

The Energy Conservation Center, Japan

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We Support Your Energy Conservation Activities

2020-2021



The Energy Conservation Center, Japan

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

<http://www.asiaeec-col.eccj.or.jp>

Progress of Energy Conservation

1951	• Enforcement of the Heat Management Act
1960	• Change of energy policy from coal to oil
1978	• Establishment of the Energy Conservation Center, Japan
1979	• Enforcement of the Act on the Rational Use of Energy (the ECA) • The second oil shock
1988	• The 1 st Intergovernmental Panel on Climate Change (IPCC) held in Geneva
1997	• The 3 rd Conference of Parties (COP3) held in Kyoto Adoption of the Kyoto Protocol, Public commitment to reduce greenhouse gases by 6% (Japan)
1998	• Enforcement of the Act on Promotion of Global Warming Countermeasures
1999	• Establishment of the system for designating Type 2 Designated Energy Management Factories, Introduction of the Top Runner Standard (enforcement of the Revised ECA)
2000	• Introduction of the energy saving labeling system (JIS standard)
2002	• Ratification of the Kyoto Protocol (Japan) • Enforcement of the Basic Act on Energy Policy
2003	• Enhancement of the measures for office buildings, etc. (Revised ECA)
2005	• Effectuation of the Kyoto Protocol
2006	• Establishment of the measures for transportation and the integrated control of heat and electricity (enforcement of the Revised ECA)
2008	• Start of the 1 st commitment period of the Kyoto Protocol • Summit (G8) held in Toyako, Hokkaido
2009	• At the United Nations Summit on Climate Change, the target aiming at 25% reduction of greenhouse gas emission was announced.
2010	• Introduction of the system for regulating the energy use as a whole enterprise (Revised ECA)
2011	• Due to the Great East Japan Earthquake, electricity use in summer is limited, electricity saving measures are promoted.

Outline of ECCJ

ECCJ is the core organization responsible for promotion of energy conservation in Japan. Its activities were authorized by the Diet when the Energy Conservation Law was enacted.

Legal status	General Incorporated Foundation
Establishment	1978
Office location	Tokyo Head office & 8 branches
Supporting member	Approx. 2,100 companies
Staff	76 persons (as of July 2021)
Business scale	1746 million yen in FY2020 (17 million U\$)

Fields of Main Activities

Industrial and Building Sector	① Energy conservation Audit services for factories & buildings ② Education & training on energy conservation ③ State examination for energy managers
Commercial / Residential Sector	① Energy conservation Audit services for buildings ② Dissemination of Top Runner Program and Labeling ③ Promotion of Eco-driving
Cross Sector	① Information & data base, Publicity and publishing ② International Cooperation including AECC's activities ③ Registration of auditors for ISO50001 Energy Management System

Activities of the Energy Conservation Center, Japan

Promotion of Energy Conservation/Electricity Saving for Factories, Buildings, Stores, etc., and Reduction of CO₂ Emission

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- Instructions, survey and analysis based on energy conservation audit for factories, buildings, etc.
- Provision of information on case examples of energy conservation/electricity saving, etc.
- Support for countermeasures for CO₂ reduction

Support for Energy Conservation Activities in Households and Local Communities, etc.

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- Dissemination of energy conservation practices and activities in local communities
- Provision of information on energy efficient equipment by means of energy saving labeling, etc.

Support for Development of Human Resources for Energy Conservation and its Activities

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- Development of human resources for energy conservation through educational seminars, etc.
- Support for development of human resources through the qualification system
- International Standard ISO50001 Auditors Evaluation and Registration Body
- Provision of information on energy conservation through publications

Promotion of International Cooperation for Energy Conservation

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- Dispatch of experts and acceptance of trainees
- Collaboration with the "Japanese Business Alliance for Smart Energy Worldwide"

Implementation of National Examinations, etc. for the Qualification of Energy Managers

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- Examinations and training for qualified energy managers
- Training for type 2 energy managers, etc.

Supporting Members

Corporate companies or organizations that are supportive of the Center's business objectives are entitled to join the Center as supporting member by each factory or business unit. The Center provides special service to the supporting members to assist their energy conservation activities. The special service includes the followings.

- A website dedicated to supporting members (Special provision of useful information on energy conservation)
- Provision of information on the latest measures and technologies concerning energy conservation/electricity saving
- Provision of information and advice on the Energy Conservation Act and support for making various notification forms
- Free-of-charge provision of the monthly magazine "Energy Conservation" and discount for the participating fee for educational seminars and for the price of energy conservation promotional goods

Total number of the supporting members: 2,026. as of July.1, 2021

Mining, quarrying of stone and gravel	9	Information and communication	13	Scientific research and technical service	51
Construction	93	Transportation and postal activities	4	Accommodation and eating service	4
Manufacturing	1,544	Wholesale and retail trade	19	Education and learning support	14
Electricity, gas, heat and water	183	Financial and real estate	17	Medical, health care and welfare	7
				Others (general service, public service, etc.)	68

Promotion of Energy Conservation/Electricity Saving for Factories, Buildings, Stores, etc., and Reduction of CO₂ Emission

The energy conservation of factories, buildings, etc. which consume a great deal of energy is implemented by introducing new equipment or improving existing technologies at each workplace based on the Energy Conservation Act.

To support these activities, the Center implements instructions, survey and analysis by using energy conservation audits of factories, buildings, etc. and provides information on the Energy Conservation Act and the latest energy conservation technologies. The Center also undertakes the measures for electricity saving and CO₂ reduction support using the method of the energy conservation audit, smart technologies, etc.

Energy Audit and Consultation

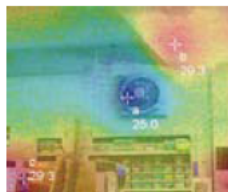
The Center dispatches energy conservation experts to small and medium sized factories or buildings and provides advices on specific techniques for improving energy efficiency (target of the energy conservation effect: 7 to 8%). Case examples of the advice so far made are widely introduced at seminars, etc.

Meanwhile, following the current needs of electricity saving, the Center provides the audit specific to that needs and holds electricity saving seminars for the industry including the household sector.

[Approximately 20 thousand energy audits and consultations were executed by FY2018 (for over 30 years since the establishment of the Center)]



Audit of thermal insulation and heat retention of a factory furnace



Visualization of indoor cold air which is constantly discharged outdoor through a ventilation fan
Advice was made to make the improvement easy to understand by visualizing it

Energy Conservation Survey of Factories

The Center conducts on-site survey ("overall factory inspection") for specified business operators and designated energy management factories based on the Energy Conservation Act.

The Center also analyzes periodic reports and mid-term and long-term plans of factories, surveys their energy consumption and energy management, provides the results and proposes necessary actions.

Support for Energy Conservation of Buildings

The Center introduces effective energy conservation/electricity saving techniques which are useful for office buildings, commercial facilities, hotels, hospitals, etc., including use of various tools, simulators, etc., through its website. Also, the Center offers energy conservation/electricity saving consulting according to the needs of individual buildings.

For the on-site energy conservation activities for buildings, "Buildings energy conservation audit engineers", who are qualified by the Center [see P5], are working enthusiastically.



Explanation of various tools and simulators for buildings

Energy Conservation Grand Prize

From among various energy conservation/electricity saving activities of companies, municipal bodies, educational institutes, etc. and energy saving products, business models, etc. newly developed, those which are especially excellent are awarded the "energy conservation grand prize".

Those activities or products are also publicized and introduced at energy conservation conventions or by the publication of excellent case examples to be used as hints for practical energy conservation activities.



Energy conservation grand prize example cases to be used as hints for energy conservation of workplace

Support for CO₂ Reduction

In Tokyo Metropolitan and Saitama Prefecture, business establishments which use more than a certain amount of energy must report their CO₂ emission amount to the prefectural government after having it verified by a third party verification body.

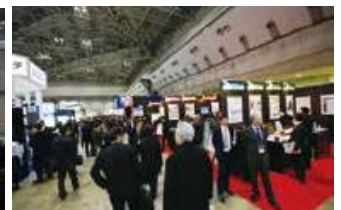
The Center has been registered as one of the third party verification bodies and it implements CO₂ verification work.

ENEX, Energy and Environment Exhibition, Aiming at the Harmony of the Global Environment and Energy

The Center holds the ENEX in February which is designated as the month for promoting energy conservation. The ENEX is a comprehensive exhibition for energy conservation and new energy.

It not only introduces excellent energy conservation/new energy equipment, energy conservation/electricity saving activities, but also provides various seminars and awarding ceremonies, contributing to the expansion of the business network.

<http://www.low-cf.jp>



ENEX

Energy and Environment Exhibition Aiming at the Harmony of the Global Environment and Energy

Support for Energy Conservation Activities in Households and Local Communities, etc.

To promote energy conservation/electricity saving by the power of the country as a whole, it is very important to create an environment in which homes, workplaces, local communities, etc. can actively and continuously promote adequate energy conservation/electricity saving activities.

For this purpose, the Center supports energy conservation practice in homes, schools, workplaces, etc. in collaboration with local governments, companies, etc., while providing useful information on the latest energy saving equipment, products, etc. in an easily understandable way.

Energy Conservation Practice, Collaboration with Local Communities

Collaboration with Local Governments, etc.

To promote energy conservation practice in local communities, the Center implements lectures or seminars and supports energy conservation audit for homes in collaboration with local governments, companies, etc. When doing this, "Home energy conservation experts" [see P5] qualified by the Center actively support those activities.

Energy Conservation Seminar Delivery Service for Elementary Schools

"Energy Conservation Home Electric Appliance Concierges" (daily life energy conservation experts) visit elementary schools across the country to deliver special classes which make students think about the global warming issue and energy conservation in homes.



Energy conservation class delivered to an elementary school

Energy Conservation/Electricity Saving Seminar

The Center dispatches instructors to seminars which are held by municipal bodies, public institutes, private industrial bodies, associations, counsels, etc. with free admission fee.

Promotion of Energy Conservation Navigator (Smart Meter)

To promote "Energy Conservation Navigator (Smart Meter)" for "visualizing" electricity consumption, etc., the Center certifies applicable equipment, provides information on the equipment and analyzes the effect of the equipment.



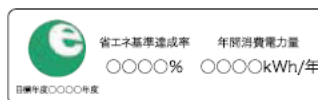
Energy Conservation Navigator (Smart Meter)

Provision of Information on Energy Conservation Equipment, etc.

Top Runner Standard, Energy Conservation Labeling

Based on the Energy Conservation Act, the Top Runner Standard is applied to home electric appliances, gas and oil equipment, cars, etc. This is a system obliging these products to achieve the highest energy conservation level within a given period of time that was achieved by a product within the same product category during a reference time.

The Center disseminates and publicizes through its website, etc. the energy-saving labeling or unified energy-saving labels, etc. designed to show consumers whether or not a product has achieved the Top Runner Standard in an easily understandable way.



Energy-saving Label
Indicated on 21 products including home electric appliances, etc.



Unified Energy-saving Label
Indicated on air conditioners, televisions, refrigerators, electric toilet seats, lighting equipment (for home use)

International Energy Star Program

As regards the International Energy Star Program implemented in 7 countries and regions of the world as an international energy conservation system for office equipment, the Center registers the equipment supported by the Program and provides information on that through its website, etc.



International Energy Star Logo
Indicated on energy efficient office equipment

Support for Development of Human Resources for Energy Conservation and its Activities

To effectively promote energy conservation/electricity saving and CO₂ reduction in companies and local communities, it is important to develop and secure human resources who can take initiative in leading energy conservation/electricity saving activities.

The Center actively implements various seminars to develop people who can undertake energy management in companies, etc. and, at the same time, supports the activities of people implementing energy conservation/electricity saving by using the Center's original qualification system.

Development of Human Resources by Means of Seminars, etc.

Educational Seminars for Engineers

The Center provides educational seminars for people in charge of energy conservation or equipment of workplace in factories or buildings as follows.

- Technical seminars providing knowledge concerning the Energy Conservation Act, the latest energy conservation technologies and measures for electricity saving
- Practical seminars that teach practical technologies using demonstration equipment



Technical Training Seminar



Practical Training Seminar

Seminars Provided in Response to Customer's Request (Seminar Delivery Service)

The Center delivers energy conservation seminars on an order-made basis in response to the request of companies, municipal governments, organizations, etc.

- In-house trainings: Trainings held by companies, governmental offices, and local governments for their employees or staff members
- Various lectures: Lectures held by companies, governmental offices or local governments for the public
- OJT trainings: Simplified audit of individual factories and buildings, and trainings accompanied with practical exercise and demonstrations using various equipment
- Others: Provision of advice for companies, etc. regarding individual energy conservation activities

The Center's Original Qualification Program

Buildings Energy Conservation Audit Engineers

The Center certifies people who can adequately implement energy conservation measures at workplace for commercial buildings such as hospitals, hotels, commercial facilities.

[Target people] Facility managers of buildings, facility vendors, consultants, etc. People who have practical experience of two years or more

[Acquisition] Lectures (lectures and written examination), preparation and submission of an energy conservation audit report

Home Energy Conservation Experts

The Center certifies people who have total knowledge of "energy conservation for homes" including knowledge about home electric appliances, structure and equipment of homes, life style, etc. and who can utilize the knowledge for activities in local communities or companies.

[Target people] Citizens, students, employees or staff members of municipal bodies, organizations, companies, etc.

[Acquisition] Qualification examination



Examination textbook for Home Energy Conservation Experts - also can be used as hints for energy conservation for homes

■ Energy Audit Professionals

The Center certifies professional people who can perform energy audits or make improvement proposals in a highly professional manner for the total energy management of workplace within companies, etc.

[Target people] Company engineers, etc. people having technical knowledge equivalent to that of qualified energy managers (national qualification)

[Acquisition] Specified examination, preparation and submission of an audit report

■ International Standard ISO50001 Auditors Evaluation and Registration Body

ISO50001 is an international standard in the energy management field (came into effect in June, 2011) and it is likely to be applied to various cases as a global standard. The Center, as a registration body for auditors, implements the following work.

- Approval of training courses implemented by training bodies
- Evaluation and registration of auditors

Contact for inquiry about ISO50001

Center for Energy Management
System Auditors Registration
(CEMSAR Secretariat)
TEL: +81-3-5439-9758
cemsar@eccj.or.jp
<https://www.eccj.or.jp/cemsar>



■ Provision of Information through Publication

■ Monthly Magazine “Energy Conservation”

The Center publishes a monthly magazine “Energy Conservation”, the only magazine dealing with energy conservation in Japan. It provides wide and high-quality information concerning promotion of energy conservation including information on energy policies and the “Revised Energy Conservation Act”, the latest technologies and knowledge of energy management, measures for electricity saving, etc.



Monthly Magazine
“Energy Conservation”

■ Books, handbooks, etc.

The Center provides basic and professional information on energy conservation in the form of books, handbooks, etc. written from a technical viewpoint.

- Documents and guide books dealing with the Energy Conservation Act and law-related matters
- Model answers and reference books for the people who take the examinations for qualified energy managers
- “Energy Conservation Handbook” and data books such as “Handbook of energy and economic statistics”, etc.
- Specialized books, practical work books concerning energy conservation technologies
- Energy conservation handbooks compiling technologies and data for energy managers of factories
- Building energy conservation handbooks compiling facility management techniques and data for facility managers of buildings



■ Promotion Goods for Energy Conservation Activities

The Center distributes various goods (at cost) which can be used to promote energy conservation activities in factories or offices.

- Posters, energy conservation check seals, etc. that advocate energy conservation practice of individuals
- LCD temperature meter seals which are useful for controlling indoor temperature
- Display boards, flags, banners, etc. which help people of factories or offices implement energy conservation activities together



Wappen



LCD Thermometer



Poster

Energy Conservation Promotion Goods

Implementation of National Examinations, etc. for the Qualification of Energy Managers

Under the Energy Conservation Act, companies which consume a great deal of energy must appoint overall managers who are responsible for the energy management of their company and staff members of factories, etc. who have a qualification of "qualified energy manager", etc. The people who have a qualification of the "qualified energy manager" are playing an active role not only at the workplace of their factory but also in various fields as an expert giving advice for the energy conservation and CO₂ reduction.

The Center is a designated organization for implementing national examinations, training, etc. for these qualifications.

Managers Qualified under Energy Conservation Act

Under the Energy Conservation Act, companies and workplaces are obliged to appoint energy management control officers or energy managers having a certain qualification according to the following classification A to C. (See Table below.)

"A": Companies whose annual energy consumption (crude oil equivalent, hereinafter called the "consumption") is 1,500 kl or more (business operators)

"B": Factories and workplaces whose consumption is 3,000 kl or more and which belong to one of the 5 business types (manufacturing, mining, electricity supply, gas supply and heat supply)

"C": Factories and workplaces other than those said in "B" above and whose consumption is 1,500 kl or more

	Energy Managers	Work	Qualification Required
A	Energy Management Control Officers	Total responsibility for the energy management of the company as a whole (Executive officer class)	-
	Energy Management Planning Promoters	To assist the energy management control officer in practical work.	Qualified energy managers or people who finished the energy management seminar
B	Type 1 Energy Managers	To manage energy in factories or workplaces. • Management of facilities consuming energy • Improvement of energy use methods and management of monitoring work	Qualified energy managers
C	Type 2 Energy Managers	• Report of energy consumption, energy use efficiency, etc.	Qualified energy managers or people who finished the energy management seminar

Examinations, Seminars, etc. for Obtaining Qualification

The Center is a designated organization for implementing the national examinations in relation to the "qualification required" above.

Qualification of "Qualified Energy Manager"

- The qualification as a qualified energy manager is given by either of the following ways.
 - To pass the "qualified energy manager examination" (national examination) with "experience in practical work for one year or more".
 - To take the "energy management training course" with experience in practical work for 3 years or more (to be certified after passing the end-of-course examination).
- These examination and course are held one time per year respectively throughout the nation.



Examination for the Qualified Energy Managers

"Energy Management Seminar"

- The seminars are held throughout the nation every year.
- No qualification is required to take this seminar. The seminar finishes in one day.



Designated Energy Management Seminar

Promotion of International Cooperation for Energy Conservation

The Center enhances international cooperation to promote energy conservation from a global point of view.

To cope with global issues such as limitation of natural resources and climate change, it is inevitable to save energy. In this sense, Japan is expected to actively play its role as an advanced energy conservation country. The Center dispatches experts and accepts trainees to and from abroad, especially to and from developing countries in Asia based on the agreements between the governments to spread the policies and technologies of energy conservation.

The Center also strongly supports the activities for spreading Japan's advanced energy conservation technologies internationally through the co-work between the government and the private sector.

Dispatch of Experts

The Center dispatches energy conservation experts to overseas workplaces, mainly to those of Asian countries. Using the experience obtained in Japan, they promote energy management techniques for factories and buildings, propose energy management systems or policies and support the efforts to build and enforce the base of energy conservation activities, and development of human resources engaged in energy conservation.

[The number of experts dispatched by FY2019: 1,969 experts to approximately 30 countries]



On-site audit of a building



Multilateral training program

Acceptance of Trainees for Training in Japan

The Center accepts trainees coming from Asia, the Middle East, etc. who are responsible for the proposal and implementation of energy conservation policies in their countries to be trained in Japan.

The Center provides them with practical lectures and training covering energy conservation policies, technologies, practice, factory visits, and their findings are brought back to their countries and used to make their own systems there.

[The number of trainees accepted by FY2019: 4,383 trainees from approximately 60 countries]



Acceptance of Trainees
Factory Visit

Provision of Energy Conservation International Information

Through "Asia Energy Efficiency and Conservation Collaboration Center" established within the Center, etc., the Center distributes and collects information on energy conservation policies and technologies and builds a network between organizations concerned.

International Energy Conservation Business

The Center supports the operation of the "Japanese Business Alliance for Smart Energy Worldwide" (JASE-World) established jointly by the government and the private sector for the purpose of promoting internationally Japan's advanced energy conservation technologies on a business basis.

Especially, the technical brochure "Japanese State-of-the-Art Smart Energy Products and Technologies" compiling Japanese advanced energy conservation technologies is highly evaluated at international venues.



Technical Brochures (English Edition)
Distributed at Ministers International Conference

The Center also contributes to business matching by introducing Japan's energy conservation measures, examples of energy conservation activities, excellent energy conservation equipment and technologies through exhibitions held in and out of Japan and dispatch of missions.



Energy conservation mission in Brazil



World Future Energy Summit

Energy Conservation Activities based on International Framework

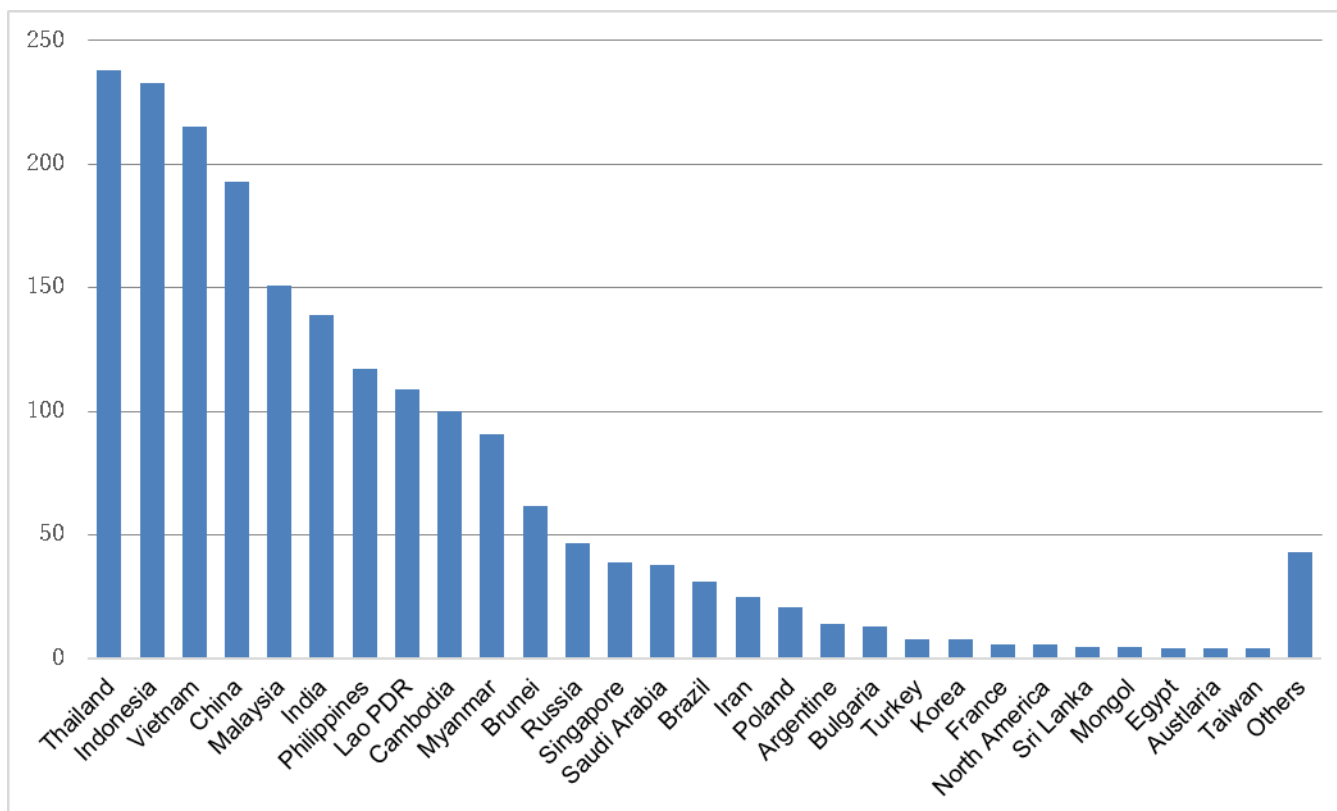
The Center participates in international energy conservation activities, e.g. some task groups of IPEEC* (International Partnership for Energy Efficiency Cooperation) and SE4All initiative (Sustainable Energy for All). These activities contribute to the promotion of energy management and capacity building for overseas policy makers, energy managers and practitioners.



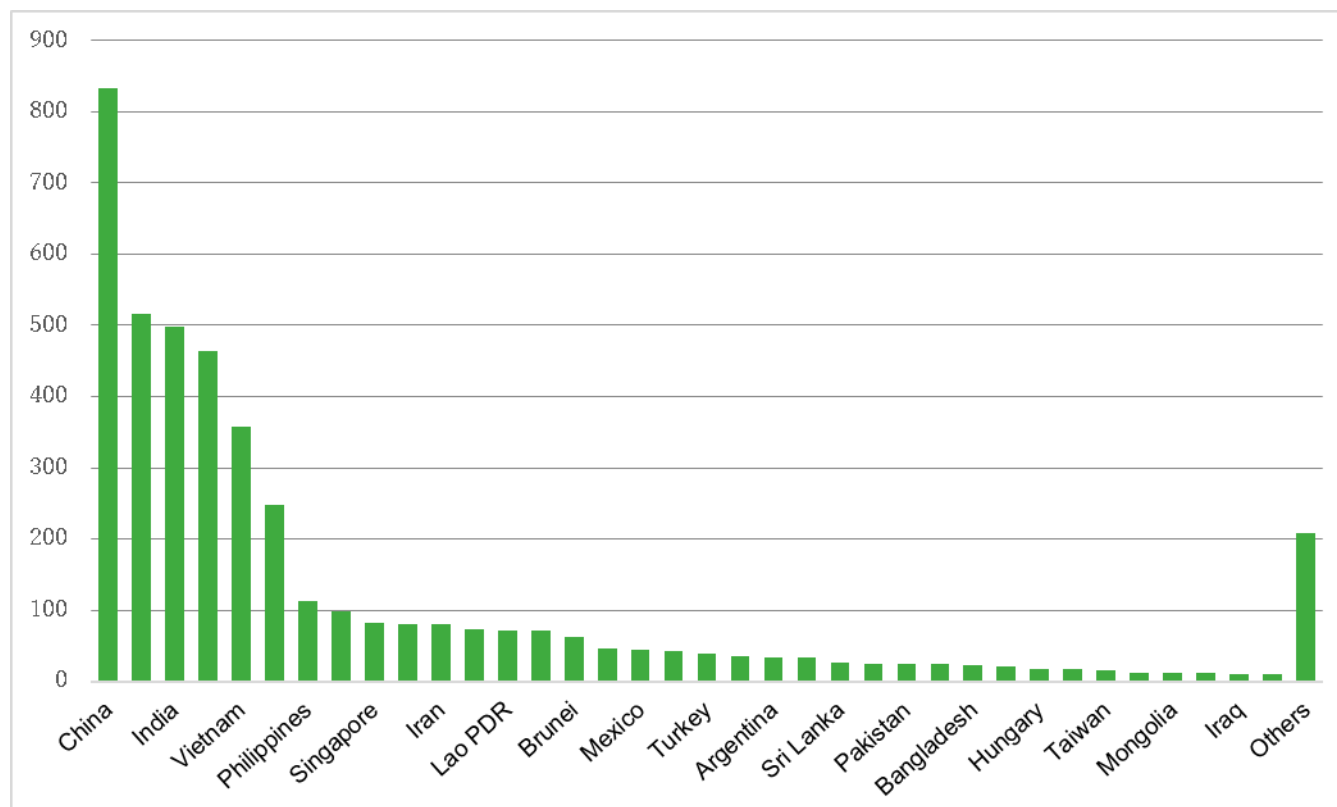
SE4All Forum in Tokyo

*Top Tens Task Group (~2015)
EMAK Task Group (2016~) etc.

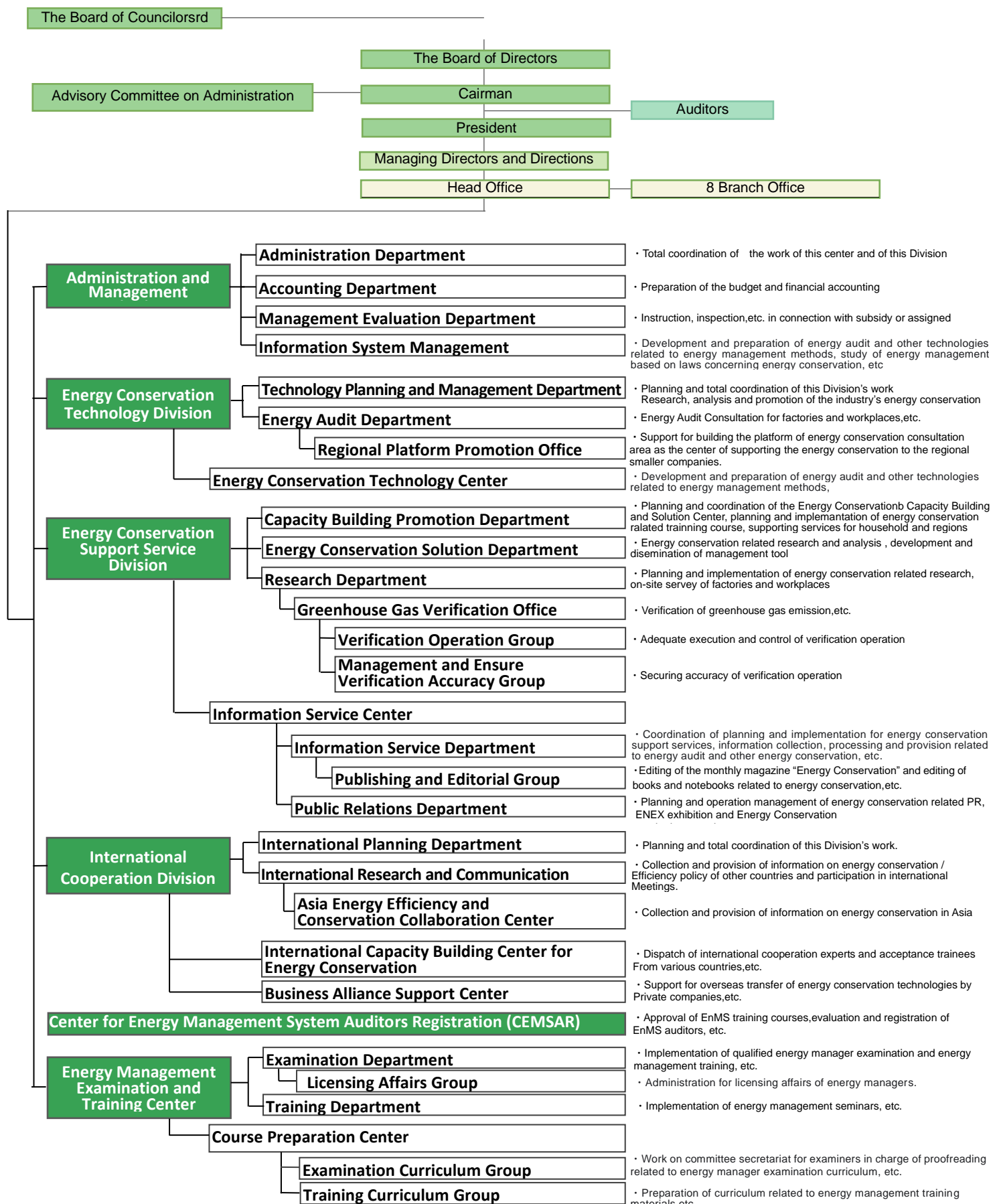
Expert Dispatch per country since 1980



Receiving Trainee per country since 1982



Organization Chart





The Energy Conservation Center, Japan (ECCJ)

Asia Energy Efficiency and Conservation Collaboration Center (AEEC)

Igarashi Bldg. 5F, 2-11-5 Shibaura, Minato-ku, Tokyo 108-0023 Japan



- Eight minutes' walk from Shibaura Exit (East Exit) at "Tamachi" Station of Keihin Tohoku Line / JR Yamanote Line
- Ten minutes' walk from Exit A4 at "Mita" Station of Asakusa line (Subway) / Mita line (Subway)
- Ten minutes' walk from "Shibaura Futo" Station of Yurikamome Line

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