

Enforcement and Surveillance of MEPS & MELS in Singapore

Presented at: Singapore Study Tour – ASEAN Cool

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Outline

1. Overview
2. Inspection
3. Verification Testing

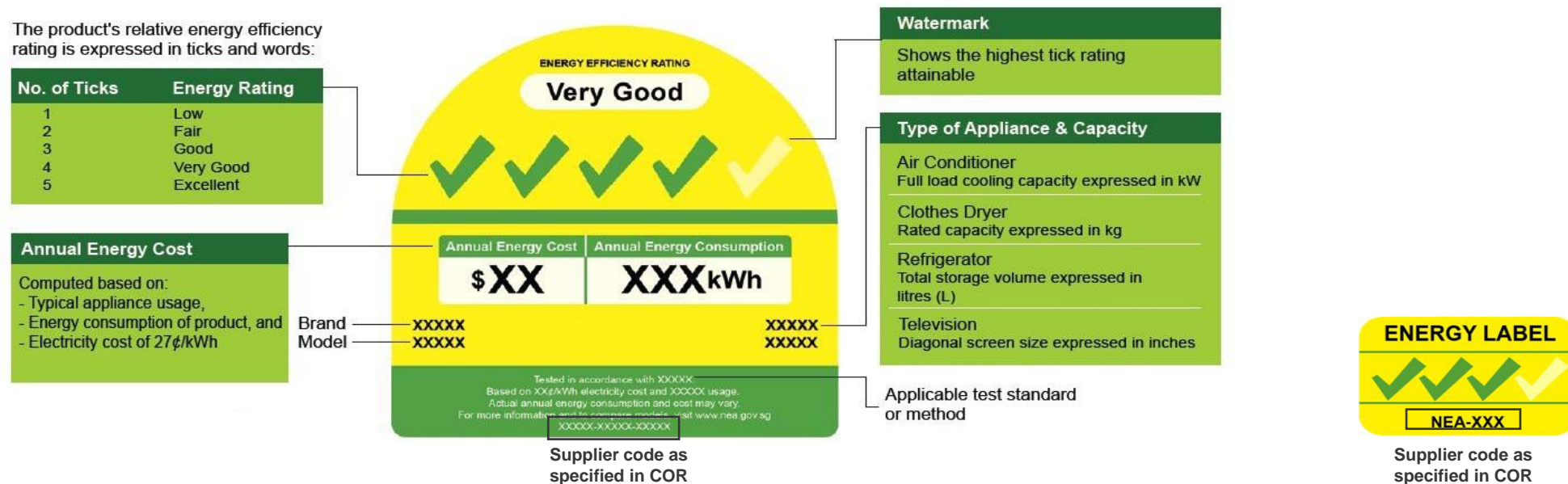
Overview

- Under the **Energy Conservation Act (ECA)**, authorised officers are given the authority to **check and inspect regulated goods** that are **supplied in Singapore** to ensure that they comply with **MEPS and MELS** requirements.
- The **enforcement and surveillance of MEPS and MELS in Singapore** serves to **safeguard the robustness** of these policies.



Inspection

- **Regular inspections** are carried out to **verify** that regulated products offered for sale by suppliers bear **genuine, prominently displayed energy labels** issued by NEA.
- Verification of proper energy labelling ensures **consumers receive authenticated energy efficiency information**, empowering them to make **more informed purchasing decisions** across both physical retail outlets and online platforms.



Energy Label for air-conditioners, refrigerators, clothes dryers and televisions



Energy Label for lamps

Checks on Energy Labels

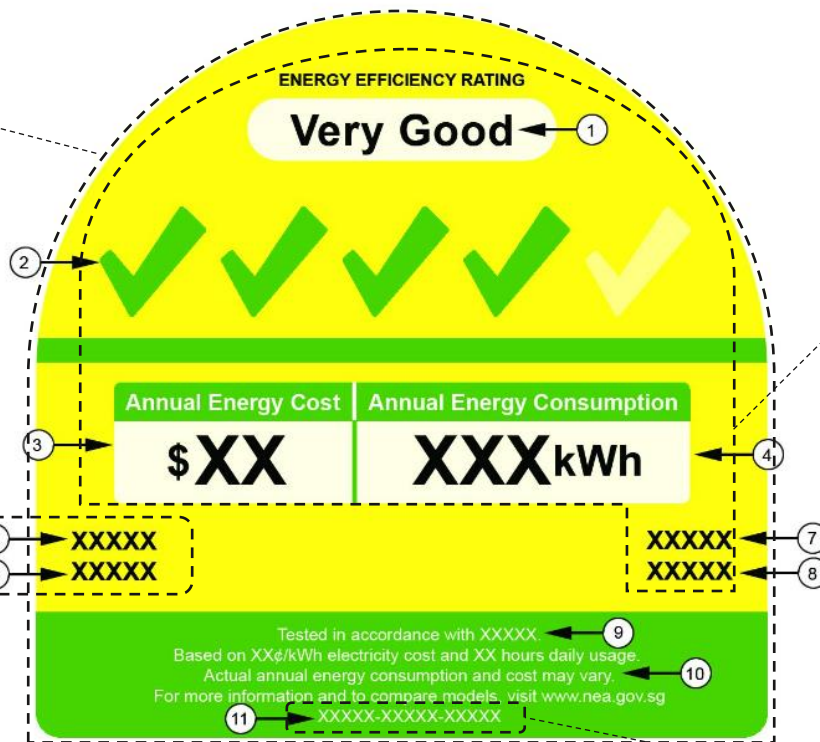
1. Overview

Check if:

- energy label is missing, defaced, or obscured
- dimension, shape, or colour of energy label is incorrect
- font type, size or colour is incorrect
- any incorrect text or spelling

2. Brand/Model

- **Check** brand/model of label and ensure it tallies with labelled good
- **Verify** if brand/model is in the latest active MELS list
- If missing, model is either unregistered or failed to meet MEPS



4. Energy Information

Check the following energy information against the active MELS list for the brand/model:

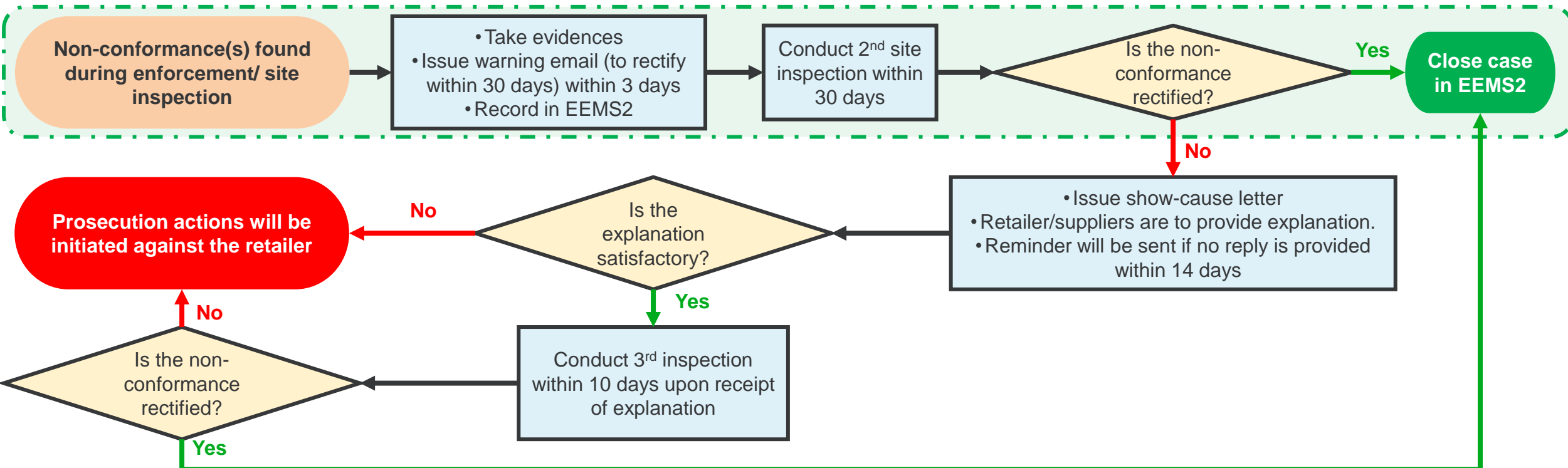
- Energy Efficiency Rating in Words (1)
- Energy Efficiency Rating in Ticks (2)
- Annual Energy Cost (3)
- Annual Energy Consumption (4)
- Type of Appliance (7)
- Size or Cooling Capacity for air conditioner (8)

3. COR Number

- **Check** if COR Number tallies with brand/model in the active MELS list

Flow of Enforcement Procedures

- In general, the enforcements are carried out with a light-touch as non-compliances are given ample opportunities to rectify.
- Thus far, all retailers and suppliers have been co-operative, and they have rectified the non-compliances upon being issued with warning letters.



Advertisement of Regulated Goods

- Under the **ECA**, any person **advertising** any **regulated goods** in an **advertisement** that has any **visual element** must ensure that

(a) an Energy Label is, as far as practicable, displayed in the advertisement next to the image or description of the regulated goods

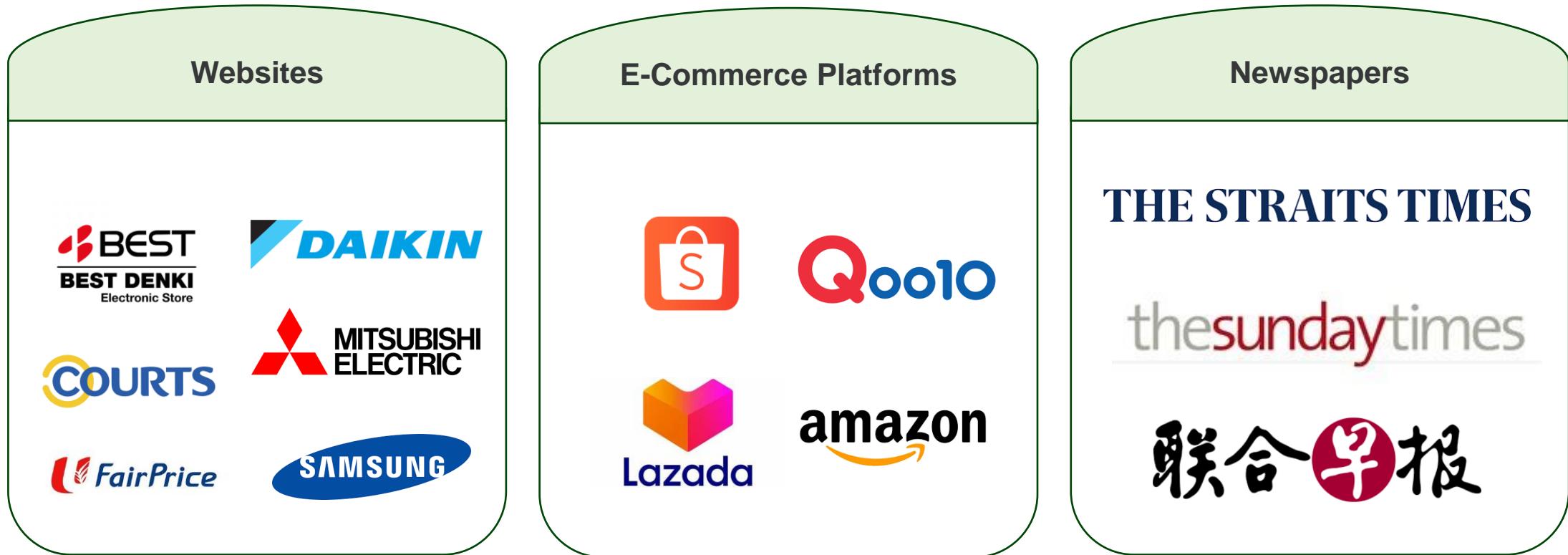


(b) or where it is not practicable, the tick rating for the regulated goods is prominently stated in the advertisement.



Online Inspection

- Online inspection of listings and advertisements is carried out on websites, e-commerce platforms and newspapers.



Example of Non-Compliance



2 Door Refrigerator
220L | 250L | 300L | 330L | 360L



J-Tech Inverter



Extra Eco Mode



Energy Efficiency: 3 Ticks

FREE



Local Shipping



2 Year Warranty



Tick rating displayed here appears to resemble an NEA-issued label. Which may cause confusion.



Example of how NEA-issued Energy Label should be displayed in an advertisement.



Example of how tick rating should be displayed if space is too small for energy label to be seen clearly.

Verification Testing

- **Verification Testing (VT)** is a **compliance monitoring process** to assess whether the actual energy performance of a product conforms to the performance reported by its supplier.
- This serves to **safeguard the integrity of MELS** and **preserve consumer and industry confidence** in the energy labelling scheme.



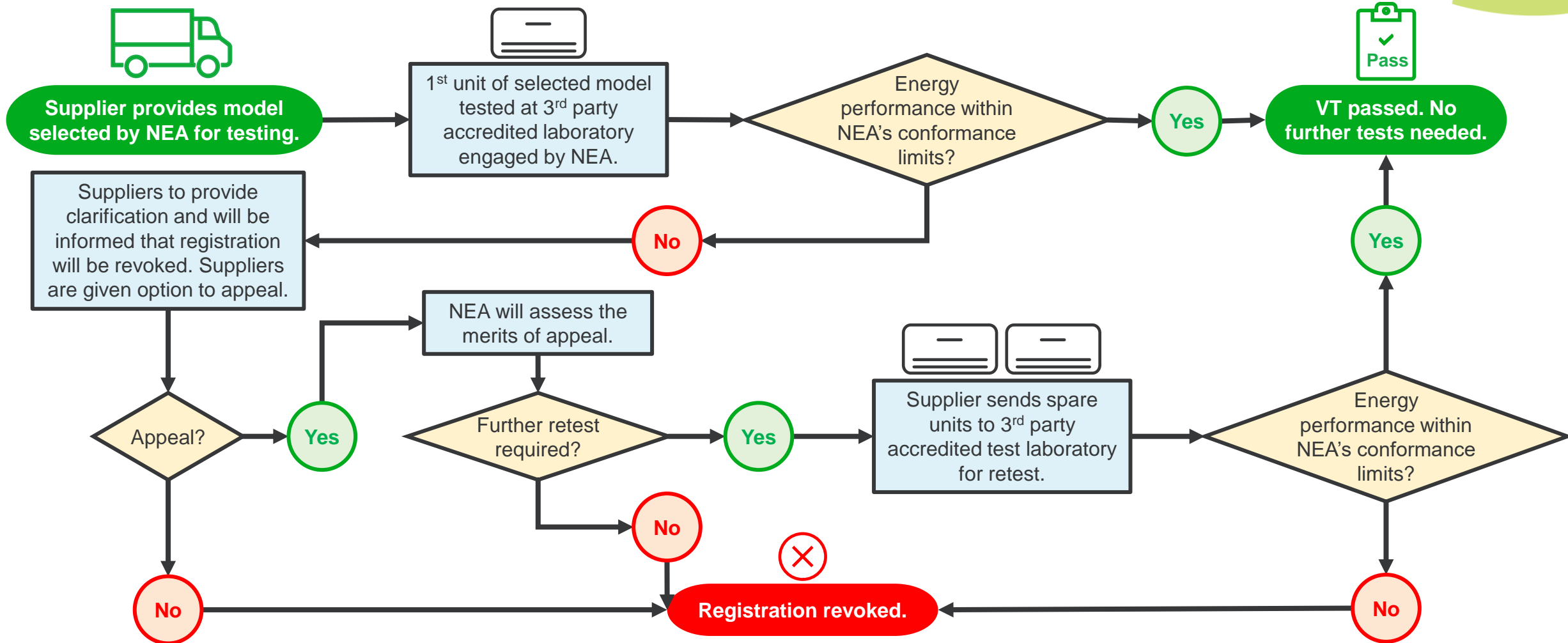
Conformance Assessment

- During VT, appliances are **tested** for their **energy performance** in **third-party accredited laboratories** according to **internationally recognized standards or protocols**.
- **Key parameters** from the VT reports are used to assess if the energy performance of the model conforms with **VT conformance limits** publicly available in NEA's website.
- **All information** from VT reports are **cross-referenced** against the specifications declared by suppliers in their test reports submitted during product registration to ensure **consistency** of the **declared information**.

Regulated Goods	Limit
Air-conditioner (including single-phase Portable Air-Conditioner)	COP computed from results of VT > 0.9 x COP computed from Test Report data
Refrigerator	Energy consumption computed from results of VT < 1.10 x Energy consumption computed from Test Report data
Clothes Dryer	Energy consumption computed from results of VT < 1.10 x Energy consumption computed from Test Report data
Television	Energy consumption computed from results of VT < 1.10 x Energy consumption computed from Test Report data
Lamp	Refer to compliance conditions for lamps in Test Report section
Three-Phase VRF Air-Conditioner	COP computed from results of VT > 0.9 x COP computed from Test Report data (i.e. COP for 100%, 75%, 50% and 25% loading).
Three-Phase Induction Motor	(a) For motors with rated output power of up to 150kW (100% - motor efficiency at rated output power) from results of VT \leq 1.15 times of (100% - Minimum Efficiency at the rated output power for the respective IE classes) (b) For motors with rated output power of above 150kW (100% - motor efficiency at rated output power) from results of VT \leq 1.10 times of (100% - Minimum Efficiency at the rated output power for the respective IE classes)

VT Conformance Limits

Verification Testing Process



VT Compliance Rates

- In 2023/2024, a total of 51 models over 5 product categories were tested from 34 different suppliers.
- Overall compliance rates** were found to be **90.2%**.
- All regulated appliances, apart from lamps, had 100% compliance.
- This gives assurance on the overall quality of appliances in the Singapore market as well as the reliability of energy labels in providing accurate information to consumers.

	Air-Conditioner	Clothes Dryer	Lamps	Refrigerator	Television
No. of models tested	10	2	20	15	4
No. of models within the specified conformance limits ("Pass VT")	10	2	15	15	4
No. of models outside the specified conformance limits ("Fail VT")	0	0	5	0	0
Compliance Rate	100%	100%	75%	100%	100%
Overall Compliance Rate	90.2%				

Summary of 2023/2024 VT results

Brand	Models Tested				
	Air-Conditioner	Clothes Dryer	Lamps	Refrigerator	Television
Beko		✓			
Bosch				✓	
Brandt		✓		✓	
De Dietrich				✓	
Dyccorra			✓		
Firstled			✓		
Fisher & Paykel				✓	
Fujitsu	✓				
Hisense					✓
Hitachi	✓			✓	
iLumston			✓		
Ledvance			✓		
LG	✓			✓	
Luxton			✓		
Megaman			✓		
Midea	✓				
Miele				✓	
Mitsubishi Electric	✓			✓	
Mitsubishi Heavy Industries	✓				
Nasonik			✓		
Osram			✓		
Panasonic	✓				
Philips			✓		
Prism+					✓
Pvtech			✓		
Racer			✓		
Samsung				✓	
Sharp					✓
Sony					✓
Sunshine			✓		
Topstar			✓		
Toshiba	✓				
V-Zug				✓	
Whirlpool				✓	
Total	10	2	20	15	4

List of suppliers selected for 2023/2024 VT

Thank you!

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