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Assessment of the draft updated National Energy and Climate Plan of Ireland

Accompanying the document

COMMISSION RECOMMENDATION

on the draft updated integrated national energy and climate plan of Ireland covering the period 2021-2030

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1 SUMMARY

1.1 Overview of key objectives, targets and contributions in the draft updated NECP



The European Green Deal, the fast-evolving geopolitical context and the energy crisis have led the EU and its Member States to accelerate the energy transition, and to set more ambitious energy and climate objectives, with a strong focus on the diversification of energy supplies. These developments are reflected in the legislative framework adopted under the ‘Fit for 55’ package and the REPowerEU Plan.

Ireland’s draft updated national energy and climate plan (‘the draft updated NECP’ or ‘the plan’), submitted on 8 December 2023, partially takes into account this new geopolitical and legislative framework.

Table 1: Summary of key objectives, targets and contributions of Ireland’s draft updated NECP

	National targets and contributions	2020	Progress based on latest available data	2030 national targets and contributions	Assessment of 2030 ambition level
	Binding target for greenhouse gas emissions (GHG) compared to 2005 under the Effort Sharing Regulation (ESR) (%)		2021: -1.9% 2022: -3.4% ¹	-42%	NECP: -10.2%
	Binding target for net GHG removals under the Regulation on Land Use, Land Use Change and Forestry (LULUCF)		Reported net emissions of 7.34 Mt CO ₂ eq. in 2021 and reported approximated net emissions of 7.31 Mt CO ₂ eq. in 2022	-626 kt CO ₂ eq. (additional removal target) 3728 kt CO ₂ eq. (total net emissions)	Insufficient ambition. Ireland not projecting to reach the 2030 target
	National target/contribution for renewable energy: Share of energy from renewable sources in gross final consumption of energy (%)		2021: 12.5%		Ireland’s target of 31.4% is significantly below the 43% required pursuant the formula set out in Annex II of the Governance Regulation

¹ The ESR emissions for 2021 are based on final inventory data and for 2022 on approximated inventory data. However, the final ESR emissions for 2021 and 2022 will only be established in 2027 after a comprehensive review.

	National contribution for energy efficiency:				
	Primary energy consumption (Mtoe)	13.9	13.9	15.2 (no target but WEM forecast)	Ireland's primary energy consumption projection is 15229 ktoe. Energy Efficiency Directive (EED) recast Annex I formula: 11,230 ktoe
	Final energy consumption (Mtoe)	11.7	11.4	12.9	Ireland's final energy consumption projection is 12911 ktoe. EED recast Annex I formula: 9,858 ktoe.
	Level of electricity interconnectivity (%)	0%	0%	15% ²	

Source: Eurostat; Ireland's draft updated national energy and climate plan

1.2 Summary of the main observations³

Ireland submitted its draft updated NECP more than five months after the deadline of 30 June 2023⁴. Therefore, the European Commission had limited time to draft its assessment in this Staff Working Document, in order to enable Ireland to submit its final draft updated NECP by the legal deadline of 30 June 2024.

The draft updated plan refers to the revised energy and climate targets recently agreed under the **Fit for 55** package and the **REPowerEU Plan**. However, it does not sufficiently elaborate on how these targets will be effectively reached.

Regarding the reduction of greenhouse gas emissions under the **Effort Sharing Regulation**, the plan provides emission projections demonstrating that with existing

² Calculated by the European Commission based on the ETNSO-E data (Winter Outlook 2022-2023). The 2030 level represents the general interconnectivity target of 15%. The level of ambition cannot be assessed, because the actual 2030 interconnectivity levels will depend on the implementation of the planned interconnectors and changes in the generation capacity.

³ In addition to the notified draft NECP, this assessment also considers informal bilateral exchanges, which are part of the iterative process established under the Governance Regulation.

⁴ Article 14 (1) of Regulation (EU) 2018/1999 on the Governance of the Energy Union and Climate Action OJ L 328, 21.12.2018, p. 1–77.

policies and measures (PaMs) Ireland is not on track to meet its national greenhouse gas target of -42% in 2030 compared to 2005 levels. In some sections of the draft plan, Ireland refers only to its old ESR target of a 30% reduction before the revised ESR. According to Ireland's projections, there is a gap of 31.8 percentage points, highlighting the need for more ambitious climate action. Ireland did not provide ESR projections for the 'with additional measures' (WAM) scenario in the plan but according to Ireland's WAM projections submitted in March 2023, there is a gap of 13.1 percentage points.

On **LULUCF**, the draft updated plan indicates that Ireland will fall short of the 2030 ambition, highlighting the need for enhanced climate action. The draft does not clearly set out a pathway to increase the land sector's contribution to the EU's overall enhanced climate target, nor does it describe with detail specific measures, such as afforestation, and their impacts. The focus is on agricultural emissions and actions to reduce them. The draft includes only projections for existing measures and does not provide a clear implementation timeframe nor quantification of the impacts of specific policies and measures. It also lacks information on the status and progress in ensuring higher tier levels and geographically explicit datasets needed to ensure the robustness of net removal estimates.

On **Carbon Capture Utilisation and Storage (CCUS)**, the plan does not identify annual emissions that can be captured, nor any geological CO₂ storage capacity. The plan does not foresee the deployment of any dedicated CO₂ transport capacities. Ireland currently prioritises research in Carbon Capture and Storage (CCS).

The draft updated plan reflects partial progress towards **international commitments under the Paris Agreement**. Ireland had a commitment to phase out coal and peat fired electricity generation, which are expected to no longer be a part of the electricity generation mix post 2025. Ireland states that peat fired generation is 'expected to cease at the end of 2023' as this is when the last remaining plant using peat will switch to 100% biomass fired generation, but more details are missing on how this will be achieved or on a concrete date. No date, timeline or commitment to phase out fossil fuel subsidies are given in the draft updated NECP. Ireland notes it is committed to model the impacts, both in terms of the economy and in terms of emissions, of removing fossil fuel subsidies.

Regarding **adaptation to climate change**, the draft updated NECP does not contain adequate analysis of relevant climate vulnerabilities and risks to the achievement of national objectives, targets, and contributions and the policies and measures in the dimensions of the Energy Union. The draft updated NECP describes the legal and administrative national setup, including on adaptation. It mentions the national adaptation plans as well as the sectoral and local plans. While it is stated that sectors relevant to energy and climate (for example electricity, transport, agriculture) all have developed sectoral adaptation plans, risks from climate change or extreme weather events are not specifically described nor are measures identified to counter those risks. The link to the specific Energy Union objectives and policies, which adaptation policies and measures should support, is not specified nor quantified. Adaptation policies and measures to support Ireland's achievement of national objectives targets and contributions under the Energy Union, are not properly described in terms of their scope, timing and expected impacts.

For **renewable energy**, the draft updated plan is a preliminary update which only includes a reduced overall target based on existing measures, **putting forward the contribution of 31.4% of renewables in final energy consumption**; this is significantly below the share

of 43% resulting from the formula in Annex II of Regulation (EU) 2018/1999 on the Governance Regulation of the Energy Union and Climate Action (“Governance Regulation”). The plan reports that this does not correspond to a reduced commitment and that the updated target including additional measures will be included in the final version of the updated NECP. The plan includes trajectories for renewables in the electricity, transport and heating and cooling sectors as per Directive (EU) 2018/2001 (“REDII”) and as amended by Directive (EU) 2023/2413 (“revised REDII”) but does not include a trajectory for Renewable fuels of Non biological origin (RFNBOs). At the same time, it provides, for the most part, a comprehensive list of measures that Ireland has adopted or intends to adopt to support the deployment of renewable energy.

Regarding **energy efficiency**, the draft updated NECP is a very preliminary update of the 2020 plan. Several key elements are missing such as the national contributions to the 2030 energy efficiency targets and the expected impact of measures in terms of energy savings. The plan reports that information on the missing key elements will be included in the final version of the updated NECP by June 2024, following the publication of the Directive (EU) 2023/1791 on energy efficiency and amending Regulation (EU) 2023/955 ('EED recast'). Given that this key information is missing, a comprehensive assessment of the plan, including its level of ambition and coherence, cannot be completed.

Regarding **planned energy efficiency measures**, the draft updated NECP puts forward a set of comprehensive measures addressing most of the relevant sectors, including buildings, transport and business sectors. However, the quantification of the energy savings and the financial needs are only partially provided, thereby making it difficult to assess their contribution towards the overall energy efficiency targets. As regards the **energy efficiency first principle**, the draft updated NECP mentions that Ireland is committed to apply it, but no information on its concrete application is provided.

In relation to **buildings**, the draft updated NECP refers to the long-term renovation strategy (LTRS) but does not update any of its key elements, targets or milestones. Several of the measures addressing the building sector are outlined to stimulate and finance cost-effective deep renovation, also addressed to worst-performing buildings and lower-income households. However, the draft updated NECP does not update any of its key elements, targets or milestones including information on the expected energy savings, and the contribution of each measure towards the targets set seems not to be quantified.

The strategy for **energy security** is based on efforts to increase domestic renewable sources including wind, solar, geothermal and bioenergy and facilitate infrastructure projects. The plan emphasises the need to work with EU partners to maintain existing regional co-operation for emergency preparedness and response. Specifically in the **gas sector**, the plan notes the possibility of commissioning a floating storage regasification unit (FSRU). However, it generally contains few details on envisaged measures to strengthen security of gas supply, particularly in a context of expected decline in domestic production. In the **electricity sector**, the plan acknowledges the high dependency on imports, notably from Northern Ireland. Ireland plans to increase security of supply through electrification powered by increased renewable generation, demand-side flexibility, new gas-fired generation as backup, electricity interconnection and energy storage. The draft NECP does not provide a clear description of expected **oil** demand by 2030/2040 and does not assess the impact of decarbonisation on the national oil infrastructure (refinery, oil stocks).

Although Ireland has implemented all of the relevant **internal market legislation**, it has have almost nothing related to this in the draft NECP. Moreover, the plan does not indicate specific measures to accelerate the deployment of electricity storage, nor to engage the system operators in facilitating the penetration of flexibility services. The draft updated plan did not elaborate on the quantification of flexibility needs, and setting clear targets and objectives for demand response, storage and flexibility. policies and measures to enhance flexibility and enable a non-discriminatory participation of new flexibility services were not specifically set out in the plan.

On energy poverty, the draft updated NECP defines **energy poverty** as households having to spend more than 10% of their income on energy, and it shows a share of 29% of energy poor households in Ireland. Ireland recognizes energy poverty as a multidimensional challenge with various causes, including energy inefficiency and inability to afford energy services. The plan outlines various measures aimed at addressing energy poverty comprehensively.

In the **research, innovation, competitiveness and skills** dimension, Ireland’s draft NECP presents a broad range of strategic programmes and measures to boost clean energy research and innovation in line with the European Green Deal objectives. However, the plan lacks a clear target and pathway towards 2030 and 2050. In addition, the plan does not provide a breakdown of research and innovation (R&I) funding by public and private investors, nor the share of climate and energy in total R&I spending. While there is a strong focus on deployment, the plan lacks sufficient information about the investments needed for the manufacturing of net zero-technologies, key components and equipment as well as how Ireland will increase the resilience of its supply chains. The national strategy and measures related to digitalisation are very broad with little focus on clean energy. The plan also lacks information on skills shortages and sufficient details on measures related to the necessary skills for the transition.

Just transition aspects are partially addressed in the plan. The plan provides information on the most impacted areas concerned by the transition away from peat and carbon intensive industries, without providing a more comprehensive approach at national level to address the just transition aspects. There are some measures to address skills as discussed in the section above, but there is no assessment on skills requirements or jobs losses as a result of the green transition, and there are also no policies outlined that address these issues. Also, there is only some information on employment and social impacts of the transition. The draft updated plan does not provide sufficient information on the preparation of the Social Climate Plan (SCP) or on how the consistency of the two plans is to be ensured.

As regards its **strategic alignment with other planning tools**, the draft updated NECP reflects the 2023 **European Semester Country Specific Recommendations**, in particular with regard to the reduction of reliance on fossil fuels, permitting and energy efficiency in buildings. At the time of writing Ireland had not yet submitted its new REPowerEU chapter.

Finally, the draft updated NECP provides preliminary and partial information on the investment needs to implement the planned policies and measures for some of the five dimensions of the Energy Union. The draft updated plan does not provide details on the investment needs and funding sources for the various specific policies and measures proposed. The **analytical base** of the draft updated plan includes only ‘with existing

measures' (WEM) projections. Those projections cover relevant sectors of the economy up to 2050 including industry, the energy system and transport. Furthermore, there is no macro-economic assessment provided, which under the Energy Union Regulation is a mandatory requirement.

2 PREPARATION AND SUBMISSION OF THE DRAFT UPDATED NECP

2.1 Process and structure

The Irish plan was notified on 8 December, more than 5 months after the legal deadline. Overall, the plan follows the structure provided by the Annex I template. It covers all five dimensions, and includes objectives, targets or contributions for each, backed by some policies and measures. However, a WAM scenario is missing, policies and measures are often not sufficiently explained to allow for an assessment of whether they will achieve the corresponding target, and a solid analytical basis, including an impact assessment, is missing. The plan also reports targets and with existing measures (WEM) projections interchangeably, often reporting targets in the WEM projections chapter and vice versa. In terms of the process for preparing the plan, Ireland organised early and effective public consultations, including social partners and a multi-level dialogue. Irish local authorities are considered crucial in the development and deployment of the draft updated NECP, since they are ideally placed to provide robust leadership in advancing the climate objective at the local and regional level, and to support local communities and economic development. A strategy with a roadmap has been developed for local governments to deliver on climate commitments. Together with Ireland's three regional assemblies, a strategic link is established between the EU, national and local levels.

The engagement of local authorities in multiple initiatives is also noteworthy. This includes: the Global Covenant of Mayors, the 100 Climate-Neutral and Smart Cities mission (3 Irish cities) and the Climate Adaptation mission (7 local authorities). The role of local authorities in addressing energy poverty is not explicitly mentioned.

2.2 Public consultation

No specific public consultations were organised in the context of drafting the updated NECP. Therefore, before decisions were taken and throughout the decision-making process of the NECP update, early public participation was not fulfilled prior to submission of the draft updated NECP. The draft updated NECP explains that a focused period of public consultation on the draft will take place in Q1 2024, for a period of at least six weeks. The draft will be available for comment and feedback, which will inform Ireland's final updated NECP. It appears from the consultation planning outlined in the draft plan that appropriate communication channels and mechanisms will be set up to notify and reach the public regarding their participation in the update.

Ireland provides concise summaries of the consultations that took place for the core national strategies and plans that are featured in the draft NECP. However, it does not provide details on how exactly it took into account the public's views gathered from the consultations. Ireland also notes that Citizen Assemblies and the National Dialogue on Climate are also important avenues for citizens to discuss policy and societal issues.

It is unclear if a Strategic Environmental Assessment (SEA) has been carried out or if there are plans to do so. The SEA is however defined in the draft plan.

2.3 Regional consultations for preparing the draft updated NECP

There have been various consultations and engagement on offshore wind with North Sea countries (Belgium, Denmark, France, Germany, Ireland, Luxembourg, the Netherlands, Norway, Sweden). These took place in the framework of the High-Level Group on the North Sea Energy Cooperation (NSEC). The main outcome, explaining its scope and procedural aspects, has been summarised in the draft updated NECP. However, the plan does not mention the drafting of an NSEC common chapter. The collaboration mainly focused on the development of offshore hybrid and joint projects, permitting, maritime spatial planning and in general terms environmental considerations, financing and long-term grid and infrastructure planning. The plan mentions the clean Energy for EU Islands initiative but does not explain whether it has been involved in preparing the draft NECP. The plan also highlights bilateral engagements with neighbouring countries through ad hoc groups, without specifying the consulted Member States or the groups' scope, process, or outcomes of the groups. It recognizes the necessity of discussing the draft NECP in the context of more formal bilateral meetings and exploring additional areas of cooperation in the future.

3 ASSESSMENT OF THE AMBITION OF OBJECTIVES, TARGETS AND CONTRIBUTIONS AND ADEQUACY OF SUPPORTING POLICIES AND MEASURES

3.1 Decarbonisation dimension

3.1.1 Greenhouse gas emissions, removals and storage

Ireland's draft updated NECP embeds the increased climate targets in the ESR and LULUCF Regulation, as part of the **Fit for 55 legislative package** but it does not provide the projections or policies to reach these targets. Ireland's draft updated NECP states that it is based on the WEM scenario, which includes policies implemented and adopted by the end of 2021. The final updated NECP will include updated WEM and WAM scenarios, which will include measures post 2021. Ireland has a legally binding goal to achieve climate neutrality by 2050 (Climate Action and Low Carbon Development (Amendment) Act 2021).

The draft updated NECP does not include concrete pathways to 2050. WEM projections are performed with a time horizon of 2050, based on policies implemented and adopted by the end of 2021. However, the draft plan does not include WAM projections. The WEM projections are in line with the projections submitted in March 2023 under Art. 18 of the Governance Regulation. These latter projections show net GHG emissions (i.e., including LULUCF and excluding international aviation) of 56 million tonnes of CO₂ equivalent (CO₂ eq.) by 2050 considering existing measures and of 37 million tonnes of CO₂ eq. with additional measures, compared to 1990. This is equivalent to projected reductions in 2050, compared to 1990, of 9% and 40%, respectively. In the most recent years, however, net GHG emissions in Ireland have been rising, mainly due to a continued growth of emissions in agriculture and an increase in LULUCF net emissions. Despite the

commitment to achieve climate neutrality by 2050, the information provided in the draft updated plan does not allow for a full assessment as to whether progress by Ireland is consistent with the achievement of the EU climate-neutrality objective. However, based on all the available information, progress by Ireland towards the EU climate-neutrality objective appears largely insufficient. In the final updated plan, Ireland plans to update the WEM projections and to include WAM projections.

The draft updated NECP does not reflect the required ambition under the Effort Sharing Regulation (ESR), as the policies and measures included do not collectively suffice to reach the obligations for the effort sharing sectors. The ESR sets Ireland's 2030 ESR emissions reduction target to -42% by 2030, compared to 2005 levels. The plan projects emissions from the effort sharing sectors to be above this target in the scenario with existing measures (WEM), suggesting the need for more ambitious climate action. In the WEM scenario, Ireland would reduce ESR emissions by 10.2%, falling short of its 2030 ESR target by 31.8 percentage points. According to the projections, emissions from agriculture and transport – the ESR sectors accounting for the highest emissions in 2021 in Ireland – would stagnate. From 2021 to 2030, emissions from agriculture are projected to decrease by 4% from 23.6 MtCO₂eq. to 22.8 MtCO₂eq. and emissions from transport are projected to decrease by 1% from 11 MtCO₂eq. to 10.9 MtCO₂eq. Emissions from buildings – the ESR sector accounting for the third highest emissions in 2021 in Ireland – are projected to decrease by 36% from 6.9 MtCO₂eq. in 2021 to 4.5 MtCO₂eq. in 2030.

Agriculture accounts for the largest share of Ireland's emissions (38%), followed by transport (17.7%). Agriculture also dominates Ireland's ESR emissions accounting for around half of Ireland's ESR emissions in 2021. In 2021, Ireland's ESR emissions exceeded the annual emission allocations (AEAs) by 3.3 Mt CO₂ eq. Based on Ireland's analysis of overall emission changes from 2020 to 2021, agriculture increased by 3.6%, driven by an increase in fertiliser nitrogen use, limestone application, and numbers of livestock.

In the draft updated NECP, under section 2 on national objectives and targets, Ireland recognises its revised ESR target of a 42% reduction of emissions compared to 2005 levels by 2030. However, under section 1.1.2 strategy relating to the five dimensions of the Energy Union and under section 1.1.3 in Table 1: Key objectives, policies, and measures of the plans, Ireland refers only to its old target of a 30% reduction.

The plan does not include a 'with additional measures' (WAM) projection. However, based on the latest data that had to be reported by Member States by 15 March 2023 under article 18 of the Governance Regulation, Ireland provided a 2030 WAM projection indicating a decrease in emissions by 28.9% compared to 2005. This falls short their 2030 target by 13.1 percentage points, highlighting the need for more ambitious climate action.

Member States have flexibilities under the ESR to comply with their targets. To assess whether Member States comply, the use of saved AEAs from previous years and the ETS flexibility if needed are taken into account. Ireland requested its maximum amount of ETS flexibility of 19.1 Mt CO₂-eq, resulting in the cancellation of EU ETS allowances for this amount in return for an equivalent amount of additional of emission allocations in the ESR. Ireland notes in its draft updated NECP that it can use this ETS flexibility and indicates that the total amount of LULUCF flexibility projected to be available is 9.3 Mt CO₂ eq. The full LULUCF flexibility of 26.8 Mt CO₂ eq (theoretically available to Ireland under the ESR) is not considered by Ireland to be possible to achieve based on the latest

projections. Ireland indicated that the significantly reduced availability of LULUCF flexibility is due to their new estimates for emissions from organic soils which are larger than previously estimated. Ireland’s WEM projections indicate that Ireland’s emissions under the ESR will exceed the carbon budget by approximately 32 Mt CO₂ equivalent over the 2021-2030 period, assuming both ETS and LULUCF flexibilities as set out in the ESR are fully utilised.

Table 2: ESR target and projections in Ireland’s draft updated NECP

ESR target and projections⁵					
	2030 target*	2021 performance (inventory data) *	2022 performance (approximated data) *	2030 WEM projection*	2030 WAM projection*
Ireland	-42%	-1.9%	-3.4%	-10.2%	-
EU	-40%	-14.5%	-16.9%	-27%	-32%

*Compared with the 2005 emissions as set out in Annex I of Commission Implementing Decision (EU) 2020/2126.

The plan does not sufficiently reflect the increased ambition of the LULUCF Regulation for 2030 and, in particular, the additional 2030 national target of -626 CO₂ equivalent. Emissions from the LULUCF sector in 2030 are projected to be above their 2030 target with existing measures, highlighting the need for ambitious climate action. The draft plan does not include a scenario with additional measures, which is expected to be included only in the final plan in 2024.

Although the draft updated plan recognises the importance of the LULUCF sector, and particularly the crucial role played by agriculture in terms of the overall land emissions, the plans does not set out a concrete pathway to increase the contribution of the land sector to the overall EU’s enhanced climate target.

In terms of policies, Ireland sets out a comprehensive list of relevant agriculture measures, and mentions in general terms forestry measures, such as afforestation enhanced carbon sequestration in soil/biomass or reduced management intensity of organic soils. However, it fails to describe in detail how these measures will be implemented in practice and to quantify the mitigation potential of the individual planned measures. The draft plan does not explain how the expected increase of biomass for energy will affect carbon sinks and fails to analyse the interdependence between LULUCF sinks and biodiversity and climate adaptation.

Further proposals for how Ireland plans to achieve the LULUCF (and related ESR) targets are to be presented to the parliament as part of the update of the 2024 national climate action plan (approved by the government 20 December 2023) and the 2024 amendment of the Common Agricultural Strategic Plan.

The plan includes objectives by 2030 for an increased share of zero- and low-emission vehicles, in particular: 845,000 electric passenger cars; 95,000 electric vans and trucks;

⁵ The comparison between the ESR target and emission projections does not take into account the flexibilities available for Member States under the ESR to comply with their 2030 targets. The ESR emissions will be comprehensively reviewed in 2027 (for the years 2021-2025) and 2032 (for the years 2026-2030).

1,500 electric buses; and 3,500 low-emission trucks. Figures are not provided for recharging infrastructure, but the plan refers to the targets enshrined in the alternative fuels infrastructure regulation (AFIR) as well as further measures for public and private charging in residential areas, through initiatives such as the National EV Charging Infrastructure Strategy, National En-Route EV Charging Plan and Destination and Residential /Neighbourhood charging plans; it also mentions a requirement for at least one recharging point in new non-residential buildings with more than 10 parking spaces. A series of measures to accelerate the deployment of zero-emission vehicles are presented, including vehicle registration tax relief, purchase grants, Vehicle Registration Tax (VRT) relief, a domestic charger scheme, grants for the installation of recharging points, and other benefits and incentives, including an EU Just Transition Fund scheme. Progress in the electrification of the bus fleet is also presented, including a framework contract that has been signed for the provision of 800 electric double-decker buses.

A drawback of the plan is the reliance on natural gas for transport, which is not a low-GHG fuel, whose demand and assets shall not be incentivised, notably under the current geopolitical and energy framework. Biogas too would be more efficiently used in high-efficiency cogeneration or hard-to-abate sectors where electrification is not possible, rather than for transport.

While the Irish NECP extensively mentions carbon offsetting mechanisms, such as ETS Aviation or CORSIA, the plan fails to identify to ReFuelEU Aviation and its legally binding mandates. Furthermore, the NECP highlights the target set by the outcome of CAAF3 (November 2023) for carbon reduction in the aviation sector through the uptake of SAF. It is crucial to note that this target is non-binding and stems from an ICAO recommendation. In contrast, the EU has a legally binding instrument, ReFuelEU Aviation, which mandates SAF uptake with specific milestones to be achieved already by 2025. This distinction must be clearly articulated within the NECP. While we recognise the acknowledgment of the international framework, we emphasise the essential significance of including the EU's legally binding framework for consistency and effective target attainment.

The maritime sector is not adequately addressed in the draft updated NECP. While there is a chapter on aviation (fuels, ETC, etc.), almost no information is provided on maritime fuels or FuelEU. The only reference is that the National Hydrogen Strategy envisages providing fuels also for the maritime sector.

With regards to **Carbon Capture, Utilisation and Storage**, the draft updated plan does not identify annual emissions that can be captured, nor any geological CO₂ storage capacity. The plan does not foresee the deployment of any dedicated CO₂ transport capacities. Ireland currently prioritises research in Carbon Capture and Storage (CCS). In this sense, a Steering Group was established in 2019 to determine the feasibility of CCS and to develop policy in the area. There is an ongoing pilot project, meant to capture emissions from an Irish refinery and to store them in a gas field in Ireland, subject to additional funding. The project has received PCI status in 2019 and has received Horizon 2020 funding. According to the plan, Ireland adopted a 5-year CCS review process, which will inform any decision to commit resources to put regulatory and permitting systems in place.

The plan pays insufficient attention to mitigating non-CO₂ emissions, in particular agricultural methane and N₂O emissions. On the one hand, the plan refers to the Common

Agricultural Policy and lists several mitigation measures addressing methane and N₂O, such as animal breeding programmes and feeding strategies, an increase of organic farming and a decrease of the use of chemical nitrogen as a fertiliser, low-emission slurry spreading, and biomethane production through anaerobic digestion. However, this list remains vague and does not provide any information on implementation or on the mitigation potential of individual measures. Moreover, the quantified projections show that agricultural greenhouse gas emissions will almost stagnate in this decade, followed by an increase after 2030.

These shortcomings are problematic, because agricultural methane and N₂O emissions accounted for 35% and 12% of all greenhouse gas emissions within the Effort Sharing sectors in 2021, respectively, and in the context of the gap towards the ESR target outlined earlier in this section.

The draft updated NECP reflects partial progress towards international commitments under the Paris Agreement. The plan refers to Ireland's commitment to deliver a complete phase-out of coal and peat fired electricity generation. Peat and coal are expected to no longer be part of the electricity generation mix post 2025. The plan details that Ireland has committed to stop the burning of coal in the ESB's Moneypoint generation plant by 2025, which will be replaced with low-carbon and renewable technologies. The last remaining peat fired plant was to switch to 100% biomass fired generation by the end of 2023. The plan does not assess the possible negative impacts of this biomass on climate and biodiversity.

No date, timeline or commitment to phase out fossil fuel subsidies are given in the draft updated NECP, but it states that Ireland's Climate Action Plan commits to model the impacts, both in terms of the economy and in terms of emissions, of removing fossil fuel subsidies. The draft plan also notes that Ireland's Climate Action Plan highlights the need to decouple economic growth from fossil fuel dependency and commits to developing a roadmap for the review and transition away from fossil fuel tax subsidies in the transport sector by 2024. The plan provides an estimate that fossil fuel subsidies accounted for EUR 2.9 billion in 2021. Indirect subsidies arising from tax expenditures, price supports, and other government revenue forgone accounted for 90%, while direct fossil fuel subsidies accounted for 10% of total fossil fuel subsidies in 2021. The draft updated NECP provides a clear overview and description of energy and fossil fuel subsidies, and says that 75% of environmental subsidies provided in Ireland are directed to potentially environmentally damaging subsidies.

In May 2023, Ireland submitted to the Commission its national long-term strategy. This Strategy outlines Ireland's 2030 targets committing to a 51% reduction in GHG emissions and climate neutrality by 2050. The strategy also emphasises a commitment to a just transition to a low-carbon economy. However, there was no information on Ireland's climate-neutrality goal in Ireland's report on the status of implementation of its initial NECP submitted in March 2023.

3.1.2 Adaptation

The draft updated NECP acknowledges the importance of adaptation to climate change. It provides a description of the policy planning setup, with national, regional, local and sectoral plans. The draft updated NECP furthermore explains that several sectors, including the energy sector has developed an adaptation plan. It also states that flooding is

one of the most important climate risks that Ireland encounters, but its impact on energy or climate mitigation is not described. There is no description of other risks such as storms or droughts that pose risks to energy transition based on wind power, geothermal and biomass production. The plan fails to describe concrete measures to increase resilience such as nature-based solutions.

The plan recognises an urgent and essential need for adaptation to address the current and future risks posed by a changing climate to secure a climate resilient economy and society by 2050, requiring efforts across all sectors and actors. The energy sector in particular needs to prepare for and adapt, by identifying areas of vulnerability and putting in place measures to avoid or minimise adverse impacts. However, the risks or measures are not described for that sector.

3.1.3 Renewable energy

The renewable energy contribution proposed in the draft NECP is a share of 31.4% of national gross final consumption of energy in 2030. This contribution is significantly below the share of 43% resulting from the formula in Annex II of the Governance Regulation, and below the 34.1% contribution indicated in the 2020 NECP including the absolute values in terms of energy. This new value is based on the WEM scenario; it is indicated in the draft plan that an updated WAM contribution will be provided in the final NECP. The overall renewable energy trajectories take into account the projected shortfall against the 2020 target (baseline). This recognises the effort required to close the gap, without explicitly indicating whether Ireland intends to close it through statistical transfers or investments in the renewable energy financing mechanism. The scenarios provide yearly overall renewable energy contribution trajectories and respective technologies, up to 2030 and for 2040. The indicative trajectory to reach the 31.4% contribution in 2030 is provided and compared with the trajectory towards the formula value of 43%, including specific reference points and predicted shortfall for 2022 (renewables share of 13.1%), 2025 (19.4%) and 2027 (22.5%). The submitted reference point for 2022 does not reach the trajectory (of 19%) calculated in line with the EU 2030 renewable energy target of 32%, which was in force at that time. Moreover, the reference points for 2025 and 2027 are significantly below the trajectory (28% and 33% respectively) calculated in line with the increased EU 2030 renewable energy target of 42.5%.

Renewable electricity generation is projected to reach 67.7% in 2030, with wind power remaining the main source of renewable electricity (10.2 GW of installed capacity generating 2.3 Mtoe, compared with 4.5 GW in 2022), with solar power also growing significantly from 258 MW and 13 ktoe in 2022 to 4.3 GW and 342 ktoe in 2030. Bioenergy is expected to roughly double but remain a minor contributor. By 2040, the installed wind and solar photovoltaic (PV) capacity is expected to reach 15.7 GW and 5.2 GW respectively, resulting in a doubling of wind power generation compared with 2030, while solar PV generation remains relatively stable. However, the updated draft plan does not include information on the innovative target for renewable energy deployment.

The use of renewable energy in the heating and cooling sector is projected to reach a share of 22.9% by 2030. This corresponds to an average annual increase of about 1.7 percentage point over 2021-2030, above the level of the binding annual increase under Article 23 of the revised REDII, but below the level of the indicative top up. Ireland does not plan to include waste heat and cold in the achievement of its target. The draft updated

plan does not mention whether Ireland plans to take account of renewable electricity in the trajectory. Biomass will remain the main source of renewable heat with 552 ktoe in 2030 – more than doubling compared with 2022 (236 ktoe) but ambient heat (heat pumps) will become a close second with 492 ktoe, a five-fold increase compared with 2022. The electricity needed to run these heat pumps and the projected capacity were not included. The use of renewable energy in **industry** and in **buildings** was not provided. No objective is set for the use of renewable energy in district heating and cooling (which represents less than 1% of heat consumption and therefore qualifies for the exemption threshold set in Article 24 of REDII) although the NECP highlights the potential in this sector.

In the transport sector, the share of renewable energy is projected to reach 14.9% in 2030 energy terms. The main measure promoting renewable fuels is mandatory quotas for the consumption of biofuels. However, the draft plan lacks details on how the use of advanced biofuels and RFNBOs is promoted. Consumption of renewable electricity by electric cars will also contribute towards the target in transport. The draft updated NECP refers to a target of 936,000 electric cars by 2030 aiming to reach 100% of new vehicle sales by 2030, which was indicated in the 2019 NECP.

Extensive details about measures related to electro-mobility (both relating to vehicles and to charging infrastructure) are included in the draft updated NECP. Measures to deliver this target include a proposed ban on the sale of internal combustion engine (ICE) vehicles and measures to electrify rail and public transport. Other policy tools include vehicle and fuel taxation measures, purchase grants for cars and heavy-duty vehicles and a new green procurement framework and public sector mandate. A new strategy for the expansion of the electric vehicle (EV) charging network was launched in 2023, with a 2025 time-horizon. EV infrastructure expansion is currently supported by a domestic charger grant scheme and an EUR 10M scheme to roll out fast chargers. The NECP mentions additional plans for EV charging schemes to be put in place between 2024 and 2026. The strategy will also be supported through a review of Ireland's overall land use and transport planning policy, and by design guidelines for EV charging infrastructure. Further actions will follow on ramping up after 2030, along with new planning rules and guidelines and the integration of EV infrastructure in building codes. However, the draft NECP does not provide specific details on such additional measures. Measures to promote renewable-based electrification of industrial processes are not specifically described.

The draft NECP indicates that the 2023 hydrogen strategy points at focusing the use of renewable hydrogen on hard-to-decarbonise sectors. The 2023 **National Hydrogen Strategy** includes a set of short-term actions to enable the development of renewable hydrogen in Ireland. The draft updated NECP indicates a target of 2 GW of offshore wind capacity dedicated to renewable hydrogen production by 2030. The actions will focus on removing barriers to projects and support its use for long-duration storage and dispatchable electricity resource, feedstock for industry decarbonisation and transport fuel for heavy goods transport, maritime and aviation. However, no targets have been set for RFNBO use in industry. The hydrogen strategy is based on domestic production, and no references to **international partnerships** in the form of an agreement, memorandum of understanding or bilateral talks for imports have been included.

On **policies and measures**, the objective in the **electricity sector** the objective is to reach an 80% share of renewable electricity generation by 2030, driven by auctions under the Renewable Electricity Support Scheme, which remains the main instrument for renewables deployment. Projects resulting from the first three auctions under the Renewable

Electricity Support Scheme (RESS) are planned to connect by 2027, while two additional auctions are planned in 2024 and 2025. In addition to the auctions scheme, Ireland set out a policy on corporate power purchase agreements (PPAs). It includes a set of principles aiming to promote PPAs and ensure that they result in net benefits in terms of climate, renewable energy affordability, consumers and the just transition. In order to achieve the required accelerated deployment, further planned measures include the streamlining of permitting procedures, greater monitoring of onshore wind power at regional level, the introduction of support schemes for small scale and micro-generation, and facilitation of community participation in renewable generation. Phasing out coal and peat-fired electricity generation will also contribute to increasing this renewable share. As regards the promotion of innovative technologies, the draft NECP mentions funding support for new onshore and offshore technologies as well as support to a pathway for ocean energy technologies.

Policies and measures include the move towards a plan-led regime for offshore renewables development including a large auction scheme (ORESS, which delivered a first volume of over 3 GW of projects in 2023) and a new framework for centralised development after 2030. In that context, a new maritime spatial planning law was adopted in 2021, followed by the first national maritime spatial plan (NMPF) and the creation of a new State consent as a first step to the new streamlined permitting process. In 2023, a new Maritime Area Regulatory Authority was also established to manage the new consenting process. This is complemented by an industrial strategy to secure a sufficient and resilient supply chain.

As regards **joint projects**, Ireland refers to regional cooperation in the context of the North Sea Energy Cooperation, this focuses on promoting offshore renewable energy and has helped prepare the agreement on non-binding goals for 2050 with intermediate milestones for 2030 and 2040⁶.

The draft plan provides information on measures to deliver on the ambitious new target for solar energy. This is expected to be achieved through a combination of large scale project support under the RESS and small-scale generation, with at least 500 MW of local community-based projects to be supported under the Small-Scale Renewable Electricity Support Scheme, and with a fast growing number of subscriptions to the Domestic Solar PV grants funded by the Micro-Generation Support Scheme and its extension to non-domestic sectors. Further the plan sets out a roadmap for corporate power purchase agreements to boost Ireland's renewable energy capacity including relevant measures for the consumer dimension.

Ireland did not indicate explicitly whether it has put in place a strategy for **energy system integration**. Nevertheless, it refers to the commitment to strengthening the policy framework on increasing the flexibility of the energy system through incentivising uptake of storage and demand response. The roll out of smart meters is indicated as one of the main drivers of electrification and aggregated demand side response.

Measures for **renewable heating and cooling** include the development of a policy framework for the introduction of a renewable heat obligation on heating fuel suppliers,

⁶ The Member countries are: Belgium, Denmark, France, Germany, Ireland, Luxembourg, the Netherlands, Norway and Sweden with the participation of the European Commission. A Memorandum of Understanding on cooperation with the UK on offshore renewable energy was signed between the NSEC Energy Ministers and the EU Energy Commissioner in December 2022.

which should also support the following: delivery of Ireland's biomethane target; achieving a target of 600,000 heat pumps installed over the period 2021-2030, supporting the expansion of district heating and the progressive ban on installing new fossil fuel boilers and their phasing out in existing buildings through a combination of incentives, information, and regulatory measures. The draft NECP mentions the intention to adopt a strategy on geothermal energy including targets on ground source heat pumps. However, it does not indicate any timeline, nor does it provide details on scope or budget. The draft NECP indicates that the impact of the Support Scheme for Renewable Heat (SSRH) will be impacted by the restriction of support to large energy users to contracts for difference under EU State Aid rules, which limits the ability to support biomass use.

Solid biomass is projected to play a higher role in the energy mix. Some measures to promote **bioenergy** availability have been included in the draft updated NECP, but no measures promoting bioenergy sustainability have been clearly highlighted. The draft updated NECP includes projections on bioenergy (up until 2050) and the estimated amounts that will be used for electricity and heating and cooling generation and for consumption in the transport sector. It has estimated trajectories on bioenergy demand, disaggregated between the three above mentioned sectors. The draft updated NECP does not include data on biomass supply by feedstock and origin, nor on the source of forest biomass used for energy and the impact on the LULUCF sink and on biodiversity. In particular, the draft updated NECP does not include the assessment, of the domestic supply of forest biomass for energy purposes in 2021-2030. This is required in accordance with the revised sustainability criteria under the revised REDII and to ensure compatibility of the projected use of forest biomass for energy production with Ireland's new obligations under the revised LULUCF Regulation, particularly for 2026-2030, together with measures and policies ensuring such compatibility. The plan has not assessed the impact that bioenergy trajectories may have on LULUCF sinks, biodiversity and air quality and the cascading principle has not been highlighted exhaustively. Ireland has published a biomethane action plan in September 2023 as a separate document. However, the draft updated NECP did provide a target for biomethane of 5.7 TWh by 2030 but an action plan and trajectory till 2030 have not been included.

The plan does not include a **mapping of the areas** necessary to achieve the national contribution to the EU renewable energy target or renewables acceleration areas and dedicated infrastructure areas. As regards the streamlining of administrative procedures and time limits for granting permits, the plan does not include a reference to a contact point for project promoters of technology of a certain threshold but describes the gradual transition to a plan-based planning and consenting system for offshore renewable energy. The plan provides a clear description of the way offshore renewable development is addressed in the maritime spatial plan but should develop further how marine environmental objectives will be taken into account. Generic information related to streamlined administrative procedures for other technologies is provided. The plan gives indications on the additional human resources dedicated to permitting but does not provide quantitative elements.

3.2 Energy efficiency (including buildings) dimension

Ireland has not reported revised energy efficiency targets. It argues that the EED recast indicates that the Commission will provide an updated 2020 EU reference scenario to Member States. It is presumed that Ireland intends to provide an updated indicative

national energy efficiency contribution early in 2024 following receipt of the updated scenario.

Ireland did not report any energy efficiency target for 2030. Given this, and for the purpose of this assessment, the provided 2030 WEM projections of energy consumption for primary energy consumption and final energy consumption are considered below.

According to the data presented in the draft updated NECP, Ireland is estimated to **increase final energy consumption** by 0.07 Mtoe per year until 2030 compared with the 2017-2019 average⁷. This would correspond to a theoretical national contribution of 15.23 Mtoe for primary energy consumption (compared with 11.23 Mtoe set out in the EED recast Annex I formula results) and 12.91 Mtoe for final energy consumption (compared with 9.86 Mtoe set out in the EED recast Annex I formula results). Ireland's reported projections for primary and final energy consumption deviate from the theoretical results stemming from the formula in the EED recast Annex I by 35.6% and 31% respectively. The 2030 consumption projections that have been provided are **higher** than the Irish 2020 energy efficiency targets (+9.6% and +10.4% for primary and final energy consumption respectively)⁸.

The target on reducing total **final energy consumption of all public bodies** is not well described in the draft updated NECP. There is not enough information provided on the measures planned, including for information on the inclusion of public transport or the armed forces. Ireland highlights the role of the Public Sector Energy Efficiency Strategy and its associated measures and support programme. However, specific details on the floor area to be renovated by 2030 and the contribution of measures are not provided.

Ireland intends to deliver the energy savings required by Article 8 of the EED recast through a combination of an energy efficiency obligation scheme (EEOS) and alternative measures. The cumulative savings target for the **energy savings obligation** is set at 36.424 GWh with sub-targets of 5% for energy poverty and 10% for residential areas. However, the draft updated NECP provides little information on the alternative measures that will be used to deliver the savings required post-2020 under Article 7 EED (Article 8 of the EED recast). The policies and measures contained in the draft plan under the energy efficiency dimension include only partial estimation of energy savings.

The draft updated NECP describes the measures to achieve the 2030 energy efficiency goals covering all sectors. Various measures to reach the higher 2030 targets are sufficiently presented in the draft updated plan (measures in place that continue, upscaled measures, measures adopted after 2020 and new planned measures). The new measures that were not reported in the 2020 NECP cover among others the Energy Efficiency Obligation Scheme, the updated national retrofit plan, the public sector energy efficiency strategy, and the regional skills fora, which will ensure a skilled workforce to implement sustainable practices regionally.

The draft updated NECP does not provide an explicit quantitative assessment of the impact of most of these measures. A more detailed analysis and quantitative evaluation would be

⁷ The 2017-2019 average has been calculated based on the EED recast definition for final energy consumption, and the savings per year have been calculated for the period 2021-2030.

⁸ The comparison has been done with the 2020 targets as included in the 2022 report on the achievement of 2020 energy efficiency targets (COM(2022) 641 final).

necessary for a comprehensive understanding of the impact the presented measures might have on Ireland's national contributions to the 2030 energy efficiency targets.

The draft updated plan does not include measures explicitly mentioning the “energy efficiency first principle”, except once.

The draft updated plan refers to the **long-term building renovation strategy (LTRS)** but does not update any of its key elements, targets or milestones. It recalls indicative building renovation targets for 2030 from the strategy, including retrofitting the equivalent of 500,000 homes to a Building Energy Rating level of B2 or cost-optimal equivalent, upgrading local authorities’ housing stock under Phase 2 of the social housing retrofit programme, installing 600,000 heat pumps (400,000 in existing buildings), and implementing advanced performance requirements in current regulations combined with a mandatory requirement for renewables. For 2040, formal milestones have not been set; for 2050, a further 500,000 retrofits would be an expected milestone target ahead of achieving 1.5 million houses retrofitted by 2050.

To address the building sector, 17 main measures are envisaged. Several of these are destined to stimulate cost-effective deep renovation, including co-funding for national estate portfolio leads, financial support for vulnerable people, provision of free energy efficiency home upgrades for lower-income households, and provision of free upgrades for households at risk of energy poverty, all to prioritise the worst-performing homes. Unfortunately, the draft NECP provides unclear information on expected energy savings, and the contribution of each measure towards the target seems not to be quantified.

The draft NECP provides only an indicative outline of budgetary resources, mentioning the commitment to increasing the carbon tax progressively over the period 2030 and using the revenue raised for additional spending, including EUR 5 billion to part-fund a socially progressive national retrofitting program.

Concerning technical support, the NECP includes the SEAI Pathfinder, District Heating Centre of Excellence, and a non-domestic retrofit support scheme. While these schemes are named and described, the document lacks detailed information on allocated amounts, timeframes, and the nature of public and private sector involvement.

3.3 Energy security dimension

Ireland is in the top five EU countries in terms of reliance on fossil fuels, which in 2021 were still accounting for 88% of the country’s gross available energy⁹. This translates into a high energy import dependency on third countries (70% in 2021, mainly from the United Kingdom and the United States)¹⁰, although moderated by Ireland’s domestic production of peat and peat products (0.13 Mtoe in 2021) and of natural gas (1.26 Mtoe in 2021). However, because they are both declining, the country is increasingly dependent on the United Kingdom for its energy supply (net imports from the United Kingdom in 2022 amounted at 4,607 ktoe of oil and petroleum products, 3.8 bcm of natural gas, and 252 GWh of electricity and derived heat). According to the updated plan, the fossil fuels share in the energy mix is expected to decrease to 70% by 2030, but no forecast is provided regarding the evolution of energy import dependency. The Energy Security in Ireland

⁹ Eurostat.

¹⁰ Eurostat.

report to 2030, published in November 2023, is the overarching Irish strategy for energy security towards 2030. It sets out a four-pronged approach: 1) Reduced and responsive demand; 2) More resilient Systems; 3) Robust risk governance; 4) Renewable focus.

Ireland is still very reliant on **natural gas**, as it represents the second largest overall energy source (30.6%) and the largest one in the electricity mix (48%) in 2021. The high reliance on gas in its electricity system makes the security of gas supply particularly important for the stability of the whole Irish energy system. Natural gas is traditionally supplied by a combination of domestic production (which amounted to 1.26 Mtoe in 2021) and of imports (which covered 71% of the consumption in 2021). Ireland fully relied on the United Kingdom for its gas imports during the period 2015-2021, and thus has traditionally no exposure to Russian gas¹¹. It still means, however, that Ireland relies on a single gas supplier. This is compounded by the fact that Ireland does not have any LNG terminal nor gas storage facilities. Nevertheless, the draft updated NECP outlines plans to develop new gas-fired electricity generation capacities as back-up, despite the also expected decline of domestic gas production, with the Corrib gas field's maximum daily supply expected to decrease from 40.6 GWh/d in 2022/2023 to 12.3 GWh/d in 2031/2032).

To guarantee security of gas supply, the draft updated NECP aims at reducing natural gas demand and at developing renewable gas supply and renewable gas-compatible storage. However, no further details are provided. As a transitional measure, Ireland also intends to introduce a Strategic Gas Emergency Reserve, likely in the form of a floating storage regasification unit. Final government approval for the project is expected in 2024.

Following the invasion of Ukraine, Ireland reduced its gas demand by 4% only between August 2022 and September 2023, far less than the -15% voluntary objective and to the EU27 average (-18%). The draft updated plan does not describe the implemented gas demand reduction measures nor does it explain how these are integrated in the medium-term planning towards 2030. The plan also does not provide a forecast of the evolution of gas consumption. All in all, the draft updated plan lacks details about the envisaged measures to strengthen the security of gas supply in the country, in particular in a context of expected decline of domestic production.

In the **electricity sector**, interconnectors help Ireland balance its all-island grid loads. In 2021, electricity imports were three times higher than the exports. The Government plans to increase security of supply through electrification, with existing plans to grow renewable generation (see section 3.13), demand-side flexibility, new gas-fired generation as back-up, interconnection and storage.

Ireland aims to increase the flexibility of the energy system by deploying domestic energy sources, demand response and energy storage. For instance, Ireland's strategy includes the use of geothermal resources to decarbonise the heating and cooling of buildings and for industrial uses and power generation. This could moderate demand for electricity, particularly in winter, and serve as a source of flexibility through thermal energy storage. The draft updated plan does not mention any target or forecast for the deployment of power storage in the country, however. According to a study commissioned by the European Commission, Ireland currently has an operational storage capacity of approximately 310 MW (mostly pumped hydro, with the Turlough Hill station consisting of 4 generators of

¹¹ https://economy-finance.ec.europa.eu/system/files/2023-05/IE_SWD_2023_607_en.pdf

73 MW)¹². According to this same study, the main barriers for the deployment of energy storage in Ireland were linked to the use of System Charges rule which places energy storage plants at competitive disadvantage compared to other generation technologies.

The draft updated plan provides an overview of the measures to be taken to strengthen security of supply in the coming years. However, it does not have concrete targets or a description of projects that will enable them. It refers very briefly to implementation of the Risk Preparedness Regulation (EU) 2019/941, without giving details, and to the importance of cooperation with the UK and the EU, and the need for key financing measures for security of supply, like EU funding under the Connecting Europe Facility for EU energy projects of common interest. Two examples of the latter are the Irish interconnection projects Greenlink and the Celtic Interconnector. These references are very descriptive, without quantification or detailed description on how to achieve those measures.

Oil is the main source of energy in Ireland (48% of total energy available in 2021)¹³. In 2022, demand for oil products was primarily in the transport sector (70%), followed by buildings (18.5%) and industry (8.5%)¹⁴. Ireland is entirely dependent on shipping for all oil imports. In 2021, the three main suppliers for crude oil were USA (58.5%), Norway (25%) and Canada (12%)¹⁵. Ireland has four ports and just one refinery, in Cork, with a capacity of 71.0 kb/d. This refining capacity is not sufficient to cover national consumption, in particular of diesel, and Ireland is a net importer of oil products, mostly from the UK. Ireland is usually above EU requirements on emergency oil stocks. The draft NECP does not provide a clear description of expected demand for oil towards 2030-2040 and does not assess the impact of decarbonisation on the national oil infrastructure (ports, refinery, oil stocks).

The draft updated plan covers **cybersecurity**, by referring to the Commission Recommendation (EU) 2019/553 for non-exhaustive guidance on cybersecurity. The National Cyber Security Centre (NCSC) is working with providers of critical national infrastructure to improve the overall level of cybersecurity in the energy sector, notably by aligning with international standards, increasing collaboration with stakeholders, guidance on incident response and responding to cyber skills gap. The plan also very briefly mentions the implications for energy security of **climate change** but does not detail any measure nor objective in this regard, except that critical infrastructure (including electricity and gas networks) is one of the four themes of the National Adaptation framework. The **resilience of the supply chains** in terms of access to critical raw materials needed for the green transition is also briefly addressed through the Government's Policy statement on Mineral Exploration and mining, which aims at fostering the domestic exploration and mining activities.

¹² This figure is derived from the database which accompanied the ENTEC study on Storage funded by the European Commission and published in November 2022, by taking into account only the "operational" facilities: https://op.europa.eu/en/publication-detail/-/publication/dfcaa78b-c217-11ed-8912-01aa75cd71a1/language-en?WT_mc_id=Searchresult&WT_ria_c=37085&WT_ria_f=3608&WT_ria_ev=search&WT_URL=https%3A//energy.ec.europa.eu/

¹³ [Shedding light on energy - 2023 edition - Interactive publications - Eurostat \(europa.eu\)](#)

¹⁴ Eurostat.

¹⁵ Eurostat.

The draft updated NECP does not describe measures in the event of security of supply crisis for gas and electricity, except the possible use of oil for power generation in case of a major gas supply shortage. In this regard, Ireland submitted its National Risk Assessment, its Preventive Action Plan and its Emergency Plan, as well as the Common Risk Assessments for Norway and United Kingdom regional risk groups. At the time of writing, they are all being assessed by the European Commission.

3.4 Internal energy market dimension

Following UK's withdrawal from the EU, Ireland's interconnection level to the EU is inexistant, and its interconnection with the UK capacity currently stands at 500 MW in connection. The current draft updated plan mentions the EU electricity interconnection target of at least 15% for 2030. The plan refers to the Celtic interconnector Project of Common Interest (PCI) which will end Ireland's isolation from the Union's electricity grid as highlighted in Annex III of the REPowerEU Plan; and the Greenlink interconnector project between Wexford and Wales, which will double the interconnection capacity between Ireland and the UK. Further interconnections to the EU are also being explored with neighbouring Member States. This is particularly relevant considering Ireland's ambition of 80% of renewable electricity in 2030. Similarly, available capacity in neighbouring Member States is vital to ensure electricity demand is met, notably during episodes of tension in its electricity system when imports are required. The plan could further elaborate on the expected benefits of the key electricity infrastructure projects for the current identified congestion.

The plan also mentions the two gas interconnectors connecting Ireland and Scotland. Starting in 2024-25, these interconnectors will be able to operate independently from each other. This will further increase the resilience, flexibility, and capacity of the gas system.

With regard to the increase of the renewable energy target, and the need to enable consumers to rapidly reap the benefits from it, the plan provides key policies and measures to incentivise demand response, though without providing a clear overview of the flexibility needs. Moreover, the plan does not indicate specific measures to accelerate the deployment of electricity storage, nor to engage system operators in facilitating the penetration of flexibility services. The draft updated plan did not elaborate on the quantification of flexibility needs. In addition, it did not specifically elaborate on setting clear targets and objectives for demand response, storage and flexibility, and on policies and measures to enhance flexibility and enable a non-discriminatory participation of new flexibility services.

On energy poverty, the Irish draft updated NECP includes a definition of **energy poverty, it being households having to spend more than 10% of their income on energy**, and it shows a share of 29% of energy poor households in Ireland. Ireland underscores a robust commitment to combating energy poverty, as reflected in both the energy efficiency and internal market dimensions. Ireland recognizes energy poverty as a multidimensional challenge with various causes, including energy inefficiency and inability to afford energy services. The plan outlines different measures aimed at addressing energy poverty comprehensively. The NECP also recognises that their current methodology related to defining energy poverty is limited and pledges to improve their methodology. Funding has been provided to Ireland's Economic and Social Research Institute to better understand energy poverty.

3.5 Research, innovation, competitiveness, and skills dimension

3.5.1 Research and innovation

Ireland's draft updated NECP does not include precise **national targets and spending for research and innovation (R&I)** in specific clean energy technologies towards 2030 and 2050. Impact 2030, Ireland's research and innovation strategy, focuses on addressing societal, economic, and environmental challenges through research and innovation. The key challenge areas include climate, environment, and sustainability, with a special emphasis on energy. Additionally, the National Smart Specialisation Strategy for Innovation 2022-2027 prioritises Green Transformation for Enterprise among its five key areas.

The draft NECP does not detail the split between **public and private funds**. It provides figures on Ireland's research, development, and innovation intensity rate, which is estimated at 1.45% (EUR 4.686 bn) of gross national product (GNP) for 2021. As the draft NECP recognises, this is below the rate of 1.54% (EUR 4.299 bn) of GNP in 2020 and below the rate of the Europe 2020 strategy, which set a 3% objective for R&D intensity. The Irish government has adopted an R&D intensity target for Ireland of 2.5% of gross national income (GNI) as part of its goals under Impact 2030. The draft updated NECP does not, however, set out a concrete ambition for public and private funding for research and innovation in clean energy technologies for 2030 and 2050.

The main financing instrument supporting energy R&I is the Sustainable Energy Authority of Ireland's National Energy Research Development & Demonstration (RD&D) Funding Programme. The draft updated NECP indicates that this funding will be increased and will supplement the funding provided to the Prototype Development Fund, and to other national initiatives funded by government departments. However, no concrete funding targets are provided in the plan.

Investment in the development of offshore renewable energy is considered as key to decarbonising Ireland's energy system. Reflecting this, the draft plan indicates that continued and increased funding will be allocated to Ireland's suite of offshore/ocean test site facilities, but no specific figures are provided. The plan also reports on R&I efforts related to decarbonisation and storage infrastructure, though with limited details.

Ireland's draft NECP mentions, as significant activities in the landscape of R&I, cooperation through the European Strategic Energy Technology Plan and its implementation working groups, Mission Innovation, Horizon Europe, and the International Energy Agency's Technology Collaboration Programme. Ireland is currently involved in nine projects under the latter programme, and is about to join a new project on hydrogen and heat pumping technologies. The draft updated NECP also mentions Ireland's work on the offshore research agenda in the context of the North Seas Energy Cooperation.

3.5.2 Competitiveness

The Irish draft updated NECP refers to Ireland's National Competitiveness Council which reports to the Irish government on key competitiveness issues and provides policy recommendations. The plan identifies four key challenges to the country's competitiveness as set out in the report *Ireland's Competitiveness Challenge 2023*. However, no details are

provided on measures and investments intended to support manufacturing and the scaling-up of commercially available clean energy technologies, equipment and components.

The draft NECP describes the transition to the circular economy as a key strategic goal and describes several policies and official documents to support it. The plan does neither describe, nor quantify how the circular economy may contribute to climate mitigation and adaptation. The circular economy helps reducing dependency, and to effectively diversify the sourcing of imported raw materials and components required to manufacture clean energy technologies, for examples in the context of geothermal energy. Yet, the draft updated NECP does not mention clear objectives and timeline beyond 2025 for how Ireland will increase the resilience of its supply chains for key net-zero components and equipment.

The draft updated NECP mentions Harnessing Digital – the Digital Ireland Framework, a new national digital strategy that was announced by the government in February 2022. Yet, the draft plan does not provide more information on measures and investments, specifically related to the EU action plan on digitalising the energy system, to make their energy system more digital.

3.5.3 Skills

Ireland's draft updated plan does not identify skill shortages for the development of strategic sectors in the energy transition. However, it mentions several initiatives on skills, such as SOLAS's *Green Skills for Further Education and Training 2021-2030* working on the future skills required for the green economy, and the report of the expert group on future skills needs, *Skills for Zero Carbon – The Demand for Renewable Energy, Residential Retrofit and Electric Vehicle Deployment Skills to 2030*. Ireland also highlights Green Tech Skillnet as an enterprise-led workforce development network, which commissioned a skills analysis report on offshore wind energy, the results of which were not included in the draft NECP.

Ireland reports on some sector-specific initiatives to enhance skills, for example in the areas of offshore wind, energy efficient buildings, district heating digitalisation, and cyber security without providing more details. The final NECP should include more details, concrete targets and measures associated with the identified gaps.

4 JUST TRANSITION

The fair and just transition aspects are partially addressed in the plan. The draft updated NECP provides information on the most impacted areas concerned by the transition away from peat and carbon intensive industries, identifying and quantifying social and employment effects, but without providing a more comprehensive approach at national level to address the just transition aspects.

There are some measures to address skills as discussed in the section above. However, there is no assessment on skills requirements or jobs losses as a result of the green transition, and there are also no policies outlined that address these issues. Measures to tackle the social impact of the just transition are missing and further details should be provided on the foreseen 'horizon scanning' of upcoming challenges in these areas. The

plan consequently lacks dedicated policies and measures directly addressing social and employment impacts in a comprehensive manner.

Several tax-benefit systems and social protection systems such as the Energy Poverty Action Plan, Housing Assistance for Older People, Housing Adaptation Grant, and Solar PV for the Medically Vulnerable are being implemented. However, no strategy is presented to integrate these instruments. Little detail is presented on the employment and social impacts of the transition, for instance on the most impacted areas or at national level. No dedicated analysis of people impacted by the transition or of households in energy poverty was carried out, nor does the plan contain a clear strategy addressing energy poverty and the Just Transition at least up to 2030, and possibly to 2040 and 2050. The draft updated NECP does not provide sufficient information for the preparation of the Social Climate Plan, as assessed in Section 7.

5 REGIONAL COOPERATION

The plan envisages a strategic role for regional cooperation, particularly in electricity cross-border infrastructure and offshore energy development within the framework of the North Seas Energy Cooperation (NSEC). It also mentions a joint declaration of intent with France on energy transition cooperation and discusses regional cooperation in the area of renewable hydrogen in the context of NSEC and in the field of low-carbon hydrogen with the UK.

The plan underscores continued cooperation with the UK, which remains a key partner due to its geographical proximity, existing energy links, and a growing array of interconnectors between the UK and Member States. This collaboration takes place within various fora such as: the British-Irish Intergovernmental Conference; energy memoranda of understanding, including three signed this year on offshore renewables, electricity interconnections, and security of gas supply; the British-Irish Council – Energy work sector; or the British-Irish Intergovernmental Conference (BIIGC). The plan also focuses on the importance of cooperation on energy security, including to maintain the current cooperation on emergency preparedness and response with the United Kingdom. Ireland also cooperates in several risk groups established under Regulation (EU) 2017/1938 on the security of gas. However, Ireland has still not signed any solidarity agreements for the security of gas supply, for which two are needed, with Belgium and the Netherlands. The draft updated plan does not envisage any progress in this regard.

The plan emphasizes the relevance of regional cooperation through a number of projects: the Celtic interconnector Project of Common Interest (PCI) which will directly connect Ireland to the EU's internal energy market post-Brexit, and projects between Ireland and the UK, such as the Greenlink Interconnector or the MaresConnect project.

The draft updated plan does not consider regional cooperation for internal energy market, in particular to address congestion at interconnectors, nor does it provide much information on regional cooperation in research, innovation and competitiveness, taking into account common challenges and shared objectives.

6 INTERNAL COHERENCE AND POLICY INTERACTIONS WITHIN THE DRAFT UPDATED NECP

The draft plan could benefit from increased synergies within and between the 5 dimensions of the Energy Union. Energy efficiency in buildings as a mean to address energy poverty and the development of new energy interconnectors to address issues of both energy security and internal energy market dimensions. The plan states that Ireland is committed to applying the energy efficiency first principle to all proposals, decisions and investments flowing from the NECP. However, they only specifically mention it in the building sector framed as 'Fabric First', meaning that upgrading the fabric of a building must be the first type of intervention to reduce GHG emissions related to a building and improve its consumption. Coherence between targets (although mainly expressed qualitatively) and policies can be found in the decarbonization of the transport sector, in which in the plan, Ireland aims to increase the number of EVs, increase the proportion of renewable transport fuel in road transport through the renewable transport fuel obligation, implement a strong carbon tax trajectory, ban diesel-only purchases for urban public transports, develop the Compressed Natural Gas (CNG) fuelling network to support the uptake of CNG vehicles, promote a modal shift from private to public transports, and more. The updated plan would also benefit from a better analysis of consistency of policies and measures in each dimension and a quantitative analysis of interactions of certain objectives. However, since the WAM scenario is missing and the impact of the proposed policies and measures has not been assessed, it cannot be assessed whether Ireland's objectives are consistent and will be met by its policies and measures and whether they can have crosscutting benefits among the 5 dimensions.

7 STRATEGIC ALIGNMENT WITH OTHER PLANNING INSTRUMENTS

Ireland formally submitted a **modified RRP** in May 2023. However, it did not yet formally submit its **REPowerEU chapter**. The draft NECP only partially refers to the measures included in the amended **Recovery and Resilience Plan** ("RRP"), approved by the Council on 8 December 2023. While several of the initiatives are covered at least partly by RRF funding, this link is not made clear in the draft NECP.

The draft NECP mentions the need to address clean air related challenges, notably from the use of biomass in the residential sector and air pollutant emissions originating from the agricultural sector. There are references to the Irish **national air pollution control programme (NAPCP)** as well as its Clean Air Strategy. The impact of planned policies and measures on the main air pollutants for which Directive 2016/2284 sets emission reduction commitments is not quantified.

The draft plan acknowledged the importance of biodiversity and mentions different strategies and plans, as well as their main objectives. However, it lacks details on the concrete measures to protect and restore ecosystems, and the interlinkages with other policies (climate adaptation, bioenergy, carbon sinks). Nature-based solutions, which bring benefits for biodiversity, climate mitigation and adaptation, are not clearly described. The biodiversity section should include a paragraph for the Natura 2000 network and its importance (protection and conservation) for both habitats and species. The implementation of EU Biodiversity Strategy 2030 and the targets related to protected areas and improvement of conservation status should be considered. Due consideration would

need to be given to the conservation and protection of habitats and species (and their range) under the Natura 2000 Network, and their site-specific conservation objectives (SSCOs) and conservation measures.

The draft national plan is consistent with the commitments in the **Territorial Just Transition Plan (TJTP)**. TJTP refers to peat-fired electricity generation being phased out at end 2023, with the last power plant switching to biomass.

The plan provides inadequate analytical basis for the preparation of the **Social Climate Plan (SCP)** that will address the impacts of the new emissions trading system for fuel combustion in buildings, road transport and additional sectors (ETS2) on vulnerable households, transport users and micro enterprises. The plan does not provide any assessment of the potential impacts of the ETS2 on the most vulnerable groups, and measures are not planned for the identification of transport poverty. The plan contains no information on the Fund's governance, the process to draft the SCP, the methodology to identify potential beneficiaries, or other information useful for the effective implementation of the SCF. Although the plan contains several measures that could be, in principle, eligible under the SCF, such as certain policy measures under the Energy Poverty Action Plan, no explicit link is made with the SCF. Thus, the current draft does not explain how the SCP will build on the NECP update and how the consistency between the two plans will be ensured.

In the draft updated plan, Ireland does not provide the quantification of the climate impacts of measures currently included in the **CAP Strategic Plan (CSP)**. However, the plan clearly mentions the upcoming (2024) amendment to the Irish CSP to take account of the new LULUCF and ESR targets.

The plan is partially consistent with the **National Adaptation Framework (NAF)**. The NAF describes the impact of climate change on critical infrastructure in the following way: “Most of Ireland’s power stations, oil refineries and storage facilities are located on the coast and are therefore vulnerable to sea level rise, storm surges and higher waves. Extreme floods will affect dam safety, while extreme winds will damage overhead powerlines.” In the draft updated plan Ireland does not provide any information on measures the country would put in place to avoid damages or impacts from the identified risks to energy production or distribution.

The plan is consistent with the objectives of the two Irish ERDF Programmes that intend to tackle energy poverty. Due to the modest size of EU Cohesion policy funding in Ireland, support to the green transition within ERDF focuses mainly on fighting energy poverty.

The draft updated NECP of Ireland addresses the 2022 and 2023 **country-specific recommendations** to enhance diversification and reduce dependency on fossil fuels by taking specific actions such as shortening and simplifying permitting procedures to accelerate the deployment of renewables, pursuing efforts on energy efficiency in buildings and accelerating the installation of charging points for zero-emission vehicles. Moreover, the draft updated NECP includes actions to upgrade Ireland’s electricity transmission and accelerate the roll out of smart meters to allow a higher roll out of renewables and improve flexibility in the electricity system and energy system integration.

8 FINANCING THE ENERGY AND CLIMATE TRANSITIONS

8.1 Investments needs

The draft plan includes partial and preliminary information on the expected investment needs for some of the five dimensions, but it does not include a break down for each of the five dimensions. It is planned that additional data will be provided in the final NECP. According to the preliminary analysis, the incremental and redirected capital investment needs for the period from 2022 to 2030 amount to EUR 119 billion in low-carbon technologies and infrastructure, driven by transport (EUR 42 billion), electricity (EUR 36 billion) and buildings (EUR 31 billion). However, it does neither not include the total investment needs, a yearly breakdown nor a public/private split. Information on current public investments, leverage factors, and private investments are also lacking. Since the draft updated plan does not include a WAM scenario, these estimates do not represent the additional investments of the WAM scenario compared to the WEM baseline. The draft updated plan does not state how they are calculated. There is also no information of the investment expected at the level of policies and measures.

8.2 Funding sources

The draft plan provides occasionally information on the amount of funding available for some measures. However, this is not done in a consistent way for all measures. There is also no consolidated overview at NECP level. It is therefore not possible to identify potential gaps in terms of funding. The draft updated NECP also fails to distinguish between public and private sources of funding and fails to specify the lifetime of the measure or the share of funding for the measure that will come from the EU budget by explicitly specifying the RRF contribution. There is no quantitative indication of the contribution of the RRF to the expected public financing needs to implement the policies and measures of the draft updated NECP.

Furthermore, the Irish draft updated NECP provides unclear information about the establishment of a National Energy Efficiency Fund. However, it emphasizes government funding for various energy efficiency support programs in the residential sector through the Sustainable Energy Authority. At the same time, Ireland expects to establish a national hub under the European Energy Efficiency Financing Coalition (EEEFC), indicating a commitment to collaborative efforts for enhancing energy efficiency financing.

Financing schemes for energy efficiency are mentioned and described, but specific amounts and timeframes for these schemes are provided only partially.

9 ROBUSTNESS OF THE ANALYTICAL BASIS OF THE DRAFT UPDATED NECP

Overall, it is not possible to analyse the quality of the quantitative **analyses underpinning** the draft updated NECP because it does not provide any description of the analytical tools used for the preparation of the plan. The methodologies used for With Existing Measures (WEM) projections and impact assessment of specific policies and measures are not clearly explained and referenced.

The plan describes only a WEM scenario, with detailed projections for the relevant sectors of the economy, including industry, the energy system and transport. The projections

assume that no additional policies and measures are implemented, beyond those already in place by the end of 2021. The projections cover the period until 2050 and provide an ETS/ESR split. The analysis is only partially based on the parameters recommended by the Commission. The new ETS for buildings, road transport and additional sectors (ETS 2) has not been considered in the plan nor in projection scenarios.

The draft NECP lacks a comprehensive quantitative assessment of the **macro-economic impact** of the proposed policies and measures. The methodology is not shared, and the key transmission channels are unclear. Furthermore, there is no overall impact assessment on public budget, and it is not clear how public spending would be financed.