

Strengthening AC Energy Efficiency & Policy Compliance in Southeast Asia

In Southeast Asia, ownership of air conditioners (AC) has almost tripled, with affiliated electricity consumption quadrupled, since 2000. As a result, countries in the region are mobilizing to implement more secure and sustainable energy policies. Aligning and increasing the ambition of energy efficiency policies for ACs can benefit power grid stability, energy security, economic development, and reduce carbon emissions.

Strategic policy implementation ensures that ACs conform to efficiency policies and protect markets from sub-standard products. Policy compliance guarantees that products meet consumers' expectations, provides a fair and competitive market for industry, and ensures that governments achieve their energy goals.

CLASP, with support from the US Department of State under the Asia EDGE Initiative, implemented the *Air Conditioning Energy Efficiency and Compliance* project in 2016-2020 to support ASEAN Member States in the implementation of sustainable energy efficiency policies. Project target countries were Vietnam, Cambodia, and Lao PDR.

This project built on the work of the ASEAN Standardization Harmonization Initiative for Energy Efficiency (SHINE) program.

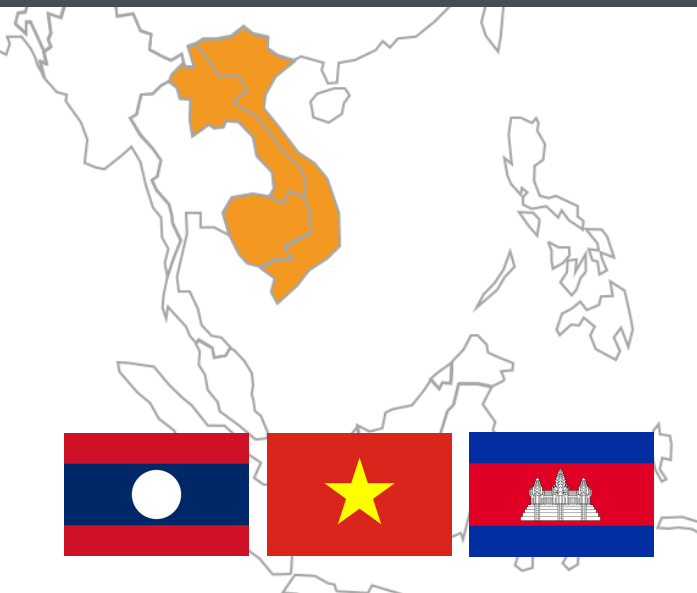
By 2040, cooling will account for 30% of peak electricity demand in ASEAN countries.

International Energy Agency, 2019



Less than 20% of ASEAN households own air conditioners, suggesting significant potential for market growth.

International Energy Agency, 2019



Efficient Appliances for People & the Planet



ASIA EDGE

Enhancing Development and Growth through Energy
The U.S. Government's Indo-Pacific Energy Initiative

The Asia EDGE Initiative is a US government effort to grow sustainable and secure energy markets throughout the Indo-Pacific.

Reliable Testing Capacity Allows ASEAN Countries to Leverage Regional Resources

Mutual recognition of testing facilities increases national-level flexibility, allowing governments to choose adequate and cost-effective approaches – such as outsourcing product testing on an as-needed basis, rather than building and maintaining their own laboratories.

To strengthen regional testing capacity in support of harmonized policy implementation, CLASP, in collaboration with the Vietnamese government and Centro de Ensayos, Innovación y Servicios (CEIS), conducted an inter-laboratory comparison in Vietnam. The exercise, which took place in August 2019, assessed the performance of three laboratories accredited to conduct AC energy performance testing.

AC sample set up for a witness testing



Participants visited QUATEST 3 testing facility

CLASP and CEIS conducted facility audits and witnessed each laboratory test the same AC units. The assessment confirmed their technical capacity to perform testing with a high degree of accuracy and meet international testing requirements, allowing the laboratories to potentially serve the testing needs of other Southeast Asian nations.

CLASP convened policymakers and testing stakeholders from 8 ASEAN countries to facilitate a dialogue on the role of competent testing capacity in advancing efficiency policies, and explore opportunities for collaboration.

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“[Our] participation in [the testing exercise] was valuable – our staff...got a better understanding of...the improvements they can [make] to ensure reliable and accurate testing...results.”

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Vietnamese Test Laboratory

Robust Collaborative Enforcement Protects Regional Markets

CLASP, in collaboration with ASEAN policymakers and local and regional partners, developed the Market Surveillance for Air Conditioners: Voluntary Guidelines for ASEAN Member States to serve as a practical resource for the governments and compliance authorities when designing or strengthening policy compliance. The Voluntary Guidelines, published in 2020, make comprehensive and targeted recommendations, including the implementation of:

- **A strong legislative foundation**, comprehensive administrative guidelines, and a budget proportional to market needs to establish and run effective market surveillance.
- **Risk-based market surveillance activities**
 - so that resource-constrained compliance authorities can remove non-compliant products, even within a limited budget.
- **Cost-effective verification testing** to target
 - products with greater risk of non-compliance, and well-documented processes to secure evidence and prove non-compliance.
- **Regional collaboration and coordination** to
 - strengthen ASEAN Member States' national compliance efforts.

The Guidelines will help strengthen the regional AC market, aiding compliance authorities in the removal of products that do not meet national efficiency requirements. A strengthened market benefits energy security and economic development in the region, and reduce carbon emissions.

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“The [Voluntary Guidelines] are quite perfect and can serve as a foundation for national market surveillance strategies for... countries which [have none] in place yet.”

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International Copper Association

Strengthening Regional Policy Compliance Collaboration

During this five-year project, CLASP brought together ASEAN policymakers to discuss the benefits of and latest developments in AC energy efficiency policies, and generate awareness around the need for proper policy implementation. The workshops facilitated the participants to identify opportunities for regional collaboration and harmonization.

Regionally harmonized AC policy supports collaboration on policy compliance efforts and encourages information-sharing between countries. Regional coordination will maximize the reach of national policy compliance efforts and accelerate policy implementation across ASEAN.

Strong National Policy Implementation Benefits Regional Markets

Several Southeast Asian countries are in the process of developing or strengthening energy efficiency policies for ACs. However, without uniformly strong enforcement across the region, the market remains at risk of being flooded with low-performing products - jeopardizing energy-related goals. In 2019, CLASP initiated assistance toward robust policy compliance capacity in Lao PDR and Cambodia.

Following in-country workshops and stakeholder interviews, CLASP developed Policy Compliance Action Plans for each country. Intended as a step-by-step guide, the plans identify key stakeholders and responsibilities, provide recommended timelines, and suggest the necessary resources needed for a holistic policy compliance and enforcement. Each plan was designed with local context and specific challenges in mind.



Compliance workshop in Lao PDR

CLASP shared the Plans with the relevant ministries in each country. In Lao PDR, the ministry welcomed the Plan and committed to incorporate it into their work plan.

The Plans provide ample guidance for policymakers in each country to enforce energy efficiency policies when adopted, building national capacity and strengthening regional defense against the dumping of inefficient products.

Participants visiting EEI laboratory in Thailand



Nearly 40% of participants at workshops and trainings were women