Strategic Energy Technology (SET) Plan Governance

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Executive Summary

The Strategic Energy Technology Plan (SET Plan) is a platform designed to accelerate the development, manufacturing and market uptake of clean, resilient and competitive energy technologies in Europe. Steered by the Member States and the European Commission, the platform brings together governments, industry and academia to align public and private research and innovation priorities on strategic energy technologies in Europe. It is the Energy Union's primary instrument for driving research, innovation, and competitiveness in the clean energy sector.

Objective. **The SET Plan aims to strengthen clean energy R&I efforts by aligning European and national strategic research and innovation agendas.** It supports the development and implementation of Common Implementation and Investment Plans (CIIPs) in clean technological areas that contribute to boosting European competitiveness, decarbonisation, and resilience of manufacturing and supply chains in Europe. Through its recent revision in 2023, the SET Plan was aligned with the most recent EU's policy objectives.

Common Implementation and Investment Plans (CIIPs) consist of three parts:

1. **Thematic Vision:** sets out the European vision in a specific energy domain
2. **Strategic Research and Innovation Agendas (SRIAs)**: sets out the research and innovation (R&I) priority actions and objectives, and makes recommendations, when relevant, on the scale-up of domestic manufacturing and market uptake of the technology
3. **Implementation and Investment Commitments (IICs):** maps resources, and identifies stakeholders' implementation and investment commitments

Governance. **The work of the SET Plan is coordinated by the Steering Group (SG), the governing body legally established as an expert group under the Net-Zero Industry Act**. The SG guides the work of the SET Plan and mandates Implementation Working Groups (IWGs) to develop the CIIPs and monitor their implementation, in close cooperation with the relevant European Technology and Innovation Platforms (ETIPs) and the European Energy Research Alliance (EERA).

- **SG:** The highest decision-making body, responsible for mandating IWGs and integrating their Thematic Visions into a SET Plan Common Strategic Vision (CSV). Consists of high-level representatives and sherpas from Member States and EEA countries as observers. Chaired by the European Commission and supported by its Bureau.
- **IWGs:** Responsible for developing Thematic Visions for their sectors, leading on identifying and collecting implementation and investment commitments, and engaging with stakeholders (e.g., ETIPs and EERA). In charge of developing, monitoring and implementing CIIPs in close cooperation with ETIPs and the EERA. Consist of representatives from Member States, EEA countries, and the European Commission.
- **ETIPs**: Responsible for developing and updating SRIAs in cooperation with other SET Plan stakeholders. Consist mainly of representatives from industry and research organisations.
- **EERA**: Contributes to the development of SET Plan deliverables. Consists of representatives from European Energy Research Centres and researchers.
- **Task Forces**: Temporary bodies, responsible for providing recommendations on better addressing cross-cutting challenges within the SET Plan framework such as skills, R&I for societal needs, digitalisation, circularity and materials, or access to market. Can consist of independent experts as well as members of the SET Plan community.

Tools. **While the revised SET Plan's primary deliverables are the CIIPs, it also has a variety of other tools to help achieve its objectives.** The Annual Conference, the Annual SET Plan Progress Report, and the Annual Report on the Competitiveness of Clean Energy Technologies are key tools for taking stock and reporting on the achievements and developments of the SET Plan. The SET Plan Information System (SETIS), an open-access platform, acts as a repository for data and updates, aiding in information dissemination and decision-making. Lastly, the SET Plan is supported by a number of Secretariats to help implement its objectives.

1. Context

Launched in 2007, the Strategic Energy Technology Plan (SET Plan) was a first step towards a coordinated energy technology policy for Europe. It plays a key role in driving research and innovation (R&I) in the European clean energy sector by facilitating the development, manufacturing and market uptake of clean, resilient, and competitive energy technologies in Europe. Since 2015, it has played a central role in implementing the Research, Innovation and Competitiveness dimension of the Energy Union, informing, and increasingly guiding, national energy research strategies as outlined in the National Energy and Climate Plans (NECPs). The platform brings together the European Commission, EU Member States, EEA countries, industry, and research organisations to reduce fragmentation[1] and foster effective decision-making through collaboration and transparency.

The Regulation on establishing a framework of measures to strengthen Europe's net-zero technology products manufacturing ecosystem, known as the Net-Zero Industry Act (NZIA), establishes the SET Plan Steering Group as a high-level expert group and provides it with a legal basis. This governance document complements the Rules of Procedure (RoP) of the SET Plan Steering Group (SG) by detailing the procedural operations of the SG and provides an essential reference framework for all involved stakeholders, ensuring that the SET Plan is well-defined, goal-oriented, and adaptable to the evolving energy landscape. An essential aspect is the alignment of language and terminology and clear identification of roles across all actors involved, enabling a common understanding of the SET Plan's goals, objectives, and strategies, thus fostering clear communication and understanding of responsibilities.

In line with the 2023 Communication on the revision of the SET Plan, the Commission will regularly report on the SET Plan's achievements to the relevant Committees of the European Parliament and Council working parties and liaise with other relevant expert groups like the European Research Area (ERA) Forum to work towards strengthening Europe's industry. Since 2024, following the incorporation of the SET Plan into the Net-Zero Industry Act[2], the Steering Group is expected to coordinate with the Net-Zero Europe Platform[3], which will include representatives of the Commission and Member States, to discuss the most recent developments that affect technology development and deployment, establish synergies between the implementation of this Regulation and the SET Plan, and issue recommendations thereon.

2. Aim and priorities of the SET Plan

This section describes the overall objective and priorities of the SET Plan.

2.1. Aim

The aim of the SET Plan is to support the development, manufacturing and market uptake of clean, efficient and cost-competitive energy technologies through better alignment and coordination of national and European strategic research and innovations agendas, bringing together European industry, academia and governments of the SET Plan countries. Through Common Implementation and Investment Plans (CIIPs), it fosters a unified vision, objectives and collaboration among industrial- and research stakeholders, SET Plan countries and the European Commission. The SET Plan acts as forum for exchange of experience and discussion regarding established energy R&I instruments and activities in Europe. It shall help sharing good practices and initiate cooperation in specific energy technologies within the Union and EEA.

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[1] *"Public sector support for R&I is inefficient due to a lack of focus on disruptive innovation and fragmented financing, limiting the EU's potential to reach scale in high-risk breakthrough technologies"* (Draghi M., 2025. p. 28) The future of European competitiveness, Part A | A competitiveness strategy for Europe, Publications Office of the European Union.

[2] Regulation (EU) 2024/1735 of the European Parliament and of the Council of 13 June 2024 on establishing a framework of measures for strengthening Europe's net-zero technology manufacturing ecosystem.

[3] Net-Zero Europe Platform is a governance body that comprises the Commission and EU countries to monitor progress, discuss developments, and engage with civil society stakeholders. The platform advises on financing for net-zero strategic projects and engages in international net-zero industrial partnerships to with facilitate global clean energy transition.

2.2. Priorities

As laid out in the Communication (2023) 634 on the revision of the Strategic Energy Technology (SET) Plan[4] , the SET Plan focuses on the six priorities of the Research, Innovation and Competitiveness dimension of the Energy Union to be achieved through intensive coordination and cooperation among Member States, stakeholders and the European Commission:

- Become a global leader in renewable energy technologies, doubling the EU's share of renewable energy to at least 42.5% by 2030, with at least 5% of new installed capacity coming from innovative technologies.
- Deliver a smart, consumer-centric energy system by optimising the grid with demand response and energy storage, aiming for at least 65% renewable electricity production by 2030, and ensure its security, stability and cyber-resilience.
- Develop and strengthen energy-efficient systems by doubling the annual building renovation rate by 2030 and making all buildings zero-emission by 2050, while reducing industry's greenhouse gas emissions by 25% by 2030 and increasing renewable energy use in the industrial sector.
- Diversify and strengthen energy options for sustainable transport, by developing sustainable and renewable fuels and sustainable batteries as well as by developing 100% renewable, efficient, and interconnected energy and transport systems to meet EU Climate Law, ReFuelEU Aviation and FuelEU Maritime targets.
- Drive ambition in carbon capture, utilisation and storage by aligning with new energy and climate policies, including the Net-Zero Industry Act, to support the rapid deployment of CCS and CCU, and aiming for at least 50 million tonnes of annual CO2 injection capacity by 2030.
- Maintain and strengthen safety in the use of nuclear energy, in line with the Nuclear Alliance's ambition to provide up to 150 GW of electricity capacity by 2050, with at least 30-45 new-build reactors.

These priorities have been updated regularly, most recently in the 2023 Communication on the Revision of the SET Plan, to ensure alignment with the latest policy context and priorities. In addition, the Net-Zero Industry Act adopted in 2024 ties the SET Plan Steering Group to the Net-Zero Europe Platform, therefore incentivising the SET Plan to cover clean energy technology development from fundamental research up to industrialisation. Accordingly, the SET Plan also aims to contribute to the NZIA objective of manufacturing in the EU at least 40 % of the Union's annual deployment needs to achieve the Union's 2030 climate and energy target. The SET Plan is also linked to the European Research Area as a Structural Policy in its 2025-2027 Policy Agenda. Hence, the SET Plan is the main tool for strengthening clean energy R&I efforts and improving efficiency in developing innovative and competitive energy solutions.

The outputs of the SET Plan activities are expected to be impact-driven and include concrete targets. The specific targets of each technology area should be clearly laid out in the respective CIIP deliverables of the SET Plan listed below, and drafted in cooperation with all SET Plan entities, including the Commission, Member States, EEA countries, industry and research representatives, and observer countries[5] where relevant. The targets should cover all stages of development, domestic manufacturing and market uptake of clean energy technologies, including bridging the gap between innovation and markets, and specify the roles of each actor in all relevant fields.

The delivery of the SET Plan increasingly requires an effective common governance framework across the numerous technologies and participant groups under its auspices, to ensure a coherent and efficient implementation of its priorities and announcements. To ensure continuity and a smooth transition to the

[4] Communication (2023) 634 from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on the revision of the Strategic Energy Technology (SET) Plan.
[5] As per NZIA Regulation, "Observer countries" cover EEA-relevant countries.

new operational modalities, laid out here, the framework detailed below will include the necessary flexibility to accommodate specificities arising from different contexts[6].

3. SET Plan entities

This section provides an overview of the SET Plan actors, which ensure a comprehensive representation of its technologies across research, business and policy contexts.

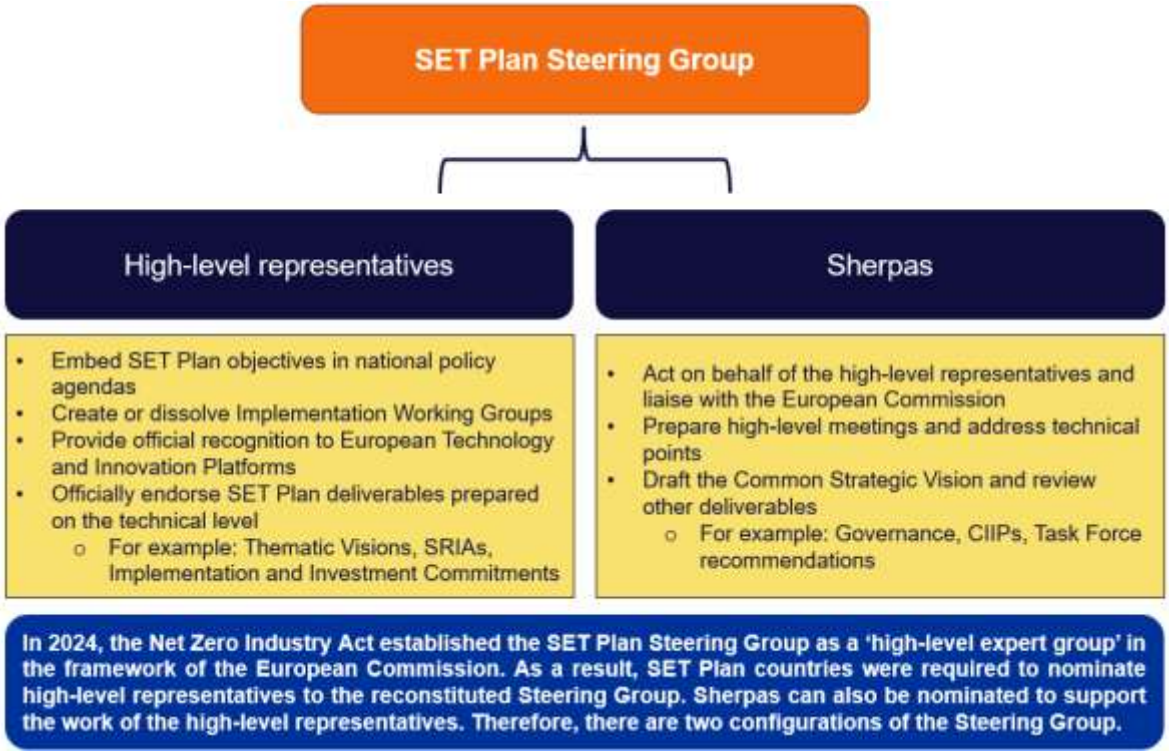
3.1. Steering Group (SG)

Legally established under the Net-Zero Industry Act, the SET Plan Steering Group (SG) is the governing body that steers and oversees the SET Plan's work. It operates within the European Commission's framework for expert groups. It represents the highest level of decision-making in the framework of the SET Plan and is chaired by the European Commission.

The Steering Group provides guidance and direction for the SET Plan, and promotes dialogue and coordination between Member States, and between Member States and the European Commission on clean energy R&I. The group seeks to facilitate the alignment of EU and Member State research and innovation initiatives, support policy learning, and ensure effective implementation of SET Plan priorities.

The Group consists of high-level representatives (Director-Generals and/or Deputy Director-Generals) and Sherpas of Research and/or Energy Ministries and/or national authorities, from European Member States as well as delegates from EEA Countries invited as observers. Accordingly, the Steering Group can convene in two different configurations: high-level or Sherpas, as explained in the Figure 1.

Figure 1. The two configurations of the SET Plan Steering Group.



[6] The SET Plan ecosystem has significantly evolved since its creation in 2007. With time, it progressively covered initiatives born outside of the SET Plan realm. This led to an increasingly diverging internal structure, which affects the intelligibility of the SET Plan's work, and therefore its impact. In the context of overall simplification, the SET Plan shall progressively standardise procedures and processes to improve efficiency, clarity, and onboarding of members.

The Steering Group bureau will act as a sounding board to the EC and the SET Plan Secretariat, for example in preparation of the Steering Group meetings and work with the EC regarding both, strategy and organisational matters of the SET Plan. The participation to the Steering Group's bureau remains voluntary from SET Plan countries. However, the Commission strongly recommends that the bureau includes Member States holding current and future presidency trio of the Council of the EU as defined in Council Decision (EU) 2016/1316[7]. This will ensure strong alignment with the EU policy cycle.

The SG tasks Implementation Working Groups to draft specific deliverables and is responsible for adopting a Common Strategic Vision for the SET Plan based on the different Thematic Visions as detailed in Section 4.2.

Based on the findings of the annual SET Plan progress report, the SG is also responsible for monitoring progress, endorsing or making recommendations for adjustments to Implementation Working Group (IWG) documents (e.g., thematic visions, CIIPs). Voting procedures of the Steering Group are laid out in the Rules of Procedure of the SET Plan Expert Group.

According to the NZIA regulation, representatives of the SET Plan Steering Group shall meet at least once every year with the Net Zero Europe Platform in order to discuss the most recent developments and synergies between the implementation of the NZIA Regulation and the Strategic Energy Technology Plan, as well as to issue recommendations thereon. The Steering Group is invited, with the support of the European Commission, to foster synergies between programmes (Horizon Europe including EIC, Innovation Fund, InvestEU, LIFE, etc.).

3.2. Implementation Working Groups (IWGs)

Implementation Working Groups (IWGs) are collaborative entities within the SET Plan, tasked by the Steering Group to facilitate the coordination and alignment of national research and innovation agendas and funding programmes in specific clean energy technology areas. They are constituted by representatives[8] nominated by SET Plan countries (EU+EEA) interested in participating, and the European Commission. The nominated representatives from the SET Plan countries are expected to have a broad understanding of relevant national policies and to have the necessary expertise and authority to contribute to implementation processes. Country representatives shall be officially appointed by national/regional authorities, and they shall represent national/regional interest. They are supported by a technical secretariat[9] (see 5.2), which also support activities carried out by ETIPs.

In specific cases, when necessary and upon invitation by IWG chairs, third countries, as well as stakeholders, including those from industry and research organisations, can be involved in IWGs as observers, that is, without a voting right. Implementation Working Groups regularly report back to the Steering Group of the SET Plan through their annual report and routine updates during Steering Group meetings.

IWGs are mandated by the Steering Group to define research and innovation (R&I) targets in their Thematic Visions and develop Common Implementation and Investment Plans (CIIPs) for their technological domains. They also monitor the implementation of the CIIPs, and report back to the Steering Group on its advancement. IWGs work in close cooperation with ETIPs and the European Energy Research Alliance (EERA) in setting priorities and targets for the Strategic Research and Innovation Agendas (SRIAs). IWGs are also engaged in SET Plan Task Forces (see below).

Existing IWGs will require a formal reconfirmation once the present governance document enters into force. If required, a transition phase can be introduced for existing IWGs to adapt to these new guidelines.

[7] Council Decision (EU) 2016/1316 laying down measures for the implementation of the European Council Decision on the exercise of the Presidency of the Council, and on the chairmanship of preparatory bodies of the Council.
[8] Officials with mandate and technical knowledge representing administration/agency in the field of the IWG.
[9] The support of the secretariat is defined by the Research & Innovation Framework Programme.

3.3. European Technology and Innovation Platforms (ETIPs)

European Technology and Innovation Platforms (ETIPs) are open stakeholder groups primarily led by industry and research organisations. They operate through regular meetings and foster collaboration among industry, research organisations, and policymakers. To be recognised as a SET Plan entity, they must be endorsed by the European Commission and the SET Plan Steering Group. ETIPs serve as active entities within the SET Plan and aim to provide strategic advice on energy research and innovation priorities, forming part of the European energy R&I ecosystem.

ETIPs focus on identifying innovation barriers, R&I priorities, supporting industry and research collaborations, and aligning efforts among national and European industrial and technological initiatives to support policy and business decisions. Coordinated by a governing body, ETIPs manage activities and ensure communication and dissemination of their work. Their meetings are chaired by representatives of industry and research organisations, while the European Commission acts as an observer in their operations. They can also invite the chairs of relevant Implementation Working Groups (IWGs) to their meetings as observers.

Under the guidance of the IWGs, and in accordance with the Steering Group's priorities, ETIPs develop their Strategic Research and Innovation Agendas (SRIAs) based on IWGs' Thematic Visions. The ETIPs can benefit from the support of joint technical secretariats (see 5.2).

ETIPs are invited to participate in an ETIPs Forum to discuss activities, plan joint efforts, and find possible synergies between technology areas. In this context, the ETIP Forum can serve as an advisory body of the SET Plan[10]. Conclusions of ETIP Forum meetings should be shared with the SET Plan SG. ETIPs are also engaged in SET Plan Task Forces (see below).

3.4. European Energy Research Alliance (EERA)

The European Energy Research Alliance is a membership-based, non-profit association representing the largest community of clean energy researchers in Europe, coordinating collaborative research across the continent through pan-European Joint Programs. EERA brings together over 250 organisations from 31 countries.

It aims to optimise and expand pan-European energy research capabilities, deliver top-tier research in clean energy technologies, and contribute to strategic policymaking and the clean energy transition. It delivers additional feedback from the perspective of research centres and academics in the field of energy.

The EERA manages its own Joint Programmes that provide scientific expertise across energy technologies. It collaborates with ETIPs and IWGs on Strategic Research and Innovation Agendas (SRIAs) and Common Implementation and Investment Plans (CIIPs). It is also engaged in SET Plan Task Forces (see below).

3.5. SET Plan Task Forces

In certain cases, as laid out in the Rules of Procedure, the Steering Group can decide on the creation of temporary, ad hoc task forces to address specific cross-cutting issues. The 2023 Communication on the Revision of the SET Plan launched the creation of five task forces to support the work of Implementation Working Groups (IWGs) and European Technology and Innovation Platforms (ETIPs) on key topics: Circularity and materials substitution, R&I for societal needs, Digitalisation, Skills, and Access to the market.

The task forces aim to address crosscutting challenges within the SET Plan, delivering specific recommendations and actionable steps, and setting KPIs, for better integration of these themes into the work of all IWGs and ETIPs.

[10] In some rare cases, IWGs might not have corresponding ETIPs. In these specific situations, the IWG can involve other stakeholder organisations involved in the SET Plan (i.e., partnerships, industrial association, dedicated technical sub-group of the IWG) to act as an ETIP, until a formal ETIP is set up and endorsed by the Steering Group or another structure is formally tasked to act as such by the Steering Group.

Each task force has a tailored work plan and will include input from external independent experts, as well as members from IWGs, ETIPs, and EERA, as well as co-funded partnerships (e.g., CETPartnership and DUT Partnership). These task forces are temporary, with a mandate of three years, and are overseen by the European Commission and the Steering Group. They will conduct dialogues within the SET Plan community to discuss pertinent issues, analyse relevant data and studies, and report their progress against predefined milestones to the Steering Group.

4. Deliverables

The main deliverables of the SET Plan are: (1) the Common Implementation and Investment Plans (CIIPs), the (2) Common Strategic Vision, (3) the annual SET Plan progress report, and (4) the annual SET Plan Conference. As the SET Plan aims to deliver impact throughout the entire innovation cycle, it will generate a number of activities, ranging from vision-setting to fostering commitments from SET Plan countries and stakeholders. Its impacts are expected to reach beyond the SET Plan framework, for instance, by offering relevant information for national authorities and private actors that could guide their policymaking and investment decisions.

In an evolving policy context (which currently includes the Net-Zero Industry Act, the Competitiveness Compass, the Clean Industrial Deal, and the Affordable Energy Action Plan), the SET Plan should anchor its work and deliverables in the needs and expectations of the EU, Member States, industry and research organisations.

In practice, as a key policy deliverable, the SET Plan's actors will co-create a comprehensive policy document under the supervision of the respective IWG, tailored for each technology covered by the platform, named "Common Implementation & Investment Plan" (CIIP). This CIIP document is divided into the following three sections: Thematic Vision, Strategic Research and Innovation Agenda (SRIA) and Implementation and Investment Commitments (IIC). More details about each of these deliverables and procedures are available below and in the annexes.

4.1. Common Implementation and Investment Plans (CIIPs)

CIIPs constitute the outcome of extensive policy collaboration between the European Commission, SET Plan countries, industry, and research organisations to identify and support priority clean energy technologies. They constitute a guidance for respective R&I programmes and investment decisions, by setting out common visions and strategic R&I agendas and identifying who intends to act upon them. The work done for the CIIPs can therefore form a basis for updating NECPs, which will remain the only obligatory instrument providing a high-level overview of national policies. In comparison, CIIPs shall cover technology specific areas centred around the respective SRIAs.

Common Implementation and Investment Plans (CIIPs) are comprehensive action plans, developed by each Implementation Working Group (IWG), which set out (1) the Vision, targets and milestones for a specific technological or thematic area; (2) the Strategic Research and Innovation Agenda (SRIA), detailing the actions and funding needed for achieving this vision; and (3) the Commitments from governments, industry and stakeholders across Europe to enhance implementation and investment. Implementation and Investment Commitments can range from a mere commitment to take CIIPs into account when drafting national policies to actual public funding and private investment.

CIIPs shall substitute existing Implementation Plans and SRIAs by integrating them into a single document covering the vision, strategy and implementation. They should be updated at least every 5 years or whenever initiated by the IWG and if confirmed by the Steering Group. The templates for the Thematic Visions, Strategic Research and Innovation Agendas, and Implementation and Investment Commitments are available in the Annex.

4.1.1. Thematic Visions

Each Implementation Working Group develops a Thematic Vision on how the strategic technology in its remit is expected to contribute to the overall transition towards a European climate-neutral energy system in a competitive way[11]. The aim of a thematic vision is to take stock of current progress of a specific technology towards the Energy Union priorities and to establish ambitious and achievable short-term (up to 2030), medium-term (up to 2040), and long-term (up to 2050) projections on the development and production of this technology in Europe and its contribution to the Union's objectives.

Thematic Visions should contain targets and milestones in line with the Net Zero Industry Act, EU climate policies and relevant reference scenarios. They should explore the potential of future cross-cutting initiatives, such as national and/or cross-border common investments, or any other relevant indicator demonstrating intergovernmental clean energy R&I support. It will guide the development or update of the respective Strategic Research and Innovation Agendas (SRIA) and support the Implementation and Investment Commitments (IICs) detailed below. The Thematic Vision acts as the first section to a Common Implementation and Investment Plan (CIIP).

The Steering Group mandates each Implementation Working Group to develop the Thematic Vision for its respective technology area. It should be drafted by the Implementation Working Group members, in consultation with the European Commission and SET Plan stakeholders (ETIP, EERA).

Once adopted by the IWG, Thematic Visions are submitted to the Steering Group for endorsement.

4.1.2. Strategic Research and Innovation Agendas (SRIA)

A Strategic R&I Agenda (SRIA) is a document that responds to the Thematic Vision of an IWG by detailing the specific R&I priorities to be pursued in the technology sector or thematic area under its remit to meet its targets and milestones, including, when relevant, the scale-up of domestic manufacturing and market uptake of the technology. It acts as the second section of the Common Implementation and Investment Plan (CIIP). It will lay the foundations required for the development of the *Implementation and Investment Commitments (IICs)* detailed below.

Under the guidance of the Implementation Working Groups (IWGs), SRIAs are drafted by stakeholder organisations, mainly the European Technology and Innovation Platforms (ETIPs), with relevant involvement from the European Energy Research Alliance (EERA) and other stakeholder organisations. The IWG will ensure that the SRIA aligns fully with the Thematic Vision and thus adheres to the structure and content agreed by SET Plan countries. Once adopted by the IWG, the SRIA will be submitted to the Steering Group for endorsement.

4.1.3. Implementation and Investment Commitments (IICs)

Implementation and Investment Commitments (IICs) are the last section of the CIIP. Its aim is to map how the different countries and stakeholders intend to contribute to the implementation of the previously drafted Strategic R&I Agenda (SRIA) and set out the main corresponding activities. It should capture the level of commitment from public and private organisations, and list actions and resource allocations relevant to achieve the identified objectives. In addition, IICs should explore mechanisms for tracking progress and identifying implementation gaps.

In this section, each SET Plan country has the opportunity to indicate how it aims to contribute (if at all) to the implementation of a particular SRIA. SET Plan countries are not expected to contribute to all thematic areas, only for technologies where they are actively engaged in the respective IWG. In summary, the IIC should give a clear sense of the means and resources that European public and private actors have at their

[11] Existing Implementation Plans drafted under the previous SET Plan framework remain the reference document as long as the new CIIP has not been fully endorsed. The previous documents can be used as background resources to draft each section of the CIIP.

disposal for addressing the SRIA, and how far they are willing to consider the SRIA as a reference document to guide their actions and resource allocations.

It should be drafted by the Implementation Working Group (IWG), in consultation with representatives from industry and research organisations like ETIPs and EERA. Once finalised, the IWG reviews the commitments and tasks their Joint Secretariat to integrate the Thematic Vision, the SRIA and the IC into the Common Implementation and Investment Plan (CIIP). The CIIP is then presented to the Steering Group for review and endorsement.

4.2. A SET Plan Common Strategic Vision (CSV)

All approved Thematic Visions are integrated into a Common Strategic Vision (CSV) by the Steering Group with the support of the Secretariat. The CSV should ensure consistency and complementarity between the various thematic visions and offer a holistic perspective for the development, manufacturing and deployment of clean tech in Europe. This overarching document will act as the broader guidance for the work of the SET Plan Community and may also be published as an official document of the European Commission[12]. The Common Strategic Vision should present the *Vision* of the SET Plan Steering Group of the transition towards a European competitive and climate-neutral energy system, and how the different strategic technologies and systems should contribute to this. It should integrate the targets and milestones from all the Thematic Visions.

4.3. Annual SET Plan Progress Report

The annual SET Plan Progress Report is a key tool for monitoring and reporting on the achievements and developments of the SET Plan within the European research and innovation landscape.

Its aim is to provide a comprehensive overview of the SET Plan's advancements, R&I investments in the various technology areas, and the progress status of each CIIP, in the frame of the evolving policy context. The publication supports the annual reporting on the competitiveness of clean energy technologies, under the Energy Union.

The report is published annually at the SET Plan conference, co-organised by the European Commission and the EU Council Presidency. The JRC leads the report's preparation, collaborating with DGs ENER, DG RTD, the SET Plan working groups, ETIPs, the ETIPs Forum, and the EERA. The report will be shared with the Council and the Parliament as foreseen in the 2023 Communication for a revised SET Plan.

4.4. Annual SET Plan Conference

The SET Plan Conference is the annual event gathering the energy research and innovation community to discuss the progress and future directions of the Strategic Energy Technology (SET) Plan. It reviews past activities and explores new trends and orientations.

The conference aims to facilitate cooperation among SET Plan countries and stakeholders to promote clean, efficient, and cost-competitive energy technologies by providing a unique meeting opportunity for all involved parties. It provides a physical platform for sharing experiences, exchanging ideas, and collaborating on clean energy development, manufacturing and market uptake.

The SET Plan Conference is co-organised by the European Commission and the EU Member State holding the Council Presidency. The event typically lasts 1.5-2 days and is often held in the fourth quarter of the year.

[12] Sector 5: Preparatory documents (EUR-Lex)

5. Supporting tools

This section explains the various tools, such as online platforms and structures, which assist SET Plan actors in completing their tasks, enhancing communication with third parties and access to funding.

5.1. SETIS

The SET Plan Information System (SETIS) is the information and dissemination platform of the SET Plan, coordinated by the European Commission. It includes an open-access website that serves as a repository for key documents (such as CIIPs), data, and updates related to the SET Plan's activities and governance. It acts as a comprehensive one-stop-shop for the SET Plan, including Clean Energy Technology Observatory (CETO) reports that constitute a complete collection of techno-economic and socio-economic data on strategic technologies and their integration into the energy system.

5.2. Secretariats

Each technology area under the SET Plan is supported by a joint Technical Secretariat, which facilitates the work of both the Implementation Working Groups (IWGs) and the European Technology and Innovation Platforms (ETIPs).

The Secretariats are tasked with enhancing the effectiveness of IWGs and ETIPs by supporting a range of activities, including:

- Preparation and dissemination of Strategic Research and Innovation Agendas (SRIAs) and Common Implementation and Investment Plans (CIIPs),
- Organisation of events and meetings,
- Coordination with other SET Plan bodies (IWGs and ETIPs),
- Collaboration with relevant partnerships and stakeholders,
- Contribution to the visibility of the SET Plan through targeted outreach strategies and content production.

Secretariats are also responsible for organising the meetings, maintaining document repositories, and supporting the Chairs in monitoring and reporting progress through SETIS. It is important to note that Secretariat members do not hold voting rights or decision-making authority within the IWGs or ETIPs they support. Depending on the structure, provisions and governance decisions of the Research and Innovation Framework Programme[13] and its Annual Work Programmes, the Secretariat can be financially supported by the European Commission.

5.3. Partnerships

The SET Plan is also supported by a wide array of partnerships between EU Institutions, Member States and industrial and research organisations.

5.3.1. CET Partnership

The Clean Energy Transition Partnership (CETPartnership) is a co-funded initiative under Horizon Europe that brings together public and private stakeholders from research and innovation ecosystems to collaborate strategically on clean energy transition efforts. It coordinates research, development and innovation (RDI) programmes across SET Plan countries, involving more than 50 national and regional funding agencies from over 30 countries.

The aim of the CETPartnership is to drive the clean energy transition and contribute to the EU's goal of becoming the first climate-neutral continent by 2050. It focuses on specific challenges identified in its own specific *Strategic Research and Innovation Agenda* (SRIA), built around seven thematic Transition Initiatives (TRIs). The CETPartnership enhances synergies within SET Plan structures and ensures effective and coordinated efforts toward energy goals.

[13] Horizon 2020, Horizon Europe and successors.

The CETPartnership organises annual transnational Joint Calls to pool national and regional research development and innovation budgets, already gathering EUR 275 million and aiming for around EUR 500 million in funding from 2022-2027. The partnership takes on board input from SET Plan Implementation Working Groups and ETIPs and consults various additional stakeholders in preparation of its Joint Calls. It promotes strategic learning and impact through the CETPartnership Knowledge Community and Impact Network, facilitating the deployment and market integration of innovative clean energy solutions.

5.3.2. DUT Partnership

The Driving Urban Transitions (DUT) Partnership is a collaborative, Member States-driven initiative co-funded by the EU, focusing on research and innovation to address urban transition challenges. It aims to create an inclusive innovation ecosystem that involves urban actors in promoting sustainable solutions that support the European Mission for climate-neutral cities, the European Green Deal, and the Urban Agenda for the EU.

The DUT Partnership aims to catalyse transformational change in urban environments, fostering inclusive, resilient, and climate-neutral cities across Europe. It targets systemic urban challenges through its comprehensive Research and Innovation (R&I) programme, structured around three Transition Pathways: Circular Urban Economies (CUE), the 15-minute City (15minC), and Positive Energy Districts (PED). The partnership sets ambitious goals, such as initiating 100 Positive Energy Districts by 2025, and developing a substantial Innovation Portfolio of solutions by 2030.

The DUT Partnership unites over 65 partners from 28 countries, including funding agencies, ministries, and expert organisations, to support urban transitions through collaborative efforts. It operates through annual calls for projects, strategic agenda setting, and emphasises co-creation and stakeholder engagement. DUT also consults relevant SET Plan stakeholders, incorporating their insights when updating its strategic agenda and organising project calls.

5.3.3. Industrial Partnerships

The **Clean Hydrogen Joint Undertaking** is an institutionalised public-private partnership established under Horizon Europe. It aims to scale up the development and deployment of clean hydrogen technologies in Europe. The partnership focuses on supporting research and innovation activities to advance renewable hydrogen production, transmission, distribution, storage, and end-use applications. It collaborates with the European Commission, industry representatives through Hydrogen Europe, and the research community via Hydrogen Europe Research. Together, these stakeholders work to strengthen the competitiveness of the European hydrogen industry, particularly for small and medium-sized enterprises (SMEs), and contribute to the EU's goals for a sustainable and clean energy future.

The European Partnership for an Industrial Battery Value Chain (**Batt4EU**) is a co-programmed partnership dedicated to batteries established under Horizon Europe. It aims to create a competitive and sustainable European industrial value chain for e-mobility and stationary applications. The partnership brings together public and private stakeholders to drive innovation and establish Europe as a global leader in battery technology by 2030.

The European Partnership for People-centric Sustainable Build Environment (**Built4People)** is another co-programmed partnership established under Horizon Europe. It aims to accelerate innovations towards a sustainable, people-centric transformation of Europe's built environment sector. The partnership brings together public and private stakeholders along the whole value chain. The European co-programmed **Partnership for Solar Photovoltaics** (EUPI-PV) was established in the context of the SET Plan under Horizon Europe, to accelerate the development, manufacturing and market uptake of solar photovoltaic technologies in Europe. This partnership implements the PV solar-related aspects of the SET Plan, driving innovation and competitiveness in the European PV solar sector to support the EU's energy and climate goals.

6. Workflow

Section 6 focuses on the interaction and collaboration among SET Plan entities, offering insight into the governance framework that supports the effective implementation of its aim and priorities.

6.1. Development of Thematic Visions

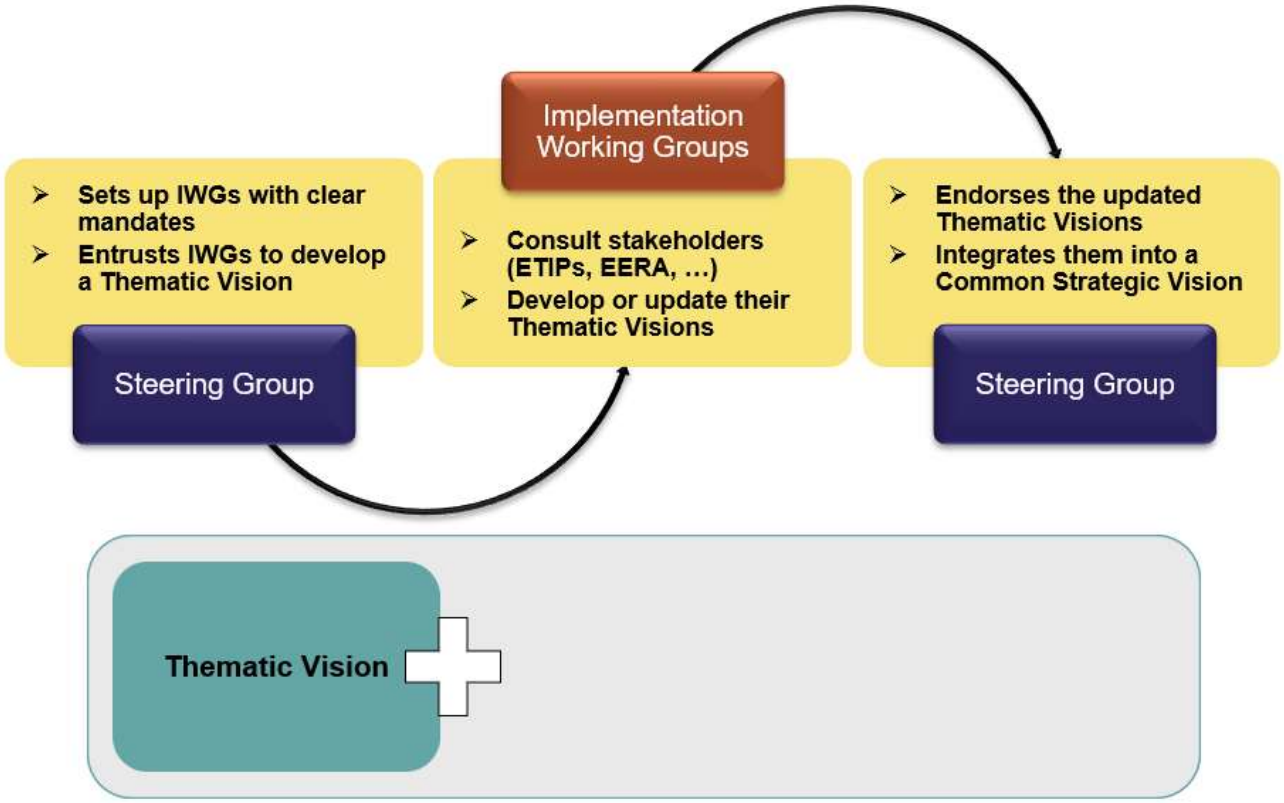
Step 1: In its mandate to each Implementation Working Group (IWG), the SET Plan Steering Group (SG) requests the preparation of a technology-specific R&I vision (Thematic Vision). This vision should outline how the IWG's work will contribute to the EU's energy objectives and targets to achieve the Union's climate, environmental, and competitiveness goals. The vision must be evidence-based, including targets related e.g., to technological performance, costs reductions cross-border initiatives, and/or any other key elements specified in the mandate. Based on the most recent technical findings and innovations, as well as context, it shall explore the future potential of technologies and highlight its strategic relevance for Europe.

The SG will then review these visions to ensure consistency with national and European priorities and identify potential synergies with other programmes and visions.

6.2. Development of a SET Plan Common Strategic Vision

Step 2: Based on the thematic visions, the SG, with the support of the European Commission, develops an overarching Common Strategic Vision that includes the overall context, EU-level policy priorities, and the expected contributions from all domains and technologies. This document serves as overall guidance for the SET Plan Community and its external communication.

Figure 2. Workflow for the Thematic Visions and Common Strategic Vision



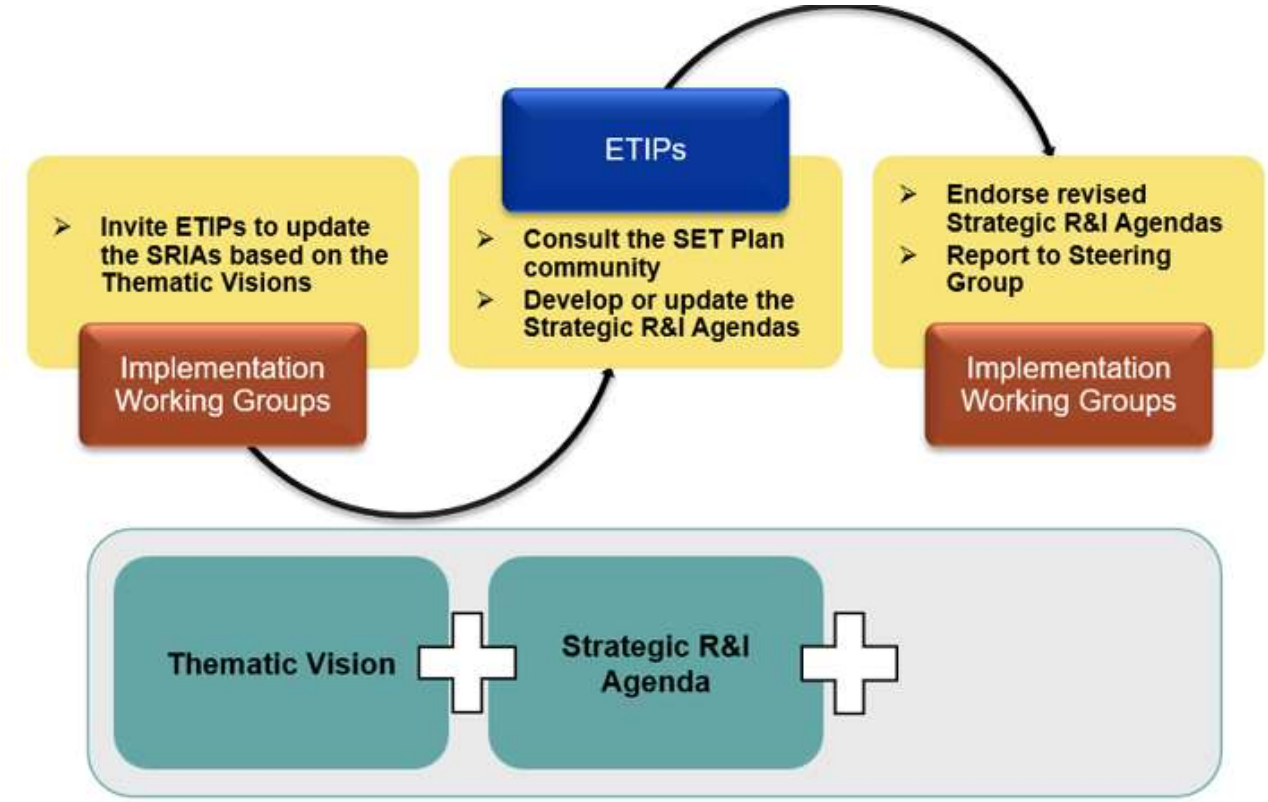
6.3. Development of Strategic Research and Innovation Agendas

Step 3: Once all Thematic Visions are endorsed by the SG, each IWG engages with its stakeholder community to either develop or update a Strategic Research and Innovation Agenda (SRIA). The SRIA serves as a document detailing specific R&I priorities to be pursued in specific technology sectors from both public and private perspectives. It identifies sector-specific priorities relevant to industry, researchers, or public administrations. It lays the foundation necessary for developing the Common Implementation & Investment Plans (CIIPs). This involves each IWG tasking the relevant European Technology and Innovation Platform (ETIP) to review and align its current SRIA with the newly adopted vision.

This task is primarily carried out by the ETIP, with active guidance and feedback from the IWG and support from its technical secretariat. It can also involve the European Energy and Research Alliance (EERA). The IWG ensures the SRIA aligns fully with the Thematic Vision and follows the agreed structure and content before endorsing it and forwarding it to the SET Plan Steering Group. The final SRIA must use a standardised template outlined in the Annex. It is up to each IWG to determine when a SRIA requires revision, engaging in the revision process using the outlined approach.

Step 4: The Implementation Working Group endorses the SRIA and informs the Steering Group of its finalisation, opening the way for the final drafting of the CIIP. All entities, including the European Commission, Member States, EEA countries, industry, and research organisations, use the SRIAs as a common reference document, which should contribute to programming their R&I activities and engaging in R&I cooperation.

Figure 3. Workflow for the Strategic R&I Agendas.



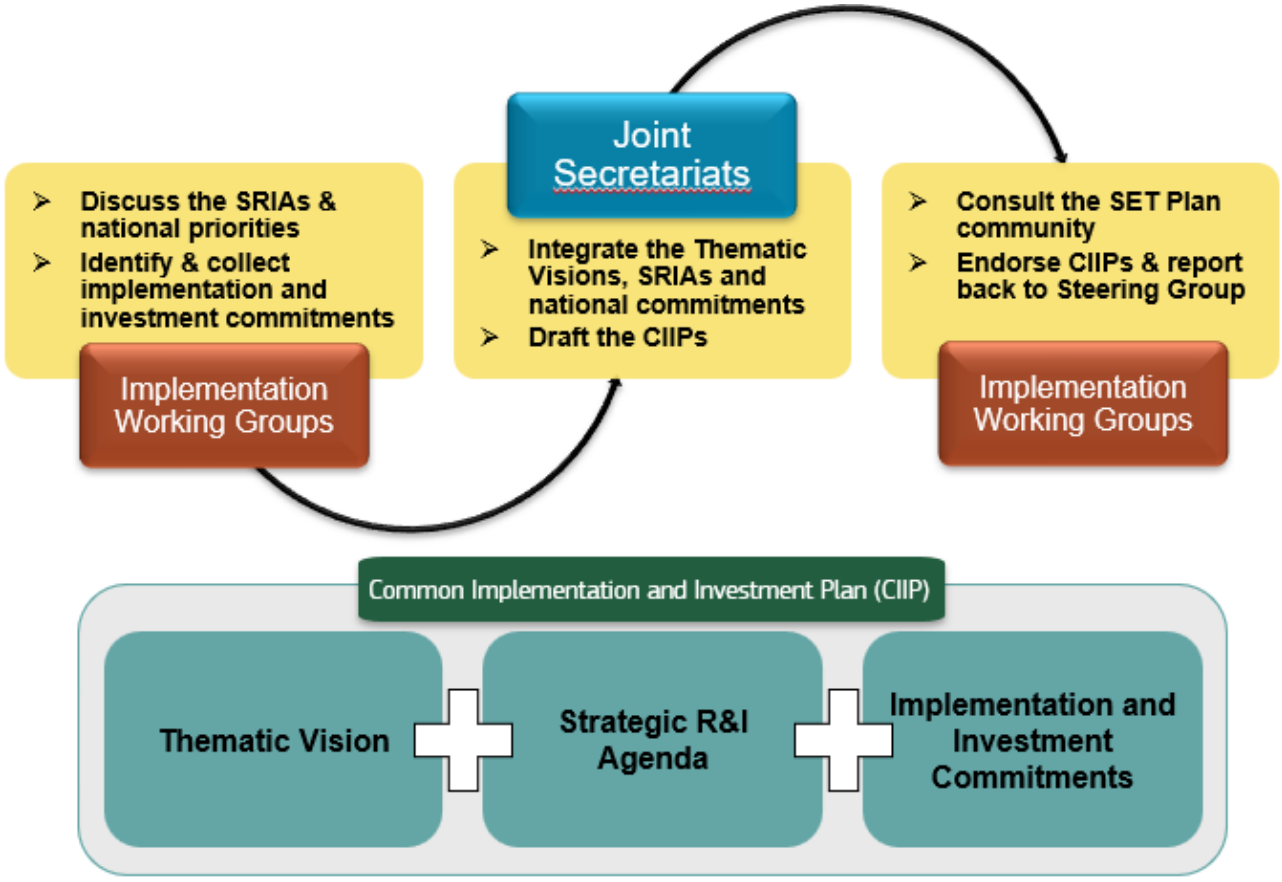
6.4. Development of Implementation and Investment Commitments

Step 5: With the Strategic Research and Innovation Agenda (SRIA) approved, each Implementation Working Group (IWG) conducts discussions with all key actors, including European Commission, Member States, EEA countries, industry partners, and research organisations. These discussions aim to explore and agree concrete implementation avenues via national, cross-border, or European programmes, as well as through potential international collaborations.

The agreements should focus on the distribution of efforts and investments and the making of commitments between public and private investors, ensuring that they align with the endorsed SRIA priorities. They should identify actions providing significant added value to existing programmes and assess how progress will be measured. This involves identifying any remaining gaps and proposing solutions, which can be addressed in subsequent SRIAs and implementation actions.

The IWG, supported by its Technical Secretariat, leads this initiative, striving to reach a consensus among stakeholders.

Figure 4. Workflow for the Implementation and Investment Commitments.



6.5. Development of Common Implementation and Investment Plans

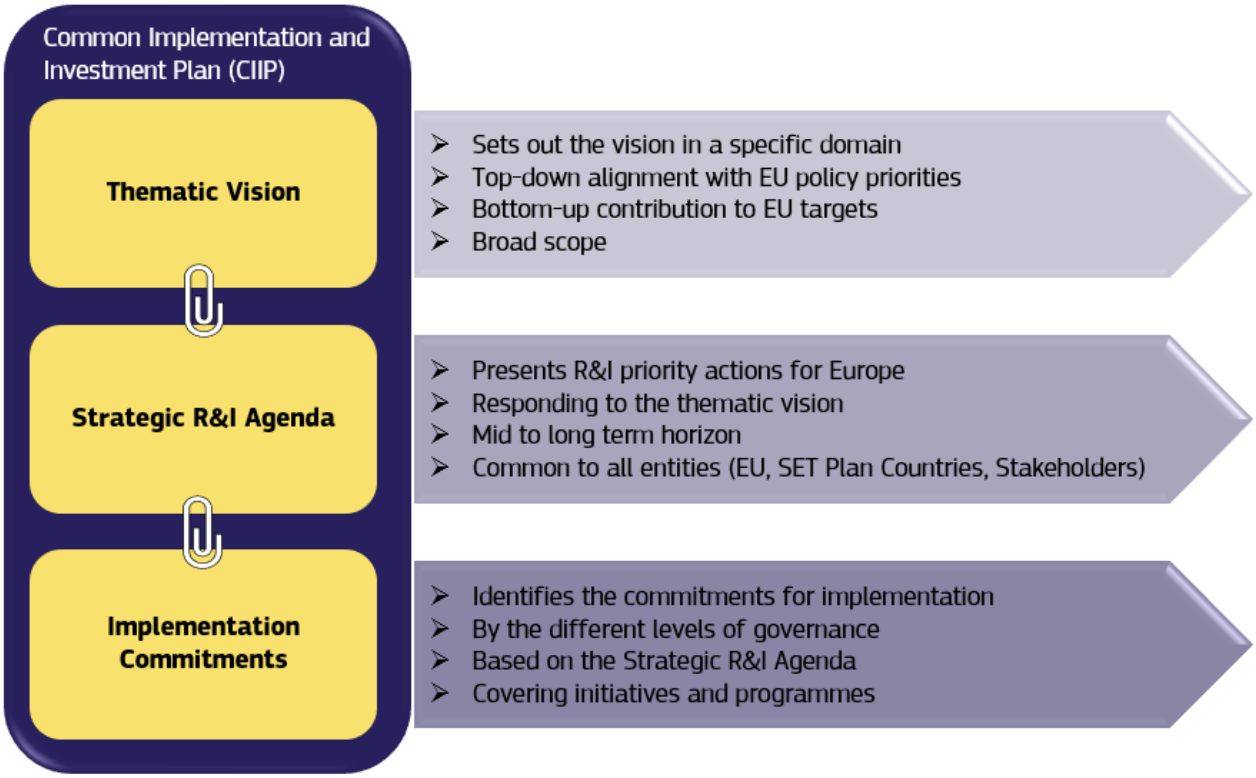
Step 6: The outcome of the collaborative efforts under Step 5 will be Common Implementation and Investment Plans (CIIPs), structured around three crucial components:

- The previously developed Section 6.1 **Thematic Vision** for the domain or technology, offering a clear perspective on the strategic direction.
- The Section 6.3 **SRIA** drafted at an earlier stage, detailing the specific R&I priorities for the relevant technology areas.
- The Section 6.4 **Implementation and Investment Commitments**, outlining the commitments for actions and resource allocations necessary to achieve the identified objectives and detailing the mechanisms for tracking progress, identifying gaps, and suggesting remedies.

Step 7: The SET Plan Steering Group subsequently reviews and endorses the CIIPs. Upon approval, it is relayed to the European Commission, which may be used to inform EU policy work.

Note: Some of the steps described may be developed concurrently rather than sequentially; the process does not necessarily require each step to be completed before the next begins.

Figure 5. Overview of the Common Implementation and Investment Plan.



6.6. Monitoring and reporting of CIIPs

As the SET Plan spans the entire research and innovation cycle, following the adoption of the Common Implementation and Innovation Plans (CIIPs), it is essential to have thorough monitoring and reporting mechanisms in place. This ensures effective management of each innovation phase and alignment with the SET Plan's overarching goals.

The annual SET Plan Progress Report, coordinated by the European Commission, details the work of each Implementation Working Group (IWG) and the European Technology and Innovation Platform (ETIP). This report is pivotal in tracking progress and identifying areas needing attention. Furthermore, the SET Plan is linked to the Energy Union Governance Regulation, which invites Member States to report SET plan activities in National Energy and Climate Plans (NECPs) when linked to national objectives and policies, as well as coordinating research programmes and aligning policies and measures SET Plan related activities. While the NECPs are not SET Plan deliverables, they directly benefit from the work achieved in the CIIPs, as the CIIPs identify priorities and implementation actions for all SET Plan-relevant technologies. The work done for the CIIPs can therefore contribute to updating NECPs, which remain the only legal instrument providing a high-level overview of national policies. In comparison, CIIPs shall cover technology specific areas centred around the respective SRIAs.

Therefore, adequate reporting is crucial after adopting the CIIPs, as their insights will become central for the next innovation cycle. Each IWG is expected to regularly (annual) assess progress made on implementation, based on the agreed process in the CIIP. This task shall be carried out by the IWG Chair, with the support of its Secretariat and relies on inputs shared by represented SET Plan countries. This applies across various sectors, identifying gaps or lagging areas, and incorporating these findings into updated CIIPs.

To support the CIIPs implementation and the dissemination of results, the SET Plan can count on recurring events like the SET Plan Annual Conference, ad hoc IWG and ETIP events, and specific workshops involving a broad array of stakeholders. These gatherings facilitate dialogue, showcase achievements, and foster a collaborative environment, driving the EU towards its energy objectives.

Annex - Draft templates

Common Investment and Implementation Plan (CIIP) Template

Common Investment and Implementation Plans (CIIPs) shall *substitute existing Implementation Plans and SRIAs by* ***integrating them into a single document covering the vision, strategy and implementation****. They should be updated at least every 5 years or whenever initiated by the IWG and if confirmed by the Steering Group.*

1. **Executive Summary**
2. **Introduction**
3. **Thematic Vision**
    a. Vision Statement
    b. Milestones and Interim Targets
    c. Future Cross-Cutting Initiatives
4. **Strategic Research and Innovation Agenda (SRIA)**
    a. Opportunities and Challenges
    b. Strategic R&I Priorities
    c. Priority actions
    d. Implementation Strategies
5. **Implementation and Investment Commitments (ICC)**
    a. Commitment Details
    b. Implementation and Monitoring Framework
6. **Conclusion**

Thematic Visions Template

A Thematic Vision should explain ***how the strategic technology in its remit is expected to contribute to the overall transition towards a European climate-neutral energy system*** *in a competitive way. The aim of a thematic vision is to take stock of current progress of a specific technology towards the Energy Union priorities and to establish ambitious and achievable short-term (up to 2030), medium-term (up to 2040), and long-term (up to 2050) projections on the development of this technology in Europe and its contribution to the Union's objectives.*

1. **Executive Summary**
2. **Introduction**
    a. Purpose of the Thematic Vision
    b. Background Information on the Implementation Working Group
    c. EU Policy Framework
3. **Vision Statement**
    a. Short-term, Medium-term, and Long-term Goals
        i. Energy
        ii. Climate
        iii. Competitiveness
4. **Milestones and Interim Targets**
    a. Detailed Description of Key Targets
    b. Milestones and Timeline for Achieving Targets
5. **Cross-Cutting Initiatives**
    a. Existing Public-Private Partnerships and/or Cross-Border Initiatives
    b. Reflection on Task Force Recommendations
6. **Conclusion**
    a. Integration with Common Strategic Vision

Strategic Research and Innovation Agenda (SRIA) Template

The Strategic R&I Agenda (SRIA) is a document that operationalises the Thematic Visions by detailing the ***specific R&I priorities to be pursued in each technology sector*** *addressed by the SET Plan to meet their interim targets and milestones. It lays the foundations required for the development of the Implementation and Investment Commitments (IIC). Once finalised, it is progressively integrated into the Common Implementation and Investment Plan.*

1. **Executive Summary**
2. **Introduction**
    a. Purpose of the SRIA
    b. Background information on the ETIP
    c. Alignment with Thematic Vision
3. **Opportunities and Challenges**
    a. Systemic Challenges and Levers
    b. Opportunities to Overcome Challenges
    c. Risks
4. **Strategic R&I Priorities**
    a. Sector-Specific Priorities
        i. Short term
        ii. Medium term
        iii. Long term
    b. Collaboration Framework and KPIs
5. **Priority actions**
    a. Stakeholder mapping
    b. Mapping of Investment and Funding Needs
        i. Public Actions Needed to Support Milestones and Key Targets
        ii. Private Actions Needed to Support Milestones and Key Targets
    c. Integration of Task Force Recommendations in Actions
6. **Conclusion**

Implementation and Investment Commitments (IICs) Template

Implementation and Investment Commitments (ICs) aim to ***map how the different countries and stakeholders intend to contribute to the implementation of the previously drafted Strategic R&I Agenda (SRIA)*** *and set out the main corresponding activities. It should capture the level of commitment from public and private organisations, and list actions and resource allocations relevant to achieve the identified objectives. In addition, ICs should explore mechanisms for tracking progress and identifying implementation gaps.*

1. **Executive Summary**
2. **Introduction**
    a. Purpose of the Implementation and Investment Commitments
    b. Overview of national backgrounds
    c. Alignment with SRIA
3. **Commitment Details**
    a. Public Commitments
    b. Private Organisational Commitments
    c. Identifying Remaining Gaps and Outlining Corresponding Strategies
4. **Implementation and Monitoring Framework**
    a. Cross-Border and Regional Cooperation
    b. Tracking Progress and Effectiveness
5. **Conclusion**