

INTRODUCTION TO ENERGY UTILIZATION MANUAL (EUM) REVIEW



Many Ws & Hs on EUM

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Q4

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Q2

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Many Ws & Hs on EUM

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Q9

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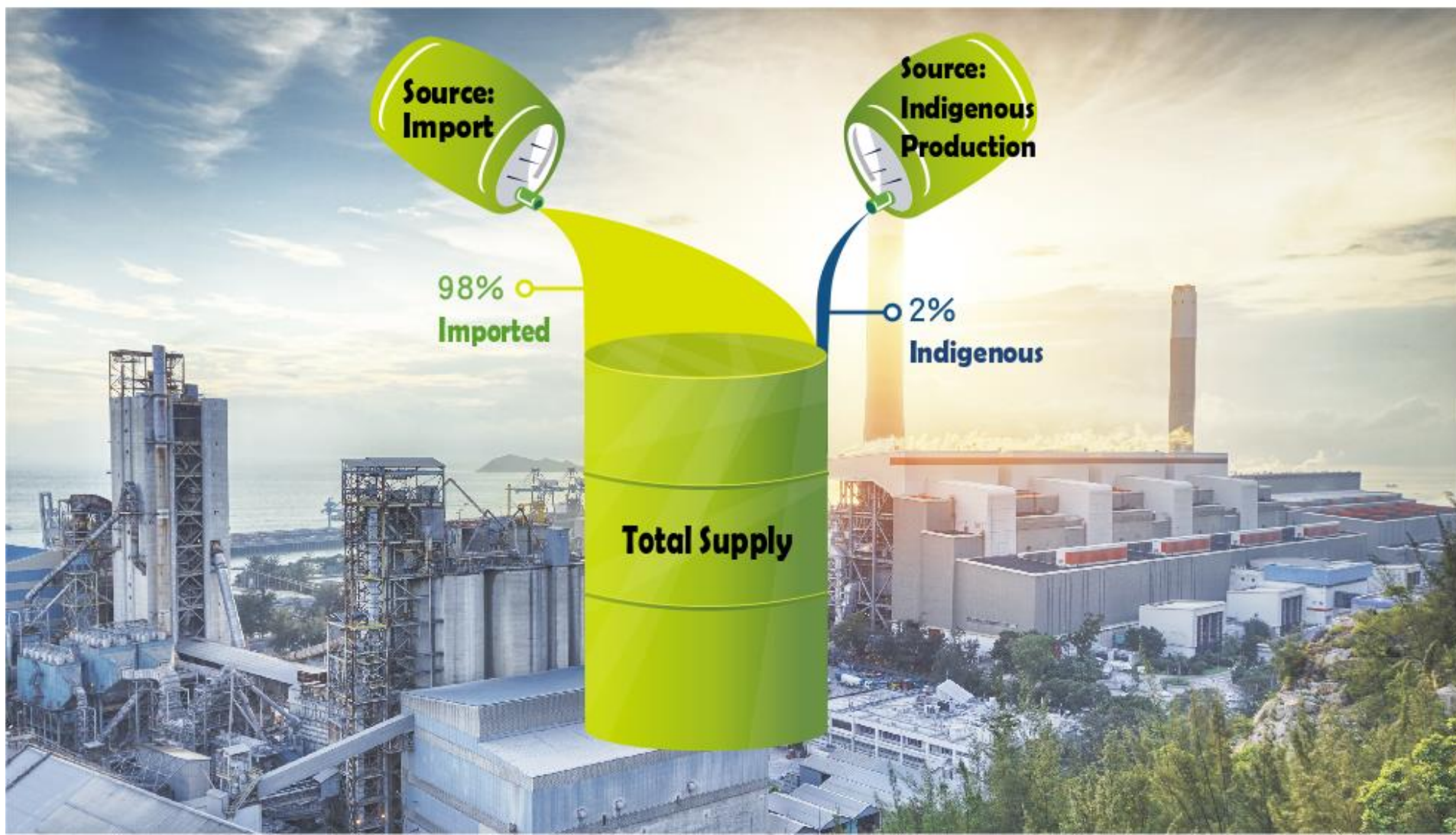
Q1 : What is EUM Review?

While an investment on a new plant project or a plant-expansion project, an energy-using capacity and its energy efficiency should be assessed during the project's design phase, And an EUM application should be submitted to the Central Competent Authority, BOE of MOEA for reviewing and approval. It should be noted that the construction works can only begin after the EUM finalized and approved. The purpose is mainly for the enhancement of energy efficiency of these invested projects.

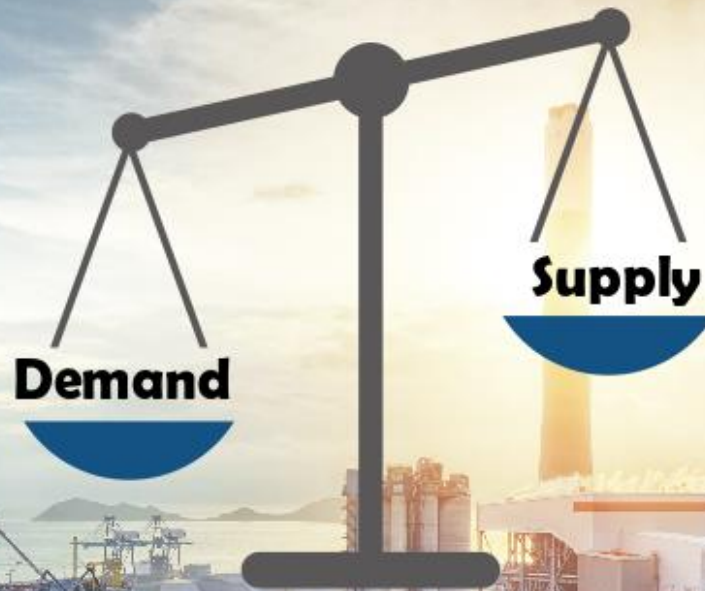


Q2 : Why EUM Review?

1. Ensuring Steady Energy Supply and Demand



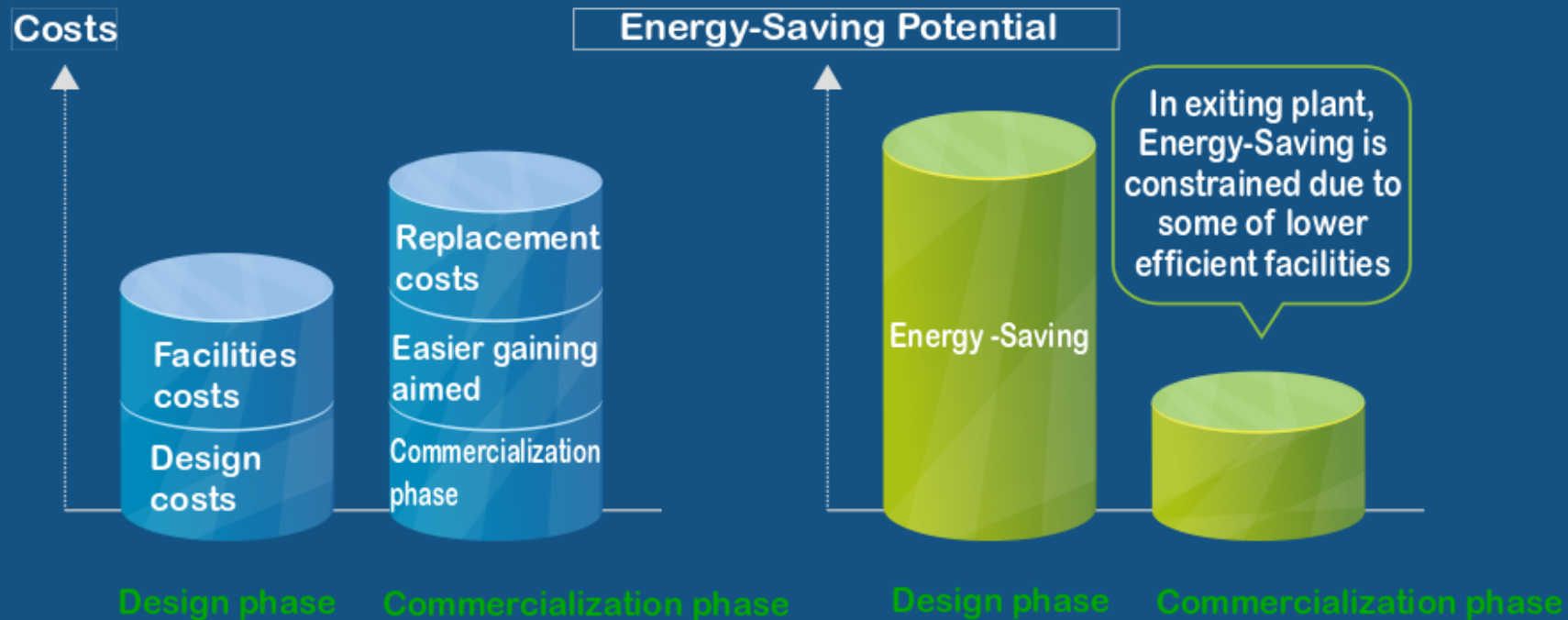
If Energy Demand > Supply...



**Imbalanced Supply and Demand of Energy
impacting S/D stability, especially $D > S$ situations**

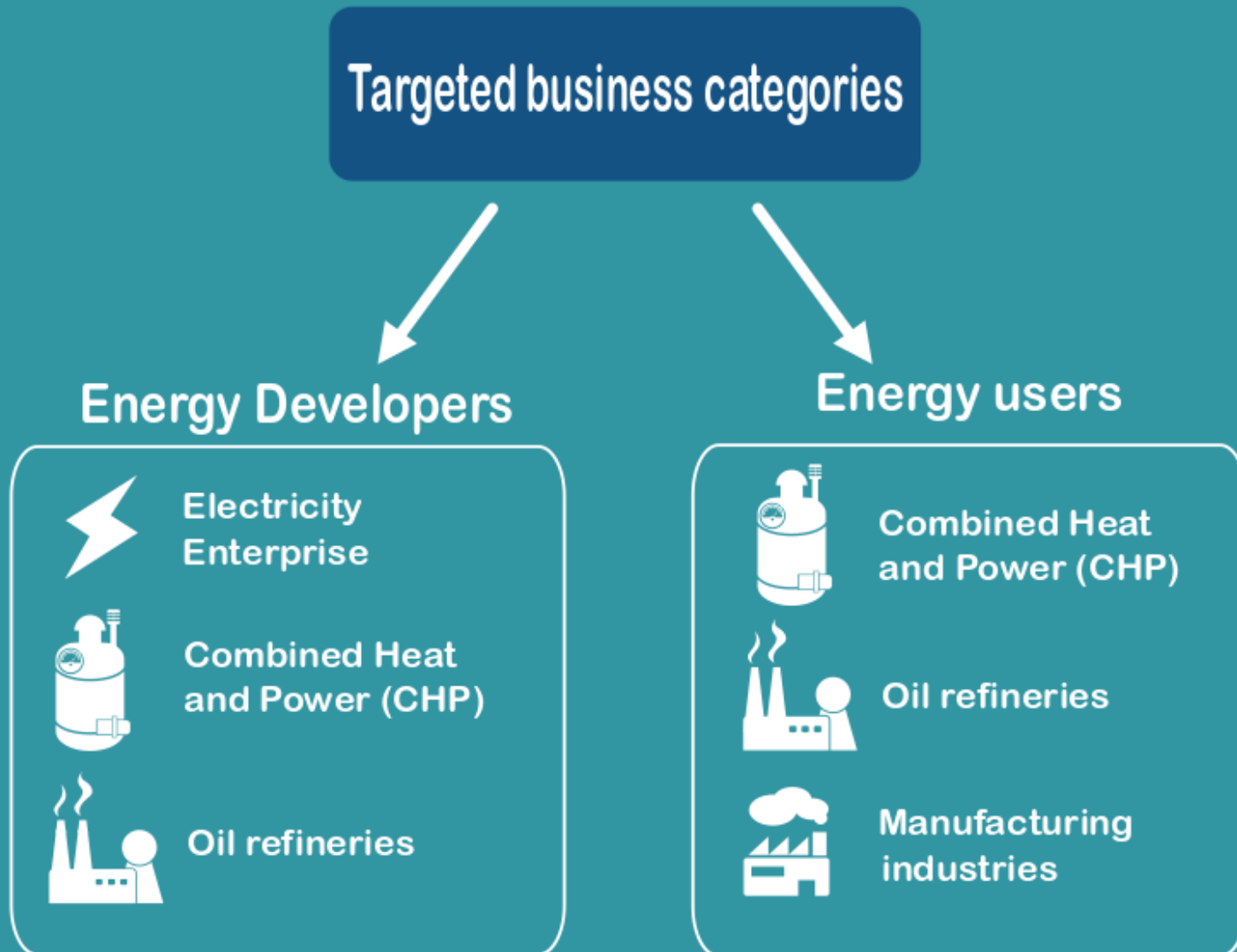
2. Energy Efficiency upwardly

For example, comparing a new plant with an existing plant







Compared to Commercialization phase, Design phase is Lower Costs with high potential of energy saving!

Q3 : Whom is EUM Review for?



Aiming at the energy users of massive investment and production plan, and Gradually Implement

| | Applicable Industrie | Applicable design /installed/chartered capacity |
|--|---|--|
|  Project Categories | Power Plants (coal-fired, gas-fired and oil-fired) | Installed capacity $\geq 50,000$ kW |
|  Electricity Generation | Cogeneration Systems (Ones that do not use wastes or biomass as fuel) | Installed capacity $\geq 50,000$ kW Or Chartered capacity of electricity consumption $\geq 25,000$ kW or above |
|  Cogeneration systems (CHP) | Petroleum Refineries | Refined Crude Oil $\geq 100,000$ Barrels per day Or Chartered capacity of electricity consumption + Installed capacity of self-usage power generation equipment ($\geq 2,000$ kW) $\geq 25,000$ kW |
|  Petroleum refineries | Manufacturing industries (Excluding Petroleum Refineries) | Chartered capacity of electricity consumption + Installed capacity of self-usage power generation equipment ($\geq 2,000$ kW) $\geq 25,000$ kW |

* Project site located on the same

* Accumulation over the entire life-cycle of Project

Who would be exempted from EUM review?



Energy consumption facilities that have been completed construction work and in operation already

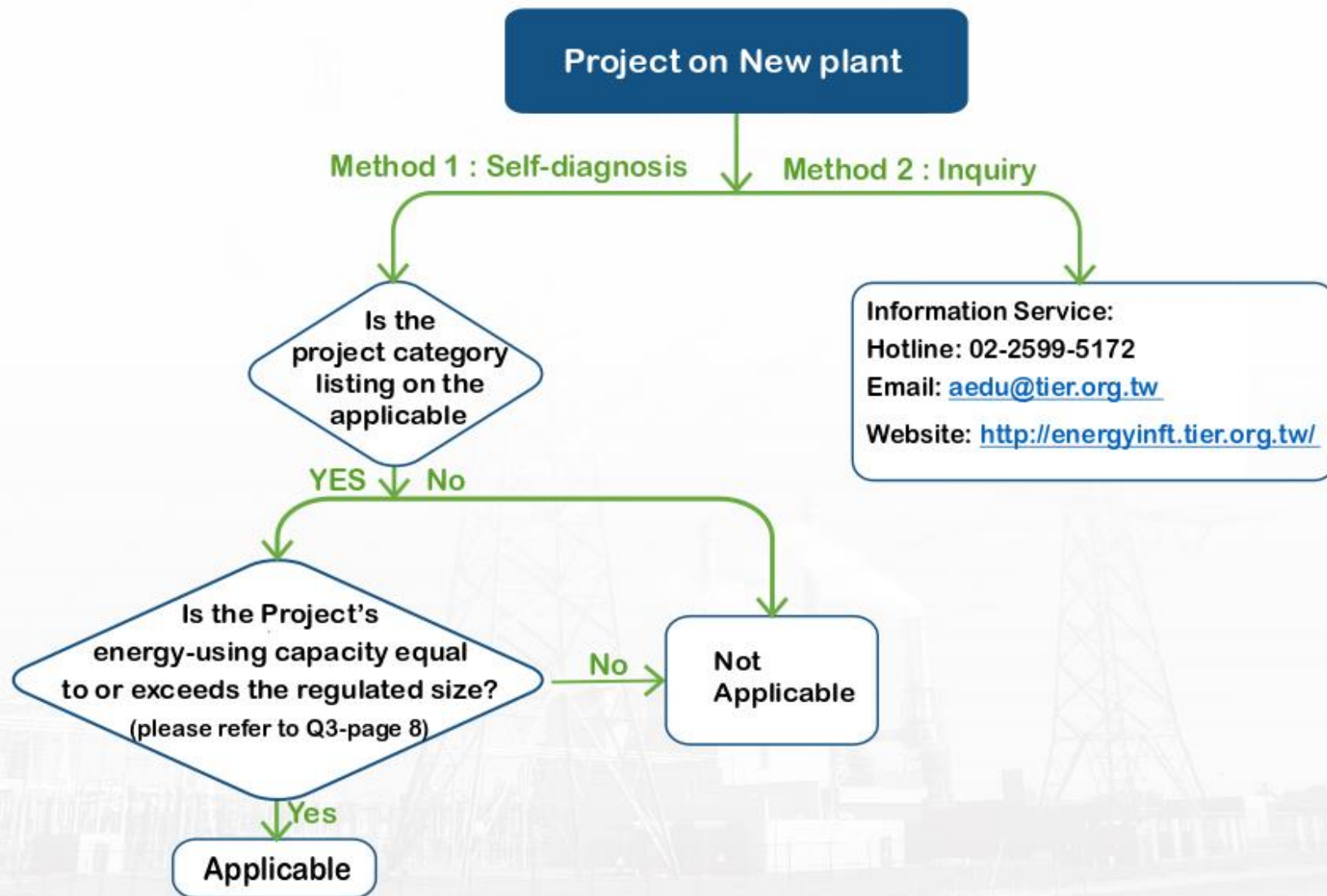


Industries not listed on the Government's manufacturing industry categories, such as agricultural produces, Fishery, Poultry, Service sectors, Education sectors ...etc.



Small-Scale Investment and Production Plan

Whether a project should be applicable to EUM Review, following the flow below

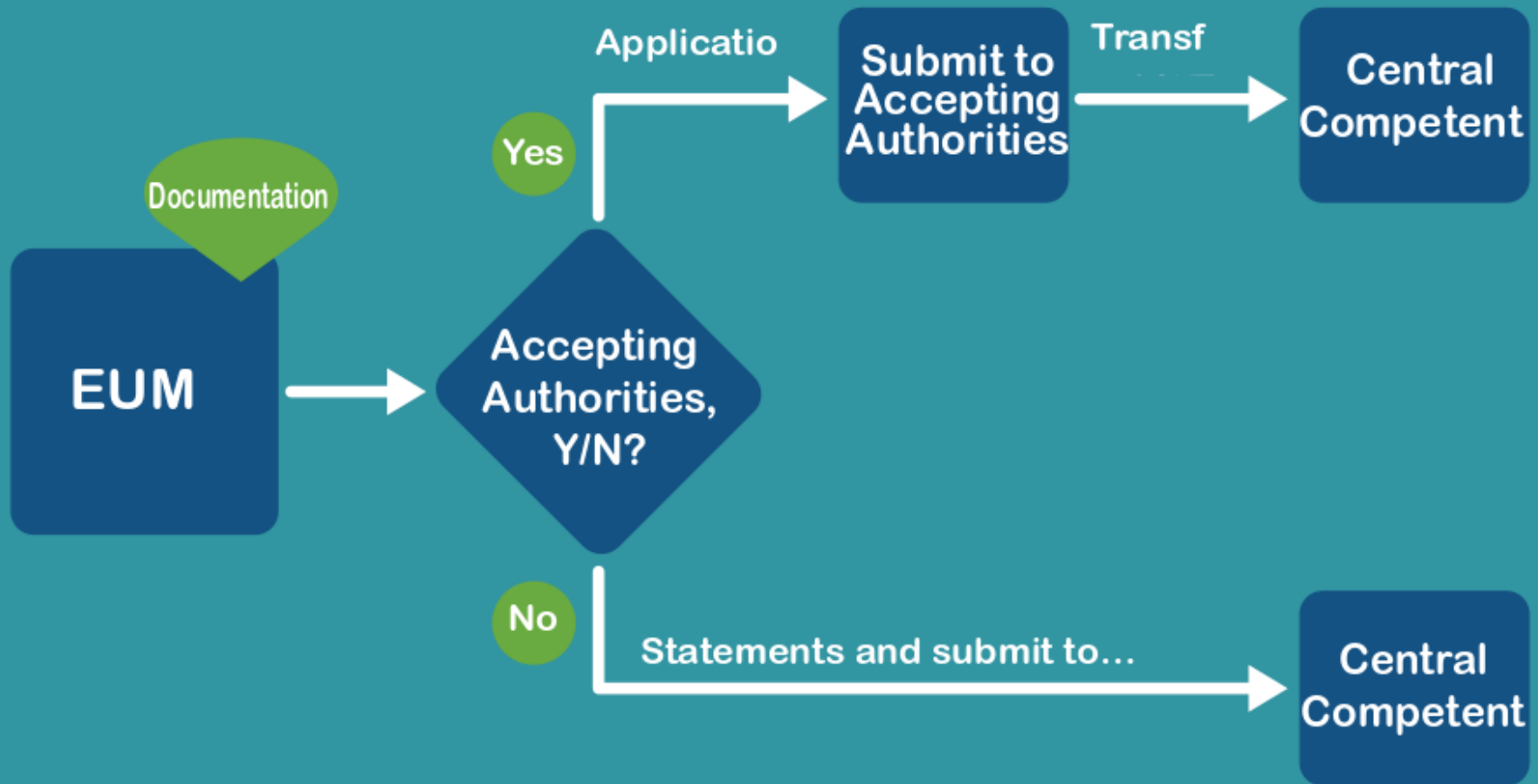


Q4 : When to apply for EUM Review?

Energy Utilization Manual shall be submitted for review during the planning stage before to construction work commencement.



Q5 : How to apply for EUM Review?



| Massive Investment Type | Plant Type | Project Location | Legal and Regulatory Authorization | | |
|----------------------------------|--|---------------------------------------|--|--|--|
| | | | Approval (Permit) Type | The rule of Law or/and Regulation | Accepting and Transferring Agency |
| Electricity Generation | Power Plants (coal-fired, gas-fired and oil-fired) | | Permits for Establishment or Expansion | Regulations on Registration of Electricity Industry (Article 3) | Bureau of Energy, Ministry of Economic Affairs |
| Cogeneration Systems | Cogeneration Systems | | Working Permit | Regulations on Registration of Self-usage Power Generation Equipment (Article 3) | Bureau of Energy, Ministry of Economic Affairs |
| Petroleum Refineries | Petroleum Refineries | | Establishment Permit | Petroleum Administration Act (Article 5) | Bureau of Energy, Ministry of Economic Affairs |
| Massive Energy-Consumption Users | Petrochemical Feedstock Manufacturer | | Establishment Permit | Factory Management Act (Article 11) | Municipal Economic Development Bureaus |
| | Blast Furnace Ironmaking | | | | |
| | | Hsinchu/Central/Southern Science Park | Establishment Approval | Act for Establishment and Administration of Science Parks (Article 4) | <ul style="list-style-type: none"> ● Hsinchu Science Park Bureau, Ministry of Science and Technology ● Central Taiwan Science Park Bureau, Ministry of Science and Technology ● Southern Taiwan Science Park Bureau, Ministry of Science and Technology |
| | | Export Processing Zones | Move-in Approval | Statute for the Establishment and Administration of Export Processing Zone (Article 3) | Export Processing Zone Administration |
| | | Agricultural Biotechnology Park | Move-in Approval | Act of Establishment and Administration of Agricultural Technology Parks (Article 16) | Agricultural Biotechnology Park Administration |
| | Others | | Building Permit | Building Act (Article 24, 25) | Municipal Public Works Bureaus |
| | self-usage power generation equipment not included in the above-mentioned plant types or project locations.* | | Working Permit | Regulations on Registration of Self-usage Power Generation Equipment (Article 3) | Bureau of Energy, Ministry of Economic Affairs |

*: Including Petroleum Refineries.

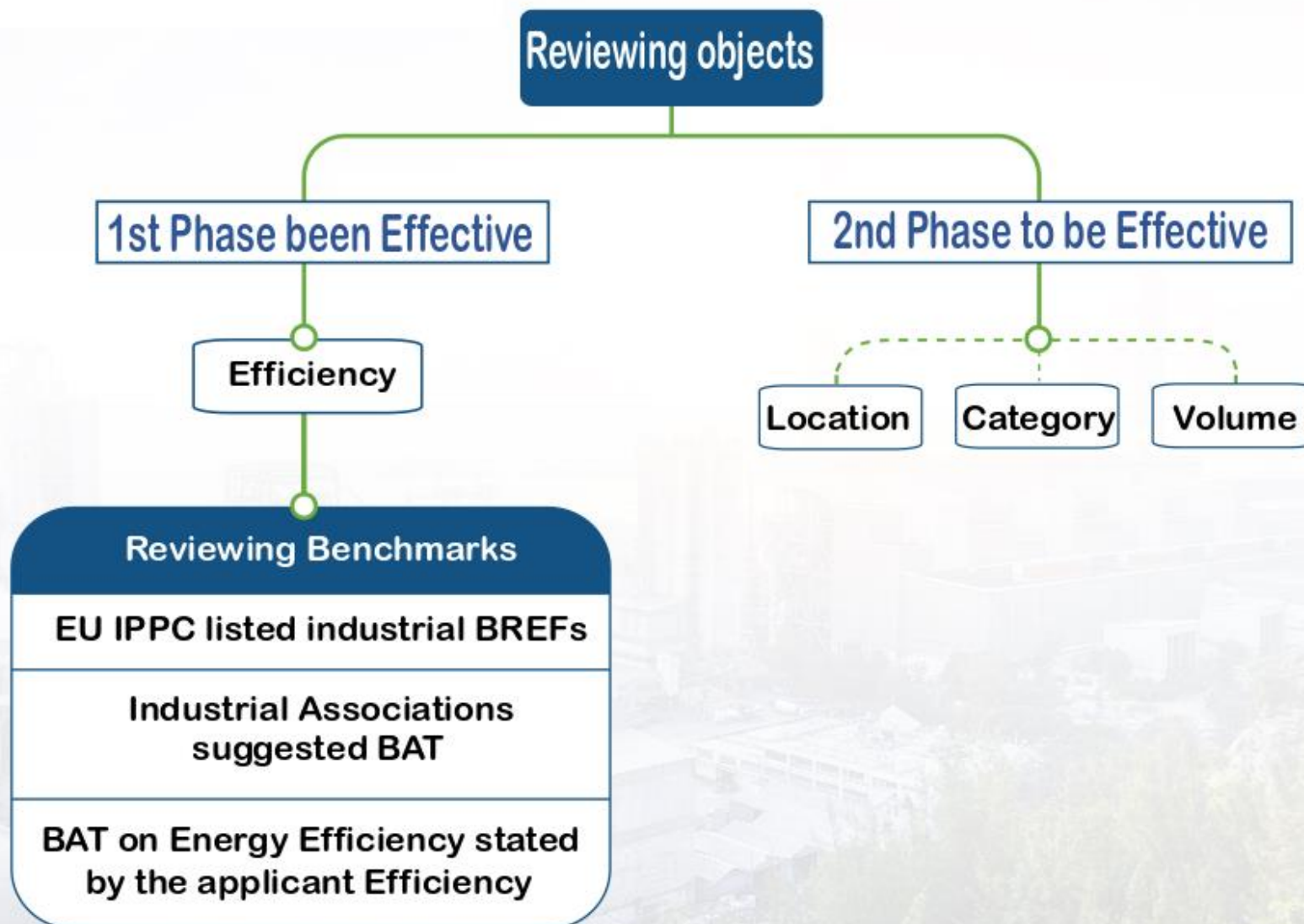
This chart shows plant types and project locations of massive investments, as well as the accepting and transferring agencies, and the rule of law or/and regulation.

Q6 : What are contents of EUM?

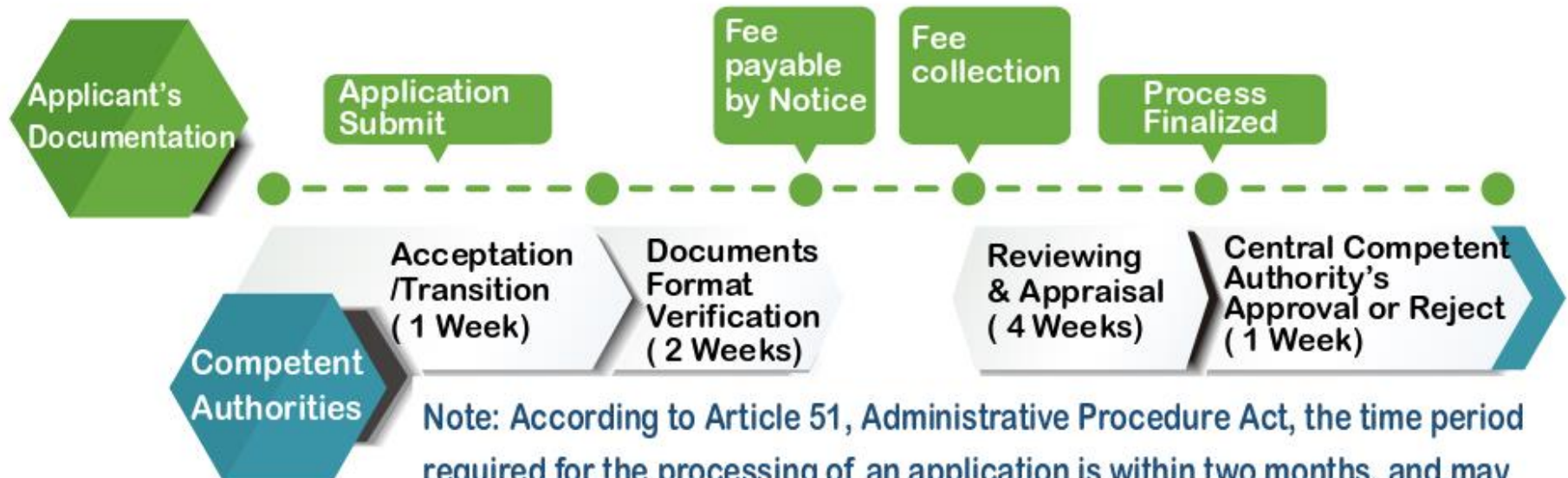
EUM Review system is 2-phase implementation, at the first phase, objects relating energy efficiency be reviewed.



Q7 : What are the Bench marks for EUM?



Q8 : Whether EUM would impact on project time schedule?



Note: According to Article 51, Administrative Procedure Act, the time period required for the processing of an application is within two months, and may be extended once.

Q9 : What would be, if disregards EUM?

Related penalties are prescribed in Articles 24 and 25 of the Energy Administration Act:



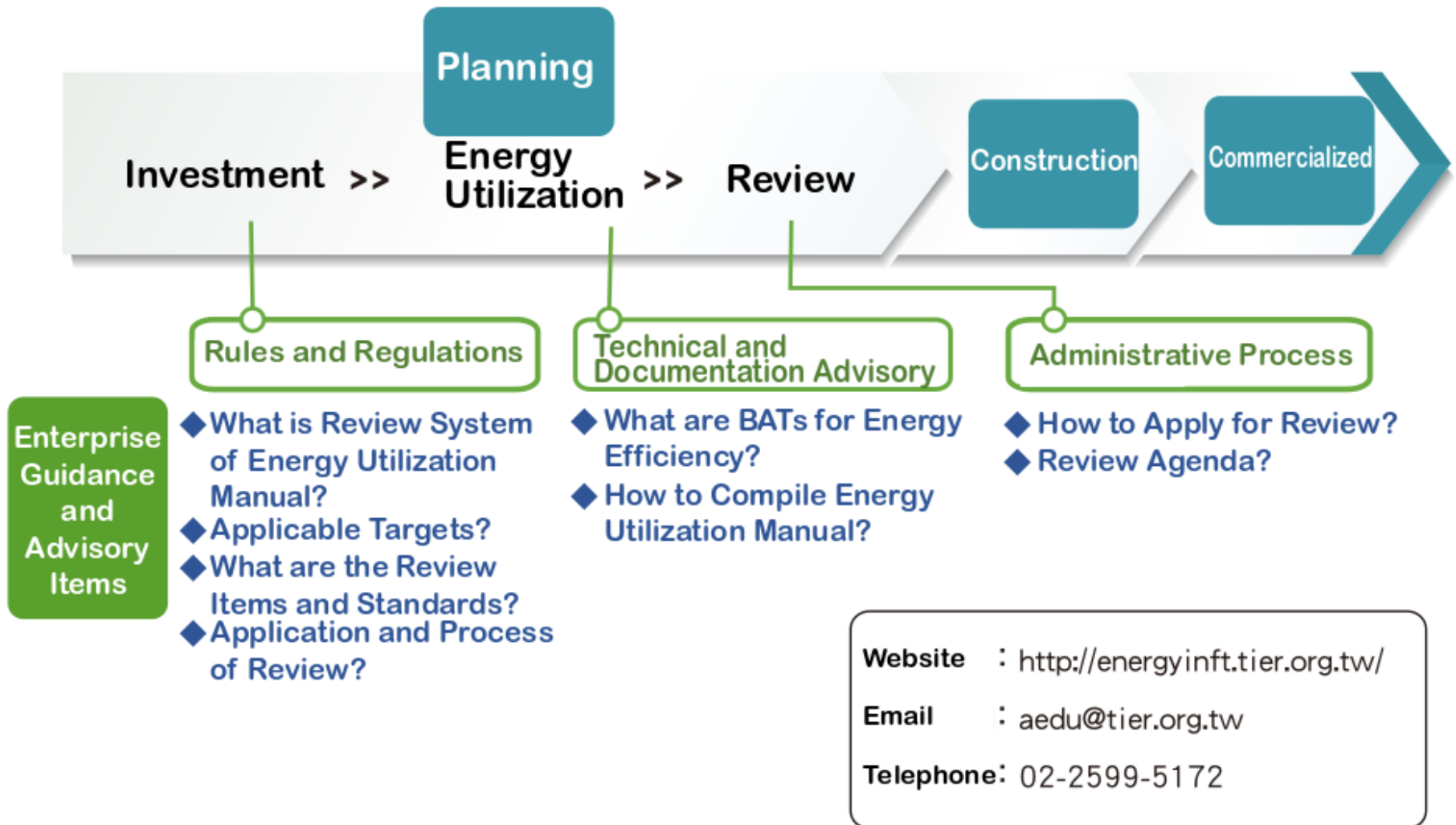
In case of the applicant's energy consumption volume exceeds the volume or fails to meet the energy category and efficiency stated in the approved EUM, the Competent authority shall notify the said enterprise for remedies within a specific deadline. If the enterprise fails to remedy by the said deadline, the enterprise shall be fined.



In case of a new plant project or plant-expansion project is executed without EUM approval, the central Competent authority may order the said investment project to suspend energy supply.

Q10 : What kind of supports to adapt EUM?

Inquiring for Enterprise Guidance and Advisory



Q11 : When EUM be effective?

**EUM Review
system Launched
in Two Phases**

Promulgation on November 24, 2015

Been effective on November 26, 2015

**Energy efficiency to be reviewed
in the first phase**

Q12 : What are the benefits of EUM Review?

For Enterprises...



**Enhance facilities
energy-saving potential**



**Energy-saving
Cost down**



**Lower energy
consumption now and then**

**Lower energy payment and
gain larger benefits from
energy saving**

To our Nation:



**Supervising
Energy
Supply-Demand
Flow**



**Securing Energy
Supply stability
and Security**

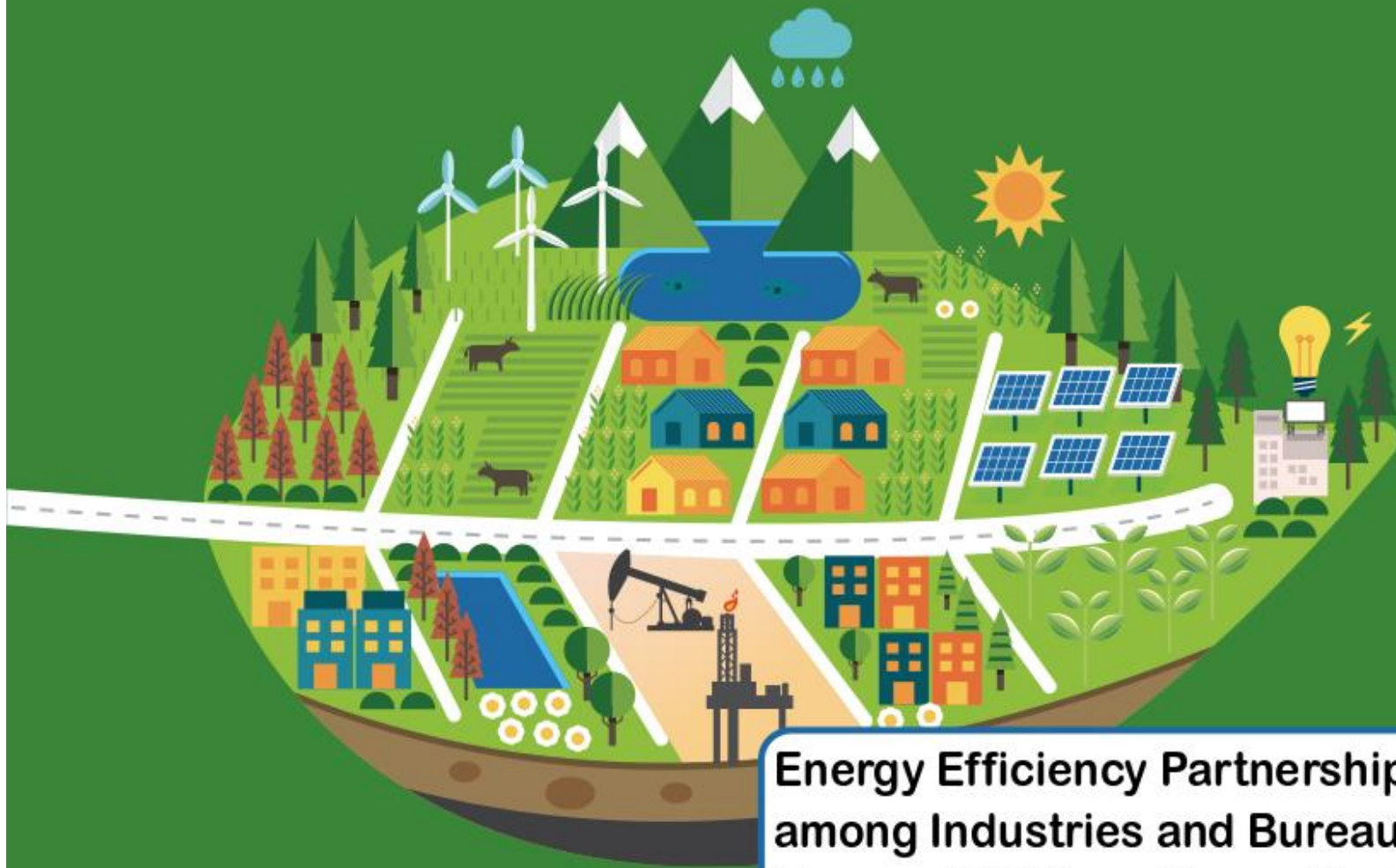


**Enhance Industries'
Energy Efficiency**



**Balance Regional
Energy Supply and
Demand**

**Energy, Environmental
Protection, Economy
Objectives of Policy**



**Energy Efficiency Partnership
among Industries and Bureau of
Energy, MOEA. Do our Best!**



**Bureau of Energy,
MOEA**

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