



KEMENTERIAN ENERGI DAN SUMBER DAYA MINERAL
DIREKTORAT JENDERAL ENERGI BARU TERBARUKAN DAN KONSERVASI ENERGI



ENERGY CONSERVATION POLICY AND PROGRAM IN INDONESIA



Japan-Indonesia Business Forum for Energy Efficiency, Conservation and Renewable Energy
Jakarta, 14 November 2018



www.ebtke.esdm.go.id



Ditjen EBTKE



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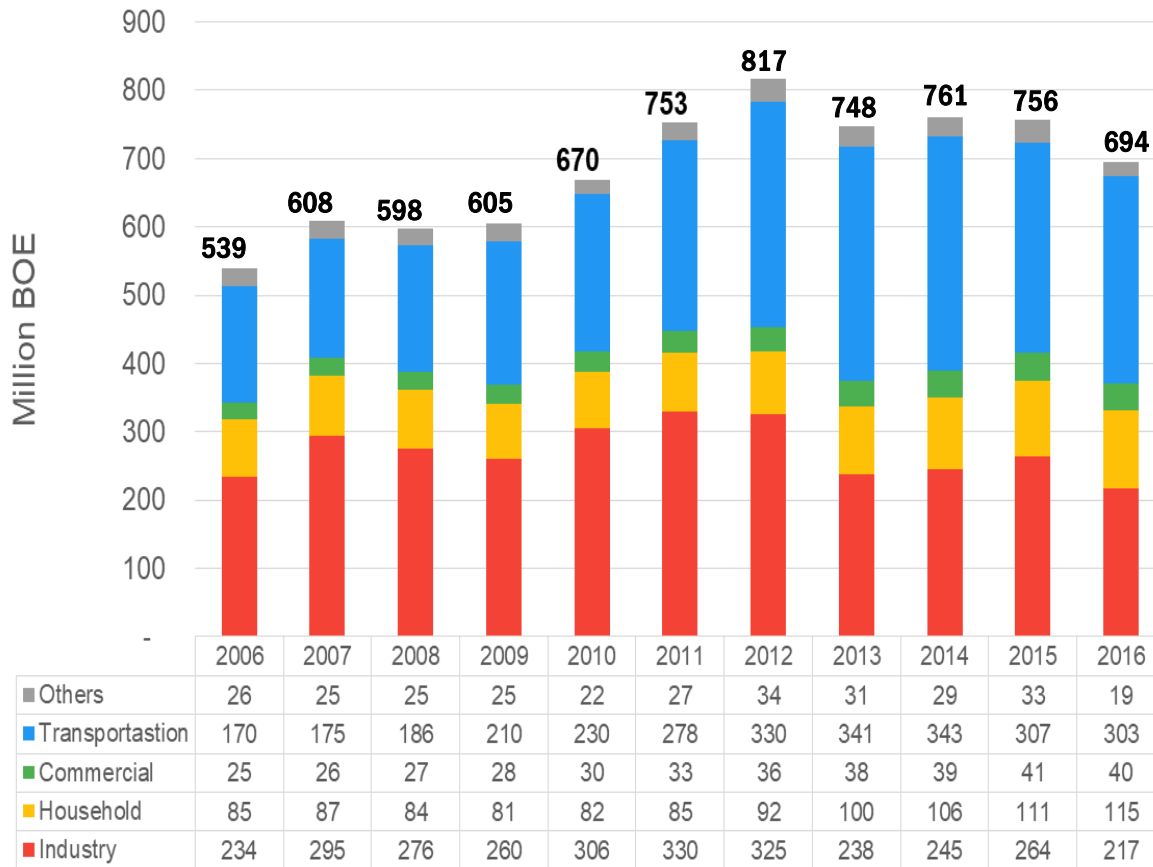
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OUTLINES

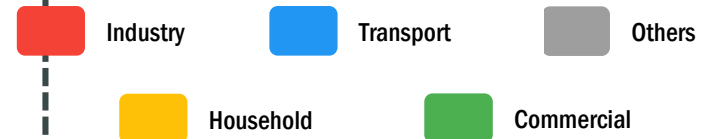
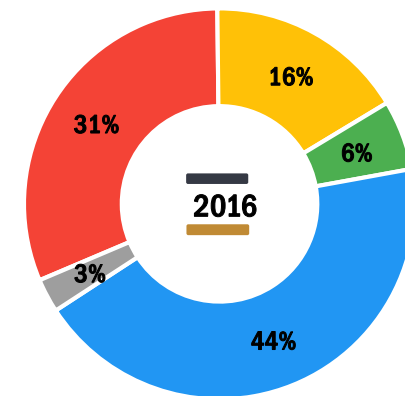
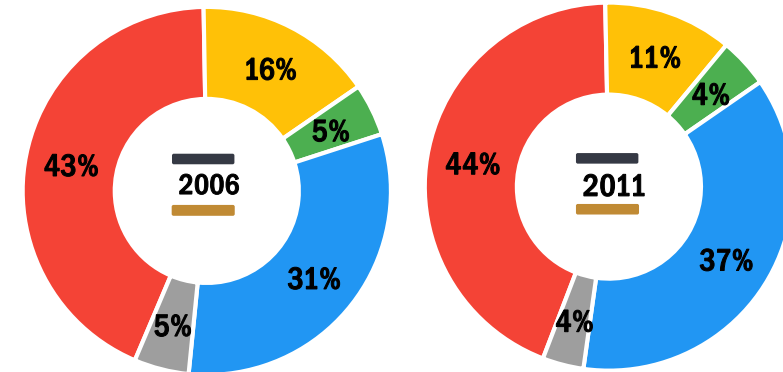
- Current Condition
- EC Policy and Regulations
- EC Programs



Final Energy Consumption



Final Energy Mix by Sector

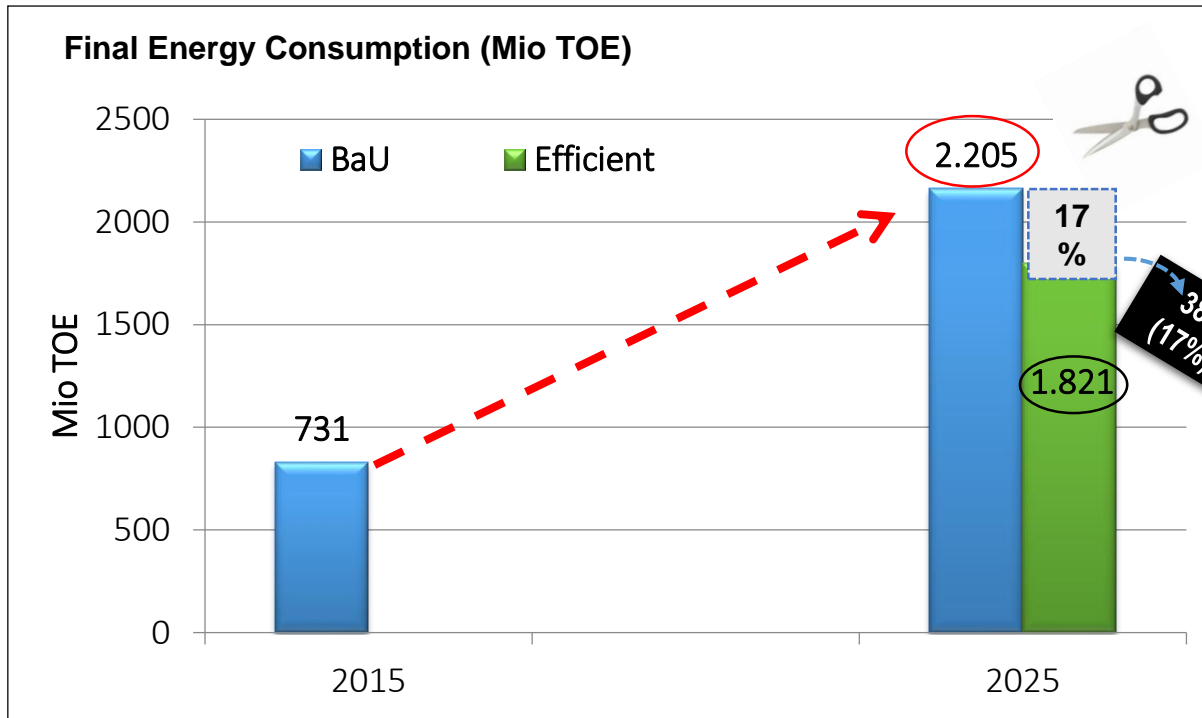




ENERGY EFFICIENCY TARGET BY 2025 (PP No.79/2014 : KEN)

Base on **National Energy Policy (KEN)** Govt. Reg. No 79 tahun 2014 dan President Reg. No 22/2017 **National Energy General Planning (RUEN)** , Energy Efficiencies Target are:

- Energy Elasticity less than 1 by 2025; (KEN)
- Reducing energy intensity by 1% per year up to 2025; (KEN)
- **Energy Saving of about 17% by 2025; (RUEN)**



Target

- Energy Saving 17% = 384 Mio TOE

Current status	2017
Energy Intensity	343 Mio.TOE/ Billion Rp
Energy Elasticity	1.12

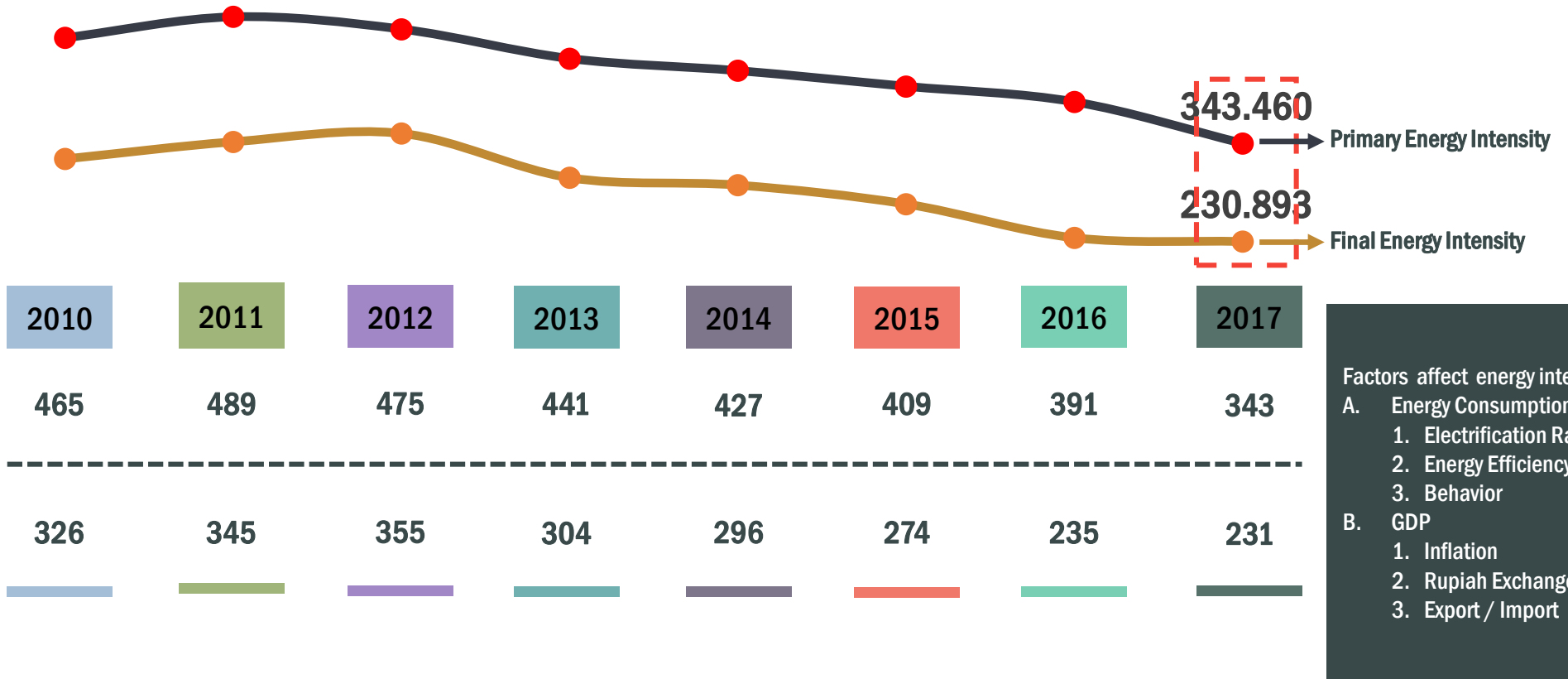
Catatan:



- Intensitas energi adalah jumlah energi yang dibutuhkan untuk menghasilkan produk PDB (produk domestik bruto) atau setara barel minyak per miliar rupiah
- Elastisitas pertambangan kebutuhan energi yg dipulihkan untuk mencapai tingkat pertumbuhan ekonomi tertentu.



Energy Intensity



Note: exclude biomass
 Source Handbook of Energy & Economic Statistics of Indonesia 2017 Final Edition, KESDM



ENERGY SAVING POTENTIAL

INDUSTRY

Energy Consumption 2016: 217 Mio.TOE
Energy Saving Potential : 10-30 %



Implementation:

- Energy Audit/IGA/ESCO
- Energy Management System/ISO 50001
- Online Reporting System
- Energy Manager and Auditor Certification
- Awareness
- *EE Pilot Project*

COMERCIAL

Energy Consumption 2016: 40 Mio.TOE
Energy Saving Potential : 10-30 %



Implementation:

- Energy Audit/IGA/ESCO
- *Pilot Project*
- EE standard
- Online Reporting(Govt. Bulding)

TRANSPORTATION

Energy Consumption 2016: 303 Mio.TOE
Energy Saving Potential : 15-35 %



Implementation:

- Mass Transport (BRT/MRT/ LRT)
- *Fuel Switching*(Oil to gas and biodiesel)
- Transportation Management System

HOUSEHOLD

Energy Consumption 2016: 115 Mio.TOE
Energy Saving Potential : 15-30 %



Implementation

- *EE Standard (Label/MEPS)*
- Awareness



Keterangan :- Tidak termasuk Biomassa

- Lainnya terdiri dari sektor pertanian, konstruksi, dan pertambangan

Sumber: www.ebtke.esdm.go.id Dirjen EBTKE Edition, KESDM

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EXISTING POLICY AND REGULATION ON ENERGY CONSERVATION

Law	No. 30/2007 on Energy	Article 25: Energy Conservation
Government Regulation	No.70/2009	<ul style="list-style-type: none"> • Mandatory on Energy Management • EE standard and Label • Incentive and Disincentive
Government Regulation	No.79/2014	<ul style="list-style-type: none"> • National RE and EE Target • Energy Elasticity < 1 in 2025 • Reducing Energy Intensity 1% per year, up to 2025
Presidential Instruction	No. 13/2011on Energy and Water Saving	<p>Energy and Water Saving for Government, State-Owned Enterprises</p> <ul style="list-style-type: none"> • Target: <ul style="list-style-type: none"> ✓ Electricity 20% ✓ Fuel 10% ✓ Water10% • Periodic reporting
Ministerial Regulation	No.18/2014 on EE Label for CFL	<p>Implementation of Label for CFL</p> <ul style="list-style-type: none"> • Mandatory for CFL manufacturer • Self Declaration of Conformity (SDOC) • More star -more efficient



EXISTING POLICY AND REGULATION ON ENERGY CONSERVATION

Ministerial Regulation	No. 12/2012 on Fuel Saving	<p>The Use of Non Subsidized Fuel Fuel Saving 10%</p> <p>Gov. Official and State-owned enterprises Vehicle</p> <p>-1 June 2012 (Jabodetabek)</p> <p>-1 August 2012 (Jawa –Bali)</p>
	No.14/2012 on Energy Management	<ul style="list-style-type: none"> • Mandatory of Energy Management for large energy ≥ 6000 TOE • The distribution of Authority (Gov, Reg.Gov.) • Monitoring of Energy Management Implementation • Incentive/Disincentive
	No.57/2017 on EE label for Air Conditioner	<p>Implementation of Label for AirCon</p> <ul style="list-style-type: none"> • Mandatory for AirCon manufacturer • Self Declaration of Conformity (SDOC) • More star -more efficient





Main Program of Energy Conservation

7 REGULATION

Resume preparation and improvement of regulation in the field of energy conservation

6 Increasing Public Awareness

- Carry out a seminar/workshop
- Serve ads about energy savings in paper and electronic media, brochures, newsletters etc.
- Organize an national energy efficiency and energy management contest and participate in the ASEAN Energy Award for building and industry
- Implementing energy saving in elementary school
- EE Campaign "Cut 10%"

5 Fostering and Supervision

- Supervising of Energy Management Implementation
- Supervising of MEPS and Label of Household equipments

1 ENERGY MANAGEMENT IMPLEMENTATION

implementation of energy management for the company's $\geq 6,000$ TOE/year
 Implement coaching and Capacity Building, Implement the SNI ISO 50001 Energy Management System: in the industry

2 Implement of MEPS and Label of Energy Efficiency

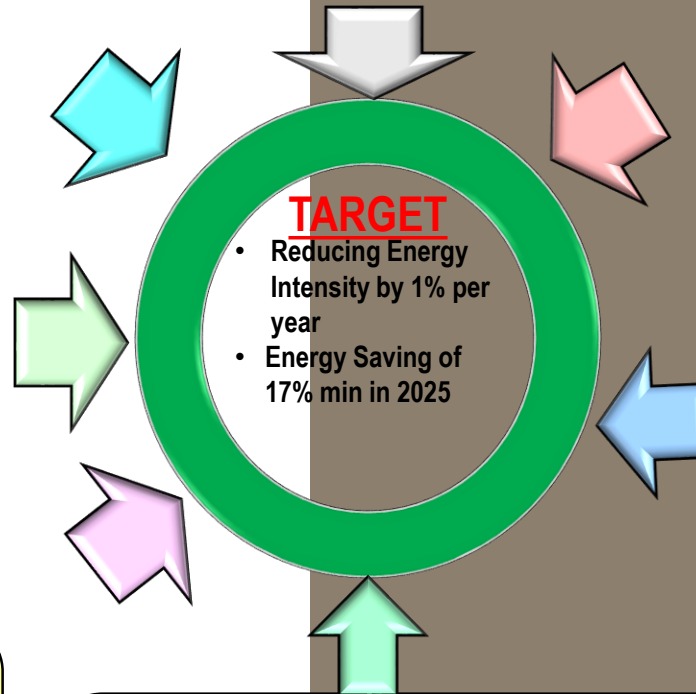
Implement of the Minimum Energy Performance Standards (MEPS) and the preparation of standards and energy efficiency Labeling for CFL lamps, air conditioning equipment, fridge, fan, rice cooker, electric motors and Electronic Ballasts; Preparation of energy saving label for industrial equipment's

3 Standard Competence Implementation

- The development of the competency Standards for managers and energy Auditors.
- Carry out capacity building for Energy Managers and Energy Auditors candidates to obtain certification of Competency, issued by LSP

4 Implements Energy Efficiency in Govt. Facility

- Capacity Building Civil Servant
- Develop of Energy Monitoring System in Govt. Building



Japan-Indonesia Cooperation in Energy Efficiency

- Energy Management System
- Capacity Building in Energy Efficiency
- Smart Community Industrial Park
- MEPS and Labelling
- Etc.



Japan Embassy Indonesia



New Energy and Industrial Technology
Development Organization



The Energy Conservation Center, Japan



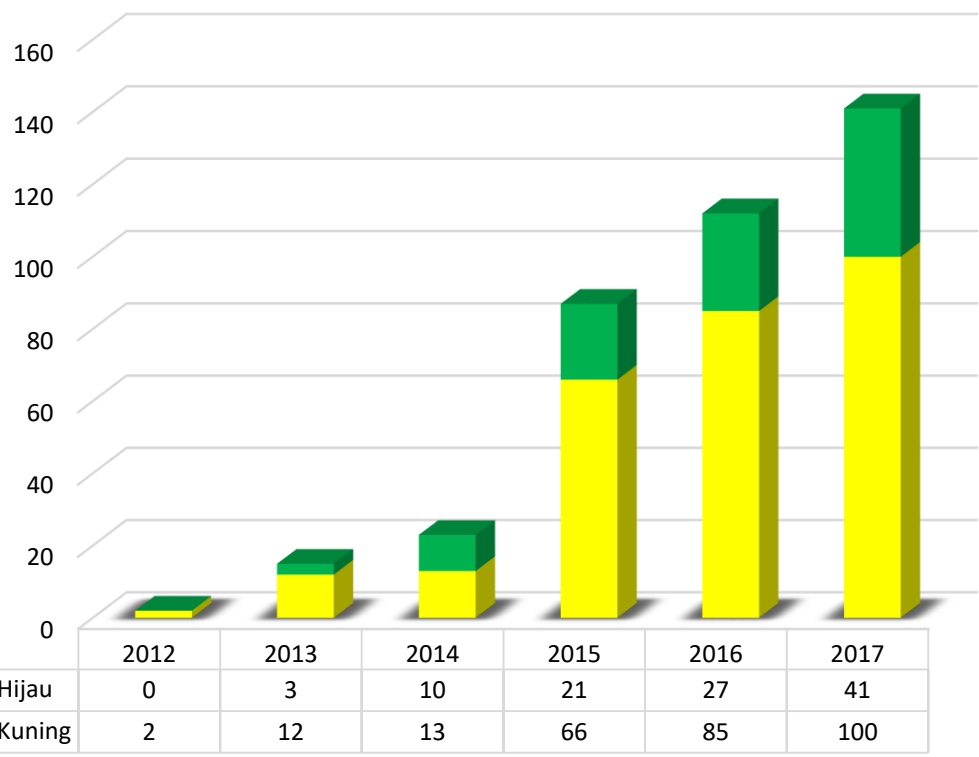
METI

Ministry of Economy, Trade and Industry





ENERGY MANAGEMENT REPORTING



- i. Kategori hijau : Company has complied to all points of article 12 PP 70/2009
- ii. Kategori kuning : The company has been carrying out most of the points contained in article 12 PP 70/2009

	2012	2013	2014	2015	2016	2017
Penghematan Energi	0	52	68	270	7,765	8,262

Penghematan yang diperoleh

8.262

GWh eq/ tahun

Perusahaan yang melaporkan

141

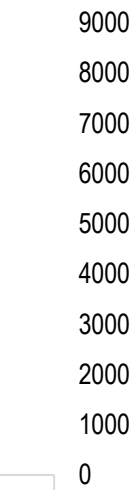
Perusahaan

Penurunan Emisi Gas Rumah Kaca

4,47

Juta Ton CO2/ tahun

EQUAL TO 1.028 M



ISO 50001 Energy Management System



Experts

National Experts



Pilot Project

8 Companies
In 2016

Total
Pilot Project

19



38 National Experts

NO	NAMA PERUSAHAAN	SEKTOR INDUSTRI	PENGHEMATAN YANG DIPEROLEH PER TAHUN			PENGURANGAN CO2 (Ton)
			LISTRIK (MWh)	PENGHEMATAN (%)	PENGHEMATAN BIAYA (Milyar Rupiah)	
1	Nippon Shokubai Indonesia	Kimia	43.860	15	51,32	5.162
2	Pupuk Kujang	Petrokimia	52.753	12	61,72	46.950
3	Daya Manunggal Tekstil	Tekstil	15.900	10	18,60	14.151
4	Kwarsa Indah Murni	Gelas	9.266	7	10,84	8.246
5	Unitex	Tekstil	4.233	7	4,95	4.073
6	PQ Silicas Indonesia	Kimia	5.800	6	6,79	5.162
7	Inter Aneka Lestari Kimia	Kimia	243	4	0,28	216
8	Ungaran Sari Garment	Garment	124	1,8	0,15	110
		TOTAL	132.179		155	84.070

75




Up to November 2018, around 75 Industries was ISO 50001 certified



Investment Grade Audit (IGA)

IGA is detailed energy audit to identify energy conservation measures. It analyzes the financial aspects of energy savings and the return on investment from potential changes or upgrades

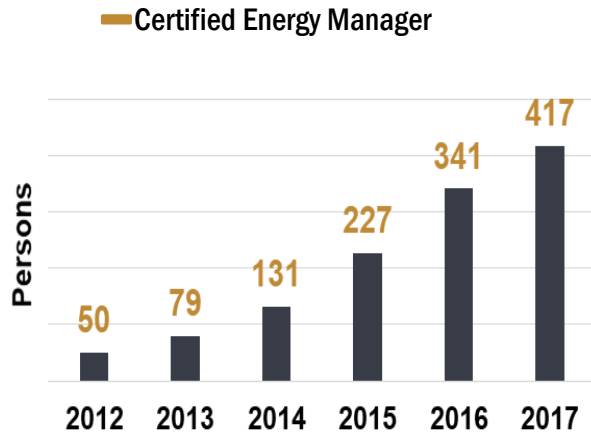
	2014	2015	2016	2017	TOTAL
Pilot Company					
Industry	1	9	2	3	15
Building	-	-	3	4	7
Saving Potential					
GWh	32,58	90,39	62,4	20,73	206,08
Billion Rp	39,09	106,97	31,1	22,71	199,86
Kilotonne CO ₂	28,21	90,27	50,6	41,06	210,18
Investment					
Billion Rp	142,1	143,95	55,3	52,38	393,74

		2016	2017	TOTAL
Implementation				
	Energy Saving (GWh/year)	2,99	51,7	54,7
	Cost (Billion Rp)	3,36	12,78	16,14
	Investment (Billion Rp)	7,64	10,24	17,88

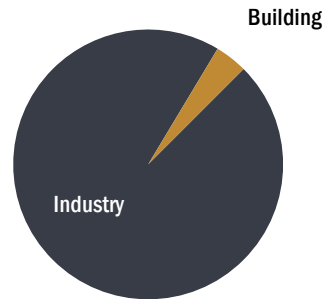


Energy Manager and Auditor

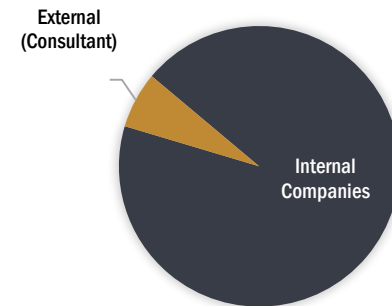
Energy Manager



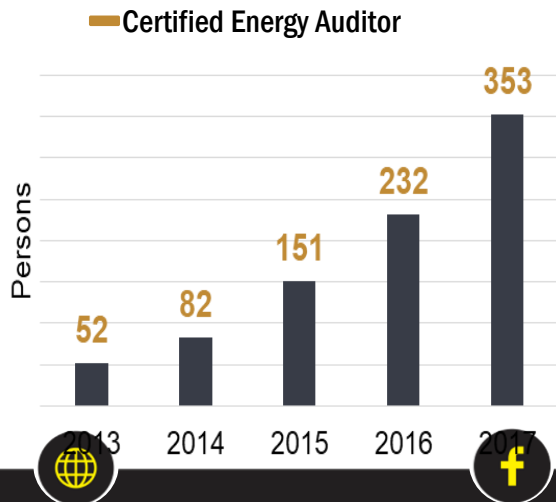
— Share of Energy Managers by Sector



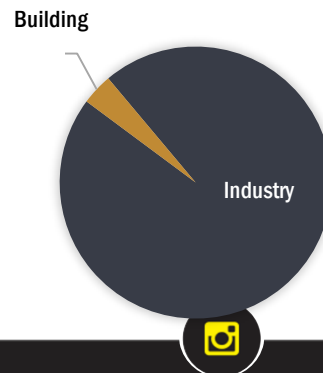
— Share of Internal and External Manager



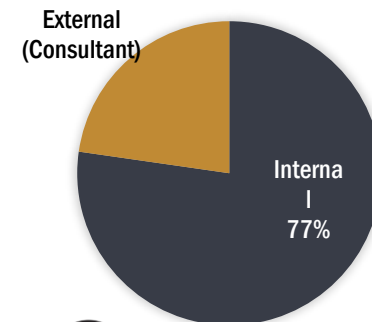
Energy Auditor



— Share of Energy Auditor by Sectors



— Share of Internal and External Auditor





MEPS AND LABELING

TARGET PRODUCT of MEPS & LABELING

1. Compact Fluorescent Lamp (CFL)

Ministerial Regulation of MEMR No.18/2014 on MEPS and Labeling of CFL

2. Room Air Conditioner

Ministerial Reg. Already issued

Ministerial Regulation of MEMR No.57/2017 on MEPS and Labeling of Air Conditioning

3. Refrigerator

4. Rice Cooker

5. Electric Fans

6. Electric Motor

7. LED Lamp

8. Washing machine

9. Water pump

10. Electric Iron

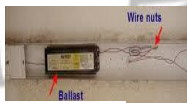
11. Television

Preparing of Ministerial Reg.

2018

2018

2019



Tingkat Hemat Energi

SEMAKIN BANYAK BINTANG, SEMAKIN HEMAT

MODEL PRODUK: _____

NO.REG. _____

Nama Model Sesuai Penamaan dari Produsen.	Motor Reg yang diterbitkan oleh Dirjen EBTKE.
Nilai Lumen atau EER Sesuai Hasil Sampel Uji.	Tanda Bintang Menunjukkan Hemat Energi.

SKEM

No. Registrasi: 001.001.1.01.001.14.0001

- No. Urut
- Tahun
- Nilai EER
- Tingkatan Bintang
- Tipe Jenis
- Merak/Perusahaan
- Nomor Registrasi
- LSPro Kementerian Perdagangan

1. Kode barang Registrasi (Kategori Komoditas)
 a. EER > 10
 b. 5.000Watt <= 10
 c. 5.000Watt <= 10
 d. 5.000Watt <= 10

2. Kode Merek/Perusahaan (Kategori Komoditas) sesuai dengan standar internasional untuk pengujian efisiensi energi (Energy Star) yang diterbitkan oleh Dirjen EBTKE. Kode ini adalah kombinasi angka yang menunjukkan kode registrasi merek dan tipe jenis barang yang akan diuji.

3. Tanda Bintang menunjukkan tingkat efisiensi energi yang terukur dan diuji (EER/14).

4. Nilai Lumen, daya atau kapasitas sesuai peraturan teknis, dan penamaan sesuai peraturan teknis Dirjen EBTKE.

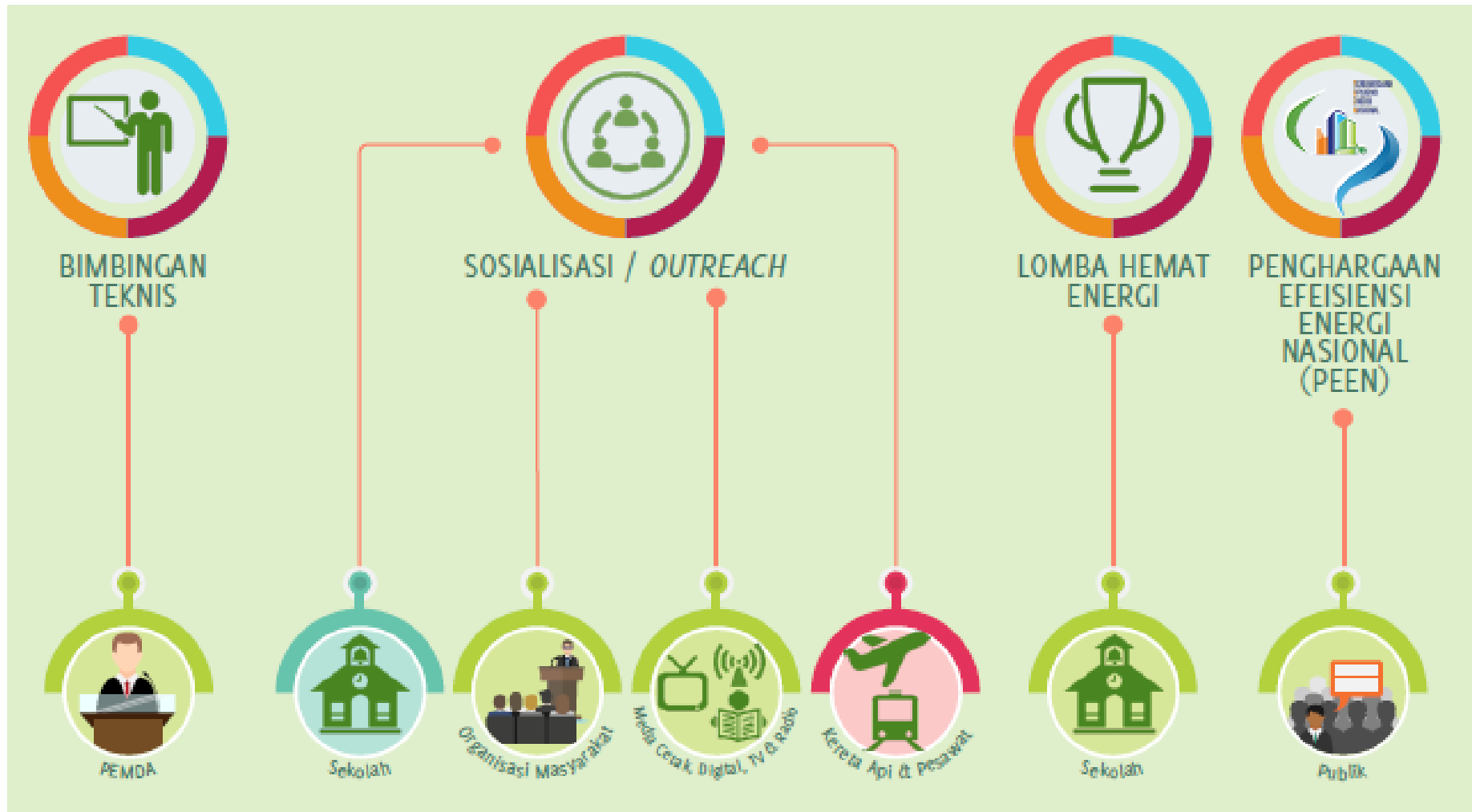
5. Kode Merek/Perusahaan (Kategori Komoditas) sesuai dengan standar internasional untuk pengujian efisiensi energi (Energy Star) yang diterbitkan oleh Dirjen EBTKE.

6. Kode tipe barang.

7. Nomor urut, yaitu nomor registrasi yang menunjukkan bahwa barang tersebut telah terdaftar dan siap untuk diproduksi.



Energy Conservation Socialization Program



SUMMARY

- ① The Government of the Republic of Indonesia has issued various regulations for the conservation of energy and national energy efficiency
- ② Energy savings potential in all sectors ranges from 10-30%
- ③ The major programs of energy conservation and energy efficiency include: energy management system implementation, MEPS and home appliances labeling, efficient energy technology implementation, energy audit in buildings and industries, and conducting socialization and technical guidance of energy conservation
- ④ To enhance the role of energy conservation then currently being carried out a revision of the Government Regulation No. 70/2009 of Energy Conservation
- ⑤ To further improve the implementation of energy conservation, Government of Republic Indonesia also has encouraged the growth of ESCO in the field of energy conservation
- ⑥ Through this forum, it is expected that it will further enhance mutual cooperation between Indonesia and Japan, especially in the areas of energy efficiency and energy conservation





TERIMA

KASIH

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