

ESTABLISHING NATIONAL POSITION ON NUCLEAR POWER IN THE PHILIPPINES

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Department of Energy, Philippines

Empowering Filipinos through Informed Energy Plans and Policies
9 October 2018
Grand Xing Imperial Hotel, Iloilo City

PRESENTATION OUTLINE

- ❑ **LEGAL BASIS OF DOE**
- ❑ **ENERGY SECTOR POLICY FRAMEWORK**
- ❑ **INTERNATIONAL FRAMEWORK**
- ❑ **ENERGY PROFILE: CURRENT AND OUTLOOK**
- ❑ **CREATION OF THE PHILIPPINE NUCLEAR ENERGY PROGRAM
IMPLEMENTING ORGANIZATION (NEPIO)**
- ❑ **NATIONAL POSITION**
 - **SALIENT FEATURES**
 - **DEVELOPMENT OBJECTIVES**
- ❑ **ACTION AGENDA FOR THE PRESIDENT**
- ❑ **ENERGY PLANNING STUDIES RESULTS**
- ❑ **ROADMAP OF THE PHILIPPINE NUCLEAR POWER PROGRAM**



Republic Act No. 7638 (DOE Act of 1992)

Section 5.f:

“Assess the requirements of, determine priorities for, provide direction to, and disseminate information resulting from energy research and development program for the optimal development of various forms of energy production and utilization technologies”



ENERGY SECTOR POLICY FRAMEWORK



AMBISYON NATIN 2040:
"A strongly-rooted, comfortable and secure life for all Filipinos"



DUTERTENOMICS: *"Build Build Build"*



ENERGY PLANS AND POLICIES

**ENERGY SECTOR
STRATEGIC DIRECTIONS**

1 ENSURE ENERGY SECURITY



2 EXPAND ENERGY ACCESS



3 PROMOTE A LOW CARBON FUTURE



4 STRENGTHEN COLLABORATION AMONG ALL GOV'T. AGENCIES INVOLVED IN ENERGY



5 IMPLEMENT, MONITOR AND INTEGRATE 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



ENERGY SECTOR POLICY FRAMEWORK



DOE's NINE POINT ENERGY AGENDA



ACCESS TO BASIC ELECTRICITY
FOR ALL FILIPINOS BY 2022



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



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



INTERNATIONAL PERSPECTIVES ON NUCLEAR



CEBU DECLARATION
12th APEC Energy Ministerial Meeting
13 October 2015, Cebu, Philippines

'We reaffirm the importance of safe and efficient development of civil nuclear power as an option to clean, high-quality and advanced modern energy, which functions as a base load power source, to help ensure global energy security and sustainable development as well as reducing greenhouse gas emissions...'



JOINT MINISTERIAL STATEMENT
35th ASEAN Ministers on Energy Meeting
27 September 2017, Manila, Philippines

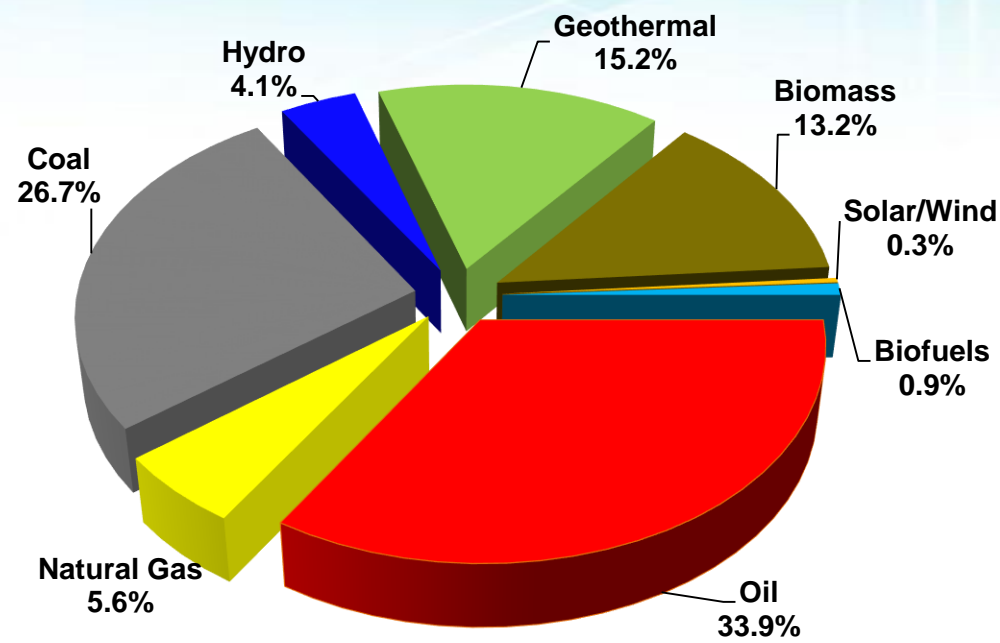
Enhancing AMS capabilities on civilian nuclear energy

'The Ministers appreciated the widening ASEAN cooperation with various DPs, including Canada, China, Japan, Russia and the United States of America, to support ASEAN in building capabilities on policy, technology and regulatory aspects of nuclear energy...'

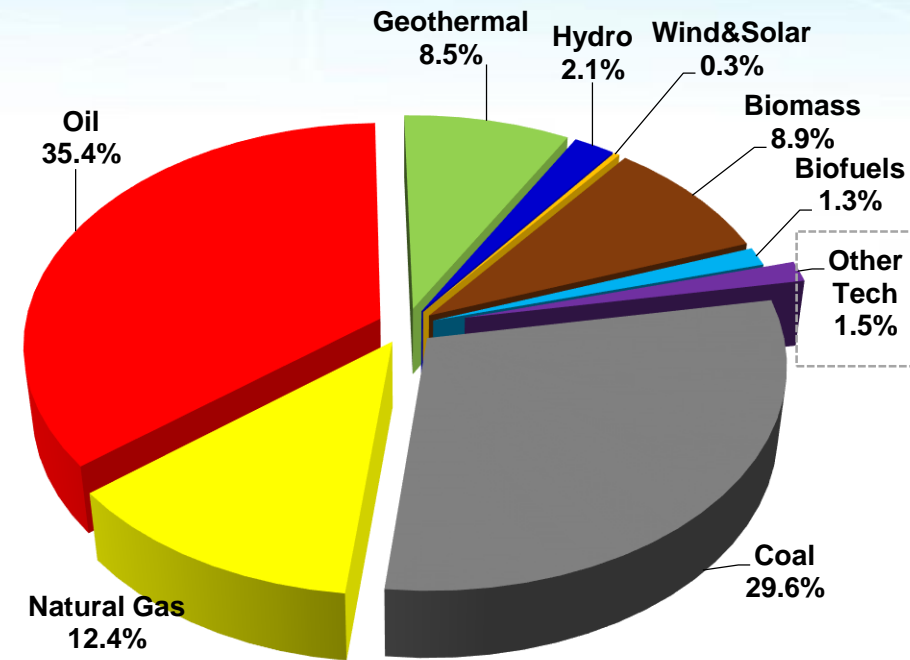


Energy Profile: Current and Outlook

Primary Energy Mix: 2017 vs 2040



2017 Actual
Total Energy: 57.57 MTOE



2040 Outlook
Total Energy: 137.8 MTOE

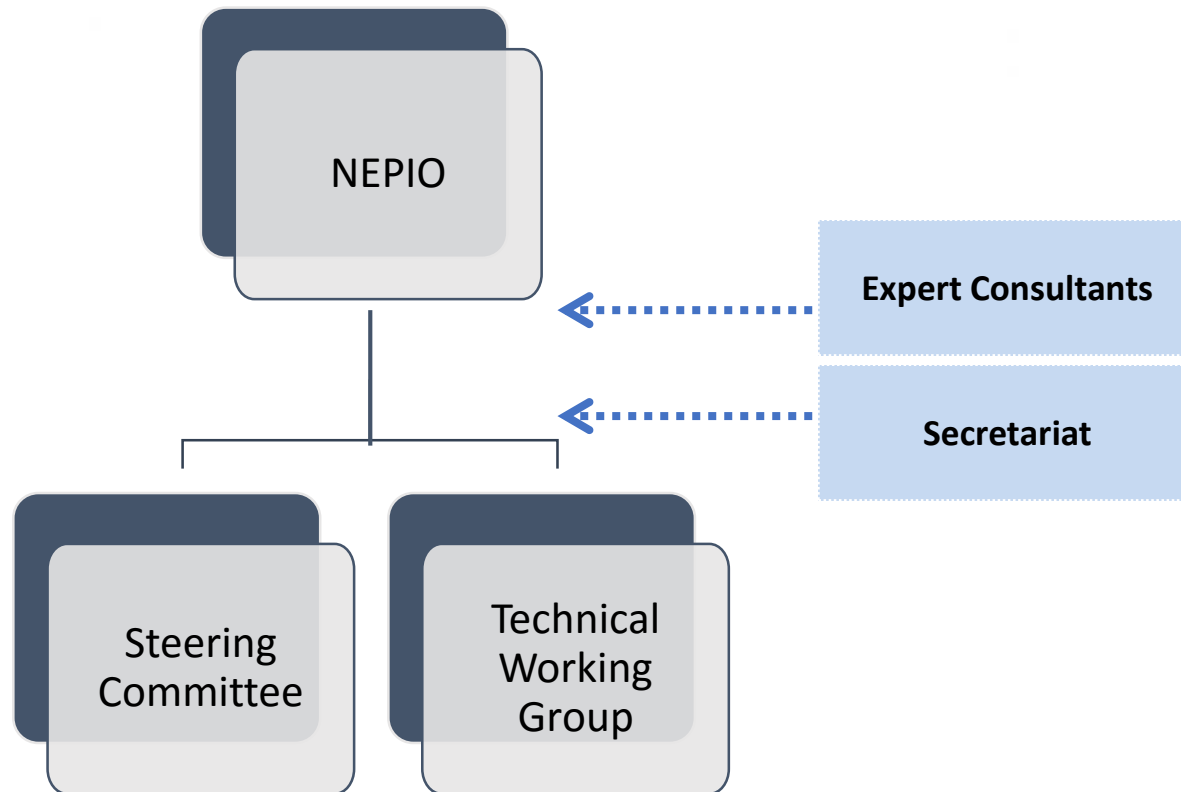
The fuel policy mix direction being pursued by the DOE for the country is to build-up an appropriate portfolio of installed and dependable energy capacities, anchored on a **technology-neutral policy**, especially for the power sector, for base load, mid-merit and peaking requirements to support our growing economy. This provides a window for the entry of other technologies, such as **nuclear power**.



PHILIPPINE NEPIO

The Philippine Nuclear Energy Program Implementing Organization (NEPIO) was created in October 2016 through DO2016-10-0013

- ✓ Lead in the unified and coordinated efforts and activities relative to the conduct of various studies and research on nuclear energy development in the country



NATIONAL POSITION

Technical term used in developing a nuclear power program which serves as the premise statement of a country's preliminary position and evaluation subject to validation by addressing 19 infrastructure issues or gaps.

If the issues are addressed and validation is successful, the position will be elevated as a “National Decision” which would then be the backbone of a Nuclear Power Program (NPP).



NATIONAL POSITION: SALIENT FEATURES

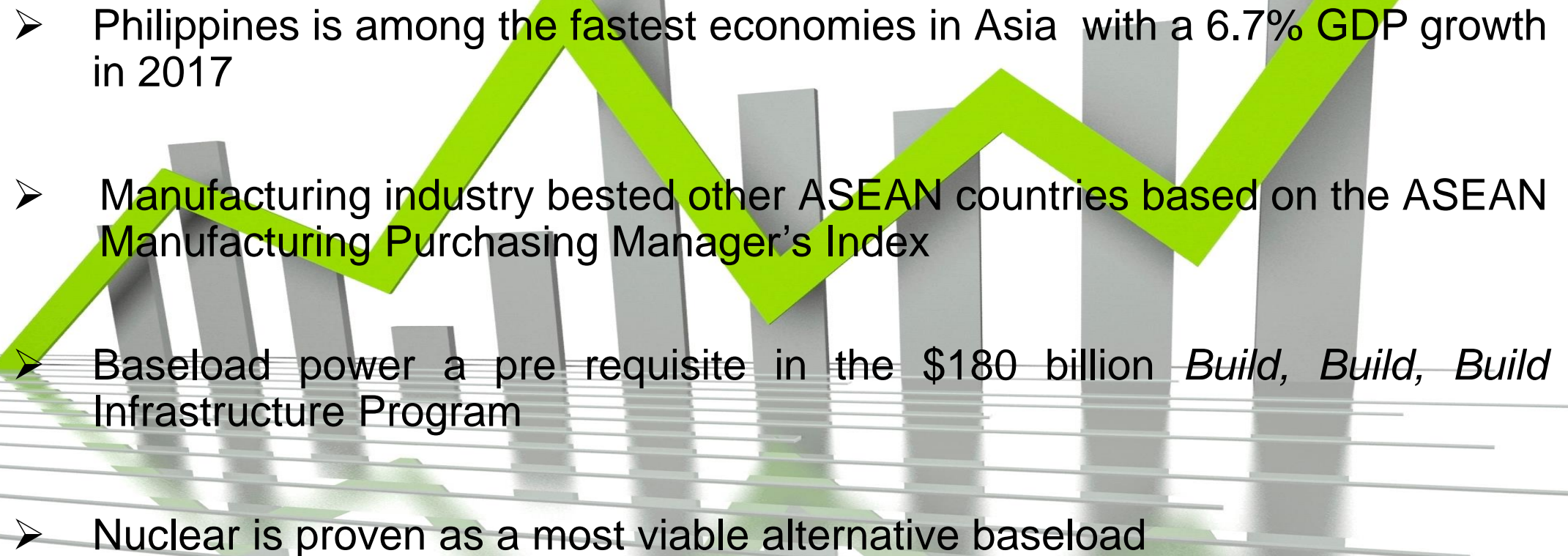
- Lays down the country's economic, social, political and environmental objectives and its national energy directions;
- Commitment to safe, secure and peaceful development of nuclear power program;
- Recognition of international and national legal arrangements to include the establishment of an independent regulatory body, with the commitment to cooperate with the international community;
- Strategies to address the gaps and challenges of [19 infrastructure issues](#); and;
- Recommendation to adopt nuclear as a long-term option- include in the energy mix



NATIONAL POSITION: CONSIDERATION OF THE PHILIPPINE DEVELOPMENT OBJECTIVES

Economic Objective

A strong and inclusive 7 to 8 % GDP growth

- 
- Philippines is among the fastest economies in Asia with a 6.7% GDP growth in 2017
 - Manufacturing industry bested other ASEAN countries based on the ASEAN Manufacturing Purchasing Manager's Index
 - Baseload power a pre requisite in the \$180 billion *Build, Build, Build* Infrastructure Program
 - Nuclear is proven as a most viable alternative baseload

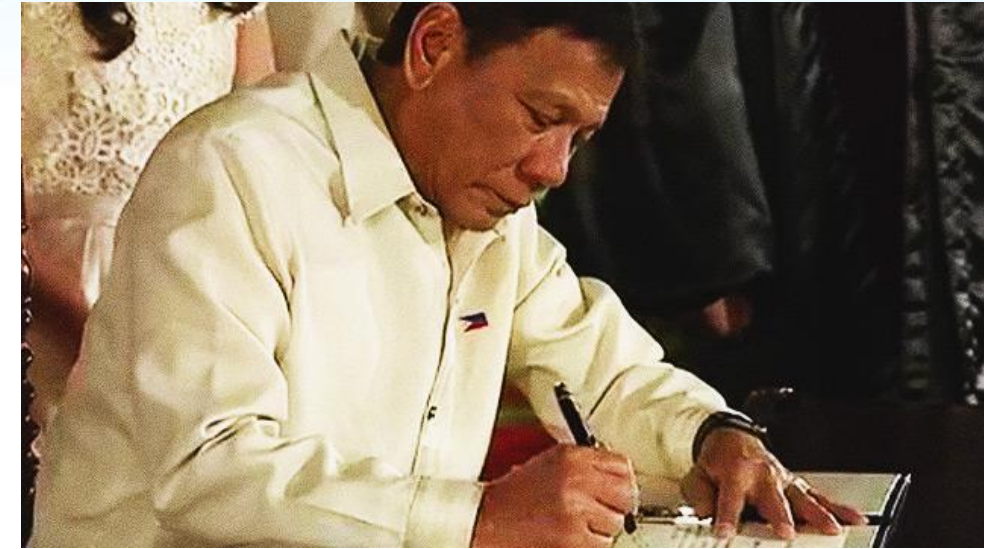


NATIONAL POSITION: CONSIDERATION OF THE PHILIPPINE DEVELOPMENT OBJECTIVES

Political Objective

Bold vision and forward looking approach

- Current leadership sees nuclear power as a key factor in sustainable development
- Nuclear energy as an area of cooperation with other countries
- It is high time to revisit other innovative sources or technologies in power generation
- Philippine government is in receipt of proposals (Russia, Korea and China) to rehabilitate the mothballed BNPP



NATIONAL POSITION: CONSIDERATION OF THE PHILIPPINE DEVELOPMENT OBJECTIVES

Social Objective



Vision to eradicate poverty by 2040

- Transform the Philippines into a prosperous middle class society
- Sustain an inclusive and resilient economy that will generate employment and job security
- Result to long term human capital investment and increased labor productivity
- Embarking on a nuclear power program shows potential driving effects on economic growth and dynamic spillover effects on related industries.



NATIONAL POSITION: CONSIDERATION OF THE PHILIPPINE DEVELOPMENT OBJECTIVES

Environmental Objective

Philippines has ratified the Paris Agreement on Climate Change

- Nuclear power is a technology that could help minimize the possible trade-offs between emission and environment.
 - Can contribute effectively to the mitigation of GHG emissions and has strong potential to decarbonize the power sector.
 - Competitive among zero emitting technologies
 - A Cost Benefit Analysis conducted shows that nuclear is a cost effective mitigation option
- 



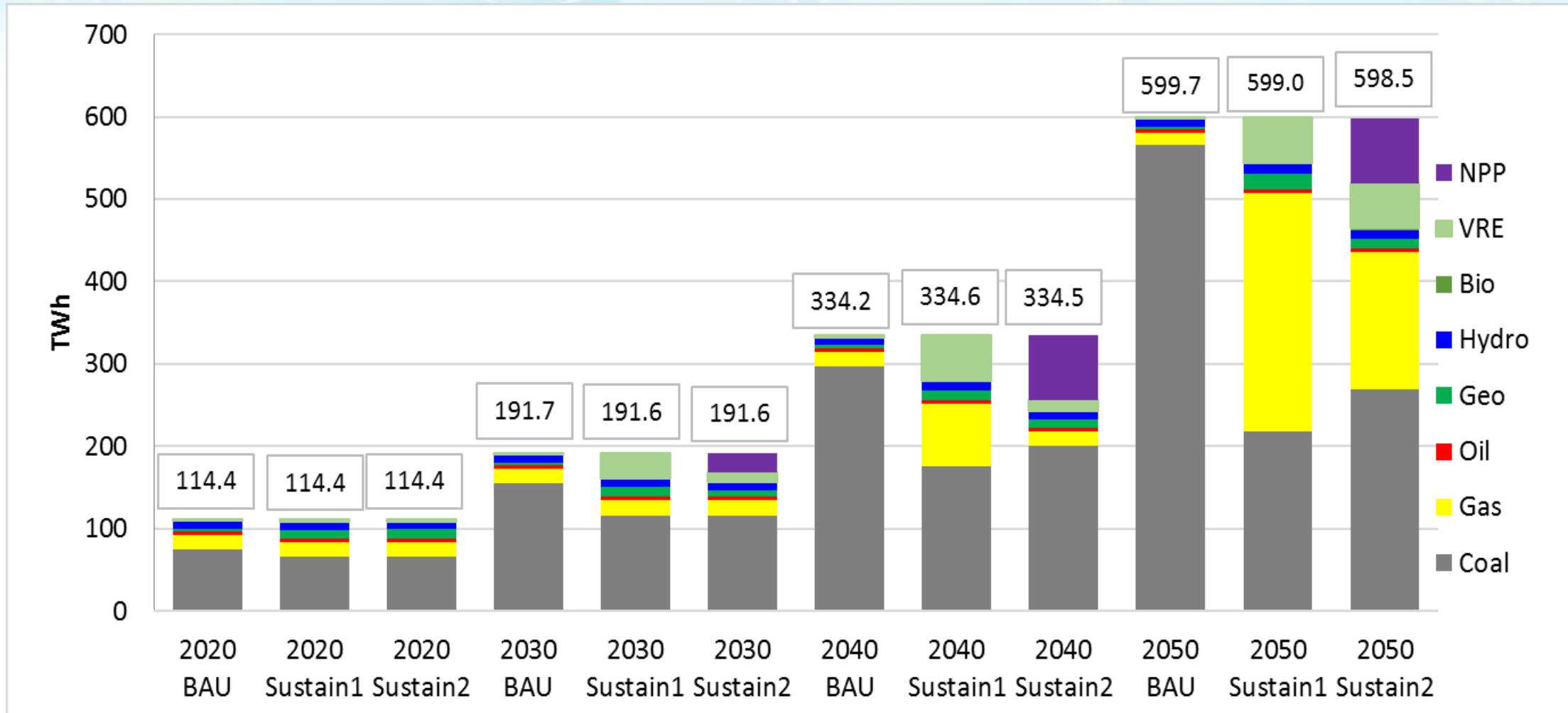
ACTION AGENDA FOR THE PRESIDENT

- Declare that the Philippines is now open to nuclear power and ready to embark on a Nuclear Power Program;
- Certify as urgent the approval of a Comprehensive Nuclear Law or any equivalent law to establish a separate and independent nuclear regulatory authority; and,
- Issue an Executive Order to expand the composition of the NEPIO to include other relevant government agencies, academe and representatives from the private sector.



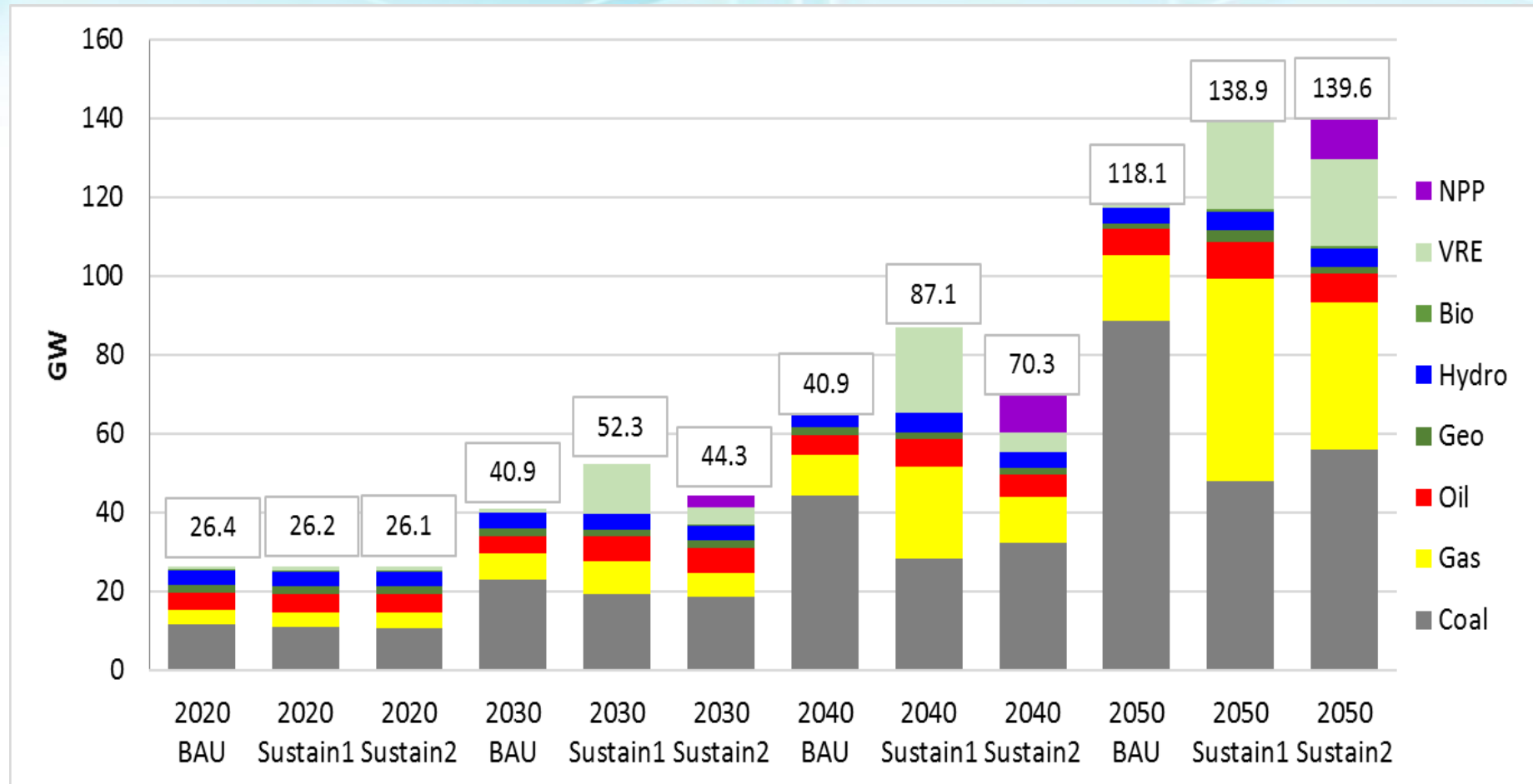
ENERGY PLANNING STUDIES RESULTS

Generation Mix by Scenario



ENERGY PLANNING STUDIES RESULTS

Total Installed Capacity Mix by Scenario

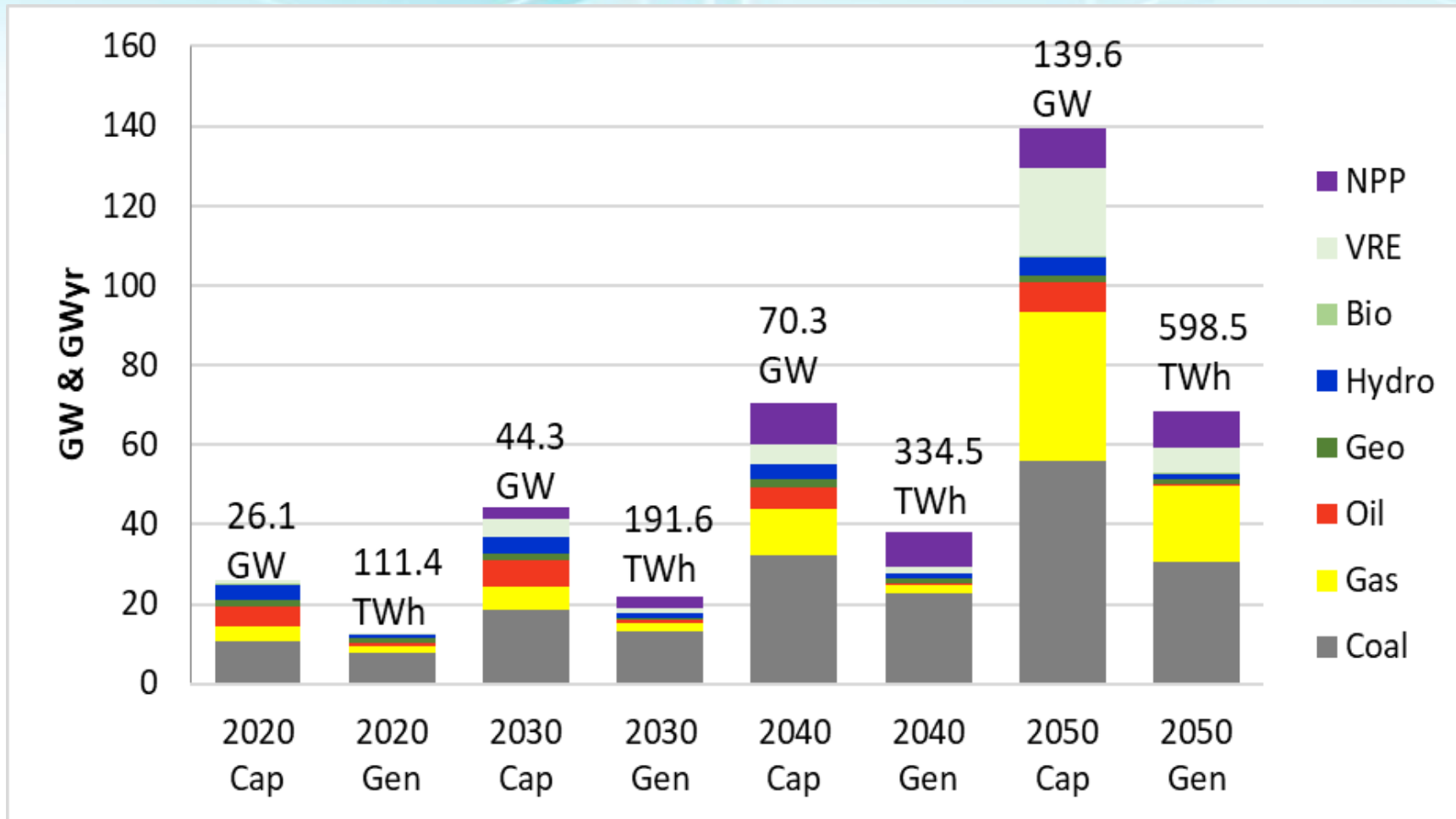


Total Installed capacity will be higher by 18% in sustainable scenarios, thus, higher investment is needed to mitigate GHG emission.



ENERGY PLANNING STUDIES RESULTS

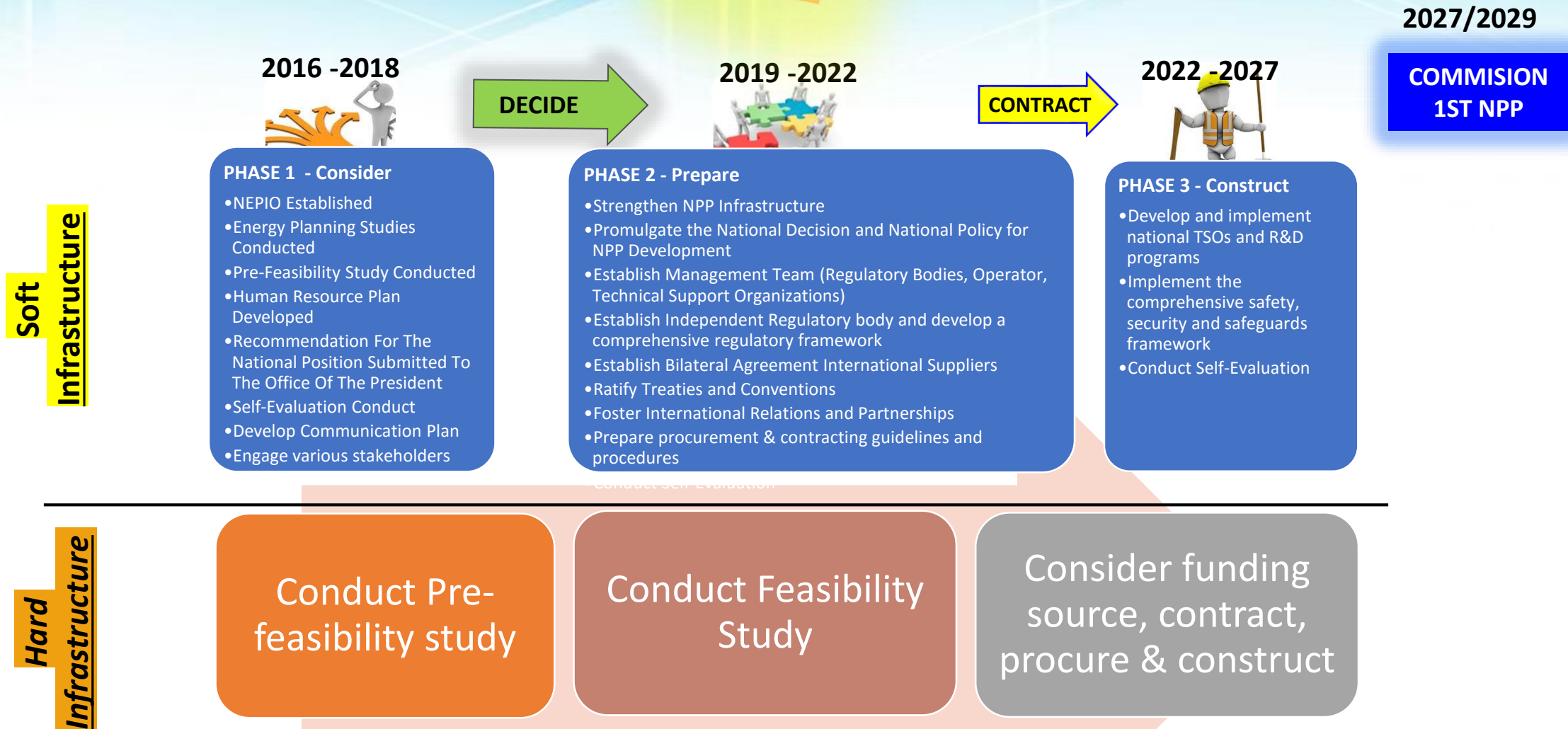
SUSTAINABLE II, Capacity Mix vs. Energy Mix



- *Diversity, security and reliability increased*
- *System's cost decreased*



ROADMAP OF THE PHILIPPINE NUCLEAR POWER PROGRAM



“... with all the new findings, technological advancements and successful experiences of countries around the world, nuclear energy holds much promise for our national interest, especially in light of our collective quest to implement our long-term energy plans...”

- Energy Secretary Alfonso G. Cusi

THANK YOU!



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19 INFRASTRUCTURE ISSUES FOR NUCLEAR POWER DEVELOPMENT



Stakeholder Involvement is cross-cutting and impacts on most of the other infrastructure issues

[BACK](#)

