

INCEPTION IMPACT ASSESSMENT

Inception Impact Assessments aim to inform citizens and stakeholders about the Commission's plans in order to allow them to provide feedback on the intended initiative and to participate effectively in future consultation activities. Citizens and stakeholders are in particular invited to provide views on the Commission's understanding of the problem and possible solutions and to make available any relevant information that they may have, including on possible impacts of the different options.

TITLE OF THE INITIATIVE	2030 Climate Target Plan
LEAD DG (RESPONSIBLE UNIT)	CLIMA, Units C.1 (strategy & economic assessment) and B.1 (ETS policy development and auctioning), ENER, Unit A.4 (economic analysis and financial instruments)
LIKELY TYPE OF INITIATIVE	<i>Communication</i>
INDICATIVE PLANNING	Q3 2020
ADDITIONAL INFORMATION	https://ec.europa.eu/clima/ https://ec.europa.eu/clima/policies/strategies/2050_en

The Inception Impact Assessment is provided for information purposes only. It does not prejudice the final decision of the Commission on whether this initiative will be pursued or on its final content. All elements of the initiative described by the Inception impact assessment, including its timing, are subject to change.

A. Context, Problem definition and Subsidiarity Check

Context

Global warming is happening and affecting citizens already now and tackling this challenge becomes urgent. It threatens our long-term sustainability on this planet. Global warming has already reached 1°C and the world is currently not on track to achieve the Paris Agreement objective of limiting temperature change below 2°C, let alone 1.5°C. The special report of the Intergovernmental Panel on Climate Change on 1.5°C estimated that the world would need to become CO₂ neutral by 2050 to be on a pathway to limit the temperature increase to 1.5°C.

The EU actively pursues policies to cut its greenhouse gas (GHG) emissions and decoupling them from economic growth. By 2018, the EU had reduced its emissions by 23% compared to the 1990 level, while its economy had grown by 61% in that period¹.

In view of further advancing these efforts, the EU recently adopted legislation to reduce GHG emissions by at least 40% by 2030 compared to 1990 levels. It also adopted renewables and energy efficiency policies and targets for 2030 as well as other sectoral policies, which would bring the reduction in GHG emissions to around 45% by 2030, if fully implemented.

In addition, the Commission proposed in 2018² that the EU should become climate neutral by 2050, compensating not only any remaining CO₂ but also any remaining other GHG emissions. Both the European Council³ and the Parliament⁴ have endorsed this long-term EU objective.

According to the latest Eurobarometer⁵, 93% of EU citizens see climate change as a serious problem and a significant majority of the EU population wants to see increased action on climate change. Consequently, The Commission put climate change and environmental degradation as one of its key priorities and adopted the European Green Deal⁶ in December 2019. The climate neutrality by 2050 objective, which the Commission proposed to enshrine in an EU law, is one of the central elements of the European Green Deal. In order to

¹ The GHG emissions covered in these figures are for EU28 and include those generated by intra-EU and extra-EU aviation departures but exclude those from international maritime traffic. They also exclude the (negative) net emissions from the land use, land use change and forestry sector, which has been a net absorber of CO₂ at the EU level every year since 1990. Excluding the UK, the EU has reduced by 2018 its emissions by 21% compared to 1990.

² COM(2018)773 final.

³ European Council conclusions, 12 December 2019.

⁴ European Parliament resolution of 14 March 2019 on climate change and resolution of 28 November 2019 on the 2019 UN Climate Change Conference in Madrid, Spain (COP 25).

⁵ Special Eurobarometer 490, Climate Change, April 2019.

⁶ COM(2019)640 final.

achieve this long-term goal and taking into account the challenge of the necessary economic transition, the Commission intends to propose increasing the EU's GHG emission reductions target for 2030 to at least 50% and towards 55% compared with 1990 levels in a responsible way and in line with the 'do no harm' principle.

Problem the initiative aims to tackle

In absence of more ambitious actions in a 2030 perspective, the EU would need to eliminate more than half of its 1990 economy-wide emissions in only 2 decades after 2030 to achieve climate neutrality by 2050⁷. This is a much faster reduction in annual emissions than has been achieved so far and thus a greater transition challenge than in the prior 4 decades. Therefore, the initiative aims to assess what would be required to have a more balanced reduction pathway from 2020 to 2050 and thus redistribute in time the transition effort towards climate neutrality.

Increasing climate ambition and, where necessary, raising energy targets as well as adapting relevant policies already in the 2030 timeframe would result in a more gradual annual reduction path and distribution of efforts between now and climate neutrality in 2050. It would mean, however, a significant step-up of ambition in the short term, with reduced lead-time for devising and implementing additional measures and for the economic actors to adjust.

The initiative needs to assess how to increase the ambition in a manner that best contributes to sustainable and inclusive growth, enhances economic competitiveness through accelerating innovation and modernising Europe's enterprises. The initiative also needs to ensure that the EU has access to a secure, affordable and sustainable energy system, that it is a socially fair and just transition that improves citizens' living conditions and supports skills formation and job creation, and that it reverses environmental degradation.

It will also assess the feasibility, costs and opportunities linked to the needed deployment of clean technologies, including nature-based solutions, considering also the state of play in technology development. It will look at the need to modernise the EU's industrial base and ensure a favourable environment for SMEs, the impacts for the EU's global competitive position as well as macro-economic impacts, e.g. on jobs and economic growth, and the potential risk of carbon leakage.

As to the transition effort to climate neutrality by 2050, all sectors of the economy and society will need to contribute, albeit with mitigation potentials differing strongly among sectors. Energy will play a central role in this process as its production and use (including by households, industry, services and transport) account for more than 75% of total emissions. Next to the energy sector, agriculture, waste and industry also generate significant amounts of non-CO₂ emissions. The EU's land use sector (agriculture land, forests and other natural land) is presently a net sink of CO₂, meaning that it removes more CO₂ from the atmosphere than it releases GHGs. Emissions from the maritime sector and aviation are projected to increase significantly and need to be addressed in the transformation to a climate neutral EU economy.

As regards aviation, the emissions resulting from intra-EU aviation are presently covered under the EU Emissions Trading System (ETS). As regards shipping, the Commission intends to build on the existing regulation on monitoring reporting and verification of shipping emissions and come with a proposal on how to extend emissions trading to this sector. Both are complementary to the active pursuance of enhanced global efforts in the International Civil Aviation Organization and International Maritime Organization.

While the EU cannot solve climate change on its own, accounting for less than 10% of global emissions, it is nevertheless the first major economy willing to do what it takes to become climate neutral, to establish a feasible trajectory towards this goal and thus lead by example. The EU has taken a leadership role in tackling climate change and ensuring a fair transition is a key consideration in the process. It is already today the most GHG-efficient major economy in the world. It has put in place a comprehensive framework of policies to reduce GHG emissions, including climate, energy, circularity and sector-specific policies. It has also established enabling policies, for instance in terms of finance, taxation, electricity market rules, research and innovation, skills, employment and measures to address social challenges. A comprehensive review of this policy framework is foreseen under the Green Deal.

EU leadership in 2020 is needed more than ever given that worldwide progress towards the objectives of the Paris Agreement is insufficient. The EU's ability to demonstrate the feasibility of a trajectory to climate neutrality and to manage a just transition will send a strong signal to other countries to follow suit.

Basis for EU intervention (legal basis and subsidiarity check)

Climate change is a trans-boundary problem, where coordinated EU action can effectively supplement and reinforce national and local action. Coordination at the European level enhances climate action and EU action is justified on grounds of subsidiarity, in line with Article 191 of the Lisbon treaty. Since 1992 the EU has worked to develop joint solutions and drive forward a global agreement to fight climate change.

⁷ With the current climate and energy targets for 2030 and the full implementation of the relevant legislation, the EU would reduce emissions by around 45% by 2030 compared to 1990. The continuation of these policies and measures would only lead to around 60% GHG reduction by 2050.

Additionally, increasing the 2030 target for EU GHG reductions will impact many sectors across the EU economy and may require policy responses in many fields, not limited to climate and energy policy itself. The impacts of the increase in ambition and of the associated policies on growth and jobs creation, the environment, public health, fairness and cost-effectiveness are examples of elements that can also be better considered at the EU level.

Action at the EU level is therefore indispensable and coordinated EU policies have a much bigger chance of leading to a true transformation, particularly in light of the global dimension of the challenge, while taking into account different capabilities to act among Member States and the EU single market as a strong driver for cost-efficient change and upward convergence.

B. Objectives and Policy options

The objective of this initiative is to propose an increased climate target for 2030 to prepare the EU for the transition towards climate neutrality by 2050, including through an amendment of the recently proposed European Climate Law. This initiative will assess the economic, social and environmental impacts. It will provide elements of the overall broad architecture of policy measures across sectors to achieve the revised climate ambition. This includes a preliminary analysis of options for the energy legislation, which will feed into a review and revision, where necessary, of the relevant targets and legislation. An analysis of the ambition of the national energy and climate plans will also feed into this assessment.

More particularly, the initiative will assess:

- impacts on the energy affordability, sustainability and security, including energy system costs, infrastructure needs, considering the role of an effective and efficient internal energy market;
- the type and pace of actions required impacting greenhouse emissions beyond the energy system, including transport, agriculture, forestry, industry and waste;
- the type and pace of clean technology development and roll-out needed;
- how this increase in the 2030 climate target relates to the pathway beyond 2030, through 2040 and ultimately resulting in climate neutrality by 2050;
- how the EU can increase the absorptions of CO₂ emissions over time, including in its natural sinks and the role of biomass-based products and nature based solutions;
- the pace and scale of investment required, also looking at how to minimise the risk of stranded assets;
- macro-economic implications, including impacts on growth, employment and competitiveness;
- the challenges for society in terms of consumer choice, household expenditure, education and training;
- the synergies and trade-offs with social and other environmental concerns such as biodiversity, the use of resources, pollution or food security.

Based on this assessment, this initiative will present:

- the overall architecture, i.e. the type, ambition and interaction of possible policy measures (while leaving the specific design of measures to dedicated policy proposals and their respective assessments) in the field of energy and climate which should work in coherence towards the revised climate ambition;
- the type and ambition of action and policies required beyond climate and energy, including transport, price mechanisms, agriculture, forestry and nature-based solutions and green infrastructure, industry, digital economy, waste, water, environment and consumer choices;
- the type of enabling framework required, for instance related to sustainable finance, R&D&I, the deployment of new technologies at scale, the roll out of a circular economy and the support necessary to accompany SMEs in the transition;

This initiative should therefore provide insights in the required updates to the overall climate and energy framework and ensure overall coherence of the specific policy updates by June 2021, notably regarding the Emissions Trading System Directive (ETS)⁸ including its carbon leakage measures and possible alternatives; the Effort Sharing Regulation (ESR)⁹; the Land Use, Land Use Change and Forestry Regulation (LULUCF regulation)¹⁰; CO₂ Emissions Performance Standards for Cars and Vans¹¹ and, as appropriate, the Energy Efficiency Directive (EED)¹² and the Renewable Energy Directive (RED)¹³, the Energy Taxation Directive¹⁴, the forthcoming Sustainable and Smart Mobility Strategy and other policy measures related to the Green Deal. This includes assessing:

- what are the feasibility and possible implications of adding to emission trading, next to the maritime sector,

⁸ Directive 2003/87/EC.

⁹ Regulation (EU) 2018/842.

¹⁰ Regulation (EU) 2018/841.

¹¹ Regulation (EU) 2019/631.

¹² Directive 2012/27/EU as amended by Directive (EU) 2018/2002.

¹³ Directive (EU) 2018/2001 (recast of Directive 2009/28/EC).

¹⁴ Council Directive 2003/96/EC.

other sectors such as road transport or emissions from buildings as well as the implications for remaining ESR sectors;

- options for how increased overall GHG reduction targets could impact ambition in the ETS, ESR, LULUCF, EED and RED legislation;
- how supply and demand side policies can work together in a coherent and effective manner, considering technology uncertainties;
- what type of specific flanking measures related to climate and energy policies are needed to safeguard international competitiveness, remove barriers, including for the roll-out of clean energy and transport technologies, guarantee energy and food security, ensure cost-effective energy production and consumption and affordability, create the right incentives to overcome the investment challenge, ensure a just transition, address energy poverty and improve climate and environmental resilience;

This initiative can also provide input to the further development of actions under the Green Deal such as the circular economy, the EU industrial strategy, sustainable and smart mobility, greening agriculture policy and preserving biodiversity.

This initiative will thus assess in a comprehensive manner the impacts of increasing the 2030 EU GHG reductions target to 50% or 55%. It will assess how higher mitigation can be achieved responsibly, meaning inter alia in a cost-effective manner while taking into account the need for a just transition.

This initiative will assess the extent to which and how the various pieces of climate, energy and transport legislation, including issues related to taxation, revenue recycling and the carbon border mechanism, could be revised in a coherent manner to achieve the higher ambition responsibly. It would thereby provide a solid foundation and insights for proposing if necessary new legislation in climate, energy, transport and other policy areas as necessary by mid-2021 and beyond. This should also inform the wider policy developments as foreseen in the European Green Deal. Finally, it will foster a reflection on how EU action can promote international action further.

In addition, the nature of future relations with the United Kingdom will affect 2030 climate ambition. This will also require reflection.

The basis for the analysis is the suite of targets and policy measures that form the 2030 Climate and Energy Framework and the Energy Union and Mobility Packages, which will be further informed by the outcome of the assessment of the final National Energy and Climate Plans.

C. Preliminary Assessment of Expected Impacts

Likely economic impacts

The transformative nature of the transition to a climate neutral economy by 2050 and the higher 2030 GHG emission reduction target mean that all sectors will be impacted to a greater or lesser degree. The 2018 in-depth analysis supporting the Commission's vision for a climate neutral economy¹⁵ indicated that the overall impact on output by 2050 would be limited and potentially positive, even abstracting from expected co-benefits and the averted negative impacts of climate change. That analysis nevertheless indicated that the transition would require sectors and jobs to undergo a transformation, creating a variety of asymmetric challenges and opportunities. The impact on jobs and need for upskilling and reskilling should be further assessed.

First, the transition will require a significant shift of investments towards a more sustainable path. Overall investment needs will increase because of higher capital needs, but energy costs would be reduced. A higher level of ambition by 2030 would amplify such effects in the short to medium-term. In particular, it is expected that investment needs through to 2030 would increase albeit technology development might attenuate this effect as has been already the case for renewables in power generation. However, this could also mean that investment needs after 2030 to achieve climate neutrality by 2050 would be frontloaded in case of higher ambition for 2030 thus evening out the overall cash flow over the coming decades. Investment by households and businesses would likely need to rise the most, though public sector investment needs would also likely increase.

Second, some sectors are likely to grow (e.g. renewable energy, construction), while many others are likely to transform (e.g. vehicle manufacturing, energy intensive industries, transport services, agriculture). A limited number of sectors should decline (e.g. coal mining or oil refining and their original equipment manufacturers and solution providers). A higher level of ambition by 2030 would amplify these transition needs in the short and medium term and their ripple effects on the entire economy.

Third, the transition to a climate neutral economy would reduce imports of fossil fuels, which would benefit the security of supply of the EU energy markets and free up resources to be invested elsewhere in the economy. On the other hand, demand for critical raw materials that are crucial for the deployment of green technologies will increase significantly.

By leading by example, EU businesses could benefit from first mover advantages and gain in competitiveness on

¹⁵ https://ec.europa.eu/clima/sites/clima/files/docs/pages/com_2018_733_analysis_in_support_en_0.pdf

global markets To the extent that the increase in mitigation ambition by 2030 in the EU may not be followed by its main international competitors, there may be an increasing risk of carbon leakage, particularly in energy- and GHG-intensive sectors This aspect will be further assessed in detail in a separate initiative, including in terms of potential impacts and options for averting or remedying carbon leakage risks.

Likely social impacts

Accelerating the transition towards climate neutrality would likely make the social and employment impacts more pronounced in the short and medium term, putting more pressure, including in terms of skills requirements and training needs, notably on the sectors that are likely to transform significantly and those that are expected to decline. On the other hand, a number of sectors are likely to grow faster and provide new employment opportunities, particularly under the appropriate enabling environment (e.g. measures supporting upskilling of the workforce).

Increasing the climate target by 2030 would likely imply an accelerated phase out in the extraction and use of fossil fuels, including coal. It would also speed up the transformation of energy-intensive industries. This would have repercussions on a specific segment of the labour force, concentrated in some parts of the EU but could have spill-over effects on the entire economy, including the labour market and living conditions.

The transformation will significantly impact the education and vocational training systems as the skills requirements of the green economy are likely to differ from the current skills requirements and as a fair degree of re-skilling and up-skilling of the labour force could be needed. Furthermore, it could require significant other social investments, including support to labour market transitions and labour reallocation.

Higher levels of investment in the energy system and incentives to decarbonise the economy, including through carbon pricing, taxation and energy efficiency measures, can have distributional impacts on energy system costs and energy prices that require attention, in particular with respect to energy affordability and connectivity for middle-class and vulnerable households and for people living in peripheral areas.

Accelerating the transition towards climate neutrality would enhance the co-benefits of mitigation efforts. Air pollution due to transport, power generation and heating in cities and in regions where fossil fuels currently represent a large share of the energy mix would be lowered, which would deliver significant benefits in terms of health and avoided related costs. Lower congestion in cities, improved buildings and greener cities would also have positive impacts on well-being.

Addressing climate change would also address the concerns of EU citizens, notably in younger generations, that action on climate change is urgent and is of importance for the future well-being.

Likely environmental impacts

The key environmental objective of this initiative is to address the issue of climate change and enhance the EU's global leadership role in the fight against climate change. Co-benefits, synergies and potential trade-offs with air pollution, waste management, resource efficiency / circular economy and biodiversity also exist and deserve attention.

The in-depth analysis supporting the Commission's vision for a climate neutral economy indicated that significant transformations in zoning of land use will be required. Careful consideration as to how this would impact land use and thus environmental objectives related to ecosystems restoration and biodiversity, impacting also the natural sink in the EU, is therefore of high importance.

Likely impacts on fundamental rights

The initiative is in line with Article 37 of the Charter of Fundamental Rights, which requires that a high level of environmental protection and the improvement of the quality of the environment must be integrated into the policies of the Union and ensured in accordance with the principle of sustainable development. No relevant impacts on other fundamental rights are expected.

Likely impacts on simplification and/or administrative burden

This will be addressed when proposing specific legislative proposals in a next stage.

D. Evidence Base, Data collection and Better Regulation Instruments

Impact assessment

The impact assessment will build on the existing 2030 climate and energy legislative framework, the Energy Union and Mobility Packages as well as be informed by the outcome of the assessment of the final National Energy and Climate Plans. It will consider the impacts of increasing the GHG reduction target to 50% or 55% by 2030 compared to 1990 with the aim of creating a smoother pathway for achieving climate neutrality by 2050. It will assess the impact on the energy system and the economy at large, looking at actions required in all main emitting sectors. It will assess economic, social and environmental impacts.

It will assess how climate, energy, transport and other sector-specific policies could interact to achieve an increased GHG reduction target. This will inform on a coherent set of changes required to the existing 2030

<p>climate, energy and transport framework, notably related to the ETS Directive, the Effort Sharing Regulation and the Land Use, Land Use Change and Forestry Regulation, the Renewable Energy Directive as well as the Energy Efficiency Directive or the forthcoming Sustainable and Smart Mobility Strategy. Any legislative proposals in 2021 will be supported by further detailed Impact Assessments.</p> <p>This impact assessment will also assess how issues related to competitiveness, just transition and energy poverty can be addressed.</p> <p>This impact assessment will thus provide a blueprint for an efficient, coherent, sustainable and responsible framework to deliver increased climate ambition by 2030. This, together with the Climate Law proposal will enable wide political reflection in the European Parliament and Council and set up the ground for work on key legislative proposals by the first half of 2021 and beyond.</p>
<p>Evidence base and data collection</p>
<p>The Commission will make use of an extensive toolkit of economic models that will operate in a coherent manner. This may include global energy and macro-economic models such as POLES, GEM-E3, E3ME and QUEST allowing to frame EU action into a global context, especially the neighbouring regions, assess the risk of carbon leakage and/or look into the overall socio-economic impacts of the transition.</p> <p>For the detailed EU-level modelling the Commission will use a toolbox of sectoral models that allow to look at impacts across the energy system and the whole of the economy. This consists of the PRIMES and PRIMES TREMOVE models for the energy and transport sectors, the combination of the CAPRI, G4M and GLOBIOM models for the land use, land use change and forestry sectors and the GAINS model for non-CO2 emissions and air pollution.</p> <p>Additional modelling tools may be used where deemed suited and as available to different Commission services.</p> <p>The EU Reference Scenario for Energy, Transport and GHG Emissions Trends¹⁶ is being updated. Due to the extensive process of updating and expert and Member State consultation, the full update will likely only be available in late 2020. Nevertheless, the modelling toolkit used for this initiative will already benefit from a full update of the historic GHG and energy statistics, growth projections, technology cost assumptions and EU policy updates. As such, the modelling toolkit should be up to date to produce a detailed assessment at the EU level.</p> <p>Assisted by support contracts, the Commission will also look in a more qualitative manner into the consequences of extending the scope of emissions trading (e.g. to road transport, maritime transport and buildings), what this would mean for the administrative burden, how evasion and fraud can be avoided and what impact this can have on citizens or mobility patterns. Similarly, the Commission will look into how increased ambition in the EU ETS may impact the risk of carbon leakage in the industrial sectors, looking at historical empirical evidence and what the techno-economic potential is to achieve further GHG reductions in industrial sectors. The Commission will separately review options to put in place a carbon border adjustment measure that is in line with WTO rules.</p> <p>This, together with extensive stakeholder input (see next point) will further consolidate the evidence base for this impact assessment.</p>
<p>Consultation of citizens and stakeholders</p>
<p>A web-based public consultation will be organised in early 2020, open for 12 weeks. It will contain multiple choice questions covering the wide range of issues associated with the initiative to increase GHG reduction ambition by 2030, it will also allow for open questions and invite stakeholders to send their own contributions. Social partners and social dialogue committees will be consulted in accordance with existing dedicated channels of consultation, including via high-level dialogues.</p>
<p>Will an Implementation plan be established?</p>
<p>The Communication will indicate what the Commission considers as necessary legislative initiatives in relation to increasing the GHG emissions reduction targets by 2030.</p>

¹⁶ https://ec.europa.eu/energy/sites/ener/files/documents/ref2016_report_final-web.pdf