

OUTLOOK

Cambodia is caught in the wheels of a dilemma. On the one hand, it has to bear the growing costs of adapting its entire society to climate change, already a pressing need due to extreme weather conditions and their impact on agriculture. On the other hand, it has to ensure the competitiveness of its own industry by achieving more energy security and affordable energy prices. Over the coming decades, both these tasks will require investments that go far beyond the existing financial capabilities of a developing country.

As the cost of adapting to climate change rises, Cambodia will have to invest heavily in expanding its energy infrastructure, in improving its energy efficiency and in finding an energy mix that provides investors and consumers with a stable, affordable energy supply. The international community will surely

offer Cambodia technical and financial support so that it can tackle these challenges, but foreign aid can only supplement the urgently needed private investments in energy infrastructure and the necessary transfer of knowledge and technology. A transparent regulatory framework for investment decisions will be the basic prerequisite for the long-term development of this sector.

MALAYSIA

Jan Senkyr

In recent years, public awareness of the importance of climate change has risen continuously in Malaysia, and it has now become an important factor in government planning and decision-making. Malaysia aims to achieve the rank of a fully developed high-income country by 2020; living conditions and environmental factors are hence being ascribed an increasingly important role. This is reflected in the media and public debate.

The Malaysian government has initiated a series of ambitious, comprehensive projects intended to bring about structural improvements in the economy, the energy system and the environment, with a focus on promoting renewable energies, increasing energy efficiency and developing green technologies.

Many of the current projects are based on decisions that were already incorporated in the Eighth and Ninth Malaysia Plans (2001–06 and 2006–11). The National Policy on Climate Change, formulated in 2009, is of particular significance in this regard. That same year, the government adopted a Green Technology Strategy to serve as a framework for the fulfilment of climate policy goals. In December 2009, Prime Minister Najib Razak announced at the UN Climate Change Confe-

rence that by 2020 Malaysia would reduce its emissions by 40 percent of 2005 levels. This is an ambitious commitment given prevailing conditions.

Malaysia is one of the countries with the highest level of emissions in relation to its economic size. This is due to an unfavourable energy mix, as far as climate policy is concerned, and to the country's economic structure. The country has rich reserves of oil and gas, and they still make up 40 percent of national income. Over 90 percent of Malaysia's primary energy is derived from fossil fuels (oil, gas, coal). Gas and coal have a particularly large share of electricity production, with 62 percent and 29.6 percent respectively. To date, renewable sources have accounted for less than one percent of power generation.

Now, the current Tenth Malaysia Plan (2010–15) includes the promotion of renewable energies and the development of green technologies as key areas for innovation.

Renewables' share of the Malaysian energy mix is to increase to six percent by 2015 and to 17 percent by 2025. On the one hand, this measure is intended to support achievement of climate policy goals; on the other, it aims to reduce the country's dependency on its dwindling oil and gas reserves. Yet recent advances

in extraction technology – particularly for exploiting shale gas and oil sands and for deep sea drilling – are creating new incentives for investments in the traditional oil and gas industries. At the forefront in this regard is the national oil and gas company Petronas.

The feed-in tariff introduced in December 2011 provided an important impetus for the promotion of renewable energies for electricity production. These tariff regulations are based on the German model and guarantee fixed tariffs for electricity that is generated from solar energy, biomass, biogas and small hydro-power plants. Applications for projects in this area are being accepted until the end of 2014, and the total capacity of the projects involved should reach three gigawatts by 2020.

The Malaysian government regards solar energy in particular as promising for promoting technological development and economic growth. After China and Germany, Malaysia is one of the leading producers of photovoltaic cells. Thanks to Malaysia's sunny weather conditions, there is great potential for development in this area.

Another promising source of renewable energy is the country's large quantities of biomass. Malaysia is the world's second-biggest producer of palm oil, after Indonesia, and its large plantations produce vast amounts of organic waste. The timber industry, rice fields and rubber plantations could also supply significant quantities of biomass. To date, however, the potential of energy generation from biomass has been largely untapped, since there is little domestic demand and a lack of the necessary legal and financial impetus. On the flip side, however, generating more energy from biomass would involve large plantations competing for rainforest land. Deforestation, particularly the illegal logging carried out during the dry season and the smog this creates, has become an important political issue in Malaysia.

The promotion of renewable energies is to be linked to efforts to improve energy efficiency. The specific goals in this regard are laid down in the New Energy Policy that is part of the Tenth Malaysia Plan. Projects to improve energy efficiency in industry, transportation, construction and the technology sector are to be supported within an integrated approach.

Malaysia does not reject nuclear power; this option is explicitly kept open in the Tenth Malaysia Plan. However, the construction plans for two reactors have not yet advanced far.

Of course there are considerable shortcomings in the practical implementation of environmental and energy policy goals. In particular, there is a lack of efficient governance, institutional competence and environmental awareness, but progress is also impeded by political and economic conflicts of interest, nepotism and corruption.

The Malaysian public are aware of climate change and the importance of sustainable environmental and energy policies, but not to the degree that people in Germany and Europe are. The German energy transition is therefore primarily being eyed by experts and the relevant government bodies, who are examining it as a possible model for Malaysia to follow. But Malaysia is predominantly interested in investments and technology transfer in its relations with Germany. Many German companies have already recognised this and have an active presence in Malaysia. But Germany and the EU could also provide valuable assistance in education and training and in capacity building, as well as by offering consultancy services and by engaging in expert discussions and exchange. This is something that the Malaysian government has already emphasised.

Malaysia is heavily involved in multilateral climate policy. It ratified the Kyoto Protocol in 2002 and has been a leading CDM host country ever since. It also made its own reduction commitments at the 2009 UN Climate Change Conference in Copenhagen, stating that its emissions in 2020 would be 40 percent lower than its 2005 levels. And although there are great differences of opinion between the members of ASEAN, Malaysia uses its position within that organisation to promote the formulation of a joint policy on climate change. Most significant, however, is the lack of appropriate legal and institutional framework conditions in Malaysia.