



Norwegian University
of Life Sciences

Master's Thesis 2023 30 ECTS

Noragric, LANDSAM

Perceptions of just transitions among workers in fossil fuel- intensive industries in Gladstone, Australia.

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Acknowledgements

Writing this thesis would not have been possible without the support of many wonderful people. I'm grateful to have learnt so much during this process and would like to thank everyone who has helped me along the way.

Firstly, I would like to thank my supervisor Professor Guri Bang, whose insightful feedback, expert guidance, and kindness made this process considerably easier. The group meetings with Guri and Team Bang – Bror, Emma, Synnøve, and Zadekia – were equal parts helpful and fun, and were a highlight of my semester. Similarly, thanks to my friends in the course for our long days at the library round tables.

From all the way back home in Australia, I would like to thank Jordan, whose friendship and Gladstone knowledge were vital in the early stages of my thesis, and my sister Monica, for her listening ear and thorough editing skills. I would also like to thank all the interviewees in Gladstone who took the time to speak with me and shared their stories.

Finally, I would like to extend my sincere thanks to Live, whose unwavering encouragement, support, and strength has been infinitely valuable.

Abstract

This thesis aimed to gain insight into how communities affected directly by energy transition policy and just transition ideas perceive them. Right-wing populist views and place attachment were factors considered when investigating the community's perceptions of just transitions. The study setting was the industrial town of Gladstone in Queensland, Australia. Two research questions were formulated to provide insight on the research objective. Firstly, how do people living in Gladstone and working in industry react to energy transition policy and understand just transitions? Secondly, what, if any, influence do factors like right-wing populist rhetoric and place attachment have on perceptions of energy transition policy and just transitions? To investigate these questions, a qualitative method consisting of semi-structured interviews was used, focusing on a sample group of people who lived in Gladstone and worked in industry. The data was collected, transcribed, coded, and analysed for all 11 interviews. The analysis yielded four major categories of findings, which each contained several themes expanding upon the main finding. Generally, the interviewees viewed fossil fuel phaseout as necessary and just transition principles as important in achieving this. However, they had concerns regarding key elements of the transition plans. These concerns included planning and feasibility, proposed timelines for implementation, economic aspects, and material and waste associated with renewable energies. The interviewees also pointed to lacking community consultation as an issue, which suggests procedurally unjust outcomes may occur. While a few interviewees expressed resistance to energy transitions, a greater number of interviewees reported that other people in Gladstone were resistant, usually due to concern regarding their personal career prospects. Regardless of their support or resistance of transitions, interviewees perceived it as a political process, citing government incompetence as a factor hindering achieving positive outcomes. Furthermore, the findings suggest that populist rhetoric has become mainstreamed in Australia, demonstrated by the interviewees using populist rhetoric regardless of their position on the left-right political spectrum. Additionally, the findings suggest that high place attachment may manifest as increased anxiety for their town, but not necessarily as resistance to just transitions. A common theme among interviewees was the recognition that managing their personal future in industry and their desire to avoid drastic climate change was a complex undertaking, which could be aided by just transition principles. These understandings of transitions suggest a hopeful future for a greener Gladstone.

List of Acronyms

Shown below is an alphabetical list of acronyms used in the thesis.

ABS	Australian Bureau of Statistics
AUD	Australian Dollar
DIDO	Drive-in drive-out
ETU	Electrical Trades Union
FIFO	Fly-in fly-out
GHG	Greenhouse gas(es)
GPC	Gladstone Ports Corporation
ILO	International Labour Organisation
IPCC	Intergovernmental Panel on Climate Change
JT	Just transition(s)
LNG	Liquid/liquified natural gas
MtCO _{2e}	Metric tonnes of carbon dioxide equivalent
NRW	Non-resident worker(s)
QAL	Queensland Alumina Limited
QRC	Queensland Resource Council
RWP	Right-wing populism/populist
UN	United Nations
WA	Western Australia

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1 Introduction

Climate change mitigation is one of the most complex challenges facing humankind today. Without concerted effort to reduce greenhouse gas (GHG) emissions, the world will be irrevocably changed. The Intergovernmental Panel on Climate Change (IPCC) (2022) has identified that rapid phaseout of fossil fuels to cut GHG emissions is crucial for achieving the target of not exceeding 1.5°C global warming above pre-industrial levels. Burning fossil fuels and industrial processes are the leading cause of carbon emissions worldwide. Thus, transitioning from fossil fuels to renewable energy and decarbonising industrial processes is critical for transforming the world's energy system (IPCC, 2022).

The heavy industries of Australia contribute significantly to both the country's economy and GHG emissions. These heavy industries include supply chains for alumina and aluminium, liquid natural gas (LNG), mining for minerals like coal and iron, production of metals like steel, and chemicals (Climateworks Centre and Climate-KIC Australia, 2023). Industrial emissions make up around 44% of Australia's total yearly emissions, largely from using fossil fuel to power operations (Climateworks Centre and Climate-KIC Australia, 2023). Australia is also a major player in the worldwide fossil fuel industry; in 2021 it was the largest global exporter of metallurgical coal and second-largest global exporter of thermal coal, and in 2022 was the largest global exporter of LNG (Department of Industry, Science and Resources, 2023). The continued extraction, use, and export of fossil fuels positions Australia and its heavy industry as a significant contributor to global climate change.

Heavy industry directly employs almost half a million people in Australia (Australian Bureau of Statistics, 2022, May 27, 2023, April 20). It also supports numerous regional and rural communities and businesses, many of whom face an uncertain future as climate change action becomes increasingly urgent. As the need for transitioning away from fossil fuels and decarbonisation of industry becomes apparent, industrial communities around Australia face transformation. Energy and industrial transitions require broad national and sub-national policies and strategies which reflect the regional contexts as part of a just transition (JT) (IPCC, 2022). JT should include collective and participatory decision-making processes to ensure equitable and just outcomes for affected communities, such as those in regional Australia.

The greater Gladstone region is situated on the coast of central Queensland (shown in Figure 1), the large state in Australia's northeast. It is home to approximately 63,000 people, and has traditionally been an energy producing region, with a long history of being an industrial town

(Eriksen, 2018a). The Gladstone region has two of the world’s largest alumina refineries and an aluminium smelter, together forming the largest industry by employment (Australian Bureau of Statistics, 2021). Gladstone also has a natural deep-water harbour, which serves as one of the busiest coal ports in the world (Gladstone Engineering Alliance (GEA), 2019) and a large LNG complex comprised of three plants and export facilities (Gladstone Regional Council, 2022), both of which employ large portions of the town’s workforce. These industries and their supporting engineering, management, and construction services are considered collectively as ‘industry’. As such, the Gladstone region has been identified as an industrial region with vast opportunity to decarbonise and transition towards renewable energy.

Figure 1: Map of Australia with Gladstone’s location within Queensland.



Note. Adapted from “Outline map of Australia” by Geoscience Australia, 2005 (<http://pid.geoscience.gov.au/dataset/ga/61754>). Copyright 2021 by Commonwealth of Australia (Geoscience Australia).

Although just transition ideas have become a common theme in the discourse surrounding fossil fuel and heavy industry communities, little research has been undertaken to understand how the communities themselves regard energy transition policy and JT (MacNeil & Beaman, 2022). This thesis uses the broad conception of JT as referring to the overall objective of

transitioning away from high carbon emission industries and fossil fuels, towards a lower-carbon society and renewable energies in a fair and equitable way with respect to workers (McCauley & Heffron, 2018). This thesis aims to build upon existing research in fossil fuel dependent communities by focusing on reactions to energy transition policies by workers in Gladstone industry who may be directly affected. Whilst the JT concept is central to this research, other themes which may affect one's reactions such as populist rhetoric and place attachment will also be explored.

This thesis defines populism as a way of being or acting in politics, and right-wing populism (RWP) as appealing to the 'low' in the high-low socio-cultural axis. This includes ways of speaking and dressing, rhetoric, demeanour, accent, identity, and ways of connecting with people, and allows politicians to exist to varying degrees on a populism spectrum, rather than populism being a binary state (Ostiguy, 2017). Politicians with RWP tendencies typically use specific rhetoric to appeal to their supporters, like positioning themselves as the voice of 'the people' and identifying how 'ordinary people' are taken advantage of by 'the elite' (Fenton-Smith, 2020). Repetition of rhetoric that is commonly used by more RWP actors will serve as a key indicator in identifying populist tendencies or beliefs among the thesis interviewees.

This thesis defines place attachment as the social, environmental, built, and symbolic feelings and bonds that people have with the places they live (Hummon, 1992; Strzelecka et al., 2017). These relationships shape how people self-identify, facilitate community, and react to and deal with change that affect the place (Della Bosca & Gillespie, 2018). This thesis aims to investigate feelings of place attachment as a factor in JT perception.

1.1 Objective & research questions

The objective of the research is to gain insight into how communities affected directly by energy transition policy and ideas react to them, and whether JT measures can ameliorate right-wing populist responses to energy transition policies. Additionally, the interviewees' place attachment with the case study town will be explored as a factor in their perceptions. The following research questions aim to shed light on the research objective.

1. How do people living in Gladstone and working in industry react to energy transition policy and understand just transitions?
2. What, if any, influence do factors like right-wing populist rhetoric and place attachment have on perceptions of energy transition policy and just transitions?

In chapter 2, I provide background on the energy mix and renewable energy potential in Queensland, industry in Gladstone, possible pathways for energy transition in Queensland, and a short overview of the ongoing JT efforts and policies in Queensland. In chapter 3, I present the theory and conceptual framework which underpins this research and explain how they are used in my thesis. The main concepts used are just transitions, populism, and place attachment and identity. Chapter 4 describes the study setting, data collection, creation of a specific analytical tool, and the analysis method I used. In chapter 5, I present the main findings and in chapter 6 I discuss these findings with reference to relevant literature. Finally, I make conclusions and recommendations for future research in chapter 7.

2 Background

This chapter provides background on the current renewable industry presence in Gladstone, renewable energy targets in Queensland, and gives an overview of the possible transition pathways identified by government and government adjacent bodies. The Queensland Energy and Jobs Plan is discussed further, as this is the main evidence of government transition plans focusing on job security, opportunities in regional and rural Queensland, and community consultation.

2.1 Industry and energy in Queensland

In 2022, the Queensland government committed to a target of 70% renewable energy by 2032 and 80% by 2035, an update from the 2015 commitment of 50% by 2030 (Queensland Government, 2022). The target commits to drastically increasing renewable energy sources and minimising reliance on fossil fuel, especially coal. However, the current mix of energy use in both Australia and Queensland is dominated by fossil fuels. In 2020-21, 91.5% of total energy consumed in Queensland was provided by fossil fuels, and 80.8% of electricity was generated from fossil fuels, primarily coal (Department of Climate Change, Energy, the Environment, and Water, 2022, September 02). The heavy industries significantly support the mining industry, as they represents a huge consumer of fossil fuel - through primary energy and electricity - to power their industrial processes (Department of Climate Change, 2022, September 02; Goddard & Farrelly, 2018). This dominance of fossil fuels has contributed to an ongoing path dependency on fossil fuels, including policy, institution, infrastructure, and technology lock-in (Evans & Phelan, 2016; Goddard & Farrelly, 2018; Seto et al., 2016; Unruh, 2000) making transition in Queensland a complex undertaking.

The reliance of coal is obvious in Gladstone, where Queensland's largest power station (coal-fired) and various coal terminals and railways are plainly visible from around town, as is the fine layer of coal dust which settles on all surfaces in and out of homes (Eriksen, 2018b). Other industrial plants and processes can be clearly seen in and around town, noticeably the huge areas of land claimed by the red mud dams of bauxite waste from alumina refinement (alumina is then smelted into aluminium at a separate plant), which are clearly visible as you fly into the town. Physical sensations like noise and odour are also reminders; those who have worked at, visited, or lived nearby to the Queensland Alumina Limited (QAL) plant will attest to the intense odour that constantly permeates the area, blown through the town by the wind (QAL,

2020). The integration of industry into Gladstone’s physical landscape reflects the importance of industry to the town’s economy and identity. This is shown in Figure 2, which is a satellite image of the Gladstone region where some major industries are indicated.

Figure 2: Satellite image of the Gladstone region with some industries indicated.



Note. Some of the major industries in the Gladstone region are indicated here with white text and white arrows. The arrows indicate the general area which the industry occupies, but many industrial operations have multiple sites taking up large areas. The figure shows that much of the land in the Gladstone region is devoted to industry. Adapted from Queensland Globe (<https://qldglobe.information.qld.gov.au/>). Copyright 2023 by State of Queensland 2023.

2.2 Pathways for energy transition in Queensland

The Queensland government has a number of documents from various bodies outlining possible pathways for energy transition. The Queensland government established the Queensland Renewable Energy Expert Panel (2016) which produced the report titled *Credibile pathways to a 50% renewable energy target for Queensland*. The report recognises the large potential for Queensland to grow its renewable energy industry, which research suggests is not

only technically feasible, but will also maintain affordability and reliability of supply (Elliston et al., 2017). The report modelling across different pathways predicts benefits for the economy and a net increase in employment opportunities; supported by research which suggests more jobs in solar photovoltaic, wind energy, and other adjacent sectors like construction, typically in regional areas with existing industry such as Gladstone (Pai et al., 2020; Ram et al., 2022; World Economic Forum, 2022, March 25).

Additionally, the Queensland government has published two climate change strategy reports: Queensland Climate Adaption Strategy report titled *Pathways to a climate resilient Queensland* (2017b) and Queensland Climate Transition Strategy report titled *Pathways to a clean growth economy* (2017a). The Adaption Strategy report focuses on a multi-actor approach to equip Queenslanders with tools and knowledge to manage forthcoming changes in the climate by outlining planning strategies across a range of sectors. In contrast, the Transition Strategy report focuses on a plan to “create new jobs and sustainable communities” (Department of Environment and Heritage Protection, 2017a, p. 2), particularly in regional areas like Gladstone.

External to both the Queensland and Australian government, the Climateworks Centre and Climate-KIC Australia (2022) produced a series of reports on energy transitions. The phase 2 report identified opportunities for potential abatement of carbon emissions in big industrial areas in Australia, including the Gladstone region (Climateworks Centre and Climate-KIC Australia, 2022). The report also estimates the additional investment and renewable energy required to achieve the abatement, as well as resulting job opportunities created. The Gladstone region was identified as having the second largest decarbonisation potential in Australia of 21.2MtCO_{2e} (metric tonnes of carbon dioxide equivalent). These abatable emissions were almost entirely in the high emission manufacturing sectors of LNG and alumina/aluminium, which are also Gladstone’s largest employers (Gladstone Engineering Alliance (GEA), 2019). The report research identifies a clear need for a deliberate, coordinated effort between industry, government, and actors across the supply chain to achieve decarbonisation. This is mirrored in JT literature and research, which asserts collaboration across actors and democratic participation in transition processes as central tenets of achieving just outcomes (Baer, 2016; Evans & Phelan, 2016; Goddard & Farrelly, 2018; MacNeil & Beaman, 2022; McCauley & Heffron, 2018; Weller, 2019).

The phase 3 report by Climateworks Centre and Climate-KIC Australia (2023) builds on the phase 2 report and outlines specific pathways to industrial decarbonisation. The report targets five main industries to decarbonise, two of which are the major industries in Gladstone – aluminium and LNG. The main emissions from aluminium production occur from high energy consumption in operations, which are typically sourced directly from fossil fuel combustion. Significant emission reductions can be achieved through using low-emission technologies in aluminium production. Thus, the report points to development and training programs for workforces to develop and operate these production processes effectively and safely. The report advocates for government support and regulation to develop and train current workforces in order to achieve a JT. Conversely, LNG’s production emissions are more direct, consisting of fuel combustion, venting, leakage, and flaring. Additionally, the ongoing emissions from the LNG’s eventual combustion for heat and electricity contributes to global emissions. The report recognises that transitioning out of LNG is a more complex pathway, as LNG represents a steppingstone towards implementing renewable energy. Thus, the major recommendation is that LNG industries look to electrification, specifically via renewable energy sources. The report notes that the LNG workforce is typically very highly trained and could therefore be retrained successfully as part of a JT.

2.3 Queensland energy and jobs plan

The Queensland Energy and Jobs Plan (Queensland Government, 2022) was published in 2022 by the incumbent centre-left Labor government, and is centred around the vision of providing clean and reliable energy for future generations. The plan is focused on how to achieve at least 50% renewable energy by 2030, 70% by 2032, and 80% by 2035 through the implementation of the Queensland SuperGrid. The SuperGrid proposes an integrated system across Queensland, connecting pumped hydro plants, solar and wind farms, hydrogen hubs, and battery projects via a backbone transmission line along the coast. One of three major focus areas in the plan is the emphasis on secure jobs and communities, especially in regional and rural Queensland. A key point is the transition of all publicly owned coal-fired power stations to clean energy hubs, supported by a security guarantee for energy workers ensuring all power plant workers are guaranteed a job or re-training support as the government transitions the plants. The security guarantee was legislated in response to union pushback which is discussed further in chapter 3.1: Just transitions.

Implementation of the SuperGrid includes a \$365 million AUD investment in the Gladstone region to reinforce the existing grid. This is of key importance in the plan, listed as the second point on the plan overview. It cites the Gladstone grid reinforcement as necessary “to support heavy industry to switch to renewable energy and decarbonise their operations” (Queensland Government, 2022, p. 6). Gladstone is identified as a critical location for clean industrial growth, specifically as a hydrogen energy hub. As part of central Queensland, Gladstone is also identified one of the three Queensland Renewable Energy Zones earmarked for renewable energy growth, specifically hydrogen, wind, and solar. Additionally, it is earmarked as a location for on-going community consultation for key implementation activities.

One of the plan’s salient points is that the Queensland economy will be \$25.7 billion AUD stronger by 2040 than it would have been without the plan. It also modelled that there would be 36,000 more jobs, direct and indirect, in green growth than without the plan. This illustrates the Queensland government’s belief that pursuing renewable energy systems and phasing out fossil fuels is economically feasible and beneficial for the economy. Driving economic growth is framed as pivotal, particularly for regional areas. The spotlight on regional areas includes supporting their communities and ensuring community consultation as part of the planning and execution process. The plan also highlights supporting and consulting First Nations peoples, who are the Traditional Owners of the land upon which all operations occur (Climateworks Centre and Climate-KIC Australia, 2023). All the points in the plan suggest that the Queensland government aiming for a JT, although the phrase is not used in the documentation. Instead, the plan uses ‘energy transition’, and aims to ensure a “secure transition” (Queensland Government, 2022, p. 4), with constant reference to worker and community benefit.

The aforementioned policy programs provide a broad overview of the Queensland government’s action and plans for a JT. The energy landscape and transition potential in Queensland is important in providing context about how Gladstone residents view JT processes and policy. Engagement from government is central when considering just, fair, and community focused outcomes. A particular focus is placed on the procedural justice element of the government driven JT process, discussed below in chapter 3: Theory and conceptual framework.

3 Theory and conceptual framework

This chapter introduces and explains the conceptual framework which provides the foundation for this thesis. The concepts are explored with focus on the study context of Gladstone, Queensland, Australia. These concepts inform the data collection and subsequent analysis, which will help to shed light on the research objective. These concepts are just transitions, procedural justice, the resource regime in Queensland, populism and governance in the Australian context, and place attachment and identity.

3.1 Just transitions

Just transition(s) (JT) originated as a term in the 1990s and is a concept which refers to the overall objective of transitioning away from fossil fuels towards decarbonised, renewable energy sources in a fair and equitable manner (McCauley & Heffron, 2018). Coined by global trade unions, JT has since been widely adapted by academics, governments, environmental organisations, and international organisation like International Labour Organisation (ILO) and various UN organisations (Snell, 2018). JT has been regarded as a concept with potential to overcome the jobs versus environment narrative (Goddard & Farrelly, 2018), pointing to the continued importance of labour unions in engagement with the concept.

Transitioning to ‘green jobs’ as a climate change mitigation strategy exposes existing fossil fuel-reliant industries to negative effects and workers to insecurity. JT aims to ensure that workers and communities adversely affected by industry decline are afforded dignity and ownership during transitions (Snell, 2018). Additionally, workers should be supported with opportunities such as re- and up-skilling, transition programs during periods of unemployment, early retirement for older workers, and livelihood loss mitigation. Communities should also be supported with policies to encourage and strengthen local socially sustainable economies and job creation to replace the economic stimulus provided from carbon heavy industries (ILO, 2015; MacNeil & Beaman, 2022). Due to the uneven population distribution across Australia, transitions occur at differing rates across different spatial scales so local social complexities should be taken into account in national policy (British Academy, 2022). However, as JT grows in popularity, various differing views and interpretations exist, as well as criticisms that the concept lacks clarity and is not practically achievable due to complexity of transition contexts (Snell, 2018; Weller, 2019).

Despite the criticism, several studies have indicated that JT policy could play a vital role in helping communities across Queensland and Australia towards a just and equitable transition to low carbon energy and industry (Evans & Phelan, 2016; Goddard & Farrelly, 2018; Snell, 2018). The Queensland and Northern Territory Electrical Trades Union (ETU) has been a driving force for JT in Australia. It publicly urged the Queensland government to commit to a plan, citing that with a proper plan, transition to renewable energy can be achieved whilst minimising the adverse impacts on regional communities and jobs (ETU, 2019). The call came following reports that one of the power stations in Gladstone was slated to close ten years earlier than expected, throwing workers into uncertainty. Subsequently, the ETU signed a world-first Energy Workers Charter with the Queensland government in 2022, which formed part of the Queensland Energy and Jobs Plan (ETU, 2022, November 01). The charter guarantees that every energy industry worker will have a job within the Government owned energy sector as it transforms over time, and recognises that reasonable compensation for affected workers is required to achieve a JT (Department of Energy and Public Works, 2022).

Goddard and Farrelly (2018) suggest that transition is possible and imminent in Queensland but recognise that a lack of long-term and consistent state and federal policy, unclear processes, and the entrenched resource regime – especially in the Gladstone region – are major challenges facing transition. These reflections are mirrored in the lessons learnt from the case study of transition in the historical coal region of the Latrobe Valley in Victoria, Australia. During and after the shutdown of a lignite (brown coal) fired electricity plant, strategies and programs to support displaced workers may have contributed to exacerbation of local disempowerment, a lack of democratic input and transparency throughout the transition, and procedural injustices around redistribution of funding intended for directly affected communities (Snell, 2018; Weller, 2019).

Whilst the transition of Latrobe Valley in Victoria may have inadvertently resulted in some unjust outcomes, there are example of JT processes achieving some success in Australia. One such location is Collie, a coal mining town in Western Australia (WA) which is transitioning away from its single dependence on coal to other renewable energies and emerging industries (Government of Western Australia, 2023, February 28). Collie has historically supplied the coal to power WA, as the town was home to two coal mines and three coal-fired power stations (Beyond Zero Emissions, 2019). As part of the transition, the coal-fired power stations have been scheduled for progressive phaseout in the years until 2029, supported by \$662 million AUD in ongoing state government funding to entice new industries to Collie and to provide

local skills training, career advice, and support for transitioning workers (Government of Western Australia, 2023, February 28). Plans for the Collie region highlight the importance of community engagement, and recognise the significance of stable jobs to the community's long-term economic wellbeing as part of a JT (Beyond Zero Emissions, 2019).

3.1.1 Procedural justice

JT, whilst related to environmental and energy justice, is not synonymous with it. JT literature has elements of energy justice, including distributive, recognition, and procedural justice. Distributive justice within energy transitions is focused on the distribution of burdens and benefits, for example affordability and reliability of energy supply (Goddard & Farrelly, 2018). Justice as recognition is focused on who is ignored or misrepresented in the transition conversation, and how these groups can be recognised (Jenkins et al., 2016). Procedural justice revolves around ideas of fairness, inclusion, and participation in decision making processes (Benjaminsen & Svarstad, 2021). This thesis will focus on the procedural justice element of energy justice. Procedural justice was considered most relevant in this thesis, as it is centred on access to the decision-making processes which govern all other aspects of energy justice and therefore JT (Jenkins et al., 2016). More just outcomes can be achieved by improved inclusion through strategies like mobilisation of local knowledge, better institutional representation, and increased information disclosure (British Academy, 2022; Jenkins et al., 2016).

Disclosure of information via public and community consultation is a common strategy for governments looking for input on energy, environmental, and transition issues (Jenkins et al., 2016; Williams & Doyon, 2019). This may be because informed communities experience greater inclusion in decision making processes. Additionally, procedural approaches can achieve better dialogue between communities and governments when they take local awareness and identity into consideration, to engage in appropriate and empathetic ways (British Academy, 2022; McCauley & Heffron, 2018). Feelings of trust and legitimacy in the decision-making processes are important for people in affected communities to participate in meaningful and fair decision-making processes which effect their environments and wellbeing (Evans & Phelan, 2016).

Consideration of procedural justice and engagement with relevant stakeholders is therefore fundamental to ensuring democratic legitimacy during transition processes, as failure to

achieve just outcomes can stall transitions (Goddard & Farrelly, 2018). The IPCC (2022) notes that application of JT principles through collective and participatory decision making processes, which is central to ensuring procedural justice, is an effective way of achieving equitable and just policy. Indeed, MacNeil and Beaman (2022, p. 120) note that “poor procedural justice outcomes have the clear potential to breed support for populist movements that promote a toxic politics of anger and alienation in impacted regions”. Thus, exploring perceptions of inclusion in decision-making processes as part of procedural justice is an important part of my thesis.

3.1.2 Resource regime

Resource regimes are defined as the formal and informational institutional structures which manage access and usage of resources, particularly regarding natural resource management of common-pool resources (Vatn, 2007). They consist of the use and transfer of the resources, as well as the rules and norms which govern what is produced from the resources (Vatn, 2007). This thesis uses a holistic conceptualisation of resource regimes to also include technologies, actor relations, and actor interactions (Holtz et al., 2008). Therefore, the resource regime consists of all the actors and elements which contribute to forming and regulating how resources are extracted and distributed.

In this thesis, the scope of resource regimes is focused on mineral resource extraction and usage in Australia. At the federal level, both major political parties have consistently supported extraction and expansion of Australian coal and LNG (Baer, 2016). However, direct control of mineral resources is usually delegated from the federal to the state level in Australia, meaning the Queensland government is a major actor in the resource regime. The main tool the Queensland and other state governments use to extract economic value from the resources is taxation, specifically mineral royalties which apply to publicly owned common-pool non-renewable resources (Wilson, 2016). All below-ground resources in Australia are considered Crown Land, and therefore must be leased by mining companies before minerals can be extracted (Baer, 2016). Mineral royalties are applied to private mining and energy companies, who represent the major non-government actors in the resource regime.

The resource regime in Queensland is vast, with many powerful actors across the resource industry who have been unusually effective at influencing politics and becoming a hegemonic industry (Baer, 2016; Goddard & Farrelly, 2018). The influential actors in the resource

industry, including prominent conservative politicians and industry sponsored local media, have supported and perpetuated negative narratives around renewable energy and transition, especially on the purported job losses that will occur (Goddard & Farrelly, 2018; MacNeil & Beauman, 2022). These actors often overestimate the number of jobs in industry and supporting sectors in the media and during political campaigning, which have regularly been proven as misleading or false (Campbell, 2015; Hawkins, 2021; RMIT University, 2019; Robertson, 2017). One egregious example from 2020 was when the powerful mining lobby Queensland Resources Council (QRC) claimed the resource sector employed 372,000 Queenslanders, when the Australia Bureau of Statistics reported only 66,000 in mining jobs (Readfearn, 2020). QRC also produced modelling to claim that their economic contribution to an inner-city Brisbane electorate was 46,750 full time jobs, when the electorate had fewer than 40,000 adults residing there (Readfearn, 2020).

The resource regime is particularly evident in the Gladstone context. One study showed that Gladstone residents were often reluctant to engage in environmental issues which were critical of local industry. The study also reported instances of people losing their jobs or becoming ostracised after openly criticising industry, and even examples of Gladstone Ports Corporation (GPC) suing people who disagreed with their practices (Eriksen, 2018b). The resource regime thus contributes to a “culture of silence” (MacNeil & Beauman, 2022, p. 120) in Gladstone, which must be taken into consideration when conducting research in the region.

The broad conception of JT based on the McCauley and Heffron (2018) definition, which encompasses the energy transition from fossil fuels to renewable energy and ensuing procedural justice considerations for workers, helps structure and focus the analysis conducted in this thesis. By focusing on energy transition aspects, the research scope is narrowed to the local economic context which affects workers and residents in Gladstone. Additionally, focusing on procedural justice in the analysis will allow issues of how workers experience fairness and inclusion in transitions to be investigated. Finally, identifying the structure and strength of the resource regime in Queensland and the history of industrial presence in Gladstone will help focus the analysis on key factors that shape perceptions of JT.

3.2 Populism and governance in Australia

The state of Queensland has historically been the state where populists have received most electoral support, and has produced Australia's most prominent contemporary right-wing populists in Pauline Hanson, incumbent Senator for Queensland; Clive Palmer, former Member of Parliament; and Bob Katter, incumbent Member of Parliament since 1983, in far north-west Queensland (Australian Electoral Commission, 2022, July 01; Moffitt, 2017). Pauline Hanson experienced a huge resurgence in the 2016 federal election after an almost 20-year absence (in which she was expelled from her own party, Pauline Hanson's One Nation, and spent time in jail for electoral fraud) since her emergence in the 1996 federal election (Fenton-Smith, 2020). In the 1996 election, Hanson won a seat in the House of Representatives by playing upon popular unrest over many issues like indigenous First Nations peoples welfare, foreign aid, foreign corporate take-overs of Australian businesses, and multiculturalism (Fenton-Smith, 2020). Her first speech to parliament, one of the most widely circulated speeches from Australian parliament, suggested that Australia was "in danger of being swamped by Asians" (Hanson, 1996).

Hanson's inflammatory attacks on Asian immigrants and First Nations peoples shocked society and the elites in media, politics, and academia (Fenton-Smith, 2020). Her election victory alerted them to the fact that many Australians shared her views and may have felt underrepresented in politics. Her approach was quickly and successfully adopted into mainstream politics, particularly by the conservative Prime Minister John Howard who served from 1996 to 2007 (Fenton-Smith, 2020; Moffitt, 2017). Many of these strategies have continued in some form within the two major parties in Australia. The history of mainstreaming populist policies has given individual populist actors space to exist within major, non-populist parties and as independents in the Australian electoral system (Moffitt, 2017). Research has shown that in countries with majoritarian electoral systems, like Australia, individual politicians with RWP styles tend to enter government via the existing centre-right party (Lockwood & Lockwood, 2022). This is true for Queensland's most known populist politicians, who initially entered politics through the two centre-right parties which form the Coalition: Pauline Hanson through the Liberal Party and Bob Katter through the National Party, which have since merged in Queensland to form the Liberal National Party (Parliament of Australia, 2022).

The socio-cultural approach to populism outlined by Ostiguy (2017) is helpful for describing populist politicians, in particular the concepts of high and low political appeal in which

populism is the ‘flaunting of the low’. The high-low axis is cultural in nature and describes a way of being or acting within politics. The high-low axis does not reflect wealth or socio-economic status but encompasses a large scope including issues like ways of speaking and dressing, rhetoric, demeanour, accent, identity, and ways of connecting with people (Ostiguy, 2017). Populism as seen from a socio-cultural approach allows politicians to exist on a spectrum of varying degrees of populism at different times, rather than the binary categorisation of one being or not being populist (Ostiguy, 2017). Given that Australia has no widespread populist movement nor any major populist political party, this approach is suitable for Australia’s populism landscape where only some individual politicians have any achieved success with a populist platform (Moffitt, 2017). This is largely due to the system of governance in Australia.

The Australian system of government is a representative democracy and a federation of states, meaning that the three levels of federal, state, and local government must function together to govern (Parliamentary Education Office, 2022, September 13). In this thesis, government is considered broadly as one entity, unless a political party is specified. All levels of politics in Australia are dominated by two major parties on each side of the political spectrum: the centre-left Australian Labor Party (referred to henceforth as *Labor*), and the centre-right Liberal Party of Australia (with a long history as the dominant partner in a coalition with the National Party, collectively referred to henceforth as *the Coalition*) (Parliament of Australia, 2022). States and territories within Australia retain responsibility for internal matters, such as policy for resources and energy. There is a disconnect between federal and state governance, with overlapping and sometimes contested political jurisdictions, uncoordinated electoral cycles, and electoral boundaries which confusingly do not correspond (Weller, 2019). For example, in state politics, the Gladstone region is bounded in its own electorate called ‘Gladstone’, whereas in federal politics, Gladstone is merged with huge tracts of rural land (the total area is larger than the area of England) to form an electorate called ‘Flynn’ (Australian Electoral Commission, 2019, November 19; Electoral Commission Queensland, 2020). The disconnect is exemplified by Queensland’s history of generally supporting the Coalition in federal elections (most recently 2022), but supporting Labor in state elections (most recently 2020) (Australian Electoral Commission, 2022, July 01; Electoral Commission Queensland, 2021, November 12).

Due to Australia’s quasi-two-party system, policy debates are often partisan in nature which can slow down policy creation and legislative processes (Hughes & Carlson, 2015), dilute outcomes, and create a dynamic where RWP rhetoric can thrive. A growing body of evidence

suggests that RWP politicians and their supporters are hostile towards policies that support climate change action and decarbonisation (Lockwood & Lockwood, 2022). One explanation by Lockwood (2018) is that this hostility could be the combination of authoritarian and nationalistic values with anti-elitism, to produce hostility towards climate change action as it is viewed as a metropolitan elite agenda. This anti-elitism view is exacerbated by a suspicion of the complexity of climate science and policy, and scepticism of climate scientists and environmentalists in society and politics. RWP actors tend to play upon this anti-elitism by exhibiting open criticism of mainstream media, often challenging official information channels and questioning factual evidence produced by ‘the elites’, especially concerning human-induced climate change (Huber et al., 2021). One method of RWP actors communicating their scepticism of climate science is the continued use of rhetoric.

A key factor of the RWP political style is the rhetoric focus on ‘the (ordinary, mainstream) people’, usually a vague term based on cultural factors to unite large groups under nationalistic values (Huber et al., 2021). However, in Australia, ‘the people’ are often coded as white, working/middle class, and residing in suburban or regional areas, in contrast with ‘the elite’ who are usually viewed as highly educated, ‘out of touch’, metropolitan dwellers with less connection to the country and the land than ‘the people’ (Moffitt, 2016). The ‘ordinary people’ identifiers are strongly reflected in the demographics of Gladstone which are predominantly white, Australian-born with Australian-born parents, with approximately half the percentage of university degree holders as compared to Queensland and Australia on a whole (ABS, 2021). Although the educated elite – often referred to in Australian RWP rhetoric as ‘inner-city, latte-sipping, greenie lefties’ – are the seen as the main threat, populism in Australia also takes aim at the immigrant Other, and indigenous First Nations peoples (Kaltwasser et al., 2017).

This thesis defines populism using the high-low axis of the socio-political approach to identify common right-wing populist rhetoric. By using a definition of populism on a spectrum, different rhetoric can be identified in the analysis without having to distinguish whether the participants themselves identify with any populist party or politician. This also allows the scope of populist rhetoric to be narrowed specifically in relation to JT topics.

3.3 Place attachment and identity

Place attachment is defined as the emotional bonds people have for places they live in, which are “ecological, built, social, and symbolic” (Hummon, 1992, p. 253). The place-people connection is strongly intertwined with community sentiment, behaviours, and one’s sense of identity and belonging (Della Bosca & Gillespie, 2018). Places are transformed into meaningful locations through one’s experiences and ideas, and these place related meanings are reinforced through local practices and rituals (Strzelecka et al., 2017). Associations with a specific place can be integrated into one’s personal identity, create meaning, and facilitate community. Place attachment is an important factor in understanding why and how communities react to and cope with change, especially in the context of climate change.

Due to the intertwined nature of place and identity, challenges facing places are often interpreted by those who have strong attachment to the place as personal challenges, or as a threat to communal identity. Even as the world quickly becomes more globalised, and modernity threatens the individuality of places, people’s attachment to these places may have strengthened in response to the commercial sameness of Western-inspired monoculture that is shaping cities globally (Boley et al., 2021). These important place attachment feelings are anchored in highly personal creations of meaning and connection with natural and social environments of the place, where strong place attachment correlates with willingness to engage in pro-environmental behaviours (Raymond et al., 2010). Despite the importance of place attachment and identity in behaviour and reactions to change, historically the energy transition discussion has been focused on technical and economic issues, potentially leaving socio-cultural issues such as place and identity underexamined (Della Bosca & Gillespie, 2018).

There is a relatively long history of Gladstone being and identifying as an industrial town (Eriksen, 2018a), and it is often referred to as an industrial hub in Queensland government documents (Queensland Treasury, 2016). In Gladstone, this history of industry informs the culture around it, and the perception of its importance in the town. Reflecting on fieldwork from 2013-2014, Eriksen (2018a) observes that this often manifests as a sense of pride and commitment to industry as an identity. Informants in Eriksen’s research refer to Gladstone as having been industrialised for generations, and often use the phrase ‘boom and bust’ to describe the cyclical nature of intensive work periods, high salaries, and subsequent influx of workers, and the low periods characterised by little industrial work availability and fewer workers. Furthermore, Eriksen (2018a) observes the transient nature of the population in Gladstone, and describes only the minority of adults in Gladstone as born and bred locals. Whilst many of the

residents are from other parts of Australia, there are a fair number of international immigrants, typically highly skilled and employed by industry in technical roles. Additionally, many established, non-local residents had originally intended on only staying in Gladstone for a few years to earn a high salary and save money (Eriksen, 2018a).

The transient population of workers coming to Gladstone for short and medium term work is juxtaposed by non-resident workers (NRWs), who have been large contributors to the perceived boom-bust cycle of Gladstone (Cameron et al., 2014). NRWs are comprised of mainly fly-in fly-out workers (FIFO), who fly into Gladstone from other places to work for a period, then fly home for the weekend or off-work periods, and a smaller group of drive-in drive-out (DIDO) workers. In Gladstone, all FIFO workers travel via Brisbane, the capital and largest city in Queensland and the third largest by population in Australia, as the airport does not offer commercial flights to anywhere else (Gladstone Regional Council, 2023). Eriksen's (2018a) fieldwork in the Gladstone region uncovered a complex relationship with FIFO workers. One of the observations was that it was natural for FIFO workers to have low attachment to the town despite spending the majority of their time there, summarised by one of Eriksen's informants who notes that "it's obvious in a way, isn't it, that FIFOs should care less about the local environment than people who live here permanently. They have no attachment" (Eriksen, 2018a, p. 51). Many other informants point to FIFO workers' lack of engagement in the town and the community generally.

This is congruent with place attachment literature which states that developing strong place attachment relies on factors like time spent in the place, belongingness with existing community, and familiarity with people and nature in the place (Raymond et al., 2010). Because the Gladstone population has a large transient population and many FIFO workers, it is likely that there will be a noticeable difference in place attachment between locals with long history in the town and people who have relocated there for work. In this thesis, I aim to investigate whether these assumed differing levels of place attachment affect one's perception of energy transition and industrial change in Gladstone.

4 Research methods

The study setting of this thesis is the Gladstone region in the northeast Australian state of Queensland, where industry has a strong presence in the town. Upwards of 13% of the workforce are employed by industry, specifically alumina and aluminium, LNG, and the port which deals primarily with coal (ABS, 2021). Thus, this study setting was selected as issues related to JT are highly relevant in industrial focused towns. Additionally, I have previous personal experience living in Gladstone and working as an engineer in industry. My familiarity with the region gave me specific contextual knowledge which helped to identify salient concerns and ask appropriate questions. This positioned me as a researcher who could draw upon my own experience to understand the local perspective in an authentic way.

A case study analysis was determined as the appropriate method for this research. I sought to give a detailed examination of a single case, specifically through a within-case analysis method (George & Bennett, 2005). This thesis used Gladstone as the single case context, meaning that comparisons to other cases were out of the study scope. Analysis of a single case study allows deeper consideration of contextual factors which can lead to higher level of conceptual refinement (George & Bennett, 2005). Thus, using a single case study analysis method helped me to better identify and discuss the indicators which represent the theoretical concepts that underpin the research objective.

This thesis used qualitative case study analysis methods to gain insight into how JT is perceived by workers in industry in the Gladstone region. Semi-structured interviews were determined as the appropriate data collection instrument. Semi-structured interviews were chosen as they allow respondents to share their thoughts without the limitations of a questionnaire. The flexible nature of interviews allowed themes which I had not foreseen to emerge (Bryman, 2012a). The interviews were transcribed, and the subsequent interview data was coded and analysed to identify common themes. A discussion of the identified themes with links to existing theory helped to shed light on the research questions. Common themes were grouped into categories and presented as main findings.

4.1 Sampling and data collection

Given my familiarity with the industry and existing network in the region, a targeted approach comprised of a purposive sampling strategy was used to identify interviewees who live in Gladstone and work in industry, which was supported by a snowball sampling approach

(Bryman, 2012c). The snowball element was primarily from interviewees suggesting other suitable people with whom they were familiar with in the town. One's role in industry was the main criteria for identifying a possible interviewee. I aimed to contact a range of workers with different levels of education, section of industry, types of roles, seniority within their workplace and field, and gender.

A total of 11 interviews were conducted online via Microsoft Teams between January and March of 2023. All interviewees were directly employed by industry in Gladstone, except for one who worked closely with industrial workers in Gladstone in a community outreach capacity (see Appendix B: Interviewee Overview). Of the ten interviewees working in industry, five were employed in alumina production, two in supporting engineering consulting services, one worked at the port primarily with coal, one in LNG, and one in supporting construction services. Only two of the 11 interviewees were Gladstone locals; the remaining nine reported moving to Gladstone for work as one of the primary reasons. Seven interviewees had obtained at least a bachelor's degree, one had an associate degree (one level below bachelor's), two had completed high school and a certificate IV (one level below an associate degree), and one had not completed high school but achieved multiple trades and a certificate IV¹. The age distribution was spread, with three interviewees in their 20s, three in their 30s, three in their 40s, one in their 50s, and one in their 60s. The gender distribution was even, with five interviewees identifying as women and six as men.

The interviews were recorded on Microsoft Teams, and the inbuilt transcription tool was used to automatically transcribe the interview as it was conducted. After each interview, I listened to the audio recording and edited the transcription to fix any errors, replaced the participants' real names with a number-letter label, simplified the formatting, and processed it to export to Microsoft Excel for analysis. The aim was for the interview duration to be approximately 30 minutes, and all interviews were between 25 – 34 minutes, except for one which lasted 47 minutes. Of the 11 interviewees, one requested to receive relevant questions to then submit a written response prior to the interview, in which we then discussed the written responses. The questions which this interviewee received were from the interview guide adapted into a questionnaire format.

¹ It is common to have a bachelor's degree when working in an engineering, management, or financial role in industry, especially in office-based roles. Trades and certificates are more common for labour or technician roles, especially site-based roles.

The interview guide was divided into different categories based on an overarching theme corresponding to the outlined research questions, such as understanding of JT, resource regime, transition potential in Queensland, and populism (see Appendix A: Interview Guide). Each interview began with introductory questions to establish the interviewee's gender, age range, level of education, history in Gladstone, and job description to contextualise their answers. Starting with set questions gave some value of consistency across interviews with unique situations. Consistency parallels the concept of external reliability, i.e., whether the findings would be consistent if the study were to be replicated in similar contexts (Krefting, 1990). The introductory questions often sparked further unprompted discussion from interviewees. However, every interview followed this introductory section with a question regarding whether or not the interviewee was familiar with JT, and if they knew what it entailed. This question was usually effective in leading the interview into a discussion about transition generally within the context of Gladstone and Queensland.

The remaining questions in the interview guide were asked in approximately the written order, but with a preference for a flexible order that was congruent with the natural flow of conversation. The purpose of an irregular order was twofold: one; to build rapport with the interviewee, and two; to allow the interviewee freedom in how they chose to respond (Bryman, 2012a). Allowing the interview to flow naturally meant that interviews had different focus depending on the interviewee's interest and knowledge. This contributed to the credibility of the research by giving the interviewee space to richly describe their experience and perceptions, also called thick description (Bryman, 2012b). Credibility parallels the concept of internal validity, which refers to how well matched the observations and subsequent development of theoretical ideas are (Krefting, 1990). Additionally, themes and topics which I had not pre-identified were often raised by interviewees and discussed further. I used many kinds of questions in the interviews, but focused on follow-up questions; so the interviewee could elaborate on an answer, probing questions; to pursue a topic which the interviewee raised, and interpreting questions; to clarify and verify my interpretations of their answers (Bryman, 2012a).

Theoretical saturation, or the saturation point, was used to dictate the number of interviews conducted. Saturation refers to the point at which responses in interviews no longer provide variation and new insights, and categories of themes clearly emerge (Bryman, 2012c). Prior to the interview process, this was estimated to be around 10-15 interviews, which matched the final number of 11. Due to the relatively small sample size and qualitative nature of this thesis,

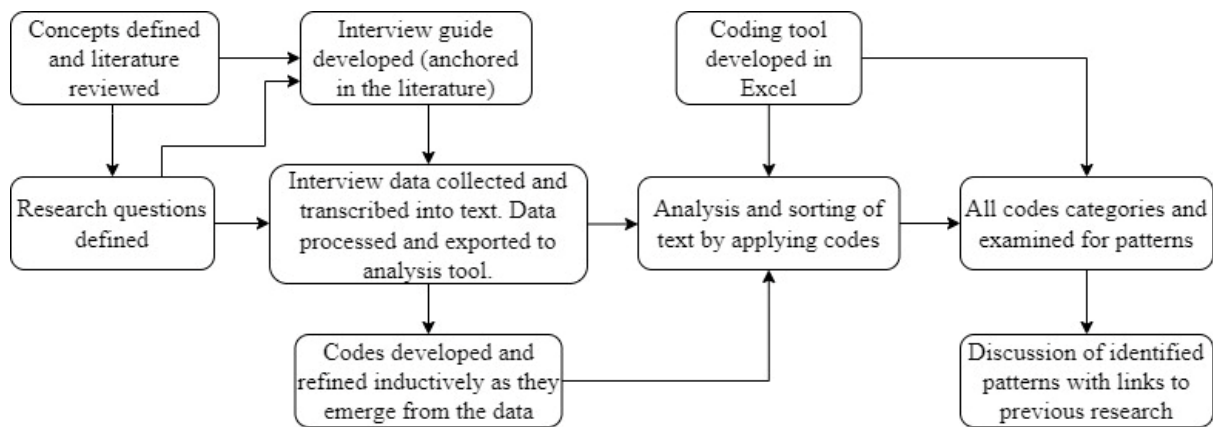
the data collected does not have statistical power to represent any generalisable trends (Bryman, 2012b). However, the interviews and subsequent analysis and findings can provide insight into the case, contribute to the small body of existing research on JT in Australian industrial towns, and help – in a small way – to give the voices of Gladstone residents and workers a platform to be heard.

4.2 Data analysis

Thematic analysis is a method for identifying and analysing thematic patterns in a data set (Braun & Clarke, 2006). This was deemed the appropriate analysis method as it has flexibility in how the theoretical framework can be applied, which allowed for a simple theoretical framework to be built from concepts relevant to the Gladstone context. A realist method was used, which reports on experiences and the reality of the interviewees to provide a rich description across the whole data set (Braun & Clarke, 2006). The thematic analysis used an inductive approach to develop codes which were directly derived from the data to identify and analyse themes to help address the research questions (Berg & Lune, 2012). Deriving the codes from the interview data was an iterative process, so some transcriptions had more than one pass at coding. Due to the nature of qualitative research, the themes and commonalities between interviewees became apparent from the data which allowed codes to be derived inductively and categories of codes to be formed. The initial, provisional codes were unrefined and became elaborated and more specific as the process went on.

The coding analysis was governed by four basic guidelines suggested by Strauss (1987): 1; the data was analysed with a specific and consistent set of questions in mind, 2; the data was analysed minutely through an iterative coding process which started with a wider focus and became more systemic as themes emerged, 3; the analysis process was often interrupted to take theoretical notes, and 4; analytical variables were not considered relevant until it was shown to be in the data. Using these four basic guidelines when coding ensured the scope of coding was limited to addressing the research questions without missing significant themes. Once the coding process was complete, the codes were grouped into categories according to recurrent themes and examined for patterns. These were then presented as main findings and discussed with links to existing theory and research. Figure 3 shows the stages of the iterative qualitative thematic analysis used in this thesis, inspired by the sequence suggested by Berg and Lune (2012, p. 352).

Figure 3: Stages of thematic analysis used in this thesis.



During the data collection, the interview data was processed to fix errors and exported to self-created Microsoft Excel spreadsheet tool, where the main coding analysis occurred. I developed this tool for the coding analysis as it provided a simple way for phrases or words to be coded with as many codes as required, displayed the data in an uncomplicated format, and provided a summary which allowed me to easily identify patterns and to group codes into categories.

Each interview used its own sheet. The transcription text was imported into a single column, and the column to the left of this used to identify who was speaking. Figure 4 shows this in the left column, where HN (Henna Narula) is used to identify me and 4-RMI is the number-letter label used to identify the interviewee. The second column stored the transcription, where new rows were used for approximately each new sentence or response from the interview to allow more granularity in coding. The green shaded top row to the right of the data was filled with each of the codes; the example of Figure 4 shows codes labels from 4F4 to 7A, all of which correspond to a theme. The codes and corresponding themes were stored in a separate sheet, which allowed any changes to the codes to be made to all interview sheets at once. For example, 6A corresponded to *achieving transition (possibilities) – planned and upcoming projects* whilst 6B corresponded to *achieving transition (possibilities) – renewable potential in Qld*.

The remaining cells created a matrix structure in which the number of instances of each code could be reported for each response row. The design of the tool meant that each response could be coded with as many codes as necessary, which proved useful when interviewees discussed multiple themes in one response. The flexible design meant that any unused codes could be ignored or deleted without issue, and new codes could be added as needed and be automatically

included in the summary table. The number-in-cells coding process was repeated for all 11 interview transcriptions. A screenshot of the Microsoft Excel coding analysis tool is shown in Figure 4 below.

Figure 4: Example screenshot from Microsoft Excel coding analysis tool.

SPEAKER	RESPONSE. CATEGORIES/CODES -->	4F4	5A	5B	5C	6A	6B	6C	6D	7A
HN	So yeah, maybe you haven't heard much about just transitions using that terminology, but maybe there has been some conversation around job losses in industry?									
4-RMI	Yeah, no, there is a huge push towards green energy and transitioning away from that fossil fuels, not so much using that terminology in the forums that I've been in. It is a pretty big part of the changes coming to the industry and it is something that is becoming measured from a projects level to actually highlight our improvements towards green energy when we're implementing projects.						1			
4-RMI	Even on a lifestyle level, on a personal level, there's been a big push with solar power and using gas and things like that. So there has always been something sort of slowly ticking away and certainly in the background for a very long time and the transition across to it had occurred, with a lot of the houses in Gladstone taking up solar energy. I guess now it's just that push towards what else the industries can do to help. Previous to that, I guess there was the tax that had come in. A while back. That was like a bit of an offset; if you're producing so much emissions or whatever, and whatever calculation was done, then as an industry you had to pay a certain amount towards the government for those emissions.						2		1	

A summary sheet was created which tabulated all 11 interviews against all the codes used. This summary table summed the number of times each code was used per interview, and in total across all interviews. The total number of instances for each code was then colour coded on a red-green spectrum, which made it easy to identify which codes were most used (green) and which were least used (red) at a glance. The summary table provided a succinct overview of codes and their usage, which helped me to group relevant codes into categories and identify thematic patterns which were of interest to the research aim. Although more instances of a theme do not necessarily mean it is significant, this was an effective starting point when determining the crucial themes. Screenshots of the summary table and coding key from the tool are shown in Appendix C: Coding Tool for Analysis.

4.3 Limitations

A major limitation was the logistical and financial barrier of flying to and staying in Gladstone to conduct in-person interviews. Thus, the interviews were conducted online, which may have limited the number of willing participants. Online interviews presented some technical challenges such as unclear audio, recording errors, and unstable internet connections which do not exist with in-person interviews. However, using Microsoft Teams had the advantage of the in-built transcription tool. The nine-hour time difference between Gladstone and Norway may have lowered the participation rate, as it meant there were limited windows of time in any one week which were suitable for me and the interviewee to meet.

My sampling approach may have limited the level of education diversity in my sample. Because I used a purposive sampling approach, I relied on my existing network in Gladstone which skewed towards the non-local, higher educated group which was the community I belonged to and primarily worked with. This limitation meant that many of the participants were highly educated (bachelor's degree), and the lower educated group – which may be the group most affected by transition policy – was underrepresented in this thesis. During the data collection phase, I strived to reach this group through a snowball sampling approach but had a low response rate. The online nature of the data collection may have exacerbated the low response rate.

4.4 Ethical considerations

To follow the ethical standards for research, the NMBU ethical guidelines were consulted prior to data collection to ensure anonymity of interviewees and security of their data. This involved creating a consent form for all respondents, and submission to the Norwegian Agency for Shared Services in Education and Research (Sikt). The consent form was distributed to interviewees prior to interviews with ample time. Prior to recording the interview with each interviewee, I described how the interview would proceed, how I would record them, how they would be anonymised in the research, how their data would be stored, and gained verbal consent additional to their signed consent. The interviewee was able to ask questions or drop out before the recording began. As some questions in the interviews were political in nature, I aimed to avoid bias in my own line of questioning. To build rapport and encourage participants to share their true opinions, I reacted neutral-positively but not enthusiastically, regardless of whether I agreed with their response.

To ensure anonymity in this thesis, each participant is listed using a number-letter label, and their industry and job description has been generalised to provide context without including identifying information. The interviewees are referred to in the discussion using pseudonyms rather than the number-letter labels (see Appendix B: Interviewee Overview). Quotes used in this thesis were carefully selected to show a participant's opinion without compromising their anonymity. Some quotes were slightly altered to retain anonymity, for example replacing a place or company name with a generalised descriptor.

5 Findings

Four major categories of findings were identified from the data analysis, with each of the four categories split into themes. The data analysis tool I used produced a summary table, shown in Appendix C: Coding Tool for Analysis - Summary Table. The table helped me to identify the number of instances for each code and thus, the most relevant categories and themes were identified. Illustrative quotes for each of the category themes from the interview data collection are shown below in Table 1. The table is modelled after the work of Trencher et al. (2020).

The first category was that interviewees generally viewed JT and fossil fuel phaseout as necessary, but retained some uncertainties regarding the details of how a transition will be achieved. Five themes within this category were identified. The first theme was that fossil fuel phaseout and the subsequent shift to renewables was generally perceived as inevitable, with a sense that transitioning to renewable energy was only a matter of time. Themes two, three, and four overlapped, and centred around concerns regarding technical and planning aspects of energy transition and frustration with proposed timelines, economic aspects of energy transition, and land use, material use, and waste from renewable energy. Theme five related to the perceived lack of community consultation regarding proposed energy transition plans and policies in the region.

The second category was that some interviewees were resistant to or fearful of JT and reported hearing similar sentiments from others in the town. Two themes which could help explain this were identified. Theme one demonstrated that resistance or fear was usually rooted in uncertainty over one's future and/or the future of Gladstone, rather than disbelief in climate change science. Theme two showed that resistance was likely exacerbated by industry's perceived lack of effort to transition away from current practices due to profit motivation. Interviewees often mentioned government intervention such as incentives or policy changes as being the crucial force which could change the behaviour of industry.

The third category was that interviewees generally perceived JT as an inherently political process, where populist rhetoric seemed to span across political leanings and was not specific to right-wing views. Two themes within this category were identified. The first theme was that government at the state and federal level were often seen as lacking competence and unity, both between levels of government, and between the two major parties. This manifested as a low level of trust in government, where politicians were generally viewed as not genuinely representing the desires of their constituents. The low level of trust was linked to how JT was

often perceived as a divisive issue which was contributing to polarisation around JT and climate related issues in Australia. The second theme, not shown in the table but discussed in chapter 6, establishes that populist rhetoric was seemingly mainstream, and that it was not limited to those holding primarily right-wing views.

The fourth category was that place specific factors of the Gladstone context were significant when considering perceptions of JT. This was identified in two themes: the first theme was that the strong industrial presence and history of industry in the region impacted perception of JT, as industry was often referred to as a permanent fixture in Gladstone life. The second theme was optimism regarding Gladstone’s future due to some unique advantages like the deep-water harbour and existing port facilities, culture of technical competence in the town, diverse industry, and a history of managing boom/bust cycles. Interviewees often contrasted this with prominent coal towns in rural and regional Queensland, which were perceived as having precarious futures due to their reliance on a single industry (coal).

Table 1: Overview of findings with illustrative quotes.

Category	Theme	Illustrative Quotes
JT and fossil fuel phaseout are necessary	<i>Inevitability of fossil fuel phaseout and shift to renewables</i>	“I think it if you're worried about some industries winding down, yes, fossil fuels are winding down [...] I think that's pretty well given that the entire world is moving in that direction. Whether governments want to or not...”
	<i>Concerns regarding planning, and frustration over proposed timelines</i>	“They're [the Qld government] going to have to have a significant plan, create feasibility studies that actually say: OK, how do we move forward? What is the plan to move forward? And then from that perspective, yeah, roll it up. But I don't see that at the moment. I honestly think this is just politicking” “I'm pro of the fact that we need to move to sustainable energy sources and stuff. Uh, so I'm for it. But, you know, with, especially in the last three or four months like it just seems to have gone from years of kicking the can down the road and doing nothing to now; it's pedal to the metal, foot to the floor, and that does not typically result in governments delivering good outcomes and cost effective outcomes when they go like skip the planning stage and go from, we're not doing anything to - here's all these things that we've just come up with and it's all full steam ahead.”
	<i>Concerns regarding economic aspects</i>	“[It's] a long timeframe to get that done so that it's all going to be done all right, it's going to be reliable, it's going to be cost effective. And is it the best option or is it not the best option? Is there other alternative? Yeah. There was no discussion of any of that. And then all of a sudden, bang! We're spending billions of dollars and you know, it's all full steam ahead and [...] the taxpayer has to wear all those costs in the long run”

	<p><i>Concerns regarding land use, material use, and waste with renewables</i></p>	<p>“I also think that, like, waste is a big issue. Just through what I've heard through obviously working here and stuff. When you're obviously transitioning, say solar panels or wind and I don't know the like carbon impact of building those things. Or how much how much land do you need, or whatever it is? But like just the waste, what waste you're going to generate from trying to go to net zero or be renewable. At these industries in Gladstone there's just going to be so much waste generated on that front.”</p> <p>“If you look at the life expectancy of solar panels, it's only 15 years and then you have these massive fields of materials rotting away.”</p> <p>“I guess I'm a sceptic because I know what it takes to... I know we need fossil fuel to even just make solar panels. Yeah, I think it's fantastic and it would be amazing [...] Then again, all the land and stuff that they clear and all the vegetation they take out to do it. [...] They put in a solar farm and they just desecrate, you know, like everything.”</p>
<p>JT: fear and resistance</p>	<p><i>Lack of community consultation</i></p> <p><i>Resistance due to personal future and future of the town</i></p> <p><i>Industry resistant as it is motivated primarily by profit</i></p>	<p>“I think a lot of people in those major centres are taking a very, very simplistic view to a much broader issue, and I don't think the regions have been consulted. Possibly at all in this process. It's the same as when new mines are opened. The regional town might want it, but it won't go ahead because someone in Melbourne has decided that it shouldn't. And I think that that sort of disconnect is a hard one to manage.”</p> <p>“I think there's a sense of inevitability that coal is on the way out. But deep scepticism about renewable energy projects, and what's real and what's spin and lots of questions about the science behind it; whether it can actually work.”</p> <p>“So I think, you know, you're trying to remove [coal for] the renewable energy. I don't think it's sustainable for our town [...] I think you'd see more towns going broke than profitable ones.”</p> <p>“I guess everyone wonders what they're going to do and how soon we're all going to lose our jobs and things. At my job specifically because I work at a coal terminal now [...] I mostly work with older people here - and they all say: yeah, thank goodness we're close to retirement, because they can't see a future for the terminal as it stands.”</p> <p>“Yeah, I think just making, somehow making industry speed up the process, because if they don't have to do it, they're not going to do it, cause it's obviously not going to save them money to do this. They don't care about this stuff, so I think it's not - well, they do, but it's not profitable. Like, they're not doing it because they want to. They're doing it because they have to.”</p> <p>“Like the engineering side, it can be done, but then from a profit perspective, it either cost too much to do without generating much profit, or it's possible to convert to hydrogen and then cut down emissions but then it won't make any profit.”</p> <p>“There's no altruism in any of this. It's all... Yeah. What can we do to keep the profit coming in?”</p>

JT viewed as a political and divisive issue	<i>Government as lacking unity and competence, resulting in low trust</i>	“Well, I couldn't see any reason why it [transition] shouldn't happen other than political reasons. That's always the concern in this country, that our politicians do take a very partisan approach to every topic, and one of them is energy. And I believe that if the rest of the world can do it, there's no reason why we can't.”
		“It's a poll driven thing in my opinion, like it's just for the, for the big wigs, there in Parliament to do. They're just throwing around numbers to say we're going to do it, we're going to do it, we're going to do it.”
		“They're [the government] convenient with the truth and they... that's the challenge that they're facing because there's been so much spin that they don't necessarily come across as credible. So if the Queensland Government wants to embark, they need to appoint somebody that's a credible individual that will be honest. And then yeah, it won't be politicized.”
		“The key difference I feel between them [private industry] and the government is the investment, they're putting in the investment into these spaces and essentially just throwing money at the problem. And I don't believe that government is, I think they're self-serving, basically. They're toeing a party line rather than... or a popular line to be re-elected rather than actually wanting to make the difference.”
		“It's [transition] very polarizing like... it's something that doesn't seem to get a very good grasp of being down the middle. I think that's down to a lot of the media reporting is either too extreme one end or extreme the other, which is sad cause truth lies in the middle there somewhere usually.”
Significance of place	<i>Industrial presence and history in Gladstone</i>	“I think, yeah, this whole town is run off this industry. You know the port; the ports corporation here supports Gladstone community fivefold [...] the whole Gladstone community revolves around the ports corporation and the port is only funded by us shipping coal and iron ore and stuff like that off our shores.”
		“Yes, industry is massive in Gladstone, so there's always some sort of tie to one or multiple of the industries no matter what you're working in.”
	<i>Optimistic Gladstone future and unique opportunities</i>	“Gladstone; it's always been very fluid. It still has a good port. It's still got a good harbour and that is a very big hub to anything that really goes on. Whether it's green energy, whether it's fossil fuels anything like that, then you need somewhere to have it in and out. So for Gladstone itself, it will probably change. Eventually in time, it'll make its own little shift and evolve to what the new side of things are. But yeah, I don't think it'll ever - it won't go away. I don't think it'll ever be a ghost town [...] It's coal and nothing else in those [rural coal] towns, which is, I think a much more precarious situation than the sort of diversification that's happening in Gladstone.”
		“And I think that's probably the lucky thing for Gladstone is that there's renewable projects earmarked for here, so. Uh, while one door shuts, another one opens, but it definitely creates like an uncertainty for people.”

6 Discussion

In this chapter, the main findings are discussed with the aim of shedding light on the research questions. To reiterate, the main research questions are:

1. How do people living in Gladstone and working in industry react to energy transition policy and understand just transitions?
2. What, if any, influence do factors like right-wing populist rhetoric and place attachment have on perceptions of energy transition policy and just transitions?

The main findings which were identified as most significant from the data were grouped into four major categories each comprised of multiple themes, outlined previously in chapter 5: Findings. The categories and themes are discussed in the same order presented in Table 1: Overview of findings with illustrative quotes., where pseudonyms are used in place of the interviewees real name to protect their anonymity. The discussion links to previous literature regarding the theoretical concepts and the study context.

6.1 JT and fossil fuel phaseout necessary

A common sentiment from the interviewees was that fossil fuel phaseout is necessary, and that JT elements are important for this transition. However, all the interviewees except for Jess, who worked in community outreach capacity, had not heard of JT as a term. The interviewees seemingly understood the JT concept after a definition was provided and we engaged in a short discussion about their understanding of it. Despite their unfamiliarity with the terminology, the interviewees generally seemed to agree that elements of JT would be necessary and useful for transition in Gladstone, especially regarding job security concerns. Moreover, all interviewees were familiar with concepts related to energy transition and decarbonisation, which may have helped them to more readily discuss JT.

Because all but one of the interviewees were unfamiliar with JT as a concept, I used a different question to prompt them into talking about energy transition plans and JT principles. I referred specifically to the goals and plans outlined in the Queensland Energy and Jobs Plan, which is aligned with JT principles as it incorporates elements of it. The question was asked with similar wording as the following: “Given the Queensland government’s commitment to 50% renewables by 2030, do you think Queensland will be able to transition to primarily renewable energy sources? Why or why not?” Many of the responses from the interviewees were based

around this overall policy plan, as it served as a method of asking about JT when interviewees were not initially familiar with the concept.

6.1.1 Inevitability of fossil fuel phaseout and transition to renewables

Generally, the interviewees were accepting of transition and viewed the phaseout of fossil fuel as necessary. The interviewees described fossil fuel phaseout and climate action as an inevitability in both the Australian and global context. The acceptance of transition was exemplified by many of the interviewees acknowledging that their current job and type of projects that they worked on would likely change in some way, as phasing out fossil fuel and decarbonisation would transform the energy production industry. They also recognised that knock-on effects of a changed energy mix would affect industry overall.

The perception that fossil fuels would be phased out was in contrast to one of the findings of MacNeil and Beauman (2022). In their research, the authors interviewed workers and residents of two coal mining communities in eastern Australia (one in Queensland and one in New South Wales), and five major themes emerged from their data. One finding from their research was that many of their respondents viewed coal's decline as exaggerated by advocates for transition. The respondents in the MacNeil and Beauman (2022) study viewed coal as a stable export for decades to come, largely due to the demand for metallurgical coal, and as an energy source to stabilise electricity supply. Their respondents contended that renewable energy sources would not be able to replace coal as a source of electricity due to the intermittent nature of sources like wind and solar. However, the interviewees in my thesis were generally confident that renewable energy had a secure future down the line, especially as they were already experiencing some conversation and action regarding energy transition.

There are a few possible factors which could help to explain why the two findings are in such contrast. One major difference is the study setting and the sample groups. The MacNeil and Beauman (2022) study focused on coal mining towns, where the residents' livelihoods were highly dependent on a single industry. Conversely, the interviewees in my thesis were less dependent on coal directly as part of their jobs, as Gladstone enjoys a more diverse industrial mix than coal mining towns. The interviewees in my thesis generally had quite a high level of education, which is a factor positively associated with belief in climate science and therefore the necessity of reducing coal (Lockwood & Lockwood, 2022; Lockwood, 2018). It may also be in part due to slowly changing attitudes towards climate change action. Nonetheless, there

seemed to be a lack of urgency to act from the interviewees in my thesis, possibly due to the perception that implementation of a transition any time soon felt unlikely to them. The feeling of unlikely implementation may be exacerbated by the perceived lack of action by industry, discussed further in section 6.2.2 below.

A few interviewees discussed their role in industry clashing with their personal desire for climate action. Sarah, who works as an environmental engineer in the alumina industry said; *“As an environmental person like, I know someone's got to do this job, you know? But like at the same time it doesn't feel great that I'm working in like something that's polluting so much [...] but I'd rather it be me than someone who doesn't care.”* These few interviewees, including Sarah, reported feeling guilt, discomfort, and some level of hypocrisy working in fields that directly contributed to climate change. However, these interviewees generally felt as though they could better mitigate negative environmental outcomes by working in those positions compared to someone who cared less about the environment or climate change. This nuanced view towards balancing personal livelihood and contribution of industry to climate change was a common thread throughout most of the interviews.

6.1.2 Concerns regarding planning and frustration around proposed timelines

One theme that became apparent was the interviewees' concern regarding planning for JT and energy transition policy, and thus frustration around proposed timelines for policy implementation. The planning concerns were mostly focused on whether due diligence and proper feasibility studies had been done. This concern is possibly anchored in the town's industrial history and the strong technical knowledge of the population. A common theme within this concern was infrastructure; how would existing infrastructure be either maintained or shutdown, how and what new infrastructure would be integrated into the town, and where the technical competence and workforce to accomplish these tasks would be sourced from. Residents in Gladstone have previously had mixed feelings towards FIFO workers, and influxes of these NRWs are common during construction and installation works (Cameron et al., 2014; Eriksen, 2018b). It is therefore likely that there will be a new construction boom for incoming renewable energy technologies and work on the existing power grid (Queensland Government, 2022) These anxieties regarding infrastructure are not new issues for residents of Gladstone, where industrial infrastructure and their affects are omnipresent (Eriksen, 2018a).

Anxiety around lack of technical competency for renewable energies, especially areas like hydrogen, which is earmarked for the region, may be related to the risk averse culture for industries in Gladstone. Due to the long history of industry, workers in industry have cultivated a ‘lessons learnt’ mentality, where many years of operations and incidents has resulted in comprehensive safe operating procedures and consistent, economically viable output. Thus, the concerns around lacking technical competency for renewable technologies seems to be largely due to unfamiliarity with renewables generally. As Richard, who works for a major mining company in project control notes, *“My thinking is if you have a hydrogen plant, you still have to go through the commissioning and the teething issues. You cannot bring that all online in such a short space of time, and then also maintain it. Because it's untested technology.”*

The planning concerns are related to the frustrations regarding proposed timelines for implementation of energy transition policy. Many interviewees thought that the Queensland government’s goal of 50% renewables by 2030 was positive in that it showed commitment to phasing out fossil fuels, but ultimately unachievable due to the tight timeline. Frustration seemed to focus on government action not starting sooner, as many of the interviewees felt as though recent action was too rushed, possibly leading to poor outcomes. This was in line with the work of MacNeil and Beaman (2022), who found that their respondents who supported JT strategies still viewed implementation as unlikely. The overall sentiment was summed up by Eliza, a project controller and Gladstone local who noted *“I think they need to get the small wins happening first before making such big steps and big changes.”*

Interestingly, around half of the interviewees acknowledged that previous federal Labor governments under prime ministership of Kevin Rudd (2007-2010, 2013) then Julia Gillard (2010-2013) (National Archives of Australia, 2023) had made some attempts at addressing climate change. Labor was viewed as somewhat unsuccessful in climate action, with interviewees pointing to factors like the 2008 global financial crisis, the mining boom and subsequent busts, and power changing hands to the Coalition, who formed federal government from 2013-2022.

6.1.3 Concerns regarding economic aspects

A common concern regarding implementation of energy transition policy was focused on the cost. This concern was twofold; the first focused on the material and labour cost of implementing renewable energy technologies in Gladstone including shutdown, repurposing,

and building infrastructure. The second focused on the wider economic impact of moving away from fossil fuels, as mining and heavy industries were perceived by interviewees as the main contributors to the Queensland economy. Whilst mining and industry undoubtedly contribute to the economy, the impact is regularly overstated. Research has shown that Australians often overestimate the number of people working in mining, the economic contribution of mining, and the importance of mining royalties to state budgets (Evans & Phelan, 2016; Selvey et al., 2022). The common misconceptions around mining and industry contribution to the economy suggests that the resource regime has been effective in shaping the public narrative around the economy and jobs (Evans & Phelan, 2016; Goddard & Farrelly, 2018).

Both these concerns seemed to stem from the idea that the cost would ultimately be the responsibility of the taxpayer, either through increased government spending or reduced personal income if jobs in renewable sectors paid less than those in heavy industry. Anxiety about renewable energy sectors contributing far less to the economy seemed to mirror narratives pushed by the mineral resource regime in Queensland, where contributions to economy in the form of mining royalties, number of jobs, and community investment are regularly raised as positives (Goddard & Farrelly, 2018). However, research has shown that renewable energy sectors have the potential to contribute more to the economy, which is reported in all the government reports discussed in section 2.2 and is a key point in the Queensland Energy and Jobs plan.

Although they shared concern for the economy, some interviewees also recognised that industrial actors may not pay their fair share of tax, as noted by some interviewees who singled out Rio Tinto, one of the world's largest mining companies, for 'tax dodging'. Indeed, Rio Tinto paid the Australian Taxation Office nearly \$1 billion AUD in a tax avoidance settlement in 2022 (Australian Taxation Office, 2022, July 20). The interviewees who discussed large companies avoiding tax also expressed low confidence that it would change any time soon. Kyle, a concreter who regularly does contract work for various industries, shared his disbelief that pursuing large industrial companies for their tax dollars would result in better outcomes for workers, stating "*as long as they get taxed... the more they get taxed the more they'll pass it on to the little man.*" Some of the interviewees discussed the companies that they worked for receiving grants or funding from the government to pursue decarbonisation. These grants were additional to the \$11.6 billion AUD spent in fossil fuel subsidies in 2021/22 across state and federal governments (The Australia Institute, 2022). Large government subsidies indicate implicit support for the fossil fuel industry, as it enables industrial actors to fund operations,

return more profit, and ostensibly contribute more to the economy than without support. Thus, subsidies and grants to fossil fuels and heavy industry may artificially strengthen its economic position and contribute to the interviewee's perception that renewable energy will not contribute as much to the economy.

6.1.4 Concerns regarding land use, material use, and waste with renewables

Many of the interviewees emphasised concerns related to the land use, material use, and waste associated with construction and operation of renewable energy. One repeated concern was that of land clearing required to house wind and solar farms. This may have been a common concern because local land changes are more obvious and noticeable than other externalised effects. Additionally, the life span and subsequent waste of materials used in renewable energy technology like solar panels and wind turbine blades was frequently repeated. Many of the interviewees raised the point that production of renewable energy still required use of fossil fuels as well as minerals like cobalt and lithium for battery technology. This is consistent with research from Brisbane, Queensland, which identified that people were usually more concerned with tangible environmental issues like pollution and waste (Selvey et al., 2022). Furthermore, these views are similar to the narratives about renewables pushed by the resource regime, both in media and industry settings (Goddard & Farrelly, 2018; McCauley & Heffron, 2018).

One interviewee – Bill, a drafter for a consulting firm and long-term Gladstone resident – voiced his frustration with the sentiment that renewable energy was associated with land clearing and waste. Speaking on land use, Bill exasperatedly noted, *“Well some people go on about the environmental cost of green energy, in that you would have to have these vast areas dedicated to solar panels. And they obviously haven't looked on Google Earth or been out to a coal mine and seen how vast the areas are that are dedicated to coal mining.”* In Bill's view, many people have a warped perception or lack awareness of how much land and materials are utilised in production of fossil fuels. Speaking on material use in coal mining infrastructure, he continues *“the amount of metal that you've put into all that infrastructure and all those rail lines and that go off for ages. You could have built a lot of solar panels with less of a footprint than all that rolling stock and all that area that you've had to do, [and] that's before you even get to the environmental cost of just clearing all that area and how much water they need to do coal mining, which is quite a bit.”*

Bill also calls out the perception of renewable energy being wasteful as hypocritical, referring to the large areas used by red mud dams in the region. The red mud dams are large, on-land storage areas of bauxite waste from the alumina refineries around Gladstone, which have high caustic content and potential for environmental damage (Stewart, 2021, October 07). A satellite image of these red mud dams is shown in Figure 2 in section 2.1. The concern for waste associated with renewable energy seems to be related to interviewees' concern for the environment, but ultimately feels inconsistent given their lack of awareness regarding waste from fossil fuel and industry generally.

6.1.5 Lack of community consultation

A common sentiment from the interviewees was that there was a lack of community consultation, and that policy makers and those pushing for energy transition do not understand the regional contexts. This is in line with the findings from MacNeil and Beauman (2022), who reported that their respondents viewed transition strategies as being devised and driven by outsiders. Their respondents expressed anxiety that their communities were losing political autonomy in the transition discussion, much like the interviewees in my thesis. The negative response from the interviewees in Gladstone towards externally driven decision-making processes seemed to partially stem from the overarching sentiment that regional and rural issues could not be understood and managed by city-based politicians and policy makers. Furthermore, many of the interviewees alluded to deep cultural differences between city and regional residents, contributing to the sense of being misunderstood and under consulted. In contrast, the respondents in the MacNeil and Beauman (2022) study displayed much less confidence in JT processes to address their anxieties around job availability, job security, and lack of equivalent pay in the renewable energy industry compared to the interviewees in my thesis.

Jess notes that this issue of change driven by external parties was already considered by the big trade unions years ago; *“I think after the 2019 [federal] election there was a bit of a sense about moving away from that [JT] language because people were feeling like that might be, you know, the change was being imposed on them.”* The interviewees in my thesis and the respondents in the MacNeil and Beauman (2022) study both expressed irritation with the idea of being condescended by people and policymakers from outside the area, who were unfamiliar with the local context and the lives that people live there.

Feelings of being misrepresented or under consulted indicate a lack of procedurally just approaches in the energy transition conversation. Jenkins et al. (2016) suggest mechanisms like greater distribution of information to improve procedurally just outcomes. Indeed, the interviewees in my thesis expressed their desire to know more about the overall transition process as well as specifics within energy transition policy. Having more information about the process could better equip the interviewees to participate in transition conversation, and therefore to feel more involved in the decision-making processes. This is consistent with research which has established that meaningful engagement with affected communities and empowering them in the decision making phase is pivotal for achieving procedurally just outcomes (McCauley & Heffron, 2018).

In summary, category one broadly served to answer the first research question. I identified that the interviewees viewed JT and fossil fuel phaseout as necessary as part of climate change action, and inevitable in the Australian and global contexts. Because all but one of the interviewees were unfamiliar with JT, a substitute question was asked to garner their perceptions of JT in Queensland. The interviewees generally perceived JT favourably, however they had some reservations regarding planning specifics, the proposed timeline for implementing transition policy, economic aspects of implementing transition and reducing reliance on fossil fuels, and the waste and land use associated with renewable energy technologies. It seemed like those with stronger place attachments to Gladstone were more worried that transition process could yield negative outcomes. Whilst the response to JT principles was overall encouraging, the interviewees also emphasised the importance of community consultation in the process, as they felt it was lacking. This points to the importance of strong procedural justice in transition processes.

6.2 JT: fear and resistance

Some of the interviewees reported fear of or resistance to energy transitions and JT processes, and many interviewees reported hearing similar sentiments from other people they knew or worked with in Gladstone. Anxieties related to JT processes were typically related to their personal and community future rather than climate scepticism. This is surmised by John, an LNG plant worker and Gladstone local, who stated “*Gladstone, I think, will still do OK. And it's just managing the interim, I guess is probably the thing [...] some people still want to argue the [climate] science, but I think it's pretty well settled.*” Doubt was typically reserved for the

feasibility of renewable energy projects, as discussed in section 6.1. Resistance to JT processes may have been linked to the interviewees' perceived lack of action by industrial actors.

6.2.1 Resistance due to personal future and future of the town

Much of the reported resistance was centred around one's personal future if they lost their job due to transition policy. This concern extended to the future of Gladstone, where some interviewees spoke about the knock-on effects of workers leaving the town, such as reduced health services, fewer local businesses, diminished sense of community, and fewer opportunities for young people. This sentiment was mostly expressed by interviewees who also expressed stronger place attachment to Gladstone. It is possible that these interviewees felt like energy transition processes – which would likely result in changes to the town – affected them more personally than those with weaker place attachment to Gladstone (Della Bosca & Gillespie, 2018).

Concerns related to personal job loss was not reported by any of the interviewees directly, however this may be due to the sample of people I interviewed. As stated, most of the interviewees had tertiary education, and all of the interviewees felt as though they had transferrable skills to enable transfers to different fields. However, some interviewees reported hearing colleagues or other people in the town express anxiety around job loss due to transition policy. Reports of other people expressing resistance to transitions were generally from older workers closer to retirement age, workers with jobs specific to fossil fuel dependent industry (some examples given by interviewee Bill were dozer driver, coal conveyor workers, and coal rail loading/offloading), and workers engaged in the coal industry, such as at GPC.

The openness to new work opportunities from my interviewees was in contrast with MacNeil and Beauman (2022), who found that several of their respondents viewed the JT concept as disrespectful to the skill and culture of their work. MacNeil and Beauman (2022) suggest factors like a great sense of pride in their skills, professions, and the culture of their workplace which has formed over generations of coal mining. This was exacerbated by the resentment towards the idea of retraining programs for workers who lose their jobs. The interviewees in my thesis were broadly open to retraining programs, especially if paid for by their workplace or the government. A possible factor for this difference is that most of my interviewees did not express strong attachment or pride about their jobs, workplaces, or industry and were therefore more flexible to gain new skills. However, some interviewees suggested that other people in

the town, especially those who would likely have fewer opportunities to move between fields, would show more resistance to transitions. The interviewees in my thesis alluded to older workers closer to retirement age as being more reluctant to retrain, as they viewed the effort of retraining or reskilling as pointless and avoidable if industry continued as usual.

6.2.2 Industry resistant as it is motivated primarily by profit

A common sentiment shared by almost all the interviewees was that corporate industrial actors were primarily motivated by profit, with no genuine intention to transition or decarbonise. The interviewees regularly referred to climate change action pursued by these actors as only occurring due to government intervention, usually in the form of funding or grants. Many interviewees referred to themselves and their peers as wanting to ‘do the right thing’ but felt as though the higher ups within their corporate structures were only concerned with profit, as current operations are more profitable than transitioning to green energy or decarbonising operations. The interviewees generally agreed that government intervention was the only way to force industry to act on climate issues. Furthermore, some interviewees noted that accepting government funding to pursue climate change action or decarbonisation came with the added bonus of presenting the corporation as ‘green’. This is succinctly noted by Tom, a project engineer, who was discussing the highly controversial destruction of two sacred, 46,000-year-old indigenous First Nations caves in WA in 2020 by mining company Rio Tinto (Wahlquist, 2020, May 26), *“I think they're trying to get on the front foot [after the cave destruction] by doing all these initiatives, which is green energy. So I suppose you could call it green washing a little bit.”*

The strength of the resource regime in Gladstone and Queensland may have contributed to reluctance towards energy transition policy and implementation. Paralleling the ongoing narrative of industry success with the future of Gladstone may have been purposeful by industrial actors who wished to foster reluctance for energy transition policy, and therefore continued support for industry (Goddard & Farrelly, 2018). This collusion of narratives points to the importance of corporate actors in the transition discussion, noted by Snell “focus on government environmental policy overlooks the role of private enterprises as environmental policy agents” (2018, p. 553). Because the interviewees perceived corporate industrial actors as motivated by profit, they also assumed that they would not act with environmental interests in mind. The interviewees identified the government as the main, and sometimes only, actor

that could facilitate transition. This commonly held perception may implicitly absolve corporate industrial actors of responsibility in climate change action.

In summary, category two broadly served to answer the first research question. I identified that a few interviewees expressed some resistance to JT process, but more interviewees reported that other Gladstone residents has expressed resistance. Resistance and fear of JT was seemingly anchored in anxiety for one's personal future and about the future of the town rather than solely climate science scepticism. Stronger place attachment to the town seemingly manifested as deeper fear of transition policies and the potential changes that would result in Gladstone. Interviewees with lower place attachment were generally more willing to retrain or relocate and were less attached to their respective industries. Resistance to JT was perhaps exacerbated by the perception that industry was slow or unwilling to act on environmental issues without government intervention.

6.3 JT viewed as a political and divisive issue

Many of the interviewees perceived JT as an inherently political and divisive process. The government, both state and federal level, was considered the main driver of JT whilst industry was generally viewed as having a more passive role. The passiveness of industry might be related to overall expectation that industry will not actively pursue energy transition or decarbonisation without being incentivised or legislated by government first, discussed in section 6.2.2. Frustration and confusion around transition processes were usually directed at government or actors external to the Gladstone context. Some interviewees assigned blame to 'they', and in some cases it was not made clear whether this referred to government, people with strongly pro-climate change action views, city dwellers, people who did not work in industry, or another group.

One possible explanation is that referring to undefined groups as 'they' takes inspiration from the RWP framing of 'the elite', which is a vague term used to differentiate that 'the people' are authentic and real, whereas 'the elite' are corrupt and out of touch with local issues and therefore do not represent the will of 'the people' (Moffitt, 2017). Interviewees often referred to JT policy as divisive and polarising, linking this with unfair or biased media reporting around the issues. Scepticism for mainstream media has been documented as a common RWP strategy to stoke anti-elitism sentiment (Huber et al., 2021). The perceived divisive nature of JT policy seemed to transcend the traditional left-right political spectrums, as community organiser Jess

observes “*Yeah, there's definitely a lot of confusion and there's definitely division as well. But not in a way that feels party aligned. It feels issue aligned if that makes sense.*”

6.3.1 Government seen as lacking unity and competence, resulting in low trust

Most of the interviewees regarded the government as slow acting and lacking competence to achieve positive outcomes related to energy policy. The government was often viewed as lacking unity between the state and federal levels, even when the state and federal governments were controlled by the same party such as in Queensland. Additionally, continued conflict between the two major parties (Labor and the Coalition) was noted as problematic. Issues discussed in politics were often viewed as inherently partisan, where politicians from the two major parties made choices seemingly only to be in opposition with the other party. The perception of incompetence being applied to government generally may have contributed to the sentiment that the two major parties were not authentically representing the views of their constituents. This perception that governments and political parties lacked unity and competence seemed to occur across the political left-right spectrum, leading to an overall low level of trust. Low levels of trust seemed to be linked to the interviewees’ concerns regarding procedural justice. There was a sense that the interviewees felt excluded or forgotten from government driven transition processes which would affect Gladstone. Research on justice in energy transitions points to lacking information and feelings of exclusion from decision-making processes as possible causes of procedural injustices (Williams & Doyon, 2019).

Low levels of trust in government may have contributed to weaker democratic legitimacy (Goddard & Farrelly, 2018). To strengthen democratic legitimacy, governments must show that they represent the voice of the people, especially on contentious local issues like energy transition. Thus, many interviewees expressed disbelief that government could achieve any change, especially given the perception that they were not engaged with local communities who would be affected by energy transition policies. Marie, a civil engineer from a consulting firm, summarises the general sentiment “*I don't believe that government is [doing enough], I think they're self-serving, basically. They're toeing a party line rather than... or a popular line to be re-elected rather than actually wanting to make the difference.*” The common feeling of disillusion with government could perhaps be linked with an increase in populist views. The sentiment expressed by the interviewees parallels the ‘people versus elite’ framing within populism literature. In this context, the interviewees seem to classify the government as ‘the elite’ and themselves and their peers as ‘the people’.

6.3.2 *Populist rhetoric is mainstream*

One finding from my thesis was that populist rhetoric was generally expressed by interviewees from across the left-right political spectrum, not just limited to RWP. References were made by some interviewees to ‘the people’, in the populist sense of the people in opposition to ‘the elite’. Different phrases were used by interviewees to refer to ‘the ordinary person’, but examples included “*silent majority*” and “*the little man*”. Most of the interviewees who spoke about ‘the people’ included themselves, and often the residents of Gladstone generally, in that category. The interviewees also delineated rural and regional residents as belonging to the category, whilst implying (on one occasion, explicitly stating) that residents of cities do not belong. This is consistent with populism literature, which has found that the urban/rural divide can be a contributing factor for the people versus the elite (Moffitt, 2017).

The most consistently used example of populist rhetoric used by interviewees was the word ‘greenie’. I have identified three instances in which this word was used. The first was intended as an insult, largely directed at city dwelling, environmentally conscious, socially progressive people. The second use was as a general categorisation for people who care about environmental issues, but this description lacked the negative sentiment that the first use had. However, interviewees who used this term typically did not include themselves. Finally, the third use was as a positive self-identifier for interviewees who described themselves as caring about environmental issues and climate change action. There was overlap across all applications of the word ‘greenie’, as it is used to describe people who presumably voted for the left-wing Australian Greens party, the third largest party in Australia by seats won (Australian Electoral Commission, 2022, July 01), which is known for its commitment to the environment. The use of rhetoric across the political spectrum is consistent with the literature that describes populism in Australia as mainstreamed. This is largely due to the quasi-two-party political landscape, and the system which allows independents and minor party members to be elected directly to the senate (Moffitt, 2017).

In summary, category three served to provide insight on both research questions. Regarding the first research question, I identified that interviewees generally viewed JT as a political and divisive process, regardless of whether they viewed JT favourably or were resistant to it. A theme within this perception was the common view that government lacked the competency to achieve positive transition outcomes. For the second research question, it seemed as though RWP rhetoric may not have had a specific effect on one’s perceptions of JT. A possible reason for this is that populist rhetoric has become mainstreamed in Australia and is therefore not

specific to a single group or political leanings. This is evident in my thesis by interviewees across the left-right political spectrum using populist rhetoric, especially references to anti-elitism attitudes. The applications of the word ‘greenie’ is used as another example of rhetoric.

6.4 Significance of place

Overall, the interviewees seemed to have low place attachment to Gladstone. Strong place attachment was only expressed by the Gladstone locals, but interestingly not from long-term residents. Several long-term residents expressed some place attachment, but at a much lower level. The main factor mentioned regarding interviewees strong place attachment was a sense of community and belonging. It is possible that this was expressed by the Gladstone locals as this group overlapped with the interviewees who had kids attending local schools and participating in local sport and other activities. Those with stronger place attachment also reported having some kind of family history in the area, or history of family engagement in local industry.

The interviewees mostly expressed openness to moving away from Gladstone, with some explicitly mentioning having no attachment to the town. A factor related to low place attachment seemed to be whether the interviewee identified personally with local industry. None of the interviewees expressed strong commitment to industry, but generally hoped that the town would continue to thrive in the face of a changing energy and industry landscape. Another possible factor for reduced place attachment in Gladstone is the FIFO and short term work culture (Della Bosca & Gillespie, 2018; Eriksen, 2018a), meaning that many people who are employed by local industry are NRWs, short-term residents, or have relocated primarily for work. This is consistent with my interviewee group, made up of only two locals where the other nine had moved to Gladstone to pursue work in industry. Place specific factors may have affected one’s perception of JT policy, like the industrial presence in Gladstone the history of industrial work culture. These place specific factors may also provide opportunities for the future energy landscape.

6.4.1 *Industrial presence and history in Gladstone*

The current industrial presence and history of industry in Gladstone may have contributed to interviewee’s perceptions of JT. There was an underlying sentiment of industry being ‘too big to fail’. Some of the interviewees also discussed Gladstone’s history of boom/bust cycles

related to industry peaks and troughs and referred to this as an example of resilience when adapting to change. Interviewees conveyed that they were comforted by the idea that historical experience with managing big economic and population changes in the town placed them favourably to deal with future challenges. Interviewees generally expressed belief that industry would always be present in Gladstone in some form, as there had been a historical precedent of industry adaption. This was in line with the fieldwork by Eriksen (2018a), who observed that people were generally optimistic about the future. The belief in industry continuation was more common among Gladstone locals and long-term residents than short-term residents.

However, the confidence in Gladstone's capacity to deal with transition-driven change may be underestimating how it will affect the town. The 'too big to fail' attitude combined with the perception that transition policies are unlikely to be implemented soon (discussed in the sections above) may contribute to some of the interviewee's lack of urgency to act on climate change issues. This may be exacerbated by the passiveness of industry as a transition actor. These factors and attitudes were more common among Gladstone locals and long-term residents. It is possible that short-term residents and NRWs were less likely to share these views as they have spent less time in Gladstone and therefore have weaker context specific attitudes.

6.4.2 Optimistic Gladstone future and unique opportunities

The interviewees generally had an optimistic outlook on Gladstone's future. One major reason cited was that Gladstone had a relatively diverse mix of industry and was therefore more prepared to deal with transition than other towns which were focused on a single industry. Several interviewees mentioned the coal-mining towns of Blackwater and Middlemount in rural Queensland as examples of places they thought would fare poorly. Diversity of industry and transitioning to green energy were recognised as being important for the future of Gladstone and the environment. Many interviewees also observed industry diversification happening in Gladstone already, with some specific mentions of local solar and wind farms under construction. It is possible that many of the interviewees were open to industry diversification due to how transferable their own skills were. These interviewees, who generally had higher levels of education, may have been more open to industry diversification and energy transition because the processes did not represent a threat to their job security.

Another factor which interviewees looked upon favourably was the unique opportunities Gladstone offered. The port facilities and the deepwater harbour were cited as a major strength

which could put Gladstone in a position to capitalise on burgeoning industries. Indeed, a few interviewees mentioned already seeing wind turbine blades coming in through the port. Many interviewees also made reference to plans for Gladstone to play host to new renewable energy sources, especially hydrogen. Although several of the interviewees lamented the lack of technical knowledge for new renewable technologies coming to Gladstone, it was largely in relation to the timing (discussed in section 6.1.2) rather than resistance to the technology itself. There was a sense of subdued anticipation regarding introduction of new industries in Gladstone, perhaps related to the experience with boom/bust culture. These attitudes towards change were also observed by Eriksen (2018a, p. 44) during his Gladstone fieldwork; “In general, people in Gladstone express optimism about the future, and they are not worried about change”.

In summary, category four served to answer elements of the second research question, specifically regarding place attachment as a factor affecting perception of JT. I identified that there were likely some place specific factors which affected perceptions towards transition policy in the Gladstone context. These factors were mainly related to the history and culture of industrial work in Gladstone, affecting perceptions of how Gladstone would cope with transition-driven change. However, a common theme from the interviews was that Gladstone had some unique factors that could ease transition, such as diverse industry options and useful existing infrastructure.

7 Conclusion

This master thesis aimed to gain insight into JT, specifically to investigate how communities which are affected directly by energy transition policies react to them. Additional factors such as populist rhetoric and feelings of place attachment were considered. Gladstone is home to many fossil fuel-intensive heavy industries, and Queensland's largest coal fired electricity plant. Thus, energy transition policies are relevant to Gladstone's future in the face of changing global energy systems as a response to climate change. The research questions used to help achieve the study objective were *How do people living in Gladstone and working in industry react to energy transition policy and understand just transitions? And What, if any, influence do factors like right-wing populist rhetoric and place attachment have on perceptions of energy transition policy and just transitions?* Semi-structured interview data was collected from 11 people living and working in industry in Gladstone. The data was analysed, and four major findings were identified which provided insight into the main research questions.

When investigating the first research question, it became clear that all but one of the interviewees were unfamiliar with JT as a term. In order to investigate JT, the term was explained to all interviewees, and they were then asked questions about existing energy transition plans in Queensland. The interviewees generally viewed energy transition and fossil fuel phaseout as necessary and conveyed that they viewed fossil fuel phaseout as largely inevitable in Australia and globally. Despite generally viewing JT concepts favourably, the interviewees had many concerns regarding the specifics of how energy transition could be achieved in the context of Gladstone. Conversely, a few interviewees demonstrated resistance to energy transition policy, and several interviewees reported hearing anxiety about transition policies from other workers and residents in Gladstone. These concerns mostly stemmed from anxieties regarding their personal career futures, rather than scepticism of climate science. Few resistant voices may be partially due to the highly educated sample group in this thesis, who perceived their own skills as highly transferable to other fields. Those with lower levels of education and less transferable skills are more likely to experience adverse effects from transition policy. If more research were to be conducted in Gladstone or other transition affected communities, a larger sample group with differing levels of education and job types within industry would likely yield a wider range of views on energy transition policy.

A common sentiment among the interviewees was the feeling that the community had not been adequately consulted on transition plans, pointing to possible procedural injustices. JT literature identifies procedural justice processes as a high priority if a JT is to be achieved in

Queensland, and indeed anywhere. Communities which face insecurity due to transition must be provided dignity and a sense of autonomy throughout the transition processes. Increased and ongoing community engagement could achieve better procedural outcomes and could likely reduce the intensity of anxieties regarding transition policy. I therefore recommend that further studies on industrial communities should focus on the procedural justice element of transition, as little research has been done in this context. Additionally, JT advocates should prioritise community engagement as it would likely result in more equitable and positive outcomes.

Regarding the second research question, my findings did not yield clear results on whether populist views affected perception of JT. I identified that supporters and resisters both perceived the energy transition process as political and doubted whether the government had appropriate competency to achieve positive transition outcomes. However, my findings demonstrated that populist rhetoric was used by people across the left-right political spectrum, which was consistent with existing literature which describes populism as mainstreamed in Australia. Future research could investigate links between populist views across the left-right political spectrum and perceptions of energy and climate policies.

Strong place attachment to Gladstone was expressed by Gladstone locals, with long-term residents only expressing some instances of place attachment. Generally, the interviewees showed low place attachment, likely due to the sample group consisting mostly of people who relocated to Gladstone specifically for work. The findings of my thesis point to place attachment possibly manifesting as increased anxiety regarding the town's future. However, it is difficult to surmise if this had an impact on one's perception of JT, or if resistance to energy transition expressed by those with strong place attachment was due to another factor. Future research could investigate how place attachment affects perceptions of climate and energy policy on a broader scale, and not limited to workers in industry.

The interviewees had complicated perceptions and feelings towards energy transition policies and JT strategies. A common theme from the interviewees was the recognition that working in industry and supporting energy transition policy was a complicated task. Encouragingly, many of the interviewees expressed a desire to navigate the complexities in way which they could do the right thing, both for the environment and their community. This is a promising sign in the collective challenge of tackling climate change.

8 References

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Appendix A: Interview Guide

The attached interview guide was used to conduct all 11 interviews. As this is just a guide, not all questions were asked, nor were they asked in the exact wording every time.

General

1. What is your gender and age range?
 - a. Note: looking for general age e.g., 30s, 40s
2. Do you work in (heavy) industry in Gladstone?
 - a. Workplace/company if they're willing to share.
 - b. Alternatively, what is your occupation or field?
3. How long have you been living/working in Gladstone?
 - a. Did you move to Gladstone for work?
 - b. Do you have family and/or family history in Gladstone?
4. What is your highest level of education?

Just Transitions

5. Have you heard about just transitions? And do you know what it is?
 - a. *a concept which refers to the overall objective of transitioning away from fossil fuels towards decarbonised, renewable energy sources in a fair and equitable manner (McCauley & Heffron, 2018)*
 - b. Have you experienced any attention to just transition issues in Gladstone?
6. Do you think you could work in the renewable energy industry, why or why not?
 - a. Would you be willing to re-skill/re-train? Under what conditions?
7. Would you be willing to move away from Gladstone to retain a job in your current industry?
 - a. Why or why not?
8. Given the Queensland government's commitment to 50% renewables by 2030, do you think Queensland will be able to transition to primarily renewable energy sources?
 - a. *Currently 8.5% of all energy is renewable, and 19% of electricity is renewable (ABS, 2021)*
 - b. Do you think Gladstone would need any type of government support to be able to transition (e.g., compensatory measures for people losing their job in mining industry, re-skilling support, R&D investments, etc.)

Populism

9. How do you experience the political debate around coal phase-out in Australia/Queensland/Gladstone?
 - a. What are the different political parties' thoughts on the effects for your industry?
 - b. Is this a particularly politicized issue?

Resource Regime (not relevant for all participants)

10. Do you follow the news? How often, and on what platforms?
 - a. E.g., hear news from family/friends/colleagues.
11. Are climate issues discussed at your workplace?

Appendix B: Interviewee Overview

Table 2 below provides an overview of all interviewees, including when the interview was conducted and the duration of the interview. Each interviewee is listed with their workplace or the industry they are employed in, the role or capacity in which they work, and their level of education. These workplaces and roles have been simplified to keep the interviewees anonymous. The pseudonym is the name which they are called in the thesis text and has been randomly selected from a list of common names in Australia.

Table 2: Overview of all interviewees.

Date (2023)	Label	Duration	Workplace or Industry, and Role	Pseudonym	Education Level
20/01	1-RPR	25 mins	Major mining company. Project engineering.	Tom	Bachelor's degree
31/01	2-TFK	32 mins	Major mining company. Project control and finance.	Richard	Bachelor's degree
01/02	3-LWT	29 mins	Major mining company. Administration.	Bec	High school and certificate IV
03/02	4-RMI	33 mins	Major mining company. Project control and support.	Eliza	Bachelor's degree
20/02	5-YOA	31 mins	Bulk materials handling (port). Engineering, project management.	Rob	Bachelor's degree
23/02	6-ATE	47 mins	Consulting firm. Drafting.	Bill	Associate's degree
27/02	7-EWT	28 mins	Building/construction contracting. Concreting.	Kyle	Incomplete high school. Trades and certificate IV
28/02	8-LPO	32 mins	Alumina and aluminium industry. Environmental engineering.	Sarah	Master's degree
01/03	9-IGE	30 mins	Community organisation*	Jess	Bachelor's degree
07/03	10-REO	34 mins	LNG plant. Site worker.	John	High school and certificate IV
09/03	11-TCC	30 mins	Consulting firm. Civil engineering.	Marie	Bachelor's degree

* As mentioned in the methodology, this participant was the only non-industrial worker.

Appendix C: Coding Tool for Analysis

Summary Table

Shown below in Table 3 is the summary table of all 11 interviews against all the codes used. The codes are listed in the first column, and the number-letter label in the top row, from 1-RPR to 11-TCC, are the labels used for each interviewee. This summary table summed the number of times each code was used per interview, and in total across all interviews. The total number of instances for each code is shown in the right-hand side column, which was colour coded on a red-green spectrum. This made it easy to identify which codes were most used (green) and which were least used (red) at a glance.

Table 3: Summary of codes for all interviews.

Code	1-RPR	2-TFK	3-LWT	4-RMI	5-YOA	6-ATE	7-EWT	8-LPO	9-IGE	10-REO	11-TCC	Total
1A	1	0	1	0	1	0	1	1	0	1	1	7
1A1	0	0	1	0	2	1	1	0	0	1	1	7
1A2	0	0	0	0	0	0	1	0	0	0	0	1
1B	0	0	0	1	0	0	0	0	1	0	0	2
1B1	0	1	0	2	0	0	0	0	0	0	0	3
1B2	0	0	0	0	0	0	0	0	1	0	0	1
1C1	1	1	0	1	1	2	0	1	0	0	1	8
1C1I	1	0	0	1	1	2	0	1	0	0	1	7
1C1II	1	1	1	0	0	0	1	0	0	0	0	4
1C1III	0	0	0	0	0	1	2	0	1	0	0	4
1C2	0	0	0	0	0	0	2	0	0	0	0	2
2A	1	1	5	3	2	4	0	2	3	2	2	25
2A1	0	0	0	0	0	2	0	0	0	1	0	3
2A2	0	0	0	0	0	0	1	0	0	0	0	1
2A3	0	0	0	0	0	0	1	0	0	0	0	1
2A3I	0	0	0	0	0	0	0	0	0	0	0	0
2A3II	0	0	0	0	0	0	2	0	0	0	0	2
2B	5	0	0	4	4	2	5	1	1	2	1	25
2C	2	0	0	0	1	0	0	0	0	1	0	4
3A	0	0	0	0	0	1	0	0	0	0	0	1
3B	2	0	0	0	0	1	0	0	0	0	0	3
3C	1	1	0	0	1	0	0	2	1	0	0	6
3D	0	1	0	1	0	0	1	1	0	1	0	5
3E	0	1	0	2	0	0	2	0	0	0	1	6
4A	1	6	1	2	1	1	2	3	0	6	2	25
4B	3	4	1	5	2	0	5	2	0	4	2	28
4C	0	3	1	2	2	0	2	3	0	7	2	22
4D	3	5	0	1	0	1	0	2	0	6	4	22
4E	0	7	3	1	2	0	3	6	0	2	6	30
4F1	0	0	0	0	1	0	3	0	2	0	2	8

4F2	0	0	0	1	0	0	0	0	3	0	3	7
4F3	0	0	0	0	0	0	5	0	4	1	4	14
4F4	0	1	0	2	0	0	1	0	4	1	3	12
5A	0	7	0	0	0	0	3	1	0	2	1	14
5B	0	2	1	0	0	7	4	3	2	6	3	28
5C	0	2	0	1	0	1	1	0	0	6	3	14
6A	5	3	2	4	5	1	1	5	2	1	3	32
6B	1	1	2	2	1	5	0	2	0	0	1	15
6C	5	1	3	5	4	1	0	2	0	1	5	27
6D	0	0	3	6	3	2	0	0	0	2	2	18
7A	0	2	0	0	0	0	3	0	0	2	2	9
7B1	0	1	0	0	0	0	3	0	0	0	1	5
7B2	0	0	0	0	0	1	1	1	0	0	1	4
7B3	0	0	0	0	3	0	0	0	0	0	0	3
7C	0	2	1	0	2	0	0	0	1	1	3	10
7D	3	3	1	1	5	2	1	0	2	3	5	26
7D1	0	3	0	0	0	1	0	0	0	0	1	5
7D2	0	0	0	0	1	3	0	0	0	1	2	7
7D2I	0	0	0	0	1	4	0	0	0	3	0	8
7D2II	0	0	0	0	0	0	0	0	0	1	1	2
8A	1	0	0	0	1	0	0	3	0	0	2	7
8B	0	1	0	2	1	0	4	0	0	0	0	8
8C	0	0	5	3	1	1	1	0	0	2	0	13
9A	4	2	8	3	3	1	4	5	0	0	1	31
9B	2	2	3	6	5	3	5	1	4	1	0	32
Total	43	65	43	62	57	51	72	48	32	68	73	614

Coding Key

The first number corresponds to the larger code theme, and each additional letter or number narrows the theme scope. For example, code group 1 (level 1) is broken into three codes 1A, 1B, and 1C (level 2), which is broken down further into 1A1, 1A2, 1B1, 1B2, 1C1, 1C2 (level 3). The most granular coding is used here in 1C1I, 1C1II, 1C1III (level 4). Table 4 outlines the logic of this coding key, however the coding key itself showing which themes each code corresponds to is not included, as it may jeopardise the anonymity of the interviewees.

Table 4: Coding key explanation.

Code Level	Level 1	Level 2	Level 3	Level 4
Indicator	Number	Letter	Number	Roman numeral
Example group 1	1	1C	1C1	1C1I
Example group 7	7	7D	7D2	7D2II

Appendix D: Information and Consent Letter

Attached is the information and consent letter which was distributed to potential interviewees prior to conducting the interview. All interviewees included in this thesis returned a signed copy of the consent letter.

Are you interested in taking part in the research project “*Perceptions of just transitions in fossil fuel and heavy industry communities in Queensland, Australia*”?

This is an inquiry about participation in a research project where the main objective of the research is to gain insight into how communities affected directly by just transition (JT) policy and ideas perceive it. In this letter we will give you information about the purpose of the project and what your participation will involve.

Purpose of the project

The objective of the research is to gain insight into how communities affected directly by JT policy and ideas perceive it. The research aims to collect interview data from locals living and/or working in the Gladstone region of Queensland, Australia. We are interested in your personal experience living and/or working in Gladstone, your understanding of and feeling towards just transitions, and your experience in or related to the heavy industries in Gladstone.

This research is for a master’s thesis as part of the Master of International Environmental Studies program at the Norwegian University of Life Sciences (NMBU).

Who is responsible for the research project?

Norwegian University of Life Sciences (NMBU) is the institution responsible for the project. The main researcher will be master’s student Henna Narula, supervised by Professor Guri Bang. The contact details for both student and supervisor are listed below.

Why are you being asked to participate?

You are being contacted to participate in this study as you have been identified as someone who can provide valuable insight into how just transitions are viewed in Gladstone.

What does participation involve for you?

This research project will consist of me collecting semi-structured interview data from participants in Gladstone. If you choose to participate in this research, it will involve you being interviewed about your experience living and/or working in Gladstone, just transitions, and some related questions. As the interview will be semi-structured, you will be free to discuss anything that you deem relevant to the topics. The interview will last approximately 30 - 45 minutes and will be conducted digitally (either on Microsoft Teams or Zoom, according to your preference). I will record the interview and take some notes. The section below outlines how we will use your data.

Participation is voluntary.

Participation in the project is voluntary. If you chose to participate, you can withdraw your consent at any time without giving a reason. All information about you will then be made anonymous. There will be no negative consequences for you if you chose not to participate or later decide to withdraw.

Your personal privacy – how we will store and use your personal data.

We will only use your personal data for the purpose(s) specified in this information letter. We will process your personal data confidentially and in accordance with data protection legislation (the General Data Protection Regulation and Personal Data Act).

I will record your interview and take notes. Your interview data will be stored locally and will only be accessed by me (Henna) and my supervisor if necessary. To ensure no unauthorised person can access your data, I will replace your name and contact details with a code. The list of names, contact details, and codes will be stored separately from your recorded interview and consent form. All files and folders will be password protected, and only myself and my supervisor will know the password.

Your responses in the interview may be used in my master's thesis, but responses will be anonymised and will only reveal some of your information e.g., your gender, age range, occupation. Your information will only be used to provide context and may be purposely vague in order to keep your anonymity, for example describing your general field of work rather than specific occupation, and referring to you in publications using a pseudonym.

What will happen to your personal data at the end of the research project?

The project is scheduled to end by 15th May 2023. Your interview recording will be deleted on this date. Your data will be anonymised as soon as the recording has been processed into a transcript. Your anonymised data, including the transcript of your interview, will be retained and stored on the university server for the purpose of future research.

Your rights

So long as you can be identified in the collected data, you have the right to:

- access the personal data that is being processed about you
- request that your personal data is deleted
- request that incorrect personal data about you is corrected/rectified
- receive a copy of your personal data (data portability), and
- send a complaint to the Data Protection Officer or The Norwegian Data Protection Authority regarding the processing of your personal data

What gives us the right to process your personal data?

We will process your personal data based on your consent.

Based on an agreement with Norwegian University of Life Sciences (NMBU), Data Protection Services has assessed that the processing of personal data in this project is in accordance with data protection legislation.

Where can I find out more?

If you have questions about the project, or want to exercise your rights, contact:

- *Norwegian University of Life Sciences* via *Professor Guri Bang* (guri.bang@nmbu.no) or *Henna Narula* (henna.narula@nmbu.no)
- Our Data Protection Officer: *Hanne Pernille Gulbrandsen* (personvernombud@nmbu.no)
- Data Protection Services, by email: personverntjenester@sikt.no or by telephone: +47 53 21 15 00.

Yours sincerely,

Henna Narula
Student

Professor Guri Bang
Supervisor

Consent form

I have received and understood information about the project *Perceptions of just transitions in fossil fuel and heavy industry communities in Queensland, Australia* and have been given the opportunity to ask questions. I give consent:

- to participate in an interview, conducted and recorded digitally
- for the publication of my anonymised interview data
- for my personal data to be stored after the end of the project for the purpose of follow-up studies [optional]*

I give consent for my personal data to be processed until the end date of the project, approximately 15th of May 2023

(Signed by participant, date)



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