

ROADMAP

Roadmaps aim to inform citizens and stakeholders about the Commission's work in order to allow them to provide feedback 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.

TITLE OF THE INITIATIVE	An EU Smart Sector Integration Strategy
LEAD DG – RESPONSIBLE UNIT	DG ENER-C1
LIKELY TYPE OF INITIATIVE	Communication to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions
INDICATIVE PLANNING	Q2 2020
ADDITIONAL INFORMATION	-

This Roadmap is provided for information purposes only and its content might change. 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 Roadmap, including its timing, are subject to change.

A. Context, Problem definition and Subsidiarity Check

Context [max 10 lines]

The Commission presented in November 2018 its [Long Term Strategy](#) for the decarbonisation of Europe, which presents several possible pathways to achieve a deep decarbonisation of our economy. Building on this, the Commission announced as part of the [European Green Deal](#) its intention to make Europe the first climate-neutral continent by 2050.

In this context, the Commission's [2020 Work Programme](#) announces the adoption of a Strategy for smart sector integration by June 2020. This initiative is essentially about creating a smarter, more integrated and more optimised energy system, in which all sectors can **fully contribute to decarbonisation**, including those where progress has been slow to date (transport, certain parts of industry, buildings).

Achieving a **well-integrated energy system** by better **linking the different sectors**, electricity, gas, buildings transport and industry will be necessary to deliver in a timely and cost-effective manner on the ambitions of the Green Deal. It will also provide increased opportunities for investment and growth for EU industries and jobs for citizens. The initiative should allow new low-carbon energy carriers, such as **hydrogen**, to emerge and facilitate the progressive **decarbonisation of the economy, including the decarbonisation of the gas sector**.

Problem the initiative aims to tackle [max 25 lines]

Increased climate ambition in the EU implies a great transformation of the energy system since energy production and use account for more than 75% of the EU's greenhouse gas emissions. To date, Europe has made significant progress in decarbonising its electricity production. But progress has been slower in other sectors (gas, liquid fuels, heat), and fossil fuels remain predominantly used in transport, industry and in buildings.

To meet our 2030 and 2050 climate objectives, while also guaranteeing secure and affordable energy for consumers, there is a need to accelerate the pace of our energy transition and to ensure that all sectors fully contribute to decarbonisation. This can be done by creating new "links" in our energy system, exploiting thus possible synergies between sectors. At the same time, it should contribute to providing new investments to relaunch economic growth and jobs, while strengthening EU industrial leadership.

First, there are opportunities to **increase the use of** (renewable and low-carbon) **electricity** via electrification of sectors that currently still rely on fossil fuels. Examples are the use of electric vehicles in transport, or of heat pumps for heating buildings.

Second, fossil-based gases and fuels need to be progressively replaced by **renewable and decarbonised gases** and fuels, especially in hard-to-decarbonise sectors such as air transport or certain industrial processes. **Hydrogen** produced from renewable electricity will play a key role in this context, together with the replacement of natural gas by **biomethane** produced from agricultural wastes, achieving thus a **progressive decarbonisation of the economy, including of the gas sector**. Current market rules do not allow this and

would need to be adapted.

Third, our energy sector should become more “circular” and as **energy efficient** as possible in line with the energy efficiency first principle. This is not only about reducing our consumption, but also about the overall efficiency of our energy system. An example is the use of industrial waste heat or waste heat from data centres to heat buildings, for instance through a district heating network.

Several **barriers** still prevent this potential from fully materialising and allowing citizens and industry to embrace cleaner energy alternatives. This initiative for better energy system integration aims at identifying and addressing these barriers. The objective of this initiative is to strengthen the necessary links across different sectors in our energy system, to create an enabling framework where the different energy carriers can compete on a level playing field and to use every opportunity to reduce emissions. This integration of our energy system is necessary if we want to achieve a deep but also cost-effective decarbonisation of our economies. It will build a more decentralised and digital energy system, in which consumers are empowered to make their energy choices.

Basis for EU intervention (legal basis and subsidiarity check) [max 10 lines]

The legal basis for this initiative is Article 194(2) of the Treaty on the Functioning of the European Union.

It is an initiative in an area of energy, which is a shared competence between the EU and Member States. When identifying in which areas and what kind of EU action could bring added value for accelerating the clean energy transition and decarbonisation through smarter and better integration of different sectors, this Strategy will properly take into account the principle of subsidiarity. In general, EU action is efficient and effective in addressing the transition of the energy system in a coordinated way, ensuring transversal reduction of greenhouse gas emissions and harnessing the benefits of the internal energy market.

B. What does the initiative aim to achieve and how [max 25 lines]

The initiative is about creating better links in our energy system across different sectors like gas, electricity, transport, buildings and industry through (i) electrification, (ii) greater use of renewable and decarbonised gases and fuels, and (iii) a more circular energy system, in order to accelerate the decarbonisation of harder-to-abate sectors, such as transport, buildings, parts of industry, or agriculture. The initiative is fully consistent with and complements other relevant Green Deal initiatives.

The strategy aims to:

- explain the benefits and synergies enabled by better integration of the different sectors in the context of the Green Deal and a climate-neutral Europe by 2050;
- identify the main barriers that currently prevent exploiting these benefits and synergies and that would justify additional action at European level;
- identify a set of actions to be followed up by the Commission in order to address those barriers and foster sector integration, taking into account the subsidiarity principle.

Such actions could include non-legislative measures, as well as possible legislative measures to be further assessed in the context of future legislative reviews.

Actions could be grouped in five broad areas:

1. building a more circular energy system, making use of various waste resources for energy purposes, and fully implementing the “energy-efficiency-first” principle
2. accelerating the transition to a largely renewables-based power system and a deep electrification of end-use sectors
3. promoting renewable and decarbonised gases, notably hydrogen, and low-carbon liquids in hard-to-decarbonise sectors
4. upgrading market rules, including in gas markets, to enable the integration of all decarbonised energy sources
5. supporting a more integrated and digitalised energy infrastructure and its efficient use.

C. Better regulation

Consultation of citizens and stakeholders [max 10 lines]

This Roadmap will be published and be open for comments for 4 weeks (until 7 June) encouraging stakeholders to contribute.

In addition, stakeholders and the public at large will be able to gather more information at a specifically dedicated website and invited to contribute. The website will provide more background information on the planned Strategy, the problem definition and the proposed solutions. The website will also include an informal public consultation space, where through a number of questions the Commission will invite the interested stakeholders and the public to express their opinions on the proposed strategy in writing. To receive such input from stakeholders and citizens, as well as any comments of a general nature, the Commission has established a functional mailbox (**ENER-SECTOR-INTEGRATION@ec.europa.eu**).

The Commission will also seek targeted feedback in the context of the established regulatory fora, e.g. the Infrastructure Forum in Copenhagen (28-29 May) subject to the possibility to hold such events under the current

circumstances.

Evidence base and data collection [max 10 lines]

This Communication will draw from a comprehensive literature review. It will also benefit from technical input received from experts during a series of fact-finding workshops organised from 16 March to 7 April. It will also take account the input received from all stakeholders through *inter alia* the aforementioned functional mailbox.

While the strategy will identify policy areas where action will be taken by the Commission, the specific follow-up actions will follow their own approval process, in line with better regulation requirements, including the requirement to conduct an impact assessment and an in-depth public consultation when applicable.