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Reviewing Local Authority Renewable Energy Strategies' contribution to Ireland's 2030 Renewable Electricity Targets

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Executive Summary

The placement of energy infrastructure can cause significant local tensions. Research has highlighted that one of the factors sparking these tensions is a perception of exclusion from key decisions when public engagement is left to the planning application stage. In light of this, the Office of the Planning Regulator notes that “*A national renewable energy roadmap with county-specific targets could provide the basis for designation of Sustainable Energy Zones by local authorities in their development plans*”. The regulator proposes that a key benefit of this national “*spatially co-ordinated strategy*” would be to help build “*greater consensus on where and how to electrify our mobility, home heating and wider economic systems*” [1, p. 3].

The Interim Guidelines for Planning Authorities on Statutory Plans, Renewable Energy and Climate Change (July 2017) included a specific planning policy requirement (SPPR) for local authorities to:

“Indicate how the implementation of the relevant development plan or local area plan over its effective period will contribute to realising overall national targets on renewable energy and climate change mitigation, and in particular wind energy production and the potential wind energy resource (in megawatts)” [2, p. 2].

This was an update to the Wind Energy Development Guidelines from 2006, which set a requirement to identify on development plan maps the key areas where “*wind energy development will be acceptable in principle*”. However, as highlighted in the review of County Development Plans conducted by Revez et al., 2022, a lack of measurable targets is a key gap in local authority climate action planning to date [3].

Within the Climate Action Plan 2023 there are clearly defined targets for the installed capacity (megawatts, MW) of renewable electricity (e.g. on/offshore wind and solar energy) by 2030 [4]. With a central focus on onshore wind, the purpose of this project is to determine how current local authority development plans (and within this the renewable energy strategies) take these targets into account. With a particular focus on the planning guideline requirements for onshore wind energy, the assessment is guided by the following research questions:

1. Does each local authority have a renewable energy strategy or similar material within their current development plan?
2. Have they provided a map of areas where wind energy is acceptable in principle?
3. Have they outlined an onshore wind energy target for either the length of the plan or 2030? And if so, how well do these targets align with the national ambition?
4. How have other key technologies (e.g., solar PV, anaerobic digestion, or district heating) been handled?

The review highlights a low level of strategic renewable energy planning to date. There are a few exceptional local authorities that have made efforts to identify the resource potential in their area for a range of technologies, and map or outline targets for technologies other than onshore wind energy. However, within these, the targets are either based on analysis performed by consultants or lack appropriate technical grounding. On the question of compliance with onshore wind energy guidelines, the review found that roughly one third (11 out of 31) of CDPs are not compliant with the 2006 wind energy guideline's requirement to provide maps of areas where "*wind energy development will be acceptable in principle*". Moreover, there were only seven instances of CDPs containing MW targets for onshore wind in line with the specific planning policy requirement introduced in the interim 2017 guidelines. This requirement has since been revoked, but at the time of publication, the vast majority of plans were not compliant.

This review has shown that asking each local authority to determine the renewable potentials in their area and how it will contribute to the national objectives has not worked. Instead, what is needed is a nationally coordinated process to map the resource potential across the country, and new deliberative forums with local, regional and national actors to decide how the targets will be set and monitored. Another key consideration highlighted by this review is the importance of having national guidelines in place for renewable energy developments. At present, some local authorities have tried to prevent new wind energy projects in their area through the development management standards set out in the development plan. This is primarily due to the lack of clarity nationally. The revision to the 2006 wind energy guidelines have been stalled since 2019 and there are no statutory guidelines for other key technologies like solar PV or anaerobic digestion. Finally, the Office of the Planning Regulator plays a critical role in ensuring local authority alignment with national policy and consistency across administrative areas. However, proper legislative requirements are the only means by which they can make recommendations and subsequently issue directions if deemed necessary.

List of abbreviations

ABP – An Bord Pleanála

CAP – Climate Action Plan

CDP – City/County Development Plan

LACAP – Local Authority Climate Action Plan

LARES – Local Authority Renewable Energy Strategy

NPF - National Planning Framework

OPR - Office of the Planning Regulator

RES – Renewable Energy Strategy

RESS - Renewable Electricity Support Scheme

SEAI – Sustainable Energy Authority of Ireland

SPPR – Specific Planning Policy Requirement

PV – Photovoltaic

1 Background: Policy Context

1.1 Ireland’s Renewable Energy Targets

The Climate Action Plan (CAP) 2023 published in December 2022 sets out clear targets for renewable energy deployment by 2025 and 2030 [4], summarized in Table 1-1.

Table 1-1. Ireland’s Renewable Electricity and Heat Targets for 2025 and 2030 [4].

<p>By 2025:</p> <ul style="list-style-type: none"> • 6 GW onshore wind capacity • Up to 5 GW solar PV capacity including at least 1 GW of non-new grid solar • Up to 0.8 TWh of district heating installed • Up to 0.4 TWh of heating provided by renewable gas
<p>By 2030:</p> <ul style="list-style-type: none"> • 9 GW onshore wind capacity • At least 5 GW offshore wind capacity • 8 GW solar PV capacity including 2.5 GW of non-new grid solar • Green Hydrogen in production from surplus renewable electricity • Up to 2.5 TWh of district heating installed • Up to 0.7 TWh of heating provided by renewable gas

These targets have evolved quite significantly since the first CAP 2019 that preceded the Climate Act 2021, which stepped up the national ambition for emission reductions. The increased ambition has required both an increase in the scale of installations (GW targets) and critically, the diversity of technologies (introduction of district heating, renewable gas and green hydrogen). It also reflects the rapid growth in the availability of these emerging technologies. Most notably, the dramatic rate at which solar PV has fallen in cost while gaining in efficiency (power output in Watts per panel). The previous CAP 2021 target had been 1.5-2.5 GW solar by 2030 [5]. This is set to be met by planned projects already in the pipeline. The Renewable Electricity Support Scheme, Ireland’s auction for grid connections, awarded just under 2.3 GW of Solar PV projects in 2020 and 2022 (Table 1-2).

Table 1-2. Final auction results from RESS 1 [6] and RESS 2 [7].

	RESS 1 (2020)		RESS 2 (2022)	
	Onshore wind	Solar PV	Onshore wind	Solar PV
Projects	19	63	14	66
MW	479	796	414	1,534
GWh	1,469	767	1,270	1,478

Ireland is a world leader in the integration of onshore wind energy. The Republic of Ireland had a total installed wind capacity of 4.3 GW at the end of 2020 [8]. The year 2020 was a particularly “windy” year, which meant wind energy provided 36.3% of our electricity [9]. This is something we can all be proud of. However, it has not been without its challenges. As an island grid, it poses a difficult technical challenge to ensure the smooth operation of our transmission network. There have also been significant local tensions around certain developments. Wind Aware Ireland represents over 50 local opposition groups nationwide [10]. There is a clear tension between the speed at which we need to double the current onshore wind energy installed capacity and the time it takes to work with communities. Moreover, we must ensure that new emerging technologies do not spark further opposition. If we are to continue this massive deployment of renewable energy, then more strategic spatial planning [11], and meaningful community engagement is needed [12].

1.2 The evolving role of Ireland’s local authorities in climate action

The 2012 European Energy Efficiency Directive encouraged the public sector to lead by example in efforts to improve energy performance, setting a target for energy efficiency improvements of 33% by 2020 [13]. This introduced the need for a monitoring system to track progress against the energy efficiency targets. Within Ireland, local authorities submit their energy data to the monitoring and reporting system maintained by the Sustainable Energy Authority of Ireland (SEAI) [14]. This only covers direct emissions from local authority owned property such as buildings, vehicles, and public lighting.

The Climate Action and Low Carbon Development Act 2015 introduced the National Adaptation Framework to “*specify the national strategy for the application of adaptation measures in different sectors and by a local authority in its administrative area*” [15, p. 9]. The National Adaptation Framework was published in 2017 and was followed in 2018 by the Local Authority Adaptation Strategy Development Guidelines, which importantly note that “*Completed local strategies should then be used to inform development plans and other statutory plans and policies of the local authority*” [16, p.7].

The signing of the Local Authority Climate Action Charter placed a significant responsibility on local authorities to lead on climate action [17]. This was strengthened in the Climate Action and Low Carbon Development (Amendment) Act 2021 (hereinafter referred to as the Climate Act), which greatly enhanced the role of local authorities in delivering climate action [18]. Most significantly, it introduced local authority climate action plans dealing with both mitigation and adaptation measures. Three key elements of these will be: the baseline emissions inventory for the administrative area, climate action targets for the county, and the inclusion of a requirement for development plans to have regards for the actions set out in the LACAPs.

In the Climate Action Plan 2021, in contrast to the Climate Act, there is little mention of the local authority. There is a small subsection within the chapter on how the public sector will lead by example, which refers to the local authority climate action plans introduced in Climate Act. It also refers to the development of decarbonisation zones, taking forward the Portlaoise example from the previous Climate Action Plan 2019 [19]. However, the Climate Action Plan 2023 has a much stronger emphasis, with a section outlining the delivering of the Local Authority Climate Action Plans [4]:

- Phase 1: Delivery of the national Climate Action Plan 2021 and establishment of the evidence base, resource needs and other requirements for each LA CAP (2022 – February 2023);
- Phase 2: Development of LA CAP (March 2023 – February 2024);
- Phase 3: Implementation (March 2024 – February 2029).

On 2nd of February 2023, Minister Ryan launched strand 1/1a of the Community Climate Action Programme, which is designed to resource Local Authorities to work in partnership with communities [20]. Specifically, the programme supports direct engagement with communities to promote and assist in the scale up of community climate action. It will see a significant strand of funding delivered through the local authorities. During its first phase of €30 million to be allocated over the next 18 months, the vast majority of the funding delivered under Strand 1-Action: Building Low Carbon Communities, will see €24 million being provided to local authorities “*to support communities – large and small, rural and urban – to build low carbon communities in a considered and structured way*” [21].

1.3 Local Authority Renewable Energy Planning

In the Strategy for Renewable Energy 2012-2020, a key action under Strategic Goal 1, which sought to increase the share of on and offshore wind energy, was the development of a template by the SEAI to assist local authorities in developing renewable energy strategies [22]. The “Methodology for Local Authority Renewable Energy Strategies” (LARES) was published the following year in 2013 [23]. These are advisory guidelines. There is no statutory requirement to prepare a LARES as part of the statutory plan making process.

The legislative foundation for local authority renewable energy planning is strongest on wind energy. This is based on the previous guidelines from 2006 that suggested County Development Plans ‘should’ include maps of areas where “*wind energy development will be acceptable in principle*” [24,p. 10]. These are Section 28 (S.28) guidelines that the planning authority must ‘have regard to’. In comparison, the Flood Risk Guidelines 2009 have a stronger legislative basis through the National Planning Framework (NPF) as they are specifically called out in National Planning Objective 57. Thus, there is a requirement to be consistent with these under the Planning and Development (Amendment) Act 2018.

The Interim Guidelines for Planning Authorities on Statutory Plans, Renewable Energy and Climate Change (July 2017) included a specific planning policy requirement (SPPR) for local authorities to:

“Indicate how the implementation of the relevant development plan or local area plan over its effective period will contribute to realising overall national targets on renewable energy and climate change mitigation, and in particular wind energy production and the potential wind energy resource (in megawatts)” [2, p. 2]

In contrast to Section 28 Guidelines, SPPRs must be complied with. This strengthened the legislative basis for the Wind Energy Guidelines 2006. A SPPR is a ‘must’, whereas the current Wind Energy Guidelines are a ‘should’. This is not to say that they can be ignored but the legislative foundation is weaker.

1.4 The role of the Office of the Planning Regulator

The Office of the Planning Regulator (OPR) was established in April 2019 following recommendations made by the Tribunal of Inquiry into Certain Planning Matters and Payments (the Mahon Tribunal). Its role is to ensure that local authorities and An Bord Pleanála support/implement Government planning policy [25]. The Planning and Development Act 2000, as amended in 2018, gives the OPR a statutory basis to carry out three main functions (Table 1-3).

Table 1-3. Summary of the Office of the Planning Regulator functions [26].

<u>Evaluation of Statutory Plans</u> The OPR has responsibility for independently assessing all statutory forward planning. This includes city and county development plans; local area plans and variations/amendments to these plans.
<u>Planning Reviews and Examinations</u> The OPR may review the systems and procedures used by any local authority including An Bord Pleanála in the performance of their planning functions.
<u>Education, Training and Research</u> The OPR is responsible for driving national research, education and training to highlight the role and benefit of good planning. They deliver education and training programmes for both elected members and local authority/regional assembly staff.

The evaluation of statutory plans is most relevant to the review in this report. The OPR evaluate and

assess development plans for consistency with legislative requirements, in particular, with 10(2)(n); with the NPF and with the 3 Regional Spatial and Economic Strategies (RSES); and with SPPRs and addresses relevant S.28 guidelines. This evaluation generally includes making recommendations on elements that are inconsistent with the mandatory legislative or national/regional policy context, and observations on advisory matters. This submission is made on the draft CDP and responded to in the LA Chief Executive report along with all other submissions received. Following this, if an adopted plan is subsequently not compliant with any recommendations of the OPR and is inconsistent with legislation or with national/regional policy objectives, the OPR may issue a notice to the Minister recommending that powers of direction be utilised to compel the local authority to address the matter.

1.5 Emerging areas for consideration

On the 16th of December 2022, the Minister of State with responsibility for Local Government and Planning revoked the Section 28 Interim Guidelines for Planning Authorities on Statutory Plans, Renewable Energy and Climate Change. These guidelines date from 2017 and focus on administrative procedure in the preparation of local authority city and county development plans. Rather than each local authority determining their own target, which may not align with the new national mapping, the intention is to wait until after the national spatial strategy for onshore renewables is published.

“the commitment to publish a framework to set out targets for onshore renewable electricity development to inform spatial plans will be a significant output to enable the disaggregation of national targets to a scale that can be applied at local authority level. The timeline for the publication of the framework is Q1 2023. It is desirable that such outputs and targets would be available to inform county development plans and that potential for renewables would not be prescribed prematurely, particularly given the life-cycle of development plans, which span six years.” [27, p. 2]

The commitment to deliver this was later published in the 2023 Climate Action Plan, which also includes provision for revising the SEAI’s Methodology for Local Authority Renewable Energy Strategies (LARES). This is outlined as follows:

“Set out the onshore wind energy and grid-scale solar national and regional targets in the Renewable Electricity Spatial Policy Framework and publish a revised Methodology for Local Authority Renewable Energy Strategies” [4, p. 137]

These considerations came after the majority of City/County Development Plans were published over 2021 and 2022. Thus, the review still offers a useful assessment of compliance (or lack of compliance) with the requirements set out in Section 1.3 at the time when the CDPs were published.

2 Analysis: Local Authority Renewable Energy Strategies Review

The primary objective of this project is to assess the compliance with these requirements in current Local Authority Renewable Energy Strategies (LARES) and explore how well the local plans align with the overall national targets. The material available online for all current adopted or draft County Development Plans were reviewed to determine:

- If a map of areas suitable for onshore wind energy is included?
- If a target for installed capacity (MW) of onshore wind energy over the duration of the plan or for 2030 is included?
- If the target is informed by an analysis of the resource potential?
- Do the proposed wind energy targets match up to the national targets?

In addition, following this initial assessment of onshore wind, a further piece of analysis focussed on how the LARES or other relevant elements of CDPs have considered emerging technologies such as solar PV, district heating or anaerobic digestion. The results of this assessment are presented in the following Section 3, and a brief summary of each local authority is available in Appendix A.1.

To verify the findings of the initial review, in cases where both a wind map or install target in either the County Development Plan or Appendix material (e.g., Wind Energy Strategy or Renewable Energy Strategy, available online) were missing, two further methods of inquiry were carried out. Firstly, a review of the submissions made by the Office of the Planning Regulator on the draft plan. Secondly, we sent an email to the planning departments asking them to confirm if the relevant information was available but had been missed during the review. We also asked if they could provide a short explanation as to why the plan doesn't follow the requirements in the wind energy guidelines set out in Section 1.3. These are available in Appendix A.3.

The approach to assessment taken did not look in detail at the maps presented but rather simply that such a map was provided. This may have omitted some considerations. For example, some plans may contain maps with very small areas identified for wind. These have been noted here as meeting the requirement, but this does not reflect how well they actually support further deployment of wind energy. Further analysis could look to assess the land area available from various plans and if this will provide sufficient capacity to accommodate Ireland's 2030 renewable energy targets for onshore wind and solar PV. However, it is outside the scope of this review.

3 Results

A brief description of the findings in each LA can be found in Appendix A.1 and a summary table of the assessment in Appendix A.2. This section focuses on the high-level findings for each of the technologies included in the review.

3.1 Wind Energy

The results of the onshore wind energy review are presented in Figure 3-1. There were seven local authorities that didn't have a map of areas suitable for wind. This included most of the city councils who felt they didn't have anywhere suitable within their urban area, but also several more rural councils. None of those who responded to the query highlighted that a map or megawatt value was missed during the review. The explanations given can be found in Appendix A.3.

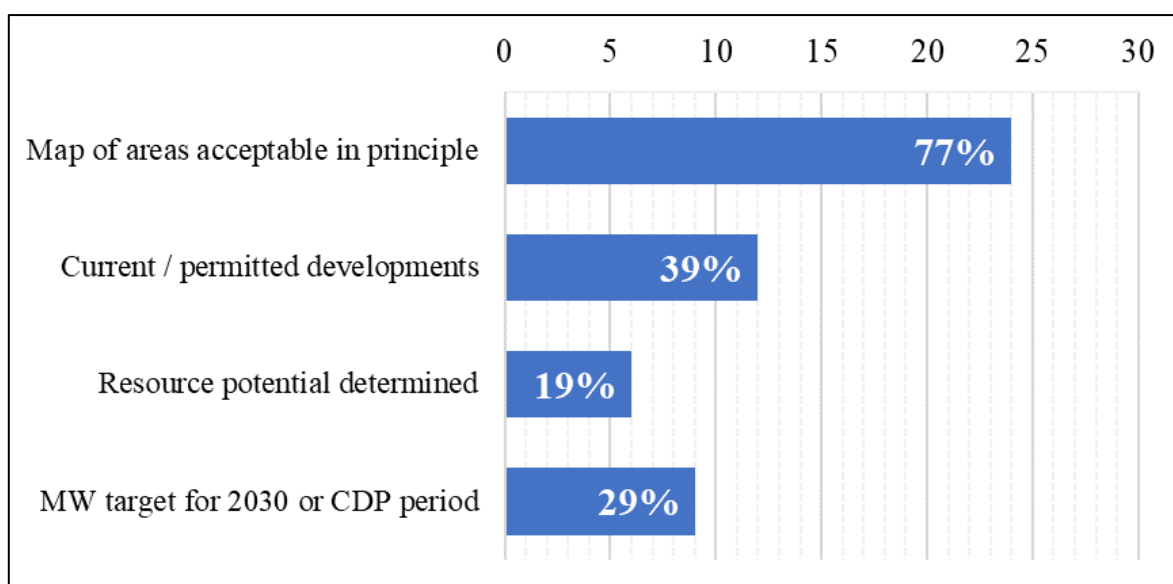


Figure 3-1. Share of plans that included the different elements on onshore wind energy reviewed.

In the case of the interim 2017 guidelines requirement for a MW target, only nine CDPs provided this target. Despite that, the sum of the MW targets provided is just under 3.8 GW (appendix A.2). Within this, only three (Carlow, Galway County and Kildare) were based on a resource assessment to determine a theoretical potential and then select a target. The others either used a portioning approach to work out how much of the national target they should contribute, or they used a value based on previous developments or those planned but not yet built. The methodology for determining a target varies. For example, Kildare firstly outline a potential target of 287 MW, which was 3.5% the national 8,200 MW target in CAP2021. This figure of 3.5% was chosen based on having 4.7% of the population and 2.4% of the land area. Then, using a figure of 12.5 hectares per MW (citing Carlow and Galway examples but with no reference) they arrive at a county potential of 280 MW using the area identified following the mapping exercise. Finally, noting the lengthy process that new developments must go through (4-5 years), a target of 107 MW is chosen as there are currently two permitted developments totalling 53.5 MW.

The current wind energy installations per county are available in Appendix A.4. Kerry currently hosts the largest share at 17%, followed by Cork County (16%) and Donegal (11%) [28]. There is a growing discontent at the uneven shares across counties, highlighted by the fact both Kerry and Donegal attempted to prevent any further wind developments in their CDPs (Appendix A.1). These counties

have exceeded their per capita portion of the national target, and likewise an area-based share. However, located along Ireland's west coast, they are best placed to generate wind energy.

3.2 Emerging areas for consideration

Every CDP has a section on renewable energy either through the inclusion of a strategy in the appendix and/or within a climate, infrastructure, development management or dedicated chapter. It is common to outline the national policy at the time (CAPs) or include statements/objectives indicating that the council will support renewable developments (particularly onshore wind and solar). However, the technical information in terms of maps, resource potential or targets that would facilitate more strategic planning is rarely included.

3.2.1 Solar PV

Bar the few exceptions that provided maps and MW targets for solar PV, the only mentions are either through statements/objectives to support such developments or within the development management standards chapter to outline planning considerations. The absence of guidelines nationally means some local authorities are taking it into their own hands. Currently, there is only a report from Future Analytics Consulting outlining planning/development recommendations for utility scale solar PV that was commissioned by SEAI [29].

In the vast number of cases, the mentions of solar PV refer to large-scale solar farms (Utility Scale Solar PV) as opposed to rooftop installations. This may in part be due to the recent planning exemption for small-scale rooftop installations, which means they no longer require planning permission.

3.2.2 Bioenergy

The few examples that cover bioenergy generally refer to woody biomass crops (such as willow or miscanthus) rather than biogas or anaerobic digestion. This is likely because the only policy support available to date was for such crops. The announcement of a target for AD development that accompanied the sectoral ceilings announcement in July 2022 was the first-time policy showed support for such developments [30].

3.2.3 District heating

As with the other emerging technologies there was little coverage of district heating in the current CDPs. There were some examples listing areas suitable for development based on either housing or heat density. In the four Dublin region LAs there are many mentions of the work Codema has done to map heat sources and demand [31], as well as the current developments being built. However, the technical data such as maps are not included in the CDPs.

4 Discussion

4.1 Key Findings

There were only nine instances of CDPs containing MW targets for onshore wind in line with the interim 2017 guidelines (Section 1.3). This requirement has since been revoked (Section 1.4), but at the time of publication, the vast majority of plans were not compliant. In terms of maps, there were seven CDPs missing maps of areas where onshore wind developments are ‘acceptable in principle’. However, since 2006 Wind Energy Guidelines are Section 28 guidelines, there isn’t a legislative requirement to follow them (Section 1.3).

How we now double our current installed capacity of onshore wind by 2030 deserves careful consideration. Although the CDPs that provided a MW target should be commended, it is important to note that the technical analysis underpinning the value put forward was generally quite weak (excl. the exceptions of Carlow and Galway County). Given that it can take up to 5 - 6 years to deliver a new wind development, it is not surprising that some councils based their targets on the currently permitted/planned developments. However, these are currently well short of the 2030 ambition at just over 6GW instead of 9GW (according to SEAI dashboard [28], Appendix A.4).

There has been some effort to incorporate new emerging technologies (i.e., solar PV, anaerobic digestion, district heating) through statements/objectives noting that the council will support such developments, or by outlining development management standards. However, the technical data needed, in terms of resource assessments, or identification of areas suitable in principle, were lacking. There were quite a few plans that mentioned offshore wind energy, which is beginning to stray outside of a development plan’s remit, since the marine environment is governed separately. The ever-expanding purpose of a CDP and different understandings of it was previously flagged as a challenge in Revez et al. [3]. They are becoming very lengthy documents, which are not easily accessible.

4.2 Ireland’s Governance Structure

It is important to note that there is good reason that this review found a low level of progress to date in LA renewable energy planning. The type of information (i.e., resource assessments and mapping) that the review was looking for requires a technical skillset. As Revez et al. highlight, following a series of interviews with planners discussing the integration of climate action into CDPs, it was found that there is a critical resource, capacity and knowledge gap at present [3]. This point is reiterated here, with the standout examples on renewable energy planning found in this review relying on consultants to provide the necessary technical analysis.

Ireland has a very centralised governance system, with the bulk of spending and decision-making coming from national government. We have the least powerful local authorities in Europe with 8% of public spending coming through local government, compared to an EU average of 23%, or in the case of Denmark 65% [32]. Likewise, Ireland suffers from weakness in representation, with an average population of 148,517 per local authority, compared to the Danish average of 57,421 (Ibid).

Under Ireland’s Climate Act 2021, the role of the local authority was greatly expanded. There is an expectation that they will play a leadership role following exemplars such as Denmark. However, at present Danish and Irish local authorities operate under very different circumstances. Fulfilling such a role will require significant structural and resource changes. The new climate action units being put in place to deliver the LACAPs and decarbonisation zones will go some way to fill this gap. However, a certain amount of time for training and development is likely needed.

4.3 Recommendations

1. *Deliver national guidelines for all renewable technologies*

The current wind energy guidelines are outdated, and the revision has been stalled since 2019. This lack of clarity on what is an appropriate development causes issues as local authorities seek to create their own development management standards, which can lead to inconsistencies across administrative areas. Firstly, this developer-led system has been shown to contribute to local tensions as the public feel excluded from key decision-making processes prior to the planning application [33], [34]. Secondly, some LAs have in effect tried to prevent new onshore wind developments in their area by outlining setback distances of 2km, which is significantly larger than the 500m proposed in the draft revised guidelines from 2019 [35]. This is also hampering the deployment of emerging technologies (e.g., solar PV or anaerobic digestion), which currently have no statutory guidelines.

2. *A nationally coordinated strategy to identify renewable energy potential in each county*

There are estimates of the national potential for key technologies like onshore wind energy [36], offshore wind [36], or rooftop solar PV [37] available, and the SEAI has published a wind resource map [38]. However, a proper assessment of the potential in each local authority administrative area is missing. Instead of allocating this work to the local authorities, a nationally coordinated study of the resource potential and most suitable areas is needed. This process is already underway, as noted in Section 1.4.

At the end of 2022, the SEAI released a LACAP dashboard with some useful statistics at the LA level such as current wind and solar projects per county [28]. Future iterations of this resource could include maps per county of the area's suitable for wind/solar developments, where the bioenergy resource is located, or areas of high heat demand/waste for district heating. There are three clear benefits to a centralised portal. Firstly, consistency in approach across administrative areas rather than each LA deciding their own target, which as highlighted by this review, has failed to date. Secondly, facilitating a conversation on where we want to locate supply/demand. This would open discussions on how those LAs being asked to take on the majority of developments will be rewarded for their contribution to such critical national infrastructure. Finally, having all the relevant information in an easily accessible public portal improves transparency. At present, the relevant wind area maps within the appendix or renewable energy strategies can be hard to find on the various LA websites.

3. *New local, regional, and national planning structures to set and monitor renewable energy targets*

How the national feeds down to the local, and vice versa requires further investigation. At present nationally set targets cause tensions within the local authorities as councillors representing the view of constituents push back against key technologies like onshore wind. If there is to be new forums for local deliberation on climate and energy objectives, then it is essential that there is some way for these to feed back into the national policy that ultimately determines the way forward. A rethinking of the communication and decision-making flow between local, regional, and national policy is needed to ensure a fair process during the strategic mapping of renewable energy potentials and determining the local authority renewable energy target shares.

Within this, the role of the OPR is important (summary in Section 1.4). The two wind energy requirements (maps and MW targets) were noted as missing in the OPRs submission to most of the CDPs identified in this review (Section 3.1). However, many of CDPs were later adopted without addressing these concerns. In instances where directions were issued, the minister opted to omit the need for MW targets. Although the SPPR wasn't revoked until December 2022, the intention to do so, seems to have been known much earlier. This lack of clarity in policy may go some way to explain the

inconsistency found in this review. The OPR's recommendations are only as strong as the legislative basis of planning requirements. Of course, this is not to say that tighter controls are the best option, it would be preferable if the new strategic mapping of renewable energy potentials involves a process that reaches consensus on the targets for each LA as opposed to a system whereby LAs are forced to comply.

4. Local deliberations on sustainable energy futures

Moving from a developer-led to a plan-led approach to identify areas for renewable energy development offers a great opportunity to improve public engagement approaches. The creation of fora like the Belfast Climate Commission [39], and use of creative techniques such as those from the Imagining2050 project [40], [41] could be integrated into the public engagement process during the drafting of local authority climate action plans.

Well-structured deliberations may help to prevent tensions later down the line when projects go for planning permission. These will need to be carefully managed deliberations, as there is a clear tension between the need for rapid renewable energy deployment and the time it takes to facilitate community participation in decision-making. As highlighted by Boyle et al., when discussing the role out of large-scale energy infrastructure like overhead pylons: "*Transparency is a vital factor for successful engagement with clarity needed around what is open for consultation and what is not*" [42, p. 8]. The move from a fossil fuel-based system to renewable energy system is not up for debate. However, exactly what shape the new energy system takes should be agreed with a diverse range of stakeholders from across national, regional, and local levels.

5. A better integration between forward planning and climate action planning

The placement of new renewable technologies is not the only issue to consider. Careful consideration needs to also be given to where new demand for electricity is being located. At present, a key challenge for Ireland's electricity grid as it decarbonises, is the mismatch between the large share of demand centred around Dublin in the East and vast wind energy resource along the West coast. Counties which are being asked to take on significant shares of renewable energy developments should also reap the economic benefits of a low carbon grid not just in terms of direct energy sector jobs, but importantly, with other companies seeking locations with high shares of renewables developing there.

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Appendix

A.1 Review Summary by Local Authority

Carlow	2022-2028	<p>The Carlow RES is a standout example.</p> <ul style="list-style-type: none"> • It provides targets for renewable electricity, heat, and transport. • It follows a proper mapping of the available resource to calculate a theoretical potential before deciding on a target for onshore wind, solar PV and bioenergy. In the case of bioenergy, the focus is on woody biomass energy crops as opposed to biogas from anaerobic digestion, reflecting policy to date. • For district heating, it is one of the very few plans (outside the Dublin region) that includes a list of suitable urban areas based on heat demand. <p>However, it is important to note that the plan was prepared by the consultants RPS Group not the local authority. Also, the target for wind is quite small at 30MW, while solar PV is 100MW.</p>
Cavan	2023-2028	<p>No RES available, and information not provided elsewhere in the CDP. Chapter 7 Transportation and Infrastructure has a small subsection noting support for some renewable options but it's very limited.</p> <p>OPR recommendation 11 required the LA to i) indicate evidence-based MW targets based on national targets; ii) provide a RES or policy framework consistent with the guidelines; To address this, Material Amendment 83 commits to the preparation of a Renewable Energy Strategy within a 6 months of plan adoption.</p>
Clare (draft)	2023-2029	<p>The draft CDP has a very detailed RES addressing a range of RE (wind, solar and micro hydro) sources, energy storage and supporting infra with detailed mapped analysis and objectives. Targets not included for all RE types. Covers all elements on wind – map, resource assessment and target but doesn't address other renewable options. These are briefly covered in different parts of the CDP. For district heating, it identifies areas for district heat such as: Shannon Municipal District and Shannon Town based on a baseline study of that area.</p>
Cork City	2022-2028	<p>No RES available, and the wind requirements are not covered in other parts of the CDP. The chapter on climate and environment mentions small-scale renewable developments, and there are some areas identified for district heating feasibility studies. OPR recommended (no.1) to identify areas for larger scale RE projects by sieve mapping; identify how plan would contribute to national RE targets, with regard to the SPPR in the Interim guidelines. This remains unresolved but no direction recommendation was issued.</p>
Cork County	2022-2028	<p>Wind area maps provided in CDP appendix rather than part of a separate RES. There are statements/objectives noting support for other developments (e.g., solar PV or hydro) in the CDP. Determines on a simple a pro-rata basis that wind energy should expand to 1,100MW, compared to 603MW commissioned developments and permitted but unimplemented 200MW, totalling 803MW.</p>
DLR	2022-2028	<p>Sieve analysis approach recommended in the Wind Energy Development Guidelines (2006), that largescale wind energy cannot be facilitated: <i>“In conclusion, having regard to the very limited scale of the ‘Area of Potential’ in the County, and the issues outlined above, there are no areas in the County that the Planning authority can recommend where large scale</i></p>

		<p><i>commercial wind energy infrastructure should be either “acceptable in principle” or “open to consideration”</i></p> <p>District heat gets a lot of mentions throughout and Codema’s feasibility assessment for the Dublin region is noted. However, there is no specific information given for the county. It is left for follow up with an objective: <i>“Preparation of a Council wide District Heat policy for the County.”</i></p>
Donegal	2018-2024	<p>The Donegal CDP is quite old, which is likely why it doesn’t have much coverage of renewable energy and they don’t have a renewable energy strategy. The original CDP contained a policy for a setback distance of 2km for new wind energy developments and a map ruling out future developments. Since then, Variation 2 of the CDP is to include a Wind Energy Strategy.</p> <p>During review of the CDP in 2022, the OPR recommendation 1 required PA to i) include evidence-based MW targets based on national targets; and ii) to omit setbacks under policy E-P-23 and E-P-24. OPR recommendation 2 required the PA to remove certain specified constraints areas not justified by the sieve analysis mapping and amend the areas ‘acceptable in principle’, ‘open for consideration’ and ‘not normally permissible’. The variation of the CDP was adopted without these amendments. The OPR then recommended the Minister issue a direction to indicate evidence-based MW WE targets for plan period based on national targets; omit the setbacks under E-P-23 and E-P-24; and to change the specified constraints areas from ‘not permissible’ to ‘open to consideration’. The Minister issued the final direction but omitted the part on MW targets.</p>
Dublin City	2022-2028	<p>No RES available, and wind requirements not in other parts of the CDP. The only technology well covered in CDP is district heating. The availability of waste heat equivalent to 1.75 times the current heat demand is noted with reference to previous work from Codema.</p> <p>The OPR submissions commends the effort on heating, and interestingly, makes no mention of the omission of wind energy maps or target.</p>
Fingal	2023-2029	<p>No RES available, and wind requirements not in other parts of the CDP. There are statements supporting wind, solar and geothermal development in the climate action chapter. These focus on microgeneration and there is no resources assessment or other relevant data provided.</p> <p>The OPR submission doesn’t note the omission of wind maps and target.</p>
Galway City (draft)	2023-2029	<p>No RES available, and wind requirements not in other parts of the CDP. The OPR submission doesn’t note the omission of wind maps and target, but does highlight the lack of a <i>“policy objective to support and/or deliver on the potential of district heating systems within the city area”</i></p>
Galway County	2022-2028	<p>Another standout example. The RES has proper resource assessment, mapping and targets for both onshore wind and solar PV. It covers current installations, those with planning granted and then a target for 2030 target. It is weaker on renewable heat and transport. However, unlike the Carlow RES, it appears to have been prepared by the local authority.</p>
Kerry	2022-2028	<p>Plan does include a map of areas suitable in principle. However, this is used to essentially rule out any future wind energy. This is justified on the basis that the county already has 18% of the current onshore wind install capacity. OPR issued a recommendation to demonstrate how plan will contribute to national targets and provide area where wind energy is permitted in principle (rather than just open for consideration) and remove 1km setback from settlements. This was not complied with. Furthermore, at material amendment stage the area open for consideration was reduced.</p>

		<p>On adoption of the plan, OPR recommended minister issue a direction to:</p> <ul style="list-style-type: none"> • Demonstrate how plan will contribute to national MW targets for renewable energy and in particular wind energy • Reinstate original wind energy map • Amend original map to change areas from ‘open to consideration’ to ‘permitted in principle’ of wind energy • Amend original map to add extensive other specified areas and omit 1km setback from settlements <p>The Minister declined to include OPR’s recommendation on MW targets, pending a framework of regional and local targets. He made a statement to the Oireachtas in this regard as required by legislation. In the final direction, the Minister directed the planning authority to reinstate the original wind energy map.</p>
Kildare	2023-2029	<p>Ticked all the boxes for onshore wind in the wind energy strategy. However, as it was a wind energy strategy and not a RES. Limited coverage of other technologies in CDP. OPR issued a recommendation on draft plan, due to absence of evidence-based approach to inform wind energy target.</p>
Kilkenny	2021-2027	<p>The wind energy strategy has a proper mapping and resource assessment, which was carried out by the 3 Counties Energy Agency but seems to be missing a MW target. There is objective to generate the equivalent to all Kilkenny’s electricity demand (633 GWh) with renewables by 2030 but the details on how different technologies would contribute to that are missing. The CDP contains a table of current and planned solar PV development, as well as discussing AD and biomass (forestry), but doesn’t include resource assessment or mapping for any of the emerging technologies.</p> <p>At material amendment stage the planning authority introduced new areas where wind energy was not acceptable, changed the naming of areas on the wind energy map from ‘acceptable in principle’ to ‘open to consideration’ and removed the MW target. The OPR issued a recommendation to make the plan without these amendments.</p> <p>This recommendation was not complied with and the OPR recommended (final direction draft dated 10/01/22) the Minister issue a direction to reinstate the original text (subject to minor amendments) which included MW targets and reinstate original areas ‘acceptable in principle’. The Minister has not issued this direction to date</p>
Laois	2021-2027	<p>Wind energy strategy covers maps of areas suitable in principle and outlines existing developments in the county as well as neighbouring counties. However, it doesn’t use the area mapped to provide a resource potential or target. They tried to include a setback distance (proximity a wind farm can be to a residential building) of 1.5 km.</p> <p>The OPR issued a recommendation to determine a MW target and to omit the 1.5km buffer zones at draft plan stage. At material amendment stage the OPR issued similar recommendations. These were not complied with. The OPR subsequently recommended the Minister issue a direction requiring the planning authority to 1) omit the buffer and 2) amend objective CM RE 1 to include the determining of MW targets. The Minister issued part 1) but declined to issue part 2) on the grounds that it is intended to publish a new framework for setting renewable energy targets at a regional and local level.</p>
Leitrim	2023-2029	<p>The draft RES published in 2022 included a sensitivity mapping highlighting areas of potential wind energy development and MW target.</p>

		The OPR submissions welcomes the inclusion of a MW target but highlight that a setback distance of 500m is included for which there is “no basis” in any existing guidance or guidelines.
Limerick	2022-2028	No RES, but map and current/permitted developments included within CDP chapter on energy. Limited coverage of technologies other than wind and solar. Recommendation 16 of OPRs submission on draft plan required (i) MW targets, ii) omission of 100m buffer from neighbouring ‘properties’ and iii) evidence basis for wind energy map 8.1 relative to neighbouring authorities. A table was then added with renewable energy allocations for differing technologies’, including: 150MW wind energy, 20MW anaerobic digestion, 227MW solar, 0.3MW hydro and 0.5% geothermal heat.
Longford	2021-2027	Minimal requirement met by including a map of wind areas in the CDP appendix. OPR recommendation 12 on draft plan required the planning authority to indicate how the areas designated for renewable energy would contribute to national targets, and its MW share of national GW target. However, no amendments were made.
Louth	2021-2027	No RES but some details on renewables in CDP climate chapter, wind area map covered in the appendix. OPR recommendation 14 required the PA to include MW targets. This was not taken up. However, during the material amendments an objective to do so within 6 months of making plan was included.
Mayo	2022-2028	Reused 2011-2020 RES, which is a little out of date. The CDP chapter on ‘climate and renewable energy’ cites: “Research carried out on behalf of the Irish Wind Energy Association (IWEA) indicates that 400 square kilometres of suitable land is available for onshore wind energy in Mayo.” It states that this equates to a 10 GW potential based on ‘best practice in the wind energy industry’, and then choose a target of 600 MW without a clear evidence base. OPR recommendation 15 required an evidence-based MW target (100MW was proposed). Amendment made to increase to 600MW, but no evidence based detailed.
Meath	2021-2027	There is an old RES from 2017 available but it is not referenced in the current CDP. While there are some statements noting support for wind energy developments. The necessary mapping and other information are missing.
Monaghan	2019-2025	No RES available, and information not in other parts of the CDP. This CDP was before both OPR and NPF.
Offaly	2021-2027	Has a wind energy strategy not RES, so as is common includes a wind map but nothing else and other technologies just briefly covered in CDP. OPR recommendation 13 required the PA to include MW targets and omit 2km setback from wind turbines. There was no MW target included but the land area identified is quite large, and the 2km buffer was removed. OPR MA recommendation 4 required PA to indicate targets or an objective to do so within 6 months of making plan, which was included in the final plan.
Roscommon	2022-2028	Used old RES from 2014-2020, so rather out of date. The OPR recommendation 11 required the planning authority to include the 267MW figure from their wind energy strategy in the CDP as a target and provide evidence base. However, no amendment was included. At the material amendments stage, OPR recommendation 1 required the planning authority to omit 1.5km setback distances that had been introduced. This was then omitted.

Sligo	2017-2023	The oldest CDP out of those reviewed. It doesn't have a RES, some bits in CDP chapter on energy but no wind map or resource assessment/ target.
South Dublin	2022-2028	No RES, energy chapter in CDP No recommendation issued from the OPR
Tipperary	2022-2028	Reused an old RES from 2016 that has wind map and current developments. OPR recommendation 11 required evidence-based MW targets, and removal of 1km setback from settlements. However, no amendments were made.
Waterford	2022-2028	One of the few examples with a table of current MW install and share for both electricity and heat. There is a MW target for wind, solar PV, and bioenergy. These are based on analysis by the 3 counties energy agency. However, unfortunately it is not up to date with the more recent CAPs. The renewable electricity target of 35% is significantly below the national objective of 80%.
Westmeath	2021-2027	CDP has a landscape character maps and wind capacity map. It also has objective to prepare a Renewable Energy Strategy for the County over the lifetime of this plan and subject to the availability of resources - Currently no RES but there is some detail in energy chapter - one interesting objective is the setback distance of 2km. OPR recommendation 6 required planning authority to omit mandatory setbacks from wind turbines, recommendation 7 required evidence-based MW target for wind energy, and recommendation 8 required omission of definition of industrial scale / large-scale wind energy. These amendments were not made. During material amendment stage, the effective separation distance was increased as well as the sensitivity of designated areas. OPR recommendation 2(a) again required the planning authority to omit mandatory setbacks from wind turbines. When this was not taken into consideration, OPR issued a recommendation for direction to amend the adopted plan to i) delete objective 10.132 (renumbered 10.143) setbacks; and ii) identify evidence-based MW targets to contribute to national targets. The Minister decided not to issue the direction in relation to MW targets under part (ii), as outlined in statement before the Oireachtas.
Wexford	2022-2028	Included a chapter in the CDP 'energy strategy'. It contains maps of areas open for consideration for both wind energy and solar PV, as well as current wind farms. However, a MW target was not provided. OPR recommendation 10 required the planning authority to remove the exclusion zone (250m from level 3 and 1km from level 1 & 2 settlements) for solar PV development. At material amendment stage, these recommendations were not complied with. The restrictions were instead extended, and an objective introduced to require agreement of neighbouring property within 300m of wind turbine. The OPR recommendation 6 required planning authority to commit to reviewing restriction as part of future local area plans, and recommendation 7 required planning authority to omit restrictions on wind developments. These requirements were no complied with, but a direction was not issued.
Wicklow	2022-2028	Has a wind energy strategy not a RES, just includes map of suitable areas OPR recommendation 17 required the PA to indicate evidence based renewable energy MW targets to contribute to national targets. A 255 MW target was then included at material amendments stage.

A.2 Assessment Table

LA	CDP period	Onshore Wind				Solar				Bioenergy				District heating				
		Map of suitable areas	Current / planned developments	Resource potential	MW target	Map of suitable areas	Current / planned developments	Resource potential	MW target	Map of suitable areas	Current / planned developments	Resource potential	MW target	Map of suitable areas	Current / planned developments	Resource potential	Heat demand	MW target
Carlow	2022-2028	✓	✓	✓	30	✓	✓	✓	100	✓	✓	✓				✓	✓	
Cavan	2023-2028																	
Clare (draft)	2023-2029	✓	✓	✓	550	✓											✓	
Cork City	2022-2028																	
Cork County	2022-2028	✓	✓		603				43									
DLR	2022-2028	✓	✓															
Donegal	2018-2024	✓																
Dublin City	2022-2028															✓		
Fingal	2023-2029																	
Galway City (draft)	2023-2029																	
Galway County	2022-2028	✓	✓	✓	1,373	✓	✓	✓	216									
Kerry	2022-2028	✓																
Kildare	2023-2029	✓	✓	✓	107													
Kilkenny	2021-2027	✓	✓	✓			✓											
Laois	2021-2027	✓	✓															
Leitrim	2023-2029	✓	✓															
Limerick	2022-2028	✓	✓		150		✓		227				20					
Longford	2021-2027	✓																
Louth	2021-2027	✓																
Mayo	2022-2028	✓	✓	✓	600													
Meath	2021-2027																	
Monaghan	2019-2025																	
Offaly	2021-2027	✓																
Roscommon	2022-2028	✓																
Sligo	2017-2023																	
South Dublin	2022-2028	✓												✓	✓	✓		
Tipperary	2022-2028	✓	✓															
Waterford	2022-2028	✓	✓	✓	132				84			✓	202					
Westmeath	2021-2027	✓																
Wexford	2022-2028	✓	✓			✓												
Wicklow	2022-2028	✓			255													

A.3 Responses from LAs missing wind area maps

Cavan	2023-2028	Highlighted: <ul style="list-style-type: none"> • EDO 05 Commence the preparation of a Landscape Assessment within 6 months of the adoption of the development plan • Section 7.10 Renewable Energy.
Cork City	2022-2028	Noted that Cork City has very limited potential for large scale wind energy development due to its urban nature, and that the CDP commits to supporting small or microscale wind energy development in appropriate locations, as well as supporting Cork County Council in facilitating offshore windfarms. Highlighted: paragraphs 5.36, 5.37, 9.22 and 11.248, Strategic Objective 4, Objectives 5.5 and 9.15 and ZO 20 City Hinterland of the Cork City Development Plan 2022-2028 are relevant.
Donegal	2018-2024	No reply
Dublin City	2022-2028	Noted the urban nature of Dublin City Council, and also that the 2006 Guidelines are now significantly out of date. Highlighted: <ul style="list-style-type: none"> • Chapter 3 - Climate Action covering: district heating, micro-energy/on site-energy generation and wind energy • Policy CA13 support for offshore wind energy; particularly around the Dublin Port area
Fingal	2023-2029	Highlighted: <ul style="list-style-type: none"> • Chapter 5, which has policies and objectives with regard to Renewable Energy including Wind Energy • Chapter 11 Infrastructure and Utilities, that outlines policy with respect to Renewable Energy, micro-renewables etc. • Stage 3 Material Alterations to the Draft Plan includes PA CH 5.8: which amends Section 5.5.3.5 of the Draft by inserting a requirement for the local authority to prepare a Wind Energy Strategy.
Galway City (draft)	2023-2029	No reply
Leitrim	2023-2029	No reply
Meath	2021-2027	Noted that the Council has in recent years delayed the commencement of a Renewable Energy Strategy until the adoption of the Draft Review of the Wind Energy Guidelines in 2017. Highlighted: <ul style="list-style-type: none"> • Landscape Character Assessment that includes an assessment of the potential capacity of the landscape to accommodate renewable energy developments. • INF POL 41 of the Meath CDP 2021-2027. INF POL 42 also aims 'to support the identification, in conjunction with EMRA, of Strategic Energy Zones, areas suitable to accommodate large energy generating projects • Planning permission for solar farms granted within the county
Monaghan	2019-2025	No reply
Sligo	2017-2023	Noted that the section 23 Guidelines were issued after the CDP 2017-2023 was adopted, so the specific planning policy requirements could not have been considered when drafting the Plan. And that these Guidelines were revoked on 16 th December 2022.
Westmeath	2021-2027	No reply

A.4 Wind energy shares by county

	Population				Area (km ²)				Wind Energy Installed [23]						Population Share* (MW)		Area Share* (MW)	
									Current (MW)		Planned (MW)		Total (MW)		Δ**		Δ**	
Carlow	61,931	1%	898	1%	8	0%	22	1%	30	0%	109	-101	111	-103				
Cavan	81,201	2%	1,932	3%	136	3%	27	2%	163	3%	143	-6	239	-103				
Clare	127,419	2%	3,442	5%	217	5%	15	1%	232	4%	224	-7	427	-209				
Cork County	358,898	7%	7,281	10%	686	16%	34	2%	720	12%	630	56	903	-217				
Cork City	222,333	4%	1,123	2%	0	0%	0	0%	0	0%	391	-391	139	-139				
Donegal	166,321	3%	4,860	7%	452	11%	237	13%	689	11%	292	160	602	-150				
Dublin City	588,233	11%	118	0%	0	0%	0	0%	0	0%	1,033	-1,033	15	-14				
Dún Laoghaire–Rathdown	233,457	5%	127	0%	0	0%	0	0%	0	0%	410	-410	16	-16				
Fingal	329,218	6%	453	1%	1	0%	0	0%	1	0%	578	-577	56	-55				
Galway City	83,456	2%	1,572	2%	0	0%	0	0%	0	0%	147	-147	195	-195				
Galway County	192,995	4%	6,100	8%	348	8%	110	6%	458	7%	339	9	756	-408				
Kerry	155,258	3%	4,735	7%	711	17%	1	0%	712	12%	273	439	587	125				
Kildare	246,977	5%	1,694	2%	0	0%	60	3%	60	1%	434	-434	210	-210				
Kilkenny	103,685	2%	2,072	3%	52	1%	29	2%	80	1%	182	-131	257	-205				
Laois	91,657	2%	1,720	2%	61	1%	95	5%	155	3%	161	-100	213	-153				
Leitrim	35,087	1%	1,589	2%	93	2%	0	0%	93	2%	62	31	197	-104				
Limerick	205,444	4%	2,760	4%	239	6%	0	0%	239	4%	361	-122	342	-103				
Louth	139,100	3%	832	1%	7	0%	210	12%	217	4%	244	-237	103	-96				
Longford	46,634	1%	1,091	2%	0	0%	0	0%	0	0%	82	-82	135	-135				
Mayo	137,231	3%	5,588	8%	271	6%	279	15%	551	9%	241	30	693	-421				
Meath	220,296	4%	2,335	3%	10	0%	0	0%	10	0%	387	-377	289	-280				
Monaghan	64,832	1%	1,296	2%	26	1%	82	5%	108	2%	114	-88	161	-134				
Offaly	82,668	2%	1,990	3%	93	2%	354	20%	448	7%	145	-52	247	-153				
Roscommon	69,995	1%	2,548	4%	111	3%	5	0%	116	2%	123	-12	316	-204				
Sligo	69,819	1%	1,838	3%	96	2%	0	0%	96	2%	123	-27	228	-132				
South Dublin	299,793	6%	223	0%	0	0%	0	0%	0	0%	527	-527	28	-28				
Tipperary	167,661	3%	4,304	6%	350	8%	85	5%	435	7%	295	56	534	-183				
Waterford	127,085	2%	1,859	3%	60	1%	34	2%	94	2%	223	-164	230	-171				
Westmeath	95,840	2%	1,825	3%	0	0%	88	5%	88	1%	168	-168	226	-226				
Wexford	163,527	3%	2,365	3%	182	4%	0	0%	182	3%	287	-105	293	-111				
Wicklow	155,485	3%	2,033	3%	93	2%	40	2%	133	2%	273	-180	252	-159				
	5,123,536		72,603		4,303		1,807		6,110									

*CAP2023 target of 9 GW split by population and area, **Difference in MW versus current install capacity