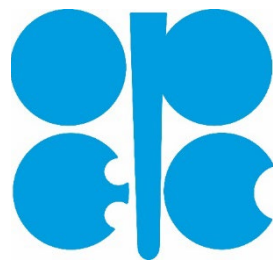


# Organization of the Petroleum Exporting Countries (OPEC)



## Inputs to Katowice Committee of Experts on the Impacts of the Implementation of Response Measures (KCI): Work plan Activity 11

OPEC Secretariat  
Research Division  
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**Workplan Activity 11: “Facilitate, exchange and share experience and best practices in the assessment of the environmental, social and economic co-benefits of climate change policies and actions informed by the best available science, including the use of existing tools and methodologies”**

The Organization of the Petroleum Exporting Countries (OPEC) welcomes the call for inputs by the KCI<sup>1</sup> in order to implement the workplan activities of the forum on the impact of the implementation of response measures and its KCI. In this context, the OPEC Secretariat would like to provide its input with respect to activity 11 that will be considered at the 7th KCI meeting, from 2–3 November 2022, in Sharm El Sheikh, Egypt.

The OPEC Secretariat provides its input responding to the guiding questions included as an annex to the call for inputs, as well as to the additional guidance provided for each questions:

- *Which climate change policy(ies) and actions, informed by the best available science, were assessed for environmental, social and economic co-benefits and what were the co-benefits identified from your assessment?*

The Working Group III contribution<sup>2</sup> to the Sixth Assessment Report of the IPCC<sup>3</sup> underlines that climate change policies and actions entail different mitigation costs and benefits. A focus on equity<sup>4</sup> considerations is necessary to avoid climate-induced harm, as well as the unfairness that could result from actions taken to reduce emissions. In particular, it is stated that mitigation policies which recognise and address the equity challenges inherent in transition to a low-emissions future would be needed, along with both near- and long-range holistic planning that explicitly seeks synergies between climate change and sustainable development while avoiding trade-offs.

In light of the above, the IPCC report highlights that co-benefits and trade-offs arising from the implementation of climate change policies and actions could vary by region and/or country. Viable transition pathways should be identified to ensure that equity and energy security are not compromised – including in natural resource endowed countries where climate mitigation could imply significant employment and economic structural changes that raise multiple distribution concerns.

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<sup>1</sup> Katowice Committee of Experts on the Impacts of the Implementation of Response Measures.

<sup>2</sup> *Climate Change 2022: Mitigation of Climate Change*, available at: <https://www.ipcc.ch/report/sixth-assessment-report-working-group-3/>.

<sup>3</sup> Intergovernmental Panel on Climate Change.

<sup>4</sup> Equity encompasses the notion of distributive justice that refers to the distribution of goods, burdens, costs and benefits within and across countries.

A systematic assessment of such mitigation policies and actions is therefore important and could benefit from greater understanding, based on modelling analysis. Given that mitigation approaches could not only lead to emissions reduction in specific sectors, but have wider socio-economic impacts, they could provide a stronger case for achieving political and societal support both in developed and developing countries, raising the finances required for implementation.

Accordingly, an alternative scenario has been compared by the OPEC Secretariat to the projections of the Reference Case of the World Oil Outlook<sup>5</sup>, having a distinct narrative of climate change policies and mitigation ambitions compatible with the Paris Agreement long-term goals. This relates to the critical role of technology options that could lead to win-win solutions with environmental and socio-economic benefits. It provides an alternative emissions reduction pathway that focuses on the greater implementation of the CCS (carbon capture and storage) technologies in industrial sectors, strong investment in hydrogen supply networks and the increasing adoption of the CCE (circular carbon economy) framework across the global economy.

Compared to the Reference Case, under the alternative scenario, global energy-related CO<sub>2</sub> emissions are reduced by about 63% in 2045, demand for coal is 58% lower – primarily due to an accelerated phase-out of unabated power generation from coal in countries such as China, India and South Africa – demand for gas is reduced by 37%, and oil demand is 16% lower. Overall, there remains substantial demand for fossil fuels, accounting for about 55% of total primary energy demand in 2045.

Analysis shows that the adverse impacts of climate mitigation response measures could be significantly alleviated if innovative approaches and advanced technology options such as those considered in the alternative scenario are implemented at scale. CCS is an environmentally sound technology, which can allow countries to maintain the diversity of energy supply. Hydrogen can also be a key energy carrier for decarbonisation in various hard-to-abate sectors, whereas the CCE framework encourages countries to use all technologies, forms of energy and mitigation opportunities.

In addition, such options can protect and create new high-value job opportunities, while also contributing to the diversification of exports in energy-producing and exporting economies. Their relative importance within a country's available portfolio of mitigation actions varies depending on resource availability, capacities and national circumstances. Cooperative initiatives and partnerships, as well as adequate financial resources, can play a critical role in promoting technological advancement for climate action, and deployment and scaling up of such options, including in developing countries.

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<sup>5</sup> [https://www.opec.org/opec\\_web/en/publications/3049.htm](https://www.opec.org/opec_web/en/publications/3049.htm).

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- *How such assessment was conducted? Were there any standards used? What are challenges and opportunities, and lessons learnt from these assessments?*

To implement the scenario analysis, the proprietary E3ME macroeconomic model from Cambridge Econometrics was employed.<sup>6</sup> E3ME is one of the most advanced models of its type and is frequently used for climate policy analysis.

While conducting this research activity, it was noted that knowledge gaps exist in understanding why some regions or countries encounter delays in technological change and innovation, as well as the role of policies and limitations, including finance. Understanding of mechanisms for inclusive approaches in knowledge flows is important to ensure developing countries receive sufficient support to mitigate climate change while aiming to increase any expected co-benefits and eliminate potential adverse impacts.

- *What actions were/are/will be taken based on the co-benefit assessment and what specific measures taken to maximise the co-benefits if any?*

Besides combatting climate change, innovative solutions such as the CCS and hydrogen technologies offer wider benefits. Creating an enabling environment for investment in these mitigation options, through appropriate policy and sufficient funding, should be a high priority for the world to achieve the long-term goals of the Paris Agreement in the context of equity and sustainable development.

Against the backdrop on present multiple crises, it is important to consider future climate change policies and actions. Despite the inherent uncertainties of energy systems, there is a need to consider all available options, means, technologies, and approaches to address global challenges in light of national circumstances and capabilities, while supporting energy security and access in an inclusive, fair and just transition.

However, a contradiction has been foisted on natural resource endowed countries. On the one hand, oil and gas exporting countries are expected to respond to tightening international markets by increasing oil and gas production. On the other hand, there are calls to reduce oil and gas usage, and actively discourage investments in the oil and gas industry.

This implies that there is an increasing likelihood of an oil and gas shortfall exacerbating energy insecurity. Moreover, efforts to achieve universal, reliable and affordable energy access for people across the globe are jeopardised. For natural resource endowed countries, particularly developing ones, it also adds to their risks and will likely hamper efforts to achieve sustainable development goals, including the poverty eradication and sustained economic growth.

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<sup>6</sup> Additional information is available at: [www.e3me.com](http://www.e3me.com).

In light of the above, OPEC and its Member Countries welcome coordinated actions and inclusive approaches for all nations to collectively tackle climate change. Innovative solutions such as the CCS technologies, blue hydrogen and the CCE platform could provide an integrated approach for emissions management and reduction to support sustainable energy systems and respond to climate targets, while it is critical to provide support to scale up their deployment to enhance their contributions to address climate change.

The OPEC Secretariat expresses its willingness and preparedness to collaborate with the UNFCCC Secretariat and other stakeholders supportive of the UNFCCC process on issues related to co-benefits and trade-offs arising from the implementation of climate response measures. The OPEC Secretariat will also continue providing insights and regional aspects that would allow for consideration of national circumstances and priorities on such critical matters in regard to the Paris Agreement implementation.