



Up-to-date Energy Service for Steam Boiler Utilizing Lease and IoT Technology

14th November, 2018

**PT. Mitsubishi UFJ Lease & Finance Indonesia
Tokyo Gas Engineering Solutions Corporation**

Cooperation in development of boiler energy service

On 25th September, we have signed MOU to cooperate with each other for the purpose of developing and exploring the potential industrial customers related to boiler energy service.

Lease & Finance company

Energy service company



Mitsubishi UFJ Lease & Finance Indonesia



Tokyo Gas Engineering Solutions Corporation



PT. Miura Indonesia



PT. Energasindo Heksa Karya

Boiler manufacturing company

Natural gas distribution company

Company overview of MULI and TGES



Mitsubishi UFJ Lease & Finance Indonesia

We have carried out financial solutions to various sectors.

Energy Finance in Japan by MUL Gr.

> 460 ESCO Projects



> 1.7GW Renewable Energy Projects



Tokyo Gas Engineering Solutions Corporation

We have abundant experience and knowledge of energy conservation.

> 600 ESCO Projects



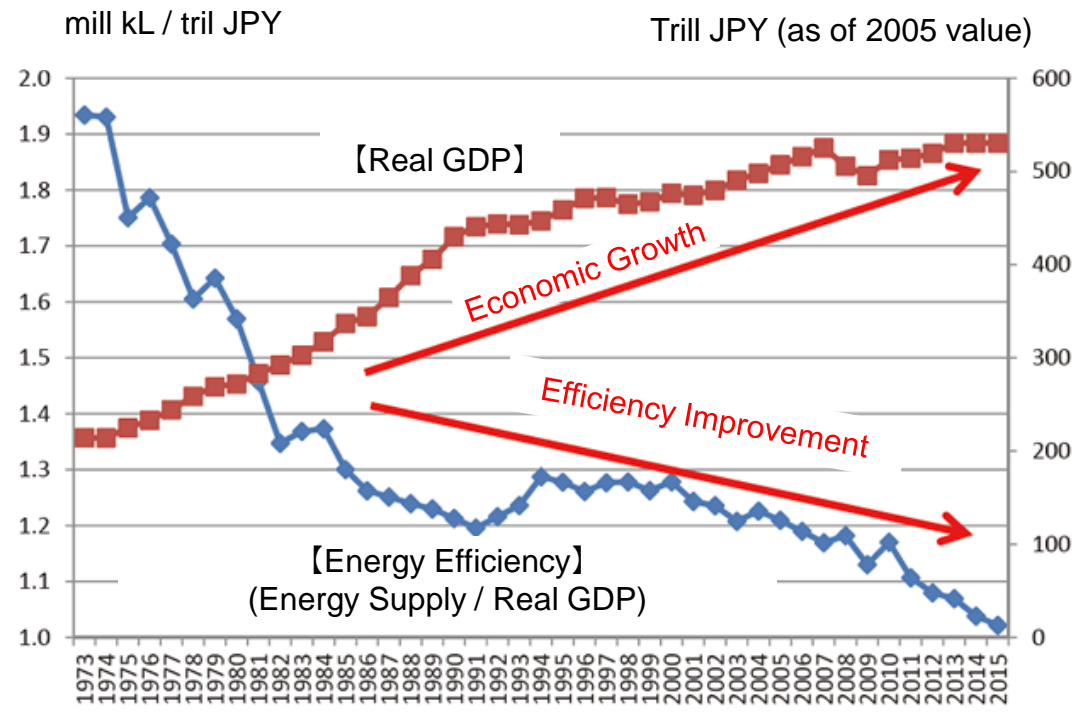
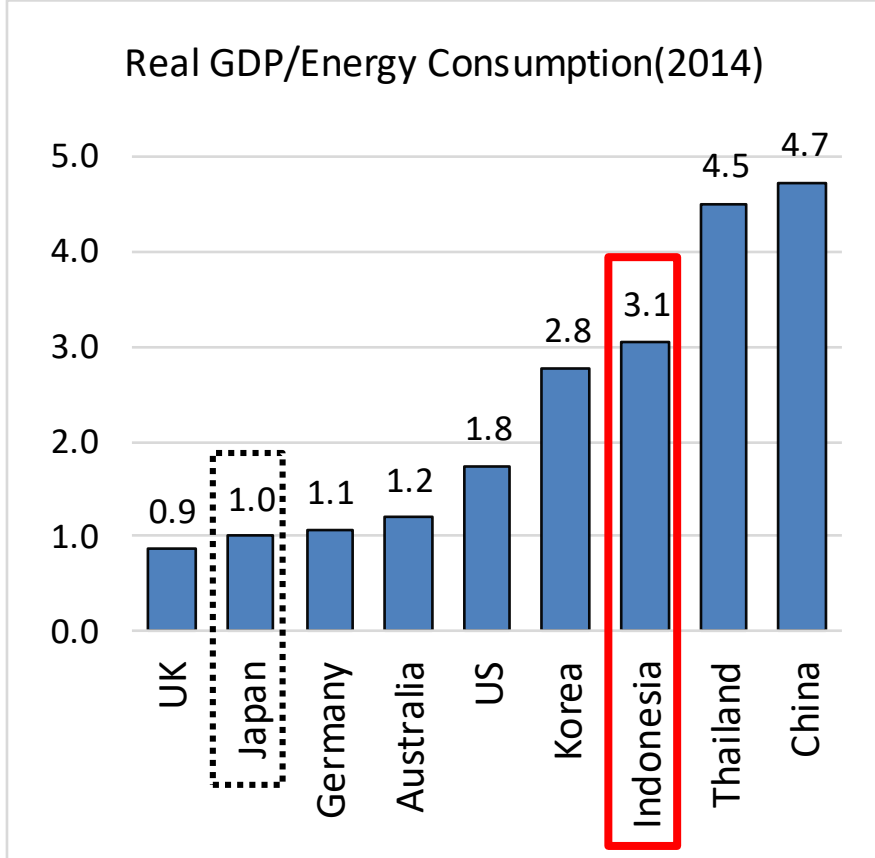
Overseas experience in USA and Malaysia



We have just commenced operation of ESCO project with CHP and absorption chiller for Panasonic AP Air Conditioning Malaysia.

Issues to be solved in industrial sector

Lots of manufacturers still utilize equipment with low efficiency at plant. We are confident that we can contribute to energy conservation with our service.



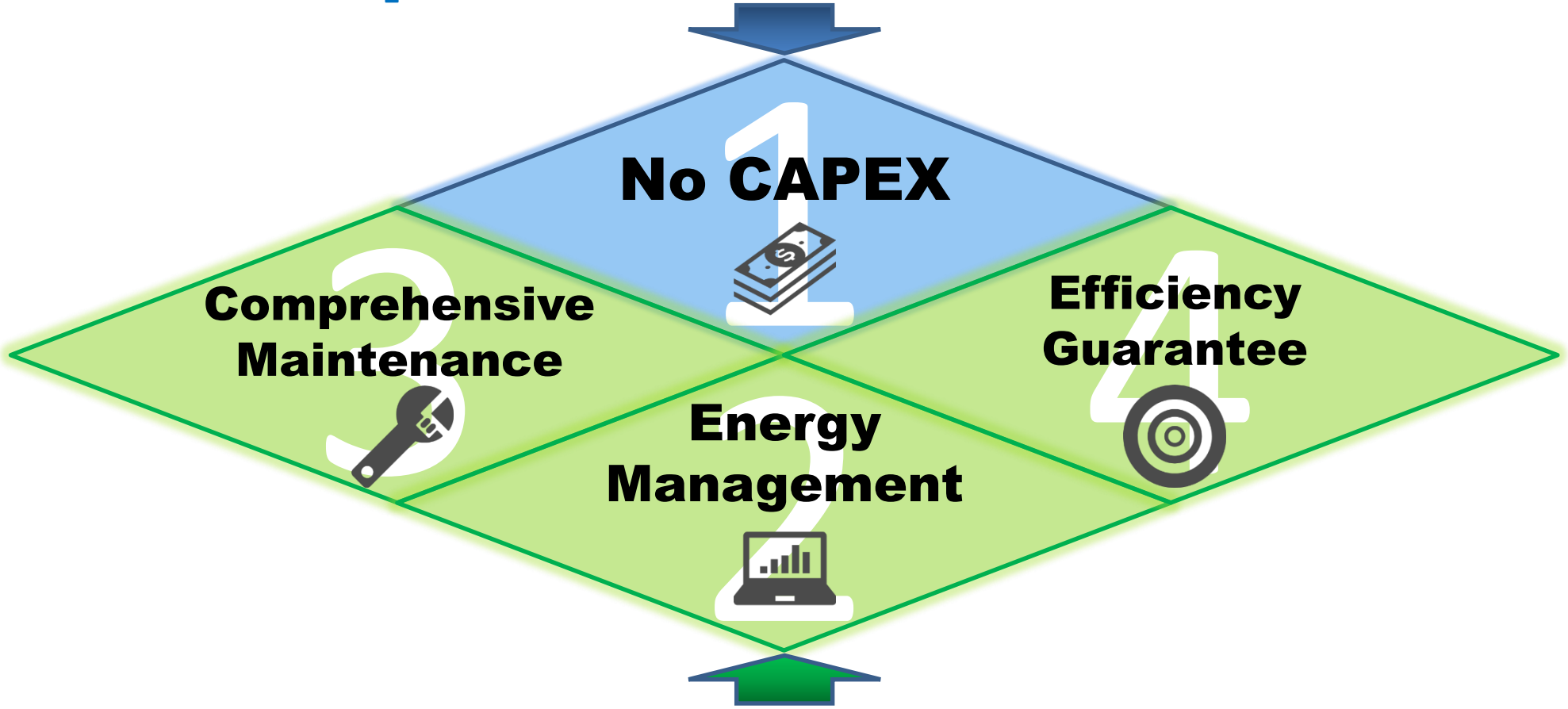
Indonesian energy consumption is almost 3 times more than Japanese in the comparison to GDP.

In Japan, the industry sector has improved energy efficiency continuingly, it makes one of the most energy efficient economy in the world.

Our energy service for steam boiler

We have established “**packaged energy service for steam boiler**”. Customers can easily replace old boilers for latest boilers and keep them high efficiency with our service.

Replacement of steam boilers

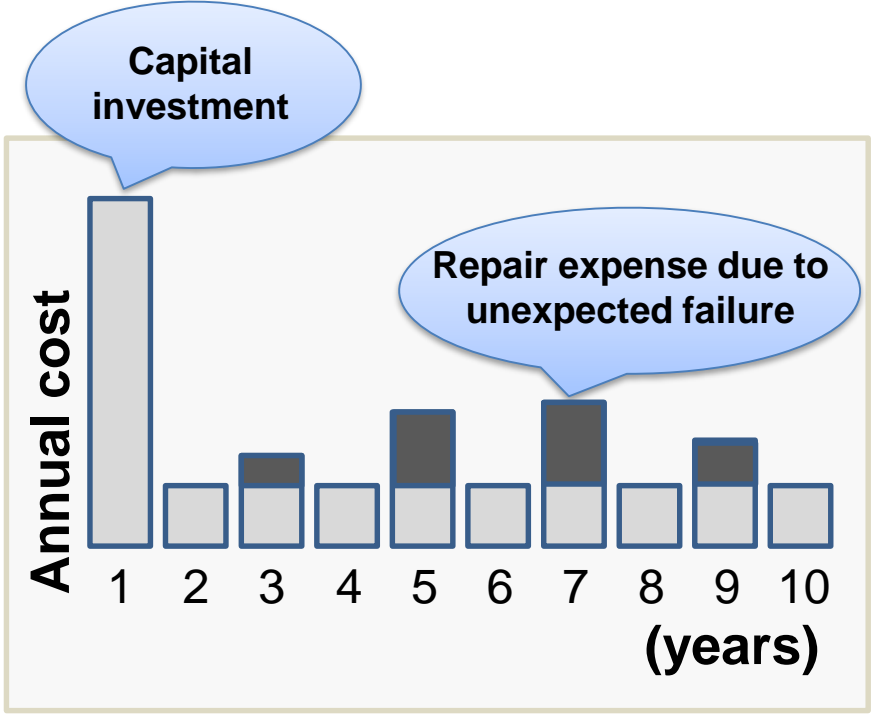


Upkeep of high efficiency

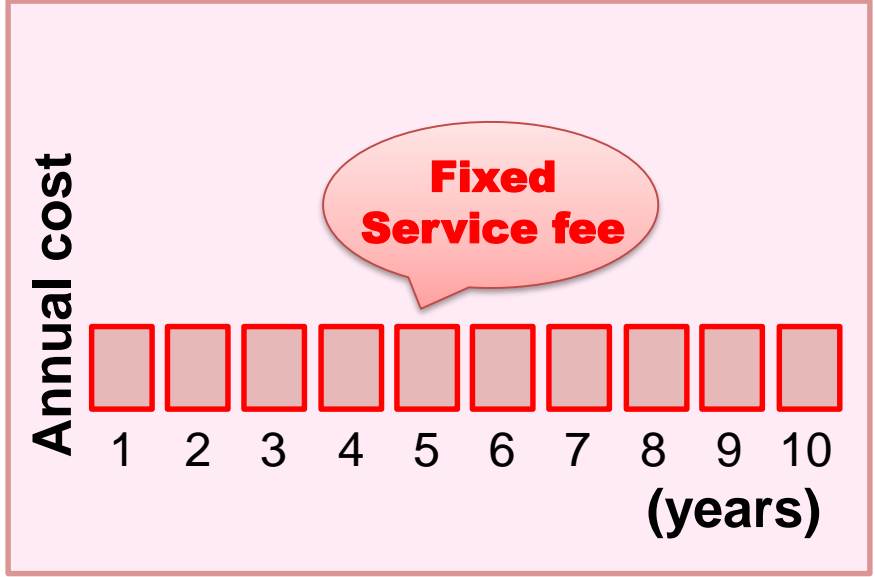
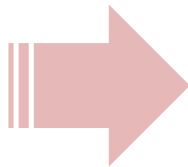
Feature of our service (1) No CAPEX

- ✓ Installing highly efficient boilers and their auxiliaries with no CAPEX utilizing finance lease

Customers do not have to secure budget for capital investment and can enjoy energy cost reduction soon after the commencement of operation.



Installing new equipment in ordinary case

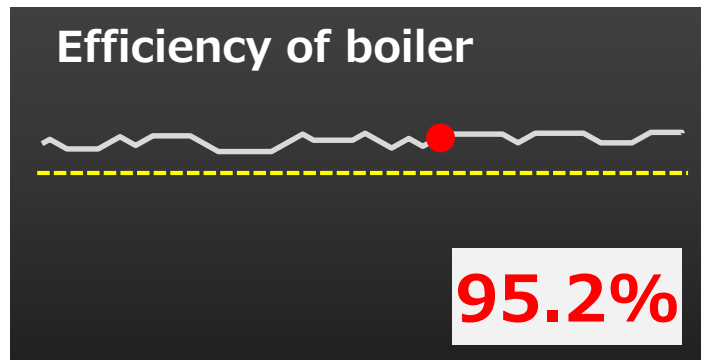
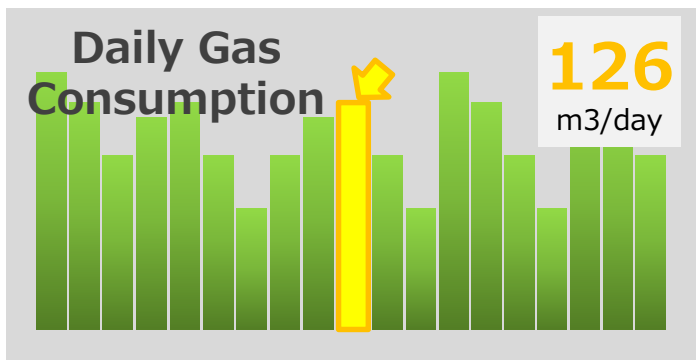
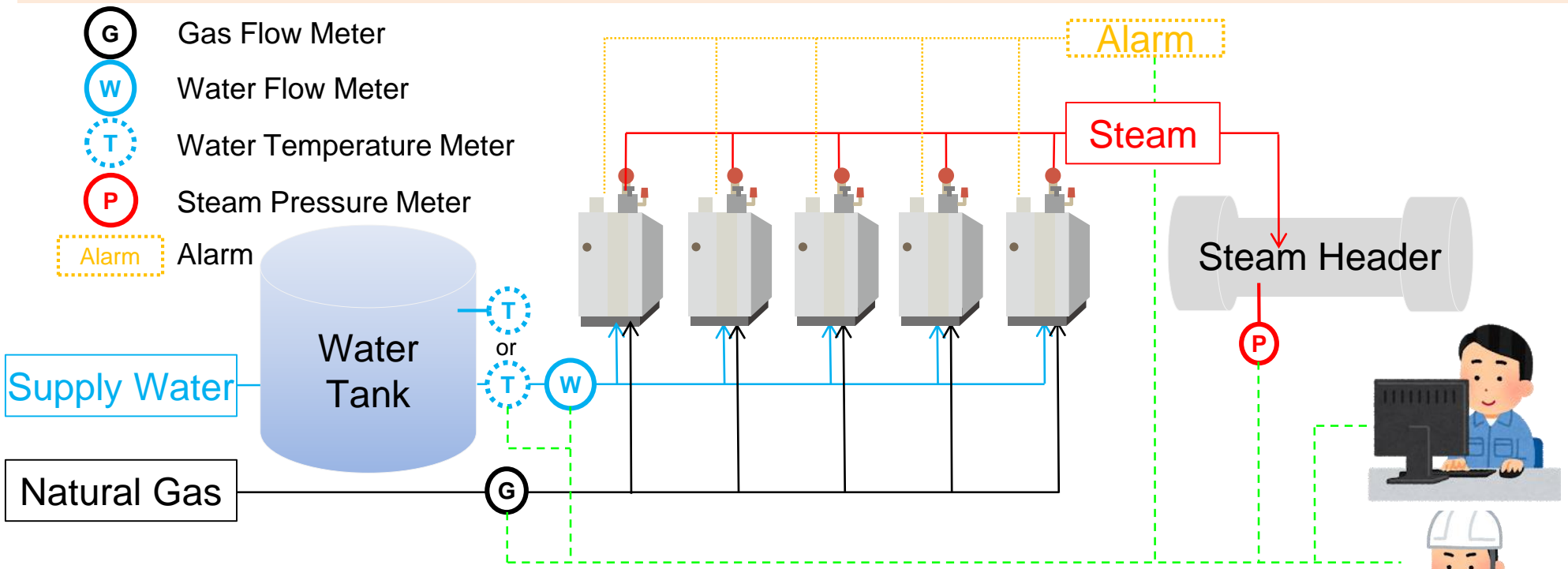


Installing new equipment utilizing our service

Feature of our service (2) Energy Management

✓ Supporting energy management of customer's facility by remote monitoring and reporting

Customers can easily recognize energy consumption and operation status of steam boilers. This is the first step to realize continuous energy conservation.



Feature of our service (3) (4) Comprehensive Maintenance Efficiency Guarantee



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- ✓ Providing comprehensive maintenance for boilers and their auxiliaries
- ✓ Providing efficiency guarantee of boilers

Customers can utilize new boiler system with long-term high performance, reliability and durability. In addition, customers can continuously enjoy energy cost reduction during the period of the agreement.

Miura Maintenance Program

Inspection

Warranty

Maintenance



Efficiency of boiler

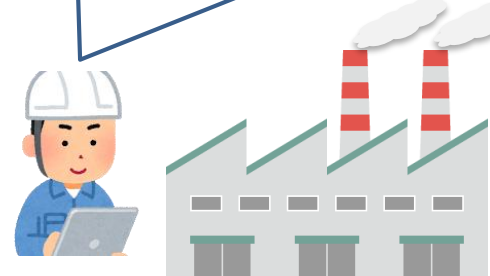


When we find boiler efficiency becomes lower than target efficiency, we shall recover it to satisfy the target efficiency.

Energy conservation in Japan

In Japan, there has been an increasing energy service not only for steam boiler but also for Combined Heat and Power (CHP), Chiller, and other utility facilities.

We have realized much energy conservation!

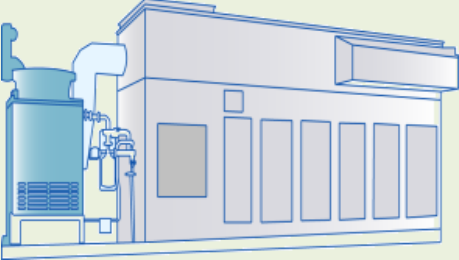
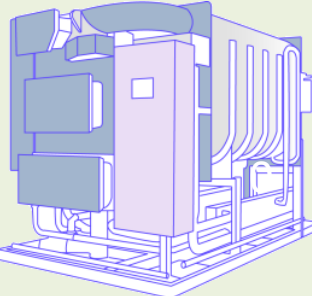


Customer



								
Electricity	Steam	Hot water	Chilled water	A/C	Natural gas	Pure water	Compressed air	Nitrogen/ oxygen



 Gas CHP	 Absorption chiller	Steam boiler	Water treatment facilities
		Turbo chiller	Pure water production
		Air compressor	Power receiving transformer
		Renewable energy facilities	Other utility facilities

Operated by energy service company

	
Natural Gas	Electricity

Governmental support in Japan

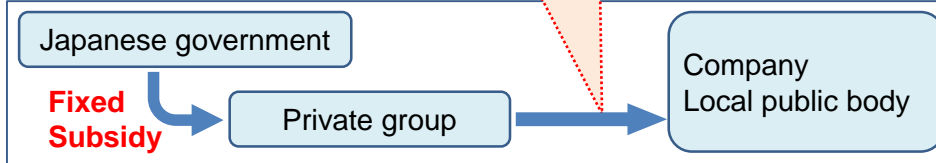
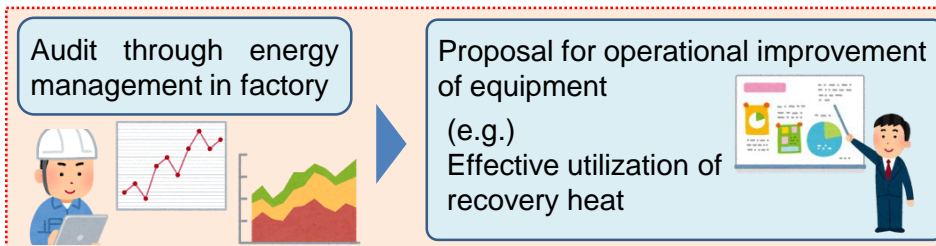
In Japan, there are various kinds of subsidy / tax incentive which assist manufactures to install the latest equipment with high efficiency.

Ex.1 Subsidy for encouraging small and medium enterprise to conduct energy audit

Contents

Encouraging small and medium enterprise to realize energy conservation

- (1) Conducting energy audit / providing useful information
 - ✓ **Conducting energy audit to small and medium enterprise for free**
 - ✓ Introducing energy audit cases through various media
 - ✓ Providing lecturer of energy conservation for free



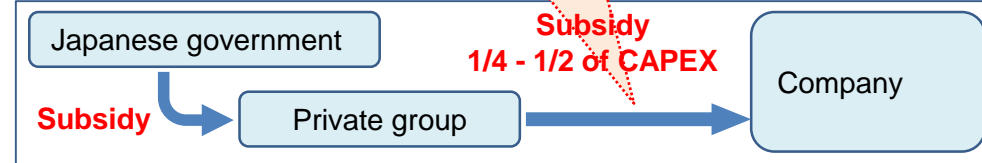
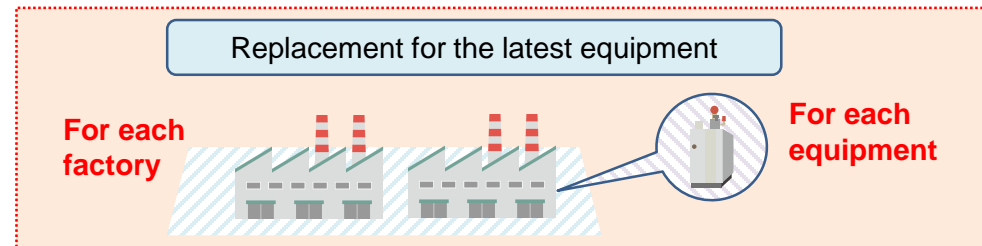
- (2) Promoting energy conservation locally
 - ✓ Establishing consultation counters for energy conservation throughout Japan

Ex.2 Subsidy for encouraging investment in equipment for energy conservation

Contents

Encouraging factory, commercial building, and housing to invest in equipment for energy conservation

- (1) Supporting replacement for the latest equipment
 - ✓ **Supporting replacement for each factory**
 - ✓ **Supporting replacement for each equipment**
 - ✓ Supporting energy conservation activities conducted by collaborating several companies



- (2) Supporting demonstration of "Net Zero Energy Building"
- (3) Supporting demonstration of "Net Zero Energy Housing"
- (4) Supporting demonstration of the latest building materials for energy conservation

We are confident that;

(1) our service can help lots of manufactures balance CAPEX minimization and energy cost reduction

(2) our service can contribute to energy conservation in Indonesia

Leave energy cost reduction and energy conservation up to us!!



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