

Economies can't grow in the dark

Clive Turton, Singapore | Opinion | Thu, January 07 2016,

One in five people in Southeast Asia has no access to electricity. In Myanmar alone, nearly 36 million (68 percent of the population) live without power, while in Indonesia, one-quarter of its 250 million people are without this essential ingredient for better prospects and quality of life.

Even where power generation is present, it is often ageing, inefficient, unreliable or far from where the power is needed. 70 percent of the world's oldest power stations are located in Asia. Significant losses — as high as 25 percent of production in Myanmar and 18 percent in Cambodia — are incurred in the transmission and distribution of electricity across far-reaching power grids.

And in countries like Indonesia and the Philippines, where large populations are dispersed among many islands, getting electricity to where it is needed is a huge challenge. This has had and will continue to have a significant impact on the development of the region.

Statistics show that access to electricity can be life altering. Although causality is always hard to prove, what we can say for sure is that in countries with reliable power:

- * Average gross domestic product is six times higher
- * Average life expectancy is 20 years longer
- * Average unemployment is 33 percent lower
- * Average monthly wages are 10 times higher

Not surprisingly, only four countries in Southeast Asia rank above the world average on the United Nations' Human Development Index (HDI), a comparative measure of life expectancy, literacy, education, standards of living and quality of life.

Brunei, Malaysia, Singapore and Thailand score significantly higher on these measures than those on the other side of the spectrum — countries such as Cambodia, Indonesia, Laos, Myanmar and the Philippines, which fall far below the average.

In those countries ranking above the world average on the HDI, electrification is widespread. The same cannot be said for those countries lagging on the HDI.

With the launch of the ASEAN Economic Community on Dec 31, 2015, there is a more urgent need to ensure that regional integration is accompanied by measures to address the development divide so that the benefits of this economic community are equitably enjoyed by all member countries. Providing better access to electricity in ASEAN's developing economies will go a long way towards narrowing this gap.

Against this backdrop, the demand for power will only keep increasing. ASEAN needs to add 354 gigawatts of capacity for power generation by 2040, which is more than double today's capacity and will require investment of US\$618 billion in generation and \$690 billion in transmission and distribution of this power.

As ASEAN member governments continue to invest in needed power generation capacity, they should consider the following points.

Firstly, for immediate power needs, there's an available solution that offers electricity in weeks rather than years for the tens of millions in the region who are without it —fast-track power generation.

These mobile, modular power plants can be installed and generating power in 60 to 90 days. They also can be located near demand, reducing transmission and distribution losses, and are scalable from 15 to 500 megawatts — enough to power entire cities.

Because these machines can be powered up and down quickly to meet fluctuating demand, they also are a flexible supplement to intermittent solar, hydro and wind power in countries like Myanmar, whose heavy reliance on hydropower leads to severe electricity shortages during the annual dry season.

Successful fast-track projects can represent a shot in the arm for economies, leading to the creation of local jobs, increased household income and the growth of revenue-generating industrial production. Recipients of fast-track power soon gain access to things that the developed world takes for granted, such as refrigeration and adequate lighting for schools and hospitals that have a transformative effect on societies.

Secondly, despite the urgent need to deliver access to electricity in many developing countries, governments should take a long-term view when planning for their future power generation needs by using more advanced and efficient technologies. Mobile fast-track power can be a valuable bridging solution while permanent combined-cycle power plants are being constructed, which often can take up to ten years from decision to generation. The benefits of fast-track power as a bridging solution come with minimal up-front investment.

Governments simply provide the site and fuel, and only begin to pay once the electricity is flowing. It also gives governments the flexibility to generate urgently needed power immediately, avoiding a degradation in quality of life and economic growth while permanent infrastructure is being constructed for the long term.

Thirdly, while the focus in this region is very much on accelerating economic development, countries no longer can afford to set aside the environmental costs associated with power generation. At the recent Paris climate talks, it was agreed that unlike previous pacts, all nations must participate in the effort to address climate change, not just the richest few. As governments in Southeast Asia invest in infrastructure, they must consider the costs of power generation associated with the use of coal or heavy fuel oil (HFO) in terms of pollution. With advancements in technology, there need not be a trade-off between speed of installation and environmental footprint.

Fast-track power plants using advanced dual-fuel turbines derived from jet engines can switch seamlessly between natural gas and other fuels, produce significantly less emissions than diesel or HFO solutions, and have a footprint that is approximately a third of the size for the same electricity output.

The evidence is clear — access to reliable electricity is a game changer when it comes to enhancing the standard of living and future prospects for individuals and the societies they live in. With the right investments in power generation, developing nations can get out of the dark and begin to grow their economies in weeks rather than years.

The writer is regional managing director of APR Energy. The views expressed are his own.