

Introduction of Energy Efficiency in Thai Economy

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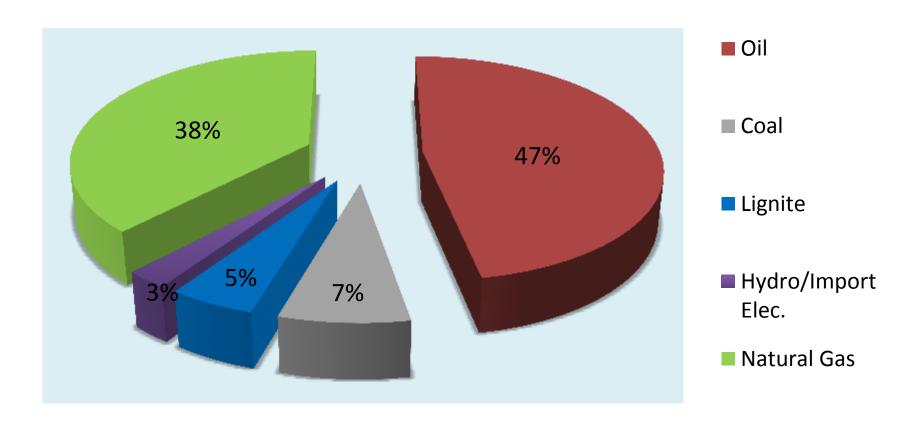


- > Thailand's Energy Situation
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1. Thailand's Energy Situation

Energy Consumption in Thailand

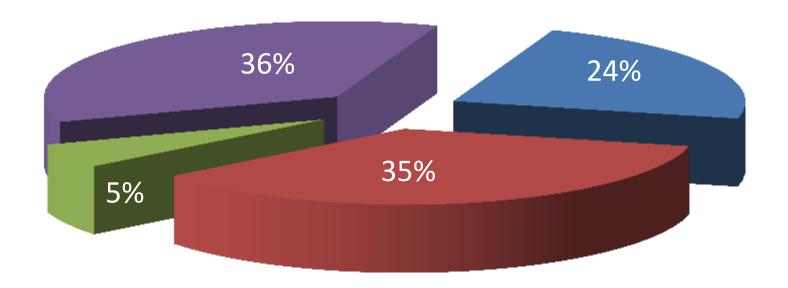
- Total energy consumption in 2013 is 2.56 million barrels (oil equivalent) per day
- Total energy cost 56 billion USD



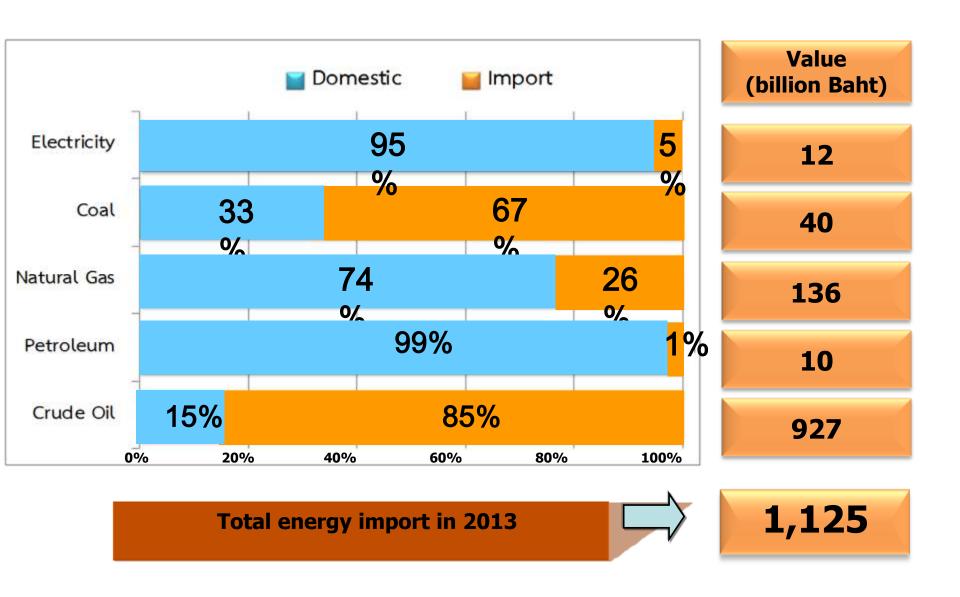
Energy Consumption in Thailand

Energy consumption by economic sectors

■ Res. & Com. ■ Transport ■ Agriculture ■ Industry



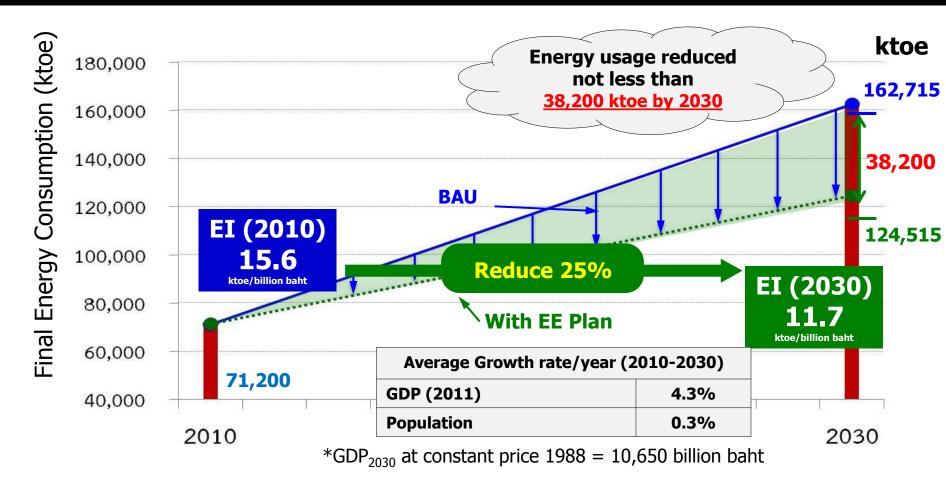
Energy Consumption in Thailand



2. Energy Policy and Plans

20-Year Energy Efficiency Development Plan

Government policy @ 23rd AUG 2011 aims to reduce Energy Intensity 25% within 20 years



Target Groups

- > Industrial sector
- > Transportation sector
- > Business Building
- > Small Business and Residential Building

Expected outcome in 2030

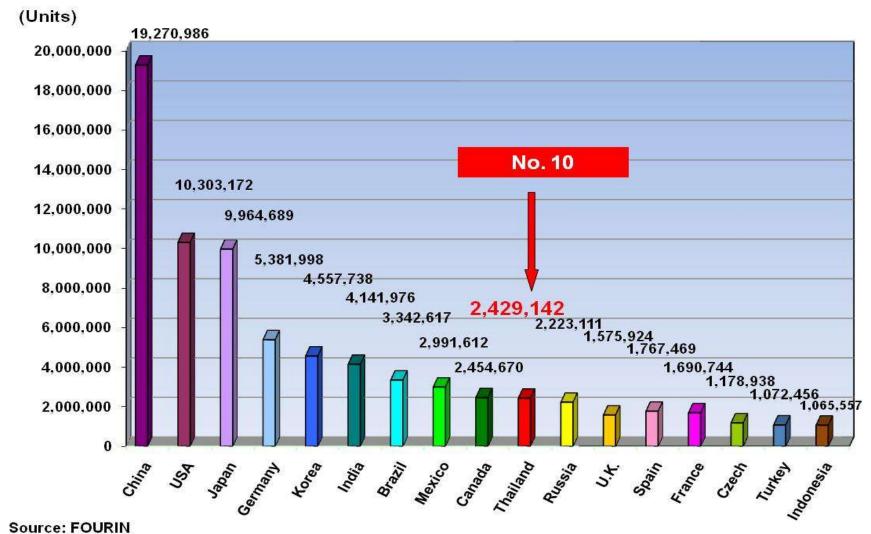
- ➤ Reduce final energy consumption at least 38,200 ktoe
- ➤ Reduce CO2 emission 130 M. tons
- Reduce Energy cost 707,000 M.Bahts.

EE Target by sectors

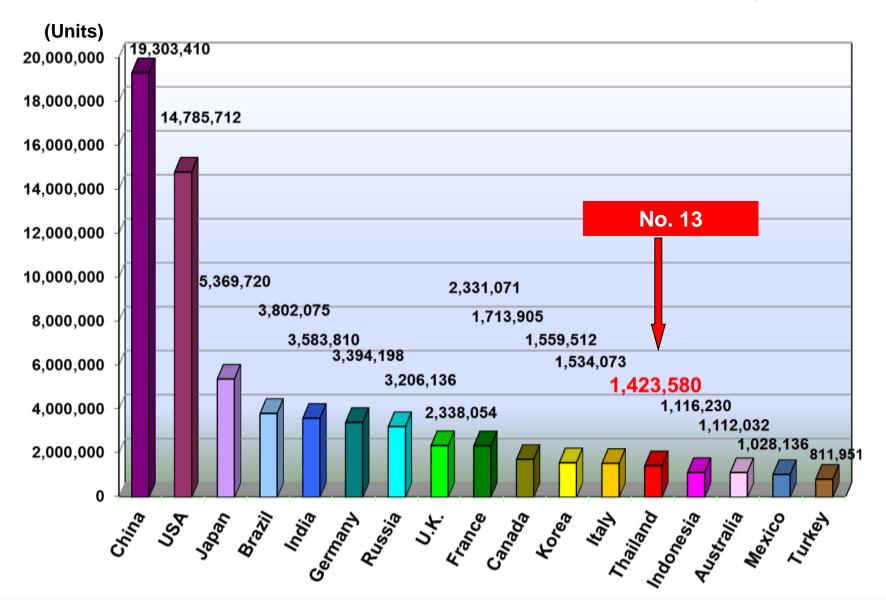
| Sector | Target in year 2030 | | | | | | |
|-------------------------|---------------------|----------------|-----------------|--|--|--|--|
| | Electricity (GWh) | Heat (ktoe) | Total (ktoe) | | | | |
| Industry | 39,112 | 12,767 | 16,100 (42%) | | | | |
| Transportati | | | | | | | |
| on | - | 16,800 | 16,800 (44%) | | | | |
| Commercia I Building | 23,007 | 340 | 2,300 (6%) | | | | |
| Residential | 18,972 | 1,383 | 3,000 (8%) | | | | |
| Total | 81,116 | 31,288 | 38,200 (100%) | | | | |

3. Transportation Sector Overview

Global Automobile Production Ranking 2012

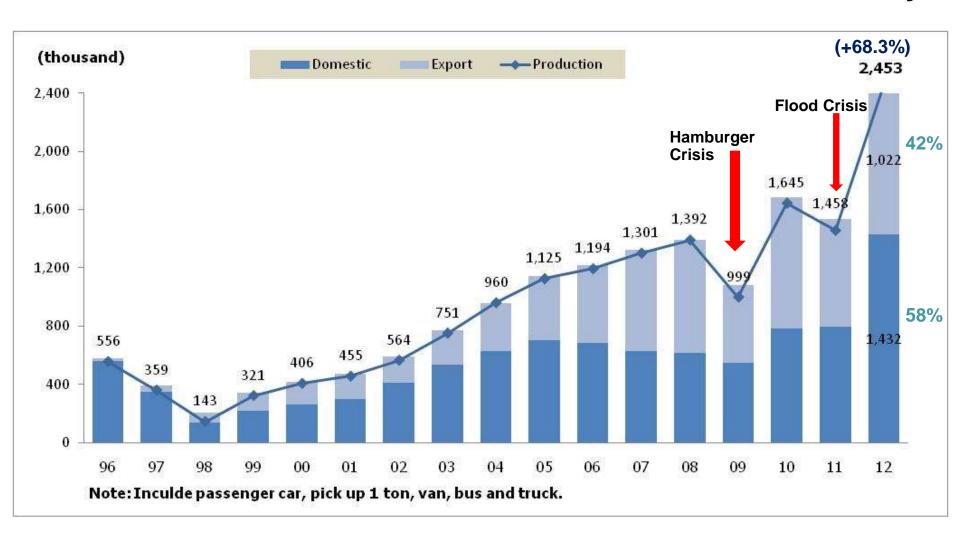


Global Automobile Sale Ranking 2012



Source: FOURIN

Current Situation of Thailand Automotive Industry



Source: Thailand Automotive Institute (TAI)



Emission standard

| Country | | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | |
|-------------|----------|-------|------|------|--------------------|---------------------|-----------------------|-----------------------|--------------------|------|--|
| THAILAND | | Euro3 | | | Euro4 | | | | | | |
| INDONESIA | | Euro2 | | | | | | Euro 4 (Tentative) | | | |
| MALAYSIA | Gasoline | Euro2 | | Eu | Euro 3 (Tentative) | | | | Euro 4 (Tentative) | | |
| | Diesel | Euro1 | | Eu | Euro 2 (Tentative) | | | | | | |
| PHILIPPINES | | Euro2 | | | | | Euro 4 (Tentative) | | | | |
| VIETNAM | | Euro2 | | | Eur | Euro4 (Under Study) | | | | | |
| SINGAPORE | Gasoline | Euro2 | | | Eur | Euro 4 (Tentative) | | | | | |
| | Diesel | Euro4 | | | Eur | Euro 5 (Tentative) | | | | | |

Thank you for Your attention!

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