

Energy efficiency is a key ingredient to achieving universal decarbonised electricity. Early adoption of a strong standard is crucial to avoiding lock-in of carbon intensive infrastructure

Energy Transition Masterclass
Session 7 – Recap on Key Message

ENERGY EFFICIENCY

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ENERGY TRANSITION ROUNDTABLES
Energy Transition Masterclass



ENERGY
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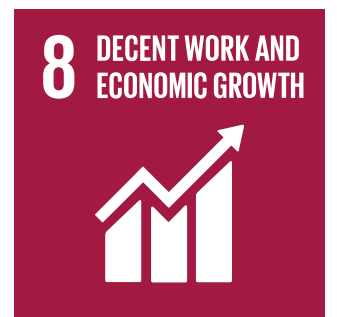
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University



MULTIPLE BENEFITS OF ENERGY EFFICIENCY

Energy is a means to development, not an end by itself. We use energy to access the services it provides, such as heating, lighting, cooling, and cleaning. Improving energy efficiency means reducing energy consumption and GHG emissions while pursuing and maintaining a good-quality life.

Energy efficiency also enables universal clean energy access and brings health benefits (e.g. by adopting efficient and clean cooking facilities) and has synergies with many other Sustainable Development Goals (SDGs).



Energy efficiency synergies with Sustainable Development Goals.
Source: IPCC, 2022: Climate Change 2022: Mitigation of Climate Change.
Cambridge University Press, Cambridge, UK and New York, NY, USA.

TYPES OF ENERGY EFFICIENCY (EE) POLICIES

- 1. Regulatory** instruments, e.g. legally enforceable minimum standards for energy efficiency of buildings or products
- 2. Financial** instruments, e.g. Grants to reduce the price of energy-efficient options
- 3. Informational** instruments, e.g. Energy labelling schemes to enable people to take account of energy in their purchase decision-making





MINIMUM STANDARD REGULATION: BUILDING CODES

1

Improved building codes can reduce energy consumption and avoid carbon lock-in over the lifetime of the buildings.

Experience in the EU with decades of adopting energy efficiency policies for buildings showed a strong possible impact of residential building code on reducing energy intensity.

The building performance requirement tends to be strengthened over time.

Reference: Economidou, M., Todeschi, V., Bertoldi, P., D'Agostino, D., Zangheri, P., Castellazzi, L.: Review of 50 years of EU energy efficiency policies for buildings. Energy Build. 225, 110322 (2020)



MINIMUM STANDARD REGULATION: BUILDING CODES

Data requirement:

Setting minimum required standards requires sufficient underlying data to ensure a level of policy that supports energy goals without imposing a heavy burden on consumers and the country.

This can be challenging in places that do not have a lot of resources for testing and analysis, or do not have a lot of historical data to work with.



MINIMUM STANDARD REGULATION: BUILDING CODES

Existing buildings:

Performance standards are suitable for applying to new construction but not the existing ones. No single solution could quickly transform the existing buildings with high energy intensity.

Improving EE of existing buildings occupied by tenants faces particular challenges when owners are the one to pay for the improvement while benefit accrues to the renters.

2

FINANCIAL INSTRUMENTS

SUBSIDIES OR TAX REBATES

on energy-efficient buildings, vehicles or appliances are common instruments adopted to reduce the price of energy efficiency options.

However, those instruments can be expensive to implement and do not ensure effectiveness. For example, consumers tend to buy appliances which are of higher quality but not necessarily more energy efficient.

Subsidies and tax rebates may redistribute benefits towards the wealthy while tax on polluting options usually imposes burden on the poor.

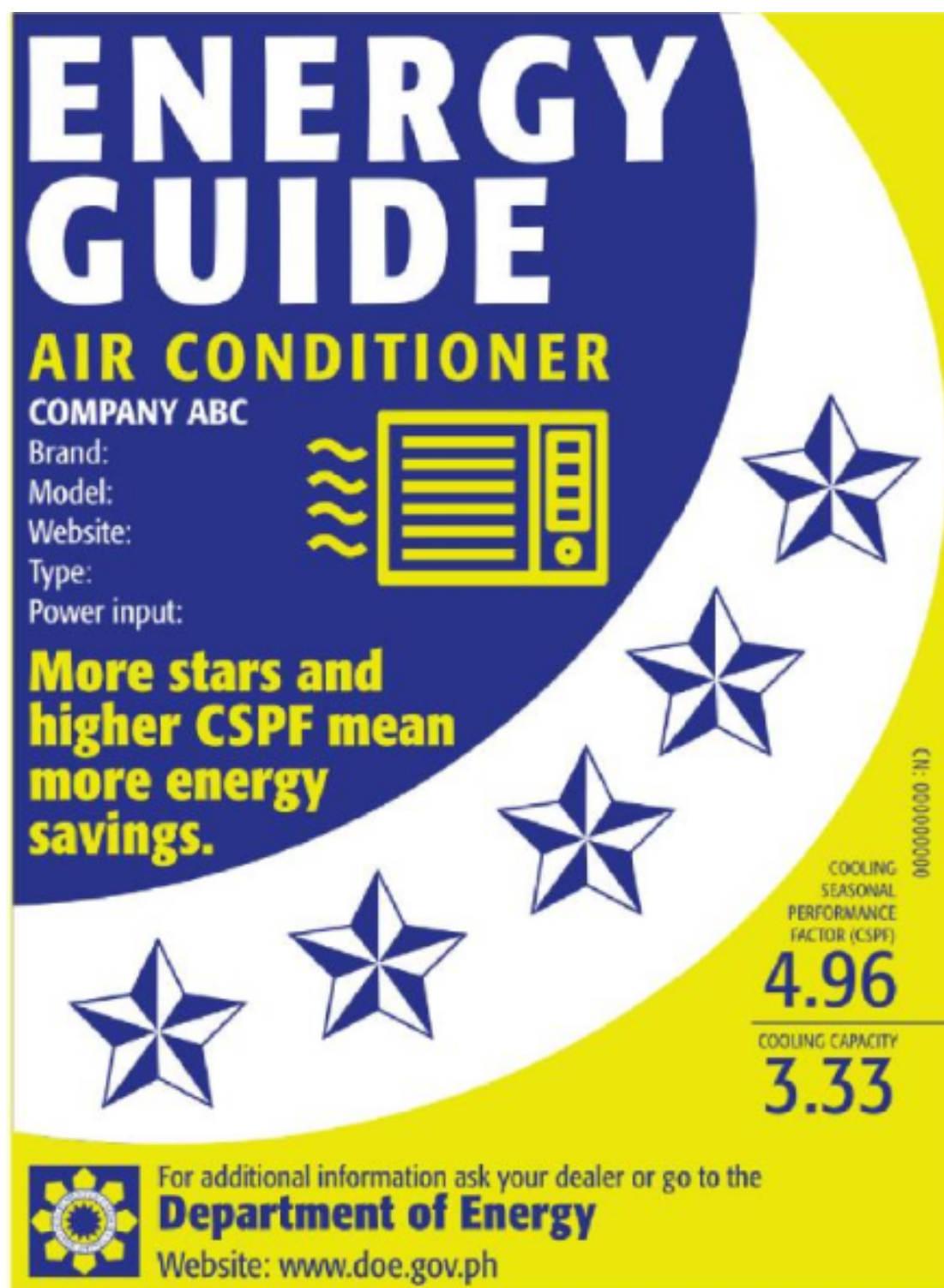
Reference: Houde, Sébastien & Aldy, Joseph. (2017). Consumers' Response to State Energy Efficient Appliance Rebate Programs. American Economic Journal: Economic Policy. 9. 227-255.



INFORMATION-BASED INSTRUMENTS

Energy labels / certificates help energy-efficient products being recognised and more valued.

Information based-instruments are less costly to implement but can be highly effective in directing consuming behaviour towards EE products.



Energy Label in the Philippines



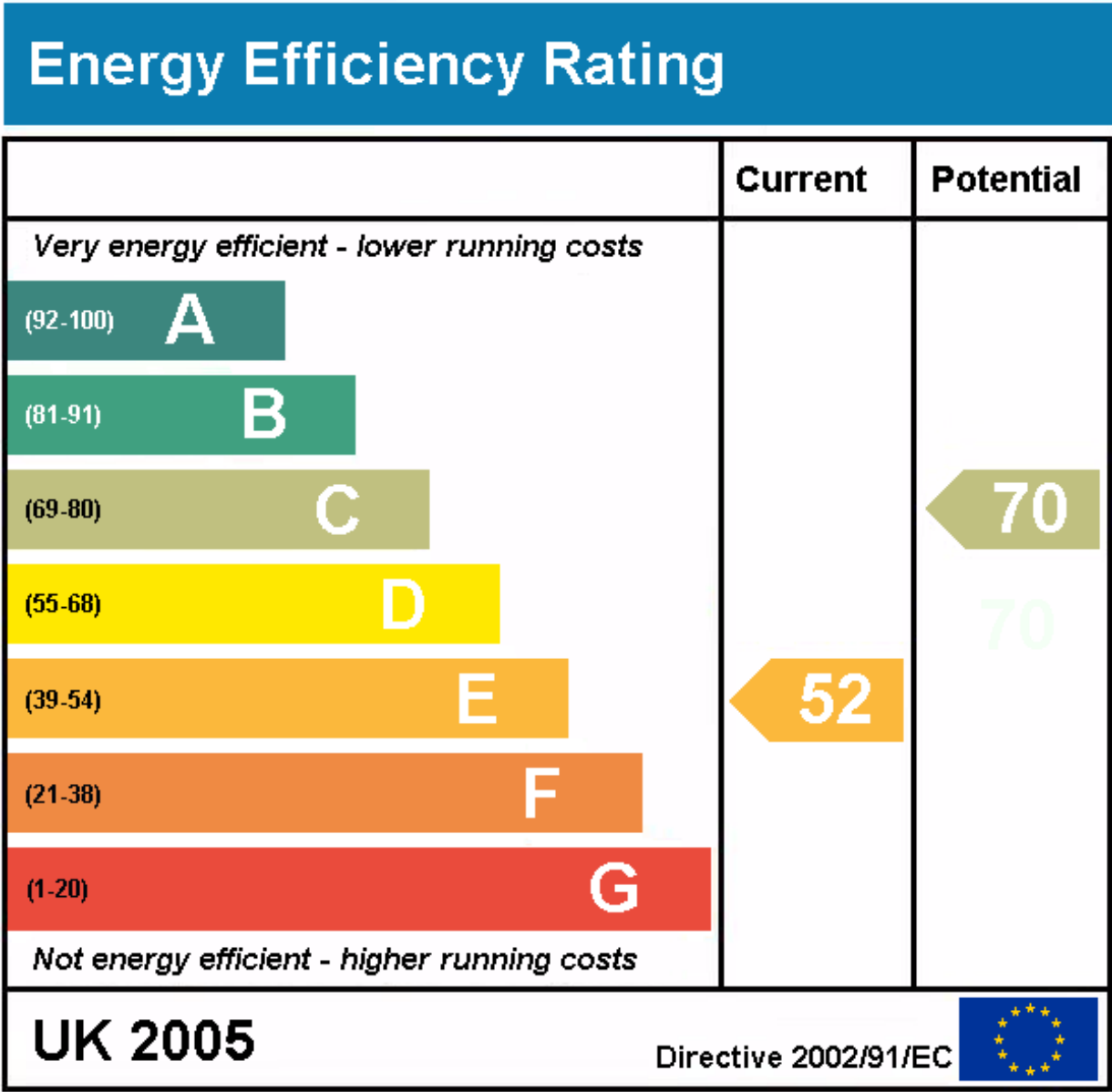
Energy Label in Vietnam

Energy Performance Certificate


issued for a property informs potential tenants and buyers with energy efficiency information in making their decisions.

High energy-efficient labelled buildings are often valued, sold or rented with a higher price compared to ones with the same characteristics but not certified.

Reference: Ramos, A., Gago, A., Labandeira, X., Linares, P.: The role of information for energy efficiency in the residential sector. Energy Econ. 52, S17–S29 (2015).




Energy Performance Certificate in the UK



It is critical for countries that are rapidly expanding built infrastructure like Indonesia, the Philippines and Vietnam to consider implementing strong standards to avoid lock-in of carbon-intensive infrastructure.

Each energy efficiency scheme, whether minimum standard regulation, pricing, information instruments, or its combination, is useful for specific contexts and sectors. Preliminary assessments and data monitoring mechanisms are of importance to determine the design and enable program evaluation.





NEXT SESSION

TRADE, INVESTMENT AND GREEN INDUSTRIAL POLICY

Dr. Rebecca Pearse

10:00-12:00 HANOI-JAKARTA TIME

11:00-13:00 MANILA TIME

JUN 14

ETP Round Tables is a two-year capacity building and networking program of the ETP in Indonesia, the Philippines, and Vietnam. The program aims to build awareness and understanding of practical solutions and pathways that can support Indonesia, the Philippines, and Vietnam accelerate their transition to 100% zero-carbon energy.

Over a 24-week structured online training programme, the ETP Roundtables – **Energy Transition Masterclass** will provide a suite of tailored professional forums (training sessions) to enable the exchange of information, develop leadership among the region's energy transition stakeholders, and endow participants with the latest understanding and tools to accelerate energy transition for both policy and market contexts.

See more: <https://www.energytransitionpartnership.org/>

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