

PHILIPPINE ENERGY PLAN 2017-2040

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Senior Undersecretary

ACD Conference towards Energy Security, Sustainability and Resiliency

8 August 2017

Be Grand Hotel, Panglao, Bohol



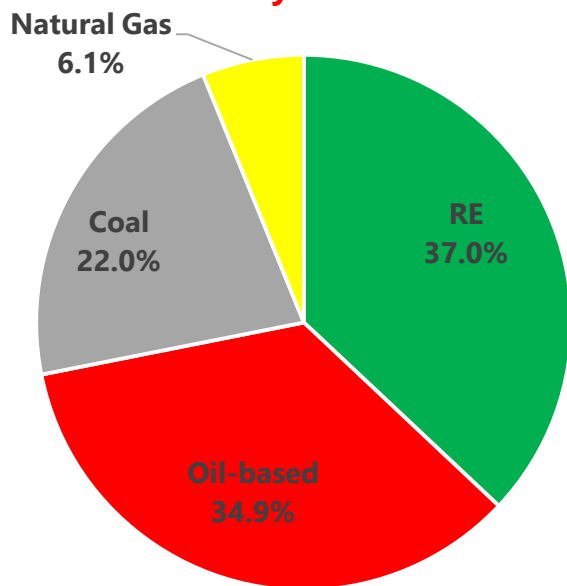
Talking Points

- I. Where we are now
- II. Where we are headed
 - Strategic Directions
 - Nine-Point Energy Agenda
- III. New Policy Initiatives
- IV. Challenges

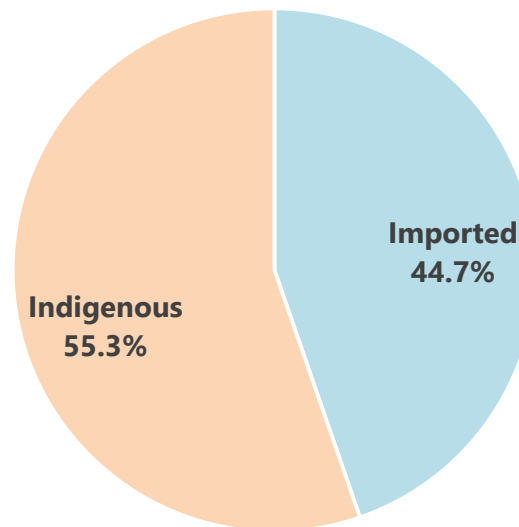


Where we are now: 2016 Energy Supply

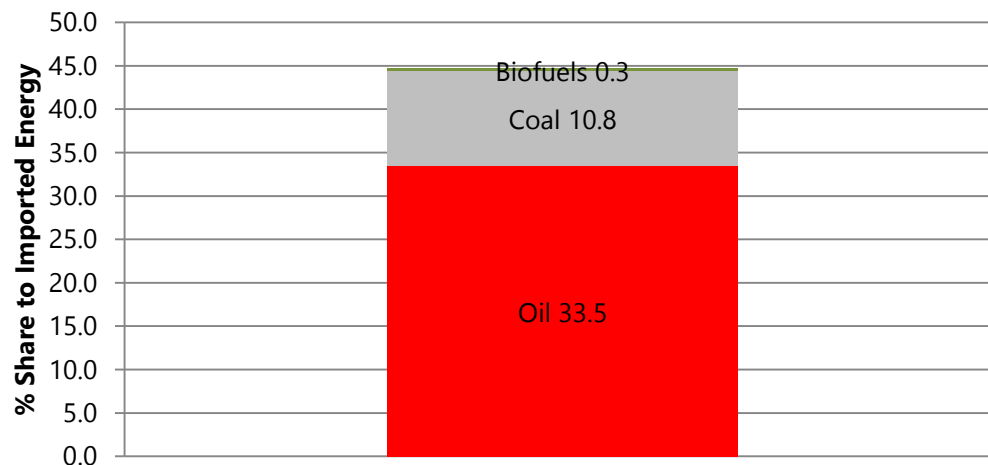
By Fuel



By Source



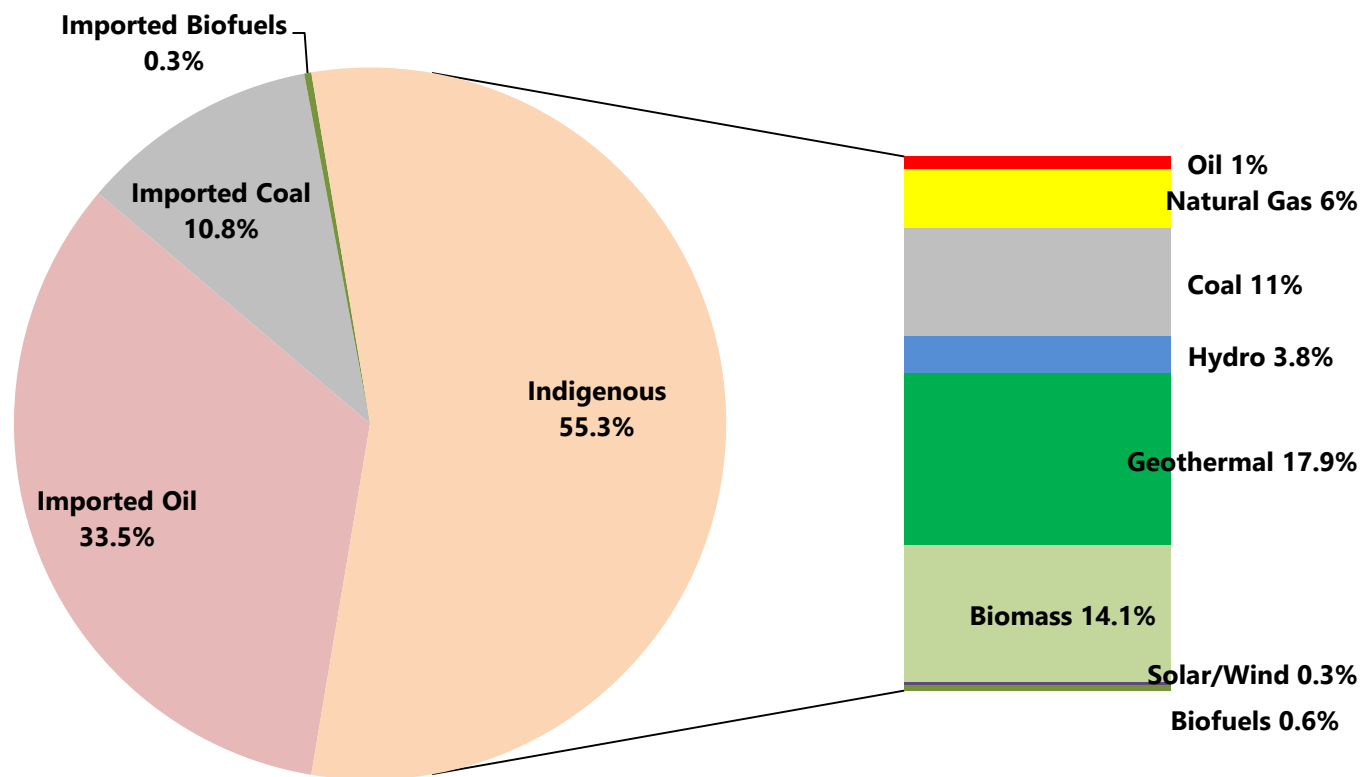
Imported Energy



Total Energy	53.19 MTOE
Self-Sufficiency	55.3%
Renewable Energy (RE)	37.0%
Clean Energy (RE + Nat Gas)	43.1%



Where we are now: 2016 Energy Supply

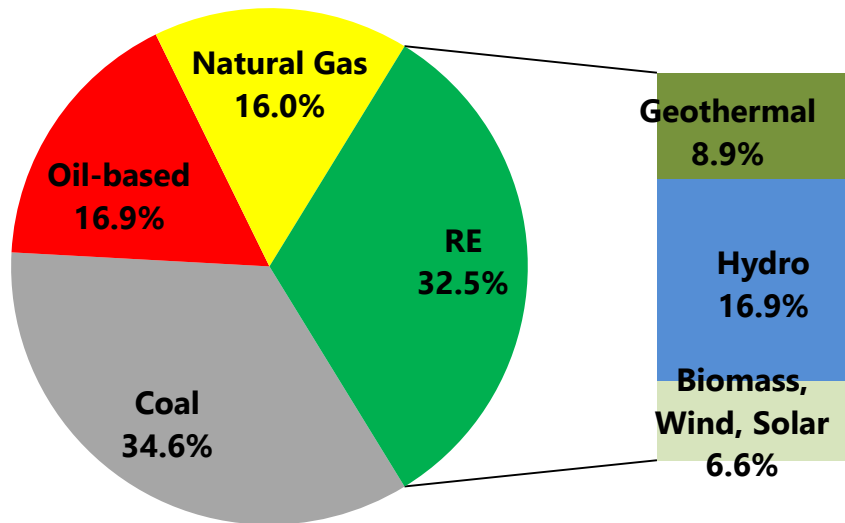


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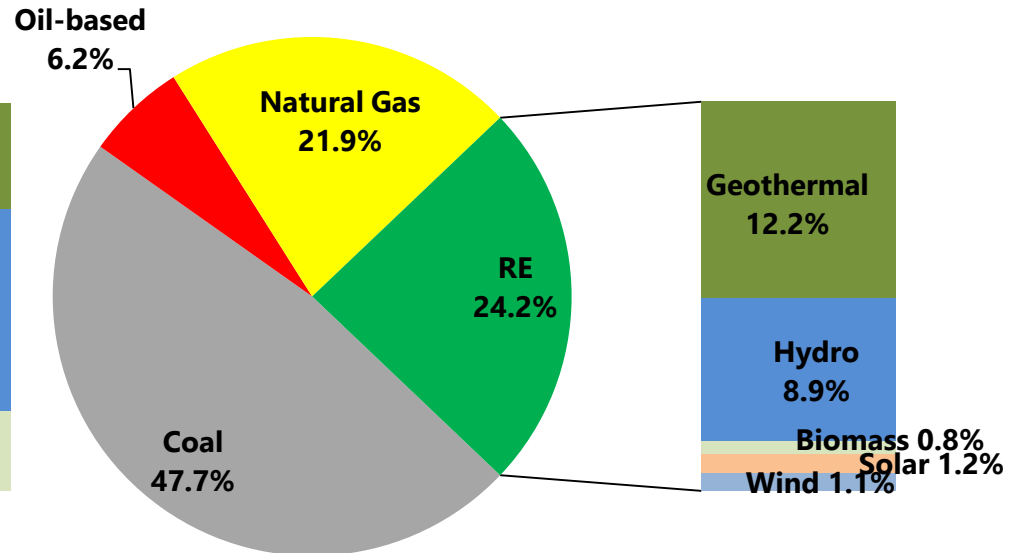
Where we are now: 2016 Power Capacity and Gross Generation

Installed Capacity



Total Installed Capacity:	21,424 MW
Renewable Energy Share:	32.5%

Gross Generation



Total Generation:	90,797 GWh
Renewable Energy:	24.2%
RE + Nat Gas:	46.1%



Strategic Directions 2017 – 2040

1
ENSURE
ENERGY
SECURITY

2
EXPAND
ENERGY
ACCESS

3
PROMOTE A
LOW CARBON
FUTURE

4
STRENGTHEN
COLLABORATION
AMONG ALL
GOVERNMENT
AGENCIES INVOLVED
IN ENERGY

5
IMPLEMENT,
MONITOR AND
INTEGRATE SECTORAL
AND TECHNOLOGICAL
ROADMAPS AND
ACTION PLANS

6
ADVOCATE THE
PASSAGE OF THE
DEPARTMENT'S
LEGISLATIVE
AGENDA

7
STRENGTHEN
CONSUMER
WELFARE AND
PROTECTION

8
FOSTER
STRONGER
INTERNATIONAL
RELATIONS AND
PARTNERSHIPS



Strategic Directions 2017 – 2040

1 ENSURE ENERGY SECURITY

- Audit and assessment for power generation, transmission and distribution facilities
- Appropriate portfolio of installed and dependable power capacity mix of 70% baseload, 20% mid-merit and 10% peaking plant categories matching peak demand and reserves
- Build an LNG Terminal for a future “Clean Energy City”
- Accelerate total privatization of PSALM assets
- Improve reliability, availability and resiliency of energy infrastructure and facilities
- Conduct energy contracting rounds



Strategic Directions 2017 – 2040

2 EXPAND ENERGY ACCESS TO ENSURE AFFORDABLE, RELIABLE, SUSTAINABLE AND MODERN ENERGY FOR ALL

- Achieve 100% electrification of targeted identified unelectrified households in all three major islands by 2022
- Connect the Mindanao grid with the interconnected Visayas and Luzon grids by 2020 to increase power supply reliability and resilience



Strategic Directions 2017 – 2040

3 PROMOTE A LOW CARBON FUTURE

- Increase RE Capacity by 2030 (based on 2010 level)
- Promote technology innovation through research, development, demonstration and deployment
 - Clean, efficient and smart energy technologies
 - Infrastructure for next generation vehicles



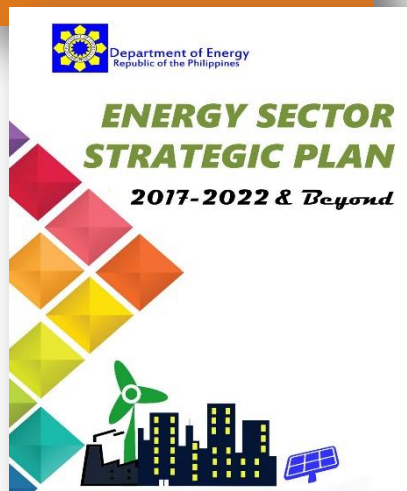
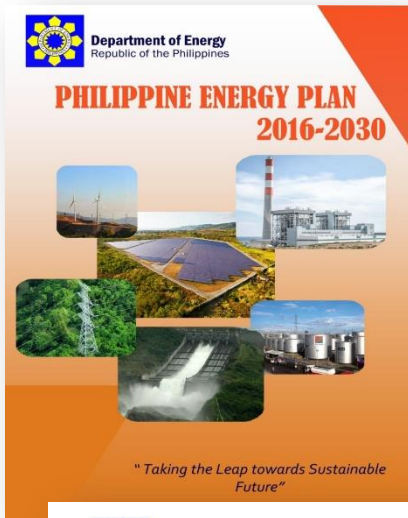
Strategic Directions 2017 – 2040

4 STRENGTHEN COLLABORATION BUILDING AMONG ALL GOVERNMENT AGENCIES INVOLVED IN ENERGY AND ENERGY-RELATED ISSUES

- Implement Executive Order (EO) 30 on Energy Projects of National Significance (EPNS)
- Energy Virtual One Shared System (EVOSS) platform for streamlined permitting
- Capacity and competency building of human resources of the “Energy Family” in the organizational, administrative, financial and legal areas



Strategic Directions 2017 – 2040



5 IMPLEMENT, MONITOR AND INTEGRATE SECTORAL AND TECHNOLOGICAL ROADMAPS AND ACTION PLANS

- Alternative fuels and energy technologies
- Energy efficiency and conservation
- Oil, gas and coal resource development
- Renewable energy
- Downstream oil, gas and coal
- Power and electrification
- ICT for energy



Strategic Directions 2017 – 2040

6

ADVOCATE THE PASSAGE OF THE DEPARTMENT'S LEGISLATIVE AGENDA AND ISSUANCE OF PERTINENT RULES AND REGULATION

- Energy Efficiency and Conservation (EE&C), Natural Gas, Liquefied Petroleum Gas (LPG), Petroleum Upstream Regulation
- Review of existing laws such as EPIRA, Downstream Oil Industry, Renewable Energy



Strategic Directions 2017 – 2040

7

STRENGTHEN CONSUMER WELFARE AND PROTECTION THROUGH MULTI-SECTORAL MULTIMEDIA IEC PROGRAMS

- Scale up the *E-Power Mo, E-Safety Mo, E-Secure Mo, E-Diskarte Mo* campaign
- Integrate energy concepts in curriculum for public school students through seminars and field visits
- Promote alternative fuel vehicles and emerging energy technologies



Strategic Directions 2017 – 2040

8 FOSTER STRONGER INTERNATIONAL RELATIONS AND PARTNERSHIPS

- Bilateral and multi-lateral energy cooperation
- Facilitate free trade agreements on energy trade and services
- UN's Sustainable Energy for All (SE4All)



Nine-Point Energy Agenda

DOE's Nine-Point Energy Agenda



FACILITATING THE COMPLETION OF TRANSMISSION PROJECTS BY 2020



PRO-CONSUMER DISTRIBUTION FRAMEWORK FOR AFFORDABILITY, CHOICE AND TRANSPARENCY



STREAMLINING DOMESTIC POLICY TO CUT RED TAPE



DOE TO DELIVER ON PSALM PRIVATIZATION



PROMOTING EFFICIENT USE OF POWER AMONG CONSUMERS THROUGH AN IEC



ACCESS TO BASIC ELECTRICITY FOR ALL FILIPINOS BY 2020



ADOPTING A TECHNOLOGY NEUTRAL APPROACH FOR AN OPTIMAL ENERGY MIX



IMPROVING THE SUPPLY OF POWER THAT IS RELIABLE, TO MEET DEMAND NEEDS BY 2040



DEVELOPING LNG NEEDS FOR THE FUTURE IN ANTICIPATION OF THE MALAMPAYA DEPLETION



Nine-Point Energy Agenda

DOE's Nine-Point Energy Agenda



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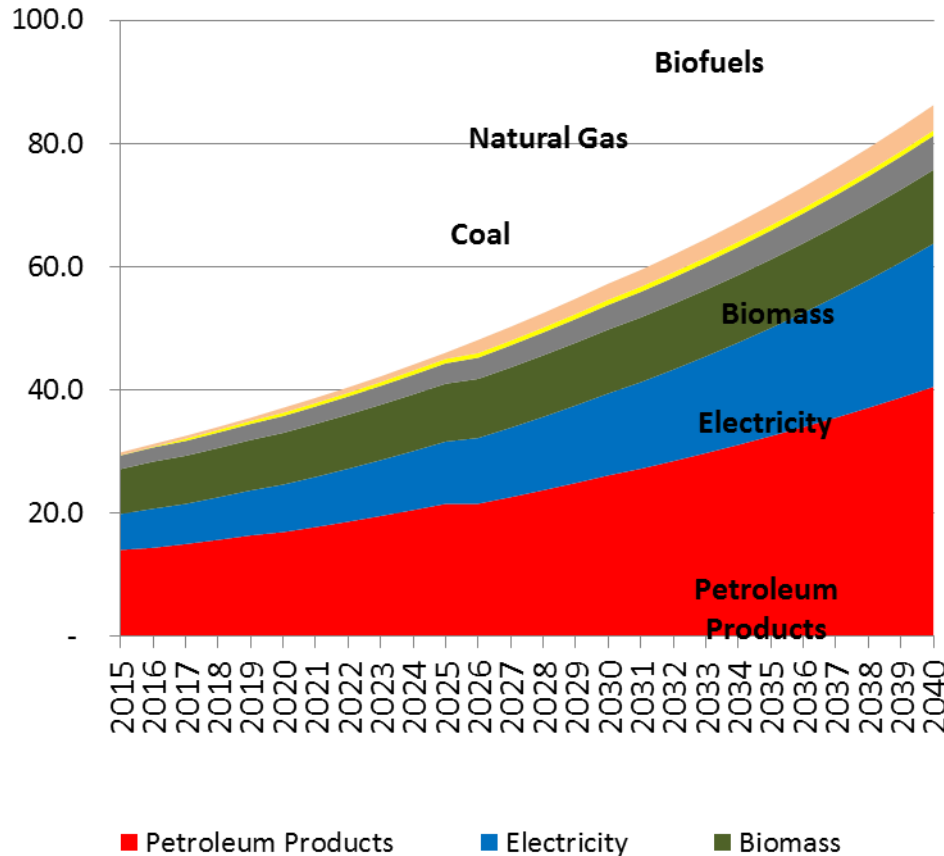


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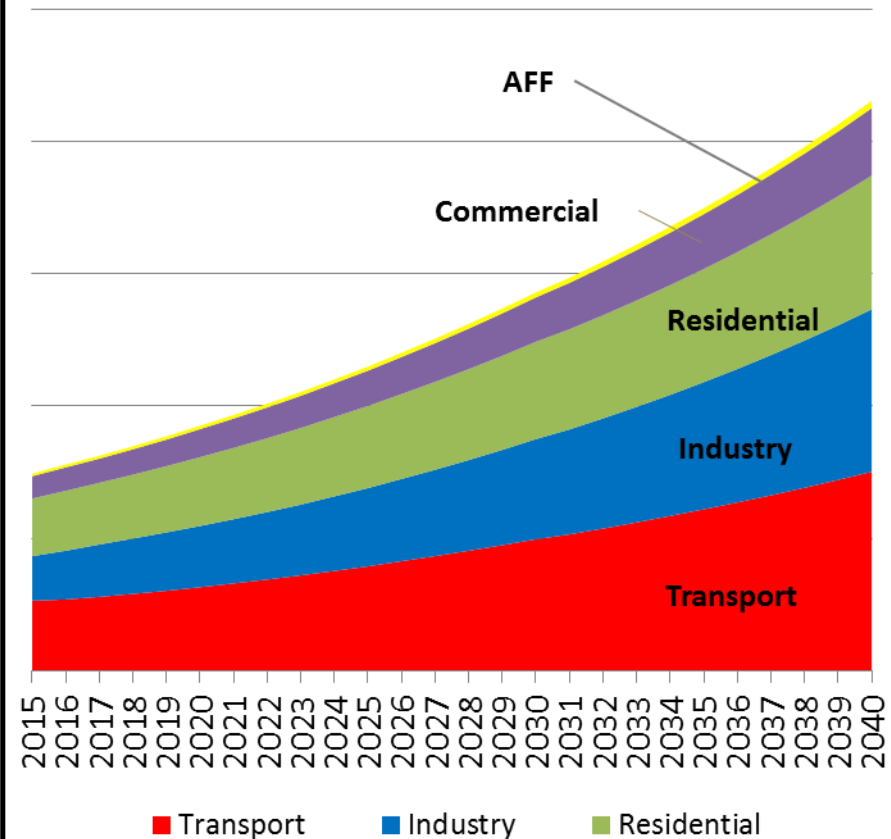


Where we are headed: Energy Demand Outlook 2016-2040

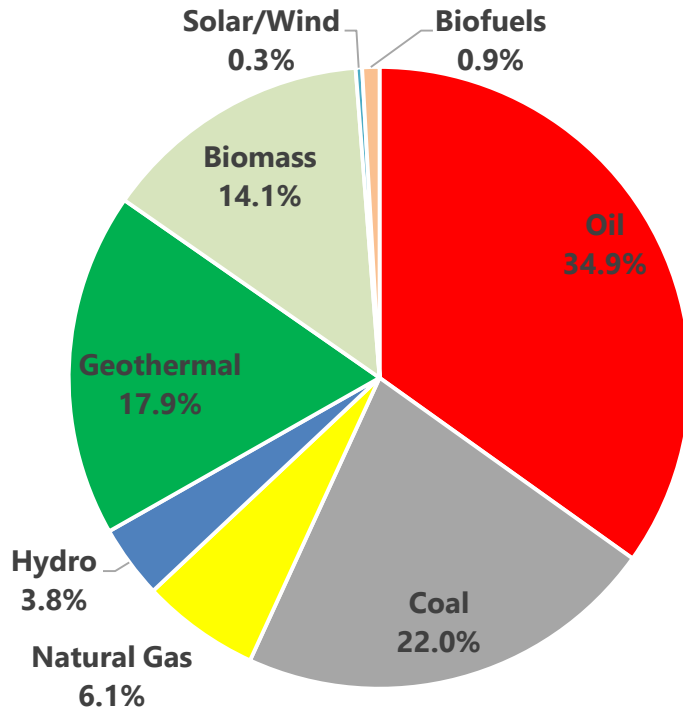
By Fuel Type



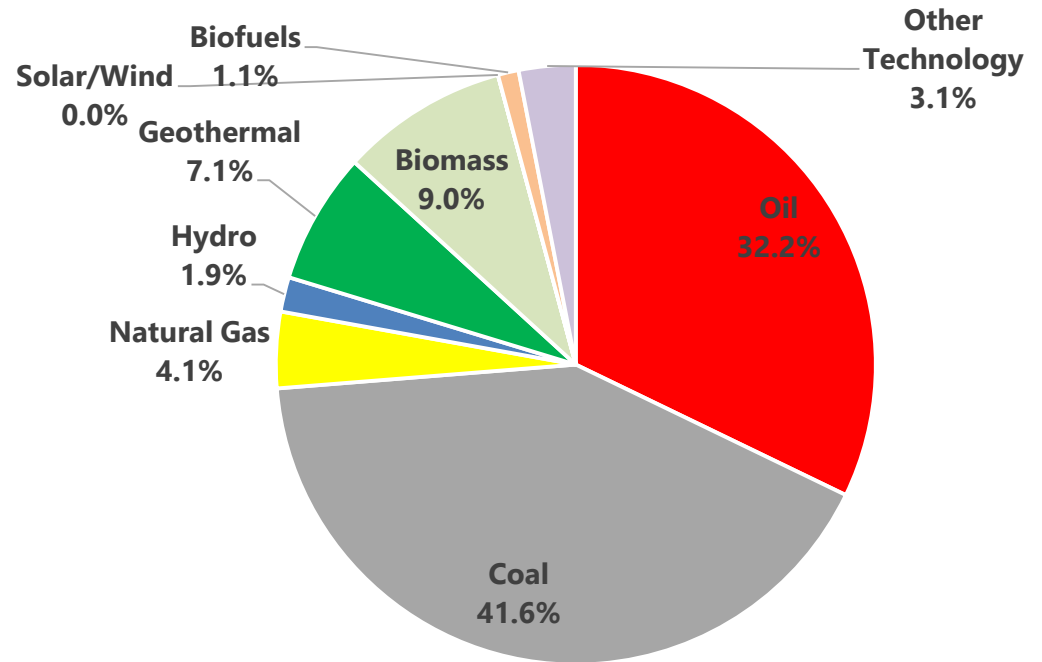
By Sector



Where we are headed: Primary Energy Mix 2016 and 2040



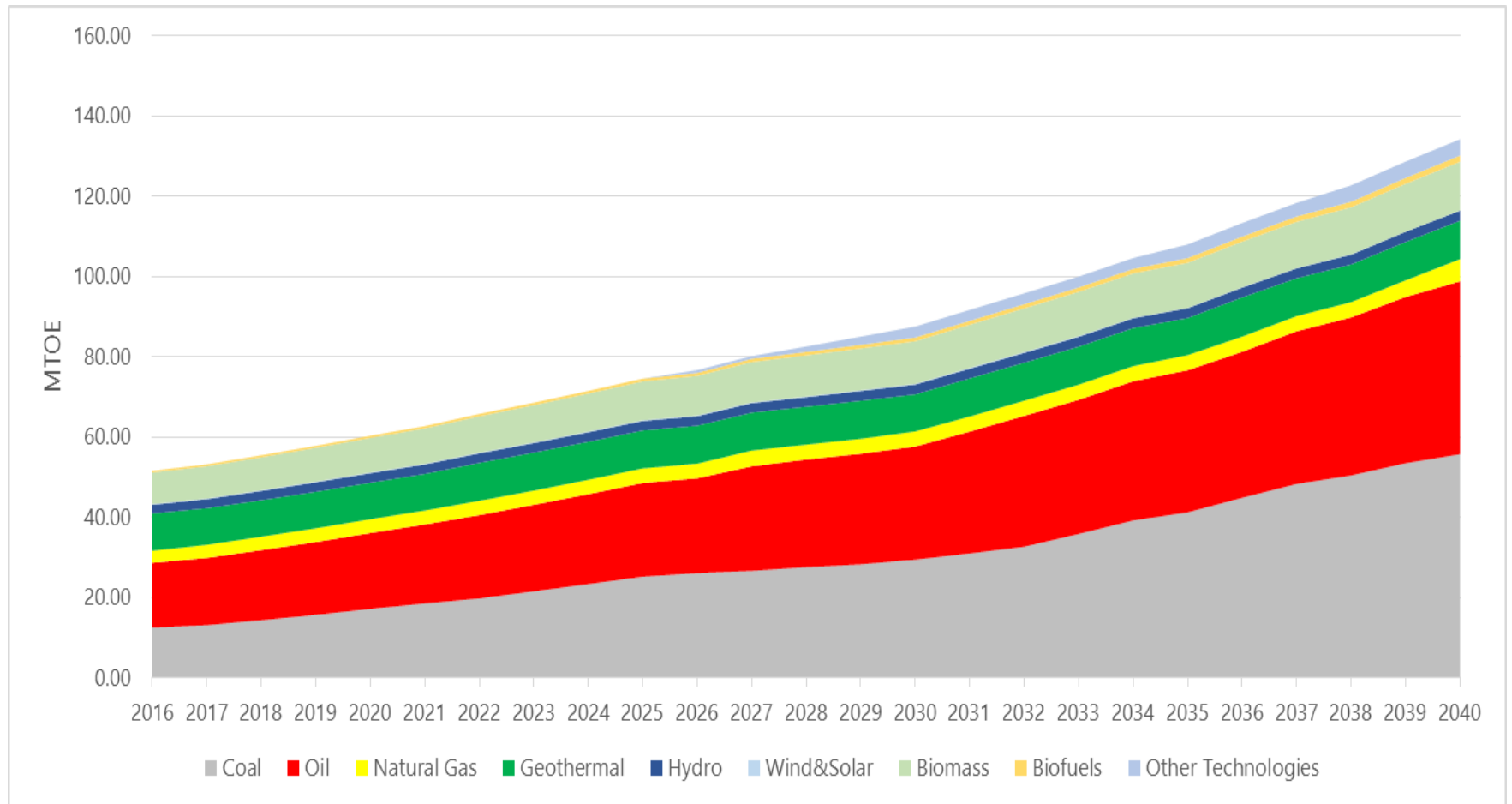
2016 Actual
Total Energy: 53.2 MTOE



2040 Outlook (Clean Energy Scenario)
Total Energy: 134.2 MTOE



Where we are headed: Energy Supply Outlook 2016-2040

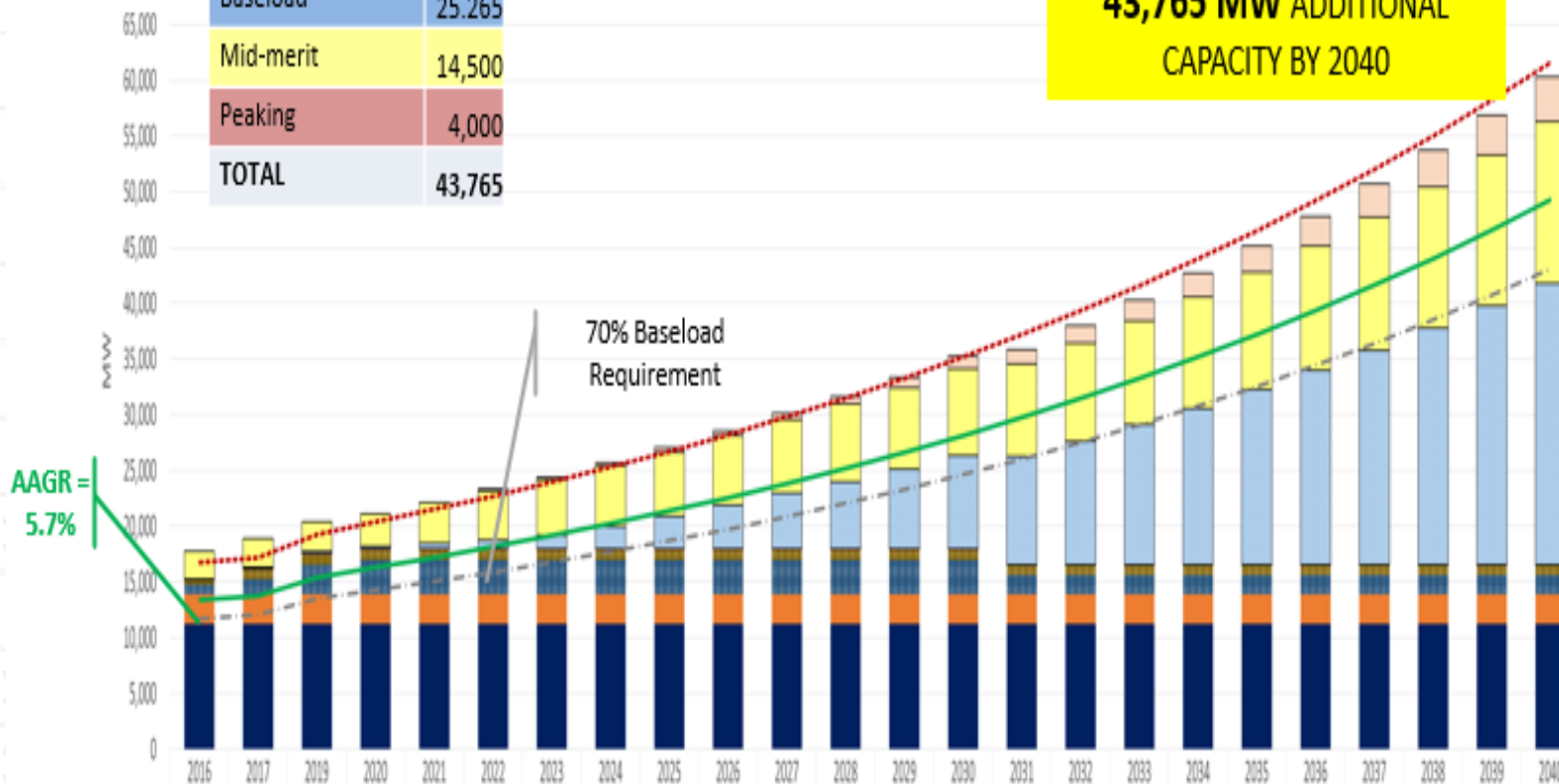


Where we are headed: Additional Power Capacities 2017-2040

- Capacity Addition - Peaking
- Capacity Addition - Mid-merit
- Capacity Addition - Baseload
- Committed Peaking
- Committed Mid-merit
- Committed Baseload
- Existing Peaking
- Existing Mid-merit
- Existing Baseload
- - - Reserve Requirement
- System Peak Demand
- - - 70% baseload Req

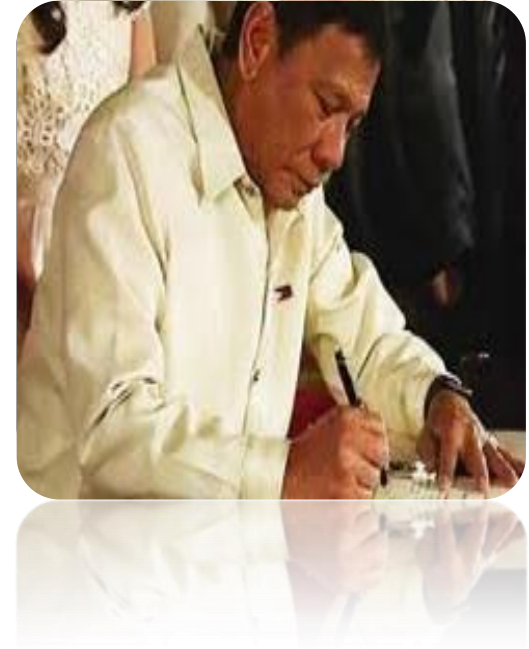
Capacity Addition	MW
Baseload	25,265
Mid-merit	14,500
Peaking	4,000
TOTAL	43,765

**THE PHILIPPINES WILL NEED
43,765 MW ADDITIONAL
CAPACITY BY 2040**



New Policy Initiatives

- Executive Order No. 30 (EO 30)
 - Creating the Energy Investment Coordinating Council (EICC) in Order to Streamline the Regulatory Procedures Affecting Energy Projects
 - Classification of Energy Projects of National Significance (EPNS)
 - Capital Investment of at least PhP 3.5 Billion
 - Contribution to the country's economic development
 - Consequential economic impact
 - Potential contribution to the country's balance of payments
 - Impact on the environment
 - Complex technical processes and engineering designs
 - Infrastructure requirements



New Policy Initiatives

- Energy Resiliency Policy
 - “Adoption of Resiliency Planning and Program in the Energy Industry to Mitigate Adverse Effects Brought About by Disasters”
 - Promotes planning and investment to ensure nation’s energy infrastructure continues to deliver while anticipating and reducing vulnerabilities



Challenges

- Ensuring energy security, reliability and reasonably-priced energy
- Passage of energy-related bills (e.g. energy efficiency and conservation, etc.)
- Harmonization of laws/policies
- Social acceptability of energy resources or technologies
- Energy resource development hindered by transnational / geographical boundaries



Challenges

- To strengthen energy security, expand energy access and promote technology neutrality
 - Integrated LNG
 - Nuclear



Korea's Singori Nuclear Plant
(Source: <http://www.koreaitimes.com/images/singori.jpg>)



LNG Tanker
(Source: <https://energy.gov/fe/science-innovation/oil-gas/liquefied-natural-gas>)



Thank You!



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