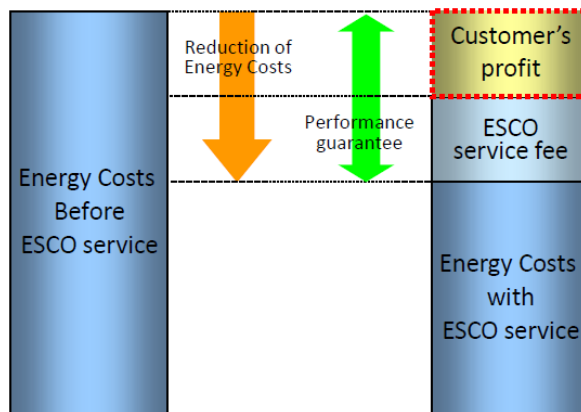


ESCO and EMS in Japan

(Energy Service Company & Energy Management System)

Advantages of ESCO scheme	
<u>(Performance Contract)</u> ESCOs guarantee energy cost reduction	<u>(Pay from the Savings)</u> Investment cost is provided by ESCOs and the service fee is covered by the saved energy cost



Japan Association of
Energy Service Companies

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Preface

JAESCO (Japan Association of Energy Service Companies) is the only association in Japan which promotes ESCO projects and Energy Management Systems (EMS).

It was established in October 1999 in order to conduct the following activities;

- (1) Policy related lobbying activities
- (2) PR and marketing of ESCO concept
- (3) Training the staff of member companies
- (4) Information
- (5) International cooperation
- (6) others

And in May 2016, JAESCO included EMS as its business territories. EMS includes;

- (1) Visualization of energy consumption
- (2) supporting optimal operation of facilities
- (3) energy service provider (ESP)
- (4) on site generation of electricity
- (5) Asset outsourcing of utility facilities

EMS is recognized as the advanced scheme of ESCOs and expected to play important roles to tackle various issues. JAESCO is pleased to support these challenging businesses of member companies.

Energy Audit

- Identify Energy Efficiency possibility
- Calculate saved energy & cost
- Estimate installation cost
- Calculate pay-back year



ESCO

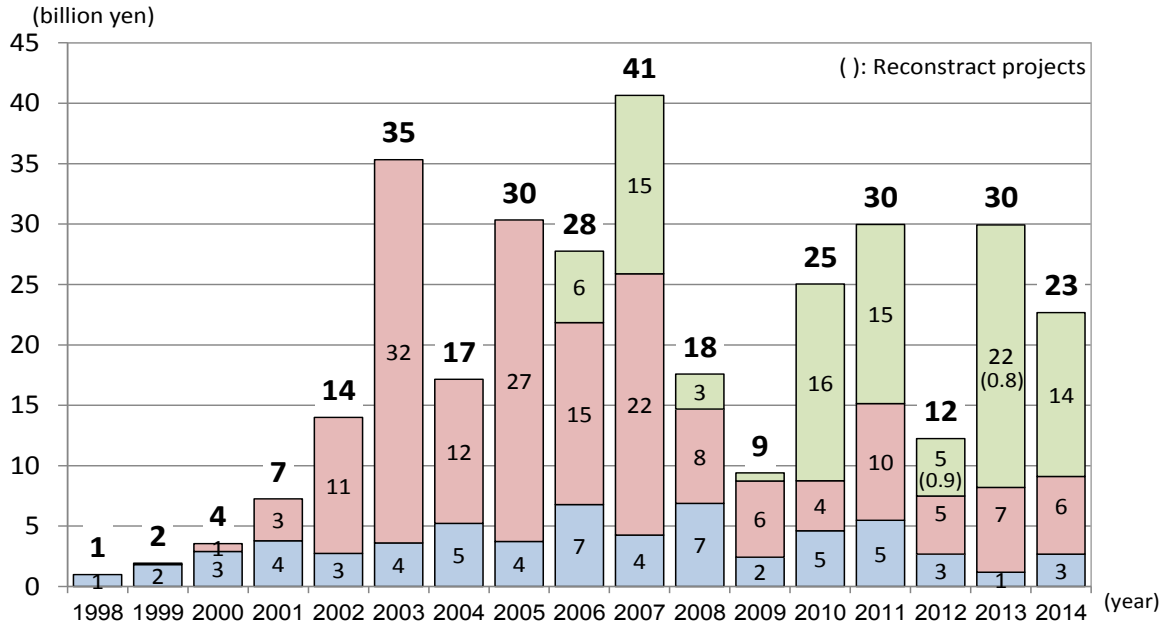
- Evaluate the credibility of customers
- Calculate long term payment plan of customers
- Design the Measurement & Verification Plan
- Design guarantee level of EE performance

EMS

- Visualization of energy and water consumption
- Continuous supervision and analysis of operation of equipments
- Conduct overall energy business as general contractor
- Take outsource of asset ownership

Trend of Market size of ESCO in Japan

■ Guranteed Savings ■ Sherd Savings
■ Energy Service Provider, On Site Generation, Others



Governmental policies to promote ESCO

METI (Ministry of Economy, Trade and Industry)

April 2007	published "Manual for local governments to introduce ESCO".
April 2010	revision of the energy conservation law and its ordinance. "large energy consumers must consider the performance contract provided by ESCOs in order to improve energy efficiency."
April 2014	revision of the ordinance of energy conservation law " large energy consumers must consider to introduce services of BEMS aggregators and/or ESCOs to improve load leveling performance."

MOE (Ministry of the Environment)

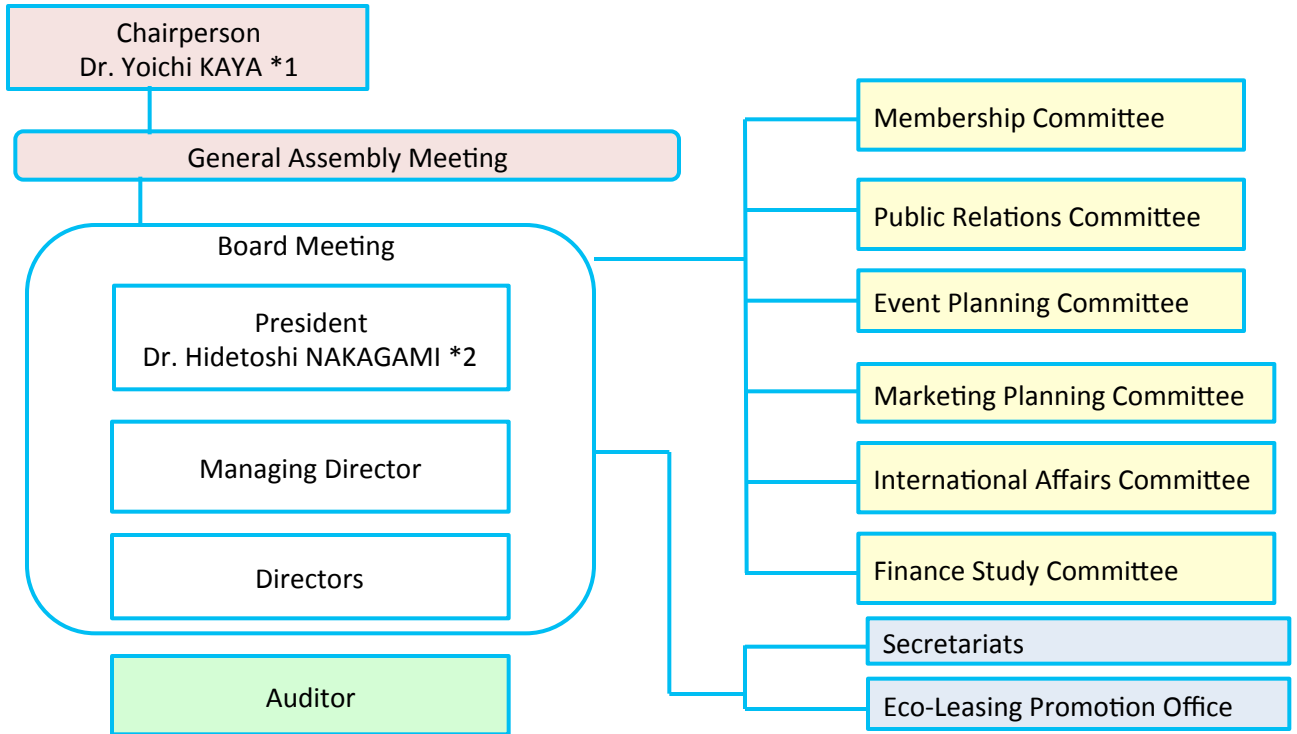
Dec. 2007	law for procurement of environmentally conscious products " Government and public organizations must consider to procure ESCO services for their buildings and facilities."
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MLIT (Ministry of Land, Infrastructure and Transport)

May 2011	revision of manual for public buildings to introduce ESCOs
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About the Association

Structure of JAESCO



*1: Professor Emeritus of Tokyo University

*2: Chairman of Jyukankyo Research Institute (JYURI)

Members of JAESCO

- Regular Members ----- 33 companies
- Supporting Members ----- 44 companies
- Friends of JAESCO ----- 20 individuals
- Special Members ----- as the followings

Dr. Yoichi KAYA	Professor Emeritus of Tokyo University
Jyukankyo Research Institute (JYURI)	
Energy Conservation Center of Japan (ECCJ)	
Daiichi Sogo Legal Office	
Development Bank of Japan (DBJ)	
National Institute of Advanced Industrial Science & Technology (AIST)	
Dr. Shuzo MURAKAMI	Professor Emeritus of Tokyo University
Dr. Takao KASHIWAGI	Professor Emeritus of Tokyo Institute of Technology
Dr. Yasunori AKASHI	Professor of Tokyo University