

The role of low carbon power generation in support of a just Energy Transition

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Abstract

Achieving a just Energy Transition is a very complex requirement that, as yet, has made comparatively little progress worldwide, in part due to discussions being bogged down in rhetoric. In particular, there appears to be widening differences of opinion between major OECD countries and the developing nations, especially those in Asia. The former are fixated on introducing Variable Renewable Energy (VRE) plus, as yet to be fully developed storage, while pushing the case for a one size fits all approach based on that technology option. However, this is not acceptable to developing nations, not least because energy quality and availability vary worldwide. At the same time, there appears to be an ongoing disconnect between recent OECD statements that have suggested that global demand for oil, natural gas and coal is expected to peak shortly due to rapid deployment of electric vehicles while at the same time there have been complementary suggestions that such advanced technologies are limited due to shortage of critical minerals. Interestingly, more importantly, whatever predictions are being made for such countries by the OECD, they are not recognised as being relevant by developing nations, especially those based in Asia with its abundance of low-cost coal. This discord is also now being seen and heard in OECD countries,

Perhaps more importantly, there is a growing view that the leaders of most OECD countries are not only ignoring the needs of most of the developing world but are also creating massive discord due to the unaffordability of their mitigation intentions for their own citizens. This does not bode well for a positive way forward. Consequently, progress related to serious climate change mitigation can best be described so far as very fragmented, with many groups raising serious doubts about technology approaches that are felt to be too expensive and not always capable of meeting the required performance targets.

Various OECD groupings such as North America and the European Union are pursuing the massive introduction of VRE, such as solar and wind, and as noted above, with plans in place to ultimately close all fossil energy technologies. That is inconsistent with current practice in both regions as natural gas will remain a critical component of the energy mix for some while since it is seen as a transition fuel. In addition, the European Commission seeks to close all nuclear power plants within the European Union, which seems at odds with such a clean energy source. The IEA has declared that these radical changes are being pursued on a ‘one size fits all’ basis, which presumably refers only to the EU and possibly the USA.

This presentation considers the growing divergence of approaches, including VRE, batteries, CCUS, nuclear, and biomass. While the EU and USA may pursue their focus on VRE and as yet unproven storage, the developing nations seem likely to pursue alternative pathways including the benefit of a technology agnostic approach that covers both flexible low-carbon technologies such as CCUS in combination with VRE that provides a cost-effective option, compatible with the UN Sustainable Development Goals (SDGs).

These and related issues are considered from a global perspective.

note: This document will be opened to the participants on IERE website before the Forum and opened to the public afterward.