

Asia will be the tipping point for energy transition

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ASIA'S growth and dynamism gives it every incentive to take a pioneering role in the transition to a modern low-carbon energy system.

Taking a leading role would not only help rein in global warming, to which the region is particularly vulnerable, it would also provide cleaner, more affordable and secure energy supplies.

"Fast-developing nations are not wedded to the same old ideas and ideologies, like some industrialised nations are. We don't have the same vested interest in the Victorian economy, the same sunk capital that holds us back by constricting the ability to move forward," Malaysian prime minister, Najib Razak, told the Energy for Tomorrow conference in Kuala Lumpur.

"We don't necessarily believe that the best way to generate energy is to set fire to something," he said, while adding that developing economies like Malaysia are flexible and fast-moving, seeing new technology as an opportunity, not a threat.

Policy versus technology

Despite his optimism, it seems not only Asia, but the world too, has reached a point where policies rather than technologies, have become the principal barrier to progress.

If governments can address the institutional, contractual and regulatory lock-in that favours incumbent high-carbon industries and technologies then the transition to a low-carbon economy is possible, Simon Upton, director, environment directorate, Organisation for Economic Co-operation and Development (OECD), told delegates to the conference.

"Understandably, the cost of exiting from the status quo can appear daunting. And we should not underestimate some powerful headwinds, one of which I call carbon entanglement," he added during his keynote speech.

Some governments rely overwhelmingly on fossil-fuel revenues,

and have heavily invested interests in continuing these flows of income.

However, the wrong infrastructure choices made today could lock-in a high greenhouse gas emission pathway for decades to come, which scientists believe will accelerate global warming with devastating economic and environmental consequences.

In its latest *World Energy Outlook*, the International Energy Agency warned that the world's entire carbon budget from now through to 2100 – the amount of fossil fuels that can be burnt while safely keeping global warming below two degrees Celsius – will be consumed by 2040.

The energy watchdog estimates that cumulative investment of \$53 trillion is needed by 2035 in low-carbon energy supply and energy efficiency to steer a course towards a low carbon future. That is only 10% more than the \$48 trillion business-as-usual that will likely be invested in any case.

"We are not talking about low growth or no growth. We are talking about changing the composition of growth. There is no rule that says that economic growth can only occur through the combustion of vast quantities of fossil fuel," said Upton.

Putting a price on carbon emissions – the EU and the Canadian province of British Columbia are already doing so, while China is also piloting carbon pricing – would help guide economic choices away from fossil fuels. It is also the cheapest, most straightforward way of guiding innovation towards low-carbon technologies and behaviour.

More worrying is the persistence of subsidies, which are a negative price on carbon. "They fly totally in the opposite direction of where we need to go," said Upton.

Fuel subsidies in Asia, including Malaysia, are common practice, and market liberalisation has been slow. But falling crude prices could help governments accelerate the reform process without losing too much political capital.

Of course, governments cannot encourage new technologies and business models to re-shape

economies if there are barriers hard-wired into their regulatory infrastructure.

Looking ahead to 2030, Asia will make up about two-thirds of the global middle-class population, compared to one-third today. What those consumers buy, and how they live, will be shaped by the policies that governments deploy.

"They could be policies that tip the transition in favour of a low carbon transition. Or they could lock in yesterday's patterns," warned Upton.

South and Southeast Asia has much at stake with climate change. The region is particularly vulnerable to unabated global warming. Rising sea levels, as well as losses to agricultural output, will slash economic productivity if emissions continue to rise, suggests the latest analysis from the OECD.

In Southeast Asia, urbanisation – which magnifies challenges such as air pollution, water access, vehicle congestion and waste management – is moving faster and on a larger scale than ever before in recorded history.

Indeed, Asian megacities are particularly vulnerable to the effects of climate change. Two-thirds of the roughly 400 million people worldwide that live in cities sitting less than 10 metres above sea level live in this region.

Carbon capture

Quite simply, fossil fuel combustion without carbon capture and storage will no longer be possible in the second half of the century, if governments are going to keep a lid on global warming, cautioned Upton.

Asia, the fastest expanding energy market in the world, has the opportunity to lead the transition to the low-carbon economy and modern clean energy system. Aside from the economic benefits, it will also mean cleaner air, better health, lower poverty and more energy security.

The region's governments need to stand back and look across the entire range of signals they are sending to consumers, producers and investors alike. If ever there was a case for joined-up policy, this is it, concluded Upton. ●

