

# KCEP readiness manufacturing initiative

## Findings from the AC market assessments in Thailand, Vietnam and the Philippines

A presentation to the International Conference On Sustainable Cooling  
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# CLASP's Southeast Asia Cooling Program Scope

## National PSPs

**Thailand**

**Vietnam**

**Philippines**

## ASEAN regional compliance program

**Accreditation support**

**Generation of MRAs**

**Regional network for compliance authorities**

# AC market assessments

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- Market Size



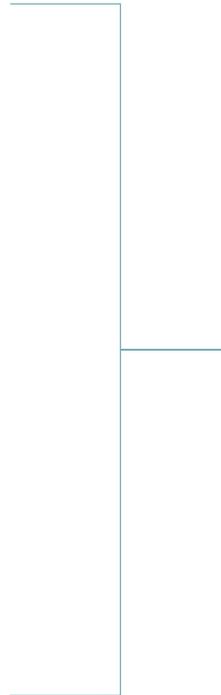
Based on national statistics, Euromonitor, JARN.

- AC types

- Brands

- Labeling

- Policy Analysis



Based on retail store visits & manufacturer interviews:

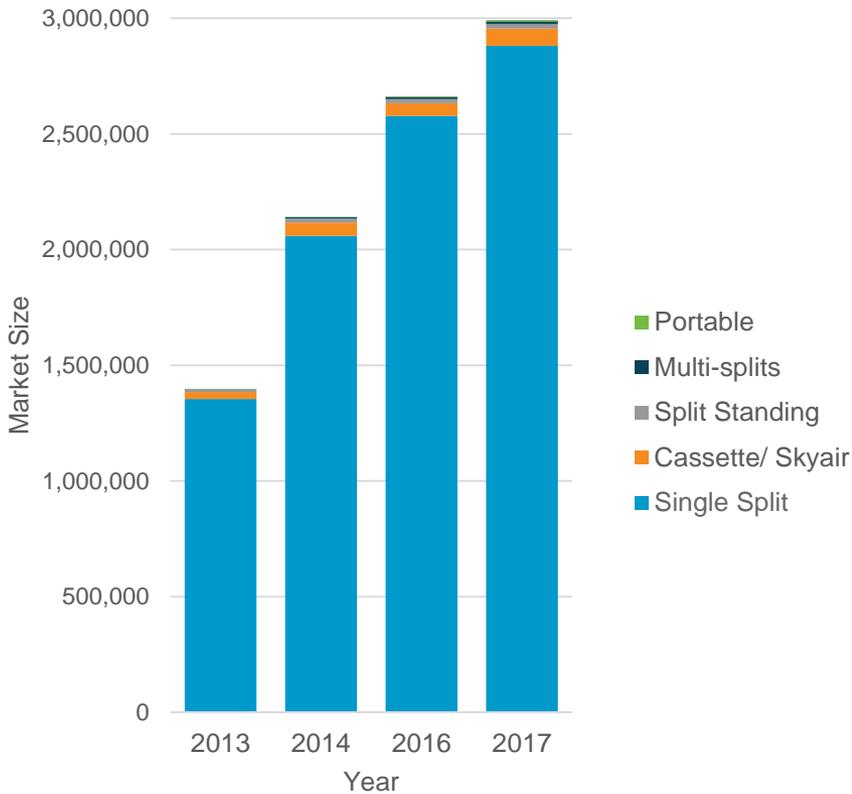
- Vietnam: 1,773 data points
- Philippines: 3,900 data points
- Thailand: 2,146 data points

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# Vietnam market findings

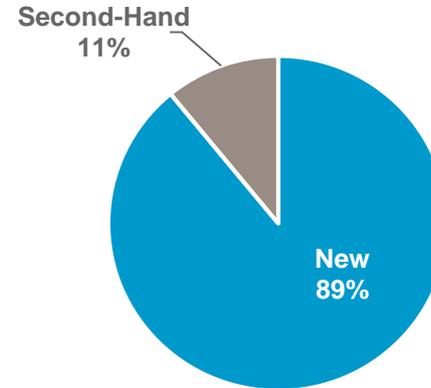
# The Market for ACs is Growing in Vietnam

## AC Market Size in Vietnam



\*Market Size is calculated as: (Imports + Manufacturing) - Exports

## Estimated Ratios of New & Second-Hand ACs in the Market



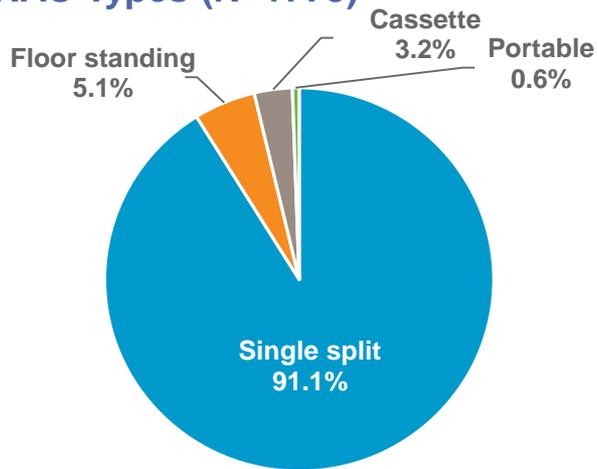
\*Estimates provided by manufacturers

## 2017 Market Size Estimates

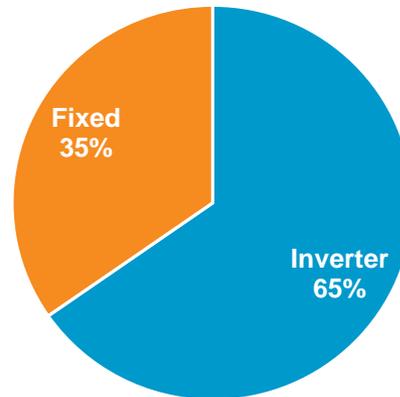
- ~ 3 million ACs (EEI)
- ~ 2.4 million ACs (Euromonitor)
- ~ 1.7 million ACs (JARN)

# AC Types in Vietnam

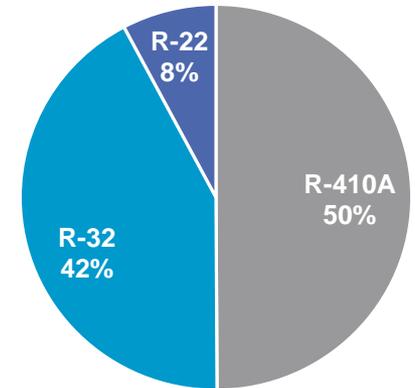
RAC Types (N=1773)



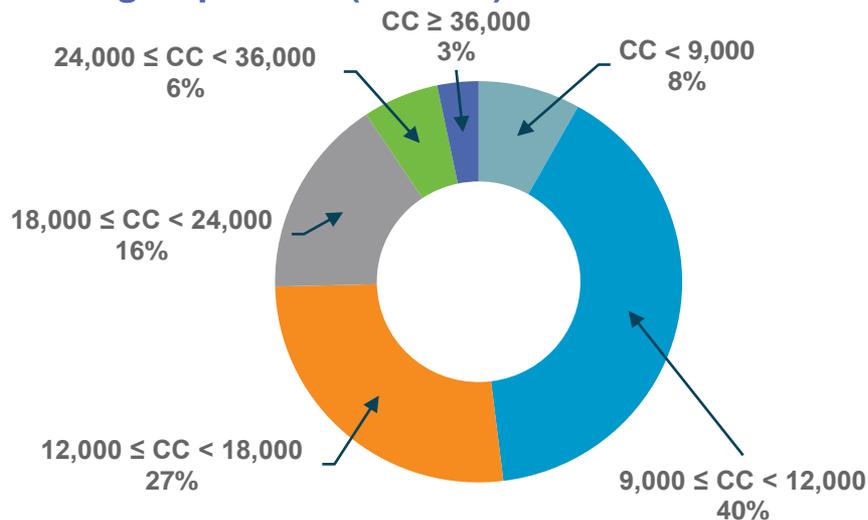
Compressor Types (N=1773)



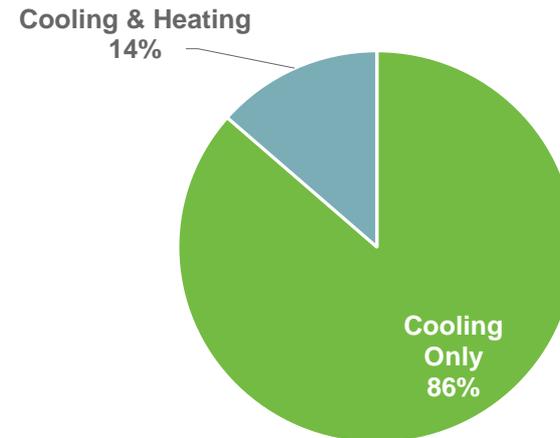
Refrigerant Types (N=1773)



Cooling Capacities (N=1773)

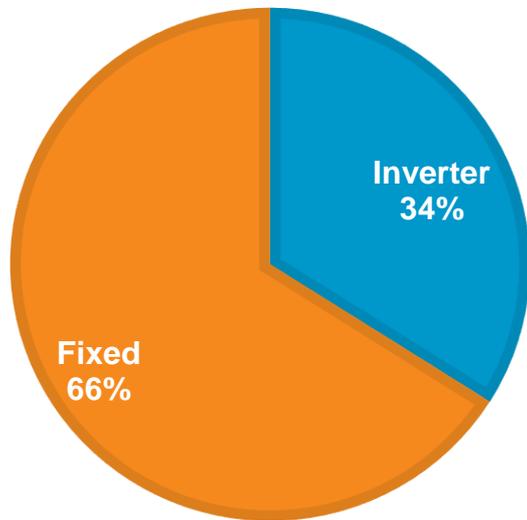


Cooling & Heating Function (N=1773)

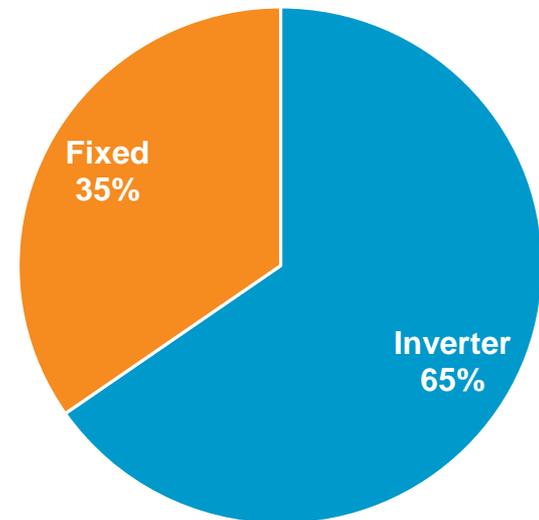


# Inverter AC Market Transformation in Vietnam

Compressor Types in 2013



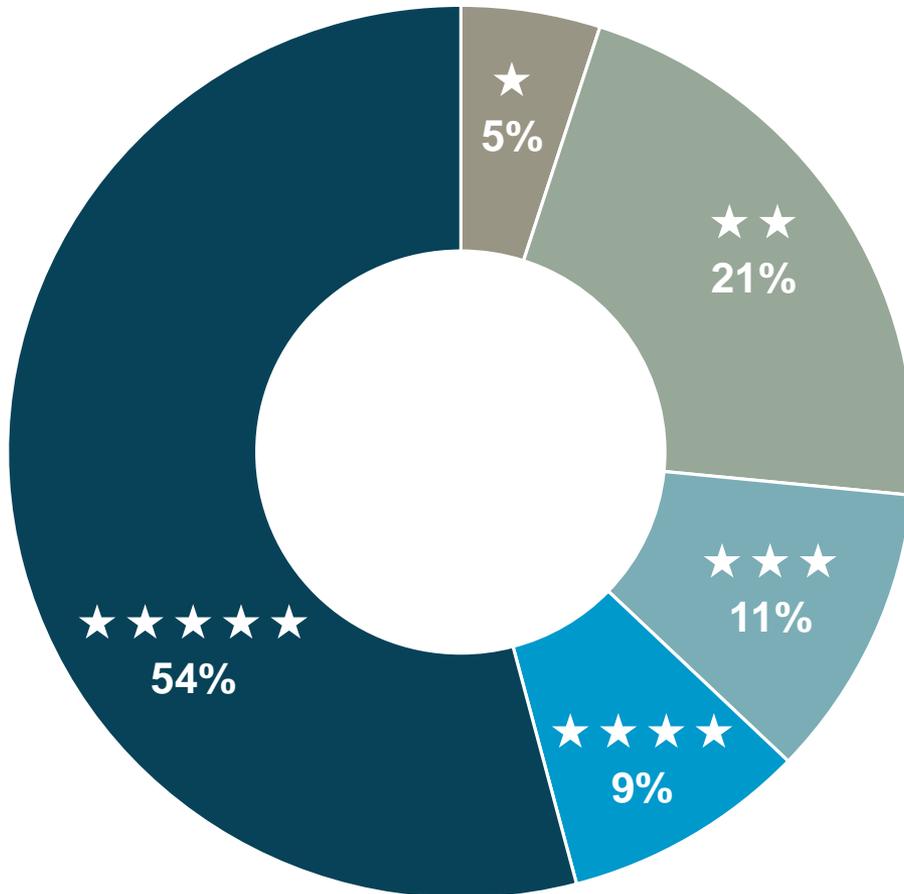
Compressor Types in 2018



- Inverter models market share has nearly double in 5 years

# AC Labeling State of Play 2018 in Vietnam

Energy Star Ratings (N=584)

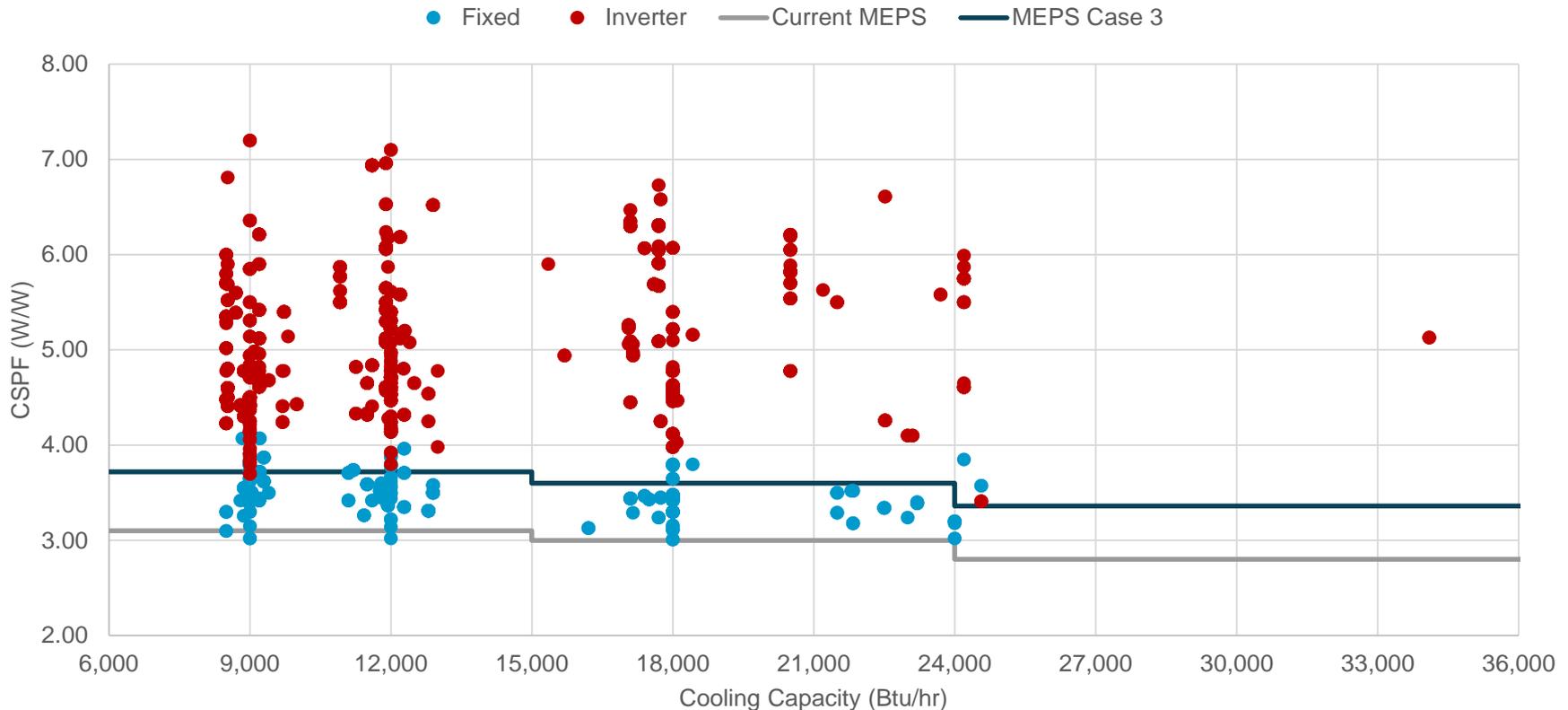


- 99.8% of the models bore certified labels
- **62.8% of models on the market bear ratings of 4-5 stars**



# Impacts of potential MEPS scenarios in Vietnam

## Policy Case #3 - MEPS Raised by 20% (N=1391)



Vietnamese market is prime to an increase in the MEPS level of ambition:

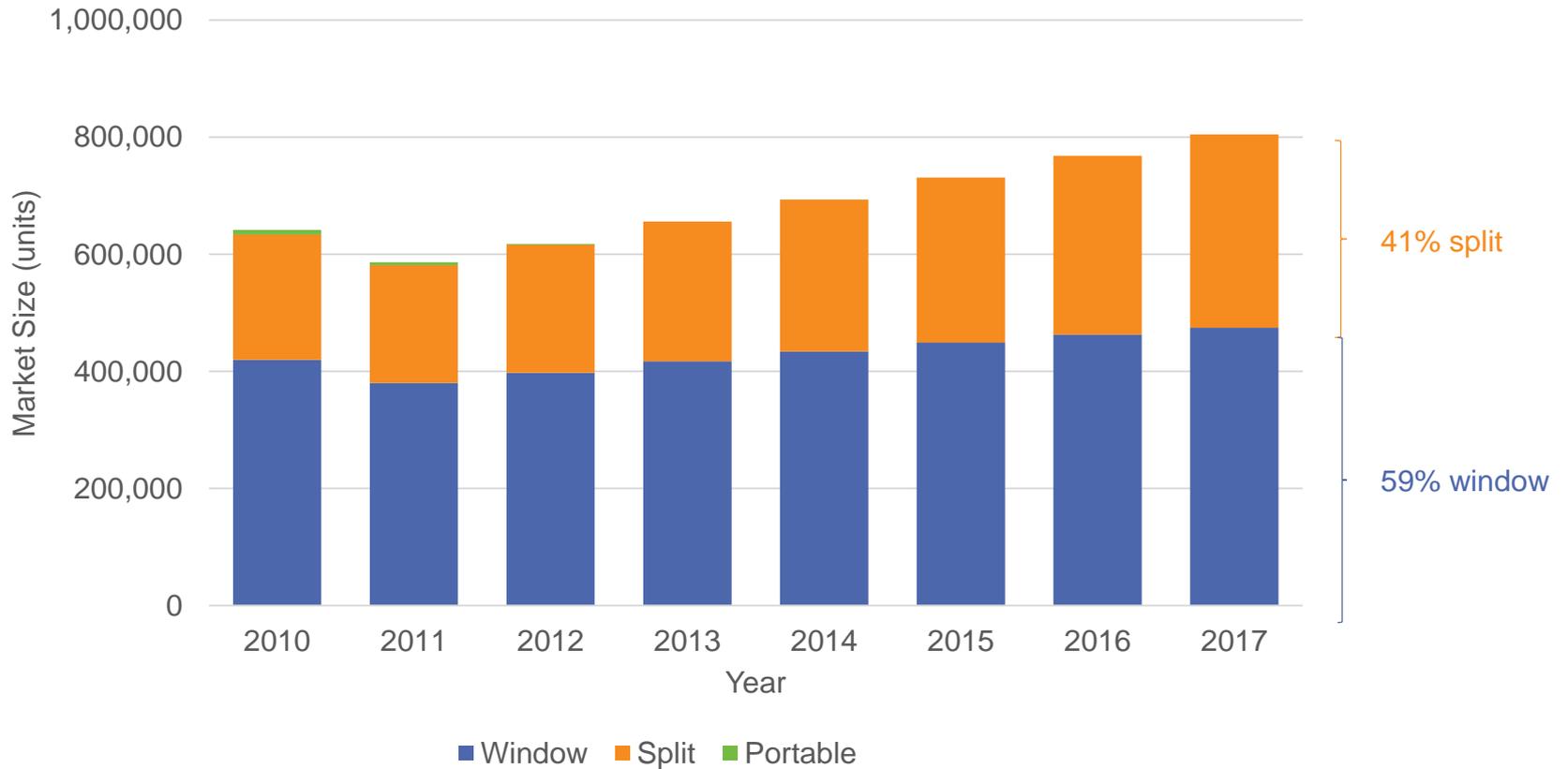
- A 20% increase to current MEPS will remove 22% of AC models from the market (78.1% of models on the market already meet or exceed this efficiency level)

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# Philippines market findings

# The market for ACs is growing in the Philippines

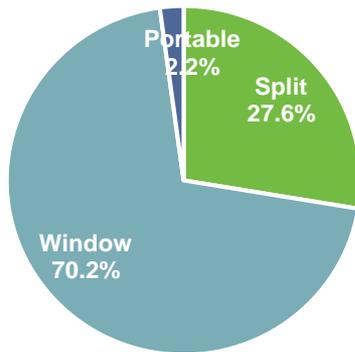
## AC Market Size in the Philippines\*



\*Euromonitor data

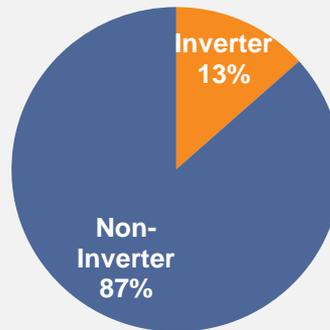
# AC types in the Philippines

RAC Types (N=3932)

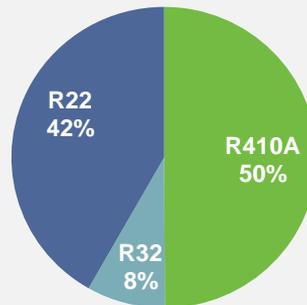


## WINDOW

Compressor Types (N=2762)

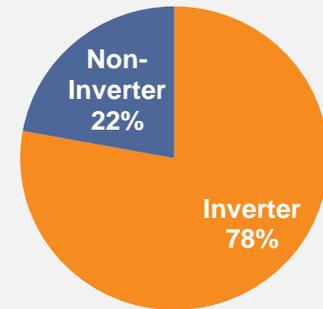


Refrigerant Types (N=2586)

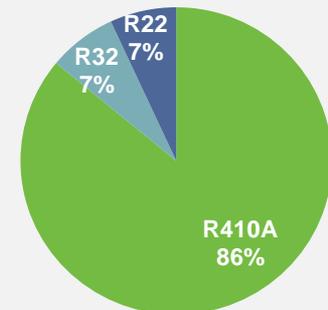


## SPLIT

Compressor Types (N=1085)

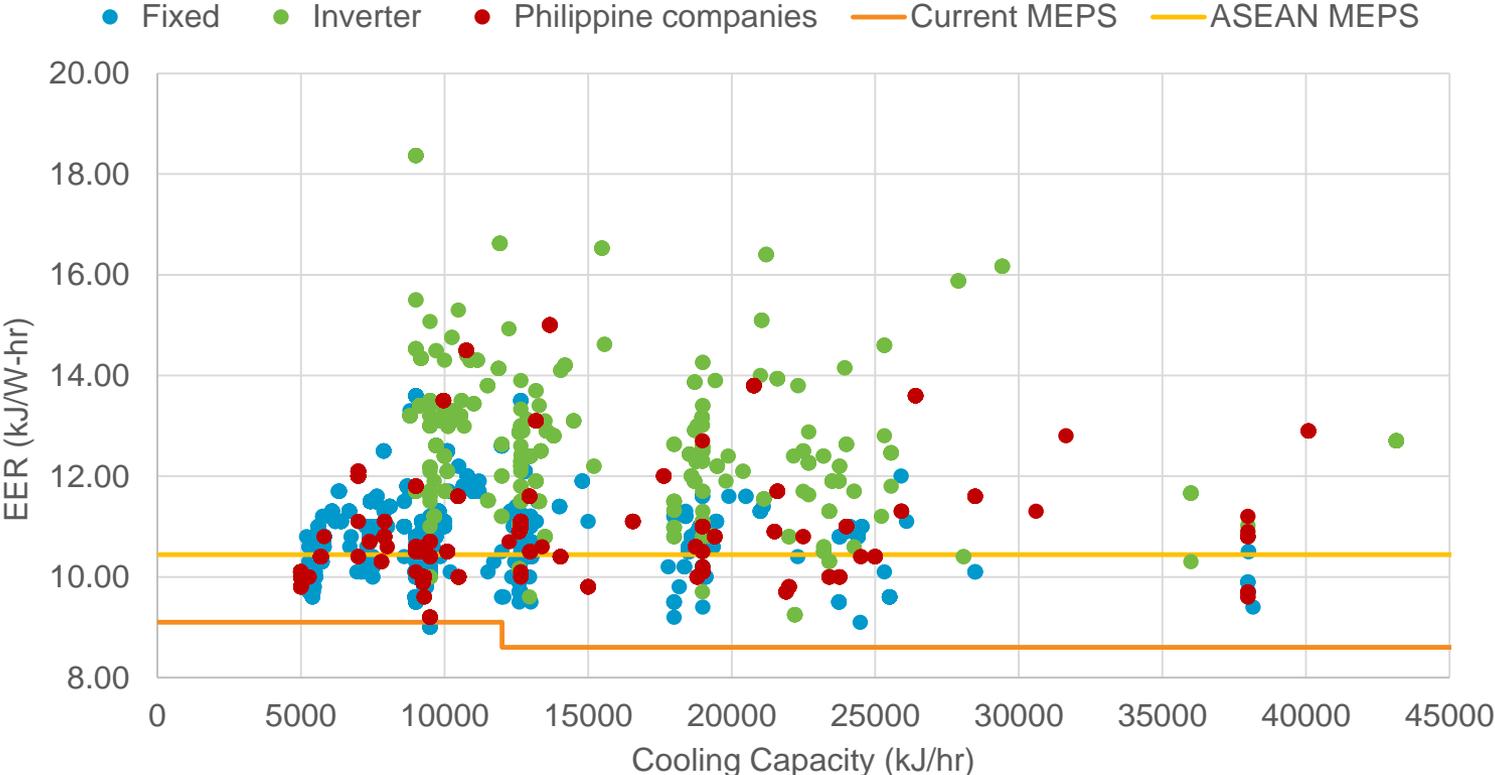


Refrigerant Types (N=899)



# Cooling Capacity vs. Efficiency – ASEAN MEPS

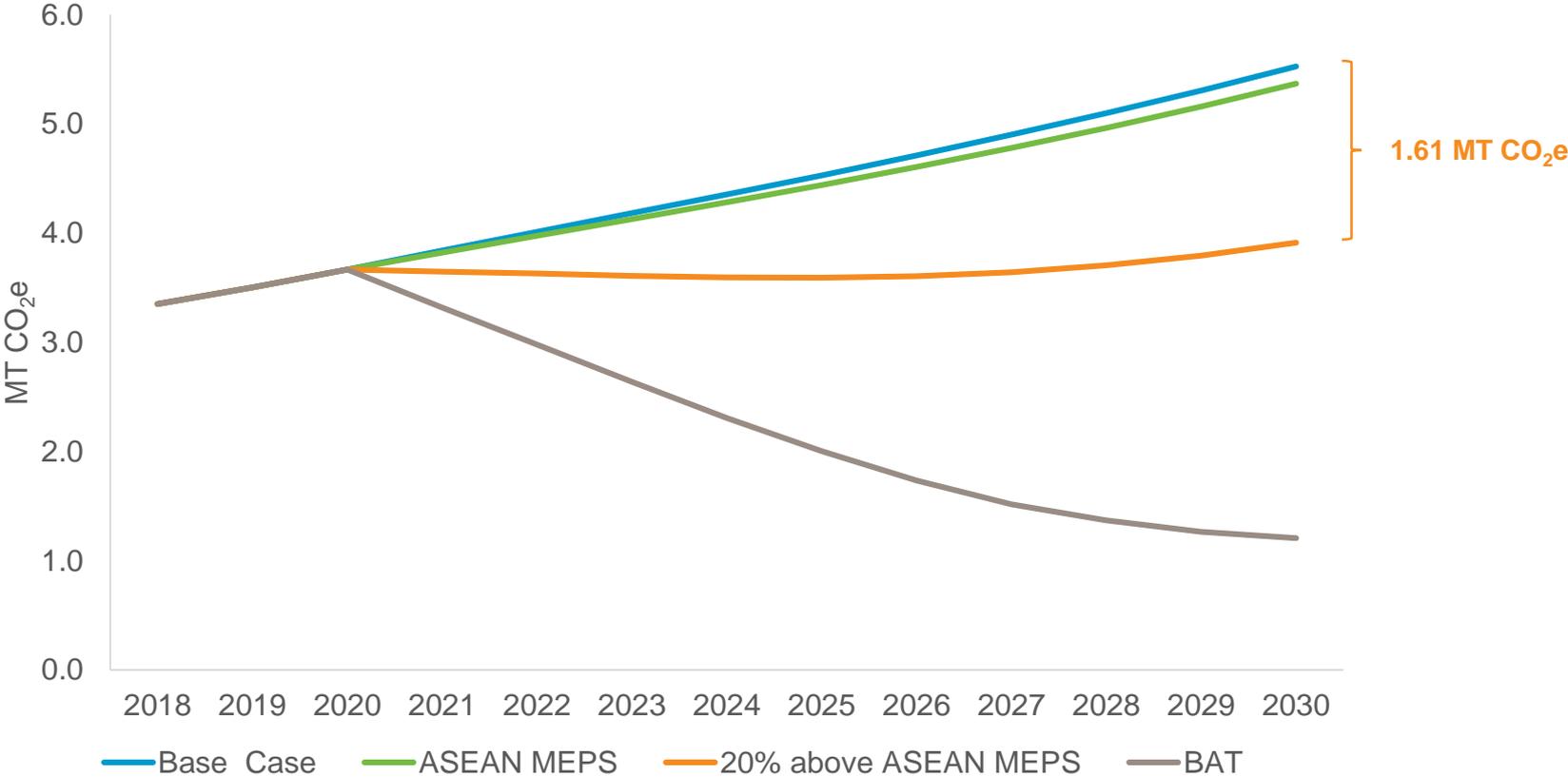
### Cooling Capacity vs. Efficiency by Compressor Type\* (N=2999)



\*Models manufactured by Philippine companies (Concepcion-Carrier and Koppel Inc.) are shown separately

# National level benefits - emissions savings

### The Philippines Emissions Savings

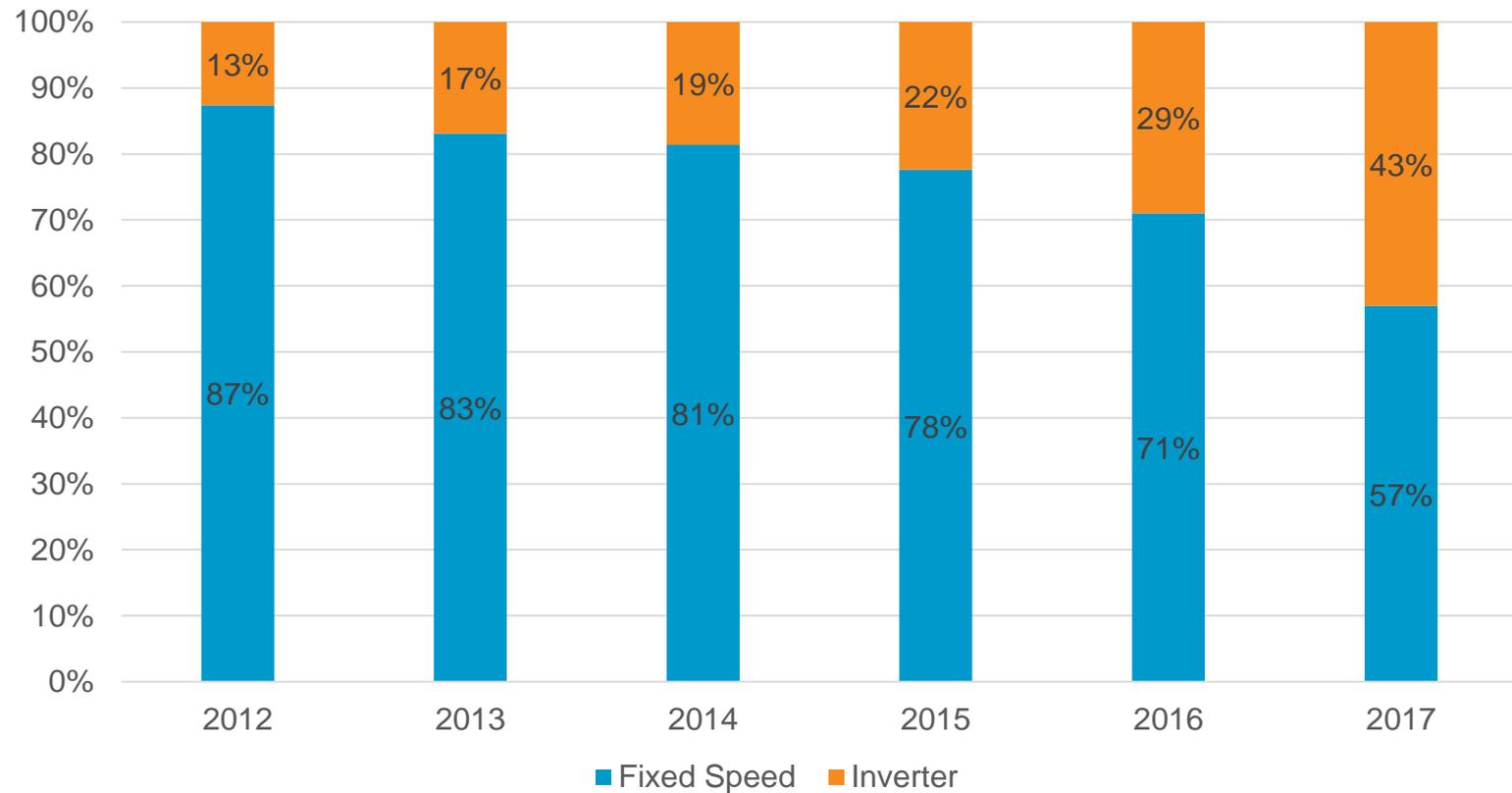


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# Thailand market findings

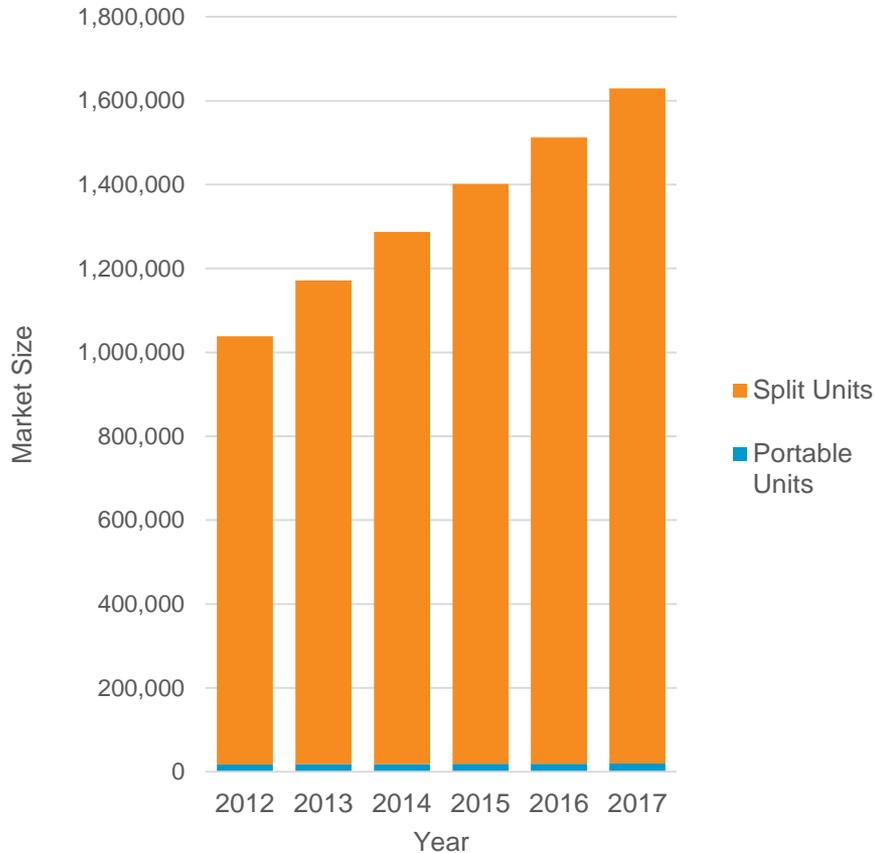
# Thailand – Gathering Evidence of Market Transformation

## Market Share by Compressor Type

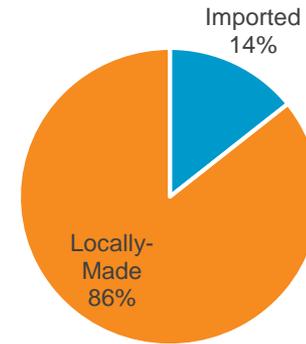


# The Market for ACs is Growing in Thailand

## AC Market Size in Thailand



## Estimated Ratios of Imported and Local AC Units in the Market (N=1135)

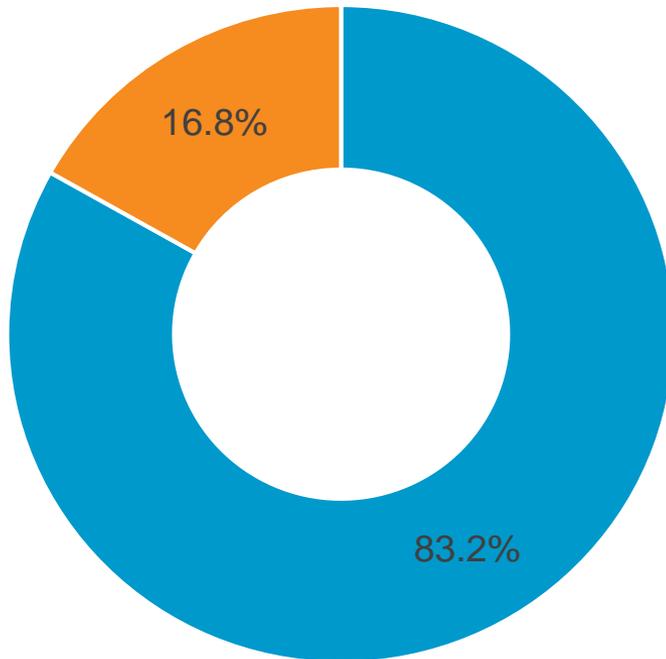


## 2017 Market Size Estimates

- ~ 1.6-1.7 million ACs (EEI)
- ~ 1.6 million ACs (Euromonitor)
- ~ 1.4 million ACs (JARN)

# AC Labeling State of Play 2018 in Thailand

Energy Labels in Thailand (N=1135)



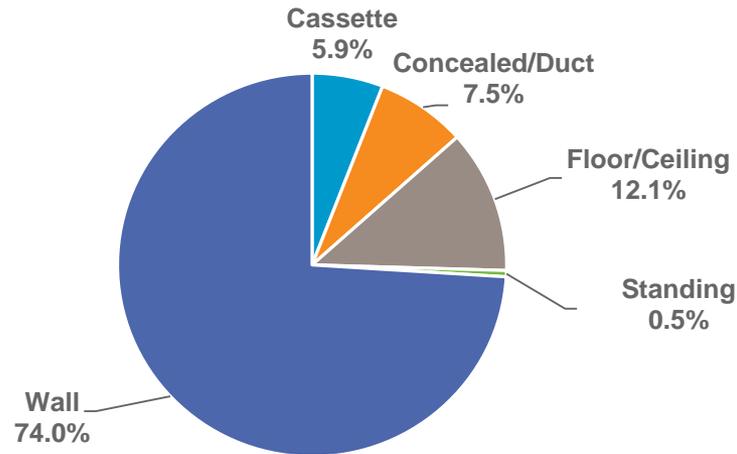
■ EGAT #5 Label   ■ No Label

- 83.5% of the models bore certified labels
- All certified labels were number 5 labels

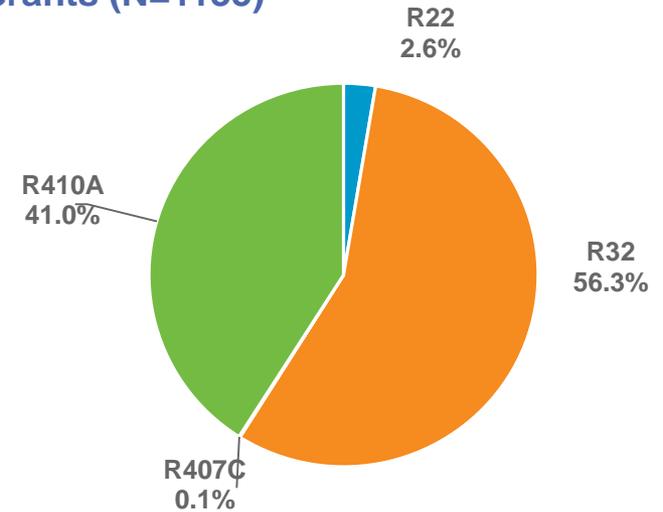


# AC Types in Thailand

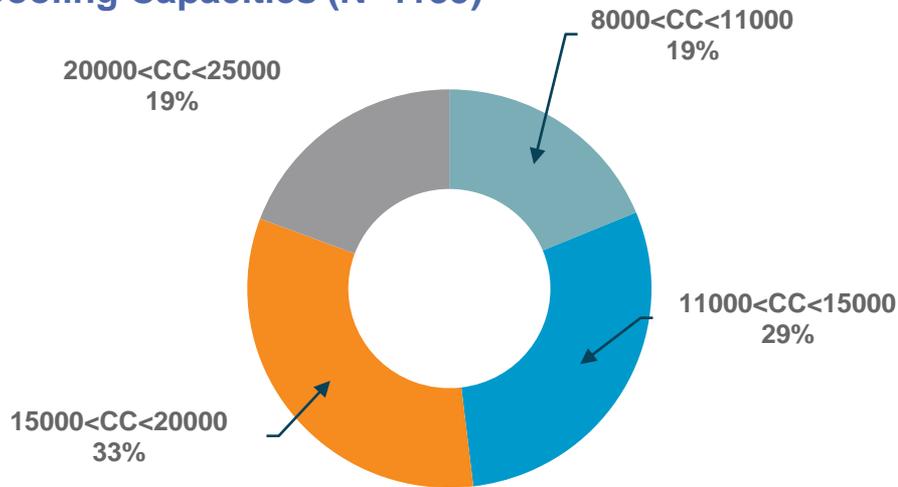
RAC Types (N=1135)



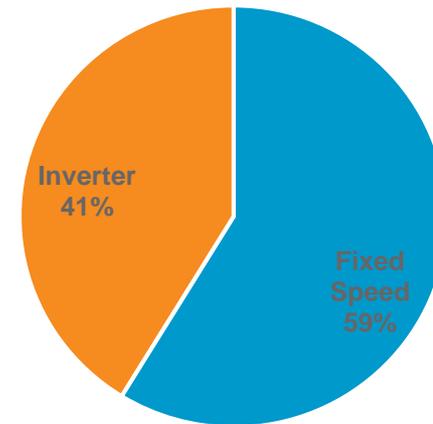
Refrigerants (N=1135)



Cooling Capacities (N=1135)

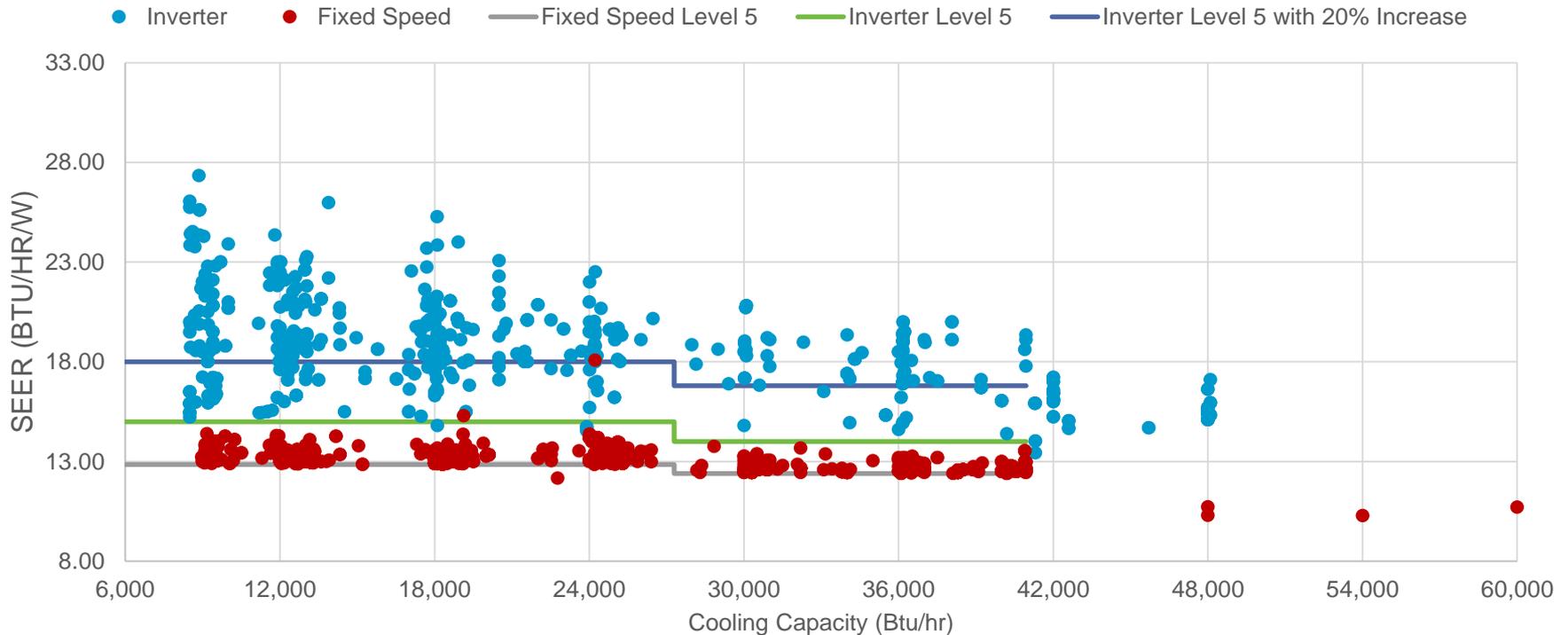


Fixed Speed vs. Inverter Units (N=1135)



# Impacts of potential label revisions scenarios in Thailand

## Policy Case: EGAT Level 5 Label Increased by 20%



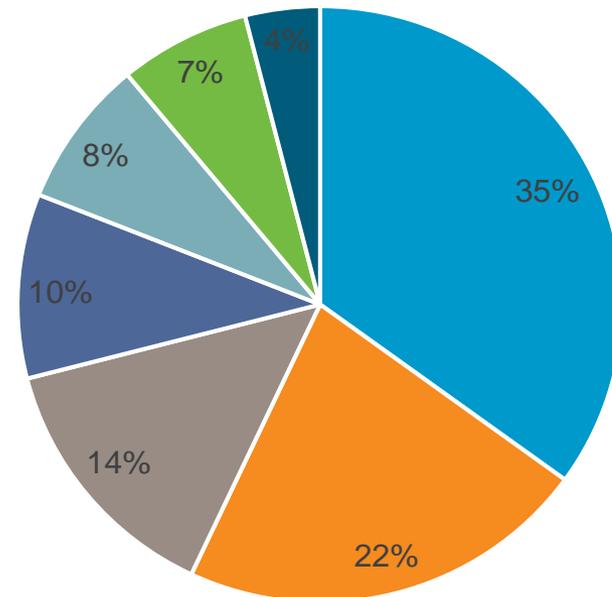
Thai market is prime for an increase in the EGAT Level 5 label level:

- A 20% increase in the Level 5 Label will decrease the market share of Level 5 labels to 27.2%, with only one fixed speed model at Level 5

# Thailand – Understanding Consumer Preferences

- The most frequently cited factor for choosing an AC unit was energy efficiency
- Energy efficiency is also a top factor in government procurement, where the EGAT #5 label is often a requirement

Top Factor in Selecting an AC Unit



- Energy Efficiency
- Rapid Cooling
- Reliability
- Healthy Function
- Comfort of Use
- Quiet Operation
- Other

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Any questions?

