SEAD | SUPER-EFFICIENT EQUIPMENT AND APPLIANCE DEPLOYMENT INITIATIVE

Governments Working Together to Save Energy.

SEAD Policy Exchange Forum

Role of Appliance Efficiency Programmes in Intended Nationally Determined Contributions

27 October, 12:00–14:00 UTC / GMT

www.superefficient.org

CLEAN ENERGY MINISTERIAL
Accelerating Transition to Clean Energy Technologies

ipeec International Partnership for Energy Efficiency Cooperation

Welcome, Introductions & Agenda

Nicole Kearney and Yang Yu, CLASP

SEAD | SUPER-EFFICIENT EQUIPMENT AND APPLIANCE DEPLOYMENT INITIATIVE

SEAD | SUPER-EFFICIENT EQUIPMENT AND APPLIANCE DEPLOYMENT INITIATIVE

A Global Initiative:

SEAD governments work together to save energy

☆ China is an observer of the SEAD Initiative

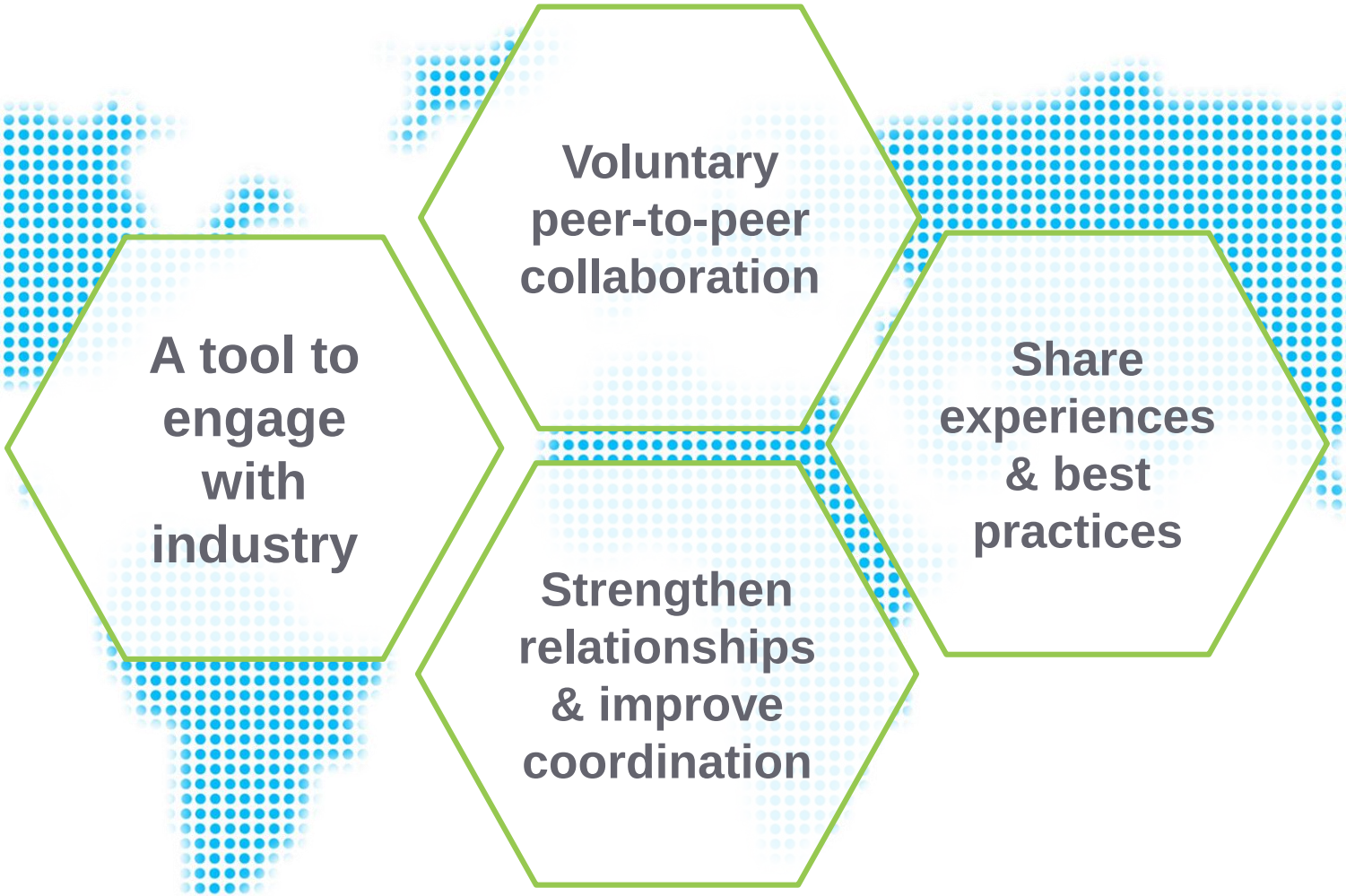
Foster Global Collaboration & Partnership

SEAD increases visibility of energy efficiency at the highest levels

G20 Energy Efficiency Leading Programme

- G20 Energy Efficiency Leading Programme (EELP) Product Best Practice Policy Exchange Series.
- Webinar and in-person meetings
- Collaboration between SEAD, IEA, 4E
- SPEx (webinar):
  - Role of Appliance EE Programs in INDCs. October 27.
- IEA-4E Workshop (in-person):
  - Latest developments in EE product policy. Ottawa, November 15.
- More SPEx and in-person meetings in 2017. Stay tuned!

Welcome to the SPEx!



Who is on today's call?

- **CLASP -** SEAD Operating Agent and SPEx coordinator
- **International Energy Agency**, co-hosting today's SPEx
- Presentations from:
  - **China National Institute of Standardization**
  - **Directorate General for Energy Efficiency**
  - **Institute for Trade of Vietnam**
- Participants on today's call include policy makers, industry representatives, civil society, consultants, international organisations

SPEx Call Agenda

- Insights on Appliances from IEA's 2016 Energy Efficiency Market Report
- Country Case Studies and Perspectives from:
  - China
  - Peru
  - Vietnam
- Q&A and Group Discussion - All Participants
- Closing Remarks

Webinar Guidelines

- All on mute during the presentations
  - Submit questions via the webinar chat application
  - Raise Hand feature also available
- If you have questions:
  - Please introduce yourself (Name and Organisation)
  - Clarifying questions can be asked after each presentation
  - Share discussion questions for Q&A and General Discussion session
- During Q&A and General Discussion session:
  - All participants will be unmuted
  - If not speaking, please mute your devices.
- Record of discussions
  - Webinar is being recorded
  - Presentations and Summary of Discussions available on SEAD website

Questions to be addressed:

- What are the key INDC commitments, emission targets and mitigation actions?
- Why is appliance energy efficiency a priority in INDC commitments and climate strategies?
- What are the estimated impacts of appliance energy efficiency on the overall emission targets?
- What are the challenges and lessons learned for integrating appliance energy efficiency in INDCs and maximising effectiveness?
- Are there any opportunities or needs for support, assistance or collaboration from the international community?

Insights on Appliances from IEA's 2016 Energy Efficiency Market Report

Mr. Brian Dean – International Energy Agency

SEAD | SUPER-EFFICIENT EQUIPMENT AND APPLIANCE DEPLOYMENT INITIATIVE

Mr. Brian Dean – International Energy Agency

Brian Dean leads IEA's work on energy efficiency in buildings and supports governments and organisations globally in energy efficiency policy. Prior to coming to the IEA, Brian was Head of Energy Efficiency Policy and Analytics at ICF International, and has education in engineering, architecture and political science from Rensselaer Polytechnic Institute and Massachusetts Institute of Technology.

Mr. David Morgado – International Energy Agency

David Morgado works under the Energy Efficiency in Emerging Economies (E4) Programme as part of the Energy Efficiency Division at the IEA. Prior to joining the IEA, David worked at the International Institute for Energy Conservation (IIEC). His worked focused on the design and implementation of demand-side management and energy efficiency projects and policies in countries across Asia-Pacific and Africa.

ENERGY EFFICIENCY
Market Report 2016

International Energy Agency
Secure Sustainable Together

Energy Efficiency Market Report 2016

with a special focus on Appliances, Equipment and Lighting

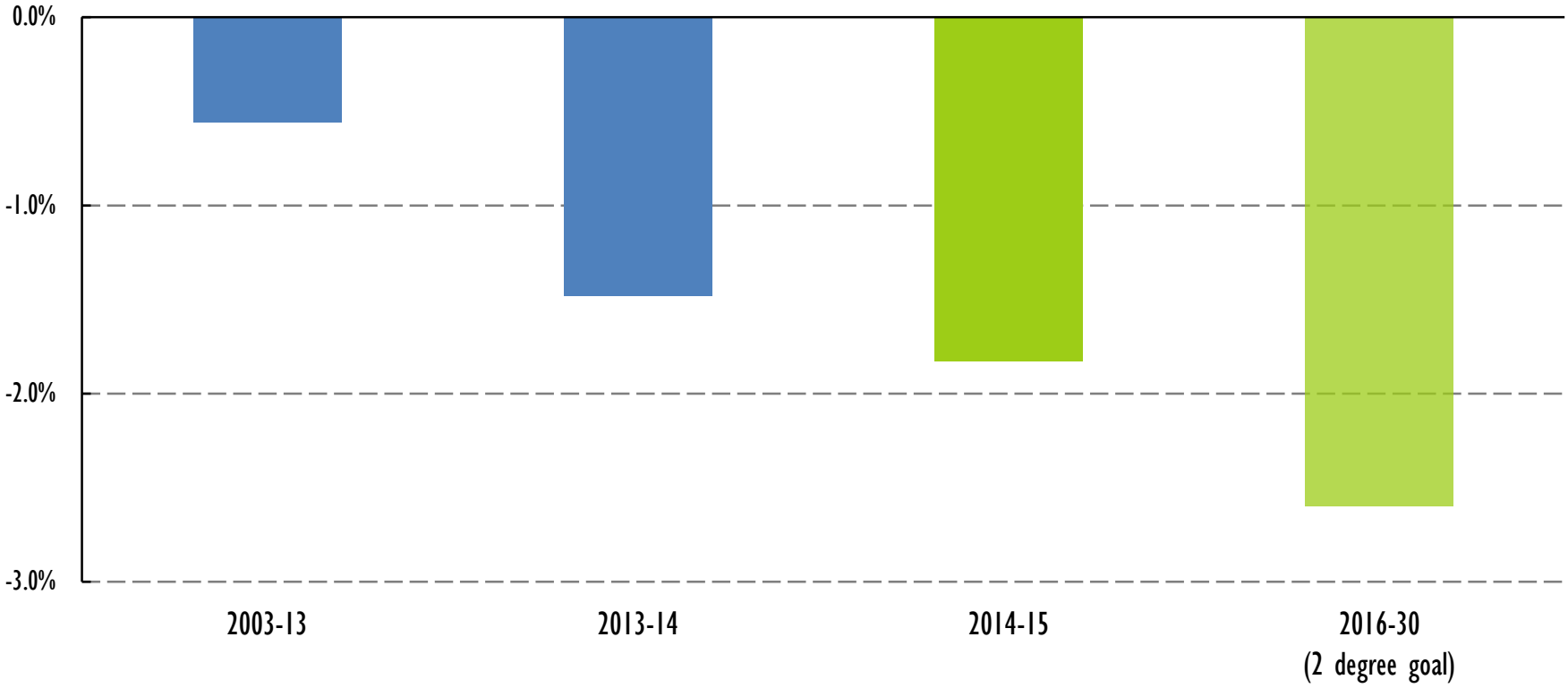
Brian Dean, International Energy Agency

October 27, 2016

www.iea.org/eemr16

Energy intensity is improving but not fast enough

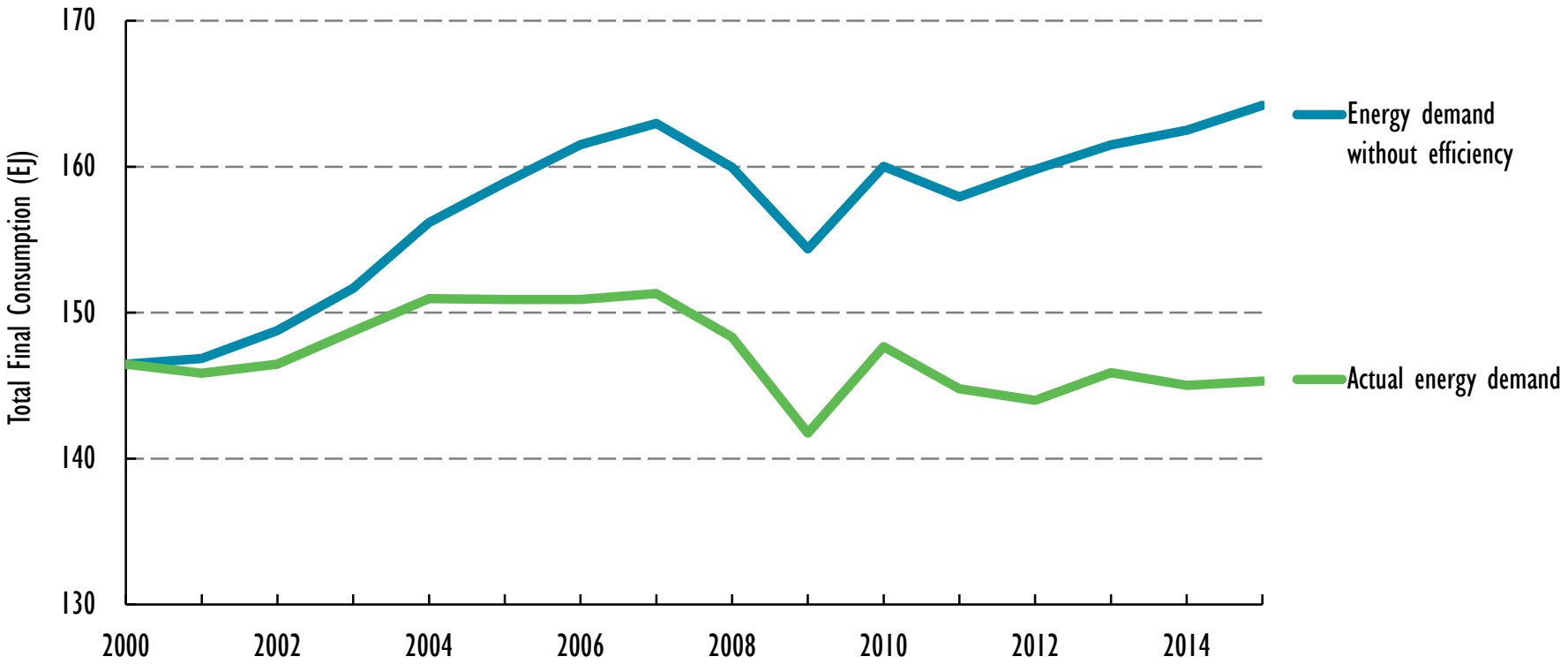
Global annual energy intensity gains



In 2015, global intensity improved by three times the average of the last decade, despite a low price environment. Intensity gains need to increase to 2.6% to achieve our climate goals.

Energy efficiency is the main driver of intensity improvements

Energy demand and the impact of efficiency in IEA countries

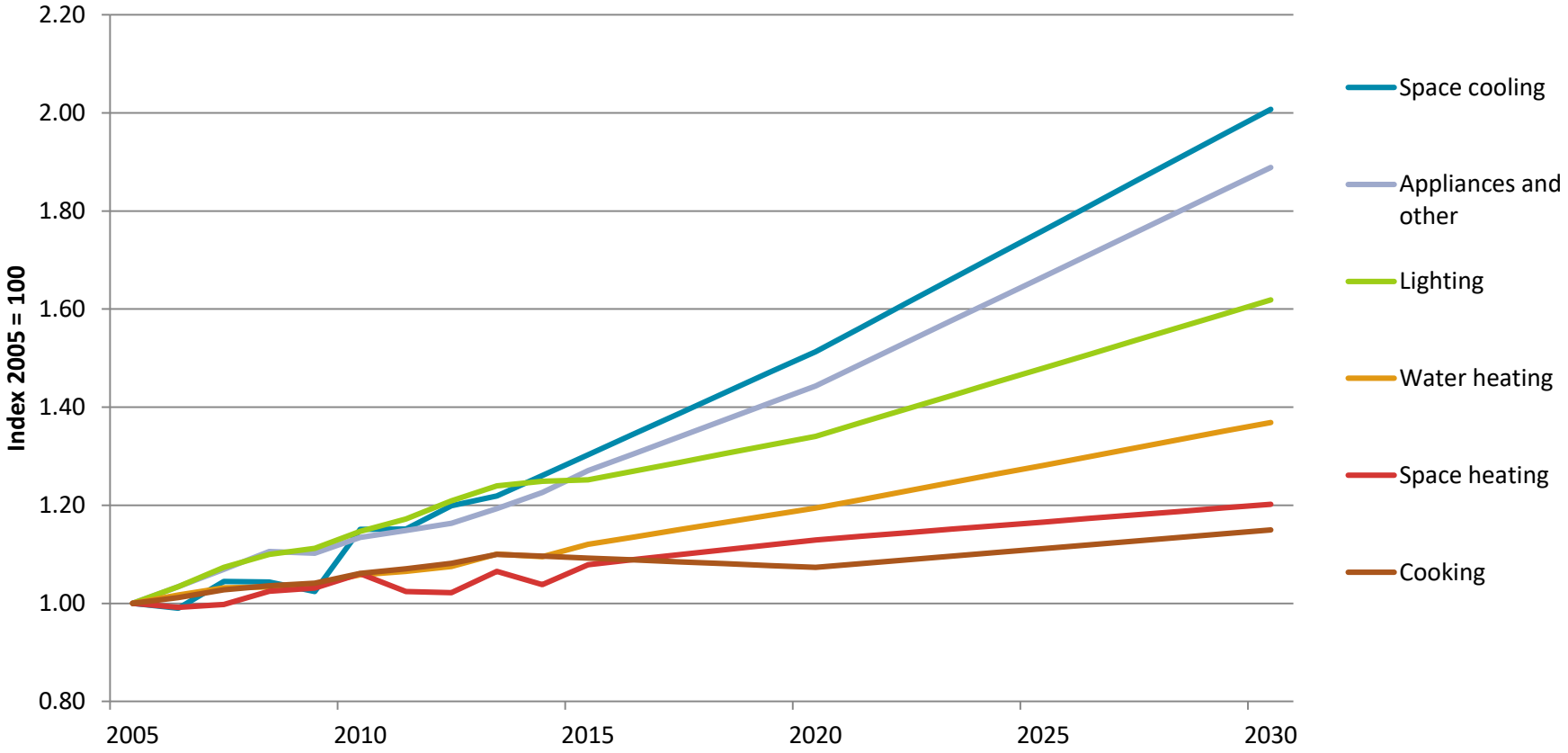


Without efficiency gains energy demand in 2015 in IEA countries would have grown by 1% and would have been higher than the 2007 peak. Instead, energy demand is 1% below 2000 levels.

Building energy consumption

Still significant increases into the future

Global building end-use energy consumption, 2005-30



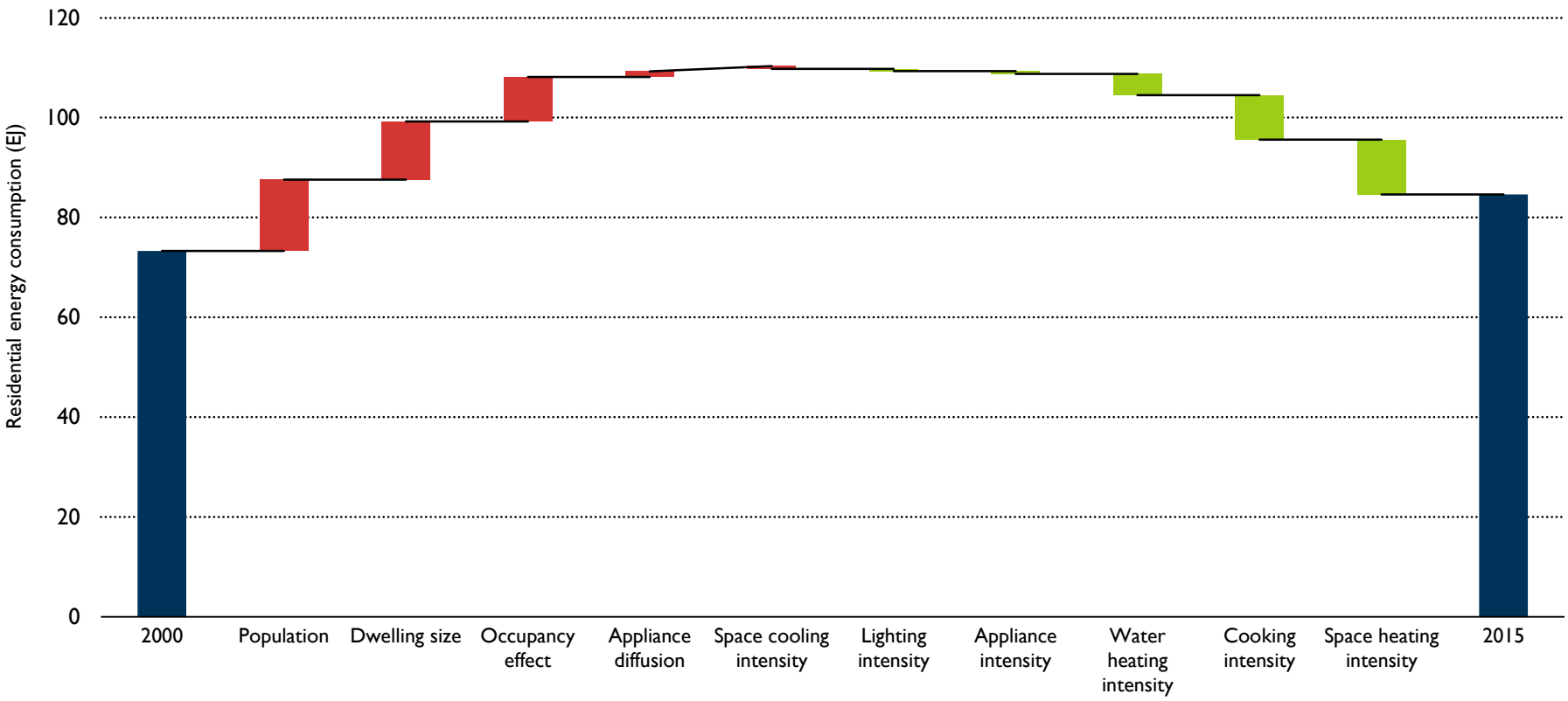
Space cooling and appliances are expected to have significant increases in energy use out to 2030 due to increased ownership.

Residential energy consumption impacts

Energy efficiency offsets most increases

International Energy Agency
Secure Sustainable Together

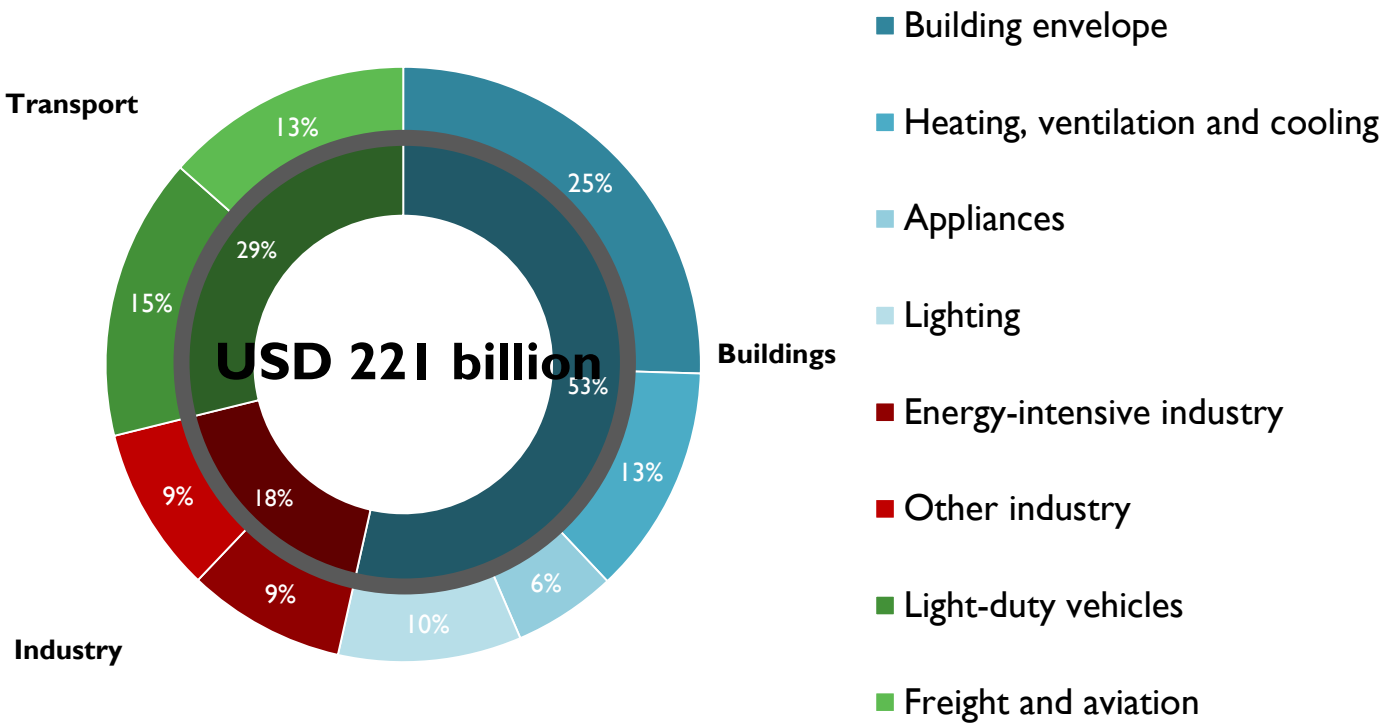
Global residential energy consumption impacts, 2000-15



Improved technology efficiency is offsetting major increases in energy due to population, dwelling and occupancy effects.

Energy efficiency investment is growing

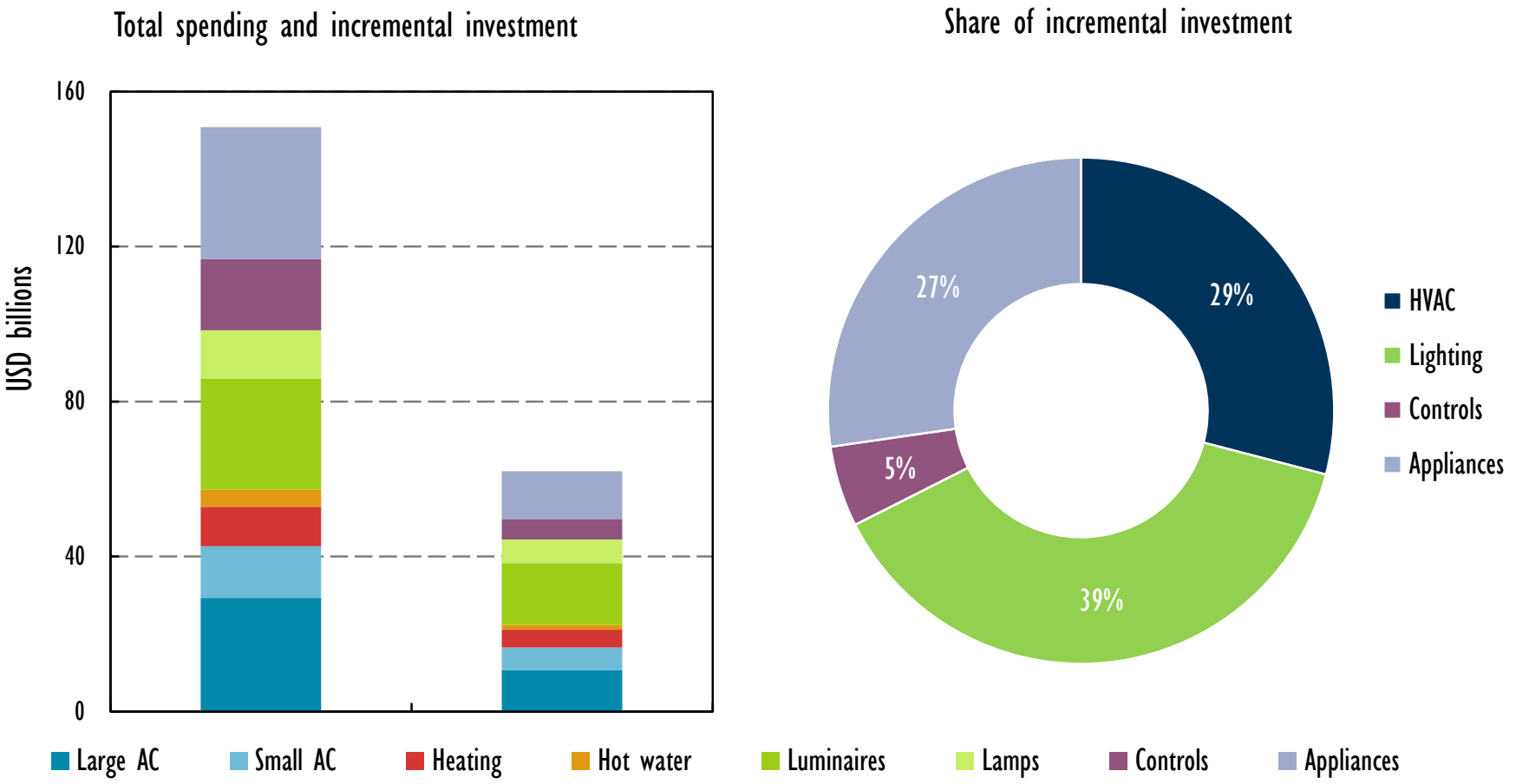
Global investment in energy efficiency by sector, 2015



Investment in energy efficiency increased by 6% in 2015, led by growth in the buildings sector.

Energy efficiency investment

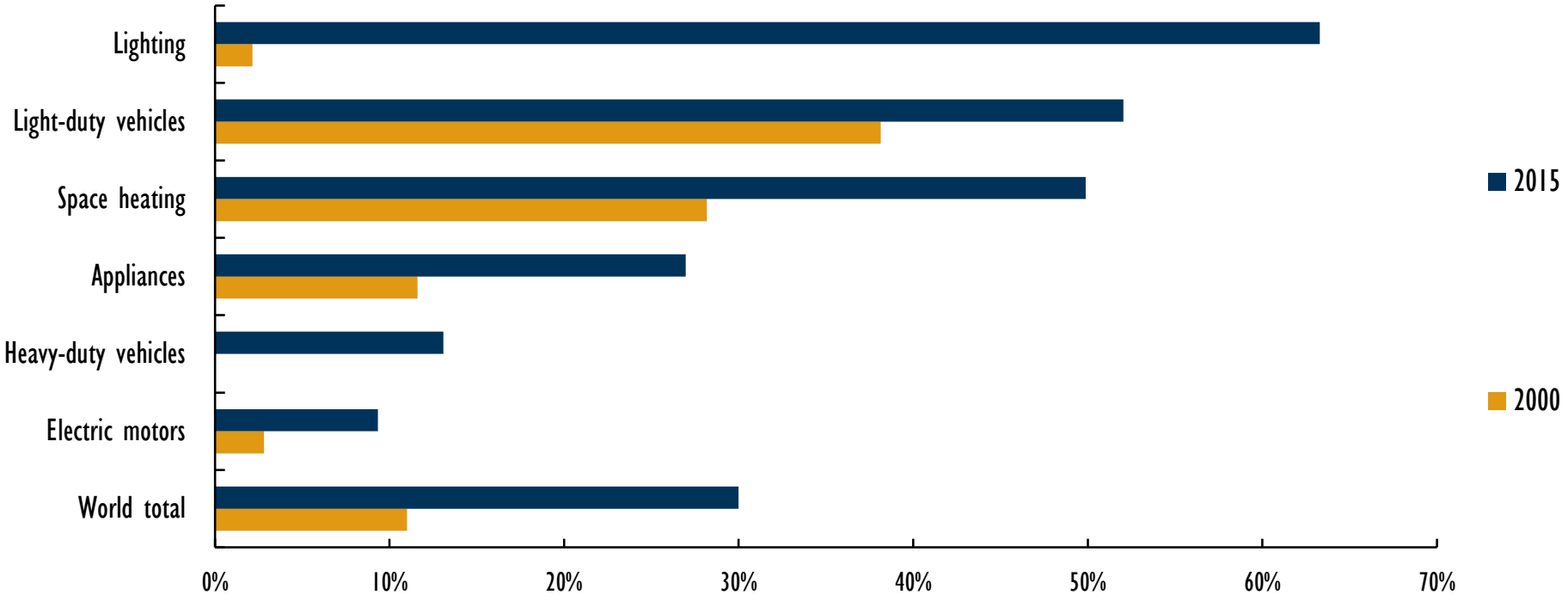
Appliances, equipment and lighting



Appliances and controls , a small portion of incremental investment, is a large portion of total spending on energy efficiency.

Efficiency gains have been driven by the expansion of policy

Share of global energy use covered by mandatory standards and regulations



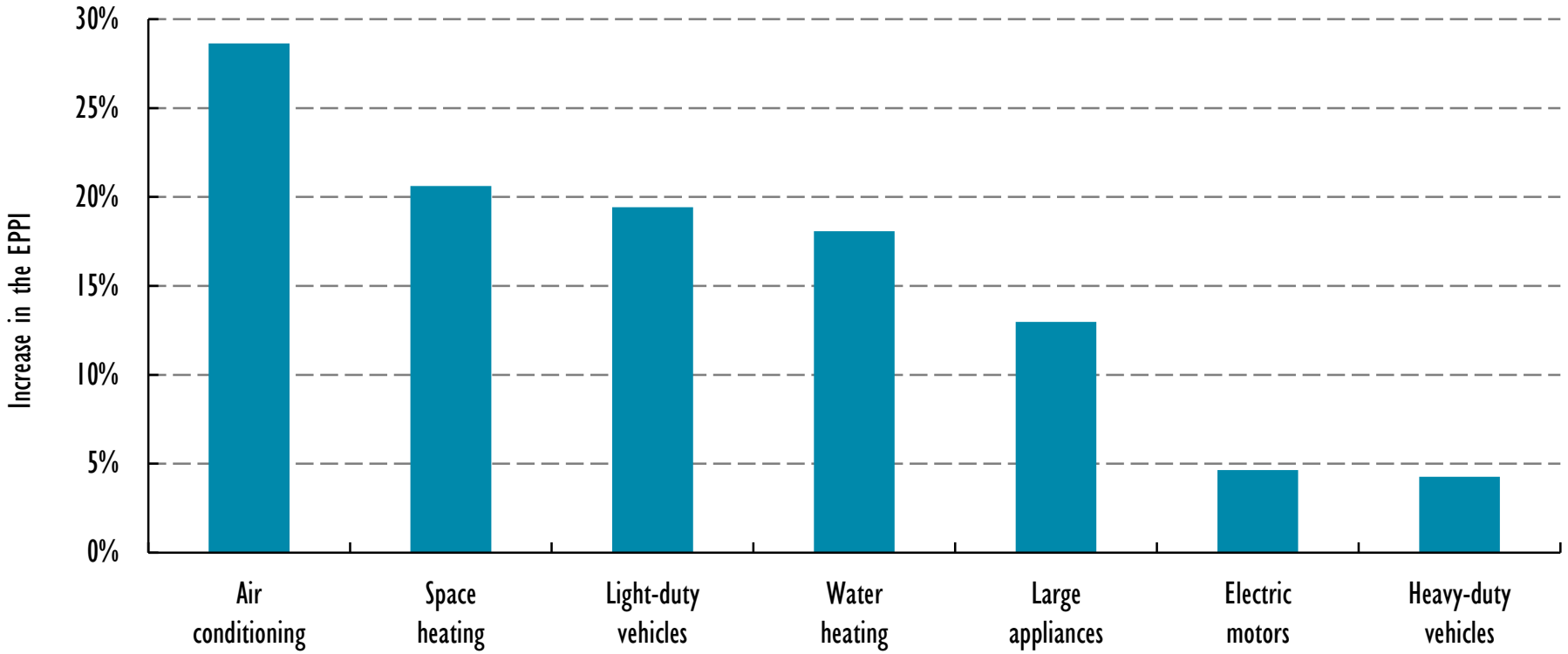
30% of the world's energy consumption is now covered by mandatory standards and regulations, up from 11% in 2000.

IEA's Efficiency Policy Progress Index

Measures growth in policy effectiveness

International Energy Agency
Secure Sustainable Together

IEA Efficiency Policy Progress Index (EPPI) increase by end use, 2005-15

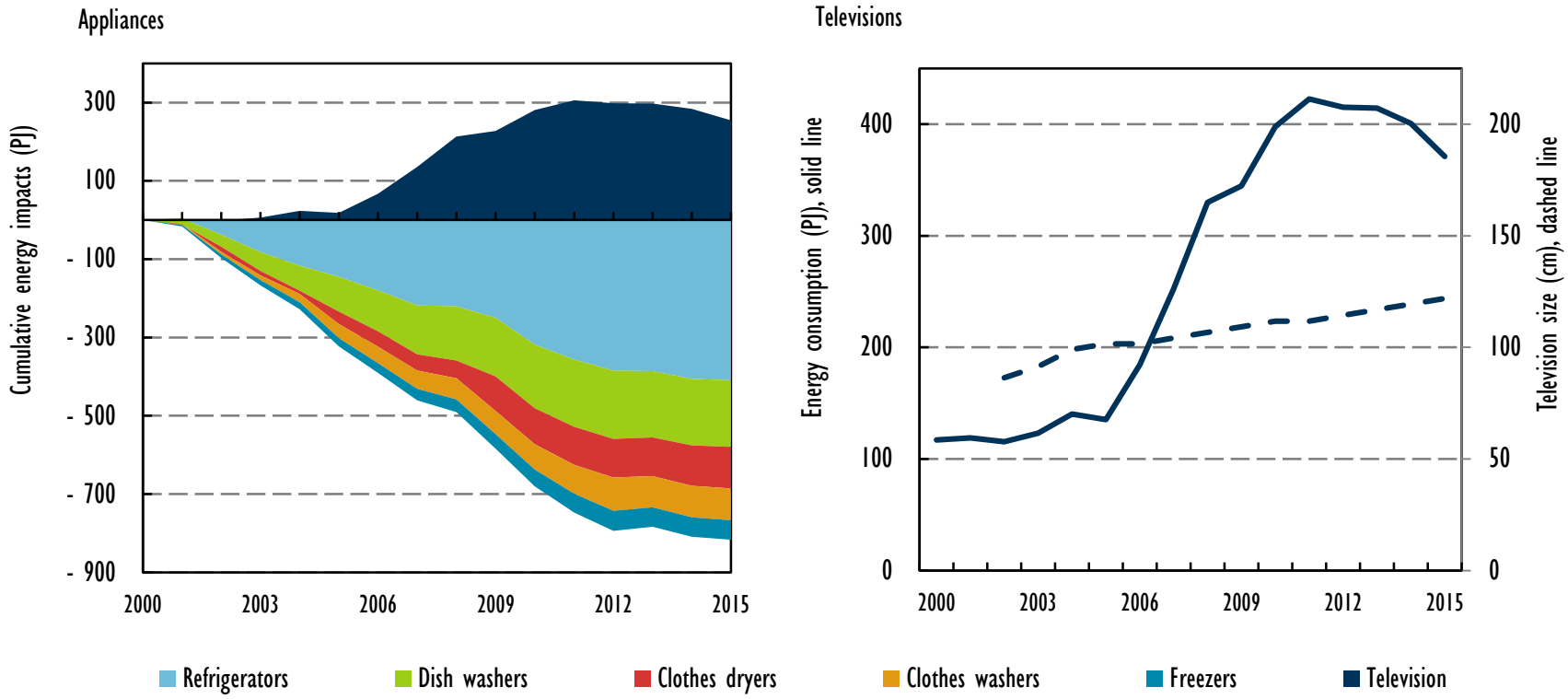


The EPPI tracks combined progress of policy coverage and strength. The most progress was in the buildings sector and the largest potential for improvement is in the freight and industrial sectors.

Residential energy consumption impacts

Energy efficiency offsets most increases

Appliance energy consumption impacts, 2000-15



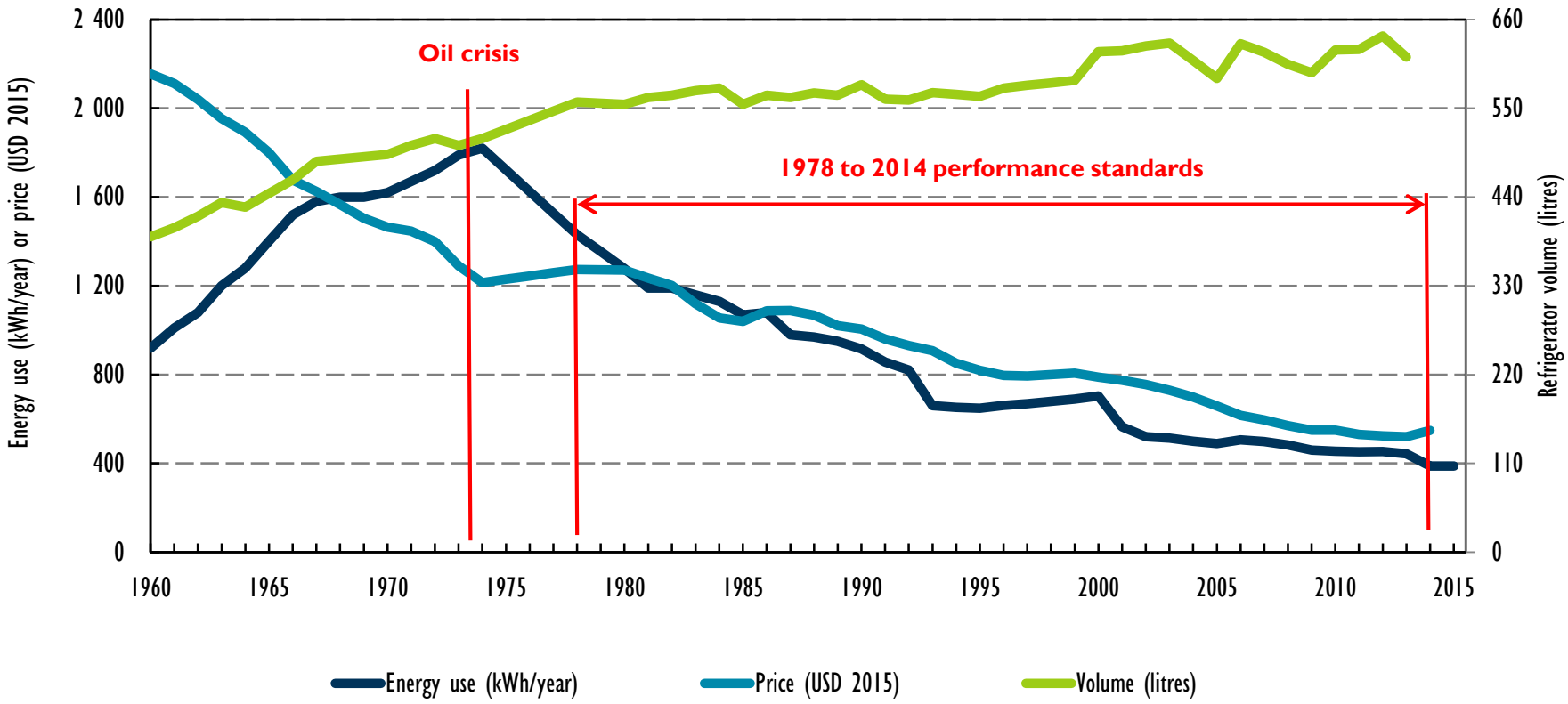
All major appliances except for televisions have improve their energy efficiency over the past 15 years. Televisions have turned the corner with LED-lit technology.

Residential energy consumption impacts

Energy efficiency offsets most increases

International Energy Agency
Secure Sustainable Together

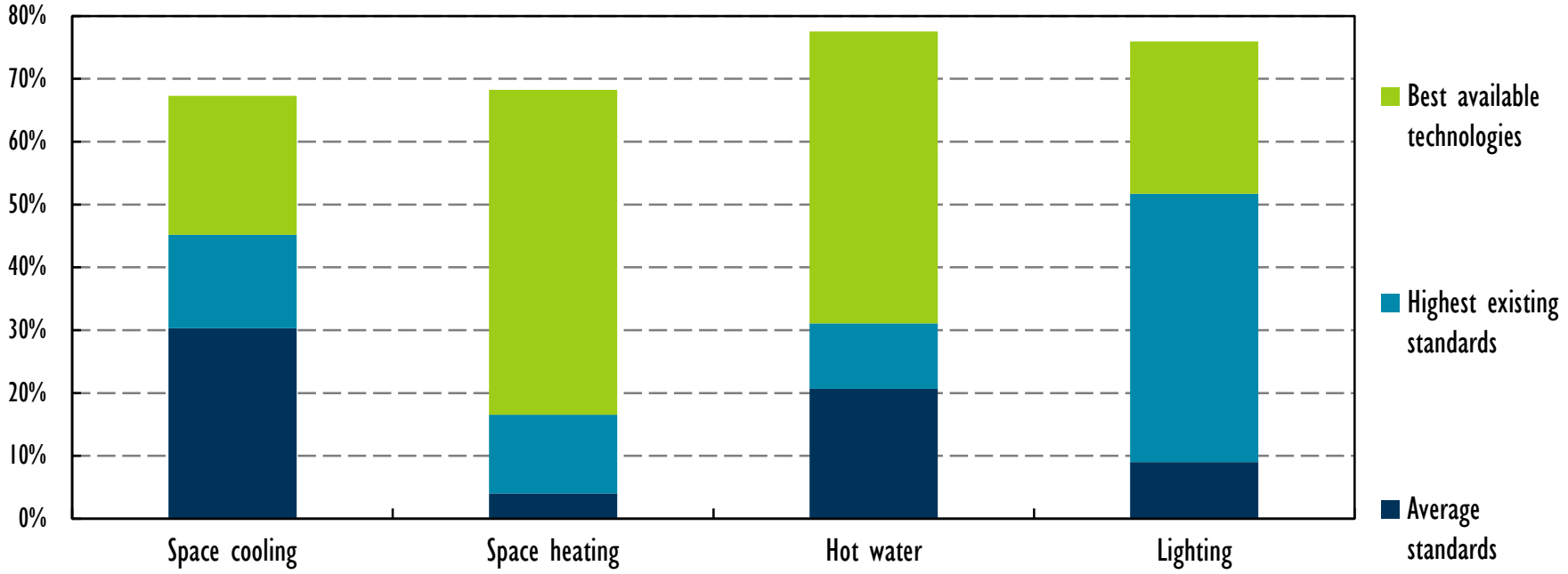
Refrigerator energy use, price and size, 1960-2015



Since the oil crisis, refrigerator price and energy efficiency have continued to improve, while refrigerators have steadily increased in size.

Policies still have significant potential to save energy

Energy savings potential of standards as a share of global end-use energy, 2015



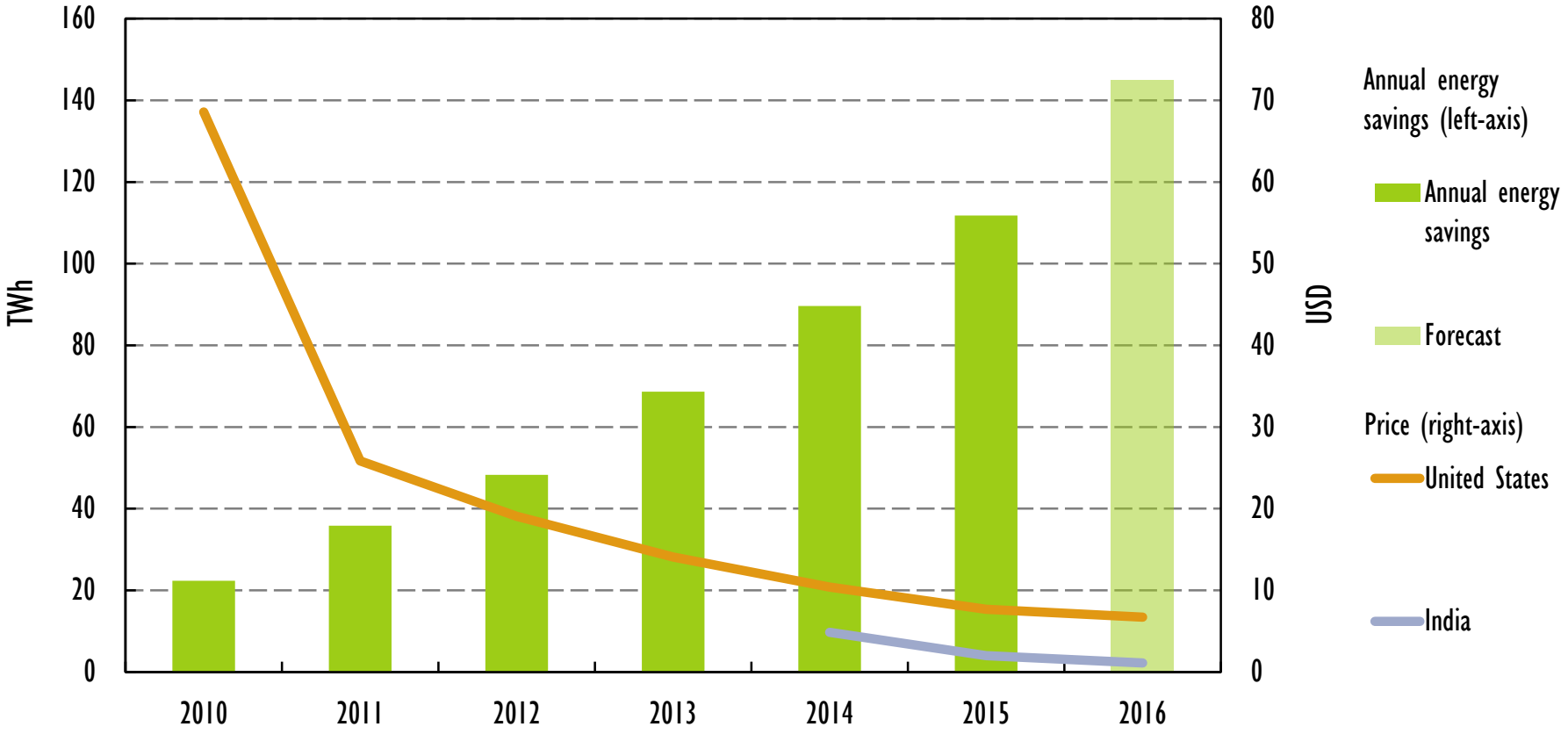
If the best in class standards had been implemented in all countries, global residential energy consumption would have been 14% lower in 2015.

Energy efficiency investment

Energy efficient lighting is taking off

International Energy Agency
Secure Sustainable Together

Global annual energy savings from efficient lighting and LED prices



Improved cost-effectiveness of LED lighting is boosting global investment by $6 billion and generating incremental annual savings of 200 TWh

The Paris Agreement

INDC commitments for energy efficiency

This map is without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries, and to the name of any territory, city or area.

INDC commitments do not include significant depth on sector level plans for increasing energy efficiency.

The Paris Agreement

INDC commitments for energy efficiency

	GHG reduction target	Target year	Baseline year	Energy efficiency mention or action
Australia	26-28%	2030	2005	Existing policy measures in place to improve energy efficiency.
Brazil	37%	2025	2005	NDC targets 10% efficiency improvements in the power sector; new energy efficiency standards in industry and transport sectors.
Canada	30%	2030	2005	More than USD 10 billion in funding for green infrastructure, energy efficiency, clean energy technologies, cleaner fuels and smarter grids.
Chile	Reduce GHG intensity by 30%	2030	2007	Reducing inefficient and polluting cars.
China	Peak emissions; Reduce GHG intensity by 60-65%	2030	2005	Multiple mentions of energy efficiency including continuing to improve and invest in energy efficiency across the economy. Specific mention of efficiency in industry, buildings and cities, and of new financing options.
EU	40%	2030	1990	Emissions savings associated with the existing EU policy framework.
India	Reduce GHG intensity by 33-35%	2030	2007	Multiple mentions of energy efficiency including existing action plans under the Energy Conservation Act. Promotes energy efficiency in industry, transport, buildings and **appliances**.
Indonesia	29%	2030	BAU	Improving energy efficiency and consumption patterns.
Japan	26%	2030	2013	Multiple references to efficiency in power generation, buildings, industry, transport, **lighting, appliances** and energy management systems.
Mexico	25%	2030	BAU	No specific mention; but efficiency likely to be a component of the Energy Transition Law approved in December 2015
New Zealand	30%	2030	2005	Improving energy efficiency above BAU levels.
South Africa	Target: Peak (2020-25), plateau (2030) and decline (2030-beyond) CO_2 emissions	2030	-	Energy efficiency improvements in the power sector, **lighting, electric motors and appliances**.
Thailand	20%	2030	BAU	Multiple mentions of energy efficiency including achieving existing energy efficiency targets in the Energy Efficiency Plan.
Turkey	(up to) 21%	2030	BAU	Increasing energy efficiency in industry with financial incentives and regulations for energy efficient buildings.
United States	26-28%	2025	2005	Continuing to update energy efficiency standards on **appliances** and buildings.

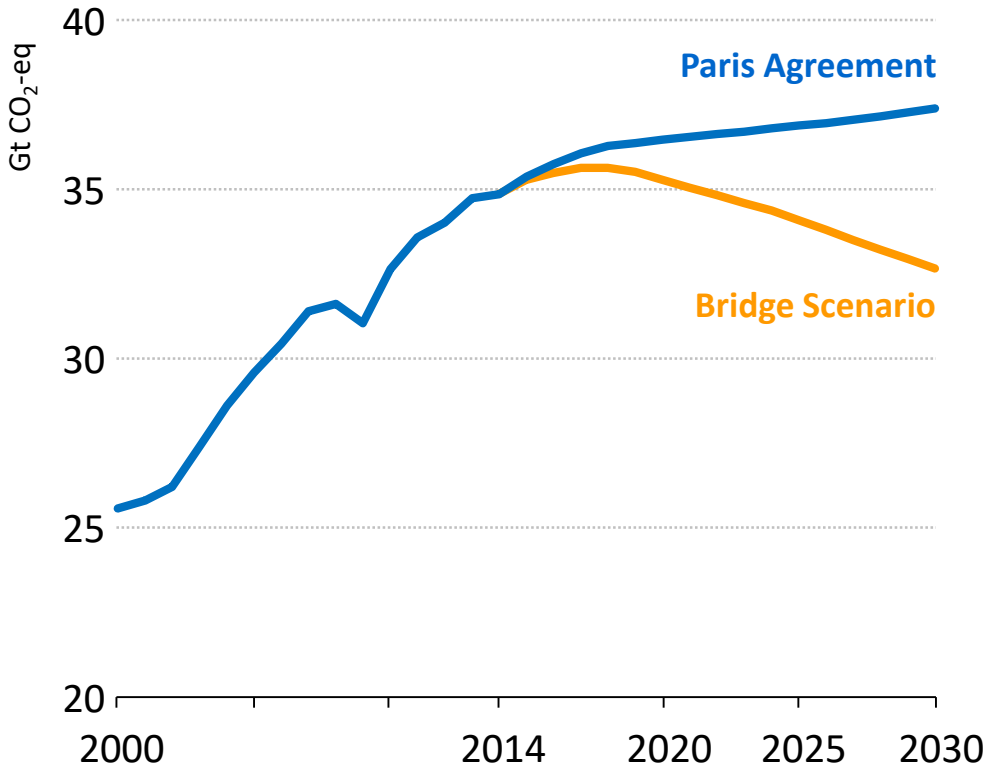
INDC commitments do not include significant depth on sector level plans for increasing energy efficiency.

Beyond the Paris Agreement

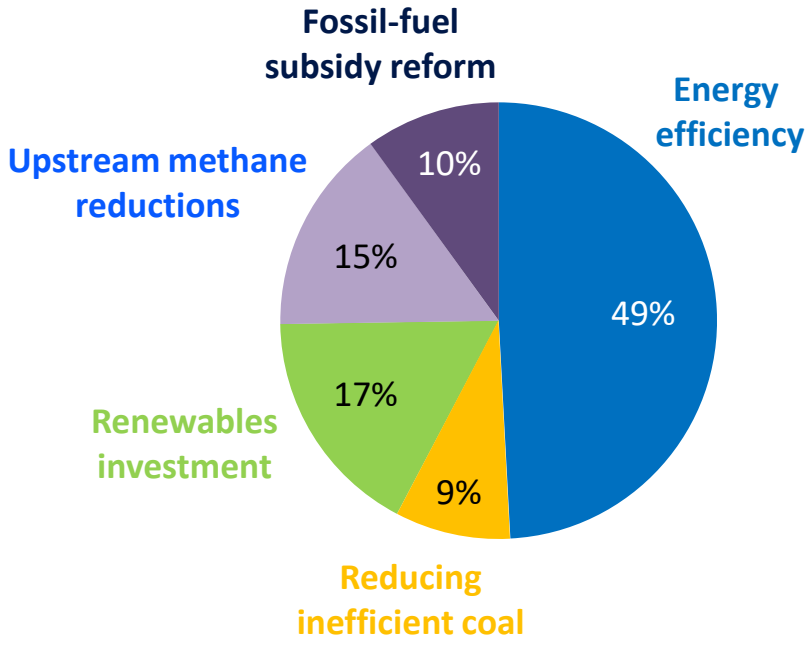
A Bridge Scenario to greater ambition

International Energy Agency
Secure Sustainable Together

Global energy-related GHG emissions

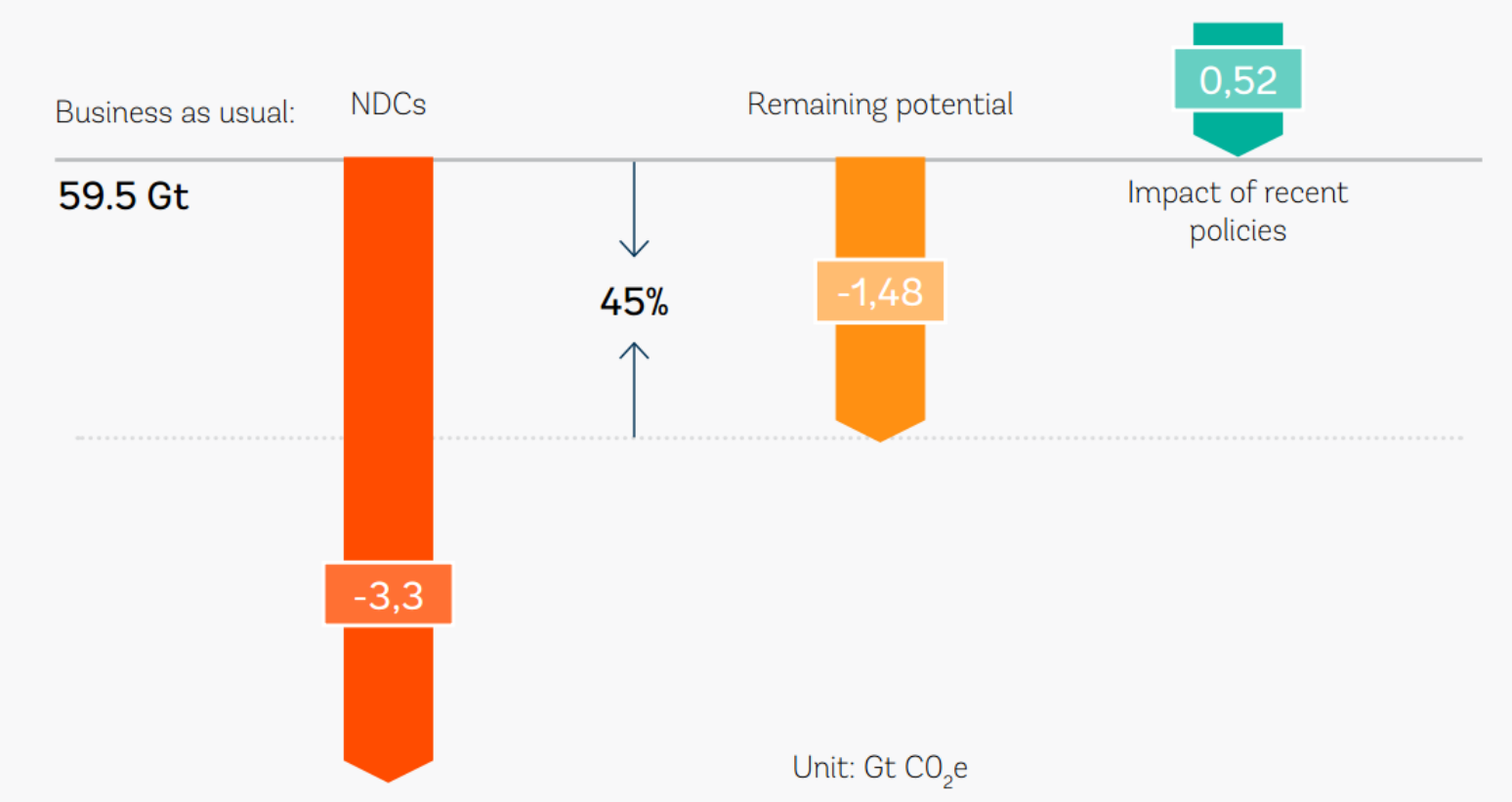


Savings by measure, 2030



Globally, energy efficiency is the largest, most important action to get on track to well below 2 degree warming

Impact - Emissions Reductions in 2030 (Gt CO2e)



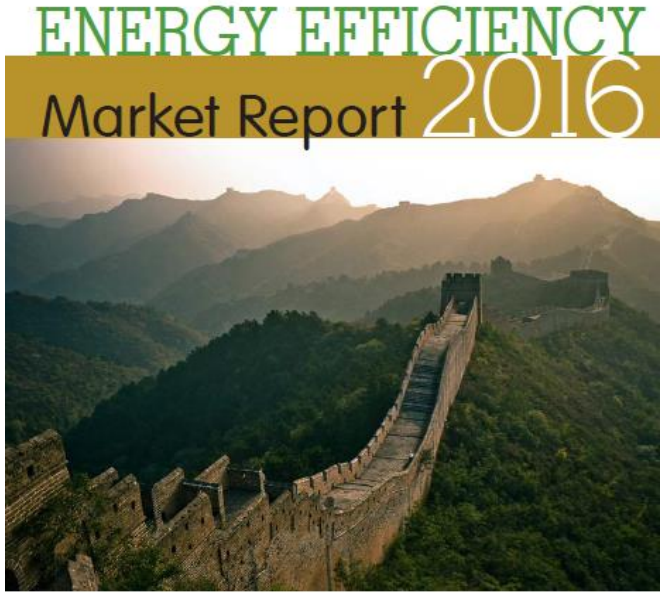
Data source:
Aggregated INDC reductions – UNFCCC. 2016. "Synthesis report on the aggregate effect of intended nationally determined contributions"
Emission potential – CLASP and LBNL analysis on behalf of SEAD
Graphic source:
World Bank. 2016. "A greener path to competitiveness"

CLEAN ENERGY MINISTERIAL

ipeec

Energy Efficiency Market Report

Free to download



www.iea.org/eemr16

Appliance Energy Efficiency and China's INDC commitment

Mr. Pengcheng Li – National Institute of Standardization, China

SEAD | SUPER-EFFICIENT EQUIPMENT AND APPLIANCE DEPLOYMENT INITIATIVE

Dr. Pengcheng Li – National Institute of Standardization, China

Dr. Li Pengcheng is an Associate Researcher at the Resource and Environment Branch of China's National Institute of Standardization(CNIS) since 2007.

He also serves as the Chair of APEC Expert Group of Energy Efficiency and Conservation (EGEE&C), co-secretary of ISO/TC 301 Energy management and energy savings. His major fields include energy efficiency standards for end energy-using products, energy efficiency policy and program evaluation, and energy efficiency financing.

Appliance S&L and China's INDC

Li Pengcheng, China National Institute of Standardization

2016.10.27

Snapshot of CNIS

- China National Institute of Standardization dates back to 1963. As a national non-profit institute affiliated to AQSIQ, CNIS is dedicated to standardization research, especially for the all-round, strategic and comprehensive issues of standardization regarding national economic and social development.

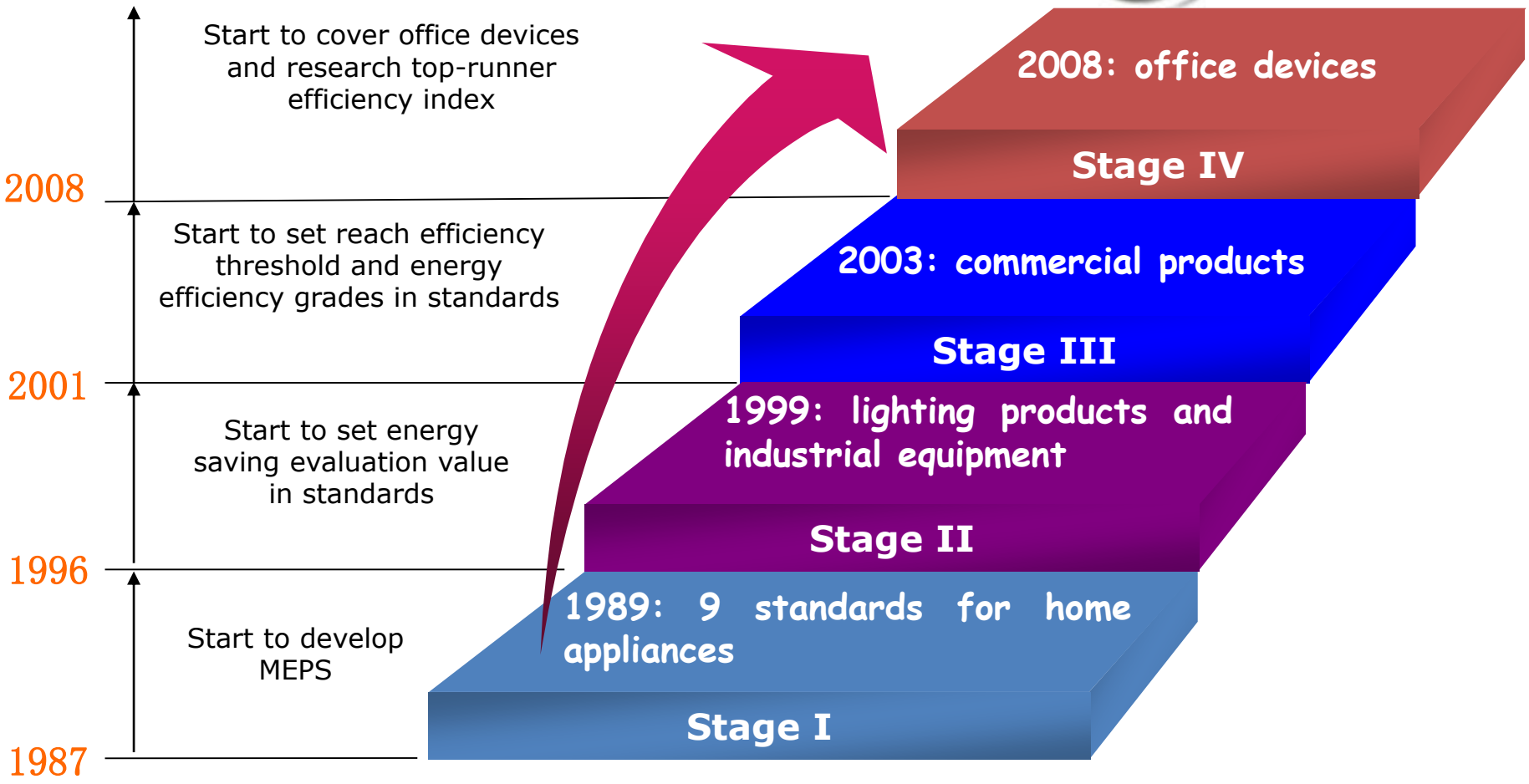
Highlights of China's INDC

- China has nationally determined its actions by 2030 as follows:
  - To achieve the peaking of carbon dioxide emissions around 2030 and making best efforts to peak early
  - To lower carbon dioxide emissions per unit of GDP by 60% to 65% from the 2005 level (By 2014, carbon dioxide emissions per unit of GDP is 33.8% lower than the 2005 level)
  - To increase the share of non-fossil fuels in primary energy consumption to around 20%
  - To increase the forest stock volume by around 4.5 billion cubic meters on the 2005 level

Energy efficiency in China's INDC

Industry	• To effectively control emissions from key sectors including power, iron and steel, nonferrous metal, building materials and chemical industries through energy conservation and efficiency improvement
Building	• Improving energy efficiency of building and the quality of building construction
Appliance	• Encourage the use of energy efficient and low-carbon products • To improve green government procurement of low-carbon and energy-conservation products
Financing	• To encourage and guide financial institutions to operate energy-efficiency crediting business

History of Energy Efficiency Standards



Energy efficiency standards in the 13th Five-Year Plan

- The 13th Five-Year-Plan of National Economic and Social Development
  - To improve energy conservation standard system. The standards will cover key sectors and equipment.
- Development plan for national standardization system (2016-2020)
  - To integrate and reduce mandatory standards
  - To establish monitoring and evaluation system for standard implementation and enhance supervision by the society
  - To deepen the international collaboration
  - To improve energy conservations standards and speed up the development of energy efficiency standards

Vision of Energy Efficiency Standards

Opinions of the General Office of the State Council on Strengthening the Standardization of Energy Conservation

Objectives: To improve 2 systems by 2020

- Standard System
- Implementation and Inspection system

Tasks

- Innovative Mechanism
- Improved Standard System
- Strengthened Implementation

Cycles for improving energy efficiency of products

- Testing methods
- Data
- Commitment of leadership

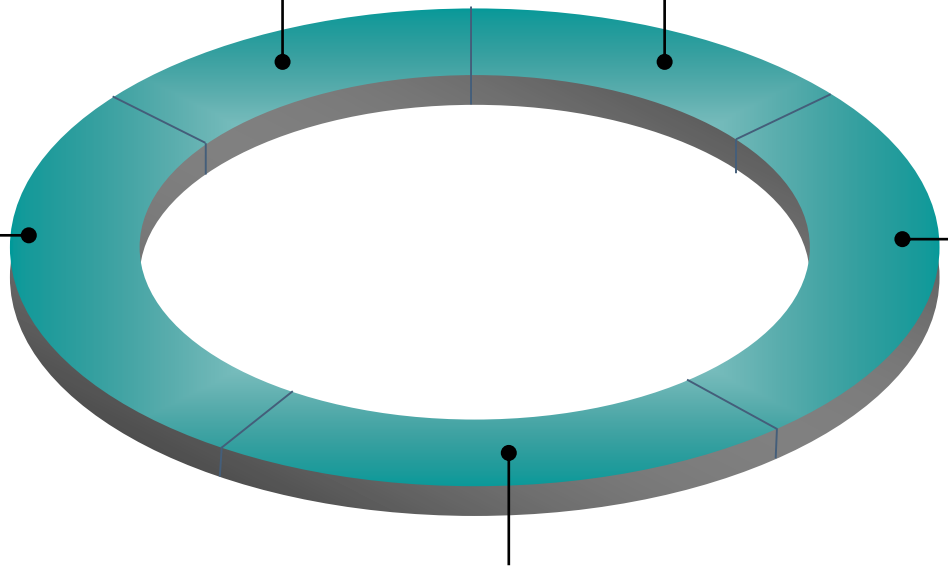
Basis

Standards

- Legal basis
- Methodology and tools
- Implementation scheme

Compliance

- MV&E scheme
- Technical capacity
- Post-evaluation



Labeling

- Implement rules
- Administrative institutes

Dissemination

- Online channel
- Handbook
- Consumer campaign
- International communication

Implementation of Energy efficiency Standards

64 standards

- 20 for household appliances
- 13 for Lighting equipment
- 7 for commercial devices
- 19 for industrial equipment
- 5 for office equipment

Mandatory energy efficiency standards

MEPS and Reach MEPS

Energy efficiency grades

Evaluating index for energy saving product

Market threshhold, phasing out bad products

Mandatory Energy Labeling Program

Voluntary certification for energy saving products

Promotion of appliances in rural areas

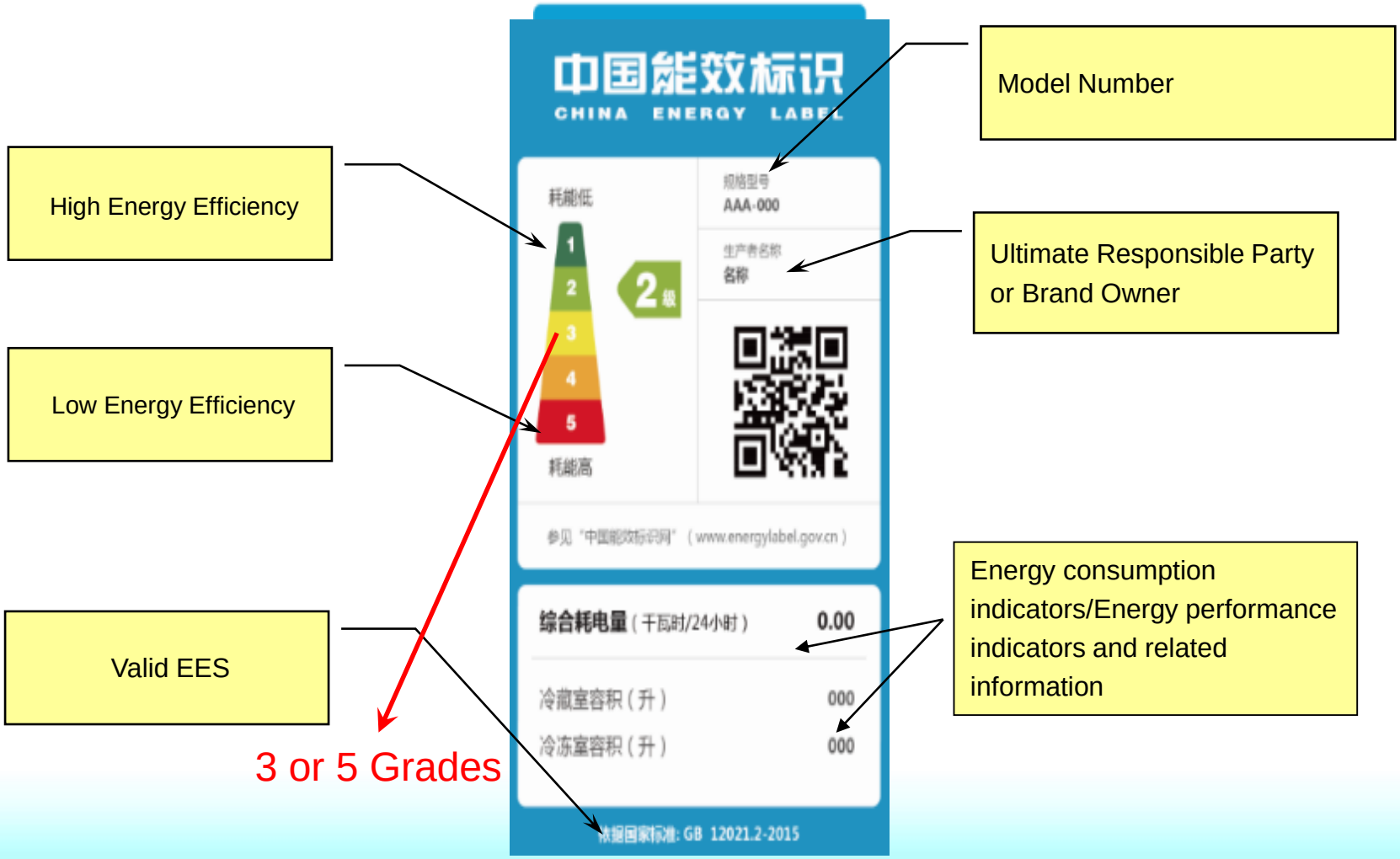
Financial incentive for efficient products

Local financial incentive

Public procurement of efficient product

Preference of income tax for enterprises

China energy label program



China ene

High Energy Efficie

Low Energy Efficie

Valid EES

nber

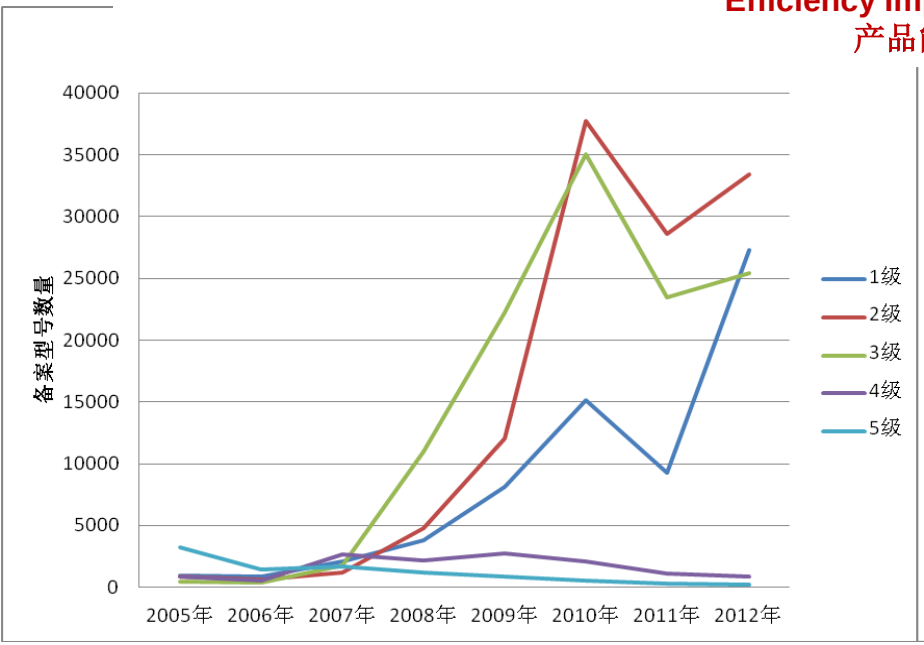
esponsible Party
wner

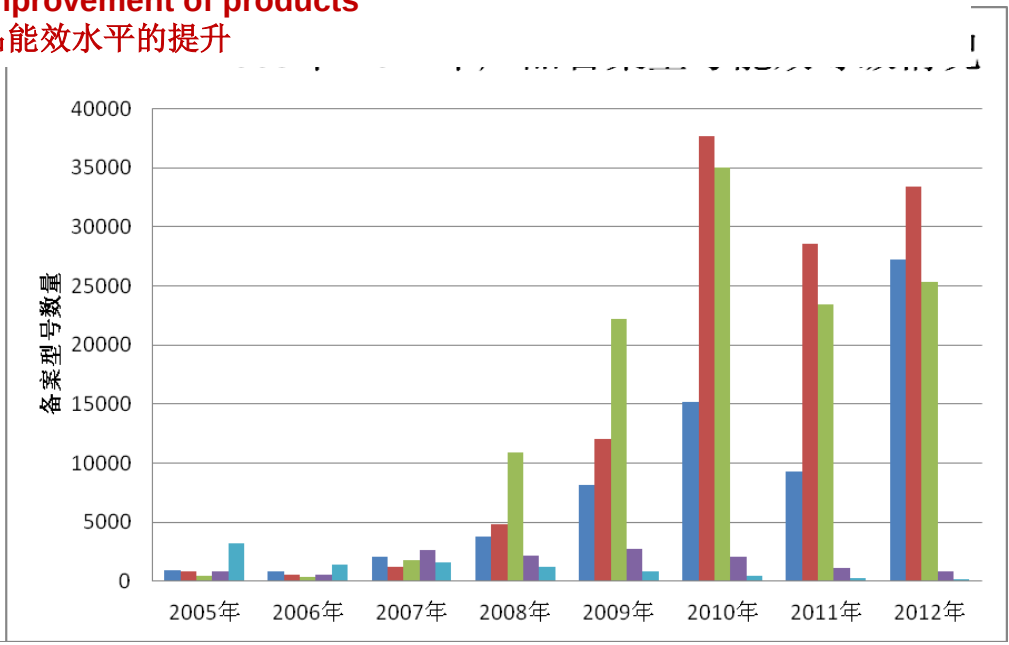
umption
nergy performance
d related

Impact of S&L

By 2012, 20 energy efficiency standards may reach cumulative energy savings of 900 TWh, equaling to the output of 9 Three-Gorges power plants in 2012

Efficiency Improvement of products
产品能效水平的提升



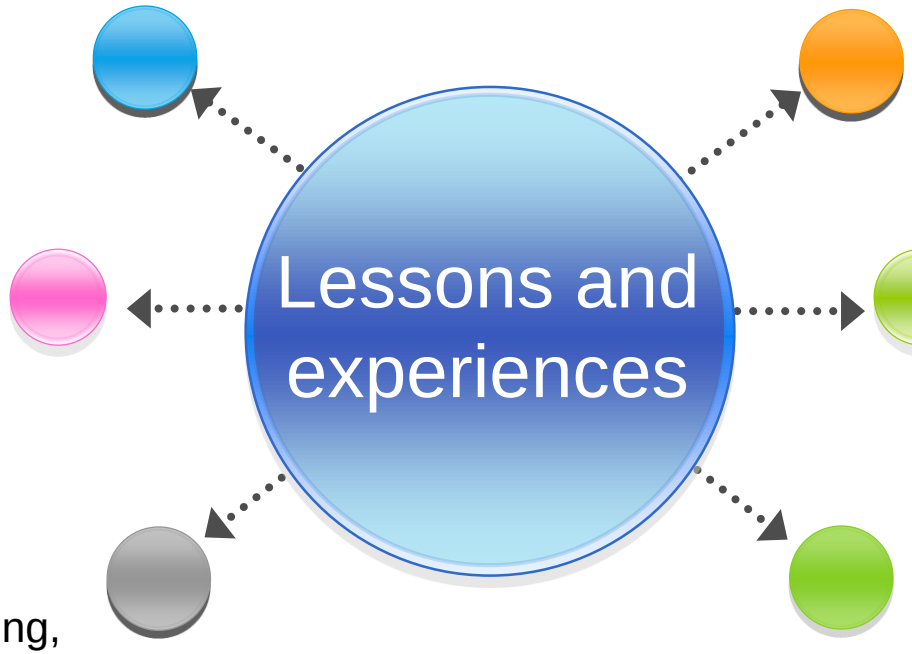


By 2012, After 7-year implementation, China Energy Label Program was estimated to reach cumulative energy savings of about 420 TWh, equaling to 30 million tons of CO2.

Lessons and experiences

Continuous improvement: good but not perfect

Policy circumstance



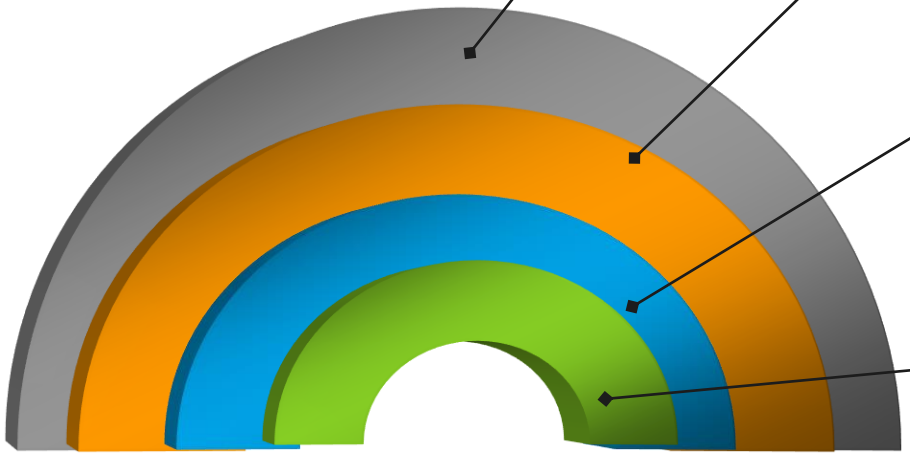
Capacity: development, testing, implementation

Unified institutional arrangement: research, administration

Resources: financing, human

Adapt international best practices to local situation: a comprehensive standard

International cooperation in energy efficiency of appliance in NDC



Database of appliance policy proposed in iNDCs (Standard, label, procurement, awareness program, rebate program)

Analysis of contribution (energy saving potential) of appliance and equipment to iNDC

Recommendations for embedding appliance policy in iNDC

Capacity building for developing energy efficiency policy for appliance and equipment

Information → Contribution → Recommendation → Capacity

Collaboration with existed initiatives

- Resources sharing
- Experiences exchange
- Best practices adoption
- Event coordination

Thank you!

谢 谢 ！

Peru’s Energy Efficiency NAMA

Ms. Daniella Rough, Directorate General for Energy Efficiency

SEAD | SUPER-EFFICIENT EQUIPMENT AND APPLIANCE DEPLOYMENT INITIATIVE

SEAD | SUPER-EFFICIENT EQUIPMENT AND APPLIANCE DEPLOYMENT INITIATIVE

Ms. Daniella Rough, Directorate General for Energy Efficiency

Ms. Daniella Rough is a renewable energy specialist with two master degrees and more than 10 years of professional experience, working as an environmental consultant in 16 countries. During the last 4 years, her work has been focused on the development of renewable energy resources in Peru. Furthermore, she now works for the Ministry of Energy and Mines as a Coordinator for the NAMAs Energy Project. Among the goals that must be achieved with this role are the development of four Energy NAMAs in Peru, which includes the following activities:

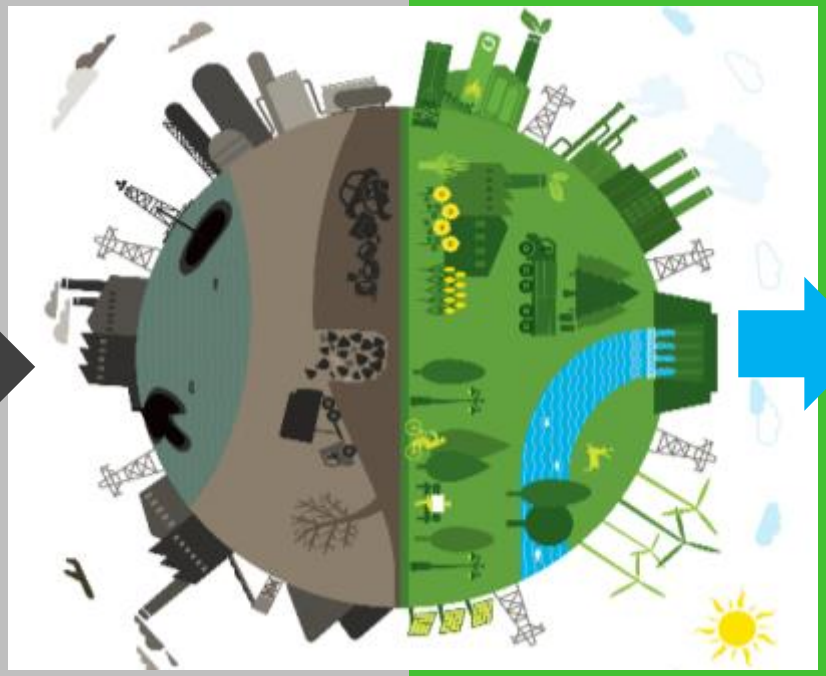
1. Promotion and development of connected, non-conventional and renewable energy sources.
2. Promotion and optimization of the use of renewable energy sources in rural electrification, heating, and cooking.
3. Promotion of energy efficiency measures through financial mechanisms, educational campaigns, and policy changes.
4. Preparation of the energy matrix for a transition to electric transport.

PERÚ Ministerio de Energía y Minas

NAMAs de Energy in Peru

Presenter: Daniella Rough
Energy NAMA Coordinator
Ministry of Energy and Mines

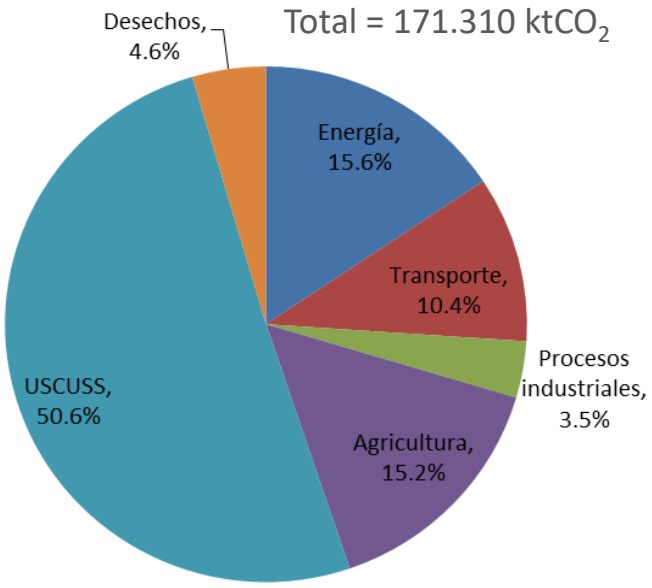
BaU



Futuro?

The Peruvian iNDC envisages a reduction of emissions equivalent to 30% in relation to the Greenhouse Gas (GHG) emissions of the projected Business as Usual scenario (BaU) in 2030.

The Peruvian State considers that a 20% reduction will be implemented through domestic investment and expenses, from public and private resources (non-conditional proposal), and the remaining 10% is subject to the availability of international financing and the existence of favorable conditions (conditional proposal).


Total = 171.310 ktCO2
Desechos, 4.6%
Energía, 15.6%
Transporte, 10.4%
Procesos industriales, 3.5%
Agricultura, 15.2%
USCUSS, 50.6%

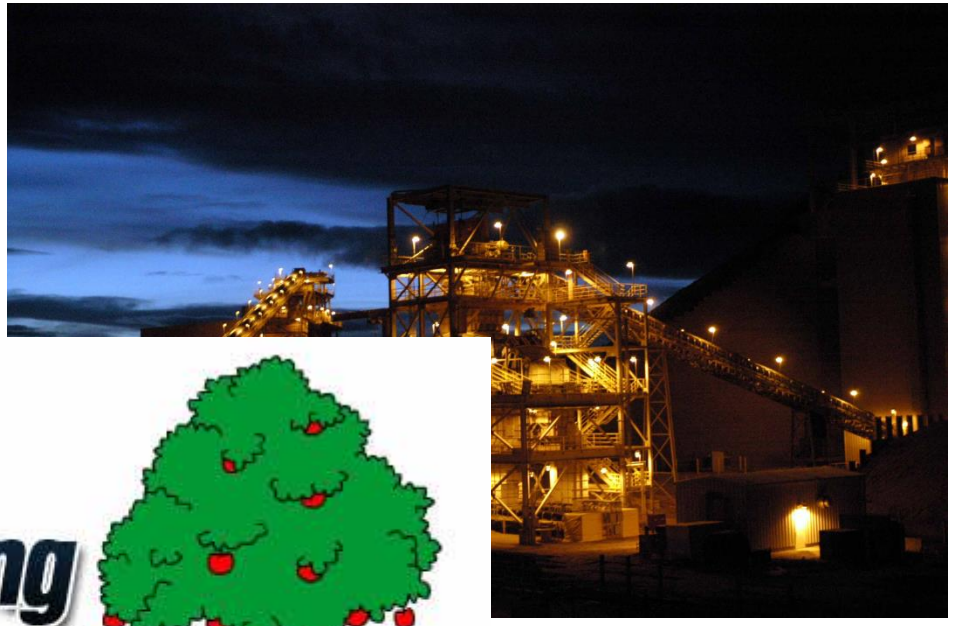
PERÚ | Ministerio de Energía y Minas

NAMA#1 Promotion of Energy Efficiency Measures

NAMA#2 Increased Contribution of Renewable Energy in the National Grid

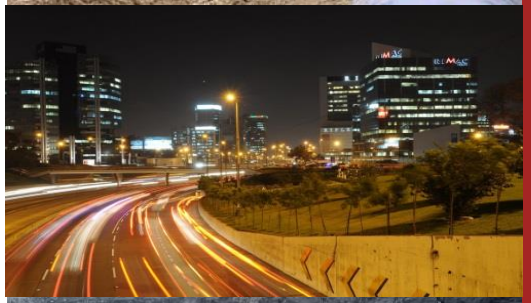
NAMA#3 Preparation of the Energy Sector for a Transition towards Clean Transport

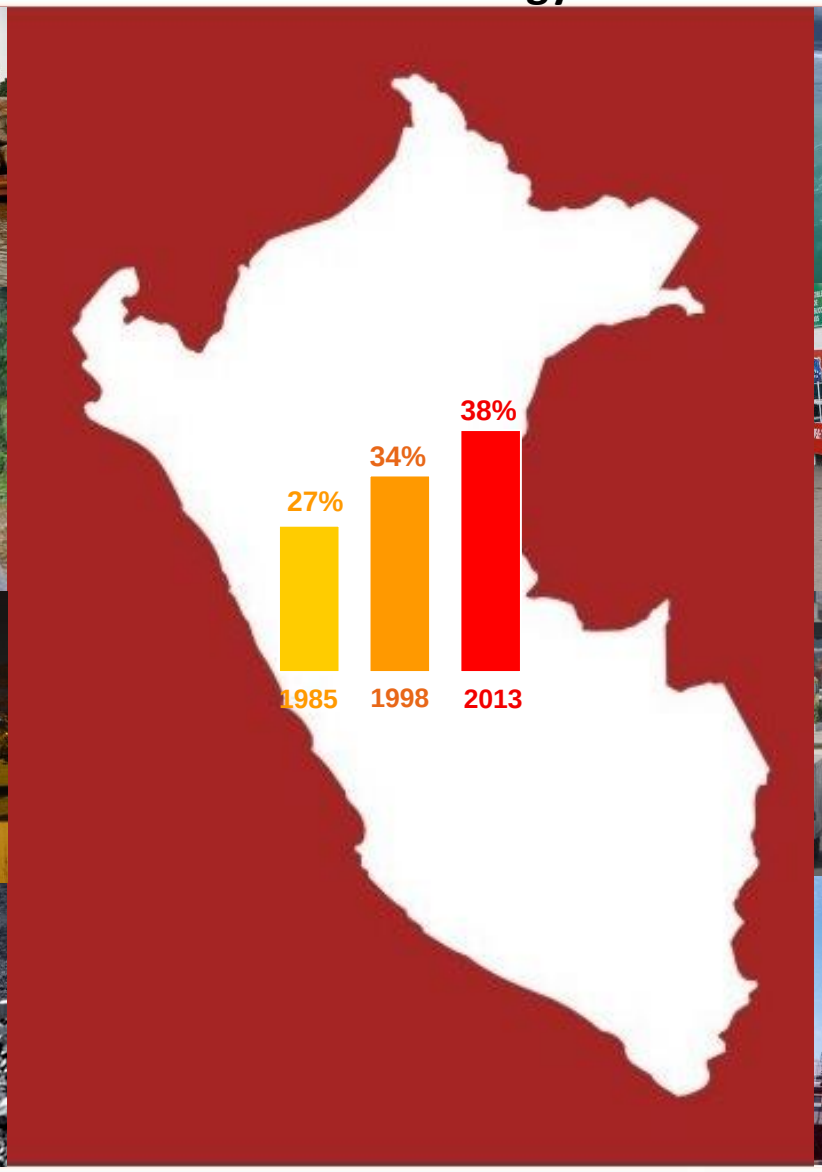
NAMA #4 Promotion of Sustainable Development using Renewable Energy in Rural Areas for Electrification, Clean Cooking and Heating



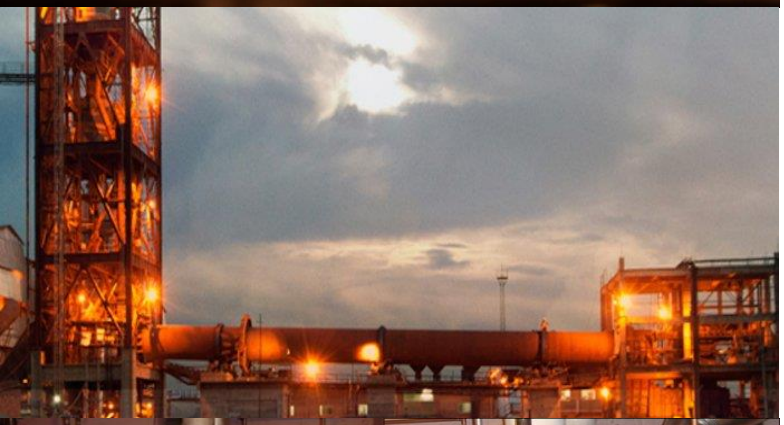
Low Hanging Fruit

National Useful Energy Balance



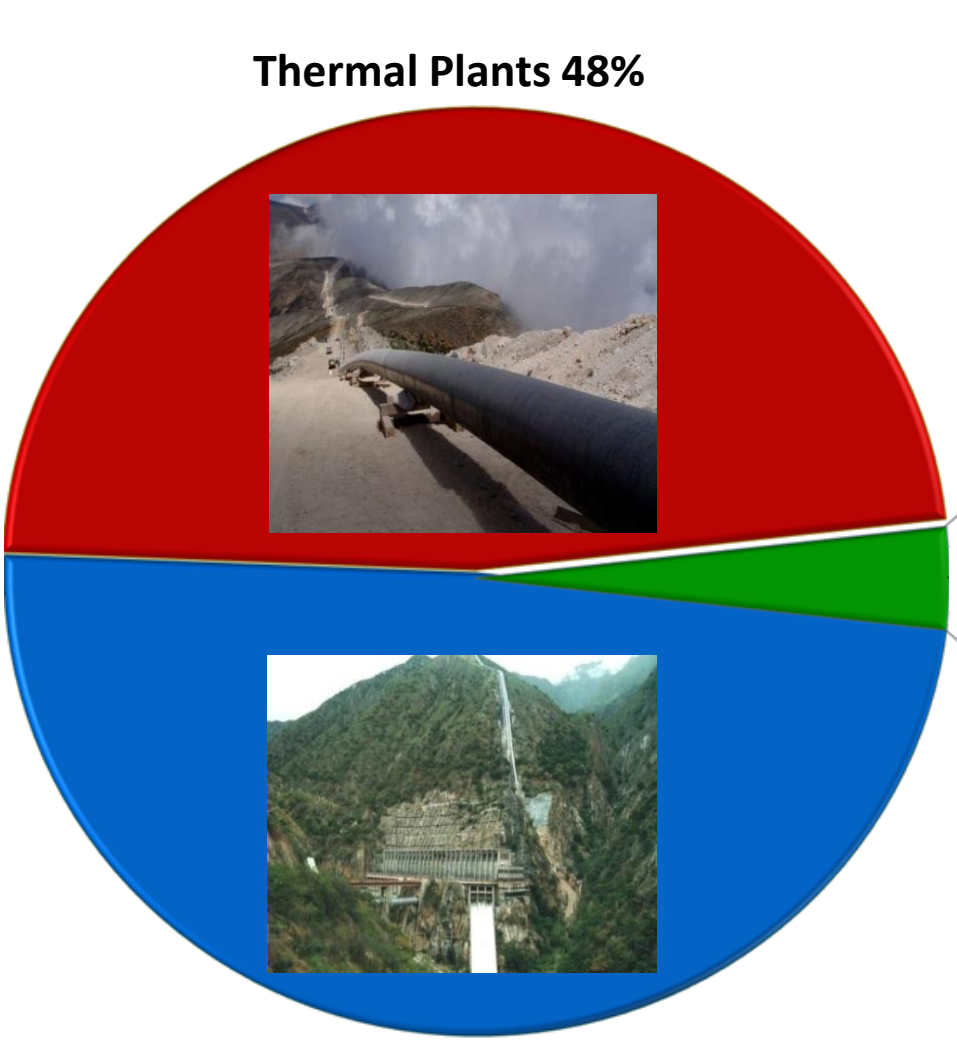


PERÚ | Ministerio de Energía y Minas

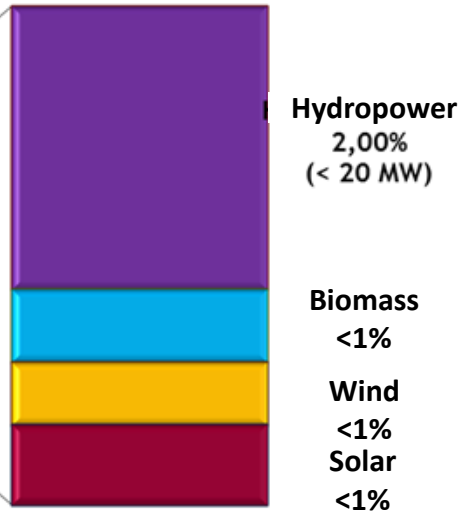


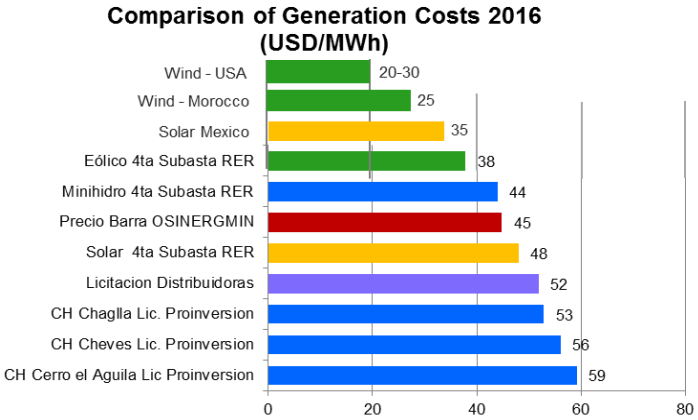
MEPS COMPLIANT

MINIMUM ENERGY PERFORMANCE STANDARDS

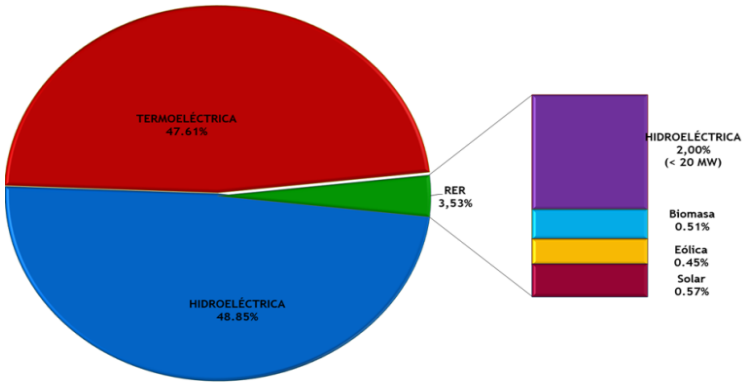


RER 4%

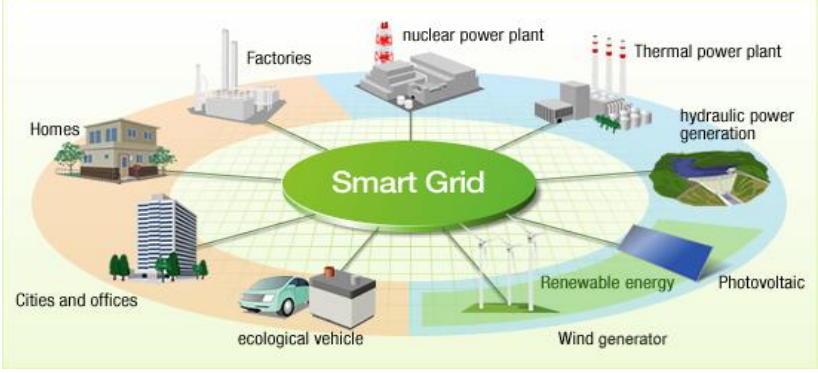




Source: COES, MINEM, 2015


TERMOELÉCTRICA
47.61%
RER
3,53%
HIDROELÉCTRICA
48.85%
HIDROELÉCTRICA
2,00%
(< 20 MW)
Biomasa
0.51%
Eólica
0.45%
Solar
0.57%


IKEA


nuclear power plant
Factories
Thermal power plant
Homes
hydraulic power generation
Smart Grid
Cities and offices
Renewable energy
Photovoltaic
ecological vehicle
Wind generator

Electromobility

- Promotion of electric buses in municipalities
- Quotas for e-taxis (X% of fleet), e.g. airport
- Promotion of electric moto-taxis in rural areas
- Guarantee of post-sale services
- Electric charging infrastructure at strategic points to incentivize electromobility
- Integration of electromobility into a smart grid
- Integration of renewable sources (eg. solar energy) in optimum areas, e.g. southern Peru


U0-6785
U0-6785


Servicio
PERU
SCE-76


E-Parken / e-parking

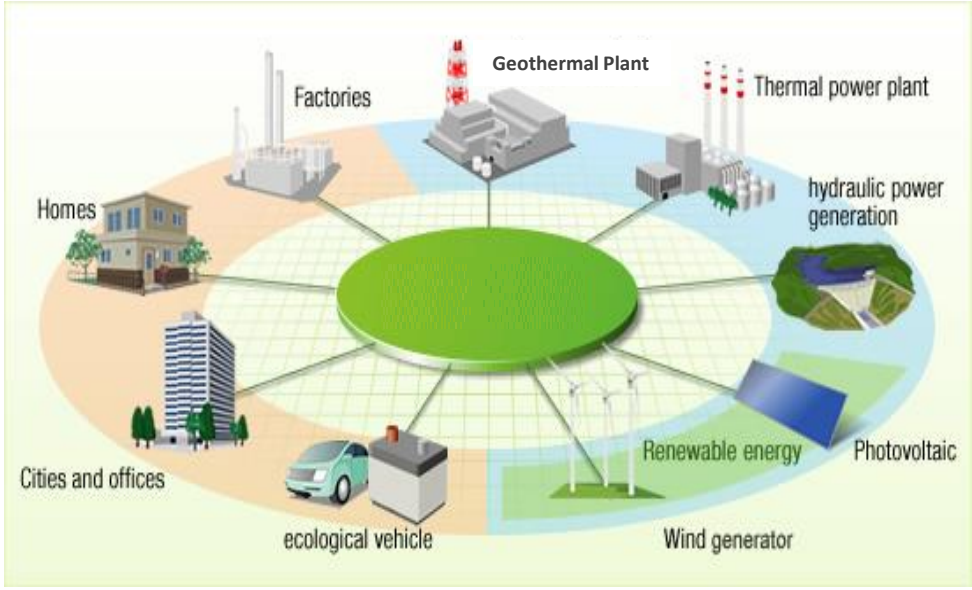

BATTERY POWERED
Long Driving Range-
All Electric Plug-in Bus
Zero-Emissions
All Electric Bus
-Zero Emissions


A
B
C
D
E
F
G


1.18.1 004670
Optical Port
endesa


edelnor
edelnor


Somos la primera y última impresión que tiene el visitante del exterior"


Geothermal Plant
Factories
Thermal power plant
Homes
hydraulic power generation
Cities and offices
Renewable energy
Photovoltaic
ecological vehicle
Wind generator

drough@minem.gob.pe

Vietnam Experience to Support Appliance Energy Efficiency

Mr. Tran Huy Hoan, Institute for Trade of Vietnam

SEAD | SUPER-EFFICIENT EQUIPMENT AND APPLIANCE DEPLOYMENT INITIATIVE

SEAD | SUPER-EFFICIENT EQUIPMENT AND APPLIANCE DEPLOYMENT INITIATIVE

Mr. Tran Huy Hoan, Institute for Trade of Vietnam

Mr. Hoan is a senior policy adviser and researcher with over 15 years' experience in trade and environment. He studied a Master of Natural Resources and Environmental Economics at the Australian National University.

For last two years, Mr. Hoan played a key role in helping the Ministry of Industry and Trade (MOIT) build up the Green Growth Action Plan in Industry and Trade, the National Action Plan on Sustainable Consumption and Production, and a 2030 vision where mitigation on climate change is perceived as one of the key priorities, along with renewable energy and energy efficiency.

Now he serves as Deputy Head in the Division of Environmental and Sustainable Trade Development at the Institute for Trade of the MOIT. This role has allowed him to work on activities related to green growth, sustainable consumption and production, and environmental issues in international trade (e.g. environmental standards and regulations, trade liberalization to environmental goods and services, etc.)

VIETNAM SOCIALIST REPUBLIC
MINISTRY OF INDUSTRY AND TRADE

GOVERNMENT POLICY FRAMEWORK TO PROMOTE APPLIANCE ENERGY EFFICIENCY: VIETNAM EXPERIENCE

Mr. Hoan Tran, Institute for Trade, MOIT, Vietnam

Hanoi, 27 October, 2016

Viet Nam: A South East Asia country

	Global Rank	Global share
CO2 emissions from fuel combustion (2012)	31	0.45%
Population (2013)	14	1.26%
CO2 emissions/Pop.1 (2012)	97	
GDP Size (2013)	57	0.23%
GDP Structure2 , % (2013) : Agriculture: 18, Industry: 38, Services: 43		

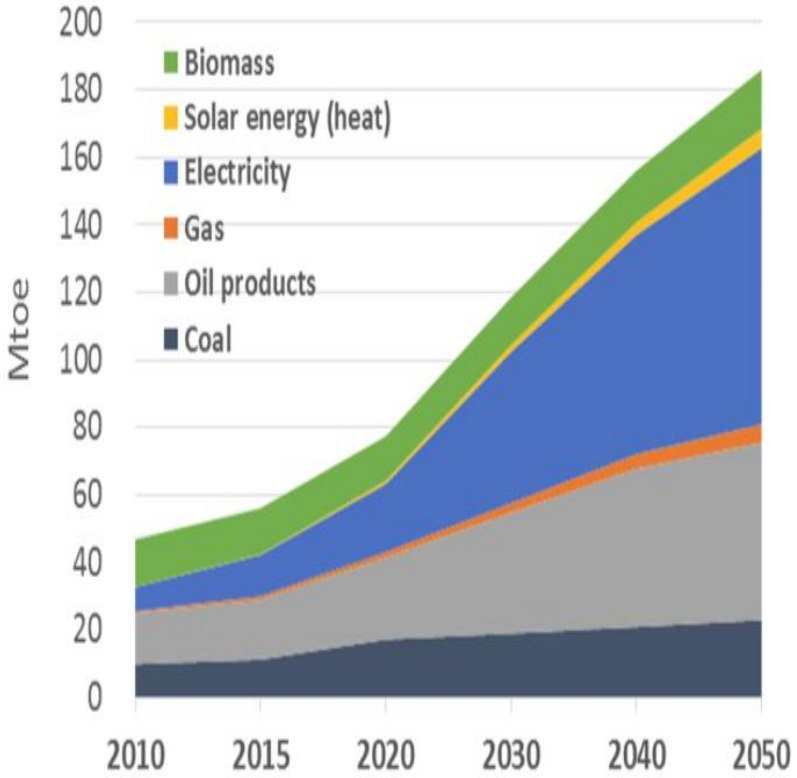
CONTENT

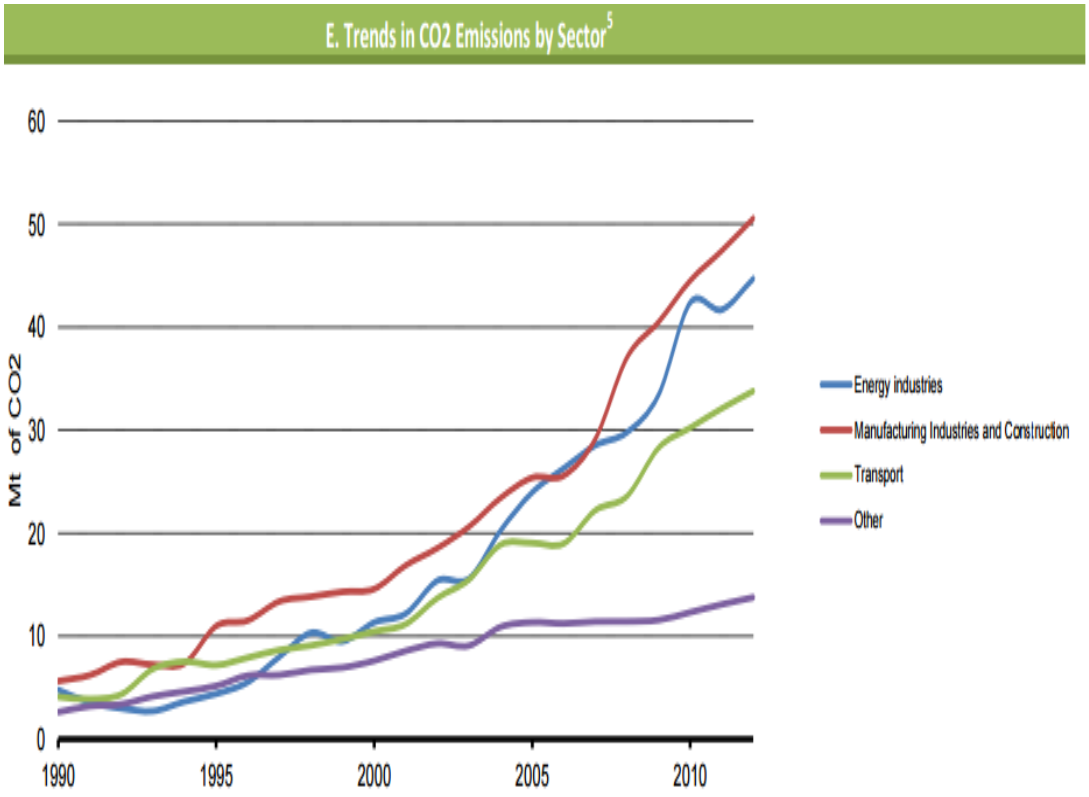
- Why do Vietnam need for EE and AEE?
- What have EE and AEE Vietnam development reached?
- Where are Vietnam AEE targets and policy framework to promote AEE development?
- Barriers and challenges
- Needs for international support and collaboration

1. WHY DO VIETNAM NEED FOR ENERGY EFFICIENT DEVELOPMENT

- Increasingly energy demand as well as GHG emission
- Start dependently to imported energy
- Highest energy intensity among the economies
- Need ensuring energy security and reduce GHG emission

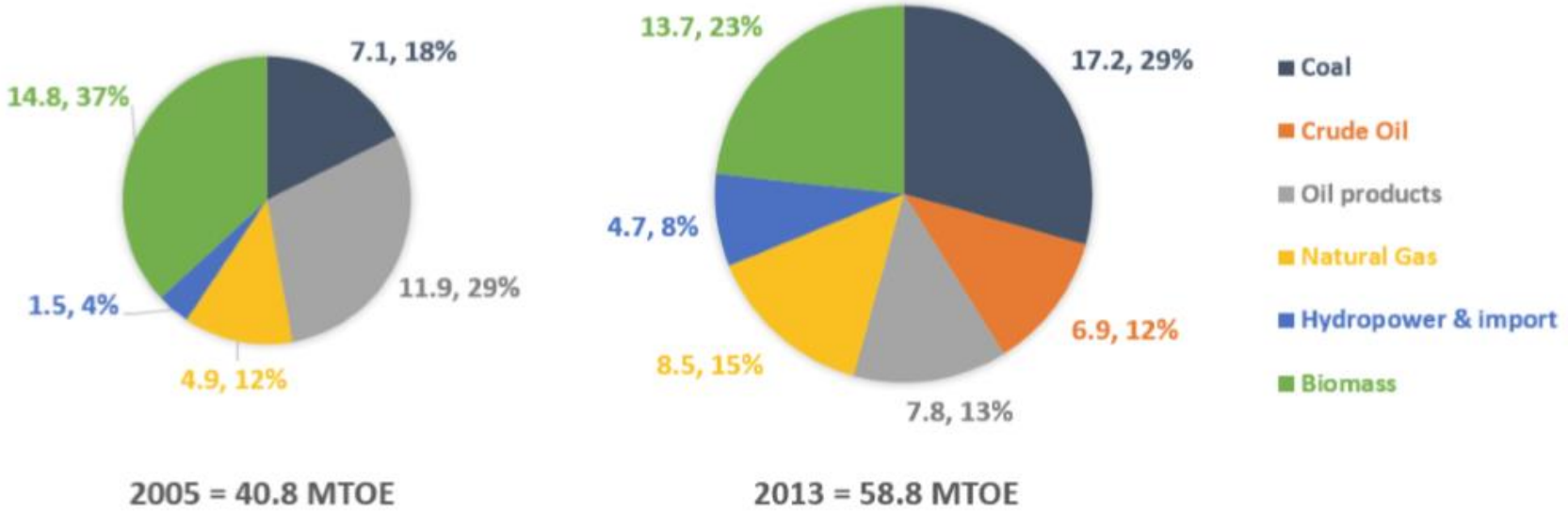
Viet Nam's final energy consumption and GHG emission by sources





Sources: National Energy Efficiency Program (VNEEP) - Ministry of Industry and Trade (MOIT), 2015

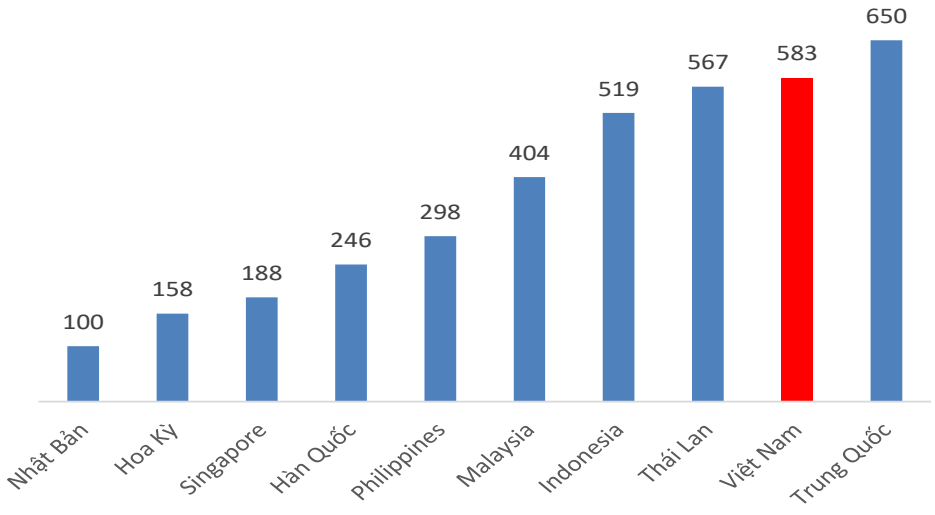
Viet Nam's primary energy supply



- **Mainly comes from fossil fuels** (coal, crude oil, natural gas), around 70%
- **Start importing**

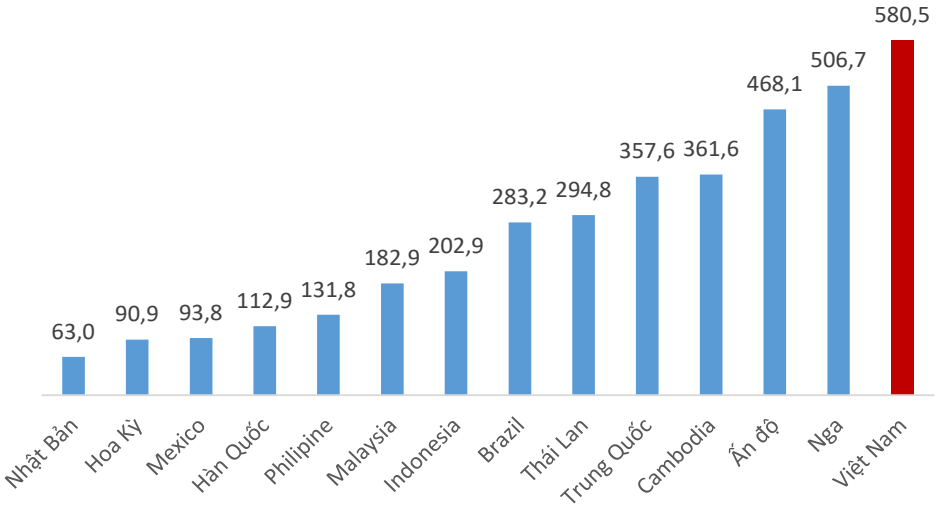
Sources: Institute of Energy, 2006; National Energy Efficiency Program (VNEEP) - MOIT, 2015

Huge need for EE



National energy intensity

- High
- Low tech
- Significant potential for improvement



Energy intensity in manufacturing industry

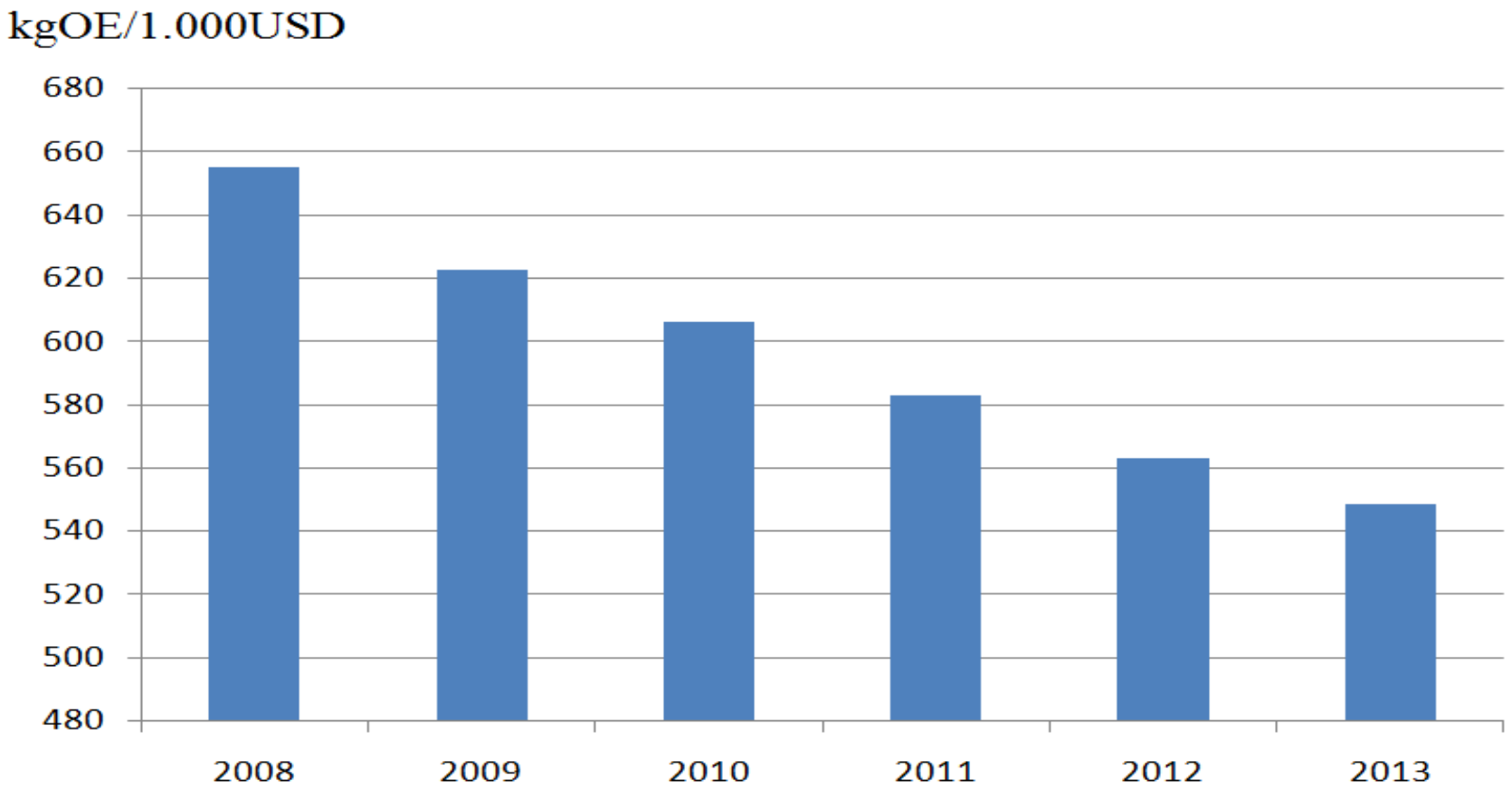
- High
- Low tech
- High energy intensity sectors: steel, electricity, textile…

Source: Energy Efficiency and Conservation Office

2. WHAT HAVE EE AND AEE DEVELOPMENT VIETNAM ACHIEVED?

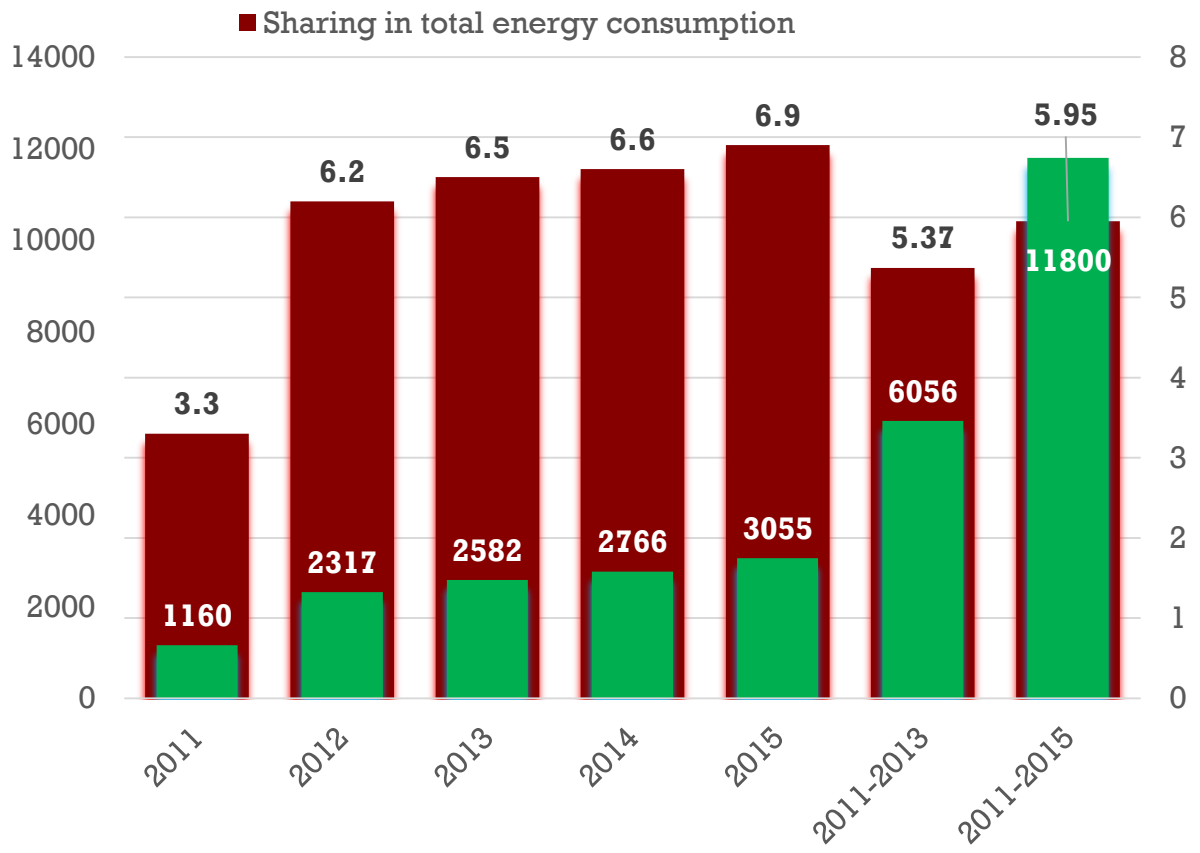
- dramatically reduce energy intensity
- significantly rise energy saving
- emerging increasingly AEE market

Energy intensity: reduce significantly



Source: Energy Efficiency and Conservation Office

Energy saving



2011-2015, save:

- 11,88 bil. kWh in total
- 2,37 bil. kWh annually
- 1.5 bil. USD in value

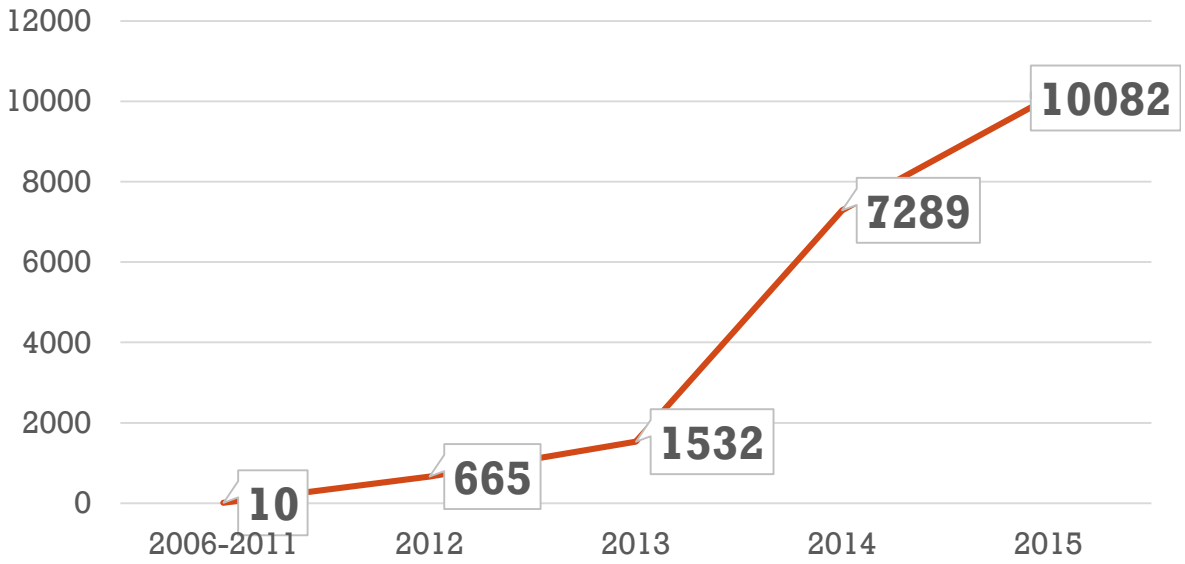
National Target: 5-8%

Source: Energy Efficiency and Conservation Office

Focused areas

Component 1	• State Management on EE
Component 2	• Education and Information Dissemination
Component 3	• **EE equipment and products** • EE standards and labeling for equipment • Energy management standards and certification • Testing and certification facility development • Marketing strategy development • Improving design and production technologies • Technology transfer
Component 4	• EE in selected sectors (manufacturing industry, transportation, buildings)
Component 5	• Financing for EE
Component 6	• Monitoring and Evaluation

AEE market: increasingly trend of certificated APP



ĐÔNG Á

Dán nhãn năng lượng

September, 2015: 10.082 certificated AEE types under 15 catalogues:

- 473 : TV products
- 749 : Lighting products
- 1.585 : Fan products
- 863 : Air condition products
- 301 : Washing machines
- 1.354 : Rice cookers…

3. WHERE ARE APP TARGETS AND GOVERNMENT'S POLICY FRAMEWORK TO PROMOTE AEE DEVELOPMENT

National Targets related to AEE

2006: National Target Program on EE&C 2007-2015 and 2011-2015

- Energy saving: 3%- 5% and 5-8% of total energy consumption between 2006 - 2010 and 2011 - 2015 respectively
- Reduce 10% energy intensity among high energy intensive industries between 2011-2015

2012: Green Growth Strategy 2011-2020, a vision to 2050:

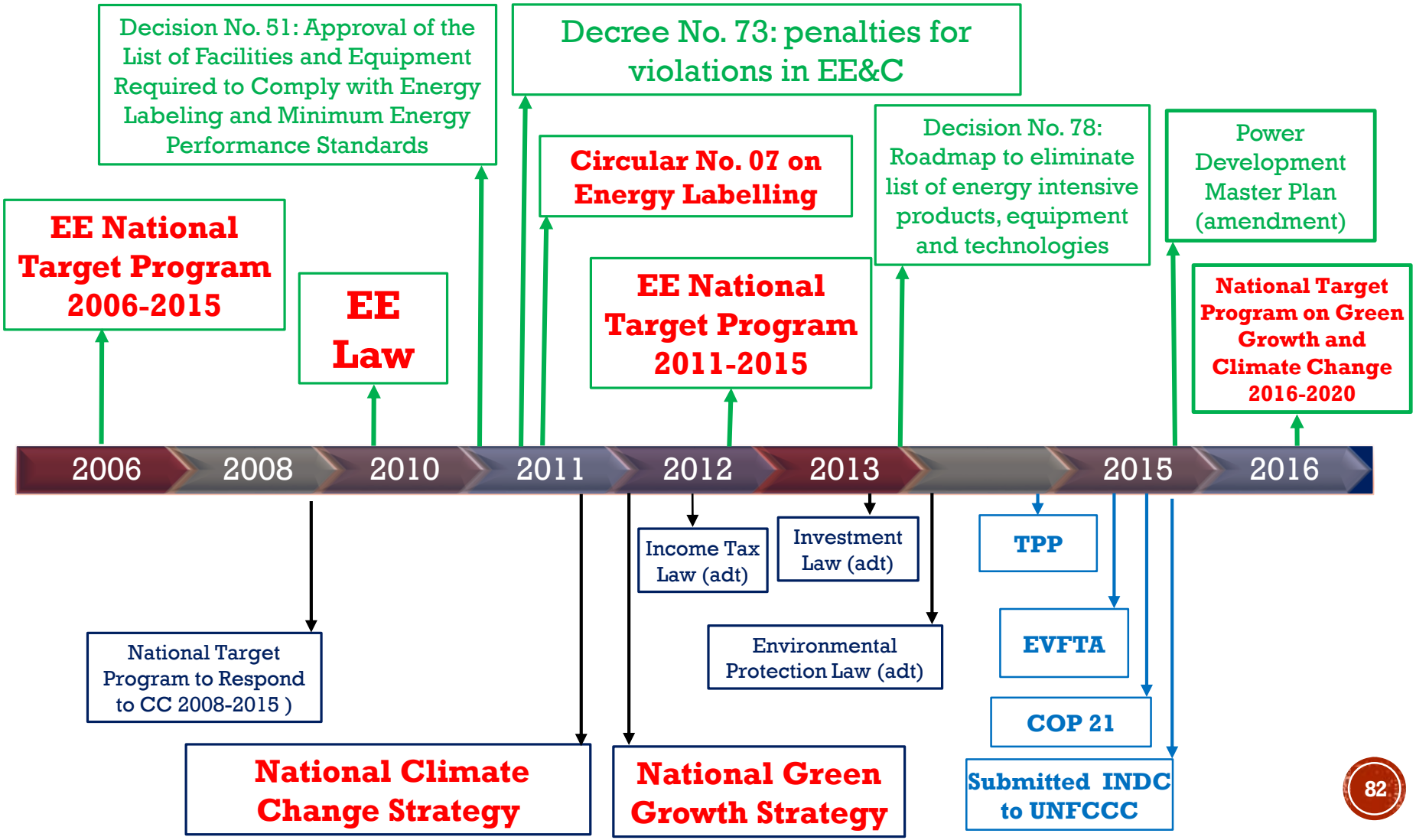
- By 2020: reduce 10% GHG emission and more 10% under international support landscape in energy activities comparing BAU, reduce emission intensity 8-10%
- By 2030: reduce GHG emission by **20%** and up to **30%** under international support landscape within energy activities comparing BAU
- Reduce energy intensity per GDP: 1-1.5% annually

2015: Intended National Determined Contribution

- Reduce GHG emission by **8%** through domestically effort and up to 25% with international support by 2030
  - Promote Renewable Energy and Clean Energy development
  - Enhance Energy Efficiency

Source: Viet Nam's Renewable Energy Development Strategy up to 2030, with an outlook to 2050

Policy framework to EE development: holistic approach



Policy package mix

Policy support

- Institutional creation
- Strategic planning

Regulatory instruments

- auditing, codes and standards, monitoring, obligation schemes, other mandatory requirements

Economic instruments

- direct investment, fiscal/financial incentives, market-based instruments

Information and education

- advice/aid in implementation, information provision, performance label, professional training and qualification

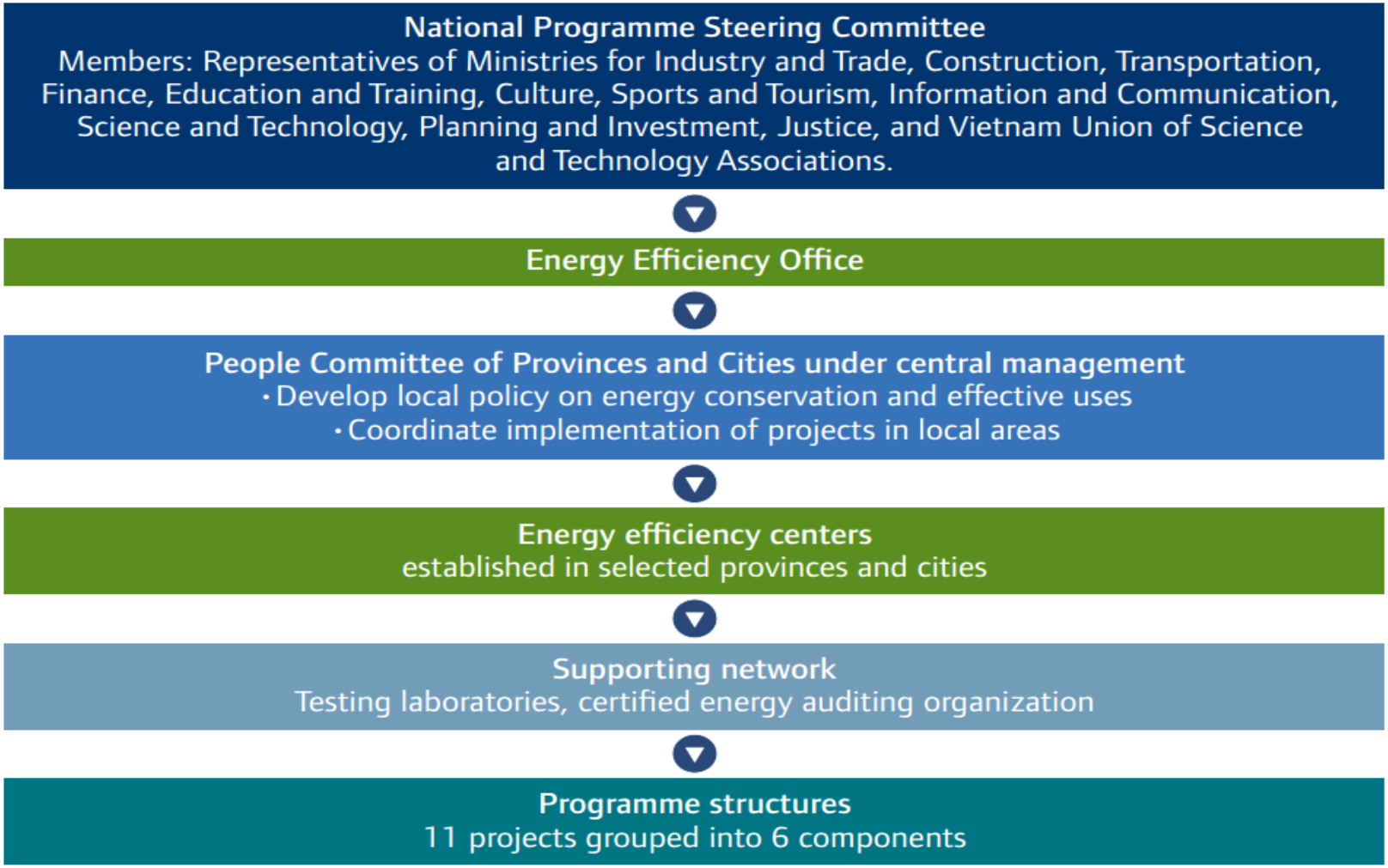
Voluntary approaches

- negotiated agreements, public voluntary schemes, unilateral commitments

R&D

- research program, demonstration project

Institutional setting for AEE development: topdown and bottom up approach



Source: http://vneec.gov.vn/en/introduction/management-of-programme-33-9397.html

EEP standards and labelling

Cross-sectoral		Industry	Transport	Buildings	
National strategy	ESCO	Energy Management	Fuel-Economy Standard	Building Code	MEPS and Labelling
The National Target Programme on Energy Efficiency and Conservation. **2006, voluntary**	Market development project.	Mandatory energy management (over 1 000 toe/y). Mandatory MEPS for electric motors, from July 2013.	Mandatory fuel-economy labelling (applied only for vehicles under 7 seater category) from January 2015.	Voluntary codes (building envelope, lighting, AC, ventilation).	Mandatory MEPS from January 2015. Mandatory labelling from July 2013 (8 products: AC, fans, rice cookers, etc.).

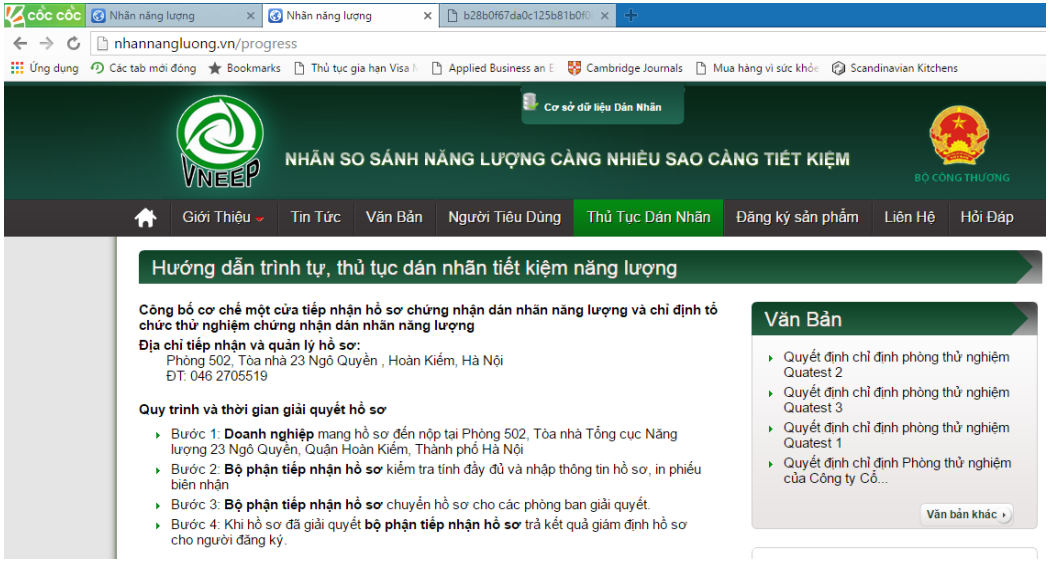
Moving steadily from VOLUNTARY scheme to MANDATORY scheme

Apply both domestic and imported products, equipment, and machines from 2015

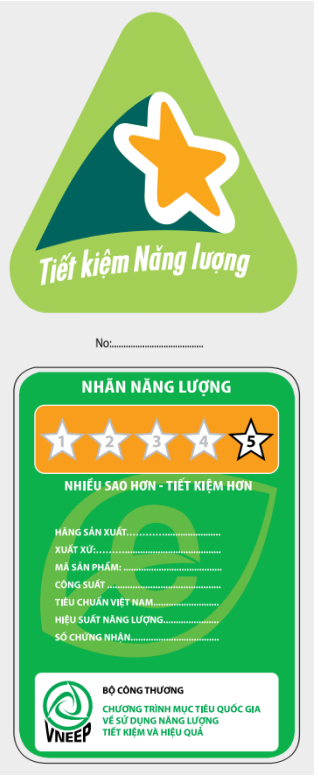
ESCO: energy service companies
MEPS: minimum energy performance standards

Energy labeling: 2011

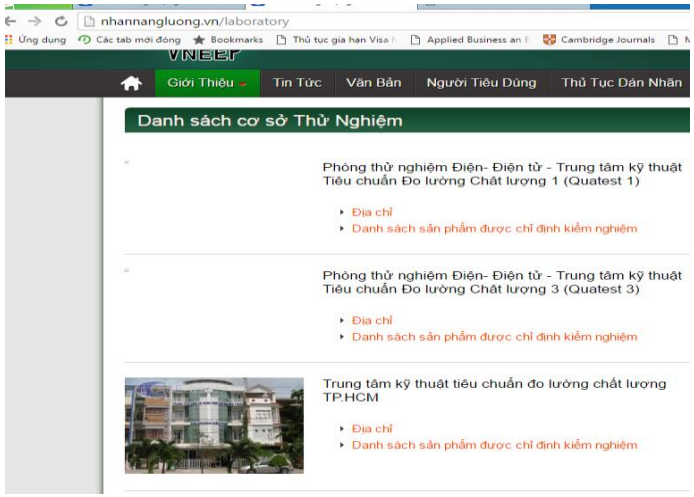
Energy labeling scheme: national online platform



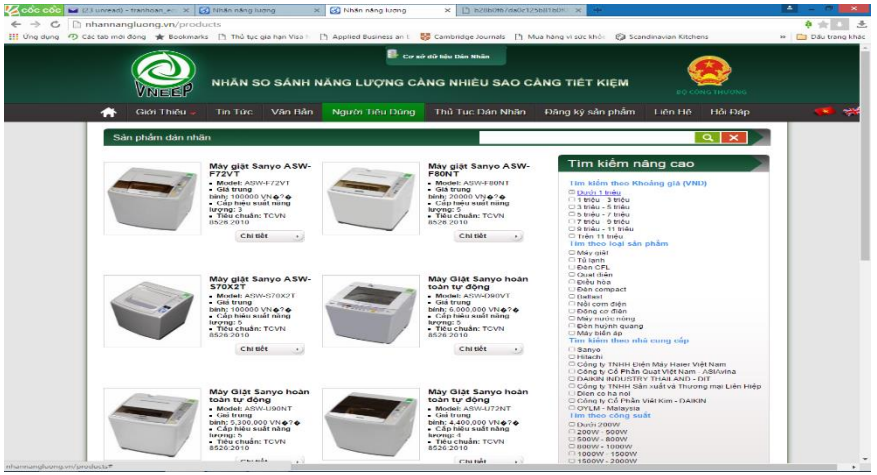
Registration and procedure for EE&C labelling



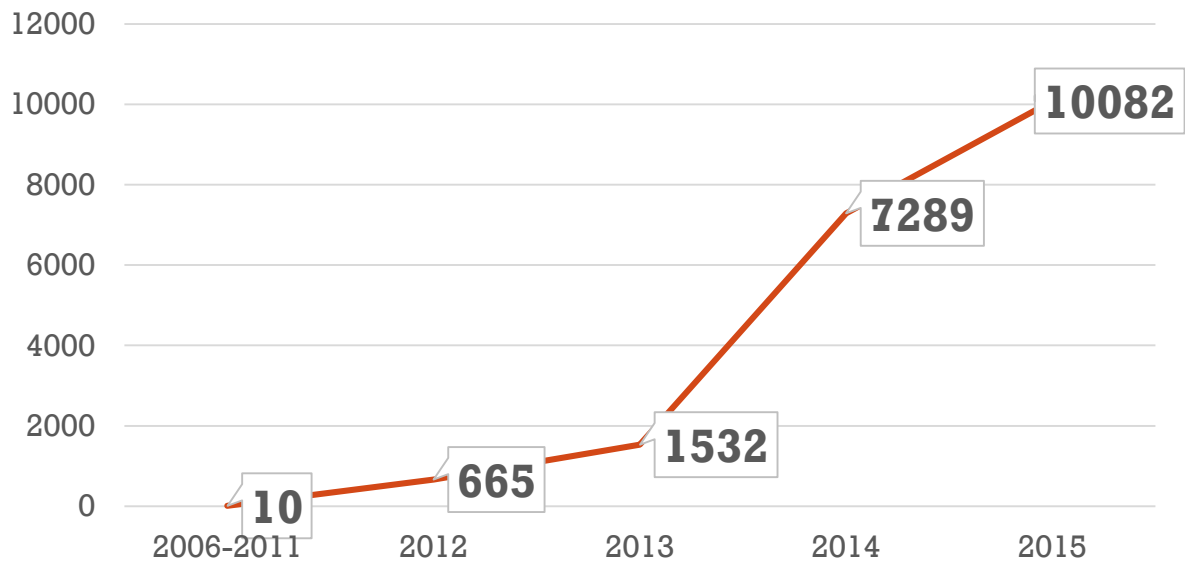
EE&C certificated agencies



Online information of AEE on the market



AEE market: Number of EE labelled product types

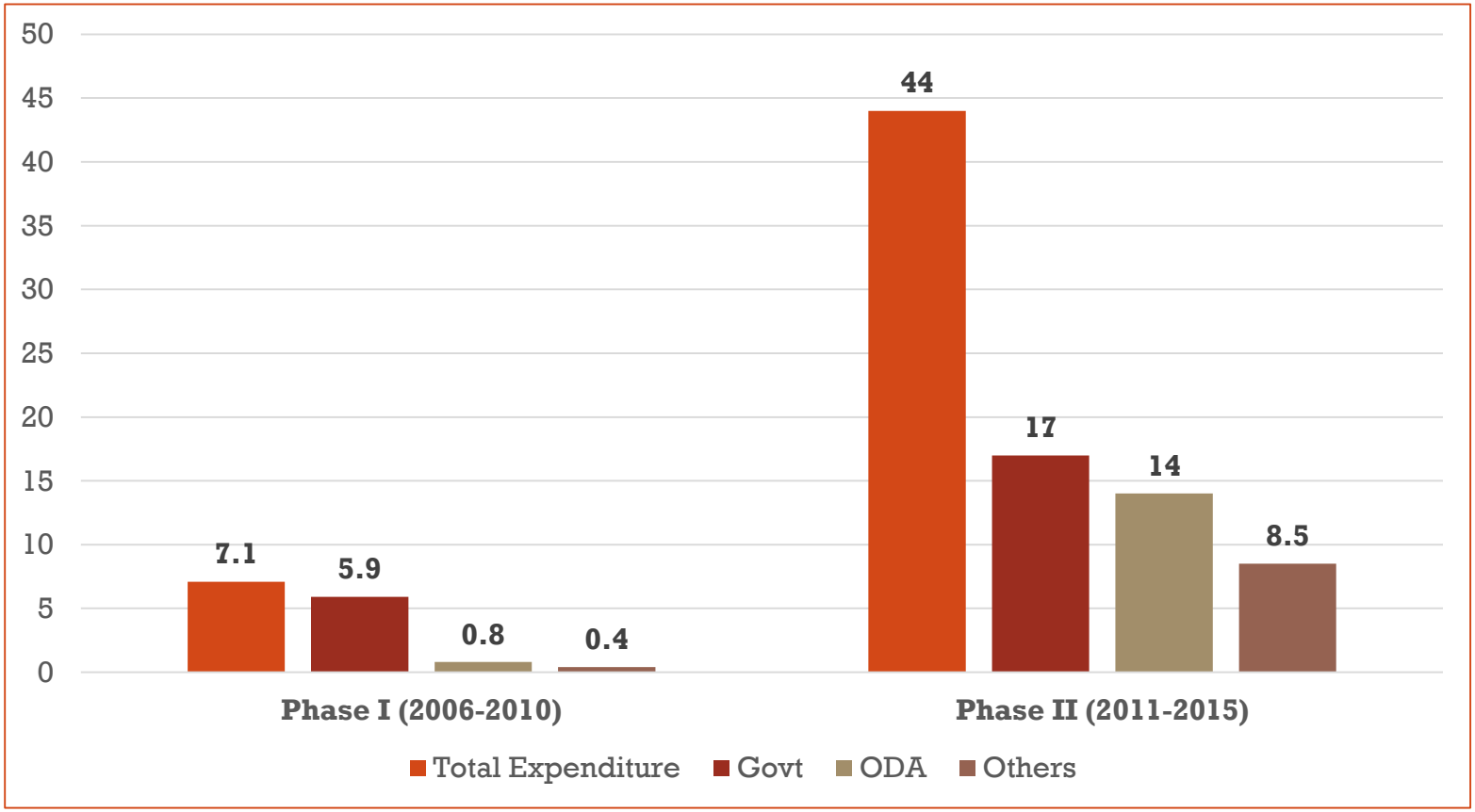


ĐÔNG Á.
Dán nhãn năng lượng

September, 2015: 10.082 products under 15 catalogues:

- 473 : TV products
- 749 : Lighting products
- 1.585 : Fan products
- 863 : Air conditioners products
- 301 : Washing machines
- 1.354 : Rice cookers…

Budget for EE&C National Target Program (bil.$)



Major EE projects and programs

Project name	Years	Sponsor	Implementing agency
Energy-Efficiency and Conservation Program for Vietnam (EE&CP)	1995–2001	GOV and Netherlands, EU, SIDA, UNDP	MOST
Vietnam Demand-Side Management (DSM) and Energy Efficiency—Phases 1 and 2[a]	2000–10	WB, SIDA and GEF	MOIT, EVN
The Pilot Commercial Energy-Efficiency Program (CEEP)	2004–10	WB and GEF	MOIT/ERAV
Compact Fluorescent Lamp (CFL) Promotion Program	2004–07	WB and GEF	EVN and PCs
Fluorescent Thin Tube Lamp (FTL) Promotion Campaign	2004–07	WB and GEF	EVN
Swiss Government and UNIDO Activities			
Clean Production Center (CPC)	1998–2008	SDC	VNCPC
Energy-Efficient Brick Project	2001–04	SDC and UNIDO	Entec (Swiss consultant)
Green Credit Line	2008–12	SECO	VNCPC and commercial banks
Promoting Energy Conservation in Small and Medium Scale Enterprises (PECSME)	2006–10	UNDP	MOST
Vietnam Energy-Efficient Public Lighting	2006–10	UNDP and GEF	NCST, IMS
The Study on Master Plan on Energy Conservation and Effective Use in Vietnam	2008–09	JICA	J-Power (Japanese consultant)

Source: Vietnam Expanding Opportunities for Energy Efficiency, WB, 2010

Major EE&C programs

Project	Main Objectives	Agency	Donor	Duration time
VNPT	Support the NTP-RCC with a focus on the transport and energy sectors	MOIT/ISEA	ADB	2011-2014
EEP	Support wider provision and use of renewable energy by facilitating renewable energy and energy efficiency-related cooperation, dialogue and experience sharing among stakeholders of different public and private sectors	MOIT/ GDE/RED	MFA NDF	2014-2016
BRESL	Barriers Removal to the Cost Effective Development and Implementation of Energy Efficiency Standards and Labeling	MOIT/ MOST/EVN	UNDP/ GEF	2009-2015
CPEE	Strengthen the capacity of Government and other key stakeholders in achieving the energy efficiency targets of the National Energy Efficiency Program	MOIT/ DSTEE	WB	2011-2016
LCEE	Support VNEEP in promoting EE in the SMEs sector with a focus on key industrial sectors, and in implementing the new energy efficiency building code for new large buildings	MOIT/MOC	DANIDA	2013-2015
ASEAN SHINE	Harmonization of test methods and EE standards, adoption of common MEPS, and changing consumer purchasing attitudes in favor of energy efficient air-conditioners.	MOST/ STAMEG	EC	2013-2016
VCEP	Support Viet Nam's sustainable growth by reducing GHG emissions through the more efficient usage of electricity in the building sector	MOC	USAID	2014-2018
VEEGB	Promote energy efficiency in building and reduce GHG emissions	MOC	IFC	2013-2017

Economic incentives

- Tariffs exemption to machines, equipment, technologies to produce EE&C products
- Exempt and reduce land rent fees, lend tax for 20 years, and publish projects in EE&C product production
- Corporate income tax (CIT)
  - Low rate at 10% for 15 years; 4 years for CIT exemption holiday
  - 50% reduction of CIT for 9 consecutive years after tax exemption period.
- Reduce interest rate to EE&CPs investment loan from:
  - Development Banks, Science and Technology Fund
  - Technology Innovation Fund, Environmental Protection Fund, and other financial institutions.

EE&C standards and regulations

- Mandatory application EE standards: Technology; management; and production process standards
- Penalty for enterprises violating EE&C standards and regulations
  - no implementation in manufacturing industry: 1.000-1.500$
  - no energy audit implementation and report: 2.500-3000$
  - Provide incorrect information in energy audit report: 1.500-2.000$
  - Applying low tech in energy production: 3.000-3.500$
- Roadmap to eliminate high energy intensive products, machines and technologies

ESCO: energy service companies
MEPS: minimum energy performance standards

Education and training, communication

- Energy saving household award program
- EE&C building award program
- EE&C enterprises award program
- Develop EE&C consultant and EE&C certification firms

Facilitating market access to RCE: TPP and EU-Vietnam FTA

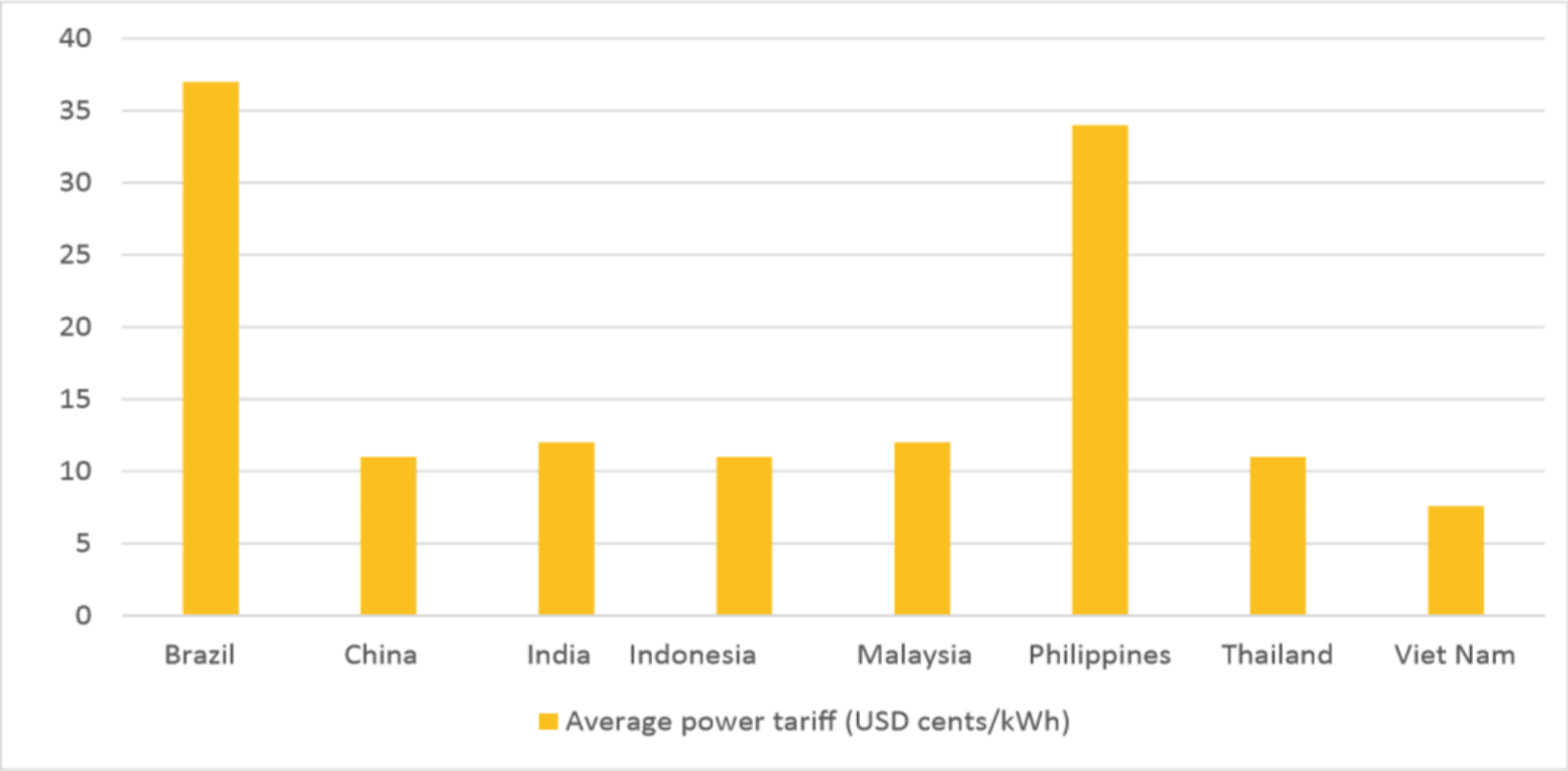
- Reduce tariff
- Remove non-tariff barriers
- Enhance technology transfer cooperation
- Boot financial support and capacity building

4. BARRIERS AND CHALLENGES

- Low energy prices
- MRV and enforcement: Lack of strictly penalties to EE&C violations
- Expensive advanced EE technology
- Restrained behavior

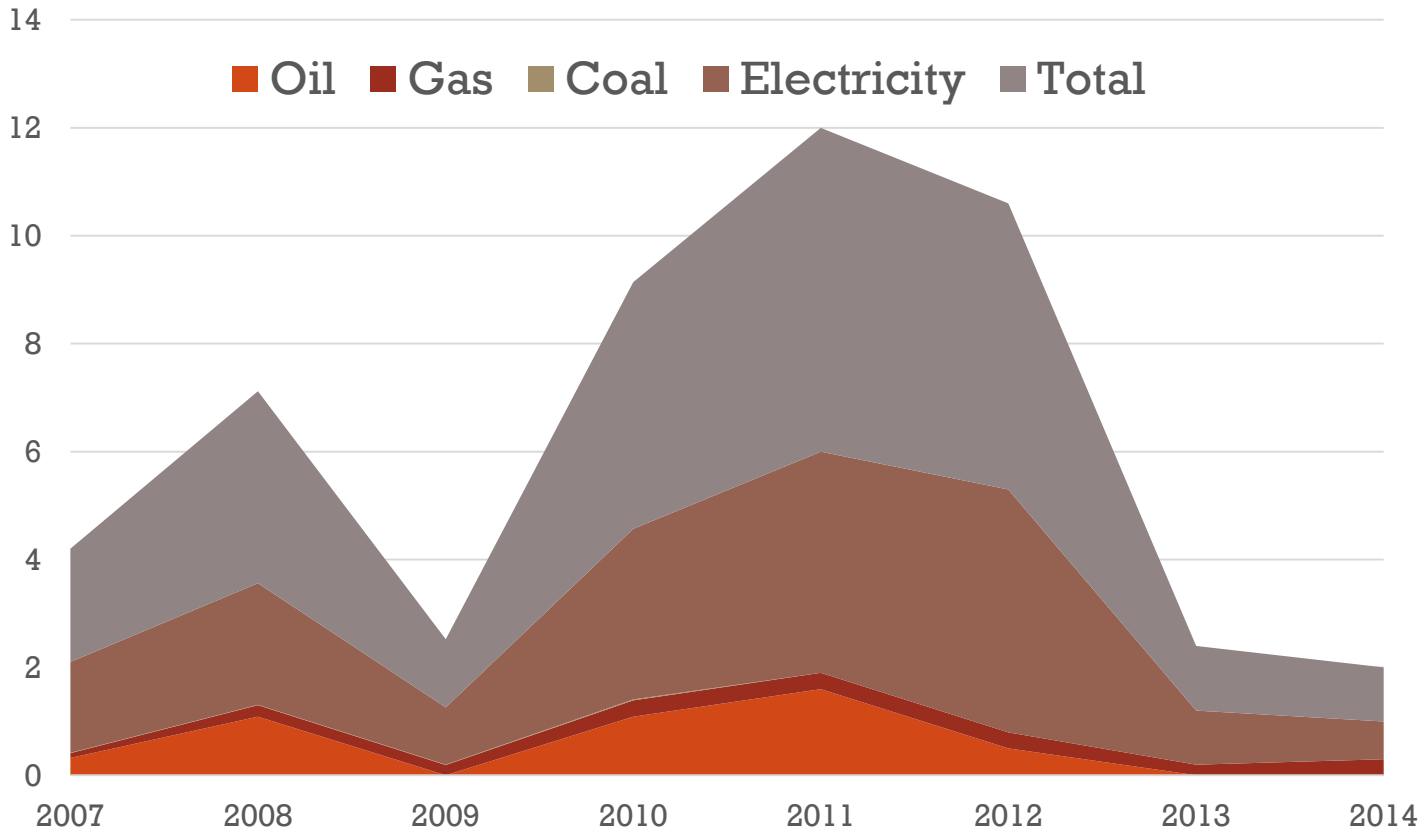
Picture source: http://doverdlc.blogspot.com/2014/10/the-3rd-barrier-of-tech-integration.html

Low electricity prices



Nguồn: http://www.statista.com/statistics/477995/global-prices-of-electricity-by-select-country/; và IEA (2015a)

High subsidy to fossil fuels (bil. USD)



Source: UNDP, IEA, 2016

5. NEEDS FOR INTERNATIONAL SUPPORT AND CORPORATION

- Technical financial cooperation for technology transfer
- Sharing experience and successful practices
- Facilitate market access to AEE: FTAs, international economic cooperation framework

Picture source: http://dangcongsan.vn/dien-dan/su-dung-tiet-kiem-hieu-qua-nang-luong-131995.html

Thank you

Q&A

Mr. Hoan Tran

- Office: Division of Trade and Environmental Research, Institute for Trade, Ministry of Industry and Trade
- Address: 12th fl, N_0 655 Phạm Van Dong street, Hanoi, Vietnam
- Phone:+84.912467361/+84.4.39428541
- Email: hoanth.vit@moit.gov.vn; tranhoan_ecovit@yahoo.com

Q&A and Group Discussion

Moderated by:

Moderated by IEA and CLASP

SEAD | SUPER-EFFICIENT EQUIPMENT AND APPLIANCE DEPLOYMENT INITIATIVE

SEAD | SUPER-EFFICIENT EQUIPMENT AND APPLIANCE DEPLOYMENT INITIATIVE

Q&A and Guiding Questions

Appliance EE as part of INDC Commitments

- Is appliance EE a part of your country's INDC commitments?
- Why is appliance EE a priority (or not a priority) for your country?
- Are there any additional opportunities to improve the appliance energy efficiency programs to further increase the INDC commitments?

Impact of Appliance EE on Reaching INDC Goals

- What is the overall emission reduction goal expressed in your country's INDC?
- Is appliance energy efficiency a significant contributor to the national INDC goals?
- How to effectively and accurately track the impact of appliance EE?

Challenges in integrating Appliance EE in INDC

- Are there any communication or coordination challenges among various government agencies in integrating appliance EE in INDC commitments?
- How are these challenges addressed?

Closing Remarks

- Key takeaways
- Possible collaboration opportunities
- Encourage participants to follow up the discussions with additional questions and thoughts
- All materials will be made available online
- Thank you for your participation!

SEAD | SUPER-EFFICIENT EQUIPMENT AND APPLIANCE DEPLOYMENT INITIATIVE

Governments Working Together to Save Energy.

For more information or follow up questions please contact:

Yang Yu, SPEx Coordinator (CLASP)
Email: yyu@clasp.ngo
Tel: +1 202 750 5596

The presentations and discussion summary will be posted on the SEAD website, along with a recording of the webinar

www.superefficient.org

CLEAN ENERGY MINISTERIAL
Accelerating Transition to Clean Energy Technologies

ipeec International Partnership for Energy Efficiency Cooperation