



MINISTRY OF ENERGY AND MINERAL RESOURCES
REPUBLIC OF INDONESIA



COUNTRY REPORT

“Current Status Energy Efficiency for Building Sector and Energy Efficiency Award in Indonesia”

Catur Wahyu Prasetyo
Directorate of Energy Conservation



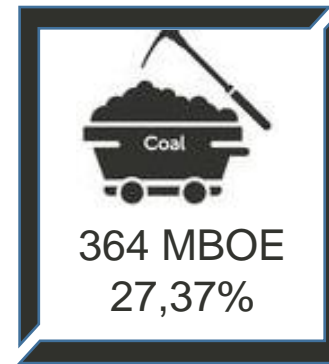
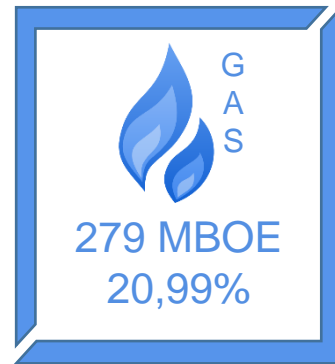
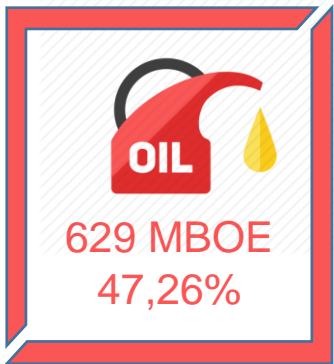
Current Condition on Energy



Energy in Indonesia

2015

Total Primary Energy Supply : 1330
MBOE



Incl. Biofuel

- **96% Fossil**
- **4% RE**



Primary Energy Supply

Growth : **4%**

Population Growth :

1,31%

Electrification Ratio :

92,8%



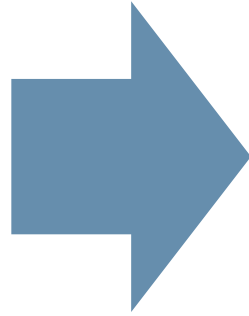
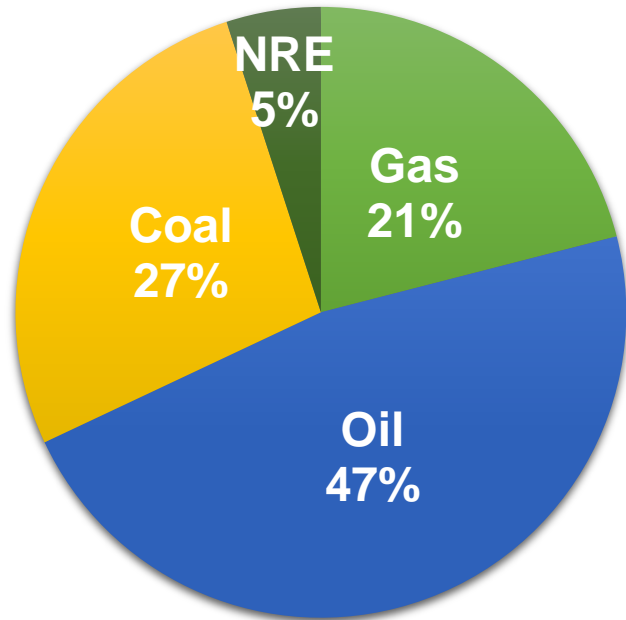
Total Final Energy : **1133 MBOE**

Primer Energy Intensity : **438 BOE /
Billion IDR**

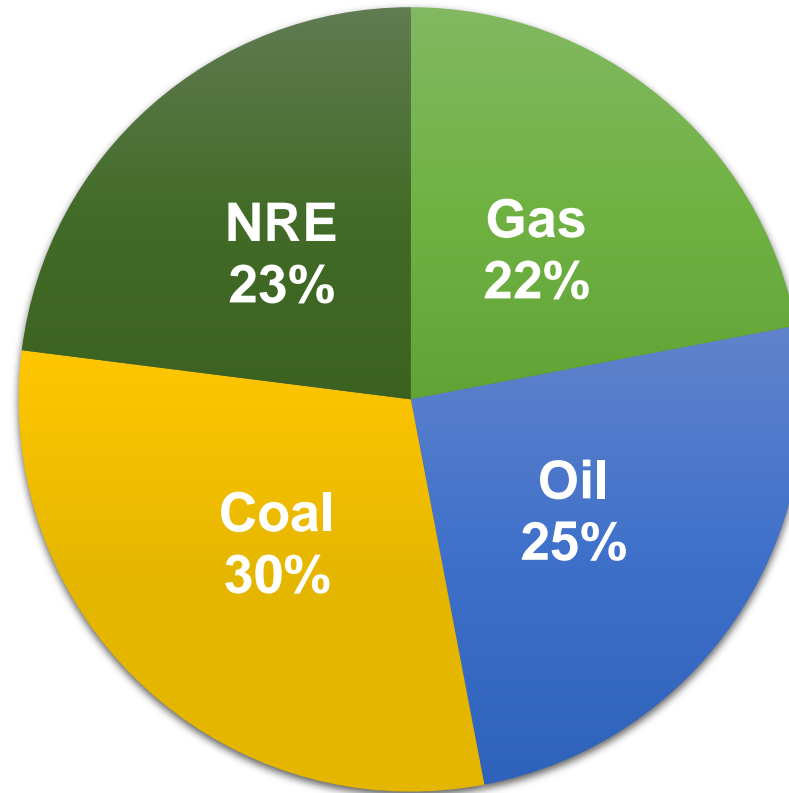


National Energy Policy Target

2015



2025

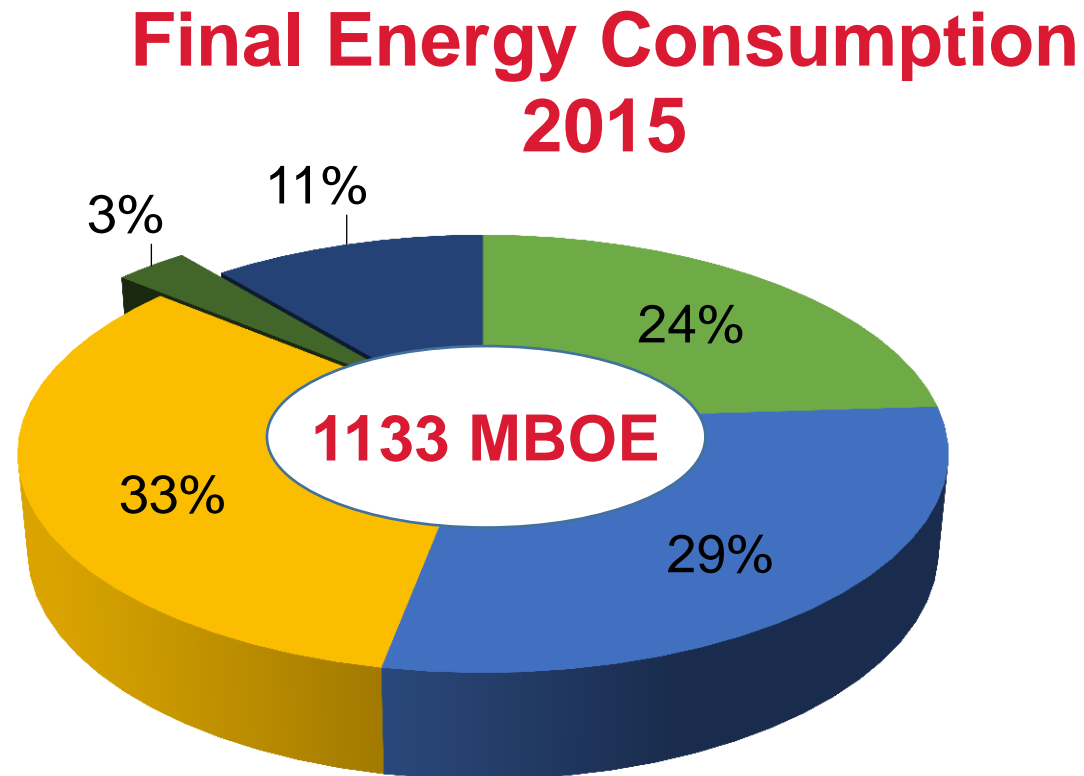
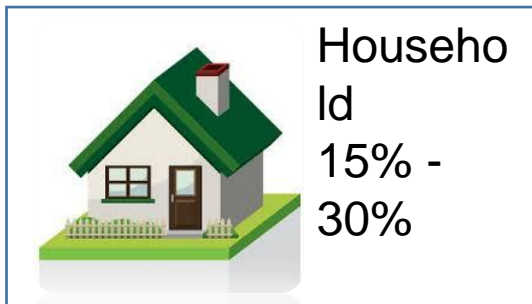


EE&C Target in 2025

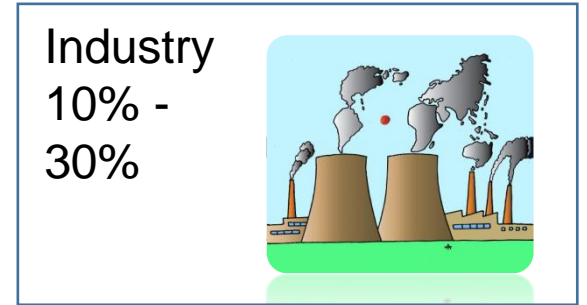
- Energy Intensity decreased 1% per year
- Energy Elasticity <1
- Energy Consumption decrease 17% from BAU



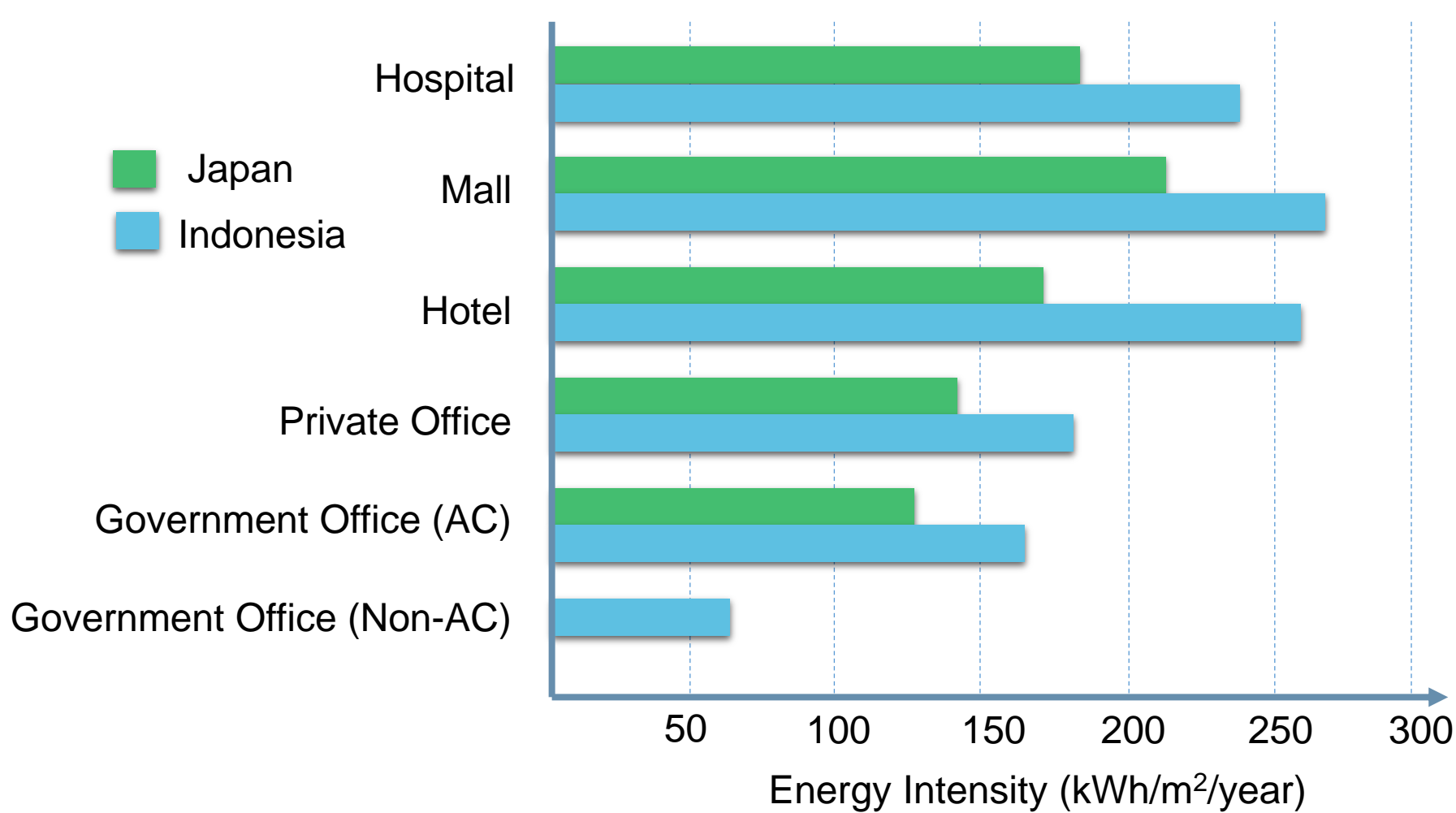
Energy Saving Potential



■ Industry ■ Transportation ■ Household
■ Commercial ■ Other



Energy Intensity in Commercial Building



Notes:

- Energy Conservation Partnership Program & JICA Study, 2010



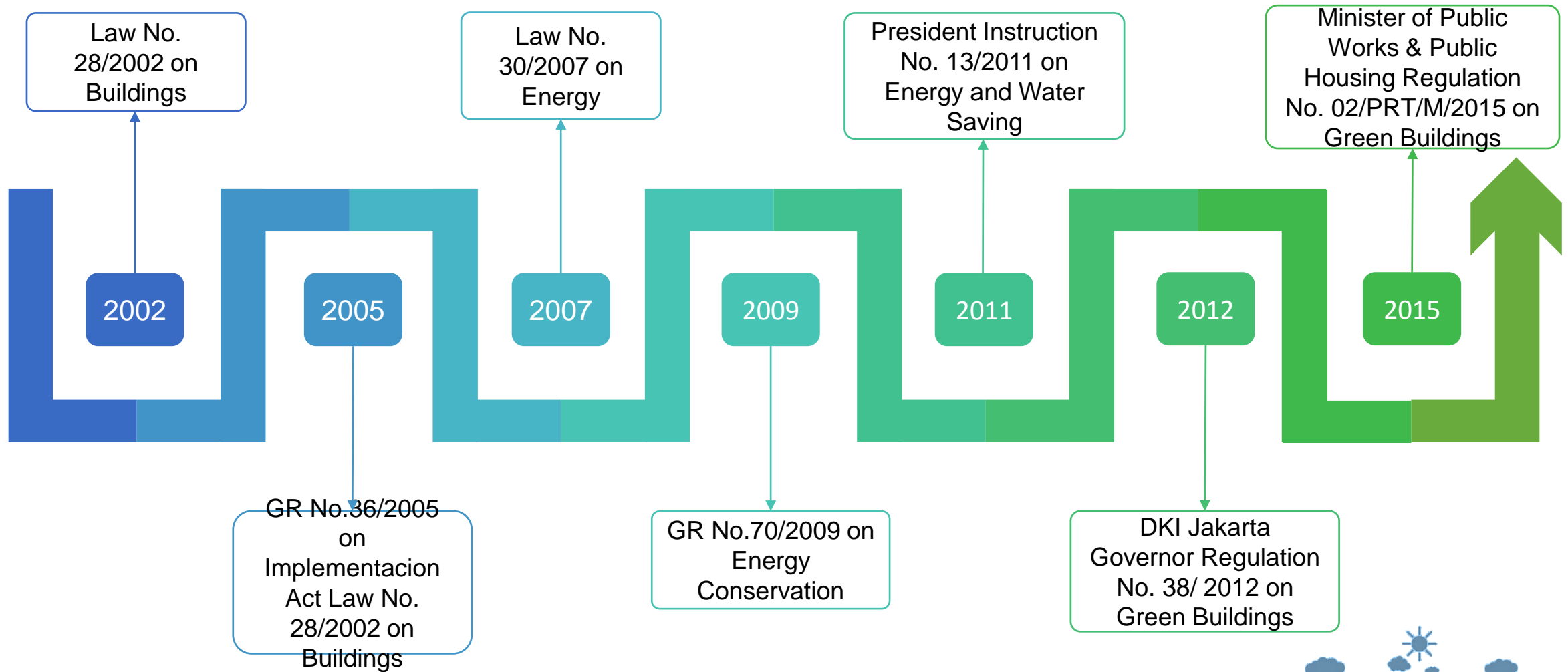
Commercial Buildings in Indonesia are still performing with poor energy efficiency



EE Policy & Program for Building Sector



EE Policy for Building Sector



EE Program for Building Sector

Formulating Standard for EE Buildings



Energy Conservation partnership Program



Energy Monitoring System (SME)



Capacity Building for Energy Manager



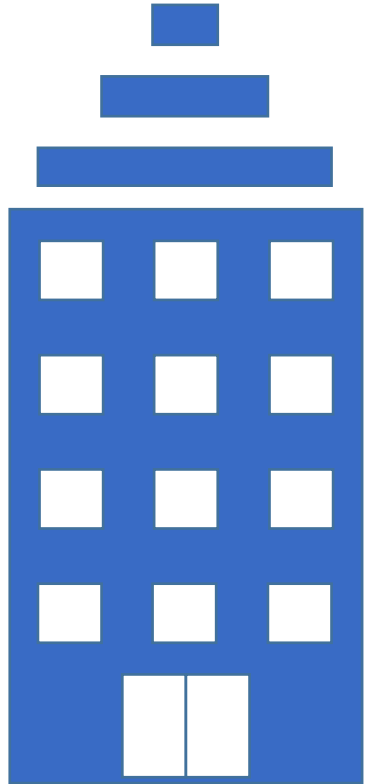
EE in Government Buildings



Increasing Awareness on EE



Formulating EE Standard for Buildings



SNI : 6196:2011
Energy Audit Procedures on Building

SNI : 6197:2011
Energy Conservation for Lighting Systems

SNI : 6389-2011
Energy Conservation for Building Enevelopes

SNI : 6390-2011
Energy Conservation for Air Conditioning System

Adopted in:

- Regulation Of DKI Jakarta Governor No. 38/ 2012 About **Green Buildings**
- Minister of Public Works & Public Housing Regulation No. 02/PRT/M/2015 on **Green Buildings**



Energy Conservation Partnership Program



Participants

	2011	2012	2013	2014	2015	2016
Industry	125	104	108	180	0	0
Building	70	55	60	120	10	10



Saving Potential

	2011	2012	2013	2014	2015	2016
GWh	837	1532	556	515	4,1	3,2
Billion Rupiah	512	624	449	391	4,8	3,5
Kilotonne CO ₂	646	1380	500	463	3,4	2,9



Saving Achievements

GWh	128	46	184	71	0,055	-
Billion Rupiah	82	60	174	34	0,074	-
Kilotonne CO ₂	94	41	163	30	0,045	-

TOTAL

842 OBJECT



325
Building



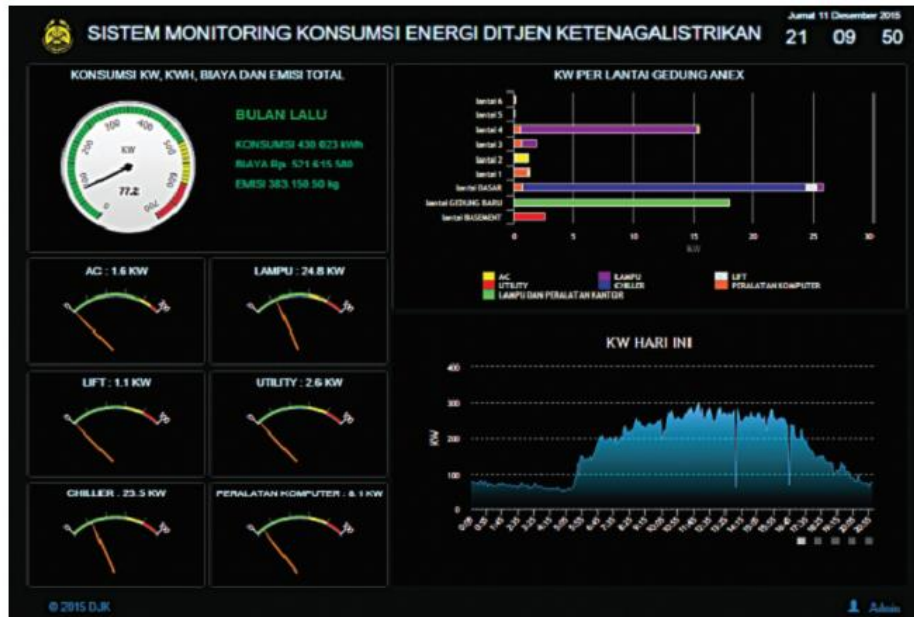
517
Industry



Energy Monitoring System (SME)



Total Saving
33.016,43 kWh
or Rp 135,55 Million



2015 Installed on 2 MEMR Buildings :

- DG NREEC
- DG Electricity

2016 Installed on 3 MEMR Buildings :

- General Inspectorat
- DG Mineral & Coal
- DG Oil & Gas

**Total Buildings :
5**

* Notes:

Savings are calculated on 2015 at DG NREEC Building



Capacity Building For Energy Manager



Energy Manager
with Certificate
of Competence

50

29

52

96

51

Total

278



Energy Auditor
with Certificate
of Competence

0

36

38

75

14

Total

163

2012

2013

2014

2015

2016

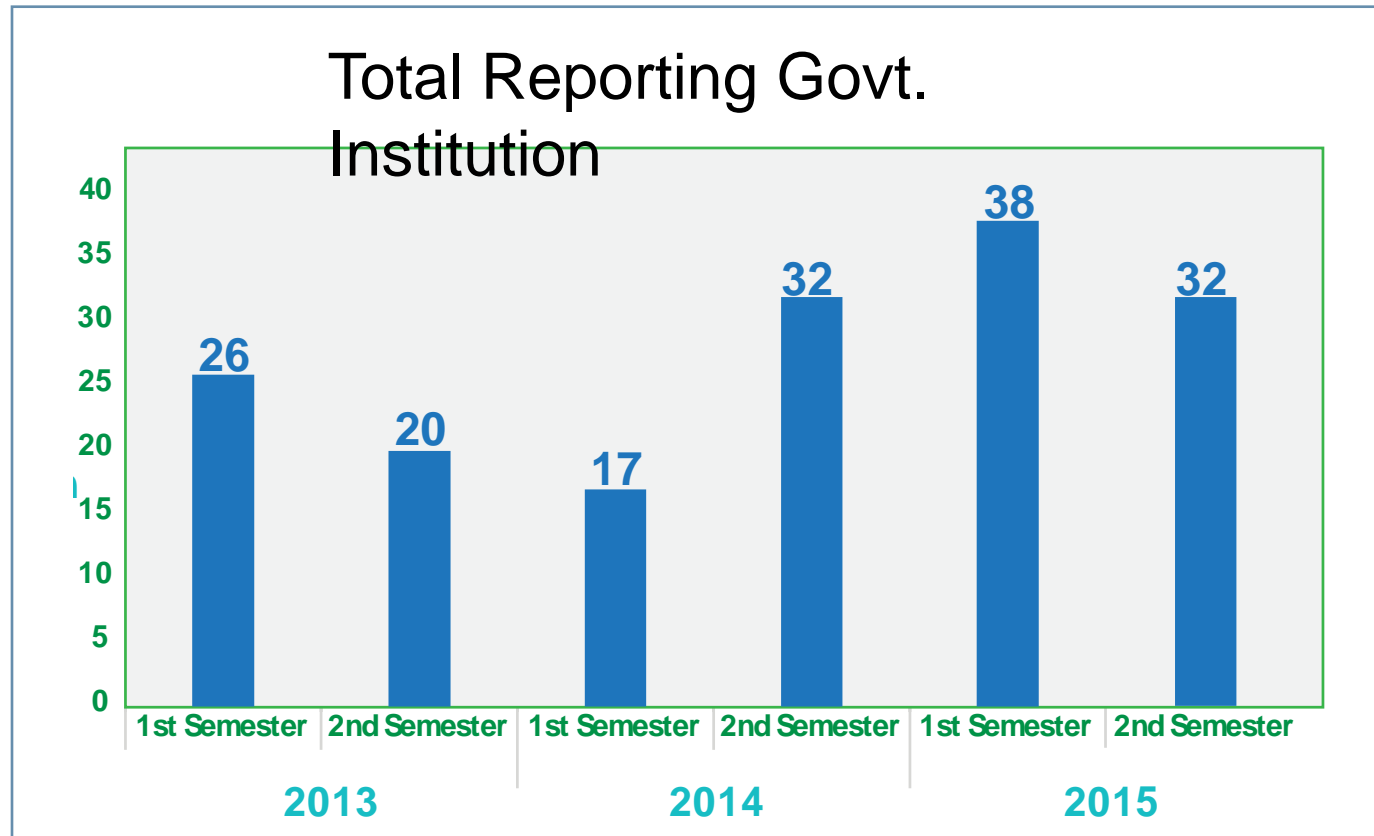
Energy Manager
with Certificate
of Competence



EE in Government Buildings (Monitoring)

(1)

- Based On President Instruction No. 13/2011 Energy and Water Saving
- Online Reporting System On Energy & Water Savings (POPEA)
<http://aplikasi.ebtke.esdm.go.id/popea/>



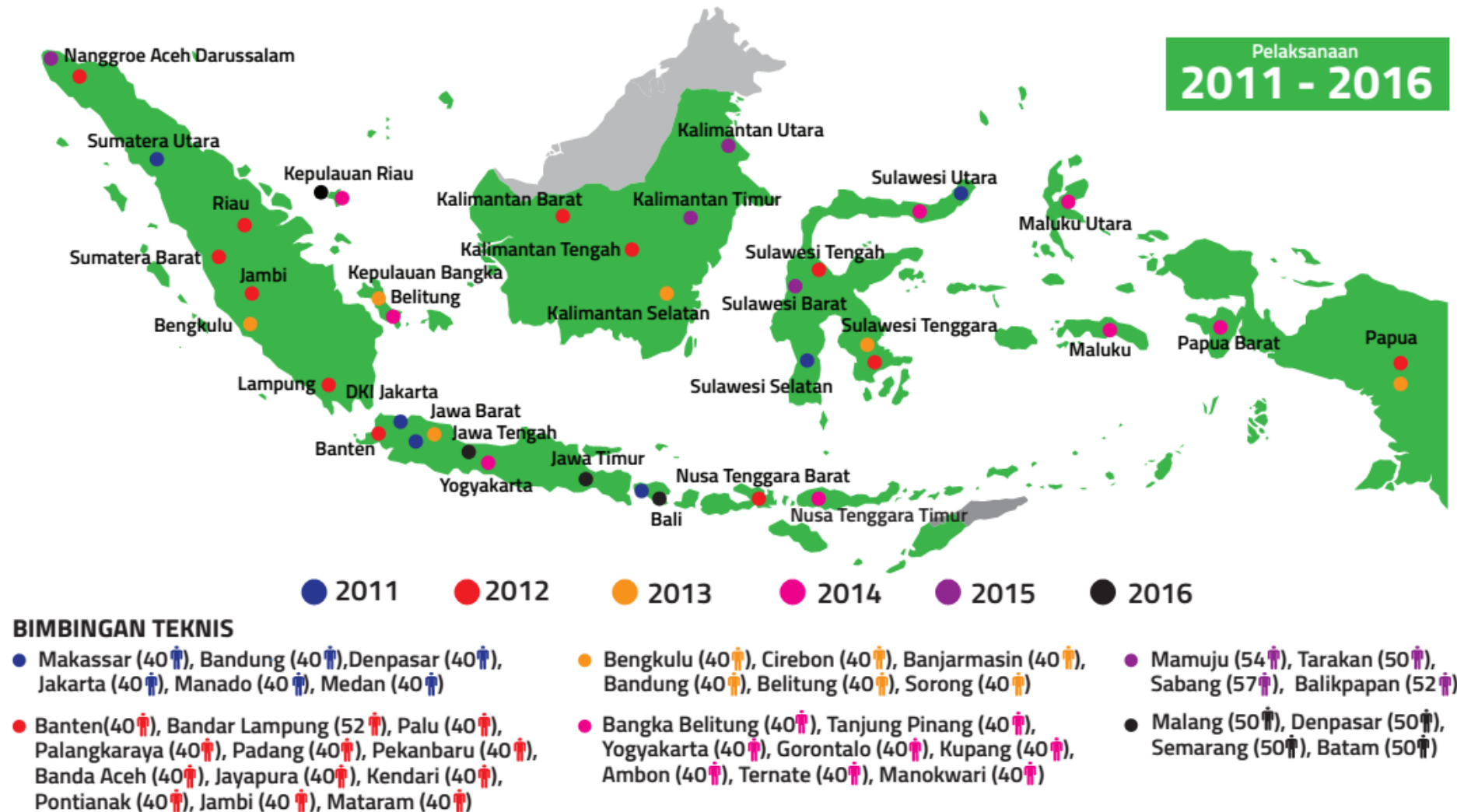
Total Reports
:
165



EE in Government Buildings (Socialization)

(2)

- Energy Conservation Workshop for Local Government



Increasing Awareness on EE



Raising Awareness



Campaign in
Mass Media



Behaviour Change



Incentif &
regulation



Stakeholder
Engagement



EE Campaigns
in the regions



Award



Actions



Incentif &
regulation



Energy
Manajer &
Auditor



MEPS and
Labeling



Award
Energy
Conservation



National Energy Efficiency Awards (PEEN)



A. Energy Efficient Building Category :

- New Building
- Retrofitted Building
- Tropical Building
- Special Innovation
- Green Building:
 - Small and Medium
 - Large

B. Energy Management in Industry and Building Category:

- Building (Small and Medium)
- Building (Large)
- Industry (Small and Medium)
- Industry (Large)
- Special Innovation (Industry)
- Special Innovation (Building)

C. Energy and Water Saving in Governmental Institution Category:

- Central Government Institution (Ministry /Institution)
- Local Government Institution



National Energy Efficiency Awards (PEEN)

PEEN	Participant	Winner
2012	12	7
2013	45	27
2014	72	22
2015	60	24
2016	84	28
2017	112	34



PEEN Category:

A. Energy Efficient Building Category :

- New Building
- Retrofitted Building
- Tropical Building
- Special Innovation
- Green Building:
 - Small and Medium
 - Large

B. Energy Management in Industry and Building Category:

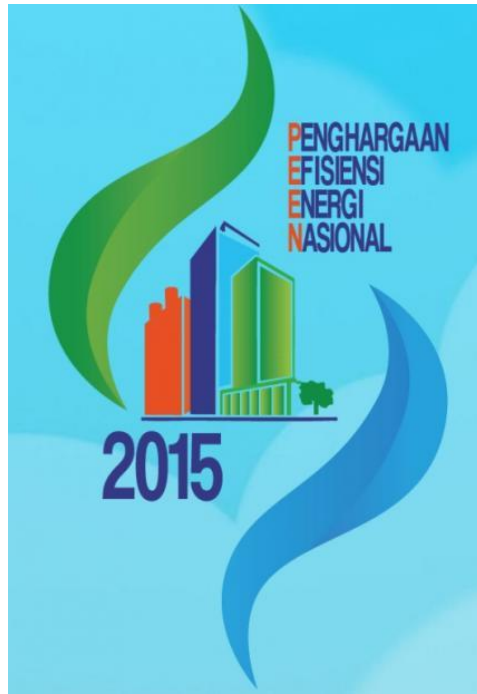
- Building (Small and Medium)
- Building (Large)
- Industry (Small and Medium)
- Industry (Large)
- Special Innovation (Industry)
- Special Innovation (Building)

C. Energy and Water Saving in Governmental Institution Category:

- Central Government Institution (Ministry /Institution)
- Local Government Institution

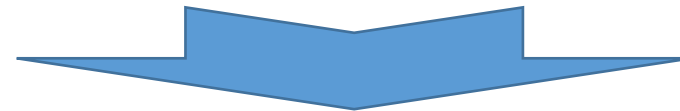


National Energy Efficiency Awards (PEEN)



**Energy
Management in
Large Industries**

Participant	Total Investment	Saving Achievements	
		Energy	Cost
15 Company	2,57 Trillion IDR	953,7 GWh eq /year	617,3 Billion IDR



118,61 MW eq*

Emission Reduction
548.872 Ton CO2

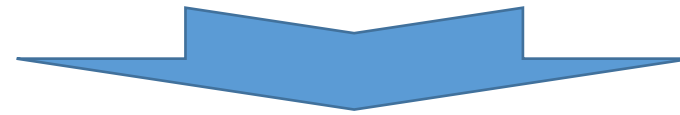


National Energy Efficiency Awards (PEEN)



**Energy
Management in
Large Industries**

Participant	Total Investment	Saving Achievements	
		Energy	Cost
18 Company	442,1 Trillion IDR	3.564 GWh eq /year	197,3 Billion IDR



443,4 MW eq*

Emission Reduction
827.832 Ton CO2



National Energy Efficiency Awards (PEEN)



**Energy
Management in
Large Industries**

Participant	Total Investment	Saving Achievements
34 Company	18.175 Trillion IDR	Energy
		36.440 GWh eq /year

5.532 MW eq*



ASEAN Energy Awards (AEA)



* Notes:

AEA Participants from Indonesia are PEEN Winners from the previous Competition

A. Category : Best Practices Competition for Energy Efficient Buildings

- New and Existing Building
- Retrofitted Building
- Tropical Building
- Special Submission
- Green Building:
 - Small and Medium (GFA 300 - 5.000 m²)
 - Large (GFA>5.000 m²)

B. Category : Best Practices Competition for Energy Management in

Buildings and Industries

- Building:
 - Small and Medium (≤2.000 MWh/Year)
 - Large (>2.000 MWh/Year)
- Industry
 - Small and Medium (TEC= 30 Million MJ/Year)
 - Large (TEC> 30 Million MJ/Year)
- Special Submission (Industry)
- Special Submission (Building)



“
ENERGY
CONSERVATION
IS
THE FOUNDATION
OF
ENERGY
INDEPENDENCE
”

THANK
YOU

