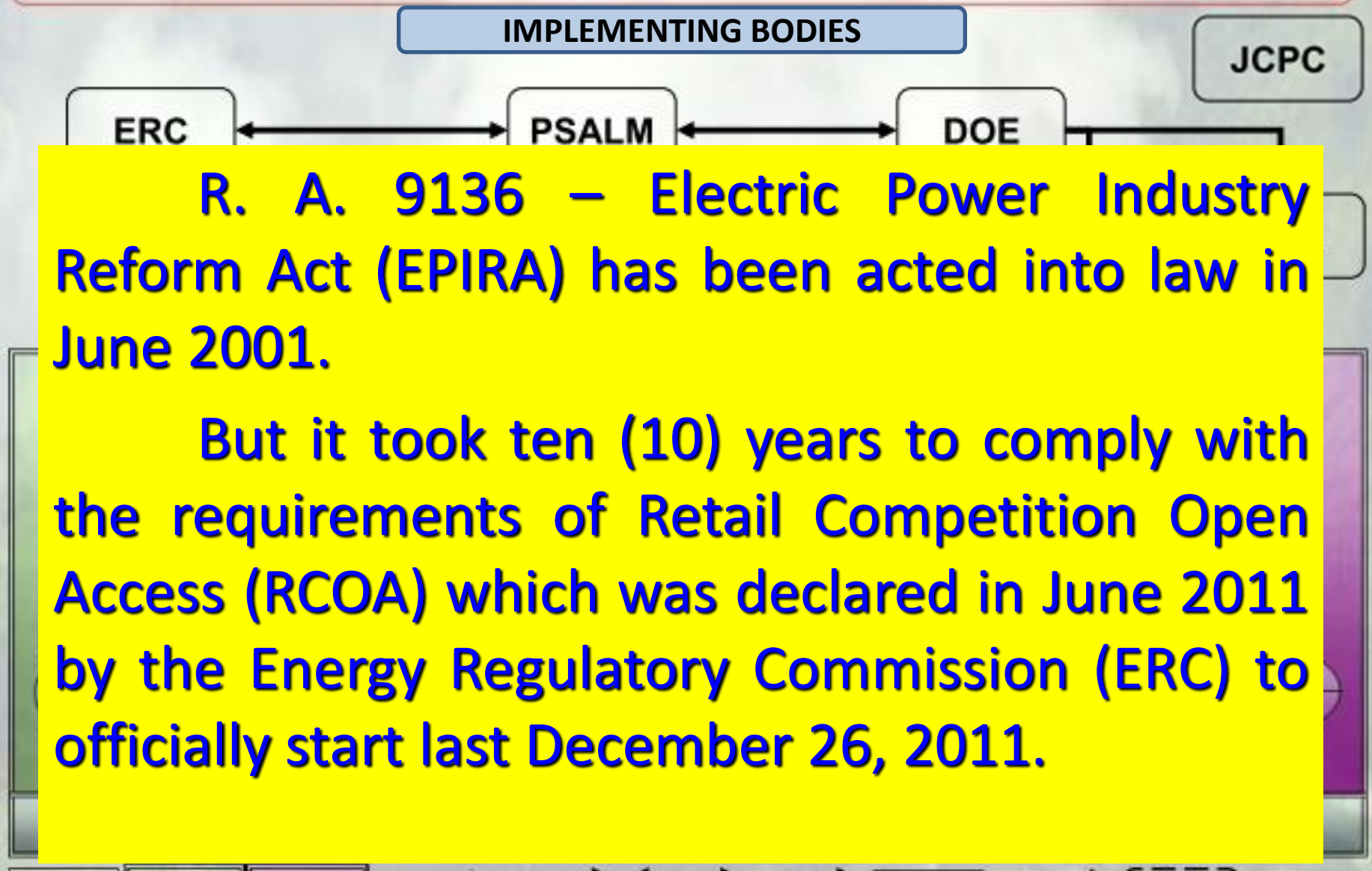
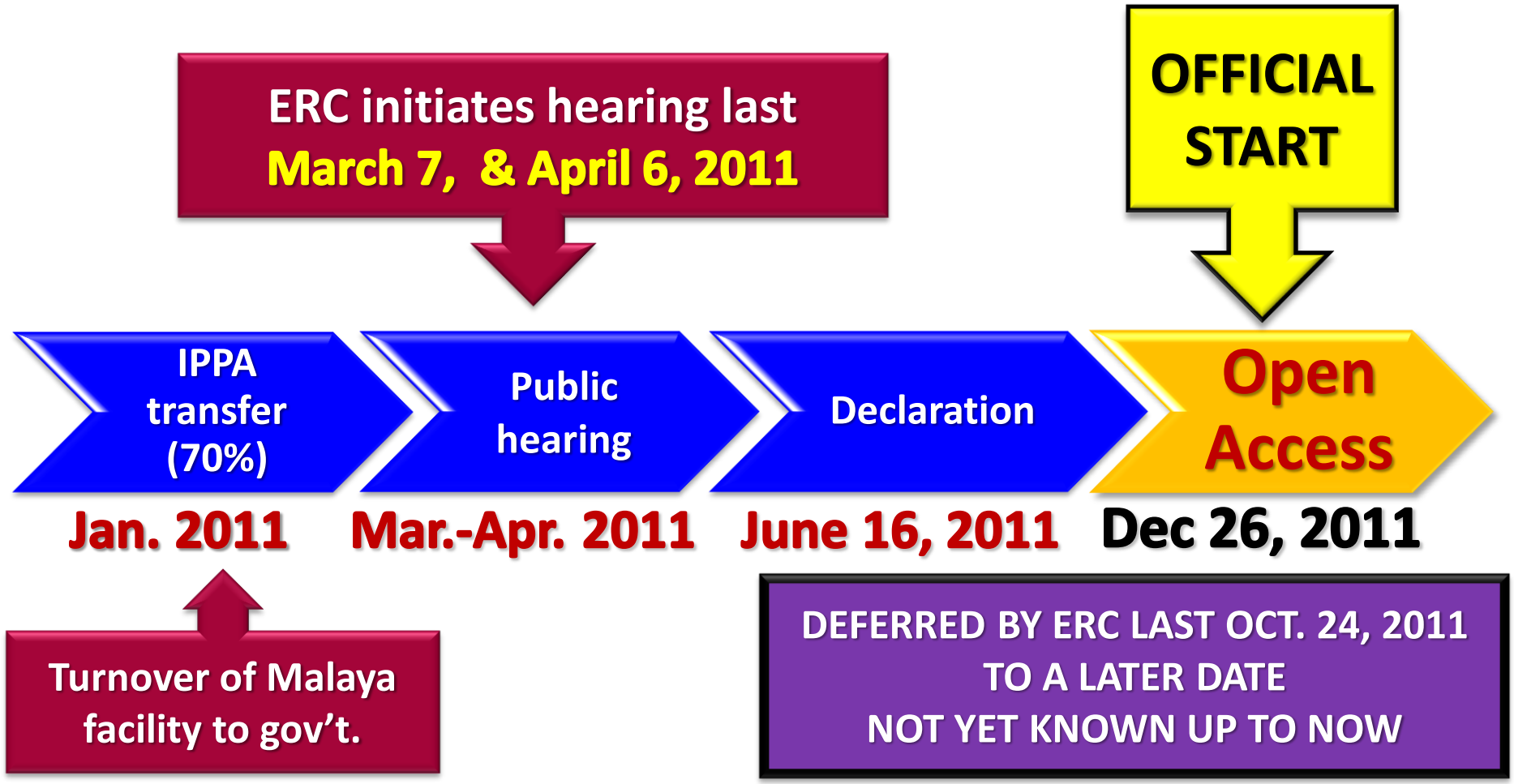
ELECTRIC POWER SITUATION IN THE PHILIPPINES

FLORIGO C. VARONA, PEE, PhD, ACPE, AER

Chairman, PTC ENERGY COMMITTE

The New Structure of the Electric Industry



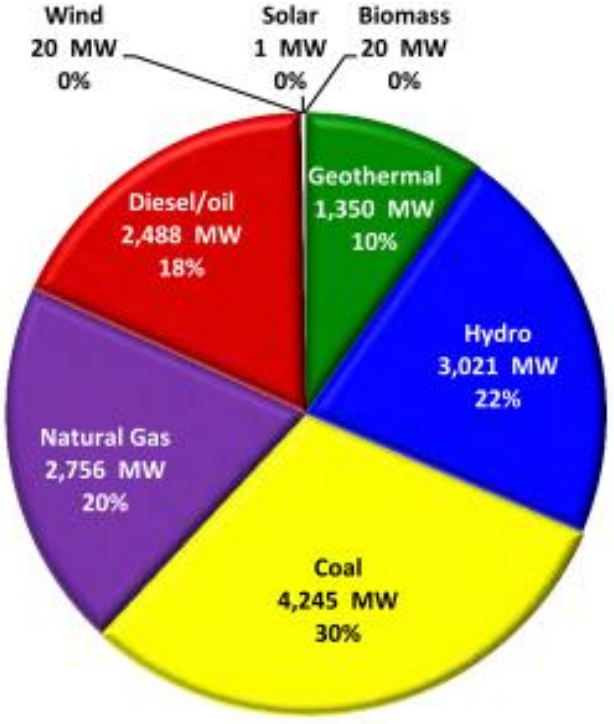

ERC initiates hearing last
March 7, & April 6, 2011
OFFICIAL START
IPPA transfer (70%)
Public hearing
Declaration
Open Access
Jan. 2011
Mar.-Apr. 2011
June 16, 2011
Dec 26, 2011
Turnover of Malaya facility to gov't.
DEFERRED BY ERC LAST OCT. 24, 2011
TO A LATER DATE
NOT YET KNOWN UP TO NOW

DEPENDABLE GENERATION CAPACITY

SOURCE:
www.ngcp.ph

Year 2010 Total Dependable Capacity:

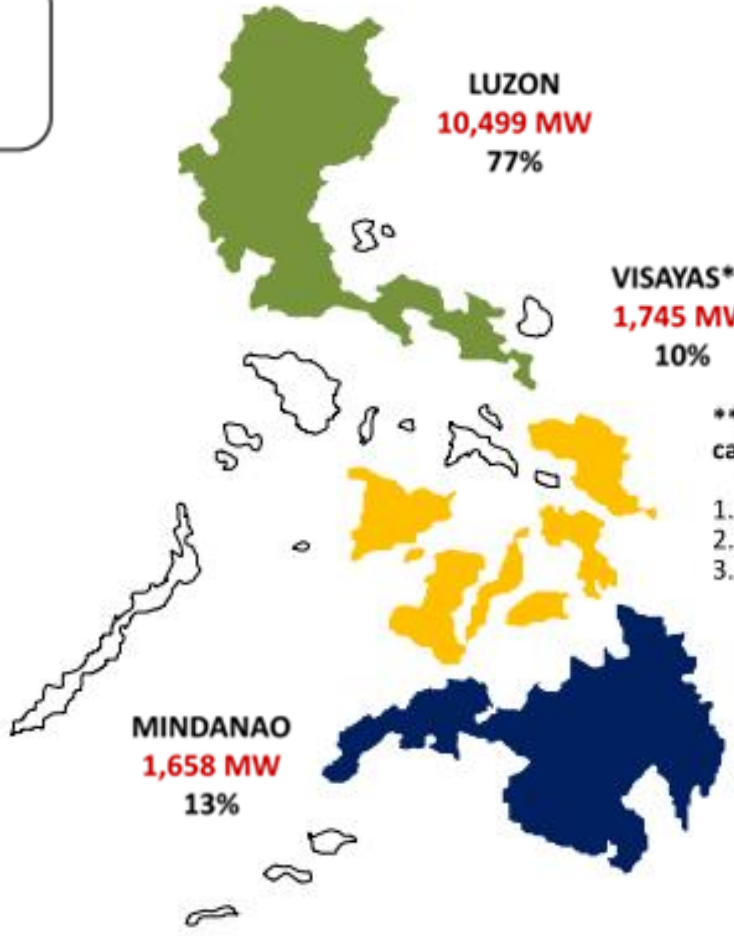
13,902 MW*



Dependable Capacity Mix

(as of December 31, 2010)

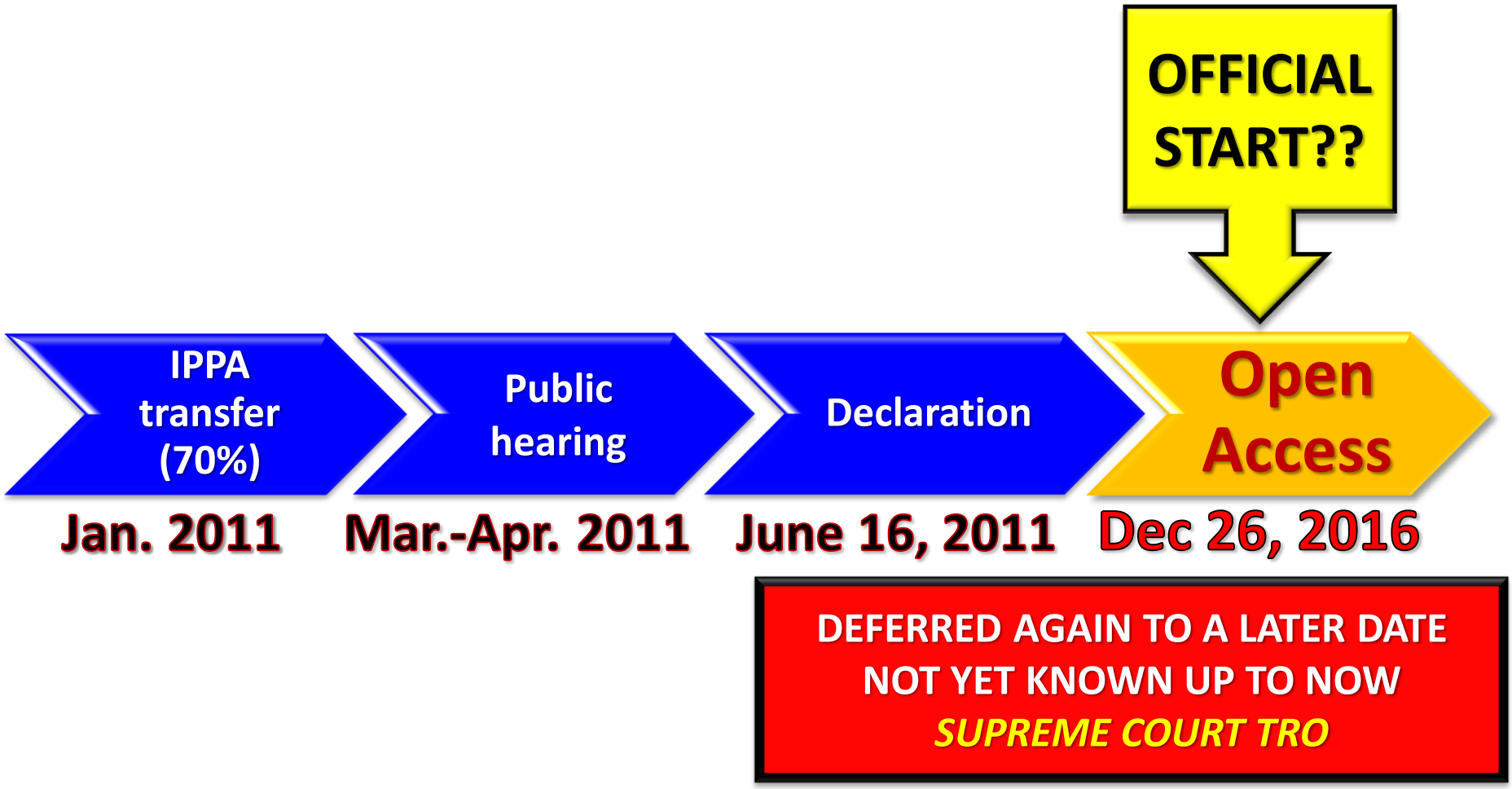
*Based on DOE's 2011 Power Development Program (PDP) Update



** Excluding new dependable capacity for 2011

1. CEDC Coal- 82 MW
2. PEDC Coal- 82 MW
3. KEPCO Coal- 100 MW

Note: Transparent islands in the above diagram are not covered by NGCP's network.


OFFICIAL START??
IPPA transfer (70%)
Public hearing
Declaration
Open Access
Jan. 2011
Mar.-Apr. 2011
June 16, 2011
Dec 26, 2016
DEFERRED AGAIN TO A LATER DATE
NOT YET KNOWN UP TO NOW
SUPREME COURT TRO

SC issues TRO on DOE, ERC rules on retail competition, open access

Published February 21, 2017 3:07pm

By VIRGIL LOPEZ, GMA News

The Supreme Court (SC) on Tuesday stopped the Department of Energy (DOE) and Energy Regulatory Commission (ERC) from implementing relatively recent rules on retail competition and open access.

The temporary restraining order (TRO) was issued following the petition recently filed by the Philippine Chamber of Commerce and Industry, San Beda College Alabang Inc., Ateneo De Manila University, and Riverbanks Development Corp.

"The Court noted that petitioners have established a clear, legal right to the TRO considering that the EPIRA Law (Electric Power Industry Reform Act) provides for the voluntary migration of end-users to the contestable market and there appears to be no basis for the mandatory migration being ordered by the DOE and the ERC through

ELECTRIC POWER INDUSTRY ROADMAP 2017-2040

ELECTRIC POWER INDUSTRY

OVERALL OBJECTIVE BY 2040

GENERATION

SHORT-TERM (2017-2018)	MEDIUM-TERM (2019-2022)	LONG-TERM (2023-2040)

• Facilitate the declaration of Power Projects as Project of National Significance
  ○ Exemption from Real Property Tax and Local Taxes
  ○ Express grant of business permit and licenses to operate
• Institute power mix policy for power generation towards optimal* portfolio to meet 24/7 electricity demand and reserve requirements with spatial and sectoral dimension
	Pursue the entry of new and emerging technologies for power generation (e.g. ocean, fuel cells, nuclear, etc.) consistent with the power mix policy.	

• Lead in the Plant Performance Assessment/Benchmarking in order to review and develop policies to improve power generation • Encourage Compliance to International Standards for constructing Power Plants and accreditation of contractors • Review and develop power generation related policies • Develop resiliency policies for generating assets • Conduct daily monitoring of power situation • Periodic monitoring of power generation projects • Provision of technical support • Promote investments in power generation		

* *Required Baseload, Mid-Merit and Peaking Capacity at least Cost*

- ENSURE QUALITY, RELIABLE, AFFORDABLE AND SECURE SUPPLY
- EXPAND ACCESS TO ELECTRICITY
- ENSURE A TRANSPARENT AND FAIR PLAYING FIELD IN THE POWER INDUSTRY

SOURCE: DOE

ELECTRIC POWER INDUSTRY

OVERALL OBJECTIVE BY 2040

SHORT-TERM (2017-2018)	MEDIUM-TERM (2019-2022)	LONG-TERM (2023-2040)

DISTRIBUTION

- Facilitate timely implementation of necessary Distribution Facilities
- Enhance Distribution Development Plan (DDP) towards operational and institutional efficiency
- Facilitate economies of scale in the Distribution Utilities' Operation
- Provide policy and regulatory support to new and emerging needs of the consumers
- Improve transparency mechanism in rates and charges
- Ensure adequate power supply contracts and reserves to serve Captive Market through open and competitive processes
- Enhance power supply contracts to include among others replacement power and penalty provisions
- Performance Assessment/Benchmarking
- Process Direct Connection Application
- Develop and monitor accountability of DUs
- Continue to implement distribution line upgrades and expansion programs for better services at the least cost to consumers
- Continue improvement in operational efficiency and good governance in the operations and management of Distribution Utilities
- Develop resiliency policies for distribution facilities

SUPPLY

Develop policies to facilitate:
- Mandatory Contestability for 1 MW and up electricity end-users
- Full open access for 750 KW and above Contestable Customers
- Retail aggregation for minimum of 750 kW aggregated demand
- Conduct Market Studies for lowering Contestability to 500 kW

Formulate Supply Development Plan for integration in the PDP

Develop policies to facilitate:
- Open access for 500 KW and below
- Retail aggregation for minimum aggregated demand of 500 kW

- Increase transparency in the retail supply contracting.
- Develop policies on the implementation of RCOA in Mindanao by 2018

- ENSURE QUALITY, RELIABLE, AFFORDABLE AND SECURE SUPPLY
- EXPAND ACCESS TO ELECTRICITY
- ENSURE A TRANSPARENT AND FAIR PLAYING FIELD IN THE POWER INDUSTRY

SOURCE: DOE

ELECTRIC POWER INDUSTRY

OVERALL OBJECTIVE BY 2040

SHORT-TERM (2017-2018)	MEDIUM-TERM (2019-2022)	LONG-TERM (2023-2040)

MARKET DEVELOPMENT

Develop policies and monitor compliance on:
- WESM Design Improvements/NMMS
- Appoint Independent Market Operator (IMO)
- Privatization of NPC assets
- policy for Embedded Generators
- Establishment of Mindanao Electricity Market
- Develop Roadmap, Policy Utilization for Smart Grid and other technologies
- Renewable Energy Market (in line with RPS implementation)
- Reserve/Energy Market Co-optimization
- Demand Bidding in the WESM
- Forwards Market/Financial Transmission Rights/Day-ahead market/Derivatives Market

- Continue policy development to enhance Electricity Market

INSTITUTIONAL AND SUPPORT MECHANISM

- Intensify Information, Education and Communication (IEC) Campaign
- Conduct periodic Market Operations Audit and Metering Service Provider Review
- Conduct WESM Rules, Market Manual and Retail Rules Review
- Establish and maintain DOE Electric Power Database Management System
- Monitor Market Operator Performance and conduct review of Standards
- Monitor compliance to WESM Rules
- Prepare and submit semi-annual EPIRA Status Report to JCPC
- Monitor and evaluate EPIRA implementation
- Assist and monitor ECs institutional strengthening program
- Support to enhance power generation planning through procurement of generation planning software and transmission planning tools

- ENSURE QUALITY, RELIABLE, AFFORDABLE AND SECURE SUPPLY
- EXPAND ACCESS TO ELECTRICITY
- ENSURE A TRANSPARENT AND FAIR PLAYING FIELD IN THE POWER INDUSTRY

SOURCE: DOE

ELECTRIC POWER INDUSTRY

OVERALL OBJECTIVE BY 2040

SHORT-TERM (2017-2018)	MEDIUM-TERM (2019-2022)	LONG-TERM (2023-2040)

MISSIONARY ELECTRIFICATION

- Conduct policy studies on optimal energy mix for off-grid areas
- Rationalize and improve UCME Subsidy System
- Develop resiliency policies for off-grid facilities
- Strengthen institutional cooperation (DOE, NEA and NPC) to ensure transparent and effective CSP and mutually beneficial supply contracts for ECs
- Determine new areas for electrification as well as eco-zones for private investment purposes
- Performance Assessment and benchmarking
- Develop graduation policy from UCME

- Develop and maintain Missionary Electrification Database System
- Promote the integration of other economic incentives in missionary electrification
- Capacitate DUs to improve power supply contracting in off-grid areas
- Monitor and enhance the implementation of the privatization of remaining NPC-SPUG generating assets
- Monitor compliance to Philippine Small Grid Guidelines
- Expand services and Improve operations of Electric Cooperatives for increased efficiency and reduction of losses

- ENSURE QUALITY, RELIABLE, AFFORDABLE AND SECURE SUPPLY
- EXPAND ACCESS TO ELECTRICITY
- ENSURE A TRANSPARENT AND FAIR PLAYING FIELD IN THE POWER INDUSTRY

SOURCE: DOE

ELECTRIC POWER INDUSTRY

OVERALL OBJECTIVE BY 2040

SHORT-TERM (2017-2018)	MEDIUM-TERM (2019-2022)	LONG-TERM (2023-2040)

HEDP

- Process, evaluate and approve projects that contribute to the attainment of 90% household electrification by 2017 (based on 2010 Census)
  - NIHE
  - ER 1-94
  - PV Mainstreaming
  - ASEP
  - QTP
- Monitoring of HEDP program
  - REMB HEP using RE
  - NEA BLEP and SEP
  - NPC Electrification efforts
- Establish off-grid Database Management System (Baseline)
- Develop proposal for NIHE Phase 2

- Process, evaluate and approve projects that contribute to the attainment of 100% electrification of targeted and identified households by 2022 accessible to grid (based on 2015 census)
  - ER 1-94
  - NIHE (Phase 2)
  - PV Mainstreaming (under ASEP)
  - QTP
- Monitoring of HEDP programs
  - REMB HEP using RE
  - NEA BLEP and SEP
  - NPC Electrification efforts

- Electrification of all targeted and identified households (*households identified beyond 2015 Census)*
- 100% household electrification of all **off-grid areas**

- Process, evaluate and approve projects that contribute to the attainment of rural electrification
  - ER 1-94 (electrification and support projects under DLF and RWMHEEF)
  - PV Mainstreaming under ER 1-94
  - QTP

TOTAL ELECTRICITY ACCESS IN THE COUNTRY

SOURCE: DOE

ELECTRIC POWER INDUSTRY

OVERALL OBJECTIVE BY 2040

TRANSMISSION

SHORT-TERM (2017-2018)	MEDIUM-TERM (2019-2022)	LONG-TERM (2023-2040)
• Facilitate timely completion of transmission projects • Enhance rules and procedures in the conduct of Transmission System Impact Studies (SIS) • Provide guide for investors in power generation siting through enhance and responsive Transmission Development Plans (TDP) • Facilitate interconnection of the three major grids – Luzon, Visayas, and Mindanao (Leyte-Mindanao Interconnection Project) and interconnect in the main grids, emergent Island-grids (e.g. Mindoro) • Develop policies towards adequate contracted capacities for reserves • Lead in the transmission Performance Assessment/Benchmarking in order to review and develop policies to improve transmission	Monitor interconnection schedule of the Visayas and Mindanao Grids by 2020 and other islands.	
• Monitor compliance with the TDP • Continue implement transmission system upgrades and expansion program (compliance to N-1, Contingency and Load Growth) • Increase transmission backbones and alternative transmission corridors • Interconnect Mindoro Island to Luzon grid • Develop resiliency policies for transmission facilities		

- ENSURE QUALITY, RELIABLE, AFFORDABLE AND SECURE SUPPLY
- EXPAND ACCESS TO ELECTRICITY
- ENSURE A TRANSPARENT AND FAIR PLAYING FIELD IN THE POWER INDUSTRY

SOURCE: DOE

ENERGY EFFICIENCY & CONSERVATION ROADMAP 2017-2040

ENERGY EFFICIENCY & CONSERVATION

OVERALL OBJECTIVE BY 2040

ENSURE THE MEASURABLE REDUCTION IN ENERGY INTENSITY AND CONSUMPTION PER YEAR VERSUS BUSINESS AS USUAL (BAU)

- Transport
- Industrial
- Residential
- Commercial

SHORT-TERM (2017-2019)	MEDIUM-TERM (2020-2022)	LONG-TERM (2023-2040)
INDUSTRY DEVELOPMENT	**STRENGTHENING**	**SUSTAINING**
• Conduct market demand scoping • Advocate the legislation of the EE&C bill • Establish cross-sectoral energy performance and rating systems • Create business tool kit for ESCOs • Collaboration with stakeholders for expanded financing models for EE&C Projects • Information, Education and Communication (IEC) campaign on EE practices • Integrate EE&C at LGU level	• Create enabling mechanisms for private sector participation • Enhance Demand Side Management mechanisms • Integrate EE&C in the learning and education system • Mainstream EE&C at LGU level	• Institutionalize EE&C Knowledge Management System • Develop advanced EE&C R&D capacity

Providing market signals
Strengthening policies, programs and institutional structures
Harnessing private sector/partner finance

SOURCE: DOE

THANK YOU