



Climate Action Network (CAN) Europe is Europe's leading NGO coalition fighting dangerous climate change. With over 170 member organisations from 38 European countries, representing over 1.500 NGOs and more than 47 million citizens, CAN Europe promotes sustainable climate, energy and development policies throughout Europe.

The revision of the Renewable Energy Directive. An opportunity to boost ambition and accelerate deployment of renewable energy

Renewables are a key part in the transition towards a net zero carbon economy. Combined with energy savings, the various renewable energy sources provide a cost-effective and readily available solution to reduce greenhouse gas emissions in a relatively short timescale. Besides their greenhouse gas emission abatement potential, sustainable renewables help reducing health costs and environmental damages caused by fossil fuels combustion. Renewables can help build resilient local economies and the mobilisation of local renewable energy potentials can increase local added value.

While the 2020 EU renewable energy target appears to be within reach, we're still far from the target in 2030¹. Many national governments are too shy when it comes to planning measures for achieving the agreed 32% EU renewable energy share by 2030. The National Climate and Energy Plans (NECPs) submitted by the governments will have to be updated anyway to be in line with the EU's increased emission reduction target for 2030. Reluctant national policies are in sharp contrast with the Paris Agreement objective to limit temperature rise to 1.5°C. The Paris Agreement Compatible (PAC) energy scenario² by Climate Action Network (CAN) Europe and the European Environmental Bureau (EEB) shows that a 100% renewable energy system by 2040 is a prerequisite for limiting dangerous climate change.

With the European Green Deal and massive recovery programmes to be rolled out, it is now high time for the EU to ramp up the growth of its renewable energy capacities while at the same time preserving our biodiversity. The EU needs to update its 2030 renewable energy target and the corresponding legislation.

This briefing presents an overview of options that need to be put forward to improve the current policy framework and to help the EU achieve its commitments under the Paris Agreement.

¹ See also EEA (2020). Trends & Projections Europe.

² For more details on the PAC scenario, see <https://www.pac-scenarios.eu/>

Only binding targets ensure ambitious targets become reality

With the adoption of the Renewable Energy Directive in 2009, the European Union had set itself an overall EU target of 20% share of energy from renewable energy sources in the final energy consumption in 2020³. The 20% EU-wide target was allocated among the Member States through national binding renewable energy targets. The national targets reflected not only a clear allocation, but also the specific progress in mobilising renewable energy potential.

The Renewable Energy Directive was substantially revised in 2018, setting a new EU goal of a minimum 32% share of renewables in final energy consumption by 2030⁴. In contrast to the 2020 renewable energy target, the 2030 renewable energy target is only binding at EU level and there are no binding targets for the individual Member States anymore. Member States had to specify national 2030 renewable energy contributions in their National Energy & Climate Plans (NECPs), following the Energy Union Governance Regulation⁵. Even though the national contributions indicated in the NECPs could be sufficient to slightly surpass the current 2030 EU renewable energy target of 32% as indicated by the European Commission's analysis in September 2020⁶, clearly there are weaknesses with the current governance system.

First of all, the governance system fails to push governments to higher ambition, as it even allows them to ignore the indicative level of the country specific benchmarks which result from the formula (based on objective criteria) set out in Annex II of the Governance Regulation⁷. Certain Member States put forward renewable energy contributions in their NECPs which were lower than those benchmarks. Furthermore, the current system lacks strong enough tools in case Member States fail to deliver.

Such uncertainties undermine the investment security for renewable energy. Given the importance of capital costs for renewable energy, clear and binding national targets and trajectories are needed to ensure predictability and certainty. Otherwise, investors might face risk surcharges when borrowing money for renewable energy projects. Removing the binding national targets sent the wrong signal. In view of the climate emergency, reliability of national renewable energy policies is needed more than ever.

Renewable energy policies need to be in line with the Paris Agreement

With the current 32% target for 2030, the growth of renewable energy in the EU is much too weak. If we do not want to depend on questionable technologies such as carbon capture and use and storage (CCU/CCS), 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 scenario⁸ shows that this implies a transition to a 100 % renewable energy based energy system by 2040.

The European Green Deal together with the commitment to climate neutrality and to a higher climate ambition for 2030 require the EU to update its 2030 renewable energy target. The Communication on the Climate Target Plan highlights that, to achieve net greenhouse gas emission

³ Directive 2009/28/EC on the promotion of the use of energy from renewable sources

⁴ Directive 2018/2001 on the promotion of the use of energy from renewable sources

⁵ Regulation 2018/1999 on the Governance of the Energy Union and Climate Action

⁶ https://ec.europa.eu/info/news/commission-publishes-assessment-national-energy-climate-plans-2020-sep-17_en

⁷ Regulation 2018/1999 on the Governance of the Energy Union and Climate Action

⁸ For more details on the PAC scenario, see <https://www.pac-scenarios.eu/>

reductions of 55%, there is a need to increase the level of ambition of the overall renewable energy share to 38% - 40% by 2030. However, as action in the next ten years will be decisive in reaching the 1.5°C objective, the EU should strive to achieve at least 65% greenhouse gas emission reductions by 2030. This also means that the increase of the 2030 renewable energy target should go well beyond what is indicated in the 2030 Climate Target Plan. CAN Europe supports an EU binding target for the share of energy from renewable sources in gross final energy consumption of at least 50% by 2030.

CAN Europe calls for:

- EU binding target for the share of energy from renewable sources in gross final energy consumption of at least 50% by 2030⁹.
- Reintroduction of binding national targets in the Renewable Energy Directive.
- An EU long term target for 100 % renewable energy by 2040.

Push for stronger implementation through a better and more coherent regulatory framework

In the coming decade and beyond, EU Member States need to significantly increase the deployment of sustainable renewable energy. In addition to the increased level of ambition, the current Renewable Energy Directive needs to be implemented and revised so it becomes the driver of a comprehensive policy framework supporting the further deployment and uptake of sustainable renewable energy.

There are several articles in the current Renewable Energy Directive dealing with simplifying or reducing burden in administrative procedures and permit-granting processes. Despite improvements made through the previous revision of the Renewable Energy Directive, it is clear that there are still too many complex and long administrative procedures that remain a barrier for increased and faster deployment of renewable energy. Further clarity to the overarching rules will be needed to ensure these barriers at national level are removed.

At the same time, we need to recognise that the climate and the biodiversity crisis are strongly interlinked. Climate change is a significant driver of biodiversity loss while the loss of biodiversity worsens the climate crisis. Therefore, climate, energy and biodiversity policies should be looked at holistically and reinforce each other. The Biodiversity Strategy¹⁰ emphasises that more sustainably sourced renewable energy will be essential to fight climate change and biodiversity loss. Cross compliance between the Renewable Energy Directive, the Biodiversity Strategy, the Water Framework Directive and the Birds & Habitats Directives should be strengthened to ensure that increased renewable energy deployment is handled with respect for biodiversity. The deployment of sustainable renewable energy needs to be supported and guided through spatial planning, ensuring at the same time the dialogue and public involvement in the process.

Cross-border developments (offshore and onshore) will become increasingly important to support the further deployment of renewable energy. Current tools to ensure effective regional cooperation in planning and implementation need to be strengthened.

⁹ For more information on the CAN Europe position about the 2030 EU energy targets see: <https://caneurope.org/can-europe-s-position-on-the-eu-2030-energy-targets/>

¹⁰ EU Biodiversity Strategy for 2030. Bringing nature back into our lives. COM/2020/380final.

New hydropower plants should be excluded from eligibility under the Renewable Energy Directive, as the potential contribution of new hydropower plants is negligible in terms of the transition to a clean energy system, and the development of greenfield hydropower is incompatible with the Biodiversity Strategy commitment to restore free-flowing rivers.

CAN Europe calls for:

- Simplifying or reducing burden in administrative procedures, by providing further clarity to the overarching rules so barriers at national level - hindering increased deployment of renewables - are removed.
- Strengthening cross compliance between the Renewable Energy Directive, the Biodiversity Strategy, the Water Framework Directive and the Birds & Habitats Directives to ensure that increased renewable energy deployment is handled with respect for biodiversity.

Energy system integration is essential to enhance quick upscaling of renewables

In an integrated energy system, energy supply and demand sectors interact more closely. Energy system integration is essential to enhance the quick upscaling of renewables, following the energy efficiency first principle. It allows for a better use of existing infrastructure, harvesting the potential of demand-side response and other flexibility options.

In addition to the core principle of energy efficiency first, greater direct electrification of its end-use sectors – based on electricity sourced from renewables – is an important feature of an integrated energy system. The revision of the Renewable Energy Directive should give a boost to renewable electricity generation and to accelerate the electrification of energy demand in buildings, transport and industry sectors.

CAN Europe calls for:

- The Renewable Energy Directive to support energy system integration and to accelerate electrification – based on electricity from renewables - of energy demand in buildings, transport and industry sectors.

Keep fossil fuels out of the Renewable Energy Directive

As some sectors and processes are not easy to electrify, the need for energy carriers with a high energy density will have to be covered by non-fossil¹¹ gases and liquid synthetic fuels. There is however an increased effort to include fossil based - so-called “low-carbon” - fuels in the Renewable Energy Directive. The Renewable Energy Directive pursues the goal of promoting renewable forms of energy and aims at creating an enabling framework for further deployment of renewables in

¹¹ There is a lot of confusion over terms such as “renewable”, “green” or “decarbonised” gases, which are in many cases misleading. That is why we use the term non-fossil gas to indicate clearly that in our view, only those types of gases which deliver genuine climate benefits and which do not originate from a fossil fuel can under certain conditions be considered as a future energy supply. Non-fossil gases must not only comply with a net zero emission society but also come from sustainable renewable energy sources.

different sectors. Therefore, the revision of the Directive should not include provisions that incentivise fossil based – so-called “low-carbon” - fuels¹².

CAN Europe calls for:

- The Renewable Energy Directive not to include any provisions that incentivize fossil based – so called “low-carbon” - fuels.

As the availability of non-fossil gases is limited, production and allocation needs to be well regulated

We see a role for sustainably produced “non-fossil”¹³ gases from feedstocks and processes that do not originate from a fossil fuel, that deliver climate benefits, in compliance with a net zero emission society (renewable hydrogen, synthetic methane, biogas, biomethane). However the amount of sustainably produced non-fossil gas will be limited and/or costly, so there is a need for a policy framework which prioritises the allocation of the limited amounts to those sectors that are most difficult to decarbonise. Only hard-to-abate sectors such as steel and chemicals, aviation, long-distance shipping and heavy-duty road transport, could partly rely on non-fossil gases.

For biogas, stringent sustainability criteria need to be applied so only fast-decaying wastes and residues with no alternative use are considered as eligible sources.

Hydrogen must be entirely based on renewable energy, produced with surplus renewable electricity or through additional renewable generation capacities¹⁴. Dedicated support schemes should incentivise additional renewable generation capacities to feed electrolyzers that cover any demand for renewable hydrogen. Converting renewable electricity into renewable hydrogen should not undermine renewable energy targets and related support schemes. The production of renewable hydrogen should not compete with the production of renewable electricity that could be directly used to decarbonise key sectors such as heating and transport in a more efficient way, including through storage. We do not support general quota targets for different gaseous energy carriers as they would not drive the necessary market introduction of renewable hydrogen and instead risk creating perverse incentives.

CAN Europe calls for:

- A policy framework that ensures that limited amounts of sustainably produced “non-fossil” gases are only allocated to those sectors that are most difficult to decarbonize.
- Dedicated support schemes that incentivise additional renewable generation capacities to feed electrolyzers. No support should be given to general quota targets for different gaseous energy carriers.

¹² In CAN Europe’s view, fossil gas needs to be phased out by 2035, the latest.

¹³ For more information about non-fossil gases, see CAN Europe position on gas: <https://caneurope.org/can-europe-position-on-the-use-of-gas-in-the-future-energy-system/>

¹⁴ Hydrogen production linked to nuclear power is not acceptable.

Make heating efficient and renewable

In 2019, only about one fifth of energy used for heating and cooling for buildings and industry came from renewable sources¹⁵. The decarbonisation of the heating sector is not going fast. More binding measures are needed that incentivise a higher uptake of renewable electricity, geothermal and solar heating, facilitated through heat storage and district heating.

At the same time, it should be noted that there is still a lot of potential for energy savings that should be tapped, especially in buildings and industrial processes. The implementation of efficiency policies is crucial and will have a direct impact on the demand for fossil fuels, on the infrastructure needed and on facilitating the uptake of renewable energy in the heating sector.

The domestic potential of sustainable, low carbon biomass is limited and/or expensive. Its use for individual heating should not be stimulated given that low temperature heat can easily be supplied through a range of other renewable heating solutions. Biomass would be better directed to other sectors such as industry where it could serve as a substitute for fossil high temperature heat and fossil feedstocks.

Renewable hydrogen should not be used for low temperature heat in buildings, given other solutions are cheaper, more efficient and more market-ready. For biogas, stringent sustainability criteria need to be applied so only fast-decaying wastes and residues with no alternative use are considered as potential sources.

Although the use of waste heat and cold may be a sensible and economic solution under certain circumstances, it should be noted that waste heat and cold is not necessarily renewable based. Mobilising waste heat and cold should be considered as an efficiency measure. Policy measures should ensure that over time waste heat and cold is entirely renewables based.

Besides the additional measures in the Renewable Energy Directive, and in order to allow renewable heating to compete in the market, it is equally important to scrap subsidies for fossil fuels in the heating sector, accompanied by matching measures to address energy poverty. Indirect support through biased energy infrastructure planning, such as the default connecting of new buildings to the existing fossil gas networks, should be stopped.

CAN Europe calls for:

- More binding measures for renewable heating & cooling that – in addition to the implementation of efficiency policies - incentivise a higher uptake of renewable electricity, geothermal and solar heating, facilitated through heat storage and district heating.

Holistic approach for buildings needed

Given that buildings are responsible for 40% of the EU's total energy consumption as well as 36% of energy-related greenhouse gas emissions¹⁶, a successful transition towards climate neutrality

¹⁵ https://ec.europa.eu/eurostat/statistics-explained/index.php/Renewable_energy_statistics#Over_one_fifth_of_energy_used_for_heating_and_cooling_from_renewable_sources

¹⁶ A renovation wave for Europe – Greening our buildings, creating jobs, improving lives. COM(2020)662.

cannot be achieved without addressing the building sector holistically. It is clear that a strong coordination with other pieces of legislation such as the Energy Performance of Buildings Directive and the Energy Efficiency Directive will be needed.

Heating and cooling is responsible for about 80% of the energy consumed in residential buildings¹⁷. In addition to measures to significantly reduce energy demand and increase renewable energy for heating and cooling in buildings - as highlighted in the previous chapter - the Renewable Energy Directive should also strengthen other measures to ensure increased deployment of rooftop solar on public and private building stock with suitable roofs. To enable an efficient integrated energy system, the increased deployment of renewables in buildings should be accompanied by measures that support demand-side flexibility options such as electric vehicles charging stations, heat pumps and battery storage that interact with the electricity grid.

CAN Europe calls for:

- A holistic approach for the building sector, through a strong coordination of the Renewable Energy Directive, the Energy Performance of Buildings Directive and the Energy Efficiency Directive.
- An increased deployment of renewables in buildings accompanied by measures that support demand-side flexibility options.

Allow industry to fully tap the benefits of renewables

Industry will need to decarbonise via reductions in resource and energy use, including redesign of products and production processes to use less energy and low-carbon materials, as well as energy efficiency measures. Industry will also benefit from renewable energy technologies that are already technically mature and available for many of their process needs. They can already easily make changes to energy sources used, through producing or purchasing renewable electricity and making other fuel switches. Subject to reform of the EU's criteria on bioenergy (see below), an obligation on industry to use a minimum amount of sustainable renewable energy could be an effective way to ensure the sector is on a more certain trajectory of achieving climate neutrality.

Notwithstanding the fact that the Renewable Energy Directive stipulates that Member States need to remove unjustified barriers to long-term Power Purchase Agreements (PPAs), we notice that in several Member States, there are still administrative and regulatory barriers. Such hurdles make it too complicated for big industrial energy consumers to directly buy renewable electricity from renewable power plant operators. PPAs can provide an important incentive for investments into new renewable capacities without depending on public support schemes.

CAN Europe calls for:

- Measures that obliges industry to use a minimum amount of sustainable renewable energy.
- The removal of unjustified barriers to long-term Power Purchase Agreements.

¹⁷ A renovation wave for Europe – Greening our buildings, creating jobs, improving lives. COM(2020)662

Introduce meaningful criteria for bioenergy

The current sustainability criteria for bioenergy in the Renewable Energy Directive are too weak and must be changed. They continue to incentivise types of bioenergy that increase emissions compared to fossil fuels – either in general or over any climate-relevant timescale. Forest biomass now receives incentives through a variety of EU policies while its external costs (from greenhouse gas emissions, air pollution, biodiversity loss and habitat destruction) are not adequately mitigated or priced in.

In the upcoming revision, it is therefore crucial that criteria are strengthened, to ensure that bioenergy delivers significant, near-term greenhouse gas savings compared to fossil fuels; limited sustainable biomass resources are optimally used in the wider economy and within the energy sector; and biomass burning does not lead to a further increase in air pollution or biodiversity loss.

Only fast-decaying wastes and residues with no alternative and/or lower emission use are supported as potential sources. Criteria should disallow the use of feedstocks that are likely to increase emissions compared to fossil fuels (e.g. tree trunks and stumps). A cap should be introduced to limit the use of biomass for energy production to levels that can be met sustainably from acceptable feedstocks within the EU. The EU's carbon accounting framework should ensure emissions from biomass burning are fully accounted for.

CAN Europe calls for:

- Meaningful sustainability criteria for bioenergy to be introduced, to ensure that only fast-decaying wastes and residues with no other uses are incentivized and that bioenergy therefore delivers significant, near-term greenhouse gas savings compared to fossil fuels.