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An Analysis of Sustainability Concerns and Business Responses in the Electricity Generation Sector in the United Kingdom

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# Abstract

Electricity generation is a critical aspect of modern life. While the UK imports energy from other countries, it remains responsible for 120 million tonnes of oil equivalent (*IEA,* 2019). This report discusses the approach of companies within this sector to sustainability reporting and the practices that come because of this. Business strategies and stakeholder relationships are core areas of analysis throughout the research. This report focusses its evaluations on the activities of Drax Group, SSE, and EDF Energy; three of the most prominent energy generation companies in the UK. Its findings suggest that a variety of frameworks are used at different levels, including the SDGs and the UN Global Compact. The report concludes with the suggestion that the electricity generation sector recognises the importance of sustainability within their operations, however the response of companies to the 2008 Climate Change act cannot yet be described as widespread and significant.

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#  Introduction

This report will analyse sustainability concerns and business responses within the United Kingdom (UK) electricity generation sector. It will achieve this through firstly evaluating the opportunities and constraints for sustainability, specifically focussing on stakeholder relationships and business strategies. It will then discuss the current approaches to sustainability reporting within the sector before making recommendations as to how the sector could improve in this area.

#  Sector Opportunities and Constraints for Sustainability Management

The UK electricity generation sector is responsible for producing the electricity that is used across the region. There are a variety of sources of electricity used in the UK, including gas-firing, coal-firing and renewable sources (Griffin, 2020). While there has been a recent increase in imported energy, the UK still produced 120 million tonnes of oil equivalent in 2017 (*IEA,* 2019). That *IEA* (2019) report also states that 40% of the electricity generated comes from oil and 30% from natural gas.

This first section of the report will discuss the opportunities and constraints for sustainability management within the sector, primarily focussing on stakeholder relationships and business strategies. Environmental responsibility is the prominent issue in the sector due to the large amount of emissions that it currently produces (Sithole *et al.,* 2016). The opportunities and constraints revolve predominantly around the organisation’s stakeholders, and the strategies that they use to provide value to the stakeholders that they feel are most important.

## Stakeholder/Partnership Analysis

Matten and Crane (2005) discuss how incorporating a wider variety of stakeholders into a company’s decision-making can increase long-term prospects. The modern corporation needs to communicate effectively with any group or individual who are impacted by their actions. This is a crucial area of discussion within the electricity generation sector and therefore is a focus of this report. Throughout this section, analysis will be provided on the importance of a variety of stakeholders that influence, and are influenced by, the electricity generation sector.

### **Governments/Regulations**

Within all sectors, the government has a major influence on the actions that can be undertaken by organisations. Laws are passed, which come together to make legislation (*legislation.gov.uk,* 2020), and businesses must act within these rules. The 2008 Climate Change Act (*HM Government,* 2008:1) is a legally binding approach that states that the UK carbon account in 2050 must be ‘at least 80% lower than the 1990 baseline’. This suggests that the government is taking a lead role in regulating the actions of organisations within the sector. It is important that the government balances their aims for sustainability with matching the increasing demand for electricity worldwide (Chalvatzis and Hooper, 2009).

### **Civil Society**

Edwards (2019) discusses how civil society includes individuals and organisations who are fundamentally interested in making improvements to sectors. The electricity sector is particularly impacted by these groups, who are becoming more dominant in influencing decisions. Foxon (2013) discusses a possibly pathway for the sector where civil society takes greater responsibility for the creation and transmission of low-carbon electricity. Because of this, residents will be more engaged with where their energy comes from and can decrease the emissions released by the sector. However, Johnson and Hall (2014) argue that leading the sector in this direction ‘could reproduce a range of existing socio-economic inequalities’, which suggests that a decentralised system might have negative side-effects. The sector needs to be careful to balance their goals of being sustainable with matching the needs of all consumers.

### **Consumers**

Electricity is a crucial part of modern society and the electricity generated in the UK is used across the country (Golombek *et al.,* 2013). Consumers can have an influence on the sector, particularly when the market becomes more competitive. A change in legislation in the 1980s has resulted in a highly competitive market; the legislation was brought in to protect end consumers from monopoly power (Bolton *et al.*, 2016).

This power returns to the consumer when they come together with a single vision (Umit Kucuk and Krishnamurthy, 2007). Consumer concern surrounding the over-use of limited resources including coal and oil has resulted in companies adapting their business strategies to reduce the concern (Grubb *et al.*, 2006). EDF are a large electricity company who have recently started using zero carbon marketing to attract these consumers (EDF Energy, 2020). This shift in marketing focus shows that as consumer demand for a more sustainable approach to sustainable electricity generation has increased, companies are responding and are giving consumers what they desire.

## Business Strategy for Sustainability

The extent to which sustainability has been integrated into business strategy within the sector will now be evaluated. Analysis will be provided on the practices and approaches of organisations within the sector concerning responsible management, marketing and corporate governance.

### Responsible Management

Responsible management is approached in a variety of ways within the sector. Freeman (2010) argues that businesses must take responsibility for the impact of their actions in contrary to simply acting within the nation’s laws. Fossil fuels remain the primary source of electricity in the UK, generating 27% of total national emissions (Sithole *et al.,* 2016), however this is set to change. In 1990 the utilities sector was restructured, which Jamasb and Pollitt (2011) claim resulted in a decrease in research and development. However, their latest report (Jamasb and Pollitt, 2015) states that this was changing; the core reason behind this being the substantial benefits to be found, both financial and environmental. The research suggests that the major increases in environmental consideration have come due to the potential profit to be made from it. While Elkington (1998) suggests that businesses should consider people and planet before focussing on profit, the profitability of this approach could be beneficial creating shared value for a variety of stakeholders. This will be discussed in more detail later in the report.

### Marketing

The marketing strategies that are undertaken by the sector can have a significant influence on the ability of the companies to be responsible. Kotler *et al.* (2013) discuss how companies should consider the wellbeing of society, not only their customers and shareholders, when undertaking marketing actions. The shift in marketing towards promoting greener electricity (Herbes and Ramme, 2014) has been somewhat successful so far, however there are arguments that suggest that marketers are not generating enough awareness of green electricity (Rundle-Thiele *et al.,* 2008). Another concern comes from a study by Rowlands *et al.* (2003), where the results suggested that only a specific demographic is being targeted when it comes to marketing sustainable electricity. Consumers are unlikely to learn about the potential benefits of green energy unless they are taught (Rundle-Thiele *et al.,* 2008), which illustrates the importance of including all consumer groups in the marketing approach. The targeting of specific demographics suggests that making profit is still the focus of the organisations in the sector. Consumers should be given the opportunity to make informed decisions about where their electricity comes from (Harries *et al.,* 2013) and therefore companies should use their marketing budget to increase consumer knowledge and better respond to their needs.

### Corporate governance

This final section will discuss corporate governance in the electricity generation sector and the influence that it can have on all the stakeholders of an organisation. Carroll’s (2016) pyramid of corporate social responsibility (CSR) evaluates the needs, wants and desires of society from an organisation. Studies have found that implementing CSR into an organisation ‘enhances operating performance’ (Harjoto and Jo, 2011:60) and therefore provides economic value. However, there are also studies that find that financial success will only come to organisations that ‘seriously implement’ CSR strategies (Wang and Sarkis, 2017:1615) and partial implementation will not provide the economic reward that they are seeking. In this sector, the results of a study by Sidhoum and Serra (2017) suggested that social performance provides economic performance. They suggest that these results occurred due to the impact that the sector has on sustainability alongside the previously discussed increase in customer involvement when deciding on an electricity company. This research shows that governance can have a major impact on the future of the sector, and there is potential for CSR to provide the economic value needed.

# Evaluation of Sustainability Reporting Within the Sector

This section of the report will discuss sustainability reporting within the electricity generation sector in the UK. The reporting of Drax (*Drax Group Plc,* 2020 and *Drax Group Plc,* 2021), SSE (*SSE Plc,* 2020) and EDF Energy (*EDF Energy,* 2021) will be analysed. The specific focus of this section will be the reporting of each company on their environmental impacts because it is the key issue of sustainability in the industry (Terrados *et al.,* 2007 and Sithole *et al.,* 2016). A study by Alrazi *et al.* (2016:692) discovered that there is a ‘positive and significant relationship between environmental performance and environmental disclosure’ in the industry. This suggests that the companies that report their environmental impacts are less likely to be causing as much environmental damage, which emphasises the importance of sustainability reporting.

Shared value for stakeholders is a concept that appears throughout the sustainability reporting in the sector. Porter and Kramer (2011) describe shared value as an opportunity for businesses to create more value than profit alone. In this sector it can encourage better communication between stakeholders and therefore create value for a wider group of them. The second part of this section of the report will discuss the potential for shared value in the sector beyond the discussed frameworks.

## Critical Analysis of Reported Content

### Sustainable Development Goals

The United Nations’ (UN) 2030 Sustainable Development Goals (SDGs) (*United Nations,* 2021) are a commonly used reporting framework within the UK electricity generation sector. EDF Energy have created a ‘Better Plan’ (*EDF Energy,* 2019: [Online]) which is aligned with the SDGs. It can be implied from this that the organisation is committed to being more sustainable, however they do not present much information on how they will improve each goal in the future. Contrary to this, Drax have utilised the SDGs to emphasise the shared value creation for stakeholders, which suggests a stakeholder focus. However, the only evaluations occur on SDGs where their impacts are becoming more positive while ignoring their negative impacts, which could be described as SDG-washing (Kornieieva, 2020) that can reduce stakeholder trust. Finally, SSE only mention four of the SDGs in their sustainability report, although they go into detail about them. They clearly define the extent to which these goals have been achieved, with statistics to provide evidence (Achinstein, 2001), and describe strategies as to how they will fulfil these goals in the future. The company recognises the impact that the SDGs can have.

### UN Global Compact

Both Drax and SSE have been participants of the United Nations Global Compact since 2018 (*United Nations Global Compact,* 2021). Drax are particularly supportive of the global compact, dedicating much of their non-financial statement to addressing their communication on progress. This shows that Drax are utilising the global compact, the ‘largest corporate citizenship initiative’ in terms of both size and inclusivity (Rasche, 2009:532), to be an industry leader in sustainability reporting. SSE are less active in their use of the global compact, choosing instead to send a communication of progress directly to the United Nations (Phillips-Davies, 2020). This apparent lack of transparency could result in stakeholder distrust, with accountability and transparency being important to stakeholders (Amran and Keat Ooi, 2014). Contrastingly, EDF Energy became a Global Compact member in 2014 but were delisted in 2020 for being ‘non-responsive’ (*United Nations Global Compact,* 2021: [online]). This suggests that they do not place enough importance on sustainability reporting. As mentioned earlier, stakeholders are less likely to trust organisations who are not honest about the level of success in reaching their sustainability goals (Alrazi *et al.,* 2016).

### Reporting Approaches

While the UK electricity generation sector was reformed in 2013, which has led to many practices occurring similarly throughout most organisations (Grubb and Newbury, 2018), the way that sustainability reporting occurs has a lot of variety. All three of these organisations mention shared value, however the reporting of this value is completed at varying levels of success. In a sector which can have the economic impact that the electricity sector has (Kowal and Kustra, 2016), all stakeholders should feel included and valued. Of the organisations analysed in this report, SSE are the most effective in discussing their key performance indicators (KPIs) and material issues. Adams and Frost (2008) believe that KPIs add validity and are the best way to illustrate an organisations impact. SSE use the Global Reporting Initiative framework (Levy *et al.,* 2010) to analyse their KPIs.

Drax report their environmental impact alongside their financial information. This makes it more difficult to access for many of their stakeholders, therefore making the organisation appear less transparent (Amran and Keat Ooi, 2014). EDF Energy report their key performance indicators well by providing their environmental impact over the previous three years. As previously mentioned, these are not analysed well enough in terms of making changes in the future.

## Limitations of Reporting Frameworks and Recommendations for the Sector

### Limitations

This section will discuss the limitations of the frameworks utilised by the three organisations discussed previously. The UN SDGs have received criticism for a variety of reasons since they were conceived in 2015. Their lack of theoretical foundation causes doubt to their validity and therefore the desire to adopt them (Spaiser, 2017). This has an impact on the electricity generation sector because the increase in consumer knowledge means that the SDGs could provide less value to them. In addition to this, the lack of incentive for organisations to join them has resulted in a less successful response than what was hoped for (Fleming *et al.,* 2017). The sector is influenced by this because the SDGs will not be effective if only adopted by a few companies.

The UN Global Compact has similar limitations. They are accused of not resulting enough action and instead only causing conversations to happen within an organisation (McIntosh *et al.,* 2017). This is problematic because companies may be able to use the GRI to appear to report sustainably, while they are hiding information that they don’t want their stakeholders to see; as mentioned, companies in this sector should aim to prioritise stakeholder honesty. One of the key limitations is the lack of comparability between communications of progress (Coulmont *et al.,* 2017). This makes it more difficult for stakeholders to understand the environmental impact of an organisation as they cannot compare them to similar organisations. The electricity generation sector is affected by this because much of the progress in the sector often needs to be unanimous across organisations, and it is more difficult to make beneficial change when there is little comparability.

While only briefly mentioned in this report, the GRI has had an influence on this sector and the next section will discuss how it may improve the sustainability reporting of these organisations. The limitations of the framework are like the others, with it being voluntary and free for all to use (Sethi *et al.,* 2017).

### Recommendations

As mentioned earlier, the electricity generation sector has a significant impact on the economy of a nation (Kowal and Kustra, 2016). Because of this, organisational sustainability reporting needs to be at a high standard. This means that, based on the findings of this report, improvements must be made. Studies by Camargos *et al.* (2014) and Wu *et al.* (2018) both discuss that KPIs and materiality are vital areas for improvement in reporting in the sector. SSE were the organisation who presented their KPIs in the most comparable and understandable way, therefore both Drax and EDF energy can learn from this. In this example, use of the GRI can provide a framework which, for the short term at least, could be the benchmark for all organisations in the sector.

A study by Domingues *et al.* (2017:300) found that successful sustainability reporting is most commonly found in organisations where the change has been ‘driven by internal motivations’. Giving staff at all levels of the company the opportunity to share their opinions and beliefs allowed them to better understand their stakeholders, and therefore create shared value for a greater range of them. This relates to Freeman’s (2010) stakeholder theory and provides evidence as to why organisations should value and engage with all their stakeholders.

# Conclusion

This report provided analysis into sustainability concerns and business responses in the electricity generation sector in the UK. This sector is critical to the nation’s sustainability goals and therefore it is important that they constantly evaluate the impacts that they have on society. The introduction of the 2008 Climate Change Act has created a legal demand for more sustainable electricity, but there has been a mixed response in how far companies are willing to alter their operations for this. A stakeholder focus, particularly including consumers, encourages the right changes and can result in significant positive results from the industry.

# References

Achinstein, P. (2001) *The Book of Evidence*. Oxford: Oxford University Press.

Adams, C.A. and Frost, G.R. (2008) Integrating sustainability reporting into management practices. *Accounting Forum,* 32 (4), 288-302. Available at: [*https://doi.org/10.1016/j.accfor.2008.05.002*](https://doi.org/10.1016/j.accfor.2008.05.002)[Accessed 20 March 2021].

Alrazi, B., de Villiers, C. and Van Staden, C.J. (2016) The environmental disclosures of the electricity generation industry: a global perspective. *Accounting and Business Research,* 46 (6), 665-701. Available at: [*https://doi.org/10.1080/00014788.2015.1135781*](https://doi.org/10.1080/00014788.2015.1135781)[Accessed 23 March 2021].

Amran, A. and Keat Ooi, S. (2014) Sustainability reporting: meeting stakeholder demands. *Strategic Direction,* 30 (7), 38-41. Available at: [*https://doi.org/10.1108/SD-03-2014-0035*](https://doi.org/10.1108/SD-03-2014-0035)[Accessed 24 March 2021].

Bolton, R., Foxon, T. J., and Hall, S. (2016) Energy transitions and uncertainty: Creating low carbon investment opportunities in the UK electricity sector. *Environment and Planning C: Government and Policy* 34, (8) 1387–1403. Available at: [*https://doi.org/10.1177/0263774x15619628*](https://doi.org/10.1177/0263774x15619628) [Accessed February 17, 2021].

Camargos, M.R., Jannuzzi, G.M. and Gavira, M.O. (2014) Analysis of the sustainability reporting initiatives of electric utilities in Brazil. *Industrija,* 42 (1), 127-147. Available at: [*https://aseestant.ceon.rs/index.php/industrija/article/view/5131/1835*](https://aseestant.ceon.rs/index.php/industrija/article/view/5131/1835)[Accessed 24 March 2021].

Carroll, A.B. (2016) Carroll’s pyramid of CSR: taking another look. *International Journal of Corporate Social Responsibility,* 1 (3). Available at: [*https://doi.org/10.1186/s40991-016-0004-6*](https://doi.org/10.1186/s40991-016-0004-6)[Accessed 20 March 2021].

Chalvatzis, K. J., and Hooper, E. (2009) Energy security vs. climate change: Theoretical framework development and experience in selected EU electricity markets. *Renewable and Sustainable Energy Reviews* 13, (9) 2703–2709. Available at: [*https://doi.org/10.1016/j.rser.2009.07.013*](https://doi.org/10.1016/j.rser.2009.07.013) [Accessed February 18, 2021].

Coulmont, M., Berthelot, S., Paul, M. (2017) The Global Compact and its concrete effects. *Journal of Global Responsibility,* 8 (2), 300-311. Available at: [*https://doi.org/10.1108/JGR-02-2017-0011*](https://doi.org/10.1108/JGR-02-2017-0011)[Accessed 25 March 2021].

Domingues, A.R., Lozano, R., Ceulemans, K. and Ramos, T.B. (2017) Sustainability reporting in public sector organisations: Exploring the relation between the reporting process and organisational change management for sustainability. *Journal of Environmental Management,* 192, 292-301. Available at: [*https://doi.org/10.1016/j.jenvman.2017.01.074*](https://doi.org/10.1016/j.jenvman.2017.01.074)[Accessed 25 March 2021].

*Drax Group Plc* (2020) Driven by our purpose: Annual report and accounts. Available at: [*https://www.drax.com/wp-content/uploads/2021/03/Drax\_AR2020.pdf*](https://www.drax.com/wp-content/uploads/2021/03/Drax_AR2020.pdf)[Accessed 23 March 2021].

*Drax Group Plc* (2021) Sustainability. Available at: [*https://www.drax.com/sustainability/*](https://www.drax.com/sustainability/)[Accessed 11 March 2021].

*EDF Energy* (2019) The Better Plan: 2019 performance summary. Available at: [*https://www.edfenergy.com/sites/default/files/the\_better\_plan\_2019\_performance\_summary\_-\_h2806.pdf*](https://www.edfenergy.com/sites/default/files/the_better_plan_2019_performance_summary_-_h2806.pdf)[Accessed 22 March 2021].

*EDF Energy* (2020) Energy Efficiency for Home Owners. *EDF*. Available at: [*https://www.edfenergy.com/energy-efficiency?\_ga=2.90878174.579570668.1613988627-218410336.1613988627*](https://www.edfenergy.com/energy-efficiency?_ga=2.90878174.579570668.1613988627-218410336.1613988627) [Accessed February 22, 2021].

*EDF Energy* (2021) Helping Britain Achieve Net Zero. Available at: [*https://www.edfenergy.com/about/sustainability*](https://www.edfenergy.com/about/sustainability)[Accessed 20 March 2021].

Edwards, M. (2019) *Civil society*. Medford: Polity Press.

Elkington, J. (1998) Partnerships from Cannibals with Forks: The Triple Bottom line of 21st Century Business. *Environmental Quality Management,* 8 (1), 37-51. Available at: [*https://doi.org/10.1002/tqem.3310080106*](https://doi.org/10.1002/tqem.3310080106)[Accessed 8 April 2021].

Fleming, A., Wise, R.M., Hansen, H. and Sams, L. (2017) The sustainable development goals: A case study. *Marine Policy,* 86, 94-103. Available at: [*https://doi.org/10.1016/j.marpol.2017.09.019*](https://doi.org/10.1016/j.marpol.2017.09.019)[Accessed 25 March 2021].

Foxon, T. J. (2013) Transition pathways for a UK low carbon electricity future. *Energy Policy* 52, (1) 10–24. [*https://doi.org/10.1016/j.enpol.2012.04.001*](https://doi.org/10.1016/j.enpol.2012.04.001)[Accessed February 21, 2021].

Freeman, R.E. (2010) *Strategic Management: A Stakeholder Approach*. Cambridge: Cambridge University Press.

Golombek, R., Brekke, K. A., and Kittelsen, S. A. C. (2013) Is electricity more important than natural gas? Partial liberalizations of the Western European energy markets. *Economic Modelling* 35, (1) 99–111. [*https://doi.org/10.1016/j.econmod.2013.06.023*](https://doi.org/10.1016/j.econmod.2013.06.023) [Accessed February 21, 2021].

Griffin, J. (2020) Electricity Production in the UK.*IBISWorld.*Available at: [*https://my-ibisworld-com.winchester.idm.oclc.org/uk/en/industry/d35.110/about*](https://my-ibisworld-com.winchester.idm.oclc.org/uk/en/industry/d35.110/about)[Accessed 16 February 2021].

Grubb, M., Butler, L., and Twomey, P. (2006) Diversity and security in UK electricity generation: The influence of low-carbon objectives. *Energy Policy* 34, (18) 4050–4062. Available at: [*https://doi.org/10.1016/j.enpol.2005.09.004*](https://doi.org/10.1016/j.enpol.2005.09.004) [Accessed February 18, 2021].

Grubb, M., Newbery, D. (2018) UK Electricity Market Reform and the Energy Transition: Emerging Lessons. *The Energy Journal,* 39 (6). Available at: [*https://doi.org/10.5547/01956574.39.6.mgru*](https://doi.org/10.5547/01956574.39.6.mgru)[Accessed 25 March 2021].

Harjoto, M.A. and Jo, H. (2011) Corporate Governance and CSR Nexus. *Journal of Business Ethics,* 100, 45-67. Available at: [*https://doi.org/10.1007/s10551-011-0772-6*](https://doi.org/10.1007/s10551-011-0772-6)[Accessed 25 March 2021].

Harries, T., Rettie, R., Studley, M., Burchell, K. and Chambers, S. (2013) Is social norms marketing effective? A case study in domestic electricity consumption. *European Journal of Marketing,* 47 (9), 1458-1475. Available at: [*https://doi.org/10.1108/EJM-10-2011-0568*](https://doi.org/10.1108/EJM-10-2011-0568)[Accessed 22 March 2021].

Herbes, C. and Ramme, I. (2014) Online marketing of green electricity in Germany—A content analysis of providers’ websites. *Energy Policy,* 66, 257-266. Available at: [*https://doi.org/10.1016/j.enpol.2013.10.083*](https://doi.org/10.1016/j.enpol.2013.10.083)[Accessed 25 March 2021].

HM Government Climate Change Act 2008. (2008). Available at: [*http://www.legislation.gov.uk/ukpga/2008/27/pdfs/ukpga\_20080027\_en.pdf*](http://www.legislation.gov.uk/ukpga/2008/27/pdfs/ukpga_20080027_en.pdf) [Accessed February 17, 2021].

International Energy Agency (2019) Energy Policies of IEA Countries: United Kingdom 2019 Review – Analysis. *IEA*. Available at: [*https://www.iea.org/reports/energy-policies-of-iea-countries-united-kingdom-2019-review*](https://www.iea.org/reports/energy-policies-of-iea-countries-united-kingdom-2019-review) [Accessed February 17, 2021].

Jamasb, T. and Pollitt, M.G. (2011) Electricity sector liberalisation and innovation: An analysis of the UK's patenting activities. *Research Policy*, 40, (2), 309-324. Available at: [*https://doi.org/10.1016/j.respol.2010.10.010*](https://doi.org/10.1016/j.respol.2010.10.010)[Accessed 17 February 2021].

Jamasb, T. and Pollitt, M.G. (2015) Why and how to subsidise energy R+D: Lessons from the collapse and recovery of electricity innovation in the UK. *Energy Policy,* 83, 197-205. Available at: [*https://doi.org/10.1016/j.enpol.2015.01.041*](https://doi.org/10.1016/j.enpol.2015.01.041)[Accessed 17 February 2021].

Johnson, V., and Hall, S. (2014) Community energy and equity: The distributional implications of a transition to a decentralised electricity system. *People, Place and Policy Online* 8, (3) 149–167. Available at: [*https://doi.org/10.3351/ppp.0008.0003.0002*](https://doi.org/10.3351/ppp.0008.0003.0002) [Accessed February 20, 2021].

Kornieieva, Y. (2020) Non-financial reporting challenges in monitoring SDG`s achievement: investment aspects for transition economy. *International Journal of Economics and Business Administration,* 8 (1), 62-71. Available at: [*https://www.um.edu.mt/library/oar/handle/123456789/53881*](https://www.um.edu.mt/library/oar/handle/123456789/53881)[Accessed 23 March 2021].

Kotler, P., Piercy, N., Harris, L.C. and Armstrong, G. (2013) *Principles of marketing.* Harlow: Pearson.

Kowal, B. and Kustra, A. (2016) Sustainability Reporting in the Energy Sector. *1st International Conference on the Sustainable Energy and Environment Development,* E3S Web of Conferences 10. Available at: [*https://doi.org/10.1051/e3sconf/20161000129*](https://doi.org/10.1051/e3sconf/20161000129)[Accessed 24 March 2021].

Legislation.gov.uk (/2018) Understanding Legislation. *Legislation.gov.uk*. Available at: [*https://www.legislation.gov.uk/understanding-legislation*](https://www.legislation.gov.uk/understanding-legislation) [Accessed February 16, 2021].

Levy, D.L., Brown, H.S. and de Jong, M. (2010) The Contested Politics of Corporate Governance: The Case of the Global Reporting Initiative. *Business and Society,* 49 (1), 88-115. Available at: [*https://doi.org/10.1177/0007650309345420*](https://doi.org/10.1177/0007650309345420)[Accessed 25 March 2021].

Matten, D., and Crane, A. (2005) Corporate Citizenship: Toward an Extended Theoretical Conceptualization. *Academy of Management Review* 30, (1) 166–179. Available at: [*https://doi.org/10.5465/amr.2005.15281448*](https://doi.org/10.5465/amr.2005.15281448) [Accessed February 19, 2021].

McIntosh, M., Waddock, S. and Kell, G. (eds.) (2017) *Learning to Talk: Corporate Citizenship and the Development of the UN Global Compact.* Abingdon: Routledge.

Phillips-Davies, A. (2020) Communication on Progress. *SSE Plc.* Available at: [*https://ungc-production.s3.us-west-2.amazonaws.com/attachments/cop\_2020/488306/original/UNGC\_communication\_of\_progress\_August\_2020.pdf?1598006632*](https://ungc-production.s3.us-west-2.amazonaws.com/attachments/cop_2020/488306/original/UNGC_communication_of_progress_August_2020.pdf?1598006632)[Accessed 23 March 2021].

Porter, M.E. and Kramer, M.R. (2011) Creating Shared Value. *Harvard Business Review*, January-February 2011. Available at: [*http://ressources.aunege.fr/nuxeo/site/esupversions/c9c186ba-f7d5-4ebe-bd74-d375387f45e8/res/res.pdf*](http://ressources.aunege.fr/nuxeo/site/esupversions/c9c186ba-f7d5-4ebe-bd74-d375387f45e8/res/res.pdf)[Accessed 20 March 2021].

Rasche, A. (2009) “A Necessary Supplement”: What the United Nations Global Compact Is and Is Not. *Business and Society,* 48 (4), 511-537. *Available at:* [*https://doi.org/10.1177%2F0007650309332378*](https://doi.org/10.1177/0007650309332378)[Accessed 24 March 2021].

Rowlands, I.H., Scott, D. and Parker, P. (2003) Consumers and green electricity: profiling potential purchasers. *Business Strategy and the Environment,* 12 (1), 36-48. Available at: [*https://doi.org/10.1002/bse.346*](https://doi.org/10.1002/bse.346)[Accessed 22 March 2021].

Rundle-Thiele, S., Paladino, A. and Apostol Jr., S.A.G. (2008) Lessons learned from renewable electricity marketing attempts: A case study. *Business Horizons,* 51 (3), 181-190. Available at: [*https://doi.org/10.1016/j.bushor.2008.01.005*](https://doi.org/10.1016/j.bushor.2008.01.005)[Accessed 18 March 2021].

Sethi, S.P., Rovenpor, J.L. and Demir, M. (2017) Enhancing the Quality of Reporting in Corporate Social Responsibility Guidance Documents: The Roles of ISO 26000, Global Reporting Initiative and CSR‐Sustainability Monitor. *Business and Society Review,* 122 (2), 139-163. Available at: [*https://doi.org/10.1111/basr.12113*](https://doi.org/10.1111/basr.12113)[Accessed 26 March 2021].

Sidhoum, A.A. and Serra, T. (2017) Corporate social responsibility and dimensions of performance: An application to U.S. electric utilities. *Utilities Policy,* 48, 1-11. Available at: [*https://doi.org/10.1016/j.jup.2017.06.011*](https://doi.org/10.1016/j.jup.2017.06.011)[Accessed 15 March 2021].

Sithole, H., Cockerill, T. T., Hughes, K. J., Ingham, D. B., Ma, L., Porter, R. T. J., and Pourkashanian, M. (2016) Developing an optimal electricity generation mix for the UK 2050 future. *Energy* 100, (1) 363–373. Available at: [*https://doi.org/10.1016/j.energy.2016.01.077*](https://doi.org/10.1016/j.energy.2016.01.077) [Accessed February 17, 2021].

Spaiser, V., Ranganathan, S., Swain, R.B. and Sumpter, D.J.T. (2017) The sustainable development oxymoron: quantifying and modelling the incompatibility of sustainable development goals. *International Journal of Sustainable Development & World Ecology,* 24 (6), 457-470. Available at: [*https://doi.org/10.1080/13504509.2016.1235624*](https://doi.org/10.1080/13504509.2016.1235624)[Accessed 25 March 2021].

*SSE Plc* (2020) Sustainability Report. Available at: [*https://www.sse.com/media/eh0dqrrw/sse-sustainability-report-2020-feb21.pdf*](https://www.sse.com/media/eh0dqrrw/sse-sustainability-report-2020-feb21.pdf)[Accessed 15 March 2021].

Terrados, J., Almonacid, G. and Hontoria, L. (2007) Regional energy planning through SWOT analysis and strategic planning tools.: Impact on renewables development. *Renewable and Sustainable Energy Reviews,* 11 (6), 1275-1287. Available at: [*https://doi.org/10.1016/j.rser.2005.08.003*](https://doi.org/10.1016/j.rser.2005.08.003)[Accessed 20 March 2021].

The Connexion (2021) People in France asked to limit electricity use today. Available at: [*https://www.connexionfrance.com/French-news/People-in-France-asked-to-cut-electricity-during-cold-snap-today*](https://www.connexionfrance.com/French-news/People-in-France-asked-to-cut-electricity-during-cold-snap-today) [Accessed February 16, 2021].

Umit Kucuk, S., and Krishnamurthy, S. (2007) An analysis of consumer power on the Internet. *Technovation* 27, (1-2) 47–56. Available at: [*https://doi.org/10.1016/j.technovation.2006.05.002*](https://doi.org/10.1016/j.technovation.2006.05.002) [Accessed February 22, 2021].

*United Nations* (2021) THE 17 GOALS. Available at: [*https://sdgs.un.org/goals*](https://sdgs.un.org/goals)[Accessed 15 March 2021].

*United Nations Global Compact* (2021) Our Participants. Available at: [*https://www.unglobalcompact.org/what-is-gc/participants*](https://www.unglobalcompact.org/what-is-gc/participants)[Accessed 10 March 2021].

Wang, Z. and Sarkis, J. (2017) Corporate social responsibility governance, outcomes, and financial performance. *Journal of Cleaner Production,* 162, 1607-1616. Available at: [*https://doi.org/10.1016/j.jclepro.2017.06.142*](https://doi.org/10.1016/j.jclepro.2017.06.142)[Accessed 25 March 2021].

Wu, S.R., Shao, C. and Chen, J. (2018) Approaches on the Screening Methods for Materiality in Sustainability Reporting. *Sustainability,* 10 (9). Available at: [*https://doi.org/10.3390/su10093233*](https://doi.org/10.3390/su10093233)[Accessed 25 March 2021].

# Appendices

Appendix 1 – Assignment Brief

**Summative Assignment: A business sector analysis of sustainability opportunities, constraints and reporting practices**

As a business intern, you have been asked to write an evaluative report of sustainability opportunities and constraints in your selected business sector. You should focus your analysis on around 2-4 organisations within the SAME sector, although you might draw on other sectors for comparison.

The first part of the report should evaluate the macro operational environment, examining characteristics of the national regulatory, civil society and consumer context, and how this influences business approaches to sustainability management. While you may draw on sector/organisational examples to illustrate your arguments, the focus should be on theoretical/conceptual discussion related to organisational context.

The second part of the report should evaluate the sustainability corporate reporting practices of 2-3 organisations within the SAME sector (although you may draw on other sectors for comparison purposes). You will need to choose businesses which publish sustainability/Corporate Social Responsibility/purpose/impact reports (so these are likely to be larger businesses).

This section is to be focused directly on analysis of business reports, structured around analysis of corporate reporting theories, frameworks and approaches.