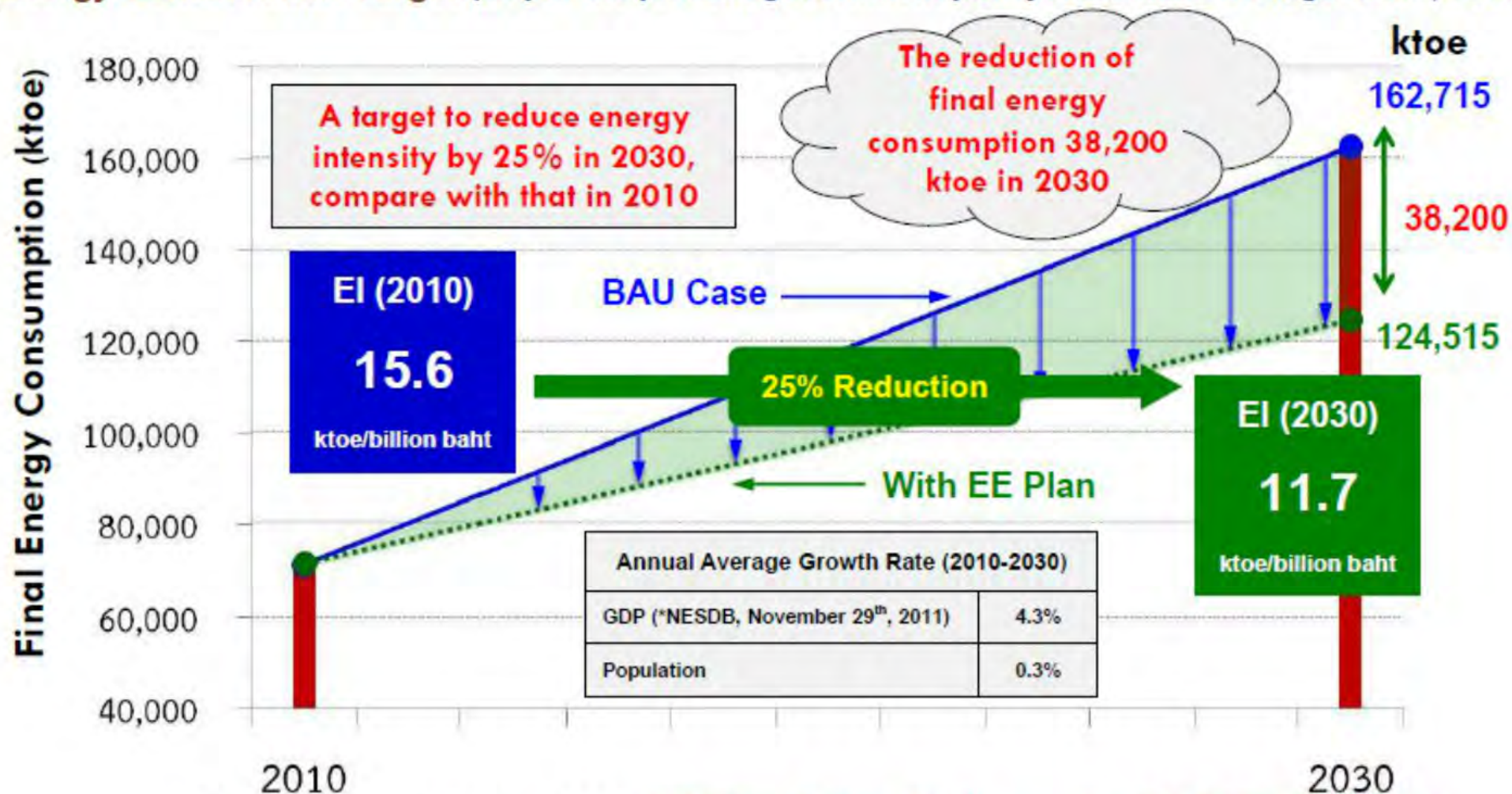




Introduction to EERS

Thailand 20-year Energy Efficiency Development Plan

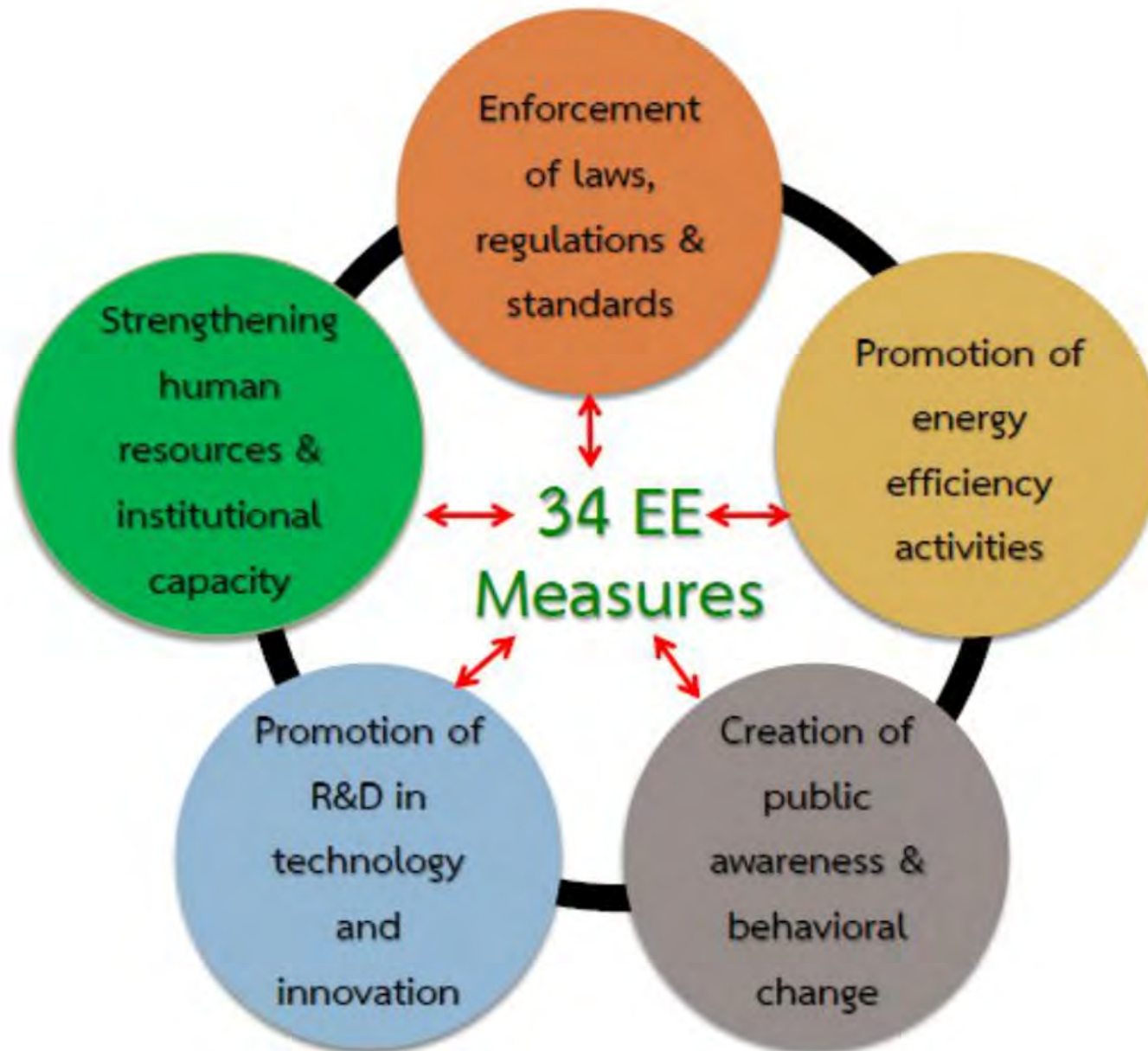
Energy Conservation Target (as per the present government policy statement on August 23rd, 2011)



*GDP₂₀₃₀ at constant price 1988 = 355 billion Dollars (Exchange rate at 30 Baht/1 U.S. Dollar)

*Office of the National Economic and Social Development Board

5 strategic approaches





Strategic approach 1: Enforcement of laws, regulations and standards

Sector	Measure/Programme
Cross cutting	1. Intensify enforcement of Energy Conservation Act
	2. Mandatory labeling
	3. Minimum Energy Performance Standard: MEPS
	4. Energy Efficiency Resource Standard (EERS) for large energy businesses
Industry	5. Specific Energy Consumption benchmarking (SEC)
Large Commercial Building	6. Energy performance standards
	7. Mandatory energy performance labeling
Transportation	8. Mandatory energy performance labeling
	9. Minimum energy performance standards (MEPS) for vehicles
	10. Fiscal measures to enhance market transformation

Energy Efficiency Resource Standards (EERS)

- Timeline in EEDP:

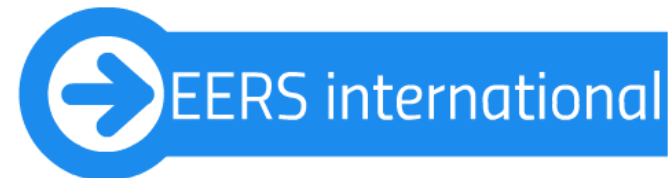
Measure/Work Plan	Implementation in Each Phase		
	2011-2015	2016-2020	2021-2030
1.4 Measure: Enforcement of the Energy Efficiency Resource Standards (EERS) for large energy businesses			
• Enforce EERS for the electricity supply industry			
• Enforce EERS for the natural gas and oil industry			

Introduction to EERS

- To introduce the concept of EERS
- To draw interest in EERS
- To explore potential collaboration

Introduction to EERS

- To introduce the concept of EERS
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What is EERS?



Basic Concept of EERS



Regulation: saving target



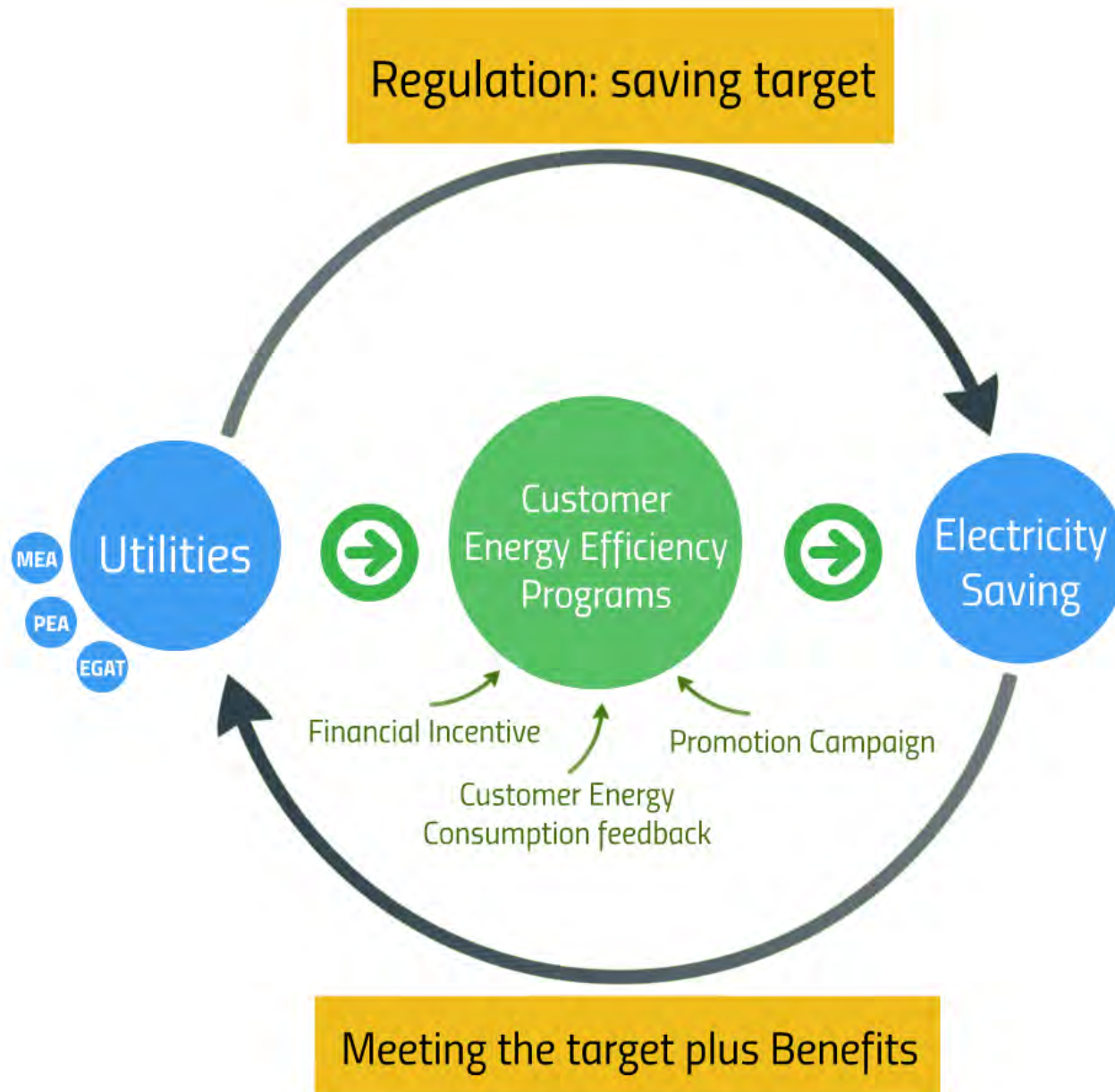
EERS is :

- A saving target for utilities
- through customer energy programmes

Why Utilities? :

- existing customer relations
- advice infrastructure & expertise
- availability of energy consumption data
- polluter-pays principle

Basic Concept of EERS ←





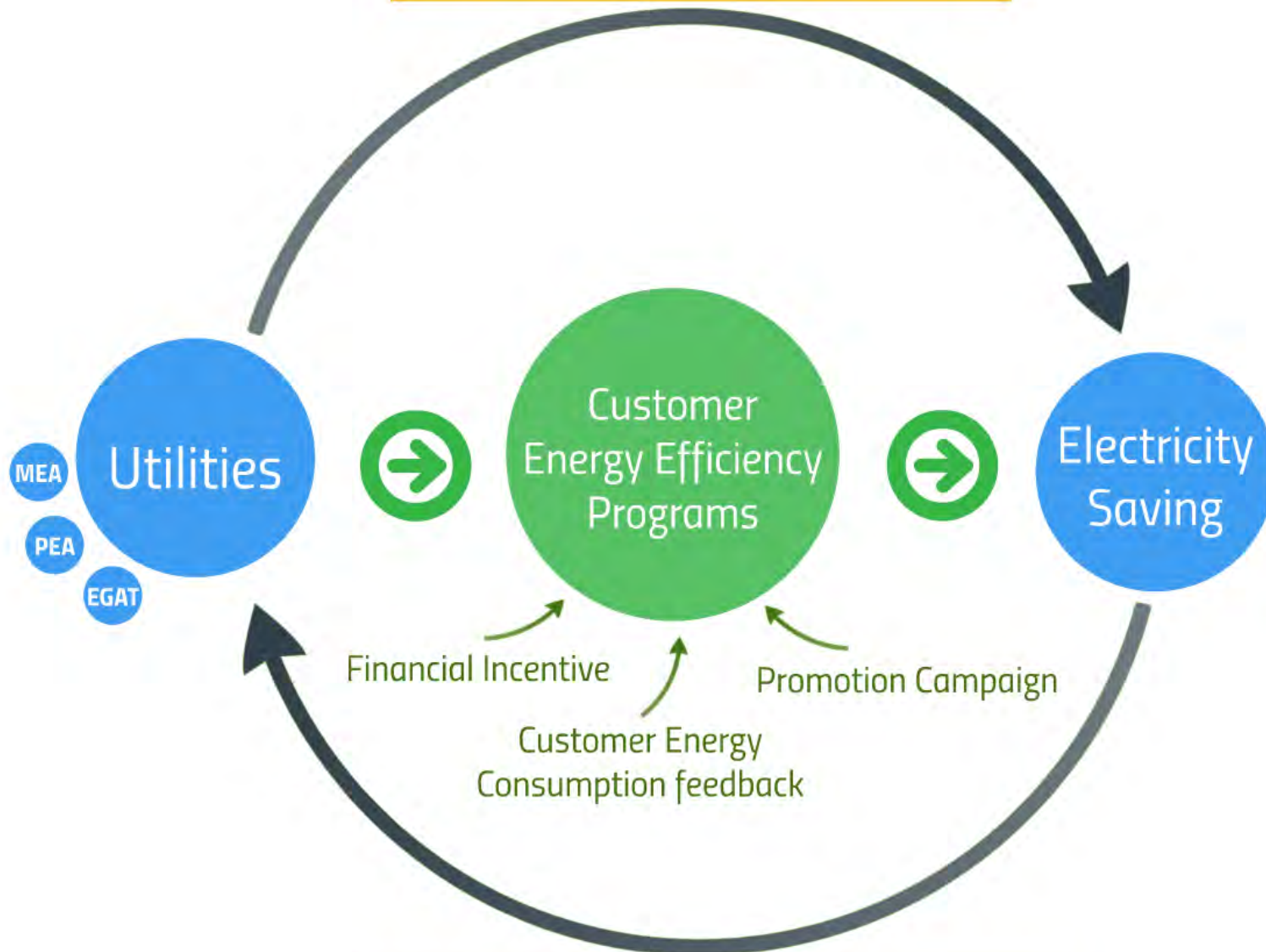
Utilities

MEA

PEA

EGAT

Regulation: saving target



Meeting the target plus Benefits



Benefits of EERS





Country

Advantages of EERS in general

- Certainty of energy savings if EERS is fully implemented
- Relatively low burden on public budgets
- An EERS scheme can stimulate the development of ESCO markets.
- EERS schemes are particularly well suited for standardised EE-measures in the residential sector or SME.

Utilities

Advantages of EERS for Utilities

- Development of new markets in the field of energy services
- Avoided or postponed investments in transmission and distribution networks due to peak load reductions
- Improved reputation
- Strengthened customer relationship
- Delay needs for additional power plant development and avoid difficulties with population acceptance

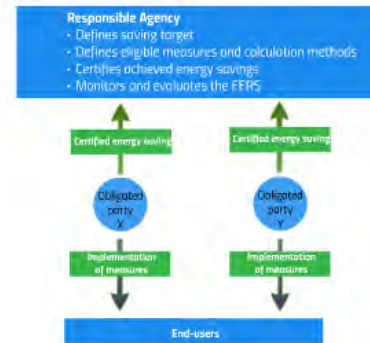
Benefits of EERS

Basic Design Features

Design elements

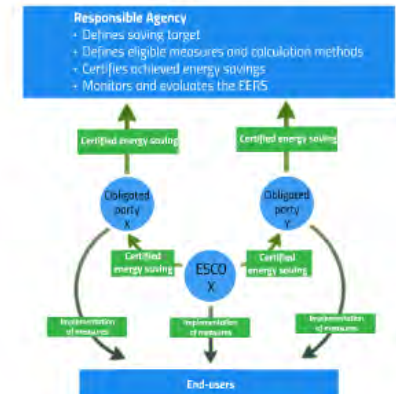
- **Target setting:** typically between 1 and 2% of final energy consumption annually
- **Obligated parties:** energy suppliers or distributors
- **Eligible energy efficiency measures:** smaller, standardised measures in the residential or SME sector are well suited, but also more complex measures are possible
- **Implementation and supervision:** regulation agency responsible for MBN, penalties, cost recovery
- **Monitoring and verification:** list of standard measures, calculation methods, compliance reports
- **Financing and regulatory treatment:** cost recovery mechanism for obligated parties necessary in regulated energy markets
- **Incentives and penalties:** performance based (financial) incentives for over performance as well as penalties for underperformance

Basic design features



Or

Basic design features



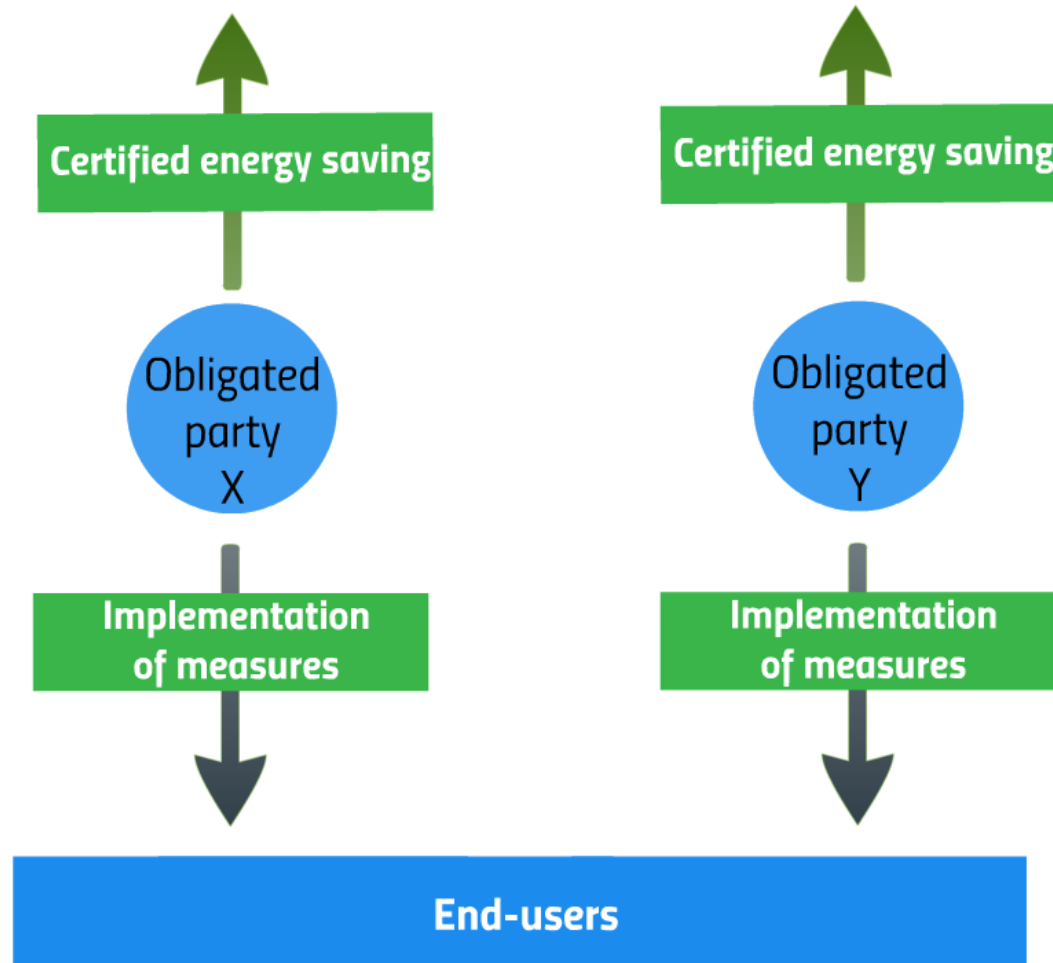
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Basic design features

Responsible Agency

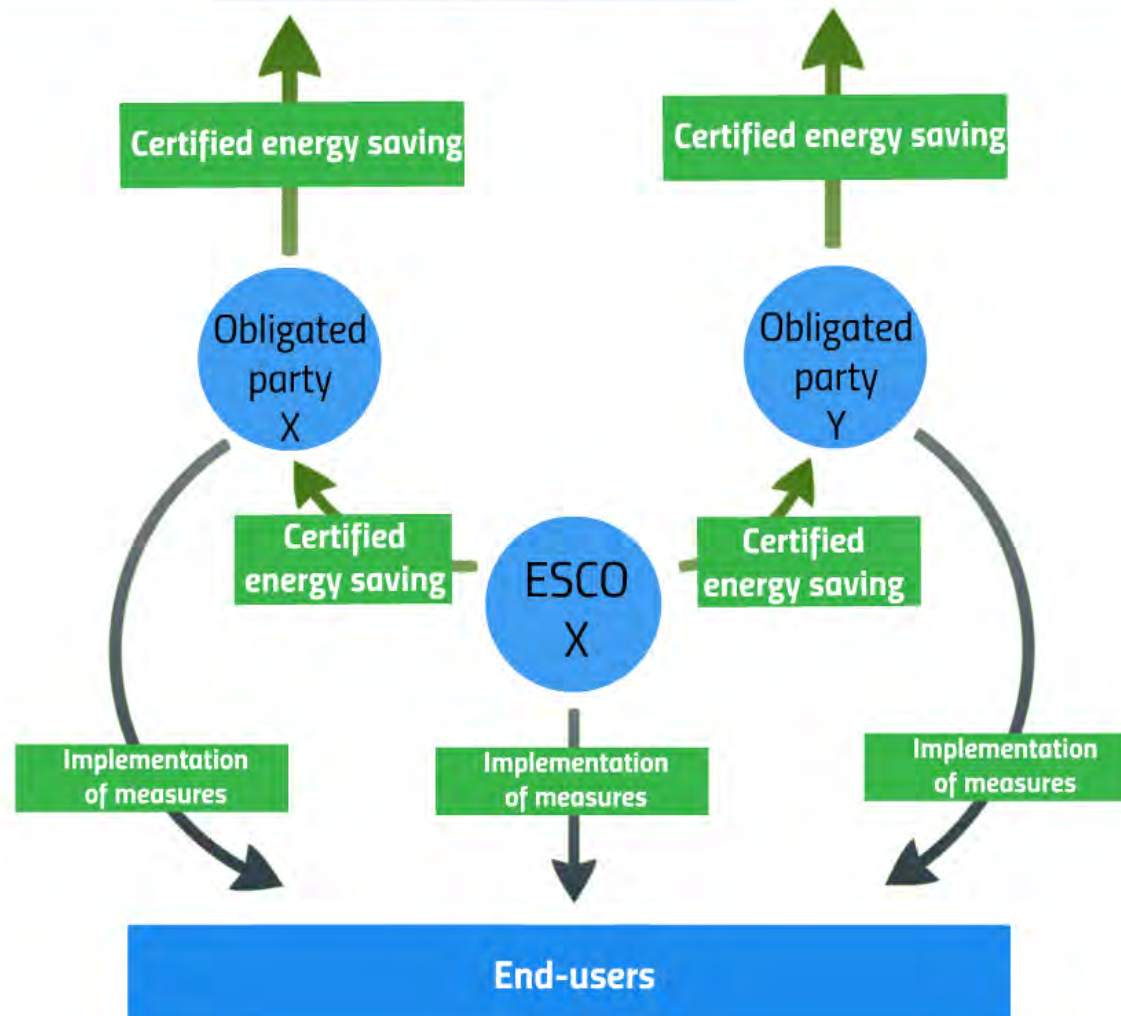
- Defines saving target
- Defines eligible measures and calculation methods
- Certifies achieved energy savings
- Monitors and evaluates the EERS



Basic design features

Responsible Agency

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Worldwide implementation status

EERS is a relatively new policy instrument – except for the USA (experience over 30 years). **The number of countries with EERS schemes is growing.**

EERS/ESO schemes are **in place in the following countries or federal states** (RAP 2012):

- Europe: United Kingdom, Denmark, Italy, France, Belgium (Flanders region), Poland (planned)
- Australia: New South Wales, South Australia, Victoria
- Canada: Ontario
- United States: California, Connecticut, Massachusetts, Minnesota, New York, Texas, Vermont
- China
- South Korea

EERS in Selected countries



California (Since 2004)

- **Who is obligated?** Utility companies (investor-owned and public)
- **Target?** 0.85% of electricity sales annually, demand reduction of 4,541 MW and natural gas consumption reduction by 619 gross million decatherms over the period 2012-2020
- **Cost recovery?** Public Goods Charge (PGC) on customer utility bills

Vermont (Since 1999)

- **Who is obligated?** Independent energy efficiency utility, Efficiency Vermont
- **Target?** 320 GWh of electricity savings as well as summer peak savings of 60.8 MW over the period 2012-2014
- **Cost recovery?** Volumetric charge (at a flexible rate depending on funding requirements) on end-users' electricity bills,

United Kingdom (Since 1994)

- **Who is obligated?** Energy supply companies (electricity and gas) with more than 250,000 gas and/or electricity domestic customers
- **Target?** Provision of measures worth around £1.3 billion annually to low-income households over the period 2013-2015
- **Cost recovery?** Cost pass-through in energy prices

Denmark (since 1995)

- **Who is obligated?** Energy distribution companies in the electricity, gas, heating oil, and district heating sectors
- **Target?** From 2015, the target will be equivalent to more than 2% of energy consumption annually
- **Cost recovery?** Through the regulated tariffs for the use of the electricity and gas distribution networks

China (since 2010)

- **Who is obligated?** Government-owned network (distribution) companies
- **Target?** Energy savings equivalent to 0.3% of electricity sales and load reduction of 0.3% compared to maximum load in the previous year
- **Cost recovery?** City utility surcharge, differential electricity prices or public budget

South Korea (Since 1995)

- **Who is obligated?** State-owned utilities in the power, gas and district heating sectors
- **Target?** No quantitative energy saving target, a utility's total investment budgets for DSM programme implementation must exceed budget of the previous year.
- **Cost recovery?** Electricity: 3.7% of the electricity charge, gas & district heating: funding from own revenues



Thank you