

# Action Plan 2008 - 2030

ENERGY EFFICIENCY AND CONSERVATION

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## Sectoral Objectives, Goals and Specific Targets:

**“To reduce energy consumption  
demand by 5 percent**

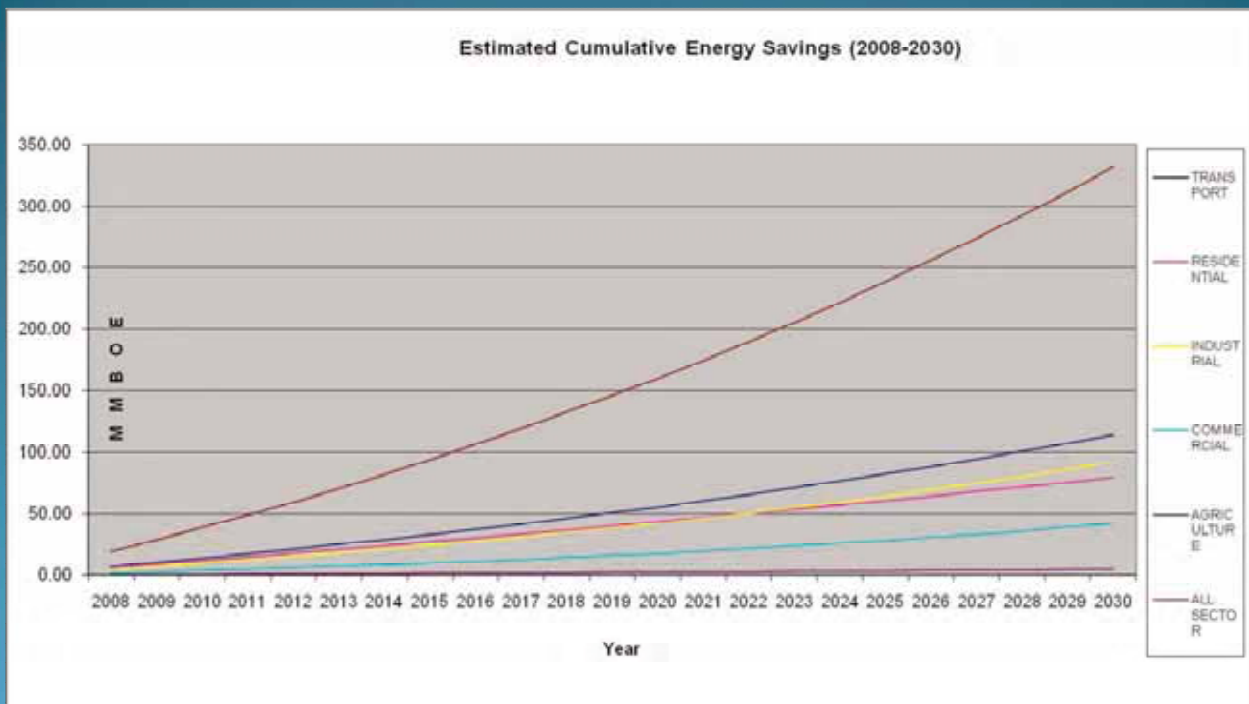
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# Potential Target

TARGETS	Quantity (2008-2030)
Cumulative Energy Savings (MMBFOE)	332.09 (47.95 Million TOE)
Average Annual Savings (MMBFOE)	14.43 (2.08 Million TOE per Yr. )
Deferred Capacity (MW)	2,768 (120 MW / Yr.)
CO <sub>2</sub> Avoidance (MT)	240 Million MT ( 10.42 Million MT/yr)

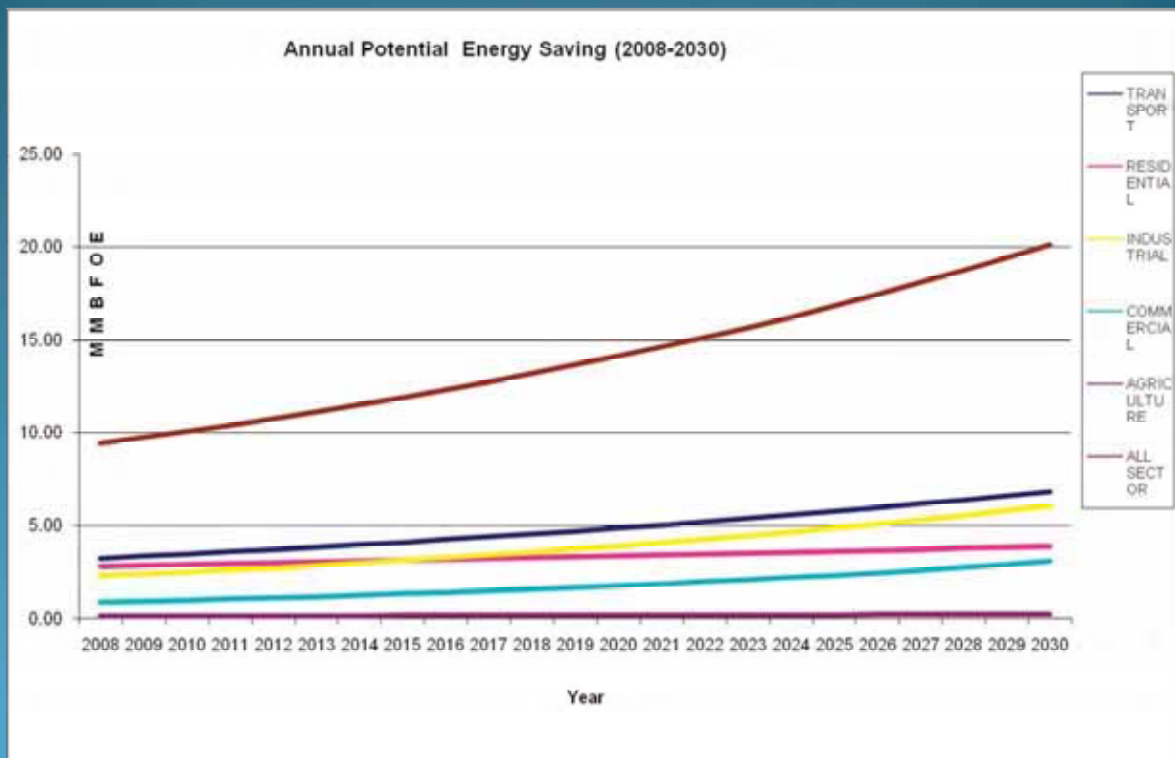
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## GRAPHS



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## GRAPHS



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**Sectoral Objectives: To reduce energy consumption demand by 5 percent**

**Short Term: FY 2008 - 2010**

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**ACTION PLAN****1. Policy study and development of legal framework for EE&C implementation****1.1 Advocate the passage of the Enercon Law**

- 1.1.a Submit / endorse Enercon Bill to congress.
- 1.1.b Act as technical resource persons in support of the Bill.

**1.2 Policy Study and development on the calibrated Phase-Out of inefficient technologies (initially Incandescent bulbs)****1.3 Policy study and development mandating the employment of Energy Manager and Energy Auditor in the industrial and commercial establishments****1.4 Policy study and development in the creation of a comprehensive and innovative financial facilities (e.g. loan guarantees, EE&C Fund)****1.5 Policy study and development of the National Strategy for Systems Loss Reduction from power generation, transmission and distribution sectors****2. Implement the following sub-components of the National Energy Efficiency Program (NEECP):****2.1 Information, Education and Communication Campaign (IEC)**

- 2.1.a Production of TV ads on fuel and electricity conservation measures in cooperation with Philippine Information Agency (PIA).
- 2.1.b Conduct Seminar-Workshop on Power Conservation and Demand Management for the Households, Commercial and Industrial Sectors.
- 2.1.c Conduct Seminar-Workshop on Fuel Conservation and Efficiency in Road Transport for the Transport sector.
- 2.1.d Conduct Seminar-Workshop for government employees on "Energy Conservation in Government Building".
- 2.1.e Promote ESCOs
- 2.1.f Promote fleet management program for public transport operators in cooperation with DOTC.
- 2.1.g Promote Public Transport leasing program in cooperation with DOTC
- 2.1.h Curriculum integration and instructional materials development
- 2.1.i Promote Green Technologies
- 2.1.j Promote non-motorized transport with LGUs

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**ACTION PLAN****2.2 Government Energy Management Program**

- 2.2.a Conduct Spot checks of government buildings
- 2.2.b Conduct posting of enercon assessment spot checks grades
- 2.2.c Conduct monitoring of electricity consumption of government buildings.

**2.3 Energy Management**

- 2.3.a Conduct Energy Audit in the Industrial and Commercial sector.
- 2.3.b Establish standards for measuring energy efficiency and baseline data for energy benchmark
- 2.3.c Reinstate Demand Side Management (DSM) among Distribution Utilities (DUs)
- 2.3.d Monitor retrofitting program for land transport in cooperation with DOTC
- 2.3.e Implement Aviation Fuel Efficiency enhancement Program
- 2.3.f Implement major retrofit program for commercial and industrial sector
- 2.3.g Implement and monitor the implementation of the revised Energy Efficiency Guidelines for new buildings.
- 2.3.h Implement CFL Replacement Program to be led by Distribution utilities (Dus) for rapid and massive switch on the use of CFL lamps on its customers

**2.4 Recognition Awards**

- 2.4.a Conduct energy consumption monitoring and evaluation of industrial and commercial establishment to determine the nominees and eventually awardees to the annual Don Emilio Abello Energy Efficiency Awards.
- 2.4.b Conduct selection process for nominating Philippine entries to the ASEAN Energy Awards both for Energy Management and Energy Conservation Practices in industries and building.

**2.5 Fuel Economy Run**

- 2.5.a Conduct fuel economy run for passenger cars and light duty vehicle
- 2.5.b Conduct fuel economy run for public vehicle using alternative fuel (LPG, biodiesel, ethanol)

**2.6 Standard and Labeling**

- 2.6.a Expand the labeling program to include Fans & Blowers, lamps & ballasts.

**2.7 Partnership / Voluntary Agreements**

- 2.7.a Enlist cooperation from the commercial, industrial, transport and academic institution sector to voluntarily implement energy conservation and efficiency program as part of the company's corporate social responsibilities.
- 2.7.b Enhance partnership with ESCO and other energy service providers including vendors/suppliers of energy efficiency technologies
- 2.7.c Implement Voluntary Agreements with the LGUs for the Rationalization of Operation of Tricycles

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**ACTION PLAN**

**3. Foreign Assisted Projects/Program**

- 3.1 Encourage participation of industrial and commercial establishments to the regional "ASEAN Energy Best Practices Competition on Energy Management for Industries and Buildings" and to the "ASEAN Best Practices Competition Award on Energy Conservation in Building".
- 3.2 Review policy implementation & provide support to PELMATP project
- 3.3 Participate in Jetro Projects (Energy Auditing in metal casting industries) being implemented by Jetro Philippine Office in coordination with DOE, DOST, Metal Casting Industry Association and metal casting Manufacturing establishments.

**4. Update and publish of "Enercon Tips" for Fuel and Electricity**

**5. Development of Energy Consumption Database and software tools/models for energy consumption analysis for the Industrial, Commercial, Transport and Government Building Sectors.**

**6. Establish accreditation system for Energy Manager and Energy Auditor**

**Sectoral Objectives: To reduce energy consumption demand by 5 percent**

**MEDIUM Term: FY 2011 - 2016**

**ACTION PLAN**

1. Policy study and development of legal framework for EE&C implementation
  - 1.1 Policy study and development of Energy Efficiency Guidelines for Residential buildings.
2. Implement the following sub-components of the National Energy Efficiency Program (NEECP):
  - 2.1 Information, Education and Communication Campaign (IEC)
    - 2.1.a Production of TV ads on fuel and electricity conservation measures in cooperation with Philippine Information Agency (PIA).
    - 2.1.b Conduct Seminar-Workshop on Power Conservation and Demand Management for the Households, Commercial and Industrial Sectors.
    - 2.1.c Conduct Seminar-Workshop on Fuel Conservation and Efficiency in Road Transport for the Transport sector.
    - 2.1.d Conduct Seminar-Workshop for government employees on "Energy Conservation in Government Building".
    - 2.1.e Promote Energy Service Companies / Service Providers (ESCOs)
    - 2.1.f Promote Heatrate Improvement in Thermal Power Generating Plants
    - 2.1.g Promote Green Building Design
    - 2.1.h Promote Energy Efficient Lighting technology for Street Lighting use in all LGUs and Electric Distribution Utilities.
    - 2.1.i Promote the adoption of "Energy Conserving Design for Buildings and Utility System" for new building construction.
  - 2.2 Government Energy Management Program
    - 2.2.a Conduct Spot checks of government buildings
    - 2.2.b Conduct posting of enercon assessment spot checks grades
    - 2.2.c Conduct monitoring of electricity consumption of government buildings.
  - 2.3 Energy Management
    - 2.3.a Conduct Energy Audit in the Industrial and Commercial sector.
    - 2.3.b Retrofitting of Industrial and Commercial establishments
    - 2.3.c Massive Phasing-out of Incandescent Bulbs and promote use of CFLs.
    - 2.3.d Implement extension of of energy efficient lighting in the local government buildings and roadways.
    - 2.3.e Continued implementation of baseline data collection for energy benchmark
    - 2.3.f Public Transport Reform for mass transit

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**ACTION PLAN**

- 2.4 Recognition Awards
  - 2.4.a Conduct energy consumption monitoring and evaluation of industrial and commercial establishment to determine the nominees and eventually awardees to the annual Don Emilio Abello Energy Efficiency Awards.
  - 2.4.b Conduct selection process for Philippine entries to the ASEAN Energy Awards both for Energy Management and Energy Conservation Practices in industries and building.
- 2.5 Fuel Economy Run
  - 2.5.a Conduct fuel economy run for passenger cars and light duty vehicle
  - 2.5.b Conduct fuel economy run for public vehicle using alternative fuel (LPG, biodiesel, ethanol)
- 2.6 Standard and Labeling
  - 2.6.a Conduct energy performance testing of electrical and electronic consumer products to verify compliance with minimum energy performance standards and to validate energy labels. Coverage:
    - 2.6.b room air conditioners
    - 2.6.c refrigerators (5 to 10 cubic feet)
    - 2.6.d compact fluorescent lamps
    - 2.6.e ballasts
    - 2.6.f linear fluorescent lamps
    - 2.6.g luminaires
    - 2.6.h freezers
    - 2.6.i industrial fans and blowers
    - 2.6.j television sets
- 2.7 Partnership / Voluntary Agreements
  - 2.7.a Solicit cooperation from the commercial, industrial, transport and academic institution sector to voluntarily implement energy conservation and efficiency program as part of the company's corporate social responsibilities.
  - 2.7.b Establish partnership with ESCO and other energy service providers including vendors/suppliers of energy efficiency technologies

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**ACTION PLAN**

- 2.8 Energy Consumption Monitoring of Industrial, Commercial and Transport establishments.
- 2.9 Publication of "Enercon Tips for Fuel and Electricity".
- 3.0 Full Scale Development of Energy Consumption Database for the Industrial, Commercial, transport and government building sectors.
- 4.0 Implement accreditation for Energy Manager
- 5.0 Implement accreditation for Energy Auditor
- 6.0 Establish accreditation system for Energy Service Company (ESCO)
- 7.0 Foreign Assisted Projects/Program
  - 7.0.a Promote participation of industrial and commercial establishments to the regional "ASEAN Energy Best Practices Competition on Energy Management for Industries and Buildings" and to the "ASEAN Best Practices Competition Award on Energy Conservation in Building".
  - 7.0.b Participate / Assist in the implementation of PELMATP project (UNDP-GEF)
  - 7.0.c Implementation of the Industrial Energy Efficiency: Study and Development of Energy Management Standard based on ISO Framework (UNIDO-GEF) Project

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**Sectoral Objectives: To reduce energy consumption demand by 5 percent**

**LONG Term: FY 2016 - 2030**

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**ACTION PLAN**

**1. Implement the following sub-components of the National Energy Efficiency Program (NEECP):**

**1.1 Information, Education and Communication Campaign (IEC)**

- 1.1.a Production of TV ads on fuel and electricity conservation measures in cooperation with Philippine Information Agency (PIA).
- 1.1.b Conduct Seminar-Workshop on Power Conservation and Demand Management for the Households, Commercial and Industrial Sectors.
- 1.1.c Conduct Seminar-Workshop on Fuel Conservation and Efficiency in Road Transport for the Transport sector.
- 1.1.d Conduct Seminar-Workshop on "Energy Conservation in Government Building for government employees".
- 1.1.e Promote Energy Service Companies / Service Providers (ESCOs)
- 1.1.f Promote Heatrate Improvement in Thermal Power Generating Plant
- 1.1.g Promote Green Building Design
- 1.1.h Promote Energy Efficient Lighting technology for Street Lighting use in all LGUs and Electric Distribution Utilities.
- 1.1.i Promote the adoption of "Energy Conserving Design for Buildings and Utility System" for new building construction.

**1.2 Government Energy Management Program**

- 1.2.a Conduct Spot checks of government buildings
- 1.2.b Conduct posting of enercon spot checks assessment grades
- 1.2.c Conduct monitoring of electricity consumption of government buildings.

**1.3 Demand-Side Management**

- 1.3.a Massive Phasing-out of Incandescent Bulbs and promote use of CFLs.

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**ACTION PLAN**

**1.4 Energy Management**

- 1.4.a Conduct Energy Audit in the Industrial and Commercial sector.
- 1.4.b Retrofitting of Industrial and Commercial establishments.

**1.5 Recognition Awards**

- 1.5.a Conduct energy consumption monitoring and evaluation of industrial and commercial establishment to determine the nominees and eventually awardees to the annual Don Emilio Abello Energy Efficiency Awards.
- 1.5.b Conduct selection process for nominating Philippine entries to the ASEAN Energy Awards both for "Best Practices Competition Award on Energy Management for Major Industries & Buildings" and "Best Practices Award Competition on Energy Conservation in Buildings".

**1.6 Fuel Economy Run**

- 1.6.a Conduct fuel economy run on passenger cars and light duty vehicle
- 1.6.b Conduct fuel economy run on public vehicle using alternative fuel (LPG, biodiesel, ethanol)

**1.7 Standard and Labeling**

- 1.7.a Conduct energy performance testing of electrical and electronic consumer products to verify compliance with minimum energy performance standards and to validate energy labels. Coverage:
- 1.7.b room air conditioners
- 1.7.c refrigerators (5 to 10 cubic feet)
- 1.7.d compact fluorescent lamps
- 1.7.e ballasts
- 1.7.f linear fluorescent lamps
- 1.7.g luminaires
- 1.7.h freezers
- 1.7.i industrial fans and blowers
- 1.7.j television sets
- 1.7.k beverage coolers
- 1.7.l household electric fans
- 1.7.m washing machines
- 1.7.n audio/video equipment
- 1.7.o passenger cars and light duty vehicles

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**ACTION PLAN**

**1.8 Partnership / Voluntary Agreements**

1.8.a Continuing program to solicit cooperation from the commercial, industrial, transport and academic institution sector to voluntarily implement energy conservation and efficiency measures.

1.8.b Continuing program to establish partnership with ESCO and other energy service providers including vendors/suppliers of energy efficient technologies.

**1.9 Energy Consumption Monitoring of Industrial, Commercial and Transport establishments.**

**2.0 Continuing activity on the publication of "Enercon Tips for Fuel and Electricity".**

**3.0 Sustain implementation of Energy Managers' accreditation.**

**4.0 Sustain implementation of Energy Auditors' accreditation.**

**5.0 Sustain implementation of Energy Service Companies' (ESCOs) accreditation.**

**6.0 Promote and Monitor Energy Management Standard based on ISO Framework on the Industrial and Commercial establishments in partnership with DTI-BPS.**

**7.0 Establish Energy Consumption Benchmark for Industries and Buildings.**

**8.0 Administer operation of the Philippine Energy Efficiency and Conservation Center**

**9.0 Foreign Assisted Projects/Program**

9.1.a Prepare project proposals on EE&C for Technical Study and Financial Assistance (specific project to be determine)

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**FY 2008 - 2030**

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