

IEA MEDIUM-TERM STRATEGY FOR ENERGY RESEARCH AND TECHNOLOGY **2023-2027**

Towards a cleaner and more secure energy future at net zero emissions

INTRODUCTION

The purpose of the IEA Medium-Term Strategy for Energy Research and Technology (hereinafter “Strategy”) is to set a clear vision and mandate for the IEA’s work to support governments’ efforts to accelerate innovation and deployment of clean energy technologies - directly through its data, analysis and convening power, as well as indirectly as facilitator for to the CERT, its Working Parties and the Technology Collaboration Programmes.

This Strategy seeks to build on the three pillars of the vision for the IEA’s modernisation strategy endorsed at the IEA Ministerial meeting in November 2015¹ as well as the new guiding principles adopted at the 2022 Ministerial. Ministers requested that the IEA plays a leading role in supporting countries in the global effort to attain net zero greenhouse gas emissions in the energy sector by mid-century.

VISION 2023-27

In line with the IEA 2022 Ministerial mandates, the IEA, under CERT’s strategic guidance and enhanced collaboration with its Working Parties and TCPs, is recognised as the leading international technology and innovation forum to review progress, to collaborate on key areas pertinent to technology and sectoral transition, and to facilitate action to advance technology innovation in sectors. This will support governments’ efforts to attain net zero globally by mid-century while maintaining security and affordability of energy supply.

IEA’S MANDATES ON ENERGY TECHNOLOGY AND INNOVATION

To deliver this vision, the Secretariat will, over the period 2023-27, prioritise activities in the three following areas:

1. Providing world leading technology and innovation advice to governments in designing policies that help to achieve their energy sector transformation to net-zero emissions by mid-century;
2. Advancing global dialogue and collaboration on key technologies and sectors in close coordination with other multilateral platforms, such as the Clean Energy Ministerial, Mission Innovation, the Breakthrough Agenda, the Hydrogen Energy Ministerial and others;
3. Further strengthening the CERT, its Working Parties, and the TCPs’ operations, increasing their relevance and nimbleness for advancing clean energy technologies to support government priorities for a cleaner and more secure energy future at net-zero emissions.

¹ IEA’s 2015 Ministerial mandates: opening the doors of the Agency to emerging economies; evolving the Agency’s mandate on energy security; and strengthening the Agency’s role as a key international hub for knowledge and expertise in clean energy, including energy efficiency.

PRIORITISED AREAS OF WORK AND DELIVERABLES 2023-27

Related to these three IEA mandates on advancing clean energy technology innovation, the Secretariat will prioritise the following activity areas.

- 1. To provide world leading technology and innovation advice to governments in designing policies that help to achieve their energy sector transformation to net-zero emissions by mid-century.**
 - a. Tracking progress, in particular through the IEA's renowned 'Tracking Clean Energy Progress' report.
 - b. Technology and sectoral analysis, including through regular thematic publications as well as roadmaps for technologies and sectors.
 - c. Strengthening the IEA Energy Technology Perspectives report, the IEA Clean Energy Technology Guide and Innovation Tracker, and the PAMs database.
 - d. Utilizing and following leading indicators such as patents, start-up activities, private sector R&D investments to inform the governments on the progress.
 - e. Developing a 'technology assessment framework' to improve the quality and comparability of energy technology data.
- 2. To advance global dialogue and collaboration on key technologies and sectors in close coordination with other multilateral platforms, such as the Clean Energy Ministerial, Mission Innovation, the Breakthrough Agenda, the Hydrogen Energy Ministerial and others;**
 - a. Foster closer and structured, institutionalised exchange between CEM/MI/TCP to seek synergies within key technologies and sectors, such as buildings, integrated electricity systems, industry, transport, hydrogen and critical minerals.
 - b. Facilitate exchange on policy best practices and highlights.
 - c. Launch a series of thematic discussions, focusing on key topics of relevance for government policy-making for key technologies and sectors.
 - d. Continue to engage with key emerging market and developing economies, providing a joint platform for knowledge exchange and collaboration as well as for collecting and sharing information on their RD&D priorities and spending in those countries.
- 3. To further strengthen the CERT, its Working Parties, and the TCPs' operations, increasing their relevance and nimbleness for advancing clean energy technologies to support government priorities for a cleaner and more secure energy future at net-zero emissions.**
 - a. Continue the implementation of the revised TCP Action Plan, and its five action areas:
 - i. Enhancement of TCP-IEA collaboration
 - ii. Engagement with emerging economies and the private sector
 - iii. Interaction with multilateral initiatives
 - iv. Awareness, communication and visibility
 - v. Governance and transparency
 - b. Support existing and possibly new CERT "Task Forces" for improving the overall operation and implementation of activities.
 - c. Promotion of the biennial TCP Universal meeting and its relevance to governments'

climate and energy efforts.

- d. Under the guidance of a CERT Task Force, lead the process for reviewing the governance structure of the CERT, its Working Parties and the TCPs, with the aim to improve the effectiveness and of operations. Also, reviewing how they align with strategic priorities of governments in view of their stated net-zero emissions ambitions for mid-century. The Secretariat is requested to provide proposals on possible improvements to the CERT by mid-2023, for decision by the end of 2023.

The IEA Secretariat will present to CERT an annual activity plan at beginning of the year, a progress update at the June meeting, and a brief summary report by the end of the year.