



PHILIPPINES Energy Efficiency Roadmap (2017-2040)

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Department of Energy

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DOE's Energy Efficiency Policies

Republic Act 7638

Sec. 2 .Declaration of Policy. - (a) to ensure a continuous, adequate, and economic supply of energy with the end in view of ultimately achieving self-reliance in the country's energy requirements through the integrated and intensive exploration, production, management, and development of the country's indigenous energy resources, and through the **judicious conservation, renewal and efficient utilization of energy** to keep pace with the country's growth and economic development and taking into consideration the active participation of the private sector in the various areas of energy resource development;

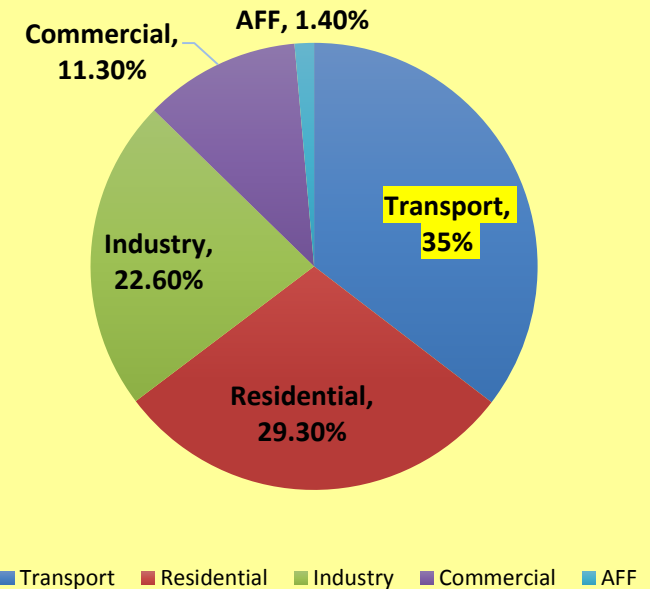
Energy Consumption Demand by Sector

2016 Final Energy Consumption

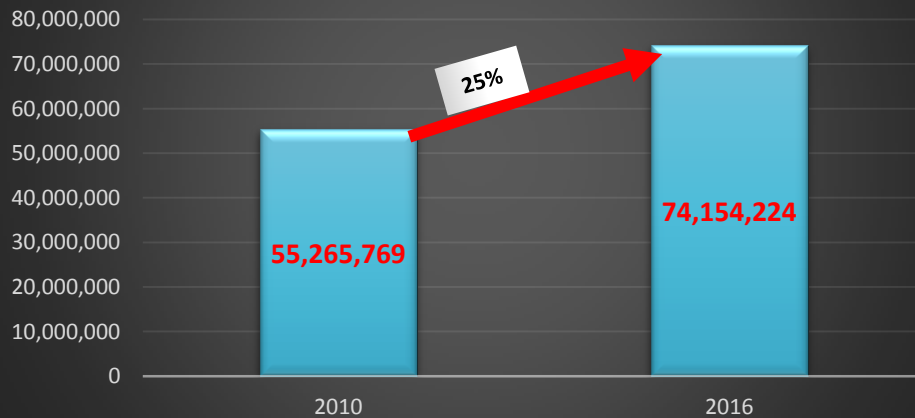
Sector	MTOE
TRANSPORT	10.6
RESIDENTIAL	8.7
INDUSTRY	6.8
COMMERCIAL	3.4
AFF	0.4
Total	29.8

*MTOE- Million Metric Ton of Oil Equivalent
Ref. DOE –PEP 2015 Update

2016 Final Energy Consumption (% Share)



Philippines: Electricity Sales (MWh)



Road Transport Vehicles

Road Transport Vehicles	Philippines (No. of Units)
Cars/UV/SUV	2,722,211
Public Transport	264,727
Motorcycle /Motorized Tricycle	4,250,667
Others (Trucks, Trailers...)	398,590





Ref: DOTr, 2012 Figures



Nine-Point Energy Agenda

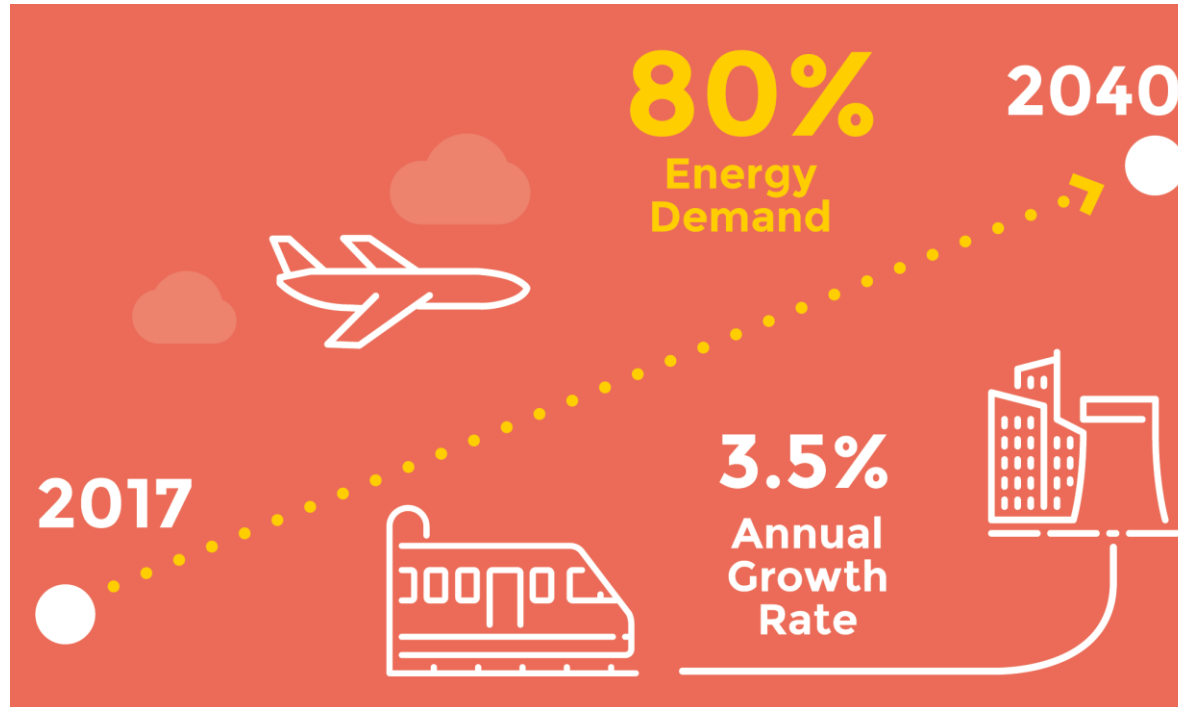
Strategic Directions 2017 – 2040

<p>1</p> <p>ENSURE ENERGY SECURITY</p>	<p>2</p> <p>EXPAND ENERGY ACCESS</p>	<p>3</p> <p>PROMOTE A LOW-CARBON FUTURE</p>	<p>4</p> <p>STRENGTHEN COLLABORATION AMONG ALL GOVERNMENT AGENCIES INVOLVED IN ENERGY</p>
<p>5</p> <p>IMPLEMENT, MONITOR AND INTEGRATE SECTORAL AND TECHNOLOGICAL ROADMAPS AND ACTION PLANS</p>	<p>6</p> <p>ADVOCATE THE PASSAGE OF THE DEPARTMENT'S LEGISLATIVE AGENDA</p>	<p>7</p> <p>STRENGTHEN CONSUMER WELFARE AND PROTECTION</p>	<p>8</p> <p>FOSTER STRONGER INTERNATIONAL RELATIONS AND PARTNERSHIPS</p>

<p>DOE's Nine-Point Energy Agenda</p>	 <p>FACILITATING THE COMPLETION OF TRANSMISSION PROJECTS BY 2020</p>
 <p>ACCESS TO BASIC ELECTRICITY FOR ALL FILIPINOS BY 2020</p>	 <p>PRO-CONSUMER DISTRIBUTION FRAMEWORK FOR AFFORDABILITY, CHOICE AND TRANSPARENCY</p>
 <p>ADOPTING A TECHNOLOGY NEUTRAL APPROACH FOR AN OPTIMAL ENERGY MIX</p>	 <p>STREAMLINING DOMESTIC POLICY TO CUT RED TAPE</p>
 <p>IMPROVING THE SUPPLY OF POWER THAT IS RELIABLE, TO MEET DEMAND NEEDS BY 2040</p>	 <p>DOE TO DELIVER ON PSALM PRIVATIZATION</p>
 <p>DEVELOPING LNG NEEDS FOR THE FUTURE IN ANTICIPATION OF THE MALAMPAYA DEPLETION</p>	 <p>PROMOTING EFFICIENT USE OF POWER AMONG CONSUMERS THROUGH AN IEC</p>



Challenges for an Energy-Efficient Philippines



Annual energy saved
by 2040 (KTOE)

Implied annual % savings
(total savings by 2040)



Transport

4,500

1.9%

(25%)



Industry

3,000

1.3%

(15%)



Residential

1,000

1.2%

(20%)



Commercial

1,200

1.9%

(25%)



Agriculture

300

0.9%

(10%)

Total

10,000

1.6%

(24%)

Economy-wide improvement
in energy intensity

3%

* This level of efficiency improvement is assumed through endogenous technology advancement; no initiatives are proposed for the agricultural sector given its small percentage share of national energy use.

Roadmap: Economy- wide and Sectoral Targets



Philippines Energy Efficiency Roadmap, 2017- 2040

Roadmap Objectives:

To support the country's economic development through efficiency gains and ensure energy security with a reduction in energy intensity across key economic sectors.

Drivers

- Sending market signals to provide incentives for EE
- Strengthening existing policy, advocacy, programs and institutional structures
- Harnessing private sector /partner finance
- Enabling innovation and new technologies

Sectoral Strategies



Transport

Short Term (2017-20)

- Minimum Fuel Efficiency Ratings developed
- Risk management on vehicle conversion, e-vehicle programs
- Re-formulated coordination mechanisms

Medium Term (2021-30)

- Financial incentives for EE through vehicle taxes
- Promotion of key vehicle technologies
- Driver education and fleet management programs

Long Term (2031-40)

- EE programs beyond road transport (passenger and cargo ships, aviation fuels)
- Reintegration of urban planning and transport energy use
- Congestion taxes



Industry

- Develop sectoral programs for EE in energy intensive industries
- Minimum Energy Performance (MEP) for motors, and other industrial devices
- Reporting by designated energy consumers

- Update MEP for industrial devices
- Implement demand side management programs
- Review of energy pricing
- Enhanced reporting & management for designated energy consumers

- Review inward investment rules for EE to remove distortions



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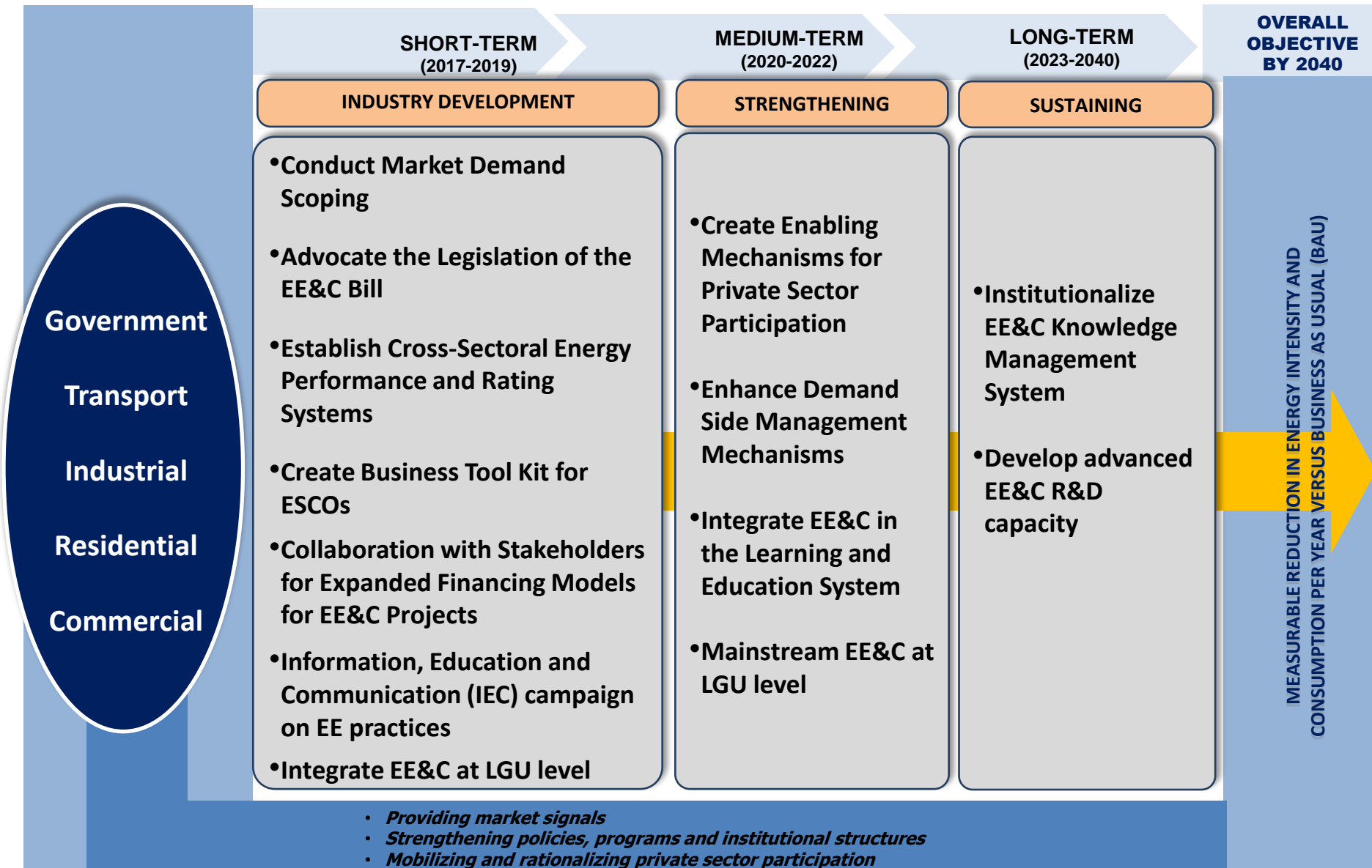
Drivers

- Sending market signals to provide incentives for EE
- Strengthening existing policy, advocacy, programs and institutional structures
- Harnessing private sector /partner finance
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Sectoral Strategies

	Short Term (2017-20)	Medium Term (2021-30)	Long Term (2031-40)
 <p>Residential Buildings</p>	<ul style="list-style-type: none"> • Minimum Energy Performance for appliances • Building envelope measures – cool roofs and insulation 	<ul style="list-style-type: none"> • Develop role of utilities as key implementation partners and information providers • Specific EE programs for low-income households 	<ul style="list-style-type: none"> • Towards energy efficient housing precincts • Inclusion of EE measures in residential Building Code
 <p>Commercial Buildings</p>	<ul style="list-style-type: none"> • Reformulate group to oversee EE measures in Building Code • Retro-commissioning program for existing buildings • Benchmarking and ratings for building information & reporting 	<ul style="list-style-type: none"> • EE measures for inclusion in national and regional building codes • Enhance benchmarking and ratings 	<ul style="list-style-type: none"> • Incentive funds in place for EE, including private financiers • Mandatory disclosure of commercial building energy intensity
 <p>Cross-Sectoral</p>	<ul style="list-style-type: none"> • Support passage of Enercon Bill • Establish EE database, data collection regime, M&E framework • Stronger coordination with local government and private sector • Information & education campaigns 	<ul style="list-style-type: none"> • National strategy for efficiency in power supply sector • Establish enforcement regimes • Enhanced reporting and monitoring 	<ul style="list-style-type: none"> • Enhanced institutional arrangements • Enhanced predecessor activities





Policy Bridge

Department Circular 93-03-05: "Monitoring of Energy Consumption of Energy Intensive Industries (Industrial, Commercial, Transport Sectors)"

Administrative Order 110 s.2004 as amended: "Government Energy Management Program" (NGAs, Bureaus & Line agencies, Gov't Hospitals, SUCs, GOCCs, Military Facilities)

Department Circular 2008-09-0004: "ESCO Accreditation Program"

Department Circular 2014-08-0014: "Enjoining all Electricity User-Consuming Sectors to Implement Demand-side Management Program and Other Energy Conservation Measures"


•Department Circular 2016-004-0005 :-"Philippine Energy Standard and labelling Program" (Home Appliances and Motorized Vehicles)





- **Energy Efficiency & Conservation Bill**

- ⑩ LGUs and the League of the LGUs shall develop, incorporate and implement the National Energy Efficiency & Conservation Program
- ⑩ Certification for Professional Competency and accreditation of Professional Services
- ⑩ Energy Performance and Labelling Requirements
- ⑩ Designated Consumers
- ⑩ DSM and EE&C Programs
- ⑩ Incentives
- ⑩ Institutional Strengthening of DOE



- **Minimum Energy Performance for Industrial, Commercial and Transport (Amending DC 93-03-05)**



- **Enhancing ESCO Accreditation System (Amending DC 2008-09-0004)**



- **Enhancing Government Energy Management Program (Amending AO 126)**

Thank You!



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