CLIMATE ACTION NETWORK (CAN) EUROPE
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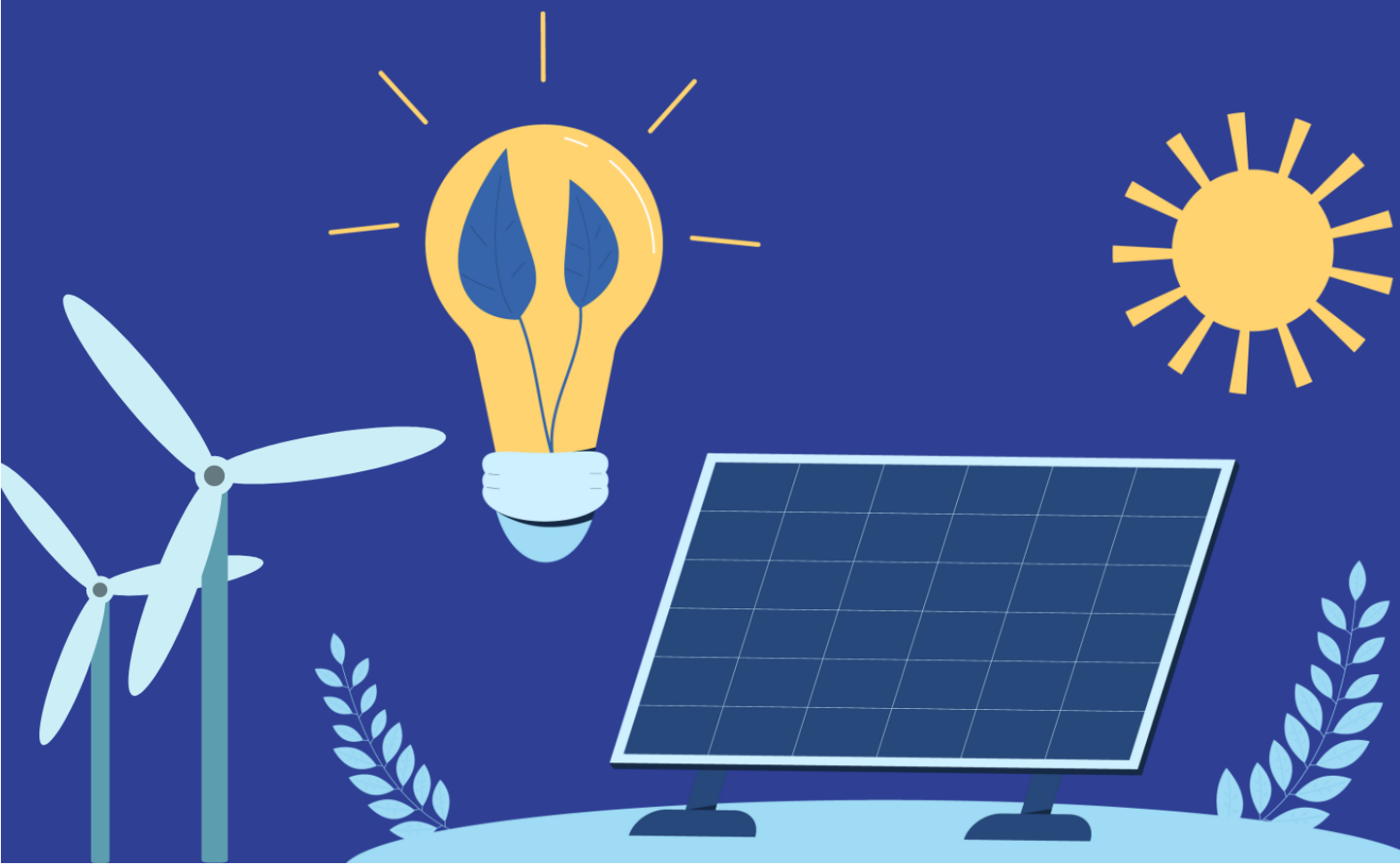
Energy Compass for the Policy Cycle 2024 - 2029

Recommendations for the new European Commission



Introduction

Confronted with a convergence of crises - worsening climate and biodiversity crisis, geopolitical turmoil, energy insecurity, widening inequality, and rising cost of living - the urgency for action and the case for resilience have never been more evident. Science makes an indisputable case for rapidly transitioning from fossil fuels to renewable energy to limit global warming to 1.5°C. This requires a fundamental overhaul of the EU's energy system.

Progressive EU energy policies of the past five years increased in many ways climate ambition. This trajectory and pace absolutely need to be upheld and further accelerated during the next EU policy cycle running over the period 2024 - 2029 as current policies are not sufficient to limit global heating to 1.5°C. While overseeing an ambitious and robust implementation of the agreed legislation by Member States, the European Commission also has to deliver new proposals to bring about an energy transition that ensures climate neutrality by 2040 at the latest and a socially just transition maximising benefits for people and the planet in line with the findings of civil society's Paris Agreement Compatible (PAC) energy scenario.

A 100% renewable energy system will function with considerably reduced amounts of energy, dispatched through highly efficient, interconnected and flexible grid infrastructure. Additionally, there needs to be a clear strategy for boosting decarbonised renewables-based heating and cooling and for a structural phase out of fossil gas across sectors. A Marshall Plan on finance with a €2 trillion heavy EU budget including a European Green and Social Investment Fund will stimulate the energy transition in an ecologically and socially just manner.

1) Fully leverage energy demand reduction

A steep and continued **reduction of energy consumption is paramount** to limit global temperature increase and maintain human activities within planetary boundaries, bringing many advantages to people, biodiversity, the economy, Europe's resilience and safety. Multiple benefits include the reduction of greenhouse gas emission and pollution, lower energy system costs, resource savings, health and well-being improvements, job creation and lower energy bills. Energy savings and renewable energy need to go hand in hand to push fossil fuels out of the energy system and ensure a compatible pathway towards limiting global temperature increase to 1.5°C.

CAN Europe has developed a **Paris Agreement Compatible (PAC) energy scenario** which shows how a fully efficient renewable energy system can be achieved. The reduction of energy demand through energy efficiency and sufficiency measures should be the basis for the transition towards such a system. The co-benefits from the scenario stemming from energy savings amount to at least €1 trillion by 2030**. Most importantly, the PAC scenario shows in the EU at least 20% energy savings by 2030 (compared to the EU 2020 Reference Scenario) and halving the energy demand by 2040 are possible**. To meet and exceed the EU 2030 energy efficiency target of 11.7% and ensure stable energy savings beyond 2030, there is a need to increase the

level of ambition and speed up the efforts to implement recent legislative changes on a national level. Therefore the following actions are needed:

- **Ensure an ambitious implementation of the Energy Efficiency Directive (EED)** by monitoring and supporting EU Member States with ambitious energy efficiency and sufficiency measures to overachieve the EU 2030 energy efficiency target (for both primary and final energy consumption). Member States should achieve **at least 20% energy savings by 2030** with well-designed measures on the ground that enable long-term energy savings.

- **Cut energy consumption in half by 2040.** Introduce a binding and ambitious **energy savings target** for primary and final energy demand reduction complemented with national binding targets for 2040, which can ensure the implementation of energy savings measures in all sectors of the economy and mobilise investments accordingly.

- **The Governance Regulation should steer the success of the 2030 and 2040 energy savings framework.** A strengthened framework should include national binding targets, ambitious gap mechanisms and overall better enforcement mechanisms. The Regulation must also bring the topic of **energy sufficiency** to the next level by including a sufficiency chapter, including a definition and better reporting opportunities for sufficiency measures. A linear binding trajectory and milestones, including a mid-term target in 2035, can furthermore help the delivery of stable energy savings between 2030 and 2040.

- **Promote energy sufficiency.** More EU-wide rules are needed to foster energy sufficiency in a multi-dimensional way and through an appropriate legislative framework. Energy sufficiency also needs to be fully taken into account in the EU energy system modelling, as it can bring many co-benefits to society, including improved air quality, public health, cost savings and equity.

- **A holistic and socially just renovation wave by tripling the current annual renovation rate**, so that by 2030 every year 3% of the building stock undergoes a deep renovation. A new "Holistic Deep Renovation Wave Strategy" that strengthens the implementation of the Energy Performance of Buildings Directive (EPBD) should further explore the **nexus between buildings' energy renovations, affordability of housing, circularity of materials and sufficiency**. Regulations such as Minimum Energy Performance Standards that trigger deep renovations need to be coupled with a strong enabling framework (financing, technical assistance and social safeguards), and must remain at the basis of an ambitious and socially just transition of the building sector.

- **A new European Heating and Cooling Strategy maximising social benefits and a Heat Pump Action Plan.** An ambitious and robust **new European Heating and Cooling Strategy** should prioritise the connection of buildings with locally available renewable heat sources such as geothermal and solar thermal, the deployment of renewables-powered heat pumps, and decarbonised district heating. A rapid shift towards renewable heating

systems must start with scaling up heat pumps. **Heat pumps are at least 3-5 times more energy efficient than gas boilers**. Heat pumps should meet high energy efficiency requirements and use **natural refrigerants** where possible instead of refrigerants with a high global warming potential (GWP) such as fluorinated gases. We urge the European Commission to publish the **Heat Pump Action Plan without further delay** ensuring long-term policy signals, and clarity about the shift from fossil fuels to sustainable and renewable heating & cooling solutions.

- **A plan to transform the transport system and reduce its energy consumption and environmental impact, while giving access to sustainable mobility to everyone.** The EU must prioritise modal shifts and the reduction of unnecessary journeys (eg. frequent and short haul flights with reliable rail alternatives) in the future transport policies, budget and measures, while boosting active mobility and public transport options across the EU through infrastructural and urban transformations. According to the PAC 2.0 pathway, as of 2030 all new vehicles will be electric. Not only must the sales of new internal combustion engine cars be phased out, but the EU must also ensure that the overall number and the average weight of cars decrease.

- **Lowering energy and material demand in industry.** New technologies are needed to decarbonise heavy industry, but technology alone isn't enough. We also need to reduce demand for energy and materials if we are to reach climate neutrality and keep the EU's resource footprint within planetary boundaries. Therefore, in addition to renewables-based electrification powering industrial processes and the use of renewable hydrogen in processes that cannot be directly electrified, an integrated EU industrial policy should mainstream circularity solutions to achieve climate neutrality by 2040, including a greater focus on demand-side measures. For example, eco-design of products and embedding circularity structurally into value chains and between industries can shape production and consumption patterns (repair, reuse, recycle, material efficiency, higher secondary use), assisting consumers to make more sustainable choices.

2) Build a 100% renewable energy system by 2040

The last five years have seen significant advancements in the transition to renewable energy. Wind and solar have grown at a rapid pace, and **in May 2023, for the first time in history, renewable energy outpaced fossil fuels** in generating electricity across the EU. The surge in renewable energy production has been instrumental in mitigating the impact of the fossil energy price crisis for numerous Europeans. Despite these achievements, **challenges persist, and a significant gap remains**. More than 40% of the EU's renewable energy supply still comes from bioenergy, with a majority of the feedstocks used actually worsening the climate and biodiversity crisis in climate-relevant timescales - it is essential that the EU prioritises sustainable renewable energy sources. From 2020 to 2022, the EU27 averaged an annual deployment of only 35 GW of renewable capacity. Although 2023 set a new record with 74 GW of wind and solar installations, this still falls short of the 100-120 GW needed annually by 2040 to align with the Paris Agreement targets.

Acceleration of sustainable renewable energy deployment should include enhancing grids, increasing storage, demand-side flexibility and improving system flexibility. Transmission and distribution-level grid bottlenecks must be addressed to avoid unnecessary losses of already generated electricity. Grid uptake can be promoted in **nature-friendly ways** and by leveraging flexibility measures to full potential to address the current gridlock, which is increasingly prohibiting many Member States from reaping the benefits of the energy transition. To manage the transition to 100% renewable energy successfully we call on the EU Commission and Member States to enable:

- **Robust and Ambitious Implementation of RED III** for fast and fair people and nature-centred renewable energy expansion, going beyond the Directive's minimum sustainability requirements for bioenergy, prioritising deployment of renewable energy infrastructures on dual land use or artificial areas, such as sealed or anthropogenic spaces, and maximising citizen and community engagement and local benefit sharing. Rigorously monitor and support EU Member States to effectively implement RED III to overachieve the updated binding 2030 EU renewable energy target of 42.5% and indicative target of 45%, integrating renewables across all sectors of the economy. Enforce mechanisms and penalties for Member States failing to meet their renewable energy targets, ensuring accountability and compliance with obligations. End all subsidies and other incentives for burning primary woody biomass, and for biofuel or other energy crops that involve the dedicated use of land.

- **Support Member States** and local communities with guidelines, expert groups and financing, to accelerate sustainable renewables deployment. Ensure robust and participatory spatial planning in synergy with nature protection and restoration targets, while maximising local community engagement and participation, through early and effective consultations as well as appropriate benefit-sharing mechanisms. Promote and facilitate international cooperation, especially for the deployment of renewables offshore, to ensure alignment with environmental legislation and sectoral policies.

- **A framework to deliver 100% renewables by 2040.** The EU should establish the ultimate objective of reaching **100% renewable energy target for 2040.** A very sharp increase of renewable energy capacities is indispensable for the Paris Agreement's objective to limit temperature rise to 1.5°C. The PAC scenario shows that this implies a transition to a 100 % renewable energy-based energy system by 2040, with 50% renewable energy share in final energy consumption by 2030 and 76% by 2035. Such a target would be instrumental to reaching climate neutrality and support the implementation of the Climate Law. The Governance Regulation needs to continue providing a solid, actionable, and transparent framework to enhance solar and wind deployment across the EU.

- **Appropriate use of bioenergy**. The sustainability criteria for bioenergy in the RED are completely inadequate and must be strengthened. At the moment, the RED provisions continue to incentivise **types of bioenergy that increase emissions compared to fossil fuels** – either in general or over any climate-relevant timescale. RED should be revised to

ensure that i) bioenergy delivers significant, near-term greenhouse gas savings compared to fossil fuels; ii) limited sustainable biomass resources are optimally used in the wider economy and within the energy sector; and iii) biomass burning does not lead to a further increase in air pollution and biodiversity loss. **Only fast-decaying wastes and residues with no other uses should be incentivised, in order that bioenergy deliver significant, near-term greenhouse gas savings compared to fossil fuels.** Member states should be allowed to add sustainability criteria on biofuels.

- **Advance the EU Grid Action Plan so it enables 100% renewable and resilient energy infrastructure**. CAN Europe's PAC Roadmap for power grids shows that tomorrow's energy system will have up to **70% electrification levels** and very high cross border electricity trade with **increasing transmission capacity for cross zonal trading to 70%**. This requires additional electricity transmission to increase up to 394 GW by 2040 compared to current levels, i.e. meaning a **tripling of additional capacity between 2030 and 2040** based on current levels (+47% to +144%). **Annual investments needed for transmission in the EU27 are significant with up to €42bn by 2040**. Ensure needed investments in electricity networks do not disproportionately hit consumers, particularly not the most vulnerable. Achieving these challenges requires strong policy guidance. Meanwhile, it is crucial to implement RED III obligations regarding permitting processes for grids, to successfully connect increasing renewable energy capacities both on distribution and transmission level, while promoting nature protection and citizen participation.

- **Unleash flexibility and storage to support renewables integration.** Ensure EU countries produce ambitious targets for energy storage and demand side flexibility, and accompanying support schemes, as set out in the Electricity Market Design. Frameworks should be designed to best match energy storage and flexibility with the patterns of renewable generation and take into consideration location and grid connection. Seasonal energy storage technologies will need to be ramped up, and space given to innovative new technologies with higher capacity, longer duration, and material footprints in line with a circular economy and reduced overall material usage.

- **Integrate higher climate ambition and assessments for a 100% renewables based energy system in the Ten-Year Network Development Plan (TYNDP)**, and its scenarios, to encourage EU's resilience. Acknowledge the new system design principles and emerging issues widely, with a view to a renewables-based pathway, and prioritise its infrastructures. Elevate EU-wide **nature-based planning** especially in transmission network planning and establish strong **circular economy requirements** in the construction phase. Provide financial support into training and re-skilling workers at grid construction and management, to adopt best practices on synergies with nature protection and restoration, early community and civil society interaction, to improve the public feedback quality and its integration, to influence siting and design decisions across Europe, as far as is technically feasible.

- **Avoid new hydropower.** Ensuring that the acceleration of renewable energy development does not hamper efforts to address the biodiversity crisis means stopping support for the construction of new hydropower plants in Europe, in light of their negative impacts on already severed freshwater ecosystems, and limited expected contribution to the renewable energy transition, as pointed out by 150 NGOs. In particular, public finance for new hydropower in Europe needs to stop, and should be redirected to the refurbishment of existing plants and to investment in low-cost, low-carbon, low-impact alternatives such as appropriately sited solar and wind power.

3) Phase out fossil fuels and avoid false solutions

The EU's economy still relies very heavily on subsidised fossil fuels, even though significant progress has been made on renewables roll out over the last years. While coal has become largely economically unviable and is on the exit pathway in most EU countries, **fossil gas still needs to be put on a similar exit trajectory**. To wean off Russian gas, the EU has built up new dependencies on other suppliers, leading to a stark overexpansion of LNG infrastructure in contradiction with LNG demand forecasts. The EU's dependence comes at the cost of energy security and with high prices for consumers and citizens while fossil fuel companies continue generating billions in profits.

Nevertheless, **emergency gas demand reductions** implemented by Member States in response to the crisis have proven to be very effective and brought down EU gas demand by almost 20% between 2022 and 2024. These successful measures should be strengthened, since reducing energy demand is a condition for a sustainable and fair EU wide framework to phase out fossil fuels. To ensure that significant progress towards reaching climate neutrality by 2040 will be made during the policy cycle 2024-2029, the European Commission should make the following proposals:

- **An Action Plan to phase out fossil gas across all sectors by 2035**, building on the emergency gas demand reduction measures and designing tailored approaches for power, buildings and industry. The power sector has already registered record shares of renewables, replacing gas and coal by renewables powered electricity. There are significant opportunities for buildings and industry working with low and mid temperature heat or the food industry to switch away from fossil based heating. An EU fossil gas phase out trajectory also needs to be complemented with a **binding methane emission reduction target**. Cutting methane emissions by at least 75% by 2030 is a concrete, effective and doable near-term measure to limit the catastrophic impacts of climate change, according to the IEA.

- **Plan for a coal phase-out by 2030.** The Commission's recent 2040 climate targets plan proposal suggests that coal will be phased out in the EU only by 2040. These figures don't align with the necessary decrease to achieve climate neutrality by 2040, as indicated by the PAC scenario, which suggests phasing out coal by 2030. We urge the Commission to

revisit assumptions for coal-phase out, the most polluting fuel, before publishing the final legislative proposal for the 2040 climate target.

- **Plan hydrogen networks with realistic assumptions.** The Commission needs to ensure that the **20 million tonnes of hydrogen as suggested under REPowerEU is not used in the ongoing and upcoming TYNDP planning cycles** (2024, 2026, 2028) and accordingly, minimise build-up of unnecessary or inefficient hydrogen infrastructure. This requires the Commission, ACER, the ESABCC or the JRC to conduct **independent needs assessments** for those sectors where hydrogen will be needed as a priority (steel, long distance transport, storage) and in the meantime use the figures from the 2040 Climate Target Plan (3 million tons) for any TYNDP modelling exercise. In addition, the implementation of the **European Network of Network Operators for Hydrogen (ENNOH)** should be well conducted and eventually not include any fossil gas Transmission System Operators. Support for hydrogen should be targeted at hard to electrify sectors only and be produced from additional renewable energy sources only. The needs of a 100% decarbonised renewables-based hydrogen network has to be based on real demand, not on supply possibilities.

- **An EU framework for decommissioning and Guidance for Member States to implement Gas Network Decommissioning Plans** as provided for by the gas package. Develop an EU-wide decommissioning framework for **fossil gas infrastructure** to plan for an orderly and socially just decommissioning of the gas grids, instead of expanding them and wasting public money on stranded assets. The European Commission should develop guidance to this end based on best practices and incentives in Member States.

- **Reverse the Carbon Capture and Storage hype.** The current reliance on Carbon Capture, Storage and Use and other emissions reduction and/or carbon removal technologies reflected in the EC 2040 Communication, including biomass-based technological removals, needs to be greatly reduced and strictly limited to process emissions. It also needs to take into account a stark and necessary reduction in industry's energy demand of minus 40% by 2040, as compared to 2015 levels, according to the PAC. The use of CCS should be strictly limited to sectors where no other option is available to reduce emissions, and/or only for residual emissions after emissions reduction options from both technological process changes and demand-side measures have been exhausted (also see this joint statement). CCS is not a silver bullet for addressing industrial emissions.

- **Prevent nuclear energy from delaying the shift to renewable energy.** The pursuit of new nuclear energy is not only dangerous but also uneconomic as construction is slow and expensive. Therefore, public finance should remain inaccessible to nuclear, as it should be prioritised on cost-effective, sustainable solutions such as energy efficiency, wind and solar energy as well as flexibility solutions like grids and heat and electricity storage systems. **Continued nuclear power blocks renewable energy access to the electricity system**, preventing the transition to a decentralised, democratic energy

system based on flexibility and local ownership. A so-called “low-carbon” directive with “low-carbon” targets would decimate the rate of renewable energy integration, which is already off track, and prevent the EU from aligning with Paris-agreement emissions reduction. Additionally, this opens the backdoor for other false solutions like fossil gas and carbon-capture and storage (CCS).

4) Ensure a socially just energy transition

All Europeans should benefit from the energy transition, and environmental and climate protection are essential to people's well-being and policies which work towards this can contribute to addressing existing inequalities. But at the moment, many are left out especially because they cannot afford the upfront investment costs needed to implement energy efficiency measures and gain access to renewable technologies. Europe is also falling short in assisting other regions and continents to tap into the benefits the energy transition offers.

However, while millions are suffering from the escalating cost of living and rising energy poverty, the largest firms and richest people have increased their profits and wealth, exacerbating inequality. This is not only a problem of justice and social cohesion. The ultra rich are responsible for disproportionately higher carbon emissions but are still able to externalise the environmental, social and climate costs of their lifestyle onto society at large. We call on the next European Commission to ensure that the costs and benefits of the energy transition are borne and shared equitably across society by proposing:

- **EU Action Plan to end energy poverty and empower citizens to be in control of their bills** based on **specific policy recommendations**, including using utility providers’ profits to finance social tariffs, preventing rent indexation for leaky housing and ensuring households at risk of energy poverty benefit from the Renovation Wave. Provide guidance on how to best tackle the overconsumption of energy by companies and high-income groups through progressive tariffs. An ambitious implementation of the **end-use energy savings energy poverty share** as mandated by the revised EED can help direct energy efficiency measures towards people most in need and alleviate energy poverty.

- **Support the scaling up of renewable energy communities**. Support Member States to fully unlock citizens’ participation as active energy consumers by removing regulatory, technical, and economic barriers on the ground, prioritising the full participation of low-income and vulnerable households. Develop and propose an **EU level strategy and action plan to support the development of renewable energy communities**. Ensure that adequate parts of EU funds are dedicated to support energy communities and that best practices on benefit sharing for renewable energy projects with local communities are replicated across Member States.

- **Oversee a systematic and thorough implementation of existing tools and policies designed to support fair transition.** This includes i) making sure that national Social Climate Plans are based on meaningful stakeholder consultation, are based on robust

distributional impact assessments and contain well targeted measures to tackle energy and transport poverty; ii) encouraging Member States to channel appropriate amount of ETS2 revenues to implement the measures designed in the Social Climate Plans, even if this goes beyond 25% of mandatory allocation enshrined in the ETS Directive. In case not enough resources will be channelled nationally to protect the citizens from adverse distributional impacts, the size of the Social Climate Fund should be increased; iii) promoting more ambitious implementation of the Council Recommendation on ensuring a fair transition to climate neutrality; iv) ensuring that the update of the action plan to the European Pillar of Social Rights strengthens social protection, social inclusion and employment opportunity to underpin the energy transition and mitigate disruptive impacts.

- **EU Strategy for a Redistributive Agenda based on the polluter pays principle (PPP) and taxing 'luxury' emissions.** This strategy should ensure that the energy transition is socially just, i.e. guarantees the right to affordable energy for all while incentivising reduction in energy consumption. Proposals should include **progressive restrictions or taxation of luxury or high-impact goods** (yachts, fast fashion, frequent low distance flights, secondary residences, unnecessarily large passenger vehicles including SUVs). Revenues should be used to finance alternative solutions for low-emission lifestyles and addressing the bottlenecks in the energy transition. Introducing incentives and **rewards for practices with low environmental footprint** should be considered (e.g. lower or remove VAT on repaired, reused or recycled goods and on public transport, shifting of Common Agriculture Policy subsidies to sustainable agricultural practices) to ensure prices reflect the true costs of a product. These measures should be complemented by **progressive taxes at national and/or EU level** to generate public revenues for investments and spending in a green and fair transition, such as a **tax on extreme wealth, a financial transaction tax and a tax on excess profits of fossil fuel industry**.

5) Close the investment gap

The European Commission estimates that compared to the previous decade, **additional investments of 1.7% to 2% of European GDP annually** will be needed to meet the objectives of the Green Deal and the REPowerEU initiative. Europe stands at a crossroads, with the end of the Next Generation EU (NGEU) in 2026 implying a substantial reduction in investment. It will cut the EU's financial firepower in half (by about €800 billion). This means about €300 billion less (over a 7 year period) available for climate and nature investment, especially affecting Central and Eastern European and Southern European countries that rely significantly on these funds to help finance their transition. At the same time, EU Member States spent in 2022 more than €400bn on importing fossil gas and over €120bn on explicit fossil fuel subsidies while implicit subsidies are significantly higher. We therefore call for :

- **A European Social and Green Investment Plan** fostering a fair transition towards a more resilient and sustainable Europe, unlocking over €1 trillion by 2030 via joint borrowing. **This Investment Plan should come in addition to a €1 trillion Multiannual Financial Framework (MFF)** for the period 2028-2034. At least 50% of the future MFF and the Social

and Green Investment Plan must be dedicated to climate and nature-related investment and the remaining part to major social and development objectives. Delivering this **Investment Plan requires new "own resources" (NORs) to come from EU-wide taxation revenues after 2026**, be based on socially just progressive taxes and the polluter-pays principle such as taxing luxury emissions or fossil fuel companies.

- **Fully phase out fossil fuel subsidies in national budgets and exclude any support for fossil infrastructure under all EU funding streams, starting with the next MFF.** CAN Europe has made 6 detailed recommendations for EU Member States to phase out fossil fuel subsidies in a socially just manner in line with the 2025 fossil fuel subsidy phase-out commitment. Shifting such subsidies towards renewable-based alternatives must be systematically encouraged under the European Semester.

- **Continuation of the Just Transition Fund** as key proof that the EU is committed to support regions/industries, who are willing to transform. Non-continuation of the Just Transition Fund would critically undermine the trust and empowerment of local authorities who have invested in developing transition plans and creating multi-stakeholder management structures, would be disruptive both to regional decarbonisation pathways, and would be detrimental to EU cohesion.

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Climate Action Network (CAN) Europe is Europe's leading NGO coalition fighting dangerous climate change. With over 200 member organisations active in 40 European countries, representing over 1,700 NGOs and more than 40 million citizens, CAN Europe promotes sustainable climate, energy and development policies throughout Europe.

CAN Europe members work to achieve this goal through joint actions, information exchange and the coordinated development of NGO strategy on international, regional, and national climate issues. CAN Europe members place a high priority on both a healthy environment and development that "meets the needs of the present without compromising the ability of future generations to meet their own needs" (Brundtland Commission).

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