

Cross-sectoral

Industry sector is most important as development in this region is driven by industrialisation. Getting energy efficiency right in developing markets is a key contribution to industrialisation. Process (thermal heating processes) are important and typically don't have electricity subsidies. Most countries have textiles, light manufacturing is next most important sector. Production is moving from China to lower labour cost SE Asia. Cement is a local industry. Some countries e.g. Indonesia have energy intensive processes Fe Al ceramics industry or heavy industry. (Yet)

Transport energy demand is projected to grow as the region increases the purchase of LMVs as it developed. More cars.

Residential sector very hard to mobilise – occupants don't care for energy only comfort. Low income is an issue, but on-going trends are towards denser multifamily housing in cities.

Barriers.

Energy efficiency is not seen as a core investment. It's seen as an operating cost not a strategic opportunity.

There is also a low awareness of confidence in the outcomes, EE isn't valued

Difficulties in getting projects funded. Accessing finance – via commercial options. Is difficult

Lack of policies to enable and support energy efficiency projects.

Country differences

Thailand stands out as doing a better job of EE. Their loans based policies circulate limited money, seem to get projects going and are enabling a developing EE services and products industry.

In Indonesia it's hard to get EE going, little awareness of EE options or why it might be good. Concepts of productivity are immature. Low prices underpin this failure. There is a lack of motivating prices and poor knowledge.

What's already being implemented?

Measure	Status
Data Collection and Indicators	Electricity department billing data Most countries seem to have some energy intensity data Some have reasonable sector data e.g. Indonesia has a subsector activity –energy data, but most countries seem to have inconsistent data systems
Strategies and Action Plans	Some countries have energy efficiency plans. E.g. Cambodia and Thailand have a co-joined energy efficiency plan covering industry household sectors. Most often priorities are identified and objective set, But they are often objectives and pronouncements with little commitment to creating the agencies and capability to deliver on the potential.
Competitive Energy prices with appropriate regulations	Electricity markets generally have government regulators whose prime function may be to set subsidised prices. Singapore the exception with perhaps the most functional electricity model in the region. Commercial pricing has been key to driving improved EE in Singapore. E.g. Green building activity is taking off in Singapore – building owners want to improve and minimise energy costs. Not clear how liberal the market policies are most often retailers and generators are

	state owned and can be involved in price setting. Malaysia has 5 years of good progress in restructuring subsidies : Its useful to identify how the money can be better spent: in thailand people wanted more health care and more education] incentive based regulation. The energy operator will be incentivised to deliver more enterprenuerially more ee I e the utiility is being motivted to deliver p more productivity, efficiency and service quality not just lowest price.
Private Investment in EE	It's quite difficult for the private sector to make investments in EE. Policies try to force audits, but these aren't enforced so compliance drives little real change in project investment. Compare this to say China where real outcomes occur. Thailand seems to be an exception, but there is still much scope for this to grow. A key problem is still awareness, very hard to sell EE in non-energy intensive industries.
Monitoring Enforcement and evaluations	It's striking that the targets that are set, without any sense of what's involved in achieving and meeting the targets. This is an area of real weakness; there is a false sense of achievement. Underlying this are a variety of different cultural perceptions of accountability.

Which Policy options are applicable to this region.

Context. There is a real need to build capacity – skills, operational capabilities, financing options and technical capacity are limited. It is important to build this capacity up to move from ambition and commitments to energy efficiency in the region to realising the EE outcomes. There are large disparities in ability and progress across the regions, and regional collaboration is an important tool for capacity building.

1. Energy Data and Indicators Governments should:

- i) collect data from energy providers and integrate into national statistics. National statistics departments should collect reliable output and energy end use data from industrial, commercial, transport and residential sectors.
- ii) Governments should consider what information is needed to make better EE policies and to monitor progress on policies and then mandate the data collection. Indicators should be developed to evaluate policies. Ensure that transport indicators are developed.
- iii) Develop indicators that get beyond aggregate TPES /GDP to sub-sector indicators that inform industry and government about the actual energy efficiency status and opportunities. This includes information to support benchmarking in key energy using sectors.

2. EE strategies and Policies. Include regular progress review and update cycles in the development of EE strategies and plans. Ensure that plans include realistic resources and address capacity and capability gaps

3. Energy Prices. Governments should investigate the opportunity cost of energy subsidies and the implications of future demand growth on their ability to continue with subsidies. They should analyse; the value to the economy that can be achieved by shifting subsidies to other economic and social priorities, such as health and education and, look at shifting subsidies from kWh to energy efficiency.

4. If Government's can't move to competitive energy prices, then there is a prime role for;

i) substantial utility EE programmes US style utility driven DSM programmes could change the impasse on capacity - State objectives are taken up by state owned utilities which have the financial, technical capability and metering data to deliver EE as a targeted output of their services particularly important given the predominant subsidisation of electricity prices,. ESCo services could be contracted in and the utilities operate as aggregators for government.

ii) and EE regulations Governments will need to put in place very strong (aligned with worlds best regulatory practice) regulations to counter the disincentives to EE from low energy prices. Regulations should be developed in conjunction with SE Asian regional partners, regional free trade initiatives and with international standardisation processes and test procedures.

3. **Financing** Government EE policies, economic instruments and financial incentives should catalyse private sector investments in energy efficiency. They should attract private sector activities like ESCOs and sustainable commercial investments in energy efficiency
4. **Development Planning and Energy.** Undertake analysis to understand the challenges from development to energy systems: identify the implications of industrialisation, increasing transport needs and urbanisation, on energy demand , the urban planning needs. Consider opportunities to develop multi-level governance capabilities to integrate local and municipal government, regional governments and national government processes and develop consistent planning polices to understand the opportunities for energy efficiency.
5. **Evaluation.** Each department accountable for EE policies, are required to report on progress.