ZERŎ TOGETHER

Towards a cleaner, healthier Dublin

Research Report

Understanding the impact of a transition to net-zero on communities in Dublin

tasc   codema
Dublin's Energy Agency

Contents

Executive summary

A net zero future is essential to achieve our climate action goals and reduce the impacts of climate change on communities around the world.

To reach net zero, the amount of emissions created must be balanced by an equal amount removed from the atmosphere, primarily through natural resources like trees and forests, alongside carbon capture technologies.

As we work towards this net zero future, there is the risk that failing to consider how policies will impact people differently will result in some groups being left behind. This could result in low-income communities and marginalised groups being in a position where they cannot afford to transition to more sustainable practices and are faced with higher prices for energy and transport. **Policies must be developed to align with the idea of a just transition.**

A just transition means that **no group is left worse off as a result of climate action** and that the move to a sustainable future takes place in an inclusive manner.

This report was carried out by Think-tank for Action on Social Change (TASC) on behalf of Codema, Dublin's Energy Agency as part of Zero Together; a Codema-led initiative with the aim of creating and delivering on a shared vision and strategy for a fossil fuel free Dublin that is ambitious and inclusive.

This research was funded through an EU Horizon 2020 Project called TOMORROW aiming to identify communities in Dublin that may be at risk of being negatively impacted by the transition to net zero. Furthermore, it sought to engage with communities in Dublin to understand the impacts that a transition to net zero will have on their communities.

The first step in this study was to identify communities that might be at risk of being left behind in the transition to net zero. Using information from the Pobal Deprivation Index, 65 Electoral Divisions (EDs) across the four Local Authority areas in Dublin were identified as 'marginally below average', 'disadvantaged' or 'very disadvantaged'.

Executive summary

To understand these areas' challenges, census data relating to socio-economic factors, such as employment, housing and travel, were reviewed for each area. This provided insight into the groups that may be most impacted by changes caused by policies relating to climate action.

The final stage of the mapping exercise was to identify local organisations within communities that could help secure a transition to a net zero society in a fair manner. These included schools, sports clubs, churches and local development companies.

Following the completion of the mapping phase, four focus groups and six interviews were undertaken with community members in Ballymun, Beaumont, Coolock and Darndale to understand community members' views towards net zero, as these communities were identified as particularly vulnerable.

Findings

A central finding from engaging with community members was the view that a **move towards renewable energy and electric vehicles would be expensive**. In the context of the cost-of-living crisis, older people, people on low and middle incomes and single-parent households were identified as particularly vulnerable groups. The absence of public transport links and cycle lanes was also highlighted.

Alongside the challenges of net zero, the **potential for the transition to improve health within communities was referenced by several groups**. In terms of achieving a just transition to net zero, community groups highlighted **the importance of receiving information from trusted sources.** These include peer-to-peer learning, experts in areas related to sustainability and organisations that provide community support services in the community.

Future initiatives should engage with existing community groups to identify how a community-led transition to net zero, that addresses individual communities' challenges and developmental needs, can be developed. This could build support for the transition to net zero by undertaking climate actions that provide tangible benefits for community members.
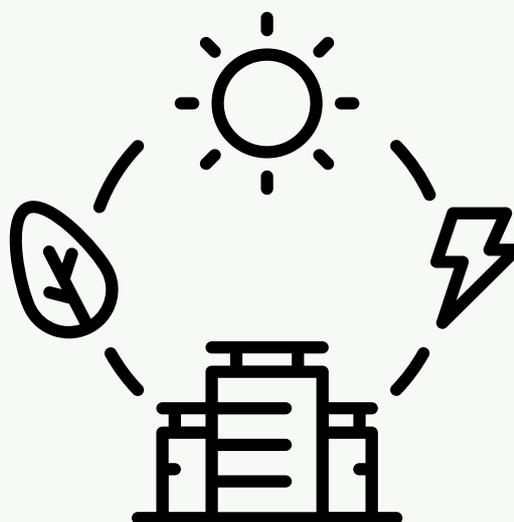
1. Introduction

The necessity of reducing society's dependence on fossil fuels results in the need for a radical transformation of how goods are produced, the sources of energy used and the mobility practices of people.

Given the extent to which societies across the globe have been dependent on pollutant practices to meet these demands, moving towards practices which align with the idea of a net zero society will be challenging. The phrase "net zero" represents a state where the amount of greenhouse gases going into the atmosphere is balanced by removing these gases from the atmosphere[1]. These gases can be removed by taking actions such as rewetting peatlands and planting more trees via afforestation.

There is the risk that altering practices in a manner that fails to consider the needs and challenges facing communities could exacerbate the living conditions of communities worldwide. A community-led and local approach can support communities in having ownership of the transition to zero-carbon societies by ensuring their concerns are embedded within plans to reduce emission creation.

In the summer of 2021, the Talking Green Survey conducted by TASC, which consisted of 1,010 respondents, found that a majority of respondents were concerned that the policies implemented to tackle climate change would make their lives harder. Additionally, a Zero Together public survey carried out in Autumn 2021 indicated that the public feel they are rarely or never included in decisions relating to how energy is used and produced in Dublin. Findings from these surveys underpin the need for an inclusive approach to climate action, ensuring that all groups impacted by climate policy are included in decision-making processes.

A particular emphasis must also be placed on including marginalised groups who are more likely to be negatively affected by climate change and climate policy. To build upon the findings of the Zero Together survey, this study intends to understand which communities in Dublin may be vulnerable to policy measures that aim to transition society away from dependency on fossil fuels. Furthermore, it seeks to understand the impacts of the transition to renewables from the perspective of local communities and what actions can be taken to ensure that no group is left worse off in the move to a net zero society.

Introduction

This report is broken into six sections. Following this introduction, section 2 provides a contextual background to net zero at an international, national and local level. Section 3 details the mapping phase of this study whereby census data was analysed to identify communities in Dublin which may be at risk of being left behind in the transition to net zero. Section 4 presents findings from the engagement with vulnerable communities to understand what the transition to net zero will mean for their communities and the actions that could support communities transitioning to net zero. Section 5 details recommendations relating to the achievement of net zero alongside undertaking future engagement with communities, while section 6 presents concluding remarks.

2. Contextual background

2.1 The need for a just transition

To reduce environmental damage across the world, changes are needed to how we make products, the types of energy we use to power homes and businesses and the ways we move around. While there have been technological developments that can support these changes, the ability of people to participate in and benefit from new practices will be impacted by several factors. In the Zero Together survey conducted by Codema between September and October 2021, the cost of these changes, issues with poor infrastructure and a lack of information and awareness were identified as barriers to taking action relating to climate change in Dublin[2]. A further challenge for moving towards a more sustainable society is that many communities have more immediate priorities to address.

A survey conducted by TASC in 2021 identified that climate change was not considered a top priority among Irish citizens. In contrast to housing (26%), improving healthcare (19%) and addressing homelessness (16%), only 6% of respondents ranked addressing climate change as their most important priority[3]. It should be noted that this survey was conducted in the midst of the COVID-19 pandemic which may have influenced some of the findings. While climate change may not rank as highly as other issues facing communities across Ireland, this finding should not be interpreted as an argument to slow climate action. Instead, it highlights that efforts to address climate change must consider communities' needs and priorities. As described in the People's Transition model for climate justice, developed by TASC, for climate action to be fast, it must be fair[4]. Achieving a just transition, where inequality is tackled and living standards are improved by delivering climate solutions, can help build social approval and demand for climate action.

> **To understand how climate solutions can be developed, communities must have their voices heard.**

Failing to consider the views and experiences of communities leads to the risk that disadvantaged groups may be left behind. Drawing upon the Government of Ireland's Roadmap for Social Inclusion, disadvantaged groups may include groups such as people who are long term unemployed, living in poverty as well as being impacted by discrimination[5]. These include women, migrants, members of the Travelling and Roma communities, members of the LGBTI+ community and former prisoners. A potential result

of failing to consider the needs and experience of these groups is that the implementation of climate action in a manner that is unjust could worsen the inequalities experienced by these groups. It could also lead to climate action being viewed as a cause of the disadvantage which certain groups face. For this reason, there is no one-size-fits-all approach to climate action, as different communities will have different challenges and strengths.

The benefit of taking an inclusive approach to decision-making is that it can support mutual learning whereby members of the public and decision-makers can learn from one another in terms of how to develop solutions which address community needs. Furthermore, it can ensure that marginalised voices are heard in the development of climate action. By motivating local communities, businesses and public authorities to work together towards the same goal, citizens can be empowered to take ownership of the transition to a more sustainable future. This can create local benefits alongside supporting positive outcomes for the rest of the world.

2.2 Net zero in a global context

2.2.1 Overview of net zero

The publication of reports from government and non-government bodies on global environmental conditions underlines the urgent need for action. Climate change threatens human well-being and the planet's health, and there is 'a rapidly closing window of opportunity to secure a liveable and sustainable future for all'[6]. Potential consequences of a continued rise in temperatures include increases in the frequency and severe nature of extreme weather events such as heat waves and floods[7]. Furthermore, increases in temperature will lead to the destruction of infrastructure, displacement of people, disrupted food chains and increase the potential for conflict[8]. To reduce the impacts of climate change, a move to net zero is needed.

Contextual background

> **The phrase "net zero" represents a state where the amount of greenhouse gases going into the atmosphere is balanced by removing these gases from the atmosphere[9].**

This means reducing the level of greenhouse gas emissions caused by humans to as close to zero as possible, as well as removing carbon emissions using natural sinks such as forests and oceans alongside carbon capture and storage technologies.

The five sectors that emit the most greenhouse gases are electricity and heat; transport; buildings; industry; and agriculture, land use and forestry. Changes such as an end to oil and gas exploration[10]; an increase in the supply of renewable energy[11]; retrofitting homes[12]; increased investment in public transport and active travel in the form of walking and cycling; and increased investment in Electric Vehicle (EV) charging infrastructure[13] will all be needed to reduce emissions in these sectors.

Behavioural changes across the whole of society will also be decisive for securing a transition to net zero. However, the ability to adopt behavioural change will vary based on different social groups' circumstances. For the transition to net zero to occur in a fair manner, consideration is needed for how policies will be implemented and how they will impact communities across the world. For example, some groups may not be in a position to incur high up-front costs in areas such as moving from petrol or diesel to electric cars or retrofitting older, less energy-efficient housing. These same groups may be negatively impacted by taxation measures designed to encourage behaviour change like the carbon tax. To ensure that the move away from practices that cause pollution is fair and equitable, measures are needed to protect low-income households from negative outcomes. Furthermore, groups that tend to be excluded from decision-making processes should be consulted to understand how they will be affected by the impacts of climate change and climate action measures.

2.3. The Irish policy response to net zero

The Irish government has outlined their ambitions to reduce emissions through various policy documents published over the last number of years. In 2020, the Programme for Government outlined a commitment to reduce emissions by 7% each year between 2021 to 2030, and to achieve net zero emissions by 2050[14]. In a bid to meet these statutory climate objectives, the Government has published a series of Climate Action Plans setting out targets and actions relating to a range of sectors. The Climate Action Plan 2023 details how a climate-neutral Ireland will bring new, green employment opportunities in building retrofits, renewable energy generation, sustainable mobility, and new farming practices. For example, in relation to energy and transport,the Government has committed to retrofitting 500,000 homes by 2030 and has called for

Contextual background

greater prioritisation and reallocation of existing road space towards public transport and active travel[15]. Climate action also features across other policy documents such as the Government's Housing for All plan which outlines a target for Local Authorities to retrofit '36,500 Local Authority homes to a B2/cost optimal Building Energy Rating (BER) by 2030'[16].

Despite the development of plans, actions and targets to support climate action, Ireland faces several barriers to move away from fossil fuels and is currently not on track to meet 2030 targets. Additionally, the Climate Change Performance Index ranking table for 2023 placed Ireland 37th out of 63 nations[17]. Ireland and Poland were the only EU states to receive a very low ranking in the area of addressing Greenhouse Gas emission creation. Although 27 out of the 36 actions from the Climate Action Plan were delivered in the first quarter of 2023, this has not stopped the creation of emissions in Ireland[18]. The continued rise in emissions highlights how further actions will be needed to reduce environmental damage. It is vital, however, to ensure that the policies introduced to address emission creation do not negatively impact the well-being of communities, particularly those who are disadvantaged.

In the development and implementation of these policies, consideration needs to be given to the challenges faced by different communities in the transition to net zero. For example, reducing dependence on car use will require improved public transport and active travel options, while those with lower incomes will need support in order to improve the energy efficiency of their homes. For this reason, there will be no one-size-

Contextual background

fits-all approach to achieving the targets laid out in the Climate Action Plan, and a greater focus will be needed on the localised challenges facing communities.

One way the Climate Action Plan recognises the need for the transition to occur in a fair and inclusive manner is through identifying the principles of a just transition. The stated principles of a just transition are presented in Table 1. It highlights the importance of empowering communities and ensuring that the introduction of climate policy does not exacerbate existing forms of inequality. Furthermore, to support citizen engagement in climate action across Ireland, the Department of Communications, Climate Action and Environment established a National Dialogue on Climate Action[19].

| Table 1: Principles of a just transition as listed in the Climate Action Plan 2023. Source: Government of Ireland (2022a). |
| --- |
| An integrated, structured, and evidence-based approach to identify and plan our response to just transition requirements. |
| People are equipped with the right skills to be able to participate in and benefit from the future net-zero economy. |
| The costs are shared so that the impact is equitable and existing inequalities are not exacerbated. |
| Social dialogue to ensure impacted citizens and communities are empowered and are core to the transition process. |

2.4. Achieving net zero in Dublin

While national governments will be critical decision-makers in designing policies for achieving the transition to net zero, cities and regions are also key drivers of climate action[20]. For example, local authorities are described as being on the front line of climate adaptation due to their role in mobilising against severe weather events and coordinating emergency response when the effects of climate change occur locally[21]. Local authorities in Ireland are also required to develop local climate action plans, including the creation of implementation plans for smaller areas across their locality called Decarbonising Zones[22]. A Decarbonising Zone is a test bed for innovation identified by the local authority where climate mitigation measures will be undertaken to address climate needs[23]. County Development Plans must also assess their impact on carbon reduction targets and include measures to monitor and review progress towards these targets[24].

Contextual background

Notably, the Dublin Region Energy Master Plan, developed by Codema, found that local authorities are only responsible for 5% of emissions in Dublin[25]. Therefore, to reach net zero in Dublin it is crucial to address and work with all sectors across the county. The Dublin Region Energy Master Plan provides the evidence-base to support this collaborative effort by identifying the most realistic pathways for the Dublin region to achieve its carbon emission reduction targets to 2030 and 2050. Put very simply, the master plan looked at 'what should go where' for every part of Dublin, based on the type of area it is and the technologies that are best suited to reducing energy-related emissions within that area. Heating accounts for the highest proportion of emissions in Dublin at 46%, followed by transport at 28% and electricity at 26%[26]. The sectors that have the highest impact on emissions are the residential and transport sector, which combined contribute around 57% to total energy-related emissions in Dublin (see Figure 1). Energy demand from buildings and services accounted for 58% of total energy consumption in the Dublin region with 69% of this demand met by fossil fuels. This clearly demonstrates our reliance on polluting sources of energy.

**Figure 1: Dublin's Energy-Related Emissions by Sector**
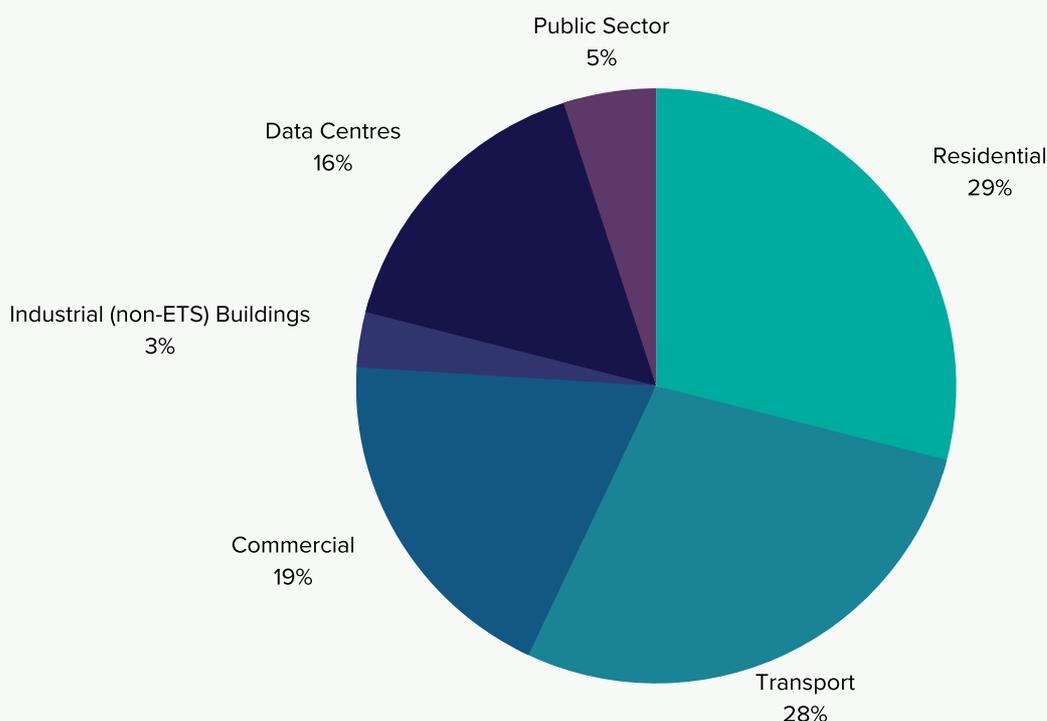
In relation to the transport sector, 65% of transport emissions come from private cars across the county. To reduce these emissions, active travel and buses should be prioritised over cars in Dublin. Furthermore, additional powers should be provided to local authorities to trial the reallocation of existing road space to more accessible, efficient and sustainable transport. One way to reduce residential emissions and our clear dependence on fossil fuels is to address buildings across the capital. Dublin has ageing buildings, as 78% of homes were built before 2000[27], meaning that the average BER (building energy rating) is D2. People living in buildings with poor energy ratings

Contextual background

often live in cold and damp conditions and may be experiencing energy poverty. To improve this situation, buildings will need to be retrofitted and built to be more energy efficient. At the local government level, one area where local authorities can influence the reduction of emissions produced in the residential sector is by retrofitting social housing and addressing areas most at risk of energy poverty across Dublin (see Figure 2).

Figure 2: Areas in Dublin most at risk of energy poverty
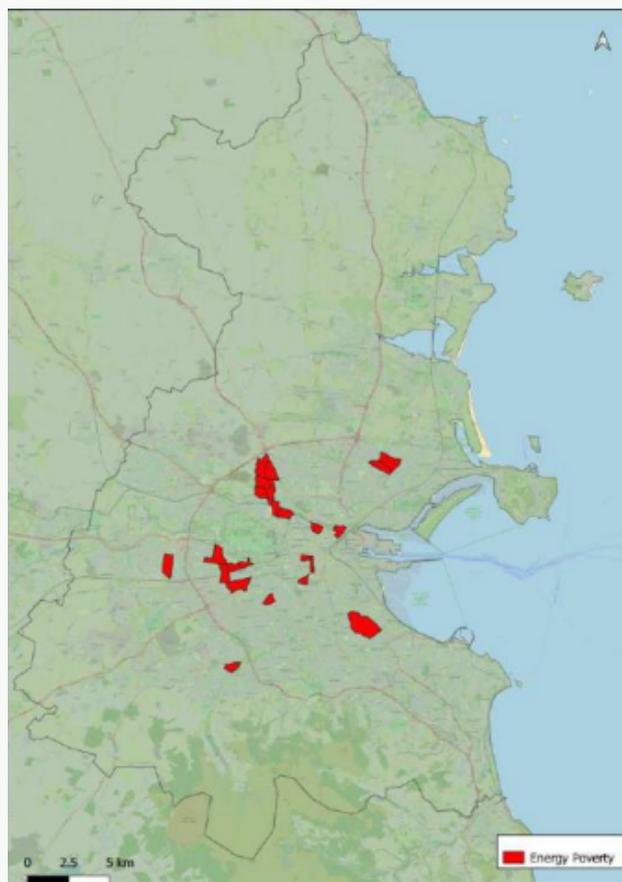
Both the Dublin Regional Energy Master Plan and local authority documents highlight the impacts climate change will have on the Dublin region. Environmental damage and the potential loss of environmental assets such as green spaces are predicted to occur due to extreme weather events, such as heavy rainfall, severe flooding, and hotter summers, which are expected to increase[28]. Dublin's physical location also results in a particular degree of vulnerability to sea level rise and coastal erosion[29]. Over twenty-one thousand residential properties and almost two thousand commercial properties are projected to be at risk of flooding by 2050[30]. The increased frequency of floods will also damage human life, health, community and social facilities and cause economic loss, such as damage to infrastructure. A further challenge moving forward is a projection that the population in the Greater Dublin Area will increase by just over 400,000 by 2031[31]. This will result in additional pressure on infrastructure, such as the drainage system and a potential green surface decrease, thereby worsening flooding.

Contextual background

To ensure emission-reduction actions are taken in a fair and inclusive way and to avoid the impacts mentioned above, collaboration and engagement will be needed with a range of groups in Dublin, such as decision-makers, businesses and community groups. Engagement with stakeholders is required to identify how other sources of emissions can be reduced. Within Dublin, the Zero Together initiative led by Codema seeks to do just that by bringing diverse perspectives and experiences together to work towards the goal of moving Dublin away from fossil fuels as soon as possible. As communities will live with the impacts of climate change, it is critical that they are provided with the assistance needed to adapt as well as processes which allow for their local knowledge to be taken on board within decision-making.

2.5. Conclusion

Policy documents highlight the range of impacts that climate change could have at the global, national and local levels. While a range of policy options could help reduce emission creation and support a transition to net zero, policies must be applied in a manner that does not exacerbate inequalities and make life more difficult for marginalised groups. Communities must be supported in the transition to net zero to ensure that a more sustainable future also means a fairer future for people living and working in Dublin. The following section presents an overview of a desk-based analysis which sought to identify communities in Dublin that may be particularly vulnerable to being left behind in the transition to net zero.

3. Mapping phase

3.1 Pobal Deprivation Index for Dublin Electoral Divisions

The first step in understanding how the transition to net zero could impact communities was to understand the vulnerabilities that communities in Dublin face. An initial review of every Electoral Division in the four Local Authorities in the Dublin region using data from the Pobal Deprivation Index was undertaken. Electoral Divisions (EDs) are the 'smallest administrative areas for which population statistics are published'[32]. There are 3,441 Electoral Divisions in the Republic of Ireland, while the four Local Authorities in the Dublin region consist of 321 Electoral Divisions. Table 2 outlines the Electoral Divisions in Dublin's four Local Authorities.

Table 2: Number of Electoral Divisions in each Dublin Local Authority

Local Authority	Number of Electoral Divisions
Dublin City Council	161
Dún Laoghaire-Rathdown County Council	69
Fingal County Council	42
South Dublin County Council	49
Total number of EDs in Dublin region	**321**

The Pobal Deprivation Index measures the affluence or disadvantage of a particular geographical area using data compiled from census data[33]. The index supports the identification of the most disadvantaged areas throughout Ireland. While the Pobal Deprivation Index does not provide data specifically relevant to how the transition to net zero will impact communities, it can help identify the communities that may need the most support in the transition to net zero. This includes the level of unemployment in an ED, the percentage of lone-parent households and the proportion of the population with primary education only. Groups that have limited money available are more likely to be in a position whereby they will struggle to adapt to the challenges that climate change will cause for living standards[34].

Mapping phase

The Pobal Deprivation Index ranks Electoral Divisions from those that are very affluent to those that are extremely disadvantaged. The first step in the mapping phase was to identify the communities that were classed as marginally below average, disadvantaged, very disadvantaged and extremely disadvantaged in each Local Authority. Although no Electoral Divisions in Dublin were described as 'extremely disadvantaged', there were noticeable differences in the levels of disadvantage among the Local Authorities.

3.1.1. Dublin City Council

Beginning with Dublin City Council, Figure 3 shows which EDs were marginally below average, disadvantaged and very disadvantaged. Dublin City Council was the only Local Authority to feature EDs that are very disadvantaged. They were *Finglas South C* and *Priorswood B*. In total, 27% of EDs in this Local Authority were marginally below average, 13% were disadvantaged, and 1% were very disadvantaged. Alongside the 2 EDs classed as very disadvantaged, 21 were defined as disadvantaged. The EDs with higher levels of disadvantage were mainly concentrated in the South West (Ballyfermot/Cherry Orchard), North West (Finglas, Cabra, Ballymun) and North (Priorswood) of the city. In contrast to this was the number of affluent EDs in the East and South East of the city.
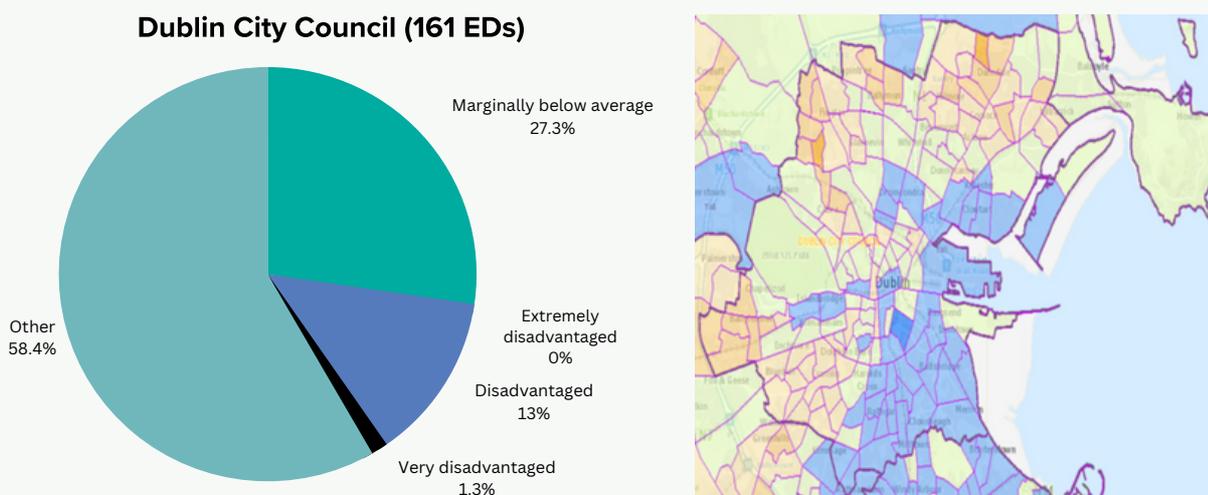

Figure 3: Electoral Divisions in Dublin City Council that are defined as marginally below average, disadvantaged and very disadvantaged. Note: more affluent EDs are coloured in blue, while more disadvantaged EDs are coloured in orange.

3.1.2. Dún-Laoghaire-Rathdown County Council

Figure 4 presents the findings for the Dún Laoghaire-Rathdown Electoral Divisions. Dún Laoghaire-Rathdown has the smallest number of EDs that were marginally below average. No EDs were described as disadvantaged or very disadvantaged. Three marginally below average EDs were located around Loughlinstown in the south of the County, while three others were dispersed. A large proportion of Dún Laoghaire-Rathdown is classed as affluent.

Mapping phase

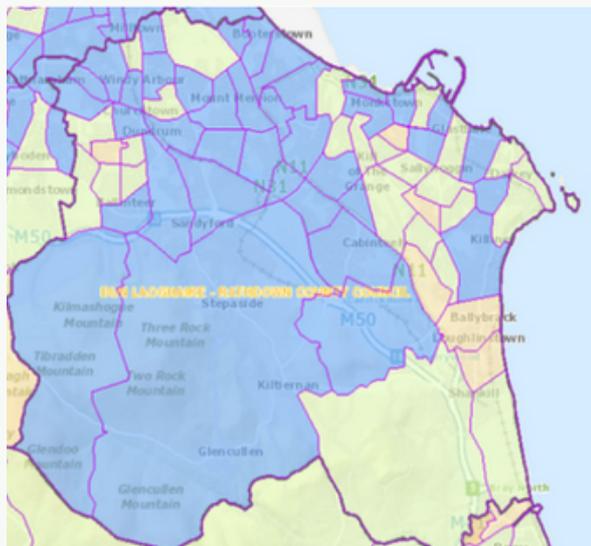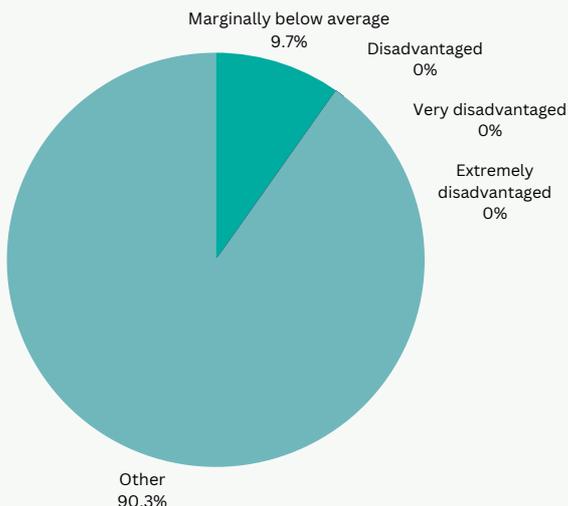### Dún-Laoghaire-Rathdown (69 EDs)

Figure 4: Electoral Divisions in Dún Laoghaire-Rathdown County Council that are defined as marginally below average, disadvantaged and very disadvantaged. Note: more affluent EDs are coloured in blue, while more disadvantaged EDs are coloured in orange.

3.1.3. Fingal County Council

Located in North County Dublin, Fingal County Council has the smallest number of Electoral Divisions. Six of the 42 EDs were marginally below average, while one was disadvantaged. These EDs were located around Blanchardstown in the southwest of the County and Balbriggan in the North of the County. In contrast to Dublin City and Dún Laoghaire-Rathdown, fewer EDs are classed as affluent. The majority of EDs are classed as marginally above average.

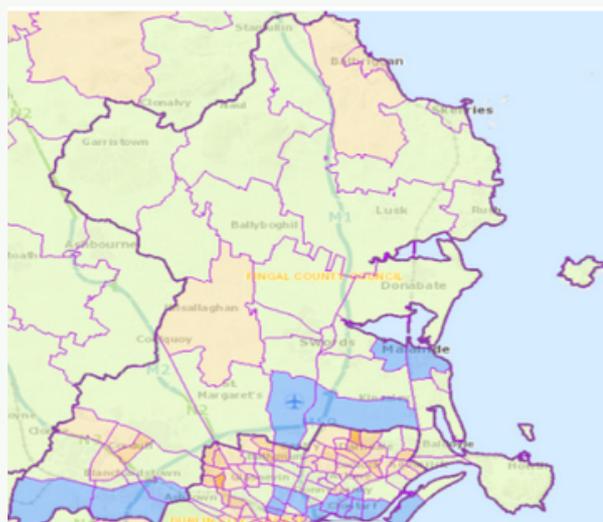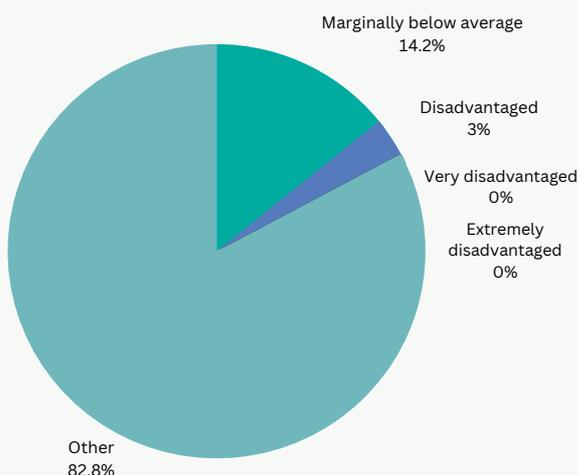### Fingal County Council (42 EDs)

Figure 5: Electoral Divisions in Fingal County Council that are defined as marginally below average, disadvantaged and very disadvantaged. Note: more affluent EDs are coloured in blue, while more disadvantaged EDs are coloured in orange.

Mapping phase

3.1.4. South Dublin

South Dublin County Council had the highest percentage of EDs that were marginally below average or disadvantaged. They account for 49% of all EDs under the council's remit. Eight EDs were classed as disadvantaged, while 16 were marginally above average. As shown in Figure 6, disadvantaged areas are concentrated around Tallaght and Clondalkin in contrast to the less population-dense Electoral Divisions in the west and the south of the Local Authority.
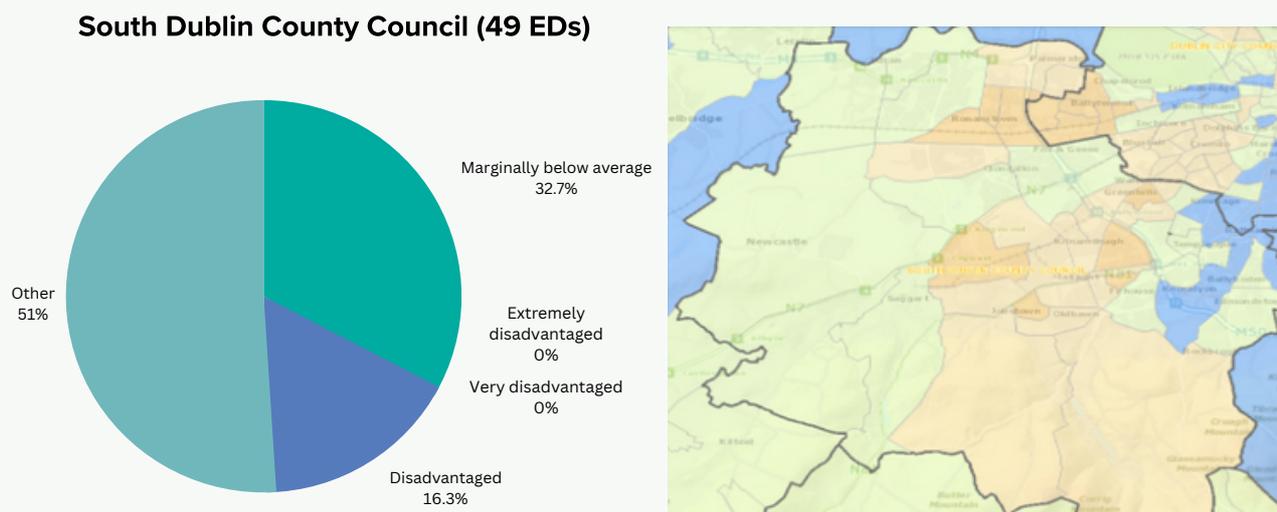
Figure 6: Electoral Divisions in South Dublin County Council that are defined as marginally below average, disadvantaged and very disadvantaged. Note: more affluent EDs are coloured in blue, while more disadvantaged EDs are coloured in orange.

The review of Electoral Divisions using the Pobal Deprivation Index provided insight into the communities that may require particular support and attention in transitioning to a net-zero society. In total, 65 EDs were marginally below average, disadvantaged and very disadvantaged. A list of the EDs classed as marginally below average, disadvantaged and extremely disadvantaged is included in Appendix 1 of this report. As referenced previously, while the deprivation index provides some insight into the socio-economic challenges faced by individual areas, it does not give a detailed picture of those areas in terms of how they will be impacted by factors critical to securing a more sustainable society. For this reason, the next step in the mapping process was to analyse data relevant to energy transitions at the Electoral Division level. This was achieved by reviewing data from the 2016 census for each ED identified as marginally below average, disadvantaged and very disadvantaged.

Mapping phase

3.2. Census data

Twenty-seven factors within the census data were analysed to understand the demographic nature of EDs and the potential challenges facing community members in relation to the energy transition. These factors were divided into three categories and are presented in Appendix 2. Firstly, socio-economic factors comprising demographic data, such as age, educational attainment and employment status were analysed. This helped to build an initial picture of how certain communities may lack the finances to invest in new practices such as home energy upgrades, including investing in heat pumps, insulation or solar panels. Housing is one of the most impactful areas when it comes to the creation of emissions[35]. Eight variables relating to housing were considered. They included the age of the housing stock in the ED, the heating source, and the ownership status (privately rented or rented from the Local Authority). The final set of variables related to mobility (in terms of how people travel) and connectivity (access to a personal computer and internet). This highlights the dependence on private or public transport and the access people may have to online information and applying for grants.

3.2.1. Socio-economic factors

The analysis of socio-economic factors highlighted the diverse nature of EDs in the Dublin region. One example of this was the different population levels in each ED. Cabra West A had the lowest population of the EDs evaluated (1,478 people). In contrast to this was Tallaght Jobstown with a population of 17,824, making it the most populated ED considered. The varying size of EDs highlights that different approaches may be needed to engage communities that are more diverse than others. Furthermore, the evaluation of EDs highlighted differences between EDs in terms of age.

Over a quarter of people living in Beaumont A were over 65 (28.2%), while Blanchardstown-Mulhuddart had the lowest proportion of people over 65 (2.13%). Another ED in the Blanchardstown area (Blanchardstown-Tyrellstown) had the highest proportion of people under 19. 41.6% of this ED's population was under 19, while Kilmore D had the lowest level of young people (17.8%). Older cohorts are described as a section of society that can benefit from a transition to net zero as it would mean warmer homes and more accessible transport options that are easier to navigate[36]. As younger generations are likely to be impacted by climate change throughout their lives, they represent an important group whose voices must be included in decision-making.

Mapping phase

Alongside differing age cohorts, consideration was also provided for social groups. Over one-third of the population in Blanchardstown-Mulhuddart, Tallaght-Springfield and Blanchardstown-Tyrrelstown were born outside of Ireland. Consideration is needed for groups whose first language may not be English. The proportion of members of the traveller community living in each ED was also evaluated. Research highlights how Travellers residing in mobile homes cannot avail of retrofitting and SEAI grants despite Travellers being disproportionately impacted by energy poverty in Ireland[37]. One measurement of energy poverty is when a household spends more than 10% of its disposable income on energy services[38]. Travellers account for 1% or more of the population in 18 EDs evaluated, more specifically, in Priorswood B, over 11% of the total population were Travellers.

Unemployment was also a consideration in this analysis as this reflects people's capacity to invest in climate-friendly actions and the importance of providing green jobs. Furthermore, young unemployed adults have been found to experience greater levels of ostracism or exclusion compared to other societal groups. For this reason, people who are unemployed may be less willing to participate in conversations focusing on climate action[39]. 19 Electoral divisions in Dublin had an unemployment rate higher than the national average of 12.9% in 2016[40]. Priorswood B had the highest unemployment rate, with 20.7%. This was followed by Tallaght-Killinarden (17.8%) and Ballymun D (17.6%).

Mapping phase

3.2.2. Housing

Moving from personal data to housing, the People's Transition report for Phibsborough conducted by TASC notes that old houses that are not insulated to modern standards are less energy efficient [41]. A consequence of this is the need to use more fuel to stay warm in winter. Over 62% of houses in Cabra East B were built before 1945. In contrast to this was Clondalkin-Rowlagh, where 0.23% of houses were built before 1945, while 63.8% of houses in Balbriggan Rural were built after 2001. In the ED of Decies, 0.1% of houses were built after 2001.

The Dublin Region Energy Master Plan discusses how people who live in rented accommodations are less likely to take on any upgrades to their property. In contrast, owner-occupied buildings are more likely to be retrofitted as the owner-occupier will see benefits in reducing energy costs[42]. The People's Transition for Phibsborough also highlighted the issue of retrofitting in areas with a large number of renters. There can be a lack of incentive for landlords to undertake expensive retrofitting processes when tenants are the primary benefactor of the retrofit[43]. A further issue is the potential for 'green gentrification'. This occurs when retrofitting increases rent price, resulting in the original tenant being displaced in favour of a tenant with a greater ability to pay an increased rent[44].

Tallaght-Springfield had the highest proportion of people living in accommodation rented from private landlords (41.2%). The ED with the lowest level of people living in privately rented accommodation was Clondalkin-Cappaghmore (3.08%). Clondalkin-Cappaghmore was the ED with the highest number of people living in accommodation rented from a Local Authority. As mentioned in local government reports, social housing provided by Local Authorities is one area where local government bodies can actively reduce emission creation by retrofitting local authority housing[45].

Mapping phase

A further factor considered in the area of housing was the energy sources used. While the number of houses without central heating in each ED was limited, 2% of dwellings in Cherry Orchard A had no central heating. Another variable considered was the sources of energy used. Oil, gas or liquid petroleum gas (LPG) accounted for 90% of central heating in 20 of the EDs evaluated. Cherry Orchard A was the only ED where oil, gas and LPG combined account for less than 50% of central heating. Tallaght-Belgard had the highest oil, gas or LPG use for heating at 95.4%, followed by Raheny-Foxfield (94.9%) and Grange D (94.8%). A consequence is that increases in carbon taxes will increase the energy cost for houses that depend on fossil fuels and compound existing inequalities.

EDs with high fossil fuel usage had low electricity use for heating. Only 1.4% of homes in Tallaght-Belgard used electricity for heating, while Harmonstown A, Priorswood E, Raheny-Foxfield and Tallaght-Kilnamanagh all had an electricity usage rate of 2%. A notable finding was the differences between neighbouring EDs when comparing the use of fossil fuels for heating with the use of electricity. While Tallaght-Belgard had the lowest use of electricity for heating, Tallaght-Springfield had the highest level at 40.5%, while Tallaght-Glenview had the third highest level (31.7%). Both of these EDs are located centrally within Tallaght and may be well-positioned to benefit from Tallaght being the site of Ireland's first large-scale district heating scheme. A further variable considered was the use of coal and peat for heating. This was much lower than oil, gas and coal use, with Balbriggan Urban having the highest level at 3.2%. The final two variables (No water supply and No sewerage facility) were uncommon.

3.2.3. Connectivity

Factors focusing on mobility highlighted how people across Dublin travel. In over half of the Electoral Divisions, travelling by foot accounted for at least 20% of all journeys to work, school and college. In many areas, this was second only to travelling by car. This highlights the role that active travel currently plays within many communities in Dublin.

The EDs with the highest number of journeys by foot were Ballymun D (29.4%), Tallaght-Killinardan (29%) and Clondalkin-Rowlagh (28.9%). Ballymun D also has the highest percentage of households which did not have a car (49.2%). Its neighbouring ED, Ballymun B, had the second highest level at 46.2%, while Kilmore C, located in the wider Coolock area, had a level of 43.3%.

The lack of car ownership within these areas illustrates the importance of accessible and affordable public transport links to support travel within communities. Travelling by car as a driver or a passenger accounted for 50% or more of all commutes in 17 of the 321 EDs. Half of these EDs were located in the wider Tallaght area, with Tallaght-Jobstown having the highest proportion of commutes by car at 56.5%. This was followed by Tallaght-Belgard at 56.4%, while Priorswood A had a level of 55.5%. The high dependence on cars was notable given the presence of the Luas red line, which connects Tallaght to Dublin city centre. This may indicate that public transport services are not connecting people to where they need to go or that there is a behavioural reason why people are less likely to use public transport.

Mapping phase

The number of daily commutes by bicycle was relatively low. Cabra East B had the highest rate at just over 10%, while Cabra West C came second at 9.8%. 15 EDs had a rate of 3% or less regarding cycling. All of these EDs were located in Ballbriggan, Clondalkin and Tallaght. A possible reason for the low levels of cycling is the lack of adequate bicycle lanes within these communities. Regarding the use of buses, the four Ballymun EDs represented 4 of the 6 EDs with the highest use of buses for transport, with over 1 in 4 people in Ballymun C and Ballymun B using buses for transportation.

The EDs with the highest use of rail for travelling to work, school or college were centred around the Kilbarrack train station (Grange D with 24.6%; Raheny-Greendale with 22% and Raheny-Foxfield with 20.6%). In 21 EDs, less than one percent of people used rail transport to travel. Unsurprisingly, these EDs were mainly in areas in Dublin North-West which do not have close access to rail networks, such as Ballymun and Finglas. Ballymun is included within the planned Metrolink, which could increase access to and use of public transport in the community[46].

The final two variables considered were access to a personal computer and access to the internet. The rationale for considering these variables is that a lack of internet connectivity could impact the ability of community members to access online services, such as information relating to the transition to net zero and relevant support. Regarding the lack of computer access, the EDs with the highest shortage of access were located in the wider Coolock area. Over half of the households in Priorswood B (52.3%) and Kilmore B (51.2%) did not have access to a personal computer. Kilmore B and Kilmore C also had high levels of houses with no internet connectivity. Cabra West B ranked first using this variable, as 30.5% of houses in this area did not have internet connectivity in 2016.

Mapping phase

3.2.4. Ranking of Electoral Divisions based on census data

Having analysed census data to gain an insight into the demographic composition of each location, the next step of the mapping phase was to identify which Electoral Districts constantly ranked high in the analysis of challenges facing communities and how this could impact Dublin's transition to net zero. The data generated from the census data was reviewed to determine which ED was positioned highest, second highest and third highest in each variable and colour coded in gold, silver and bronze, respectively (as shown in figure 5)

Location	Population	Over 65	Under 19	Born outside Ireland	Travellers	Housing built before 1945	Housing Built after 2001	Rented from Private Landlord
Ayrfield	5639	14.30%	25.40%	11.40%	0.33%	0.44%	22.00%	10%
Balbriggan Rural	16495	3.86%	39.20%	27.50%	0.91%	1.70%	63.80%	22.80%
Balbriggan Urban	8116	11.80%	30%	16.80%	0.50%	10%	21.50%	23%
Ballymun A	4765	4.81%	30.80%	24.30%	0.19%	0.36%	62.10%	16.80%
Ballymun B	4379	11.20%	30.30%	14.80%	6.21%	0.58%	34.30%	15.60%
Ballymun C	6112	11.50%	27.10%	15.30%	0.52%	0.28%	45.30%	16.20%
Ballymun D	2458	8.50%	31%	17.80%	0.12%	0.76%	52.20%	17.80%
Beaumont A	2463	28.20%	18.60%	11.20%	0%	0.90%	2.70%	8.98%
Beaumont B	4962	25.20%	20%	18.60%	0.08%	0.25%	10.10%	22.90%
Beaumont C	3242	23.80%	20.30%	14.10%	0.06%	3.50%	11.20%	13.80%
Blanchardstown-Coolmine	11320	7.58%	30.20%	26.60%	0.41%	0.67%	25.70%	23.20%
Blanchardstown-Corduff	3871	12.70%	23.30%	15.60%	0.05%	1.65%	3.38%	10%
Blanchardstown-Mulhuddart	4123	2.13%	38.10%	39.30%	1.17%	0.32%	46.80%	26.10%
Blanchardstown-Tyrrelstown	3257	2.55%	41.60%	33%	1%	0.83%	51%	10.20%
Cabra East B	3737	16.10%	21.20%	16%	0.08%	62.30%	4.84%	18.80%
Cabra West A	1478	20%	21.10%	0.80%	0.20%	19.60%	0.37%	5.04%
Cabra West B	2577	18.40%	21.20%	11.10%	0.12%	34.60%	5.50%	9.80%
Cabra West C	2953	10.40%	24.20%	12.80%	0%	41.90%	0.31%	13.40%
Cherry Orchard A	3254	6.27%	28.70%	16.50%	3.66%	0.27%	45.30%	19.40%
Cherry Orchard B (Cama)	2836	14.40%	24.50%	5.50%	0.04%	5.83%	9.40%	5.60%
Cherry Orchard C	4545	6.56%	29.90%	16.30%	0.69%	0.50%	27.90%	21.50%
Clondalkin-Cappaghmore	2581	6.28%	37.50%	12.40%	6.20%	1.03%	42.90%	3.08%

Figure 5: Analysis of variables to identify Electoral Divisions with high levels of vulnerability in the transition to net zero in Dublin.

In total, 45 EDs were ranked first, second or third in at least one variable. Electoral Divisions that did not come first in any variable were removed from the review. Finglas North A and Finglas North B were also removed as the only variables they ranked highly in were no water supply and sewerage facility. As these factors impacted a small number of households, they were not viewed as relevant to identifying the communities **most affected** by the transition to net zero. While Balbriggan Rural, Tallaght-Jobstown, and Blanchardstown-Tyrellstown ranked highly regarding houses built after 2001, the population of the ED and the number of people aged under 19, these variables were deemed to be less critical for identifying communities most in need of support in the transition to net zero. The rationale for this was that communities with older housing stocks and older communities might be more directly impacted by issues relating to energy efficiency and enhanced mobility options.

As depicted in table 3, the final round of ranking brought the number of EDs under consideration down to fifteen locations. Notably, two of these areas (Cabra West B and Kylemore) also featured in the Dublin Region Energy Master Plan as areas at risk of energy poverty.

Mapping phase

Where possible, EDs which ranked highly on several variables were included. Regarding the EDs considered most impacted, nine were located in the Dublin City Council area, four were in South Dublin County Council, and two were in Fingal County Council.

Table 3: Ranking of Electoral Divisions based on vulnerability.

Location	Local Authority	Positioned first	Positioned second	Positioned third
Priorswood B	Dublin City Council	3 (Travellers; Unemployment; No Personal Comupter		
Tallaght-Jobstown	South Dublin County Council	2 (Population; % travel by car)	1 (Under 19s)	
Tallaght-Belgard	South Dublin County Council	2 (% oil, gas, LPG; % electricity)	1 (% travel by car)	
Ballymun D	Dublin City Council	2 (No car; travel on foot)	1 (Rented from Local Authority)	2 (Housing built after 2001; Unemployment)
Kylemore	Dublin City Council	1 (No formal education/completed at primary school)	2 (No sewerage facilities; unable to work due to sickness/disability)	1 (No central heating)
Ballymun B	Dublin City Council	1 (% travel by bus)	2 (No car; Travellers)	
Cabra West B	Dublin City Council	1 (No internet connectivity)	2 (no central heating; no water supply)	1 (Houses built before 1945)
Kilmore B	Dublin City Council	1 (No water supply)	1 (No PC)	1 (No internet connectivity)
Tallaght-Springfield	South Dublin County Council	1 (rented from private landlord)	1 (Born outside of Ireland)	

Mapping phase

Table 3 (continued): Ranking of Electoral Divisions based on vulnerability.

Location	Local Authority	Positioned first	Positioned second	Positioned third
Blanchardstown-Mulhuddart	Fingal County Council	1 (People born outside of Ireland)		1 (Rented from Private landlord)
Cabra East B	Dublin City Council	2 (Houses built before 1945; % travel by bicycle)		
Balbriggan Urban	Fingal County Council	1 (coal and peat)		
Beaumont A	Dublin City Council	1 (Over 65s)		
Clondalkin-Cappaghmore	South Dublin County Council	1 (rented from Local Authority)		
Edenmore	Dublin City Council	1 (Persons with a disability)		

3.3. Mapping support groups

The final step of the mapping phase was identifying potential support groups for vulnerable communities undergoing change as part of the transition to net zero. This provides insight into some of the places where community members already meet and institutions that could be involved in developing and implementing plans to support a transition to net zero at a local level. These include active organisations and community focal points such as sports clubs, national schools, churches and health centres. A list of the organisations that are present in the fifteen areas that this study has identified as potentially vulnerable is presented in Appendix 3 of this report. Another organisation that could act as a broker for supporting at-risk communities is the local development company (LDC) for that area. LDCs are multi-sectoral partnerships that deliver community services, such as labour market activation, social inclusion and climate action[47]. LDCs are not-for-profit, volunteer-led organisations that provide a national service through locally-based services. There are a total of 9 LDCs in the Dublin region.

Mapping phase

Table 4 presents the LDC with jurisdiction over the fifteen communities identified in the mapping phase.

Table 4: Local Development Companies present within identified communities.

Ballyfermot Partnership	Dublin North West Area Partnership	Empower	Fingal Leader Partnership	Northside Partnership	South Dublin County Partnership
Kylemore	Cabra East B	Blanchardstown-Mulhuddart	Balbriggan Urban	Beaumont A	Clondalkin-Cappaghmore
	Cabra West B			Edenmore	Tallaght-Belgard
	Ballymun B			Kilmore B	Tallaght-Jobstown
	Ballymun D			Priorswood B	Tallaght-Springfield

4. Engagement Phase

To understand the views of community members towards the impacts of a transition to net zero and actions that could support their communities in the transition, the next step of this research was to engage with community members on the ground. It was evident that the Electoral Divisions of Ballymun D and Ballymun B were considered particularly vulnerable to the transition to net zero. Several Electoral Divisions around Coolock also ranked highly across criteria such as unemployment, persons with a disability and over 65s. These included Priorswood B, Kilmore B, Beaumont A and Edenmore. While these communities were geographically close, the types of challenges they face are different due to the different composition of the communities. This means that engaging with community members could help identify particular challenges facing these groups and consider tailored measures that could support communities in adapting to net zero.

Between interviews and focus groups, there were 28 participants in this study. The interview guide used in this study is presented in Appendix 4, while the focus group guide is presented in Appendix 5.

Participants in this study included, among others, people working with Northside Partnership, older community members and students at Trinity Comprehensive Secondary School in Ballymun. Focus groups lasted approximately 30 minutes to 1 hour, while the interviews lasted between 8 and 25 minutes. Several rounds of coding resulted in the creation of themes which structure the presentation of the findings of the engagement phase of this study, as presented in the following section.

4.1. How community members use energy

To begin the conversation on the transition to net zero, **participants were asked to consider how they use energy on a regular day**. A range of energy sources was described. Electricity was used in heating, cooking, domestic appliances and the charging of electronic devices. This was highlighted in the comment that '*in everyone's house there's something charging all the time*'. The increase in people working from home was also noted, as it has led to a rise in the use of energy to charge devices and the need to use more heating during the day. Participants also referenced using gas for cooking and heating, while petrol and diesel were described as important energy sources for transport. Wood and coal were also considered energy sources for people who use an open fire.

Regarding renewable sources, only one participant described how their home has an air-to-water system using a heat pump. They explained how an advantage of this is that their home is always warm.

Furthermore, as their home has only one energy source, they only have to pay one bill. They described how this was more economical than using multiple sources of energy. While the air-to-water system was viewed positively based on their experience, they were the only participant who spoke about making a switch from traditional types of energy.

One finding from the engagement phase of this study was that some participants described how they '*have been more careful* (in their use of energy) *since the price increases*' and that they had taken the '*personal decision to cut back*'. This example highlights how moving towards renewable energy without considering the impact on communities in terms of cost could worsen energy poverty in many areas.

4.2. Impacts of the transition to net zero

4.2.1. Cost of the transition

Community members discussed several impacts the transition to net zero would have on their communities. Most participants spoke of the costs individuals and communities would suffer moving from fossil fuels to renewable energy sources. As one person involved in a sports organisation explained, groups are '*worried about surviving rather than new ideas*' due to the increases in energy costs over the past year. Participants spoke about several groups who they thought would be particularly vulnerable to the impacts of a transition to renewables due to the current cost-of-living crisis. These include older people, people on low and middle incomes and single-parent households. Due to the costs facing these groups, their ability to invest in energy efficiency measures such as retrofitting or installing solar panels was viewed as limited.

In one focus group, participants spoke of seeing news reports from England where older people stay on buses to keep warm. As suggested by one participant, people in Dublin are '*not there yet,* (but we're) *not too far off*'.

Engagement phase

Participants also highlighted the long-term financial benefits that a transition to renewable would have for people. One person described the transition as a 'double-edged sword' as it has long-term benefits. However, the challenge of securing funding to invest in renewable energy sources, such as solar panels, in the short-term, meant that the transition was challenging for many communities. This is underpinned by the statement that:

> **The country could go a lot greener. It is so expensive but would save a lot of money in the long run**

While not a common theme among all interviews and focus groups conducted, in one focus group, a participant mentioned that if they invested in upgrading their home in an area such as the installation of solar panels, they would feel foolish if a national scheme was introduced and others received upgrades at no cost. This has the potential result of holding back individuals from taking action. As retrofitting and the installation of solar panels were common responses to the question of what impact the transition to net zero will have on communities, participants also spoke of the current housing crisis as a factor that will impact the transition to net zero. This focused on the different challenges facing renters and homeowners. Participants spoke of the limited options that renters would have to support the greening of apartments due to the issue of ownership alongside the broader issue of the cost of rent. Similarly, one participant described how people can '*just afford to buy a house,* (they) *can't afford to do more*'. The upgrading of older homes was also perceived to be expensive.

4.2.2. Barriers to increasing usage of public transport and active transport

Alongside the impacts of net zero on energy usage, participants spoke in detail about how a transition will impact how they move around. Participants described how the lack of cycle lanes in their community limits the greater uptake of cycling. One person alluded to safety concerns as they explained how they would not let their child cycle to school due to the lack of consistent cycle lanes in the area. Regarding public transport, participants spoke of the need for greater connectivity between destinations rather than having to go to the city centre to get another bus. This was highlighted in the comment that:

> **Buses weren't linking up to get me from A to B quick**

Engagement phase

One participant discussed how the lack of connectivity could increase the cost of transport for marginalised groups. They provided the example of refugees needing to take taxis to go to family resource centres from where they are staying. Alongside connectivity issues, the reliability of buses and the cost of public transport were also noted as potential limitations to increased uptake of public transport. One interviewee noted this in the comment that '*Dublin Bus, DART, Luas - some people find the cost expensive*'. Similarly, one participant described how, as a family of 5, it would be cheaper to go from Dublin 5 to the city centre by driving rather than using public transport. This was due to the presence of free parking compared to the availability of public transport, which may cost them approximately €20. Alternatively, it was noted that '*if it* (public transport) *was free, I would have no problem*'.

4.2.3. Electric Vehicles

Similar to the issue of affording home energy upgrades, the affordability of electric vehicles was a common theme among participants. Alongside the cost of an electric vehicle, a further issue limiting uptake described by participants was the lack of charging points. This was highlighted by one participant from Darndale who spoke of how people are '*not going to go all the way to Swords or Blanchardstown to charge your car*'. The lack of charging points was also noted as relevant to people living in apartment complexes due to the reduced likelihood that they would have an EV plug-in charger in their homes. One participant described how the lack of EV charging points at petrol stations was a measure that could be addressed to help increase the number of EV charging points within communities. While the inability of communities to invest in renewable energy may make them more reliant on increasingly expensive forms of fossil fuel energy, a similar outcome may occur in the area of mobility.

The inability of people to afford electric cars may lead to them depending on older vehicles which cause more pollution and require an NCT test every year, thereby adding further expense to people's lives.

If you have a car, you can't afford a new one. So pre-2008... your tax for that car is huge. So why don't they say, look it, fund people to go hybrid. Now, I know you have to means test it

**4.2.4. Perceived benefits of the transition to net zero**

Alongside the challenges facing communities in the transition to net zero, participants also discussed the benefits of a transition. A commonly referenced benefit was the transition's impact on improving air quality within communities. Similar to this was the view that using more renewable energy would lead to '*better health and healthier community*' due to fewer fumes from petrol and diesel power cars and reduced coal use.

While the cost of transitioning to renewables was identified as a challenge for communities, participants also spoke of how renewable energy would save money in the long term. This was based on the view that it would result in '*less money being spent on heating*'. The insulation of walls was described as a measure to help communities' financial well-being as people would be '*saving more* (by) *burning less*'. A further potential benefit spoken of by participants was the possibility of benefiting from solar panels by selling energy into the national energy network.

Participants also referenced wider environmental benefits that a transition to fossil fuels would have for slowing climate change while increasing awareness of energy consumption. One group focused on the negative impacts of fossil fuels, such as oil, on biodiversity along the coast. Notably, one aspect which did not feature in the participants' perspectives when discussing the benefits of the transition was the potential job opportunities that the transition to net zero could create. The only reference to this topic was the difficulty in finding tradespeople to complete jobs. One participant described their problem of trying to find someone to fix solar panels they have on their roof:

❝❞

In my home, I have solar panels on the roof that need to be fixed, and I've tried everywhere, but they're all so busy now putting in the new type of panels. I don't think anyone's interested in the old one, and I'd imagine it's the same for everyone living around this area, too

❝
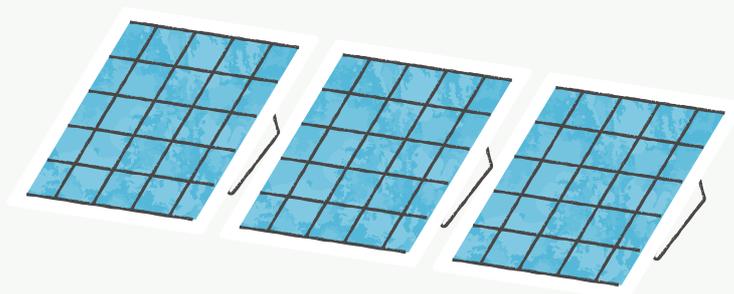
Engagement phase

In contrast to the benefits that the transition to net zero could have for communities, participants also described the scale of the challenge of creating a more sustainable society. This was illustrated in the comments that it '*feels almost futile so much damage getting done*' and that it is '*hard to know where to start*'. The necessity of action was described by one participant who noted that:

Of all the crises that we have going on currently, housing, health, and the environment is the most significant one. It will touch everybody, regardless of your socio-economic status

4.3. Actions to support a transition to net zero

4.3.1. Financial support

To achieve net zero for communities in Dublin, participants identified financial and informational support as being critically important. Beginning with finance, improving the threshold for applying for home energy upgrade grants was identified as relevant to people who own their homes. Participants spoke of the lack of incentives for homeowners to undertake actions. Related to this was the view that people in this circumstance tend to be excluded from government initiatives. The rationale for providing greater support for homeowners is that while people may not be able to afford to undertake action on their homes in the short term, completing payment over a longer term would make this more viable.

A similar viewpoint was held by people when discussing support for people who are renting from a local authority. One suggestion discussed by participants was adding a small amount to the monthly rent paid to Dublin City Council (e.g. €15 a month) to help pay back the cost of the grant for installing solar panels.

Participants also identified some groups who should be provided with additional assistance, such as old-age pensioners and people on a low income. In terms of actions that decision-makers could take, the retrofitting of all Council houses was discussed. As noted by one participant, there was a need for measures to be '*equitable, not just efficient*'. Financial support was also discussed in the context of more sustainable forms of transport. Central to this was increasing the number of charging points for electric vehicles.

Engagement phase

In terms of active travel, the bikes to work scheme was identified as a positive action, and further steps could be taken to broaden this scheme to people who do not currently qualify, such as students or people who are unemployed. The need for improvement in cycle lanes was also discussed as a way to increase active travel. Regarding public transport, reducing fares and increasing park-and-ride facilities were highlighted as possible supports for reducing dependency on private car travel.

4.3.2. Awareness-raising measures and informational supports

Several examples of actions that could be taken to increase awareness were described by participants. The need for more information about the transition to net zero was noted. An important focus was ensuring that the provision of information focused on the benefits of the transition for communities, such as how much it would save people financially per month. This was highlighted in the statement that information should be provided in 'layman's terms' and that relevant organisations '*don't need to over-explain things*'.

Aligned with the importance of describing the benefits of net zero for communities, participants also spoke of the benefits of communicating the transition via word of mouth. Central to this was the potential for people who have undertaken a change to explain their experiences to others. One participant also discussed the possible benefits of undertaking trial runs of new initiatives in an area to raise awareness. Similar to this was the benefit of seeing the impact of the transition to net zero. One participant highlighted the example of electric buses as a way of informing community members about the increased use of renewable energy:

"

> *I know that there's a goal of making more of our public transport based on electric energy as opposed to on carbon fuel. And I think that would make a huge shift in terms of people seeing the government prioritising it... you know, the impact that would make in terms of people seeing first-hand how you can have a bus that is just as good as the bus we're traditionally used to, but that's completely clean and green and, you know, using more renewable energy sources*

"

Alongside increasing awareness about actions that can be taken to support net zero, the need for support when applying for grants or the provision of information relating to schemes was also noted by participants. The importance of providing information to address people's concerns about moving towards renewable energy was also discussed. One example of this was the lack of awareness people have about how solar energy operates and if they would be without power if there is bad weather. This was noted as particularly relevant to older age groups due to the higher potential for resistance to changes within this cohort. Participants also spoke of the need for relevant organisations to go to communities to provide them with relevant information about how the uptake of renewable energy or more sustainable forms of transport could help to save them money.

4.4. Organisations that can support communities in securing a transition to net zero

4.4.1. Peer-to-peer learning and insights from experts

In terms of organisations that will help secure a transition to net zero, participants discussed various entities that can provide the financial and informational support detailed in the preceding section. As one participant discussed, no one group will be responsible for moving away from fossil fuels. Instead, it will require input from local authorities, transport providers, energy companies, schools, the government, the health service and communities.

Engagement phase

Participants referenced the importance of a community-focused approach to the transition to net zero. When participants were asked what they liked most about their area, the sense of community was a common response. The transition to net zero could build upon existing networks to help promote actions for achieving a more sustainable society. It was noted that communities have different challenges; therefore, a tailored approach would be needed to identify the most beneficial measures for securing a transition to net zero. Alongside peer-to-peer learning, participants described organisations such as the Sustainable Energy Authority of Ireland and the Environmental Protection Agency as organisations they trust to provide relevant information and advice on the transition to net zero.

4.4.2. Organisations in the community

Organisations with whom communities are already connected to were also identified as important outlets for supporting the transition to net zero. These include organisations related to sustainability, such as the Rediscovery Centre in Ballymun and tidy town groups alongside groups that provide support in a wide range of areas, such as Northside Partnership and family resource centres. Dublin City Council was also identified as a relevant organisation.

Engagement phase

Civic centres were identified as spaces that could provide information relevant to the transition to net zero. Youth services and religious organisations were also identified as groups that could provide tailored support to young people, parents and older age groups. As noted by one participant, these organisations and schools could act as bases for providing information within communities:

> **It's worthwhile maybe looking at the option of educating and informing people through community centres or even thinking of schools or church, as an example of a community base that you use the sort of facilities in the community already that people trust, that people places where people gather, places where people get information. I mean, you could provide workshops that would include not just primary school-aged children, but that they could bring their grandparents along and something that you could have a community-wide learning experience.**

4.4.3. Groups who were viewed as less trustworthy

While there were organisations mentioned as trusted sources of information, other organisations were met with mixed responses from participants. A core example of this was the role of politicians at the national level. While some participants described how they would trust local politicians, they also explained how they wouldn't trust others because of '*antics in the Dáil*'. While there was the view that the Government '*have a lot to do to get people to go greener*', one young person noted that '*it's the Government's responsibility to provide efficient methods of consumption to reduce cost of living especially for areas they label 'disadvantaged*''.

TDs and Councillors were identified as important as they hold a degree of power in local areas. Although not a theme across all participants engaged, some noted feelings of neglect within communities and how this has led to resentment and apathy. In terms of organisations that participants trusted least, one participant described how '*people are frustrated and fed up with companies putting pressure on people*'. This is focused on the perception that older people were being discouraged from switching their energy providers. Aligned with this was the perception that '*people are getting ripped off by companies*'.

5. Recommendations

5.1. Policy recommendations

Finance

The cost of the transition to net zero was a common feature within the focus groups and interviews conducted in this study. For this reason, policy measures will be needed to facilitate changes in various areas, including housing, energy and transport. In the area of housing, enhancing access to grants for homeowners, reducing the risk of 'green gentrification' for private renters and increasing the retrofitting of houses rented from Local Authorities represent actions that can reduce emission creation. Regarding energy and transport the cost of solar panels and electric vehicles represent barriers to their further uptake. Further investment, whether at an individual or a community level, will be vital to making these green initiatives more accessible to community members.

Information

The perceived absence of information relating to benefits and access to support is a measure which could be rectified by providing information that is accessible to community groups and is specific to their needs.

Infrastructure

To improve access to active travel, further investment in cycle lanes will be needed to ensure concerns relating to safety. Aligned with this is the need to improve the accessibility and connectivity of public transport, as well as improving electric vehicle charging infrastructure

> ## 5.2. Recommendations for future engagement with communities on net zero

This report has provided an initial overview of community members' perspectives in areas that could be left behind if climate and energy policy is not developed and applied in a fair and inclusive manner.

Co-creating solutions to address local barriers

The groups engaged within this study highlighted a number of areas where solutions must be developed to support the transition to net zero. The local knowledge and lived experiences of community members will be central to embedding change and identifying workable solutions. To build upon the findings of this study, a focus must be placed on co-creating climate solutions that can help reduce emission creation and address the challenges impacting community groups in their everyday lives. Therefore, it is necessary to utilise expert knowledge relating to the development of climate solutions alongside the local knowledge of community groups.
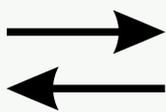
Leverage existing trusted intermediaries and meet people where they are

The first possible means to achieving this is developing and supporting a network of local community groups similar to those presented in Appendix 2 of this study to act as a linchpin for local climate action. One of the benefits of engaging with these groups is that it can help to identify where community members are already interacting with one another. This could help leverage existing networks and community meetings to share useful information and engage people on the energy transition, removing the expectation for individuals to turn up to specific events focused on energy and the transition to net zero. Connection with the providers of support services, such as those provided by local development companies, could also enhance the prospects of engaging with groups that may be overlooked in decision-making processes.

5.2. Recommendations for future engagement with communities on net zero (continued)

Make engagement accessible and relevant to local communities

A possible issue for securing a transition to net zero may be the inaccessibility of language focusing on net zero. This aligns with the perception that the communication of the benefits of net zero must focus on tangible outcomes, such as the financial benefits it would have in reducing energy costs, among others. While the People's Transition model applied by TASC focuses on community-led local development for climate justice, the language used when engaging with community members focuses more so on identifying what communities like about their local area alongside challenges facing a given community. A similar approach could be taken in the context of promoting the idea of net zero. This could assist in identifying the primary challenges facing individual communities. From this, and with the assistance of researchers with expertise in areas relating to a climate solution, measures can be taken to support the delivery of new initiatives with a climate and community benefit.

6. Conclusion

This study has undertaken a desk-based analysis of census data and engagement with community members to understand the potential impacts of the transition to net zero on communities in Dublin. Alongside discussing how energy is consumed, this study has also identified possible actions to support the transition to net zero and organisations that can assist communities in this transition.

A number of central themes emerged following the undertaking of engagement with community members. These include a lack of information, finance and an absence of necessary infrastructure to facilitate a transition to net zero. The cost of transitioning to renewable energy and more sustainable modes of transport was identified by participants as a central issue facing communities in adapting to a net zero society. A theme throughout the participants' perspectives was the impact that contemporary challenges such as the cost-of-living crisis and housing crisis have on the ability of people to invest in sustainable practices, such as the retrofitting of homes, installation of solar panels and transitioning towards electric vehicles.

Alongside peer-to-peer information, participants emphasised the need for information to underline the financial benefits that taking action will have for people. Enhancing awareness of what organisations to contact regarding applying for grants was also noted as a measure that could help address uncertainties or reservations about embracing change.

Regarding the limitations of this study, sourcing participants was a significant challenge. One potential reason may be the presence of stakeholder fatigue within communities. This can occur when community members have been asked to participate in research and policy initiatives in the past. The failure of decision-makers to adequately address underlying causes of disadvantage facing communities can lead to feelings of apathy, neglect and resentment within communities. The electoral success of political groups internationally that deny climate change or present climate action as a factor which adds further challenges to disadvantaged communities, illustrates the necessity of undertaking climate action in a just manner which leaves no group behind. Given that fieldwork for this study was undertaken during a wave of anti-refugee protests in Dublin, the transition to a net zero society must be consistent with the idea of a just transition.

> **The intention of a just transition is to make sure that the move away from fossil fuels takes place in a way that leaves no group worse and provides a voice to all who will be impacted by climate change.**

Conclusion

The just transition idea is therefore relevant to climate action as well as addressing issues of inequality that are experienced by communities currently. Given the emphasis placed on the sense of community and the role of community-based organisations, these organisations could act as central focal points for co-designing climate solutions that address challenges unique to individual communities and support the implementation of climate solutions. As these organisations reflect anchor institutions that bind communities together (e.g. churches, community centres, schools, sports clubs), these organisations could provide a safe space for the provision of information and provide community members with a forum to have their say on what a net zero future should look like for their community. Aligned with this is the need to engage with pre-existing networks within communities to ensure that engagement on the issue of net zero originates from trusted sources of information.

References

1. Intergovernmental Panel on Climate Change, 2018. *SPECIAL REPORT: GLOBAL WARMING OF 1.5 °C: Glossary.* [Online] Available at: https://www.ipcc.ch/sr15/chapter/glossary/ [Accessed 29 March 2023].
2. Codema, 2021. *Zero Together: Citizens' Survey Results,* Dublin: Codema.
3. McCabe, S., 2021. *Talking Green: The Irish Survey,* Dublin: TASC.
4. McCabe, S., 2020. *The People's Transition: Community-led development for climate justice,* Brussels: Foundation for European Progressive Studies.
5. Government of Ireland, 2020. *Roadmap for Social Inclusion 2020-2025: Ambition, Goals, Commitments*, Dublin: Government of Ireland.
6. Intergovernmental Panel on Climate Change, 2023. *AR6 Synthesis Report.* [Online] Available at: https://www.ipcc.ch/report/ar6/syr/resources/spm-headline-statements/ [Accessed 31 March 2023].
7. Krishnan, M. et al., 2022. *The net-zero transition: What it would cost, what it could bring*, New York: McKinsey Global Institute.
8. Intergovernmental Panel on Climate Change, 2019. *Climate Change and Land: An IPCC Special Report on Climate Change, Desertification, Land Degradation, Sustainable Land Management, Food Security, and Greenhouse Gas Fluxes in Terrestrial Ecosystems.*, Geneva: Intergovernmental Panel on Climate Change.
9. ESB, 2022. *DRIVEN TO MAKE A DIFFERENCE: NET ZERO BY 2040*, Dublin: ESB.
10. International Monetary Fund, 2021. *REACHING NET ZERO EMISSIONS*, Washington D.C.: International Monetary Fund.
11. KPMG, 2021. *Net Zero Readiness Index 2021*, Amstelveen: KPMG.
12. KPMG, 2021. *Net Zero Readiness Index 2021*, Amstelveen: KPMG.
13. KPMG, 2021. *Net Zero Readiness Index 2021*, Amstelveen: KPMG.
14. Government of Ireland, 2020. *Programme for Government: Our Shared Future*, Dublin: Government of Ireland.
15. Government of Ireland, 2022. *Climate Action Plan 2023,* Dublin: Government of Ireland.
16. Fingal County Council, 2021. Fingal County Council Climate Change Action Plan 2019-2024: Annual Progress Report 2021, s.l.: Fingal County Council.
17. Burck, J. et al., 2022. Climate Change Performance Index 2023, Bonn: Germanwatch.
18. Department of the Taoiseach, 2023. First Progress Report of Climate Action Plan 2023 Published. [Online] Available at: https://www.gov.ie/en/press-release/c3bdb-first-progress-report-of-climate-action-plan-2023-published/ [Accessed 24 May 2023].
19. Dublin City Council, 2019. *Dublin City Council Climate Action Plan 2019 - 2024*, Dublin: Dublin City Council.
20. United Nations' High-Level Expert Group on the Net Zero Emissions Commitments of Non-State Entities, 2022. Integrity Matters: Net Zero Commitments by Businesses, Financial Institutions, Cities and Regions, New York: United Nations.

References

21. County and City Management Association, 2021. *Delivering Effective Climate Action 2030*, Dublin: County and City Management Association.

22. Codema, 2021. *Dublin Region Energy Master Plan*, Dublin: Codema.

23. Dublin Metropolitan Climate Action Regional Office, 2020. Developing Decarbonising Zones in Ireland; A Briefing Paper for the Local Authority Sector, Dublin: Dublin Metropolitan Climate Action Regional Office.

24. South Dublin County Council, 2022. County Development Plan: Energy, s.l.: South Dublin County Council.

25. Codema, 2021. *Dublin Region Energy Master Plan*, Dublin: Codema.

26. Codema, 2021. *Dublin Region Energy Master Plan*, Dublin: Codema.

27. Codema, 2021. *Dublin Region Energy Master Plan*, Dublin: Codema.

28. Dublin City Council, 2019. *Dublin City Council Climate Action Plan 2019 - 2024*, Dublin: Dublin City Council.

29. Dublin City Council, 2019. *Dublin City Council Climate Action Plan 2019 - 2024*, Dublin: Dublin City Council.

30. O'Sullivan, K., 2020. *Over 70,000 Irish addresses at risk of coastal flooding by 2050*. [Online] Available at: https://www.irishtimes.com/news/environment/over-70-000-irish-addresses-at-risk-of-coastal-flooding-by-2050-1.4258531 [Accessed 26 May 2023].

31. Dublin City Council, 2019. *Dublin City Council Climate Action Plan 2019 - 2024*, Dublin: Dublin City Council.

32. Ordnance Survey Ireland, 2018. *Local Electoral Area Boundary Committee No. 1 Report 2018*, Dublin: Government of Ireland.

33. Pobal, 2017. *Launch of 2016 Pobal HP Deprivation Index*. [Online]. Available at: https://www.pobal.ie/launch-of-2016-pobal-hp-deprivation-index/ [Accessed 1 November 2022].

34. United States Environmental Protection Agency, n.d. Climate Change Impacts. [Online] Available at: https://climatechange.chicago.gov/climate-impacts/climate-impacts-society#:~:text=People%20who%20live%20in%20poverty%20may%20have%20a%20difficult%20time,with%20impacts%20of%20climate%20change. [Accessed 24 May 2023].

35. Codema, 2021. *Dublin Region Energy Master Plan*, Dublin: Codema.

36. McCabe, S., 2020. *The People's Transition: Community-led development for climate justice*, Brussels: Foundation for European Progressive Studies.

37. Stamp, S. & Kearns, M., 2019. *Accommodating Ethnicity: Addressing Energy Poverty Among Travellers Living in Mobile Homes and Trailers: An Exploratory Study*, Dublin: National Traveller MABS.

38. Government of Ireland, 2022. Energy Poverty Strategy Review. [Online] Available at: https://www.gov.ie/en/consultation/4e1ac-energy-poverty-strategy-review/#:~:text=Using%20this%20approach%2C%20a%20household,%2C%20gas%20or%20solid%20fuels) [Accessed 2 February 2023].

References

39. Albath, E. A. et al., 2023. *Young, unemployed, excluded: Unemployed young adults report more ostracism*. European Journal of Social Psychology, pp. 1-20.
40. Hayden, E., 2017. *Unemployment rate is one of highest in Ireland*. [Online]
Available at:
https://www.independent.ie/regionals/newrossstandard/news/unemployment-rate-is-one-of-highest-in-ireland-35843549.html [Accessed 27 September 2022].
41. McCabe, S., 2021. *The People's Transition - Phibsborough*, Dublin: TASC.
42. Codema, 2021. *Dublin Region Energy Master Plan*, Dublin: Codema.
43. McCabe, S., 2021. *The People's Transition - Phibsborough,* Dublin: TASC.
44. von Platten, J., de Fine Licht, K., Mangold, M. & Mjörnell, K., 2021. Renovating on Unequal Premises: A Normative Framework for a Just Renovation Wave in Swedish Multifamily Housing. *Energies*, Volume 14, p. 6054.
45. Dún Laoghaire Rathdown County Council, 2019. *Dún Laoghaire Rathdown County Council Climate Change Action Plan 2019-2024*, s.l.: Dún Laoghaire Rathdown County Council.
46. Government of Ireland, 2022. *Minister Ryan announces transformative MetroLink project.* [Online]
Available at: https://www.gov.ie/en/press-release/f1a15-minister-ryan-announces-transformative-metrolink-project/#artist-impressions-of-metrolink-stations [Accessed 2 January 2023].
47. Irish Local Development Network, 2020. *Local Development Companies*. [Online]
Available at: https://ildn.ie/about/local-development-companies/
[Accessed 10 February 2023].

Appendix 1

Dublin Electoral Divisions classified as marginally below average, disadvantaged, very disadvantaged and extremely disadvantaged.

ED Name	County Council	Pobal Deprivation Index
Ayrfield	Dublin City Council	Marginally below average
Ballybough A	Dublin City Council	Marginally below average
Ballygall A	Dublin City Council	Marginally below average
Ballygall B	Dublin City Council	Marginally below average
Ballygall D	Dublin City Council	Marginally below average
Ballymun A	Dublin City Council	Marginally below average
Beaumont A	Dublin City Council	Marginally below average
Beaumont B	Dublin City Council	Marginally below average
Beaumont C	Dublin City Council	Marginally below average
Cabra East B	Dublin City Council	Marginally below average
Cabra West C	Dublin City Council	Marginally below average
Clontarf West B	Dublin City Council	Marginally below average
Crumlin A	Dublin City Council	Marginally below average
Crumlin B	Dublin City Council	Marginally below average
Crumlin C	Dublin City Council	Marginally below average
Crumlin D	Dublin City Council	Marginally below average
Crumlin E	Dublin City Council	Marginally below average
Crumlin F	Dublin City Council	Marginally below average
Finglas North C	Dublin City Council	Marginally below average
Finglas South B	Dublin City Council	Marginally below average
Grange D	Dublin City Council	Marginally below average
Grange E	Dublin City Council	Marginally below average
Inchicore B	Dublin City Council	Marginally below average
Inns Quay A	Dublin City Council	Marginally below average
Inns Quay C	Dublin City Council	Marginally below average

Kilmainham A	Dublin City Council	Marginally below average
Kimmage A	Dublin City Council	Marginally below average
Kimmage B	Dublin City Council	Marginally below average
Kimmage D	Dublin City Council	Marginally below average
Kimmage E	Dublin City Council	Marginally below average
Harmonstown A	Dublin City Council	Marginally below average
Harmonstown B	Dublin City Council	Marginally below average
Kilmore A	Dublin City Council	Marginally below average
Kilmore D	Dublin City Council	Marginally below average
Priorswood A	Dublin City Council	Marginally below average
Priorswood E	Dublin City Council	Marginally below average
Raheny-Foxfield	Dublin City Council	Marginally below average
Raheny-Greendale	Dublin City Council	Marginally below average
Ushers C	Dublin City Council	Marginally below average
Ushers E	Dublin City Council	Marginally below average
Walkinstown A	Dublin City Council	Marginally below average
Walkinstown B	Dublin City Council	Marginally below average
Walkinstown C	Dublin City Council	Marginally below average
Wood Quay A	Dublin City Council	Marginally below average
Cabra West A	Dublin City Council	Disadvantaged
Cabra West B	Dublin City Council	Disadvantaged
Ballymun B	Dublin City Council	Disadvantaged
Ballymun C	Dublin City Council	Disadvantaged
Ballymun D	Dublin City Council	Disadvantaged
Cherry Orchard A	Dublin City Council	Disadvantaged
Cherry Orchard B (Carna)	Dublin City Council	Disadvantaged
Cherry Orchard C	Dublin City Council	Disadvantaged
Decies	Dublin City Council	Disadvantaged
Drumfinn	Dublin City Council	Disadvantaged
Edenmore	Dublin City Council	Disadvantaged
Finglas North A	Dublin City Council	Disadvantaged

Finglas North B	Dublin City Council	Disadvantaged
Finglas South A	Dublin City Council	Disadvantaged
Finglas South D	Dublin City Council	Disadvantaged
Grange C	Dublin City Council	Disadvantaged
Kylemore	Dublin City Council	Disadvantaged
Kilmore B	Dublin City Council	Disadvantaged
Kilmore C	Dublin City Council	Disadvantaged
Priorswood C	Dublin City Council	Disadvantaged
Priorswood D	Dublin City Council	Disadvantaged
Finglas South C	Dublin City Council	Very disadvantaged
Priorswood B	Dublin City Council	Very disadvantaged
Ballinteer-Meadowmount	Dún Laoghaire-Rathdown	Marginally below average
Cabinteely-Kilbogget	Dún Laoghaire-Rathdown	Marginally below average
Dún Laoghaire-Mount Town	Dún Laoghaire-Rathdown	Marginally below average
Dún Laoghaire-Sallynogin South	Dún Laoghaire-Rathdown	Marginally below average
Killiney-South	Dún Laoghaire-Rathdown	Marginally below average
Shankill-Rathsallagh	Dún Laoghaire-Rathdown	Marginally below average
Balbriggan Urban	Fingal	Marginally below average
Balbriggan Rural	Fingal	Marginally below average
Blanchardstown-Tyrrelstown	Fingal	Marginally below average
Blanchardstown-Mulhuddart	Fingal	Marginally below average
Blanchardstown-Coolmine	Fingal	Marginally below average
Kilsallaghan	Fingal	Marginally below average
Blanchardstown-Corduff	Fingal	Disadvantaged
Bohernabreena	South Dublin	Marginally below average
Ballinascorney	South Dublin	Marginally below average
Clondalkin-Dunawley	South Dublin	Marginally below average
Tallaght-Belgard	South Dublin	Marginally below average
Tallaght-Glenview	South Dublin	Marginally below average

Tallaght-Jobstown	South Dublin	Marginally below average
Tallaght-Kilnamanagh	South Dublin	Marginally below average
Tallaght-Kiltipper	South Dublin	Marginally below average
Tallaght-Kingswood	South Dublin	Marginally below average
Tallaght-Millbrook	South Dublin	Marginally below average
Tallaght-Oldbawn	South Dublin	Marginally below average
Tallaght-Springfield	South Dublin	Marginally below average
Templeogue-Limekiln	South Dublin	Marginally below average
Terenure-Cherryfield	South Dublin	Marginally below average
Palmerston West	South Dublin	Marginally below average
Palmerston Village	South Dublin	Marginally below average
Clondalkin-Cappaghmore	South Dublin	Disadvantaged
Clondalkin-Moorfield	South Dublin	Disadvantaged
Clondalkin-Rowlagh	South Dublin	Disadvantaged
Tallaght-Avonbeg	South Dublin	Disadvantaged
Tallaght-Fettercairn	South Dublin	Disadvantaged
Tallaght-Killinardan	South Dublin	Disadvantaged
Tallaght-Tymon	South Dublin	Disadvantaged
Terenure-St. James	South Dublin	Disadvantaged

Appendix 2

Indicators used to evaluate the vulnerability of Electoral Divisions

Population of ED	% of the population that are over 65	% of the population that are under 19	% of the population that were born outside Ireland	% of ED that are members of the traveller community	% of houses that were built before 1945	% of houses that were built after 2001	% of houses that are rented from Private Landlords	% of houses that are rented from Local Authorities
% of houses with no central heating	% of houses that use oil, gas or Liquid Petroleum Gas for heating	% of houses that use electricity for heating	% of houses that use coal and peat for heating	% of houses with no water supply	% of houses with no sewerage facility	% of the population that are unemployed	% of the population that are unable to work due to sickness	% of the population that have no formal education or completed education at primary school level
% of the population that have a disability	% of houses with no PC	% of houses with no internet connectivity	% of houses with no car	% of the population that travel by foot	% of the population that by bicycle	% of the population that by car	% of the population that by bus	% of the population that by rail

Appendix 3

Organisations located in communities identified as potentially vulnerable to the transition to net zero

	Priorswood B	Tallaght-Jobstown	Tallaght-Belgard	Ballymun D	Kylemore	Ballymun B	Cabra West B	Kilmore B
Sports and recreation	St. Michael's House Leisure Centre & Swimming Pool Priorswood Scout Group Splashtastic Swimming Lessons	Tallaght leisure centre Kickstart fitness Jobstown Celtics All-Weather Pitch Jobstown Boxing Club St Aidans Football Club Black Panther Kickboxing and martial arts club Westside boxing club	Unique Dance and Gymnastics	Setanta GAA Sports and Fitness Ballymun Lighthouse The Towers ASTRO		Poppintree Community Sport Centre	Cabra boxing club	Oscar Traynor Coaching and development centre Kilmore West Recreation Centre
Youth organisation	Sphere17 Priorswood	Brookfield Youth and community centre				Poppintree Youth Project Ballymun Youth Action Project and URRUS		Kilmore West Youth Project
School/education	St. Francis Senior National Catholic School	Tallaght Community National School St Brigid's junior national school St Aidan's senior national school St Thomas Senior National School St Thomas JNS Youth Horizons Secondary School Mount Seskin Community College St. Aidan's Community School	Scoil Ard Mhuire Solas Chríost, N.S.	CDETB Adult Education Service Scoil an tSeachtar Laoch Naionra Scoil an tSeachtar Laoch Holy Spirit Boys National school Holy Spirit Girls National Catholic School	Ballyfermot College of Further Education National Learning Network Ballyfermot Kylemore Community Training Centre	St. Joseph's Junior National School	Broombridge educate together national school Cabra community college	Gaelscoil Cholmcille Scoil Íde Scoil Fhursa Cromcastle Green Boys National School
Minority/targeted support group	Trav Act Outreach Centre	Barnardos Child And Family Centre Bawnlea		Men's Networking Resource Centre				
Old age support group	Golden Years Senior Centre						Sancta Maria Day Centre	

Category								
Healthcare provider	Darndale Health Centre The Dales	Mary Mercer Health Centre Tallaght Rehabilitation Project CLG						HSE Dublin North East Health Centre Tulsa HSE
Childcare provider	Darndale Belcamp Integrated Childcare Service Ltd	Cocoon childcare Jobstown Childcare Centre Brookview Childcare Service Ard Mór Court ECCE, Early Years Services Stepping Stones Creche		Our Ladys Nursery Ballymun Limited Tír na nÓg Ballymun Day Nursery		Poppintree Early Education Centre		
Multi-purpose amenity	Darndale Belcamp Recreation Centre Darndale Belcamp Village Centre	Jobstown Community Centre Limited South Dublin County PPN Ard Mor Community Centre	Belgard Community Centre	Ballymun Library	Ballyfermot Library		Community credit union	
				The Sillogue Neighbourhood Centre Ballymun Ballymun Regional Youth Resource (Reco)				
Business		Citywest shopping centre	Roadstone Head Office Dublin Concrete Batching Plant				Broombridge business centre Cabra NCBI charity shop Broombridge station and Luas depot	
Religious organisation		St Aidan's Parish church		Church of the Holy Spirit, Ballymun	Gospel Faith Mission Daycare	St. Pappin's Pastoral Centre St. Joseph's Church, St. Pappin's Parish, Ballymun.	Church of the most precious blood	St Luke the evangelist catholic church
Public/Green space		Corbally Park Carrigmore Park Jobstown Park Citywest Village Green	The Meadows	Sillogue Road Grassland	Le Fanu Park Kylemore Park	Balcurris Park		Coolock Lane Park Kilmore Park

	Tallaght-Springfield	Blanchardstown-Mulhuddart	Cabra East B	Balbriggan Urban	Beaumont A	Clondalkin-Cappaghmore	Edenmore
Sports and recreation			St. Finbarr's GAA club	Balbriggan Cricket Club Balbriggan 34th/161st Scouts Balbriggan FC			
Youth organisation	Foróige The big picture youth service			Youthreach			St Monica's Youth Centre
School/education	St Mark's national school	Ladyswell National School Shaheeda Zainab Independent Muslim Primary School	Christ the King Girls National School Christ the King Boys School	Balbriggan Enterprise and Training Centre		Kishoge Community College Divine Mercy Junior National School	Springdale National School
		TU Dublin Blanchardstown Campus Riversdale Community College	Happy Days Preschool and After School Naionra Bharra	Balbriggan Community College Loreto Balbriggan		Divine Mercy Secondary School Lucan Community National School	
Minority/targeted support group	Women Together Tallaght network	Dublin 15 Disability Peer Support Group		Balbriggan Integration Forum Aster Family Resource Centre		Console Clondalkin	
Old age support group						Padre Pio nursing home	
Healthcare provider	Tallaght University Hospital Tallaght Medical Practice Tallaght Adult Mental Health services	Alfa Medics Mulhuddart	HSE Health Centre Cabra	Balbriggan Medical Centre			St Joseph's Hospital
Childcare provider	Early Childhood Ireland	Tigers Childcare				Balgaddy Child and Family Centre	Tir Na nÓg Creche & Preschool
						Cappaghmore playschool	
Multi-purpose amenity	South Dublin County Partnership County Hall Tallaght	Mulhuddart Community Centre		Fleming Community Centre			
Business	The Square shopping centre Cookstown business centre			Balbriggan Chamber			
Religious organisation		St Luke the evangelist catholic church Shuhada Foundation of Ireland St Mary's Church	Christ the King Catholic Church	Balbriggan Presbyterian Church		Alkhidmah Community Mosque Church of the divine mercy	Sisters of St Joseph of Chambery
Public/Green space		Castlecurragh Park Sheephill Park				Lynch's Park	Cameron Park Edenmore sensory garden

Appendix 4

Interview guide

Reason	Question	Probe
Introductory question–help to ease the participant into the interview process	How long have you been working with (company)?	
Introductory question–potential link of organisation moving more towards the bioeconomy over recent years	What is your current position with (company)?	Did you hold any other positions in the organisation before taking this role?
Introductory question	What is your favourite part of the role you currently work in?	
Introductory question – start on positive	Can you tell me a bit about Ballymun? What are things you like about the community?	
Introductory question which leads to the identification of challenges in the community – to what extent do these challenges align with the transition to net zero?	What do you think are the main challenges facing community members in Ballymun?	How has this changed overtime?
This question will focus on the impacts which the transition to net zero is perceived to have for community members.	When you think about the move away from fossil fuels to renewable energy, how do you think that will impact community members you work with?	Can you think of any examples of how using renewable energy in areas like housing and transport will impact the lives of people in the community? What impacts do you think it might have for your organisation?

This question details perceived benefits that the transition will have for a low-income community.	What do you think are some of the benefits that a move away from fossil fuels to renewable energy will have for community members?	
This will highlight the possible impacts of an 'unjust' transition for community members.	What do you think are challenges that a move away from fossil fuels to renewable energy will have for community members?	How do you think community members will be impacted in terms of finance, housing and transport?Can you think of any groups who might be particularly at risk from this transition?
Begin focus on identifying action to support communities' ability to transition to net zero	Can you think of any steps that could be taken to support community members in this transition?	
Identification of intermediaries to facilitate transition to net zero in a manner that leaves no group behind.	Who do you think are the groups who can provide these services to support the transition away from fossil fuels that includes everyone?	Do you see a role for your organisation in supporting the transition away from fossil fuels? What supports do you think would be needed for you to complete this?
	I want to thank you for your time today. It has been extremely helpful for my study. Before we finish, is there anything that we haven't talked about today that you think is relevant to this project.	
	One final question, would you be able to recommend other people I could talk to about this?	

Appendix 5

Focus groups guide

Why are we using a focus group approach?

Focus group sessions can be targeted to capture views from those most likely to be left out of consultations. They also generate rich information, as participants' insights tend to enhance the sharing of others' personal experiences and perspectives in a way that can bring out nuances and tensions – a dynamic that is not present during key informant interviews.

Session details:

- In person
- 1 hour long

The script:

Who we are

Kieran - Moderator

Why we are here:

Codema Zero Together Project:

TASC is working on a project called zero together. The aim of this project is to understand how communities around Dublin will be impacted as we move away from fossil fuels like oil and gas towards more renewable energy. In this project we are hoping to learn what people think will be the main day to day challenges they'll face in the move to using more renewable energy and what steps can be taken to make sure that the move to renewable energy leaves no group worse off and no group behind. A key focus of this work is being inclusive, so that the needs of people who might not otherwise be heard are put front and centre. This is inclusive and participative decision-making. Each one of your stories will be an important contribution to our research and will help us understand what are your needs.

Purpose of the session and thank you:

This discussion is informal conversation, and we hope that everyone will participate. Differing views are welcome too. You are experts because you possess important knowledge about your particular experiences, needs, or perspectives that we hope to learn more about.

You can withdraw from the session at any time. We ask that everyone agrees to be respectful of the rights of others to hold values, attitudes, and opinions that differ from their own. Reminder that we are focusing at this point on issues, challenges, and needs so please try to avoid jumping to solutions.

No information will be publicly reported that would identify a participant in the focus group. Participation is voluntary, and we appreciate the valuable contributions that they will make to the Zero Together project.

<u>Role of the Moderator</u>

My role is really just to ask questions and listen

<u>Guidelines:</u>

We'll go for about an hour and a half. We would love to hear from everybody so I may ask specific people some questions to make sure we are capturing everyone's voice.
I'll be recording the session today and I will take some notes.

<u>Paperwork:</u>

We just need to spend about 5 minutes on paperwork before we start.
If you are happy to participate, you'll just need to sign the consent form.

<u>The questions to cover:</u>

So, let's get going. We can go around the table and if everyone could briefly introduce themselves, or just tell us your name... and we love to hear about -

To start off this evening's conversation, I want to learn a bit more about how you feel about the area of (location).

1. Can you tell me what are the things you like or love about (location). This might be about the town itself or it might be about the people and the community that live here.
  • Is there anything that you think is very important for the people here or something that makes (location) unique or different to other towns?

2. We're going to move on now to the second activity in today's discussion. We are going to spend a bit of time now thinking about energy. To start us off, I want you to take a few minutes and think about what energy means to you. How do you use energy in your everyday lives? This might be something like using gas for cooking or for heating your homes as well as getting petrol for your car or using the bus to get into work or going to the shops. On the post-it notes, I want you to write down all the different ways you would use energy in a regular day.

3. Thanks for sharing your ideas of what energy means to you. What we're going to do now is take a few minutes to think about challenges that you might face when it comes to energy. In particular, we're going to spend a few minutes talking about the move away from fossil fuels, such as using oil and gas for heating and petrol and diesel for transport to renewable energy like wind and solar. To start off, how do you think this will impact you individually and the (location) area more broadly in terms of how you use energy?

- What do you think are difficulties or challenges that this could cause people in (location)?
- What are advantages that these changes could bring to people in (location)? What challenges could it cause?
- How has the recent increases in energy prices impacted your livelihoods? What changes have you had to make to adapt?

4. What do you think are steps that could be taken to help people in (location) who are impacted by these changes?

- When you think about changes being planned that will affect your life, do you feel heard or that your experiences are taken onboard?
- What would you like to see in (location) in 5 years' time? What things could be done now to improve it?
  - a) mobility or transport
  - b) air quality
  - c) or community facilities or something else

5. I want to thank you all for all of your contributions today. We're almost at the end of our discussion. Before we finish up, who do you think is responsible for the transition from fossil fuels to renewables?

- When you think about challenges people are facing in the area, who do you think is responsible for helping you meet your needs or for providing support?
  - From the people you have identified, who would you have the most trust in terms of making sure your needs are met? Who would you have less trust in?
  - What do you think could be done to help improve trust or maybe make people more willing to learn or act on what is being said?

6. I want to thank you all for your participation here today. It has been great getting to hear your stories and your thoughts on this topic. I have one last question. Building on from what we have done today, how would you like to continue this conversation in terms of what your thoughts are on energy? Would you like to have more focus groups like today or is there something that you think could be good for engaging with people?

- How would you like information to be brought to you?
- Can you think of anything else that was done in (location) in the past that you think would be good to try and do on this topic?

ACKNOWLEDGEMENTS

We would like to acknowledge the support, dedication and commitment of the following people and organisations, who have been instrumental in developing this report:

- Kieran Harrahill and the team at Think-tank for Action on Social Change (TASC) for carrying out the research and authoring the report.

- The communities involved who gave up their time to take part in the research.

- Energy Cities, DRIFT and the pilot cities in the TOMORROW project

- The EU Horizon 2020 programme, which funded the development of this report

CONTACT

TOMORROW

codema
Dublin's Energy Agency

tasc
Think-tank for action on social change

ZERŎ
TOGETHER
Towards a cleaner, healthier Dublin