

## to a low carbon world

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The world is facing multiple overlapping challenges. The recovery from COVID-19 and the impacts of climate change along with the food, energy and cost of living crises are straining the economies of many countries in the Asia-Pacific region.

The fossil fuel crisis is leading many countries to seek greater energy security. But energy security today means more than just safeguarding access to resources. It is also about ensuring reliable and affordable energy supplies while at the same time protecting economies from exposure to price volatility. It is increasingly clear that the energy transition will be an enabler of energy security.

Renewable energy can act as a hedge against high and volatile fossil fuel prices. And when renewables are deployed, they can't easily be interrupted or impacted by the broader macroeconomic environment. Renewable energy is also cheaper than ever. The economic case for energy transition has never been more apparent. According to the [International Energy Agency](#), in South-East Asia, the share of renewable energy in the power system will need to rise from 2 per cent in 2020 to 18 per cent by 2030. Reaching that target may be difficult, but the benefits will extend beyond reductions in carbon emissions.

To date, 39 countries in the Asia-Pacific region have committed to such a transition through achieving carbon neutrality or net-zero emissions in the coming decades. These ambitions must contend with two inconvenient facts. First, many countries are still planning to invest in natural gas and other fossil fuel projects that may not be compatible with their carbon neutrality pledges or the Paris Agreement. Second, renewable energy resources are not evenly distributed across the region. For many countries, it is simply not possible to fully decarbonize using only domestic resources.

The energy transition, therefore, is also an opportunity to reconsider what it means to be connected with one another. Power system connectivity is one key tool that can enable increased energy security, energy transition and sustainable development.

As the energy transition progresses, countries will move away from an environment of import dependence to one of mutual benefits, sharing resources when and where they are available. This means shifting away from a predictable world, to a more stochastic one, where the position of importer or exporter can shift from hour to hour. Our power systems, operating procedures and institutions must adapt to this changing reality. It also means we must work to build trust among our neighbours.

Unfortunately, connectivity efforts in the Asia-Pacific region are lagging. This is not for lack of vision. For example, ESCAP is working with the ASEAN Center for Energy to transform the proposed ASEAN Power Grid from lines on a page to reality. And Singapore is now importing clean electricity from the Lao People's Democratic Republic. But more must be done to accelerate progress.



Another consideration is whether the affordability of renewable energy is something we can continue to take for granted. Increased deployment of clean energy technologies like wind, solar photovoltaic, and batteries, as well as the grids to connect them together will lead to an increase in demand for critical raw materials like copper, cobalt, nickel and lithium. As demand increases, will supply keep up? The Asia-Pacific region is both the major supplier and consumer of these and other inputs into the clean energy economy, and questions over the future direction of this sector are tightly linked to the economic development of countries in the region and the affordability of the energy transition.

It is important to understand whether supply chains for critical minerals can keep up with expected increases in demand, and to improve the resilience of these supply chains to minimize price volatility and avoid disruptions. With this in mind, ESCAP is examining the implications of the energy transition for Asian and Pacific economies which have significant domestic extractives industries or the potential to develop them.

Looking across our region, countries are not on track to meet the 2030 Agenda, or the Paris Agreement targets. COVID-19, the emerging impacts of climate change, and ongoing geopolitical events have slowed or in some cases even reversed progress. Countries cannot meet these challenges alone. Green energy grids carrying renewable energy throughout the region can be the answer to the region's energy security and sustainability concerns.

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