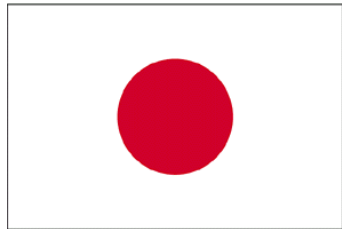


**(FY 2021) Japan – Brazil Cooperation on Energy
Efficiency and Conservation (EE&C)
Possible Application of Top Runner Program**

**(TR-2) Discussion : Issues on the Existing S&L System
of Brazil and Possible Solutions**



August 6th, 2021

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Discussion and Opinion Exchange : Agenda

Possible Application of Concept of “Top Runner (TR) Program”

(1) Input (Presentation) by the Brazilian Side

- 1) Apply the Basic Methodology of the TR Program for Setting up EE Criteria and Evaluation of the Existing “PROCEL Gold Seal Program” (Air Conditioners)**
- 2) Basic Direction to Deploy the above to the Other Appliances and Equipment**
- 3) Issues and Possible Solutions to Realize the Items 1) and 2)**

(2) Discussion and Opinion Exchange

- 1) Points of Discussion**
- 2) Ideas and Issues to Realize the Ideas in**
 - The Existing Policy and Legal Framework of S&L System**
 - Manufactures and Importers / Consumers**
- 3) Possible Solution**

(3) Wrap-up / Required Preparation for the Next Meeting

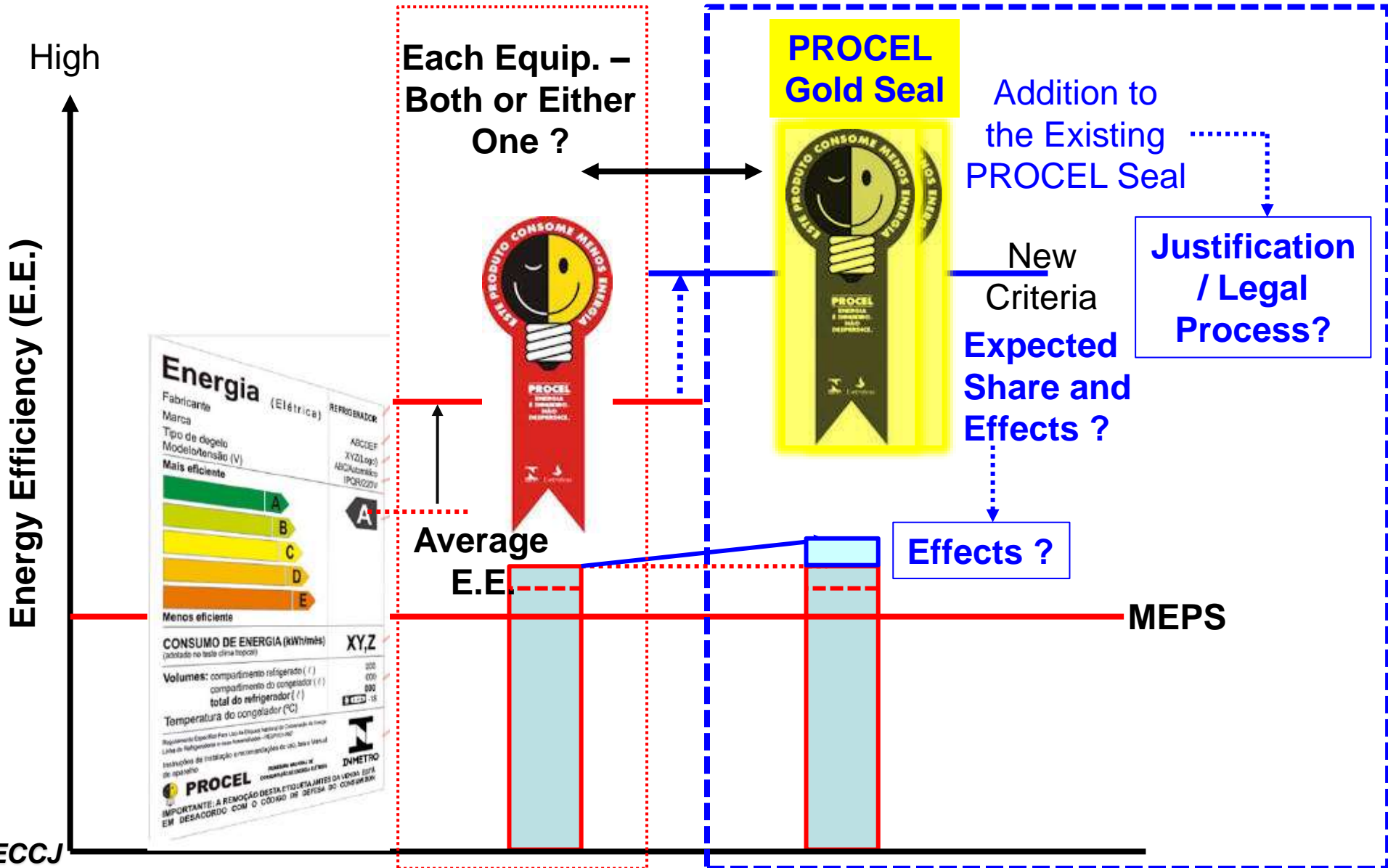
(4) Q&A on the Presentation by METI



Possible Application of Top Runner Program in Brazil - Points of Discussion to Apply to “PROCEL Gold Seal” -

Key Point and Factor		Issues	Possible Solution
“PROCEL Gold Seal” : Definition and Justification			
(Key Factors)			
Setting Criteria	Evaluation of the “Existing Top”		
	Information of R&D : ▶ Expected EE and Timeline etc.		
	Process / Methodology to Study, Propose and Authorize		
System to Test and Accredit	Methodology and Guarantee : ▶ Precise and Reliable System		
Evaluation System	Collect / Analyze Data and Info.		
Display to Promote Sales	Data and Information to Incentivize Consumers etc.		
Measure to Promote Higher EE Equip.	To Incentivize Customers		
	To Incentivize Manufactures		

Concept : Application of Top Runner Program in Brazil - Point (1) Justification / Criteria and Expected Effects -



Concept : Application of Top Runner Program in Brazil - Point (2) Influencing Factors to Realize Expected Effects -

Key Factors to Promote Manufacturing and Selling Higher E.E. of Products

- (1) Incentives for Manufacturers and Importers
- (2) Incentive for Consumers : Information to Display in the Label, etc.
- (3) Measures to Motivate Consumers for Purchasing and to Promote Sales of Equipment of “PROCEL Gold Seal”

Information of Label (Example in Japan)



Rating by 5 Stars (5-Star Product)

Achievement Ratio (%) : 112% and
Annual Electricity Consumption : 249 kWh/Y

Name of Manufacturer / Product Name

Estimated Annual Electricity Bill : 6,720 JPY

→ (Cost Performance – Merits)

Concept : Application of Top Runner Program in Brazil - Point (3) Policy and Strategy to Choose Equipment -

The Existing Appliances etc. for PBE

- 1-GAS WATER HEATERS
 - 2-CENTRIFUGAL PUMPS AND MOTOR PUMPS
 - 3-AIR CONDITIONERS
 - 4-VERTICAL FREEZERS, FROST-FREE VERTICAL FREEZERS AND HOR FREEZERS.
 - 5-BUILDINGS
 - 6-HOME GAS STOVES AND OVENS
 - 7-COMMERCIAL ELECTRIC OVENS
 - 8-MICROWAVE OVENS
 - 9-DECORATIVE LAMPS - INCANDESCENT LINE - 127V AND 220V
 - 10-LAMPS FOR HOUSEHOLD USE - INCANDESCENT LINE - 127V AND 220V
 - 11-COMPACT FLUORESCENT LAMPS 12Vdc
 - 12-COMPACT FLUORESCENT LAMPS WITH INTEGRATED BALLAST (127V)
 - 13-COMPACT FLUORESCENT LAMPS WITH INTEGRATED BALLAST (220V)
 - 14-HIGH PRESSURE SODIUM STEAM LAMP
 - 15-SEMI-AUTOMATIC CLOTHING WASHERS
 - 16-AUTOMATIC CLOTHING WASHERS TOP OPENING (TOP LOAD)
 - 17-AUTOMATIC CLOTHING WASHERS FRONT LOAD
 - 18-AUTOMATIC CLOTHING WASHERS AND DRYER WITH UPPER OPENING (WASH AND DRY)
 - 19-AUTOMATIC CLOTHING WASHERS AND DRYER WITH FRONT OPENING (WASH AND DRY)
 - 20-THREE-PHASE ELECTRIC MOTORS
 - 21-PBE VEHICLE
 - 22-REFRIGERATORS, REFRIGERATORS, COMBINED, COMBINED FROST-FREE
 - 23- PHOTOVOLTAIC ENERGY SYSTEM
 - 24-Systems and equipment for solar water heating (PBE Solar - collectors and reservoirs)
 - 25-TELEVISORS - STANDY-BY
 - 26-INSULATING LIQUID DISTRIBUTION TRANSFORMERS
 - 27-TABLE, WALL, PEDESTAL AND CIRCULATOR FANS.
 - 28-CEILING FANS 127 V
 - 29-CEILING FANS 220 V
- 
- 

Candidate Appliances and/or Equipment for PROCEL Gold Seal

(1) Air Conditioners



(2) What are the next appliances
What are the reasons ?

Prioritized Item(s) among the Existing Appliances / Equipment ?



New Policy / Strategy ?

The Existing Policy and Criteria to Choose the Appliances and Equipment in Brazil

Concept : Application of Top Runner Program in Brazil - Point (3) Policy and Strategy to Choose Equipment -

Case of Japan (Top Runner Program)

1. Conditions to Choose the Targeted Appliances and Equipment

The Following 3 Conditions Should Be Considered.

- (1) The Appliance / Equipment Used in Large Quantities in the Country
- (2) The Appliance / Equipment Consumed Large Amount of Energy During Usage
- (3) The Appliance / Equipment Required Particular Efforts to Improve E. E.

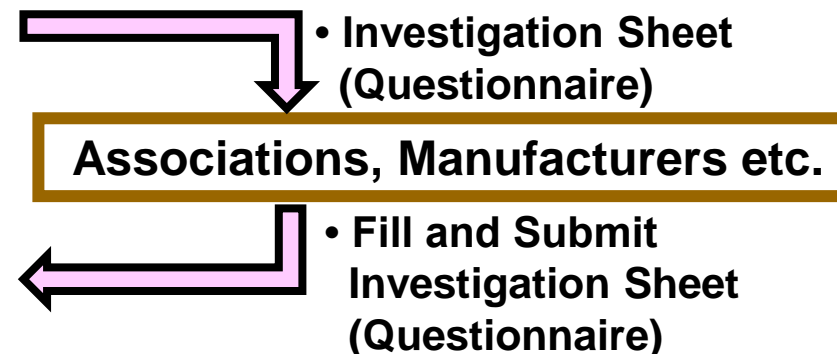
2. System to Collect Data and Information

**Reporting System Established
under the EC Act**

- Evaluation :
Weighted Average (*1)

**METI –
Agency for
Natural
Resources and
Energy (ANRE)
– E.C. Division**

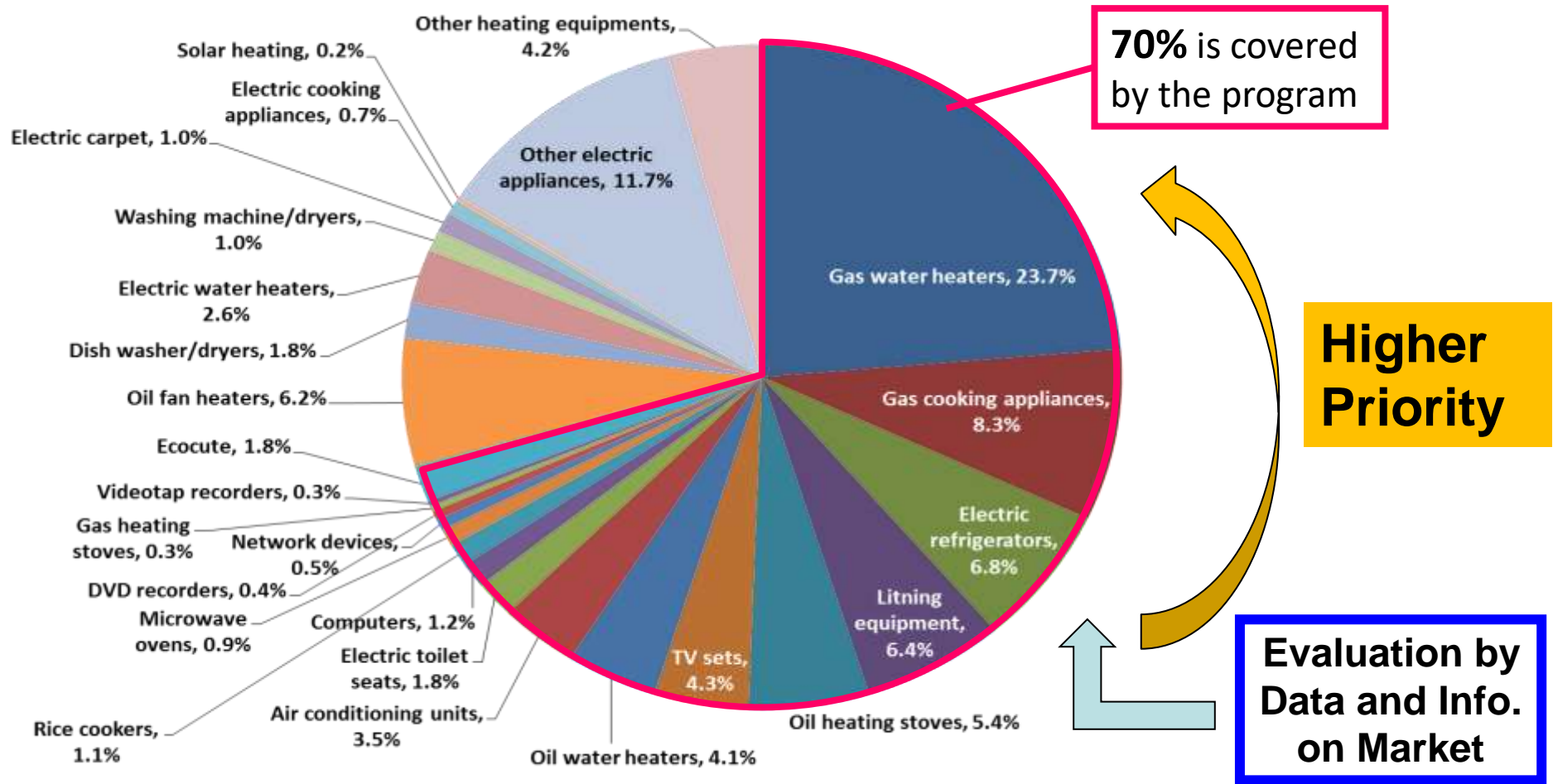
Investigation Flow



$$(*1) = \frac{\sum_{n=1}^{n=k} ((E.E.) \times (Shipped Amount))n}{\text{Total Amount of Shipped Products}}$$

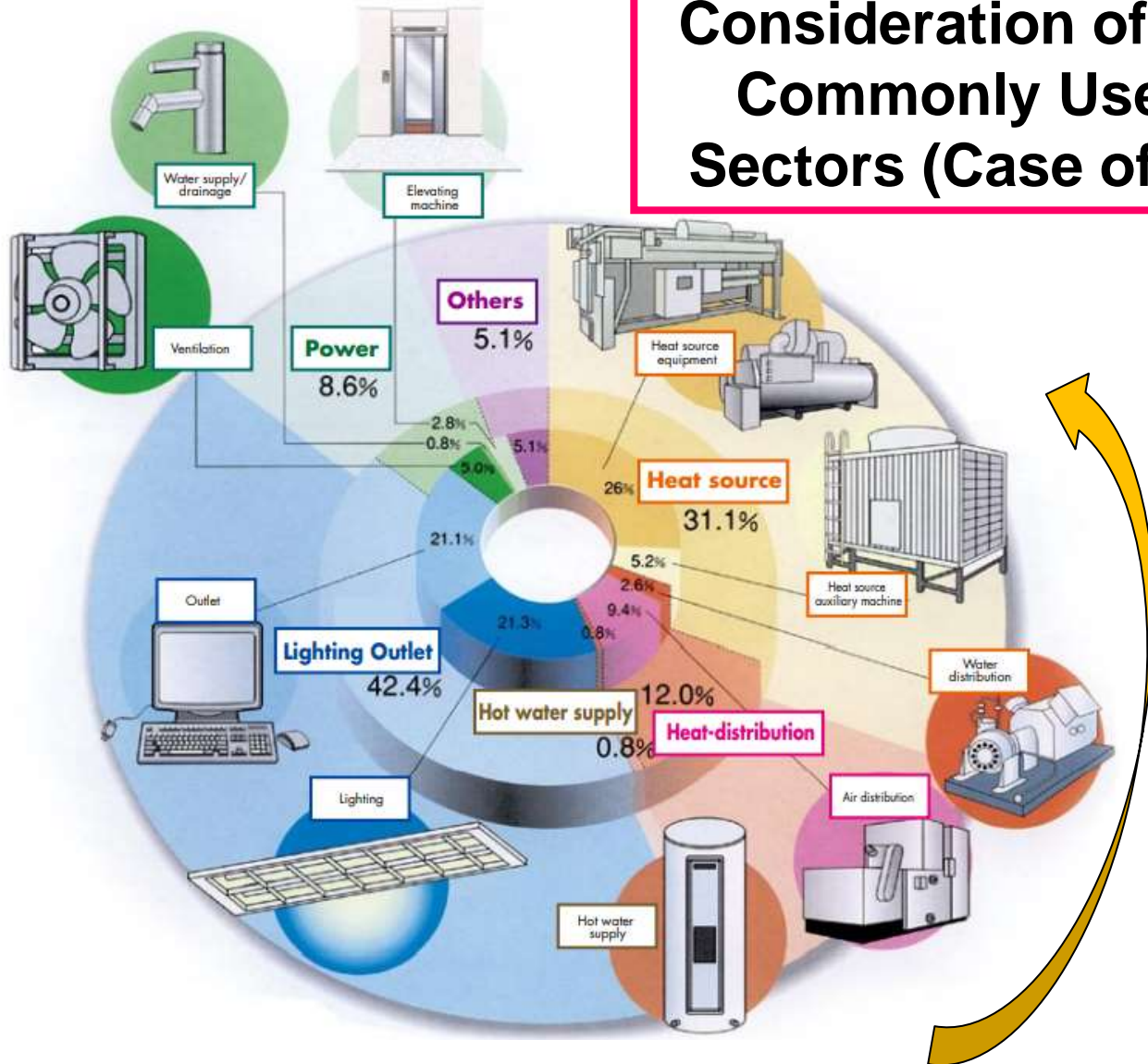
Concept : Application of Top Runner Program in Brazil - Point (3) Policy and Strategy to Choose Equipment -

○ Coverage (Household) : Approx. 70% of Final Energy Consumption



Concept : Application of Top Runner Program in Brazil - Point (3) Policy and Strategy to Choose Equipment -

Consideration of Equipment Commonly Used among Sectors (Case of Buildings)



Higher Priority

Wrap-up and Required Preparation for Next Meeting

Possible Application of Concept of “Top Runner (TR) Program”

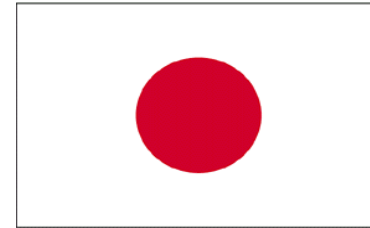
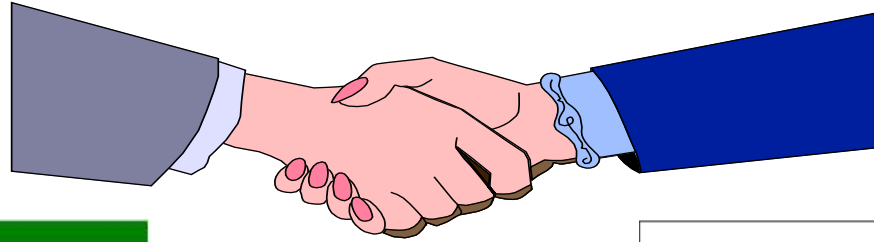
1. Wrap-up

- (1) Realistic Application of the Basic Methodology of the TR Program To Setup EE Criteria and Evaluation for the Existing “PROCEL Gold Seal Program”**
- (2) Specific Methodology of Item (1) - (Showcase : Air Conditioners)**
- (3) Required Study on Policy and Strategy to Deploy Item (1) to the Other Appliances**
- (4) Required Arrangement of Identified Issues and Possible Solutions by Key Factors**

2. Required Preparation for Next Meeting on September 9th

- (1) Agenda : (TR-1) Collection, Management of Market Data and Strategy to Disseminate High Efficiency of Products
Q&A on the Presentation Material of METI and Discussion**
- (2) Please send questions on the METI’s material to AOTS by Aug. 27th.**

Thank you very much



For More Information

[The Energy Conservation Center, Japan \(ECCJ\)](https://www.eccj.or.jp)

<https://www.eccj.or.jp>

[Asia Energy Efficiency and Conservation Collaboration Center \(AEEC\)](https://www.asiaeec-col.eccj.or.jp/index.html)

<https://www.asiaeec-col.eccj.or.jp/index.html>

[Japanese Business Alliance for Smart Energy Worldwide](https://www.jase-w.org/english/top/)

<https://www.jase-w.org/english/top/>