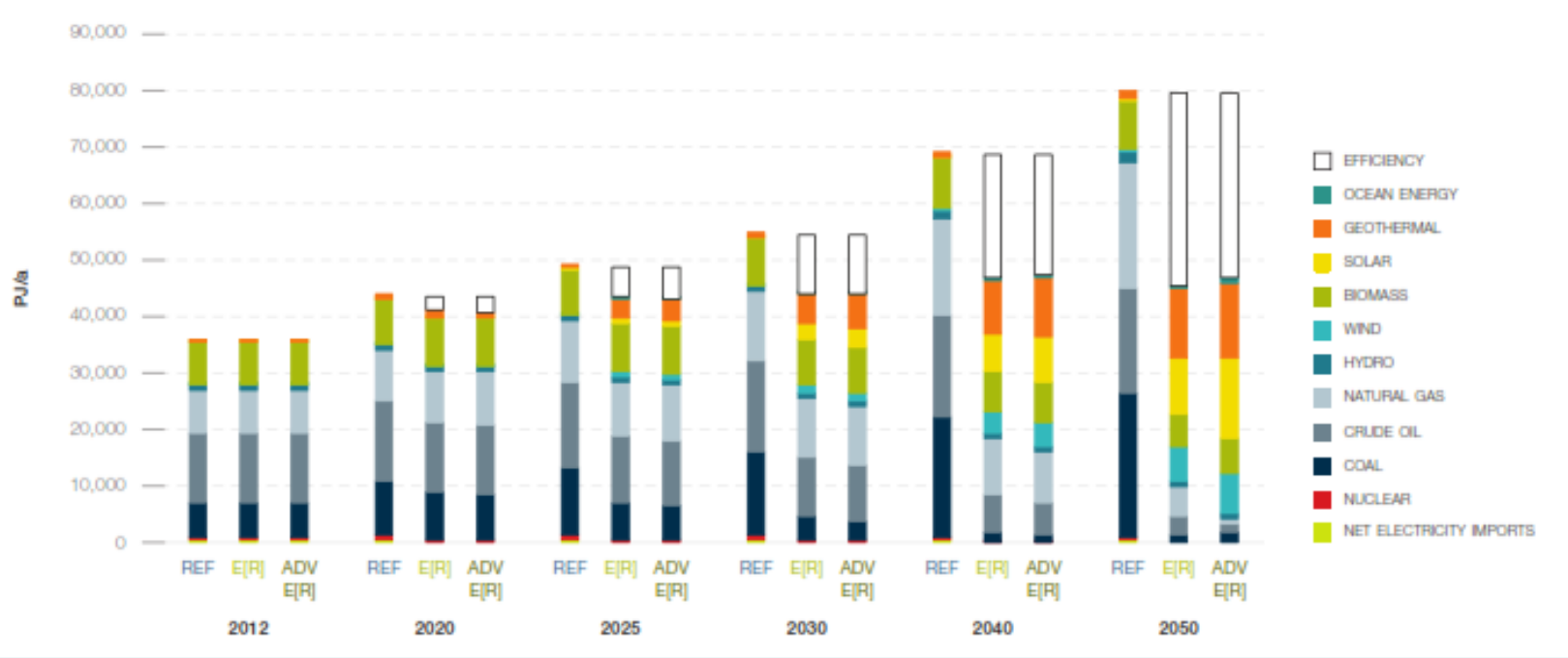
GREENPEACE

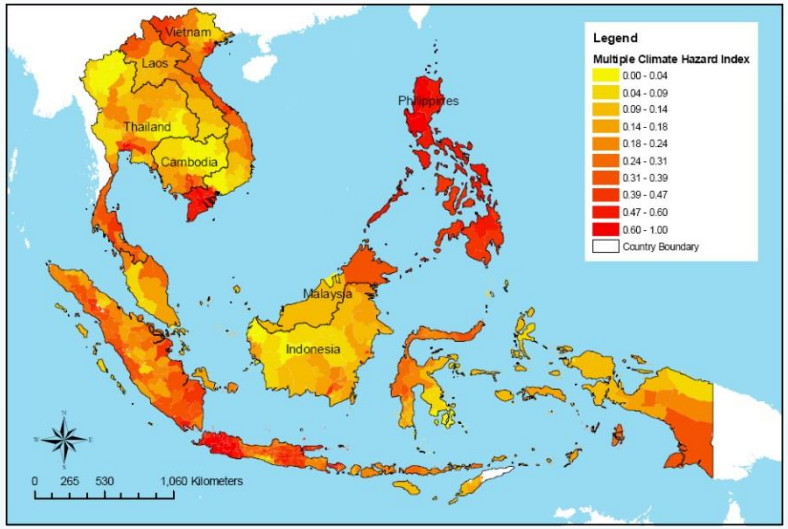
Renewables Rising: Renewable energy & energy efficiency in SEA

100% renewable energy in SEA



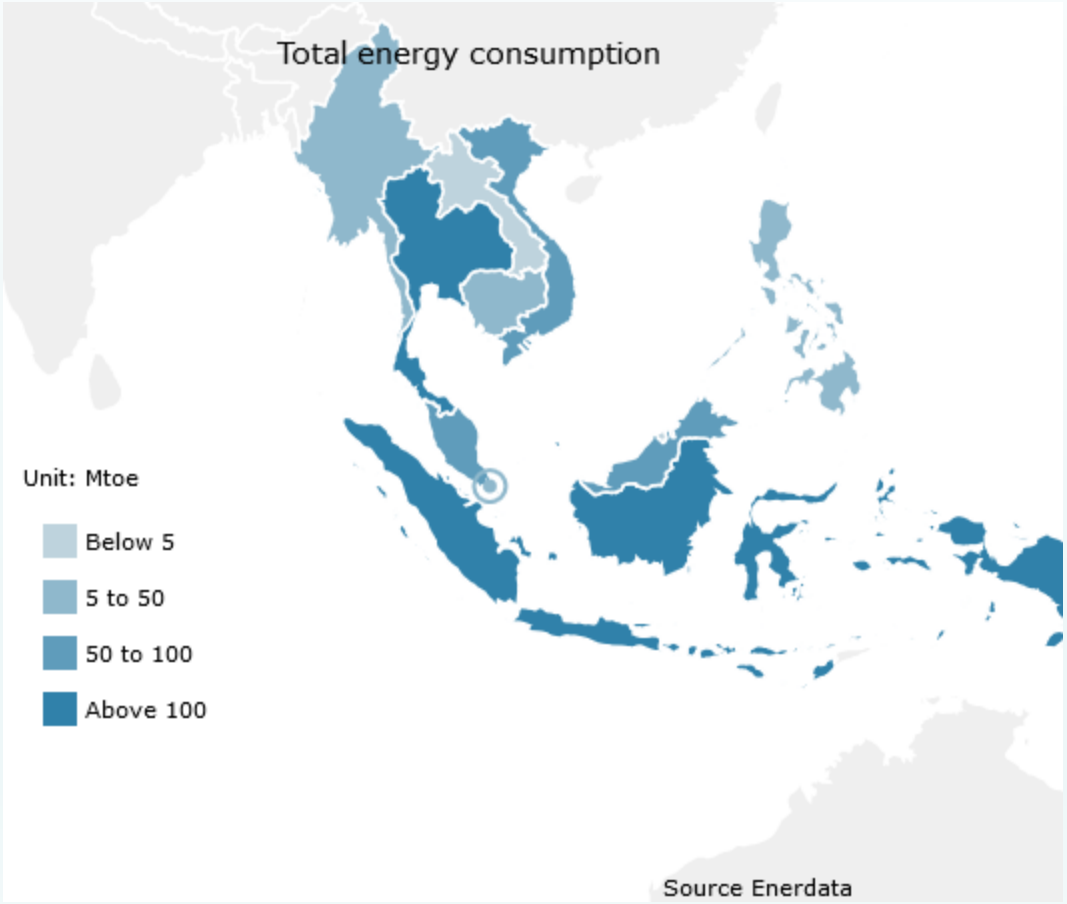
Share of RE as final energy demand across all sectors:
2012: 32% / 2020: 33% / 2030: 49% / 2040: 71%/ 2050: 100%

Current conditions in SEA



1. Rapid economic growth
2. Increasing energy demand
3. Rising fossil fuel imports
4. Growing environmental pressures
5. Highly subsidized energy prices
6. Low rural electrification
7. Heavy reliance on fossil fuels and traditional biomass
8. Large potential for RE and EE, mostly untapped.

The raise of energy consumption in SEA



Countries in SEA	
Indonesia	222
Thailand	133
Malaysia	85
Vietnam	67
Phillipines	44
Singapore	27
Myanmar	16
Cambodia	6
Brunei	4
Lao PDR	3

Renewable energy in SEA

Country	Renewable Energy Target
Indonesia	Aims to raise the share of renewable energy in its National Energy Mix from 4.79 per cent in 2011 to 25 per cent by 2025.
Malaysia	Aims to raise the share of renewable energy in the energy mix to 6 per cent by 2015 and 11 per cent by 2020.
Philippines	Aims to raise the share of renewable energy's share in electricity production to 50 per cent by 2030 and triple renewable energy generation capacity from 5 GW in 2010 to 15 GW by 2030.
Singapore	No declared targets for renewable energy use as share of national energy mix. However, the government aims to have 350MW of solar installations on public sector rooftops by 2020.
Thailand	Aims for renewable sources to provide 25 per cent of the country's total energy consumption by 2022.
Vietnam	Plans to increase the ratio of new and renewable energy sources to about 5 per cent in 2020 of the total primary energy supply and about 11 per cent in 2050. In 2010, renewables accounted for 3 per cent of the energy mix.

Current Situation

Countries in SEA have made commitments to renewable energy in some form or another. But progress to achieving these targets is slow. A range of barriers have delayed progress and continue to stand in the way. The primary barriers of developing RE in SEA are:

(1) Access to finance;
(2) Lack of local capacity to build projects;
(3) Long time needed to obtain government approvals and often complicated and opaque licensing processes;
(4) difficulties in land acquisitions;
(5) Political unrest; and
(6) Fossil fuel subsidies.

What to do next?

To address these issues, governments in SEA must, at a minimum:

(1) Simplify the renewable energy project approval process;
(2) provide guaranteed grid access for privately owned renewable energy projects and allow for privately owned projects (both large and small-scale) if not already allowed;
(3) eliminate fossil fuel subsidies; and
(4) increase support for renewable energy to de-risk investments and encourage lending.

RE already cheaper than fossil fuels

Unsubsidized rooftop solar electricity costs between **US$0.08-US$0.13/kWh.**

That's **30-40% less than** retail price of electricity in many markets globally.

Solar also already cheaper than diesel generators

Opportunities for Energy Efficiency in SEA

Buildings (incl. appliances and equipment): 40% of final energy consumption.

Lighting: Approximately 20% of electricity consumption.

Transport: 25% of final energy consumption

Industry: Five intensive industrial sectors account for approximately 40% of the energy consumed by industry- cement, chemicals, and petrochemicals, followed by paper and steel.

Barriers to Energy Efficiency in SEA

- These barriers include:

a. Lack of information and information asymmetries among stakeholders.

b. Subsidised energy prices, amounting to USD 51 billion in 2012, which deprive energy providers of the revenues needed for new investment. These have been particularly apparent in Malaysia, Indonesia, and Brunei.

c. Lack of experience in and knowledge of energy efficiency technologies, benefits, and risks among financial stakeholders.

d. A shortage of affordable funding options to finance energy efficiency projects.

e. Lack of understanding and technical capacity to develop and implement energy efficiency projects.

f. Lack of clarity in the roles and responsibilities of agencies responsible for energy efficiency, resulting in overlaps and gaps.

Unlocking SEA's Energy Efficiency Potential

The exact policy paths and measures will vary by country and by sector, but key priority areas include

a. fuel-economy standards,
b. more stringent building codes and energy performance standards for a wider range of products
c. improving capacity and energy data collection are pre-requisites to effective energy efficiency policies and implementation
d. realistic and measurable efficiency targets are needed, along with effective approaches to achieve them including mechanisms to monitor progress and make adjustments as needed.
e. the affordability of energy efficiency also needs to be improved by eliminating market distortions, such as energy subsidies, and by increasing the availability of financing and incentives.

Together these steps would help bring energy efficiency into the mainstream.

Thank you