provide insight into the value gained and lost from these unique practices.

3.3 The Social Pillar

Social Sustainability is defined as “an integral part of sustainable development, addressing social challenges such as poverty, inequality or illiteracy” (Hogrefe & Joschko, 2023)

Following on from the first pillar we have the Social Pillar or Social Sustainability, an area that although is not as well-known as the environmental aspect still plays and equally important

role in sustainability. According to Hogrefe et al. (2023) the concept of social sustainability has received increasing attention over the years by corporate management, as they view this pillar essential to delivering sustainability within organizations. Much of the theory around social sustainability focuses on stakeholder (customer & society) demands and the ability to meet these, with corporations needing social approval for its practices in order to operate (Hogrefe et al, 2023).

Hogrefe et al (2023), notes how there is a particular focus on differing social sustainability aspects in research by region, with main focuses in Europe being the agricultural industries. With varying attention by region on social sustainability topics this study seeks use this work to examine how energy companies in Ireland fit into the European research focuses and perspectives. According to Lloret (2016) within social sustainability there is corporate social responsibility, which involves a company's efforts to shape societal expectations regarding its conduct. This approach necessitates responsible actions towards consumers, investors, and government entities (Lloret, 2016). While the study by Lloret (2016) focuses more so on sustainability in corporate strategy, and the differing approaches companies can take to ensure they are effective, as such this research will be important when understanding the differing approaches to sustainability.

Within social sustainability there is also the more broadly know concept of Corporate Social Responsibility or CSR for short. CSR is defined as “when a business firm consciously and deliberately acts to enhance the social well-being of those whose lives are affected by the firm’s economic operation” (Weber et al, 2018, Corporate Social Responsibility, pg. 4). Caulfield et al (2024) notes how corporations should assume a greater responsibility in fighting bad social issues when accruing extra resources or influence, as such the study notes how much of the current focus on CSR has been on how corporations can help solve social issues.

The study by Caulfield et al (2024) also notes that while CSR may have good intentions in some cases it runs the risk of not delivering actual real social value, due to the effects of corporate expansionism and the need for companies to maintain a level of status quo to maintain profitability and power. This underscores the importance of effective balance between the social and economic pillar of sustainability, as in some regards, in order to maintain their economic edge companies must retain some level of status quo in its operations, some of which may be harmful to society as a whole. In recent years companies like commodities giant Glencore have faced human rights abuse accusations and cases for its failure to adequately plan and manage the societal impact of its business in exchange for keeping its profits (Hodal,

2021). If not managed effectively this can have unintended consequences on the social sustainability and CSR goals of a company.

3.4 The Economic Pillar

Economic Sustainability is “The practice of conserving natural and financial resources to create long-term financial stability. A system that's sustainable can last far into the future with minimal negative impacts” (Indeed, 2022)

The third pillar of sustainability is the economic pillar or economic sustainability. The study Mishchenko et al (2019) uses a qualitative approach and examines how Economic Sustainability is vital to organizations as it ensures market position stability and can be a guarantee of survival in some cases by promoting adaptability and stability. Companies who show higher levels of economic sustainability than others may show improved benefits such as attracting investment, obtaining loans and attracting skilled personnel. However, the study by Mischenko et al (2019) notes how to achieve economic sustainability, organizations must meet certain requirements including effective, continuous monitoring to ensure efficiency, the ability to rapidly respond and change to the internal and external environment and the formation of a strategy of activities to be achieved.

While the qualitative study Doane & MacGillivray (2001) contains somewhat different stances stating environmental sustainability is “allocating and protecting scarce resources, while ensuring positive social and environmental outcomes”. The study notes how there are usually two approaches to economic sustainability the first is focused on how a company stays in business and its approach while the second focuses on the companies place and effect on the economy. Both approaches involve financial performance, asset management and social and economic effects (Doane et al, 2001)

Both of these studies provide very useful but at sometimes conflicting information, however the study by Doanne et al (2001) is far more in depth on the business aspect. For the purpose of this study information will be gathered from both in order to describe economic sustainability in a broad context, the role it plays and how it can be beneficial if done right. Due to the unique roles Energy utilities play in society it is important that they contribute to economic development in a sustainable way. With Irelands energy utilities generating record profits in recent years due to high volatility in the market it is important that these companies are able to build a system of sustainable growth in order to ensure this profit continues in a sustainable way (O’Halloran, 2022). Companies like ESB have used this profit to invest heavily in infrastructure which is required in order to help build resilient sustainable projects and contribute to the goal of Net Zero (ESB, 2023). This economic investment should help utility

companies to avoid major market shocks like the recent war in Ukraine by contributing to the resilience of infrastructure, strengthening the economic sustainability of the company.

3.5 Corporate Strategy

Corporate strategy refers to “a coordinated set of actions that its managers take to outperform the company’s competitors and achieve superior profitability” (George, 2023).

Strategy is an extremely important area of each and every business. As noted by George (2023) if a company wishes to make money and obtain profit it must understand its business, its future, and any advantages on its competition, this is where strategy comes in. George (2023) again notes how corporate strategy is the strategy the company’s top management implements for the overall company and establishes a groupwide gameplan. A corporate strategy usually is aimed at achieving long term objectives and as such this makes it an excellent vehicle for achieving sustainability. As much of the companies in Ireland have long term sustainable goals for 2050 this means that a long-term strategy that is sustainable in itself, regularly updated and is effective for the business and its goals should be used in order to achieve these. According to Ahmed (2023) a strong an effective Board of Directors can be used in this regard to oversee and support the sustainability of the company’s strategy, mitigating risk, overseeing implementation, and using experience to adapt the strategy for the myriad of new and old challenges the company faces.

As noted by Ahmed (2023) utility companies have varied goals, with private companies aiming to turn a profit while state owned companies mainly aim to contribute to welfare of citizens, as such it can be assumed that these goals will vary also in their approaches to strategy also. These pieces of qualitative research by George (2023) & Ahmed (2023) are important as the former explains how corporate strategy can and should be used effectively in any business, while that latter, which focuses on the role directors in utility companies play rather than the strategy itself, delves deeper into the utility industry as a whole. As such this work will be used and compare the two pieces when talking about utility industry strategy and the role it can play in achieving sustainability.

When looking at sustainability within utility strategies it is important that companies effectively plan and manage each pillar of sustainability. As noted by Gomez et al. (2022) that in order for a company to be considered sustainable, its approach much be harmonic among all 3 pillars. The 3 pillars do not operate independently of each other and are intrinsically linked. As seen by the WEF (2020), pollution which is an environmental factor is bad for business (Economic) and costs lives (Social), as such to be effective a corporate strategy must strike a

balance between all 3, that lowers carbon emissions, delivers on societal needs and expectations while also delivering growth for the business.

In the utility industry this is more important than most as these companies run the risk of a strong environmental focus that neglects the other two pillars due to the polluting nature of the business. This is seen somewhat in the current naming and content for published utility strategies in Ireland such as ESB's Net Zero by 2040 and SSE's Net Zero Transition Report (ESB, 2023) (SSE, 2023). These reports although containing some economic and social information and goals, focus very heavily on the environmental aspect of the business and how to achieve Net Zero. With targets and deadlines for greenhouse gas emissions the main focus of these strategies. In order for a company strategy to be effectively long term and sustainable it must consider environmental sustainability, social endurance and economic stability, if it does not, the firm runs the risk of continually making short term adjustments that harm the company's effectiveness (Lloret, 2016)

3.6 Irish Energy Industry Sustainability Standards & Policy.

According to latest reports by the Environmental Protection Agency, Ireland is on course to miss its greenhouse gas emissions target of 51% reduction by a large degree (O'Sullivan, 2023). According to the report, all sectors within the country will need to do more in order to lower their emissions, this includes the energy sector. With the sobering reality that Ireland and the energy industry as a whole are not doing enough to make good on legally binding targets. This underscores the importance of strong evidence-based targets for the sector, with penalties, deterrence and supports for those who aren't doing enough. Notable standards or targets that the energy sector has signed up for include Science Based Targets and UN Sustainable Development Goals as well as general Environmental, Social Governance (ESG) reports and scores.

Within Ireland specifically companies are beholden to the Climate Action Plan, published in 2021 and updated yearly. The plan "sets out the roadmap to deliver on Ireland's climate ambition. It aligns with the legally binding economy-wide carbon budgets and sectoral ceilings that were agreed by Government in July 2022" (Gov.ie, Climate Action Plan 2024, pg. 10). According to the latest rendition of the plan energy industries are the 3rd highest GHG emitter in the country, responsible for over 14% of emissions yearly, this underscores the huge role energy companies must play in Ireland in order to lead the energy transition, this could and should be a main priority of the sustainability strategy of these companies. As noted by Zohuri et al (2021) as prosperity of nations and their populations rise the level of energy demand increases and is expected to rise by at least a fifth of current values worldwide by 2040. With

Irelands population growing 10% in the last ten years and currently being the fastest growing in the EU it is likely that a huge increase in energy demand will occur within the next few decades in order to provide for these increases (Johns, 2023). With oil, gas and coal accounting for 79% of Irelands energy usage with current demand levels any increases in demand will need to not just tackle this figure but also the increased demand for these sources, this can only be done with ever increasing investment in renewable energy by utility companies and the state (KPMG, 2024).

Another heavily utilized sustainability index for both companies and nations is the UN Sustainable Development Goals (SDG's). The framework developed by the UN and adopted by all of its member nations, including Ireland, provides a plan for prosperity for the people of and the planet itself (UN, 2024). Currently, there are 17 SDGs with associated targets for countries to meet, these include but are not limited to 10. Reduced Inequalities, 7. Affordable and Clean energy and 13. Climate Action (UN, 2024). Within the Irish context many business have signed up to achieve and support the development of these goals in a number of ways, with differing industries targeting differing goals to support as part of their sustainability strategy. In the utility industry the focuses also vary somewhat from company to company based on a number of factors. Notable companies signed up to support specific SDG's include ESB (Goals 7,9,13), SSE (Goals 13,7,8,9) and Energia (13,7,8,9,5,11) (ESB, 2023) (SSE,2023) (Energia, 2023). All of these companies show the similar focus of the industry with goals 13 (Climate Action), 7 (Affordable Energy) and 8 (Decent Work and Economic Growth taking centre stage showcasing how the industry views its priorities in terms of sustainability. However, it is of note that even within these companies who inhabit the same ecosystem there is a small level of difference in respect to other goals these companies put value in, with ESB – Irelands largest energy utility focused on just 3 such goals, while the others put at least some of their energy and focus into some less obvious areas such as number 5 (Gender Equality) in the case of Energia. This perhaps will show at least in some part in the sustainable strategy of these companies.

4. Research Question.

This studies research question Is 'To what extent and why does Irelands energy utility industry vary in its approach to sustainability in corporate strategy?'. This study hypotheses that within Irelands energy utility sector there is a huge amount of variance when compared with other sectors, mainly due to the nature of the energy business in Ireland which still relies majorly on fossil fuels with gas used to supply 48% of the energy used in Ireland in 2022 (Gas Networks, 2023).

As mentioned above the Environmental Protection Agency has recently announced that they do not believe Ireland will meet its greenhouse gas emissions target reduction of 51% (O'Sullivan, 2023). This means that in order for the state to live up to its internationally binding targets there must be rapid and efficient improvements in how Ireland and its companies operate sustainably in both the short and long term. With the large amount of fossil fuels still used in the utility industry, nowhere Is this improvement needed more than in our energy creation and use. This question is important as in order to effectively improve something it must be adequately understood. It is the hope of this work that the differences in approach to sustainability within corporate strategy of utility companies will be better understood as well as the whys behind these differences. The research here will hopefully be valuable to aid Irelands energy sector in order to achieve important UN Sustainable Development Goals and to achieve its legally binding Net Zero targets.

As this study is solely focused on the differences in Irish utilities and not utilities in other countries, there will also be focus on the role in which the geographic location (i.e Ireland) plays on these companies, their approach to sustainability, risks, and strategy. Hohn et al (2023) notes that national culture such as beliefs and values of society including masculinity, long term orientation and power distance can have an effect and is intrinsically linked to how well CSR is performed in companies. Likewise, statistics such as corruption, economic development and GDP may also play a role with lower GDPR countries exhibiting lower CSR performance (Hohn et al, 2023). According to Hofstede Insights (2024) Ireland is relatively long term orientated at 51 out of 100, this study seeks to understand how cultural factors such as this can affect how Irish utilities companies view and strategically plan to achieve sustainability and how does this differ between Irish domestic companies such as ESB and international companies such as SSE.

5. Methodology

5.1 Philosophical Assumptions

The aim of this research is to understand the associated how & why energy utility companies approach to the concept of sustainability varies. As such the research paradigm will be interpretive in nature as the results of this will vary by industry, by company and by person as there is no distinct right or wrong reason for the variances of the industry. This research assumes that the energy industry will vary in a large amount due to the associated unique challenges it faces, in particular the energy industry faces increased scrutiny due to the large emissions associated with energy production. This research also assumes that, if utilities do vary in their approach that there may be identifiable reasons for such varieties, e.g. if one utility values social sustainability over economic, why is this the case?

Within even the energy utility industry there is varying issues and responsibilities for both public and private companies which may affect their ability to implement sustainability into strategy among other things. According to research by Bliss (2015) public utilities, in the US in particular, are less likely to meet environmental & health standards due to a lack of resources, mainly associated with the political nature of the business that is not present in private companies. As such this research assumes that within utility company strategy there will be a huge difference between industries but also peer companies in the approach to sustainability.

This research also assumes that there will be an expert pool to draw from, from experience in utilities, strategy, and sustainability, all of which will have varying perspectives. Some of these perspectives may conflict or complement each other due to the experiences of the individuals involved, and it is the effort of this piece to draw conclusions based on these. Another assumption of this study is that utilities follow set standards and guidelines for sustainability when producing and monitoring their strategy's i.e., science-based targets, UN SDGS, or the Climate Action Plan, and that depending on the environment these companies operate in that these will play a considerable role in how sustainability strategy is incorporated (and will also help in identifying the aims of these strategies). Under CAP 2024, there is an expected to be 9GW off onshore wind, 5GW of offshore and 8GW of solar by 2030, these developments are mainly to be driven by utility companies with public and private investment for these long-term targets. As such it is expected that these will inform strategic planning around sustainability now and into the future.

5.2 Research Design

5.2.1 Instrument

For the purpose of this study, a qualitative approach will be used due to the nature of the research questions. Qualitative research is defined as "the naturalistic study of social meanings and processes, using interviews, observations, and the analysis of texts and images (Stanford, 2024.) Within qualitative research, the reality of situations is seen as subjective, and research is gained from the opinions of participants within the study (Smith, 2023). As the how and why the energy utility industry varies is mainly non numerical and is opinion based this is why a qualitative approach has been chosen. Individual participants within this study may have differing and evolving views on the extent of differences between their companies and others approaches, formed through both experiences within their own lives and within the unique company culture and structure.

In order to understand and develop this research piece based on these opinions, a series of interviews with knowledgeable and relevant individuals within the energy utility industry and

academia will be conducted using structured questions based around sustainability, the energy utility industry, strategy and more in order to gather expertise, knowledge, and opinions of these individuals to help explain and support the aim of this study. Interviews have been chosen for this study as they allow for a series of open-ended questions to be asked of participants, from which they can draw from their expertise to answer these questions. Interviews will also be a helpful medium due to the subjective nature of this research, as interviews allow participants to talk freely and share experiences this will allow for more open communication based on the subjective thoughts of the participants.

Interviews will be conducted during working hours, within days to weeks of each other with tailored questions based on the previous experience of individuals. Participants will be asked a series of 6 questions, with questions for participants falling into these relevant themes, 1. Challenges faced by the energy utility industry, 2. Sustainability within organizations and the industry as whole, 3. Effects of locations on sustainability strategy (Ireland & EU Focus, 4. Semi State/Public vs Private sector approach to sustainability. Questions to academia will be based more so around the Irish angle of sustainability and strategy while utility experienced individuals focused more so on the utility specific side. From these questions a broad consensus will hopefully be reached, one which understands the utility and business specific reasons for differences in variety and that also incorporates Irish specific reasons. Themes have been chosen based on what will deliver the maximum information available in order to understand the how and why of variance within utility corporate sustainability strategy.

Secondly, a review of relevant literature will also be undertaken, focusing on and critiquing literature based on the 3 pillars of sustainability, corporate strategy, and the energy utility industry in order to gain a deeper understanding of these topics, how they interact and how they may vary. Literature will focus on articles from well-known news sources, peer reviewed articles from journals including those based on sustainability and strategy, as well as government & company published reports including those from ESB in their Net Zero by 2040 strategy report and the Governmental Climate Action Plan among others.

5.2.2 Sampling

Individuals will be chosen based on their experience, whether that be in a utility company or through academia, their role (with individuals who have direct experience in strategy & sustainability a main focus), and finally their general experience with participants who have a longer stint in both the utility industry and sustainability more desired for their expert opinion. In order to identify relevant individual who can contribute to this study sustainability and strategy professionals will be research through online social media platforms and company websites to find contact information,

This sampling has been chosen for a number of reasons, first of all individuals who work directly in utility companies or who study/teach on topics such as sustainability and the energy transition are likely to have important industry insights into this topic. While those with longer tenures within the industry and academia will likely have a very thorough understanding of the industry and its attempts to deliver sustainability through corporate strategy, as well as this they may have information gathered from competitors etc.

5.2.3 Pilot

A pilot interview will be conducted with a relevant industry professional, discussing various themes and topics such as the role of public vs private utilities, strategic goals of utility companies, how sustainability is managed in a specific company and more. It is the hope of this study that this initial interview can be used to inform the thinking and questions of further interviews in order to gather more relevant and important knowledge from industry professionals. Likewise, as academic professionals will also have a wealth of knowledge relevant to both strategy and sustainability, an initial similar interview will be conducted with a strategy lecturer based at National College of Ireland to gather valuable knowledge but to also inform thinking for the following academic interviews.

5.3 Data Analysis

As interviews will be conducted via online and in person mediums, notes will be taken of conversations with participants. Recordings will also be conducted throughout the whole of the interview, from these direct quotes will be used within the finings section to ensure participants are not misrepresented, these will then be summarized or requoted in the discussion material. To understand the data recordings and notes will be consulted and compared against relevant literature including news and journal articles for a number of reasons, first to understand where the information sits within the broader literary context, and secondly to understand the importance of a finding i.e. has this been mentioned before? and if so, how often? Similarly, findings will be compared against other participants, in order to understand where they agree and disagree, hopefully with the aim of understanding which issues for the industry are most important or are the most widely known, and how this may affect sustainability efforts. Data Will then be broken down into 4 key themes, 1. 3 Pillars of Sustainability, 2. Unique Challenges etc, 3. Public vs Private Utilities and 4. Irish and EU Context. Information that pertains to these 4 themes will be quoted directly from participants within the findings section, grouped by themes based on the level of importance to said theme. This data will then be further analysed against relevant literature in the discussion and findings section to gleam its wider role and the importance of the finding.

5.4 Ethics

“Research ethics considers the act of doing good and protecting the rights of participants in research, as well as avoiding any possible harm to any participants” (Laryeafio et al, 2023, pg. 1)

Laryeafio et al (2023) also states that due to the use of human participants in qualitative research it is imperative that these participants are protected adequately In order to ensure they can freely give their honest opinion. This will form a beginning basis for the research conducted within this study.

Within this study the rules set out in the Belmont Report will be used to inform ethical considerations around the use of individuals in this study. The three principles of the Belmont Report i. Respect of Persons, ii. Beneficence, iii. Justice will be followed at all times to ensure that ethics are followed, and individuals are not taken advantage of (Department of Health, Education, and Welfare, 1979).

5.4.1 Respect of Persons

This states that people have a right to make their own decisions and that those who cannot make their own decisions require special protections (Department of Health, Education, and Welfare, 1979). As such this research will seek to treat all individuals associated within this study as autonomous individuals, never seeking to coerce individuals to participate and also allowing for individuals to withdraw consent at any opportunity. Within this, any protections needed for individuals will be implemented where and to the quality needed to ensure their respect is considered with the utmost importance. Individuals interviewed for this study as such will be asked to complete a consent form outlining their rights to withdraw consent and their willingness to undertake an interview as part of the study, be recorded where necessary and to be citied for the information provided.

5.4.2 Beneficence

This principles states that research must protect humans’ participants from harm while also ensuring that any benefits from the published study are maximized (Department of Health, Education, and Welfare, 1979). As such this study will take all efforts to protect individuals, ensuring no physical harm is applied as part of the study and seeking to lower emotional harm etc where needed, as such interviews will be offered in both online or in person form to allow individuals to choose the most comfortable medium. Research conducted from this study will also be made available to all interviewees to ensure any benefits gleamed from such will be made readily available.

5.4.3 Justice

This aspect focuses on the fair allocation of both good and bad aspects of research to all individuals, taking care to ensure that no one group, or individual is taken advantage of (Department of Health, Education, and Welfare, 1979). As part of this research all groups and participants will be treated fairly and equally, questions although tailored to each individual will remain similar enough to not out onerous expectations on one individual over another.

5.5 Limitations

As with any piece of research there were limitations associated with this study. A somewhat large limitation with the study is the sample size of interview participants, with 4 interviews completed as part of this study a huge amount of info was gathered from participants. However, this is a small sample size for this kind of research piece. This may have limited the diversity of thought in this study and may not have had as many differing opinions as could've been had with a larger sample size. Although the information gathered was extremely valuable, it may have been bolstered by more participants. Secondly, it was incredibly difficult to find sustainability professionals outside of the utility industry willing to participate, this limited the discussions around utilities differing from other industries to thoughts gathered by those within the utility industry and did not allow for an outside perspective on sustainability within other industries that could be compared.

Another, slighter limitations was the small amount of research pieces available based on the energy utility industry in Ireland and its sustainability. Although pieces were found that were relevant to this study there maintained a general lack of pieces that analysed the sustainability efforts of Irish utility and as such it presented a small problem when analysing where this piece of work sat in the broader field.

6. Findings

6.1 Sustainability & the 3 pillars (Economic, Environmental & Social).

As this research has stated above, sustainability is not just the broad topic of environmental protection and is in fact a set of 3 pillars encompassing environmental, economic, and social sustainability. This research assumed that due to the polluting nature of Utilities, that the environmental pillar would receive the most focus. Perhaps surprisingly participant 1 mentioned that the:

"Energy Trilemma is the biggest challenge faced by the industry. Utilities must secure the supply of electricity while the demand is growing, transitioning away from fossil fuel generation…. While also doing this in a means that is affordable to customers…." (Participant 1, 2024).

With this being the biggest issue faced by the industry it may also have the largest impact if not faced head on, companies that fail to adequately plan to manage this trilemma, through its corporate strategy or other methods may seem huge problems with their business. Securing the supply of energy in particular is a main focus for utilities in a time of growing demand, with demand forecasted to more than double by 2050 in Ireland utilities must ensure that customer demand needs are met by building renewable generation but in some cases supporting renewables with fossil fuel generation to cope with demand (EirGrid, 2024).

According to participant 3 there is a:

“Really good understanding (of sustainability) companies now in the utility industry have really good social strategies, are interested in their supply chain and the people involved in the supply chain and are very aware of sustainability” (Participant 3, 2024).

This point shows the increasing effects of social sustainability on utilities, most of which have signed up for the UN Sustainable Development Goals which contain social aspects of sustainability. While again according to participant 3:

“On the financial side it is difficult to get money without being sustainable” (Participant 3, 2024).

This follows on from participants 1’s concept of the energy trilemma, as in order to meet coming demand utilities will require huge levels of investment in infrastructure and renewables. This takes into account the broader concept of sustainable finance, where the financial sector takes both environmental and social decisions into account when deciding to fund projects etc (European Commission, 2024).

However, the 3 pillars are not universally important in the minds of all. As noted by participant 4 who explains that due to the high number of state-owned energy companies:

“Profit is not the number 1 motivator” (Participant 4, 2024).

“Utilities number 1 goal is to deliver government policy which is skewed toward decarbonization to meet climate goals” as such if these companies “did not deliver a profit the government or public would not really care” (Participant 4, 2024).

This highlights the differing opinions within even the same industry of the roles of sustainability in utilities. As it is somewhat to be expected that due to the large polluting nature of utilities that the environmental focus will take centre stage being the top priority of utilities and perhaps that may be to the detriment of other goals such as profitability as mentioned by participants 4. However, it is also likely that if these companies do not turn a profit and do not focus on becoming economically sustainable that they may become non-viable as businesses, in the

case of utilities this can result in non-investment of public energy infrastructure, inability to raise funds for renewable projects and a number of other issues. Further on participant 4 mentions how:

“People is not a goal it is just an enabler” and that “governmental goals are not to make ESB or EirGrids employees happy” (Participant 4).

This is a surprising view as it is one that perhaps many utility company employees may not share and goes against much of the standards in place which effect utilities including the UN SDG’s which contains numerous social and economic aspects as well as environmental. While semi state companies have a social responsibility to ensure the security of supply within the country, even if this means continuing to burn fossil fuels while demand grows, a utility that is lacking in its approach to people and social sustainability may find itself unable to finely balance these responsibilities. It is likely that in just focusing on environmental sustainability these companies may be okay in a sense however they will not prosper in the way that a utility company that follows a 3 pillars approach to its corporate strategy may.

6.2 Unique Challenges, Risks, Opportunities etc faced by the Utility Industry

Being a uniquely placed sector within the global economy it is no surprise that a unique challenge that the industry faces in its goal to achieve sustainability is the energy emissions inherit in its day-to-day business. According to participant one 1:

“The energy industry is a significant contributor to the climate challenge we face. From the point of view that traditionally we generate energy by burning fossil fuels”

This is perhaps the most obvious issue within the energy utility industry and as such remains the main focus of their associated corporate strategy. With Ireland having 2030 and 2050 climate targets as set out in the Climate Action Plan there is also the associated published strategies for companies like ESB with the “Net Zero by 2040” Strategy and SSE’s “Net Zero Transition Plan” which include targets to be net carbon zero by 2040 and 2050 respectively (Gov.ie, 2024) (ESB, 2023) (SSE, 2023). As such it Is to be expected that lowering carbon emissions is the main focus or goal for utility companies. Failure for utility companies to plan for and mitigate their role in being a key contributor may have huge ramifications for not just the companies but the world as a whole. This is an issue that not many, if any other sectors must deal with.

Following on from Participant 1, Participant 3 identified timing as a huge unique challenge for the industry stating that there is

“a huge need to build renewables with a long-time frame involved…. need to start early and build as fast as we can. There are also delays to this such as planning issue…...when looking at long term goals with Net Zero by 2050 with Ireland there is a need to work towards these immediately” (Participant 3, 2024).

With Targets of 5GW of offshore wind (up from 0 in 2024) by 2030 set out in the most recent Climate Action Plan, it is no wonder that timing is an important factor for the industry (Gov.ie, 2024). With 2030 targets rapidly approaching the industry must rely on quickly building renewable infrastructure to meet these targets, planning years in advance and starting early in order to overcome timing and planning issues associated with these developments.

When looking at one of the unique ways in which utilities operates both participant 3 and participant 4 stated that they believed utilities were unique in their approach to sustainability. Participant 3 states that in relation to sustainability:

“Utilities are a little bit further on than other industries because they need to be” and that “it is quite clear what utilities can do, in regard to electrification and that there is a clear pathway in contrast to agriculture where a pathway may be more difficult” (Participant 3, 2024).

Participant 4 agreed with this point in many regards stating that:

“Utilities understand sustainability a lot better because the electricity industry has been moving in a sustainable way for 20 years or so… other industries are only seeing this in the past few years because it is an industry trend” (Participant 4, 2024).

While another uniqueness of the utility industry in relation to environmentalism is according to participant 3 is:

“If we can decarbonize electricity and electricity heat, transport, industry and things like that it makes it easier for other sectors to decarbonize” (Participant 3, 2024).

While participant 1 agrees and states that from being a key contributor to the climate problem the industry will then:

“Become a key catalyst toward solving this problem by decarbonizing all electricity generation” (Participant 1, 2024).

This is a huge factor as many industries decarbonization efforts most likely will never have the same effect as decarbonizing the utility industry, and as mentioned by participant 1 this is where the energy industry can become a key catalyst in leading the climate transition.

6.3 Public vs Private Sector

With the large number of Semi State or publicly own utilities operating in Ireland it is interesting to understand the different goals or aims of these organizations when compared with privately owned utilities such as Energia. As is assumed public owned utilities may be less profit seeking than privately owned competition, due in most part to the Government being the majority shareholder and seeking to focus on the greater good.

Unsurprisingly both participant 1 and participant 3 noted that there are unique differences in the way in which public and private utilities work in general, in the area of strategy and in sustainability. Participant 1 stated that:

“State organizations must recognize the role we have to play and the responsibility we have to ensure a security of electricity during a transition to a decarbonized electricity future” adding that “while public companies want to move away from burning oil, gas, and coal that we also must play a role in the foreseeable future in securing Irelands energy given increases in demand. This at times may go against goals set out in emissions targets as if it is required, we will burn gas and coal plants to ensure security of supply if wind isn’t blowing” (Participant 1, 2024).

This point has been touched on slightly above, but it is extremely interesting and highlights the somewhat negative effects of being state owned during the energy transition, as these companies have set out emissions targets for themselves (e.g Net Zero by 2040 for ESB) these companies are now held to these targets by industry bodies, the EU, and the public among other things. With the aforementioned scenario predicted by EirGrid in which demand for electricity may double by 2050 due to a growing population, government owned companies may be forced to continue burning fossil fuels juts to meet demand into the long-term future, hampering their sustainability goals in a way that private companies will not have to deal with (EirGrid, 2024). Getting the balance right between achieving a net carbon company and securing the supply of electricity for the country is something that state owned companies must contend with. As the private industry quickly decarbonises at its leisure the public sector may be hindered.

Somewhat similarly participant 3 believes that:

“The main shareholder is the government, so we are answerable to the government, so we probably have a consideration that other private companies don’t have which is what is good for the state. Security of supply plays a big role in that; our number 1 priority Is not profitability… this does change our focus for sure… we have a social responsibility” (Participant 3, 2024).

This backs up the thoughts from participant 1 in relation to security of supply and how semi state companies may be more beholden to this than private companies due to the main shareholder being the government. Another important point is that of a social responsibility, as these companies are not profit driven and instead are focused on what is good for the state, they do have a strong social focus and as such this may also play a role in state owned companies being more socially sustainable than other. Private companies although they may have a social strategy, are mainly profit focused and as such they conduct themselves based on profits, this in some ways may be of detriment to social goods.

6.4 Irish & EU Context

As was to be expected several factors that affect the way in which utilities approach sustainability within their strategy are due to the location in which these companies operate.

In Ireland in particular policy issues remain a strong factor in utility companies' sustainability efforts, with planning issues and continually updating and changing policies affecting companies' efforts. This is a huge issue in Ireland, as of October 2023 no new wind farms had been approved by An Bord Pleanála within the previous 12 months due to huge backlog issues at the state planning authority (The Journal, 2023). This seriously threatens the 2030 targets of Irish Utility companies and is the single biggest issue to the sector according to Wind Energy Ireland (The Journal, 2023). According to participant 1:

"The energy industry has to deal with continuous policy change and refreshes particularly around planning constraints, the pace at which we need to do everything to meet targets that have been set at national and international level which are very ambitious and perhaps the planning is not fully there yet to ensure the rollout at the pace needed" (Participant 1, 2024).

Participant 3 agreed very much so with planning in Ireland being an issue for utilities to deal with:
"Planning issues and trying to get projects through planning will result in delays" (Participant 3, 2024).

This is a huge factor affecting utilities operating in Ireland in particular as can be seen by the lack of new wind farms completed last year. Planning delay, policy change and lack of direction is something that all Irish utilities looking to build fresh renewables have to contend with. This is unacceptable for a modern nation such as Ireland which has emissions targets for 2030 and 2050, issues such as planning gridlock can have a number of knock on effects beyond delays, they can stop Ireland from building renewable at the needed level resulting in slow decreases in emissions, affecting CAP and can make Ireland a less attractive place for utilities, slowing down the market and decreasing competition among other things.

While Irish policy is called out by participant 3 as an area which affects Irish utilities. Participant 3 mentioned, how Europe may play a bigger role:

“We are bound by the CAP (Climate Action Plan) which is really influenced by Europe, so operating in Europe is what influences us because we are bound by the legislation” and “a lot of what we do is guided by Europe and the EU Roadmap for Net Zero” (Participant 3, 2024)

Europe’s long term climate strategy is in many ways similar to Irelands Climate Action Plan, as it contains 2050 targets for the EU to be climate neutral by 2050, of which Ireland and its utilities has a part to play as a member state (Europa, 2024). With the Paris Agreement to keep emissions below 1.5c underscoring the EU’s climate plans, these targets have an effect on how utilities must approach their own targets in Ireland, all of which must be in line with both the Climate Action Plan and EU Long Term strategies.

According to Participant 2 cultural norms in Ireland do have an effect on sustainability strategy of Irish firms:

“Ireland is still behind in sustainability; a good example is the bottle recycling machines. But we have changed a huge amount in the last twenty years, looking at natural resources we have to protect including clean air…. But we do have mixed messages… one of the big problems is alternatives have not matched up country wide” (Participant 2, 2024).

Likewise Participant 3 wondered about Irelands approach against other EU countries:

“I wonder if we operated in another EU country, or a Scandinavian country would we be more ahead in our sustainability” (Participant 3, 2024).

This shows the effect operating in Ireland and within Irish culture may have on utilities, as although Ireland has thoroughly embraced sustainability in recent years it is still behind other developed nations. This could be due to a number of reasons such as policy issues as mentioned before but also because of slower rollout of sustainable practice due to stakeholder concerns.

7. Analysis & Discussion.

7.1 Sustainability & the 3 pillars (Economic, Environmental & Social).

As mentioned above, the energy trilemma or how can energy companies transition from fossil fuels, keep up with demand and remain affordable for customers is something called out as the most challenging issue for the sector by participant 1. A sentiment shared by Grigoryev et al (2020) who states that the necessity to solve the issue of the energy trilemma is something that haunts politicians, intellectuals, and forecasters. According to Grigoryev et

al (2020) the concepts of social inequality and poverty are rarely addressed when discussing climate change mitigation, however this is tackled by the concept of an energy trilemma which understands the climate issue as a connected challenge, something that participant 1 also touches one when describing the interconnectedness of the challenge and asking how this can be done. Every country must deal with unique national problems as part of its energy trilemma, but climate and energy problems are not autonomous from poverty and because of this the global energy trilemma supports both economic growth, energy & climate change, and inequality (Grigoreyev et al, 2020).

With the energy trilemma being described as “the biggest challenge faced by the industry” according to participant one it is clear it will remain a huge focus for the industry in the longer term with utilities having to work to tackle poverty (including fuel poverty) while also pushing for renewable development that can meet increasing demand. This echoes the work of Grigoreyev et al (2020) again who states that the energy transition does not take place in a vacuum and the difficulties of poverty will play a part in this transition, but that global development should seek to address climate related inequality issues. Showcasing the importance that the concept of the energy trilemma has in the context of achieving a just energy transition.

With demand for energy expected to double by 2050 due to an increasing population, security of supply will also remain a huge thorn in the side of the industry in relation to the energy trilemma. According to EirGrid (2024), Irelands slowest scenario to decarbonize would see the country grapple with a huge spike in demand due to the aforementioned demand growth, relying on energy imports in order to meet needs. While the power system may still be net zero in this scenario Irelands security of supply may be threatened by global shocks as was seen by the Russian Invasion of Ukraine. As such in order to effectively manage the long-term energy trilemma, a strong, forward-thinking strategy will play a key role. According to Wolniak et al (2023) ensuring sustainability is ingrained within corporate strategy is imperative for long term successes of a company.

Following on from the energy trilemma issue, the 3 pillars model is an area which was a large part in many of the discussions with participants, with some having stronger feelings than others. With participant 3 noting that there is a really good understanding of sustainability in the energy sector with companies focused on both the financial and social side as well as environmental, with benefits such as increased levels of funding due to this, echoing the points made by Mishchenko et al (2019) around increased funding due to sustainability. However, participant 4 noted that while areas such as people and profit are an

enabler, they are not utilities main goals and as such if these goals were not met there would not be a lot of worry from the government or society.

This would Contradict Hogrefe & Joschko, (2023) who note that social sustainability is an integral part of sustainability with focuses on poverty and inequality being tackled as mentioned above by the energy trilemma point and participant 1. With EU thinking on sustainable finance, which the EU believes will play a key role in delivery its policy objectives around sustainability, in order to qualify for financing Environmental, Social AND Governance must be considered, as such companies in the utilities space that fail to adequately balance all 3 areas run the risk of harming their financing options (Finance Europa, 2024). With CAP 21 underscoring the need for over €15bn in investment in the energy sector to achieve its targets, this highlights the possible for a full 3 pillars approach to sustainability within a utilities strategy and a strong focus on environmental sustainability with myopia on the remaining two pillars may be detrimental to the utility sector (Gov.ie, 2021). As this investment will not just be from government sources and may come from investments of the financial sector who increasingly look to ESG when investing and of which 85% of investors believe ESG is an important investment factor (McKinsey, 2023). in order to gather the necessary investment, utilities must show their commitment to not just the environmental but also the social aspect of sustainability, in doing so this will improve and support the financial or economic pillar.

7.2 Unique Challenges, Risks, Opportunities etc faced by the Utility Industry

Very unsurprisingly, the first challenge called out by participant 1 that the utility industry faces are its role in creating the climate crisis, due to the burning of fossil fuels for energy related means with the industry being a “significant contributor” (Participant 1). This is confirmed by statistics by the SEAI (2023) who note that over 30% of energy related emissions come from electricity generation alone, another 35% from heat – with the utility industry playing a huge role in providing the generation of energy as well as the heat needed for homes it is no wonder that it is called out as a significant challenge the industry faces. Many companies within the industry acknowledge this as part of their corporate strategy and are actively working toward lowering this emission. Echoing again the point from participant one who believes that the industry is working from being a significant contributor to the climate crisis to being a key catalyst for a clean energy transition. Similar to companies such as ESB for an example who wish to reduce the carbon intensity of their generation fleet by more than half by 2030, through a fivefold increase in renewable generation, effectively stifling the need to generate electricity to fossil fuel means (ESB, 2022). As well as this the company also wishes to complete up to 35k retrofits to lower the emissions associated with heat (ESB,

2022). It is clear that Utilities have recognized their roles as significant contributors and are now using the transition to become a key supporter and catalyst for the needed to help other sectors. This line of thinking is similar to work by Guerra-Mota et al (2018) who mentions there are huge infrastructure and business model changes needed for utility companies to remain viable in the future due to an uncertain future of fossil fuel energy.

Utilities also play a unique role as a catalyst in that by decarbonizing their sector and emissions, this will then play a huge role in helping other sectors to decarbonize by making it an easier process, a point touched on by both participant 1 and 3. This point fits in with research by D'Amore et al (2024) that notes companies across all sectors have set bold sustainability targets but these strongly depend on the utility sector being able to meet their own sustainability goals. In Ireland non-ETS greenhouse gas emissions such as heating in homes as well as GHG from cars make up just under half of all greenhouse gas emissions, showing the huge responsibility placed on the utility sector as decarbonization of critical infrastructure etc will help to lower these figures and achieve environmental sustainability a lot faster for the country as a whole placing the utility industry in a key and unique role (SEAI, 2023). With industries such as transport moving increasingly to electric vehicles which require electricity rather than fuel this is one area among many which could see huge benefits due to a fully decarbonised and renewable heavy energy sector. Emissions from this sector alone will go from 7.2GT this year to 0.7GW in 2050 but this relies on the energy industry being able to decarbonize and electrify the energy system (IEA, 2024). According to the IEA (2024) as the electricity sector lowers its emissions and becomes a cleaner industry, they will provide an essential foundation for the transition by delivering electrification which in turn will become an incredibly important tool for ensuring an economy wide reduction of emissions.

Finally, a point touched on by both participants 3 and 4 is the fact that sustainability is an area in which utilities are ahead of other peer industries with "Utilities are a little bit further on than other industries because they need to be" (Participant 3) and "Utilities understand sustainability a lot better because the electricity industry has been moving in a sustainable way for 20 years or so" (Participant 4) being two interesting points, and this is due in part by the clear role and pathways set forward for utilities. Hedstrom (2018) notes that the main focus of sustainable work within the past 30 years has focused on the environmental aspect. An area in which the utility industry has a key responsibility and a reason why the industry began it sustainability journey before others. Thinking by McClelland (2021) agrees with the points raised in this research, stating that possibly due to increased regulatory scrutiny the energy utility industry is ahead of other industries in relation to sustainable practices. The industry also is playing a key part in leading the adoption of sustainability, with executives

more likely to have made sustainability related changes to their operations and over almost half (in 2021) of these organizations having committed to a net zero goal, more than any other industry (McClelland, 2021).

7.3 Public vs Private Sector.

When looking at the difference between state owned/ semi state companies the main difference that came across when discussed with participants was the responsibilities of state-owned companies. In particular two areas were identified and touched upon by participants 1 and 3, 1. The security of supply and 2. The social aspect of energy.

As mentioned by both participants security of supply is a huge consideration for public utilities, to an extent that is not seen in private utilities. Although publicly owned companies do, as a major strategic goal, want to move away from the burning of oil and gas, they will continue to burn these if the level of supply of renewables is not adequate enough to meet demand due to the intermittent nature of these infrastructures. This point is echoed by EirGrid (2024) in their latest tomorrow energy scenario report which states that in some scenarios there may be a longer transition than originally planned, leading to a slower transition from fossil fuels to keep up with demand. EirGrid also already plans to keep fossil fuel plants burning to ensure security of supply, with the number of fossil fuel generators on Irelands system being a minimum of 4 at any time (Eirgrid 2, 2024). State owned energy companies may bear the brunt of this challenge, ESB in particular already has coal fired plants such as Moneypoint earmarked as sites to be a generator of last resort to ensure security of supply, while up to 9 new gas fired power plants are set to be built by the end of the year and operated by ESB with support from EirGrid among others (ESB, 2024) (Paul, 2022). Although, there is very little literature focused directly on the effect of security of supply on sustainability targets of state-owned energy companies, from the points above it is clear that the continued burning and development of fossil fuels is something that EirGrid sees as a necessity at least for the short-term going forward and is likely to be of harm to sustainability goals of the country and utilities.

Leading on from and similarly to the security of supply issue, another way as mentioned above that public utilities may differ is their responsibility to the wider public. As mentioned by participant 3:

“The main shareholder is the government, so we are answerable to the government, so we probably have a consideration that other private companies don’t have which is what is good for the state. Security of supply plays a big role in that; our number 1 priority Is not profitability… this does change our focus for sure… we have a social responsibility.”

This concept of a public utility having a social responsibility is something touched on by Ahmed (2023) who notes that utilities do have differing focuses depending on ownership, with public companies seeking to maximise the welfare of a country's citizens, while private companies seek mostly to turn a profit, however, Ahmed also notes that state owned energy companies should still retain a sense of commercial viability, something not explicitly stated by any participants on this study. Following on from the point raised by participant 3 around governments being the main share and stake holder, the study by Ahmed (2023) agrees by stating the state-owned utilities are a vehicle by which the government uses to work on socio economic development, pushing a social responsibility on the utility company based on what they believe is good for the state. An example could be private utilities hiking prices of gas and electricity to maximise their profits, however companies such as ESB or Bord na Mona will be hampered in doing this as the government will not want to upset citizens or hamper economic development with high energy costs.

7.4 Irish & EU Context

As mentioned above, the single biggest issue facing the utility sector is planning issues with renewables according to Wind Energy Ireland (The Journal, 2023). This issue is of huge focus in Ireland due to the scale of the problem, with up to 20% of the countries wind energy at risk due to planning issues, if this were to happen it would make achieving targets set out in CAP impossible (Wind Energy Ireland, 2024). This issue is something that expectedly was touched upon by participant 1 & 3, stating things such as "planning is not fully there yet to ensure the rollout at the pace needed" (Participant 1) and "trying to get projects through planning will result in delays". These points by both participants hammer home how much of an issue planning is in Ireland with worst case scenario planning issues hampering strategic climate transition goals of companies and also Ireland by limiting the available infrastructure projects needed to build renewables. Likewise, Roux et al (2022) notes how planning consent is seen as a strategic infrastructure planning issue in Ireland, with work in this area slow and constantly changing due to lack of focus. With the second point raised by Roux et al mirrored by participant 1 who noted "The energy industry has to deal with continuous policy change and refreshes particularly around planning constraints" (Participant 1, 2024). The area of planning is a huge strategic issue for utility companies in Ireland and is something that these companies have taken note of themselves, According to ESB (2024) in the company's latest pathway report planning is a challenge for transitioning to a zero-carbon electricity system in Ireland. While according to Energia (2024) in the company's latest responsible business report, 24% of renewable energy meant for the grid was turned down due to inabilities in transferring power, an issue that must be solved with future planning investment (Energia, 2024). For companies to effectively meet their strategic aims

and goals as set out in their corporate strategy, it is clear that large scale planning changes are needed within the Irish system to speed up consenting and repowering of both old and new wind farms alike. And following on from participant 1 & 3 it is evident that companies are starting to plan for these issues called out.

Secondly, a point called out by Participant 3 is that although Ireland does have an effect on Irish utilities It is perhaps European Law and legislation that has a bigger effect. Particular, participant 3 called out how European policy has had an effect on the production of the Climate Action Plan in Ireland which utilities are beholden to. O'Gorman (2020) makes similar point in which it is stated that there are several areas that govern climate law in Ireland, among these are the UN and EU regulations on climate, with bindings targets for 2020 – 2030 being conferred on Ireland by the EU.

Finally, as is to be expected cultural norms around sustainability play a factor in the way in which it is delivered in Ireland. Both participants 2 and 3 agreed with this point by stating that:

"Ireland is still behind in sustainability;" (Participant 2, 2024)

"I wonder if we operated in another EU country, or a Scandinavian country would we be more ahead in our sustainability" (Participant 3, 2024).

These two points seem to ring true, with the Environmental Protection Agency announcing, Ireland is on course to miss its greenhouse gas emissions target of 51% reduction by a large degree (O'Sullivan, 2023). Interestingly, literature from Antanasijević et al (2017) also notes that from 2004-2014 Ireland was only one of two countries in the EU who made no progress at all on overall sustainability within this time, however it should be noted that this was pre–Climate Action Plan. These points seem to agree with research conducted here. However, in recent years contrary to what is said by both participants above the UN (2023) has announced that Ireland is actually progressing well in achieving the Sustainable Development Goals with almost 80% of targets achieved, showing that the country may be doing sustainability better than is perceived in at least some of the UN SDG metrics. As can be gathered from this it is likely that utilities in Ireland are making decent progress toward delivering sustainability goals that match up with SDG's even if the environmental aspects may be somewhat lagging behind.

In relation to participant 3's point around Scandinavian sustainability, there may be some truth in the idea that companies within these countries are a bit further ahead than in Ireland. The UN Environment Programme (2020) explains that in Nordic countries such as Denmark, Finland and Iceland sustainability is prioritized at the highest possible political levels, promoting a sustainable region. Companies within this region also have their own unique

models for sustainability, particularly CSR, this along with political approach has culminated in Nordic countries having high levels of reporting around sustainability, with reporting beginning very early in these countries starting in the 1990s (Khatri et al, 2023). Efforts such as these have born fruit in these countries, with Norway currently the most sustainable country in the world followed closely by Sweden, Finland, and Denmark (Active Sustainability, 2024). All of this seems to indicate that participant 3 is correct and that although Ireland may not be as behind as initially thought, operating in a more sustainable focused country such as a Scandinavian one may be a boon for utilities sustainability efforts.

8. Conclusion

In conclusion, our climate is rapidly changing with increases of 1.1c in average temperature for the whole globe being seen since 1970 (Gov, 2024). Due to the monumental nature of the challenge, we face in correcting the mistakes of the past it is imperative that all people, sectors, and business play their part in ensuring we can transition to a sustainable world and economy. This transition, however, also represents an opportunity for business, provided they can manage this effectively. Nowhere Is this opportunity seen more than the utility industry, with up to €500mn investment from the EIB set to be added yearly to environmental sustainability (Gov, 2024). This is an area in which the utility industry can play a huge and key role. In order to do this, the industry must first understand its current approach and why it is different from other industry as well as peer companies, in order to improve and analyse its approach. This study has tried to do this, through interviews with industry professionals and academics, it has contributed to the literature and shed light on particularly unique issues for the industry that are well known such as emissions from energy, and those that are not as well-known such as security of supply hampering the sustainability efforts of publicly owned companies. From this it is clear that the industry as a whole is very different in its approach, somewhat ahead of peer industries due to a need to be, while Ireland may also be different, being perceived as slow and being behind Nordic countries, however still making good progress on its sustainability efforts. It is the hope that this study can now inform thinking around sustainability in corporate strategy for utilities in Ireland, strengthening the sectors approach to the topic and identifying where the sector differs and why.

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