

Digitally enabled decarbonization in the Philippines' energy sector

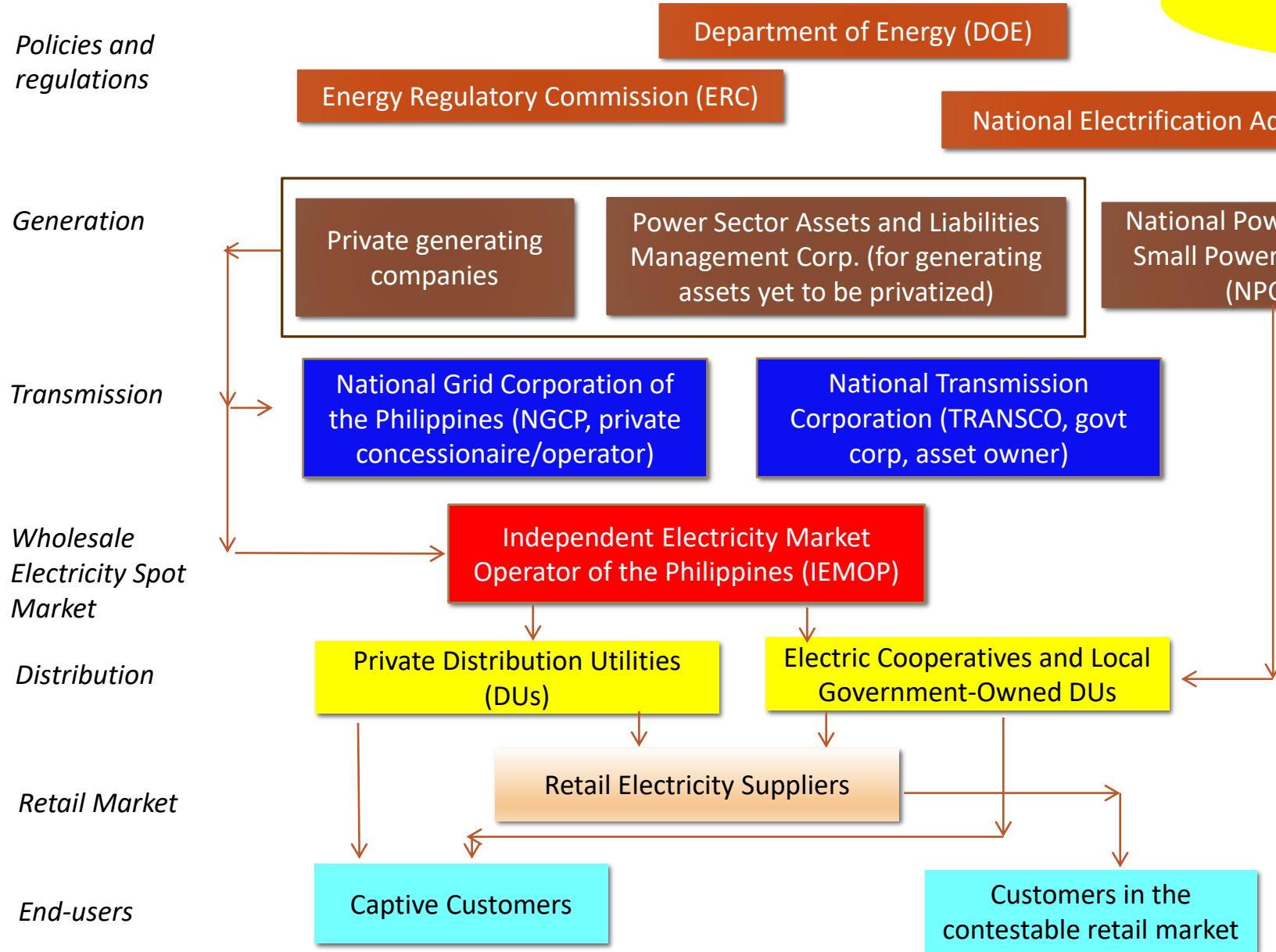
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Background: The Philippines' electric power industry post-restructuring

Restructuring and reforms in the previously vertically integrated industry started in 2001



Note: In the upstream oil and gas sector, the DOE provides policy guidance and a government corporation partners with private firms (including foreign firms, but subject to 40% ownership limit) in energy resource exploration, extraction, and development. In the renewable energy sector, 100% foreign investment is allowed.

Energy sector policies and programs supporting digitally enabled decarbonization

- Electric Power Industry Restructuring Act of 2001
- Renewable Energy Act of 2008
- Renewable Portfolio Standard
- Green Energy Auction
- Green Energy Option Program
- Renewable Energy Market
- ERC rules on net metering, spot market operation, retail market operation
- DOE's circulars on renewable energy investments, battery energy storage systems, smart grid framework formulation

Examples of private sector-led digitally enabled decarbonization

All players in the renewable energy market:

- Green Energy Auction Program: use of auction in determining the lowest feed-in-tariff for renewable energy developers; is increasing the share of renewables in electricity generation and use
- Renewable Energy Market: digitally enabled renewable energy certificate registration and trading; in the interim stage, preparations ongoing for full commercial operation; will increase the share of renewables in electricity generation and use

End-users, especially those in industries that need to comply with renewable portfolio standards:

- Green Energy Option Program: allows users consuming at least 100 kW to source their supply directly from renewable energy developers that are qualified as retail suppliers

Distribution utilities:

- Net metering (which accommodates user-owned solar PV systems); use of AI, automation, and virtual laboratories (e.g., Meralco's Powertech Innovation and eXperience Lab)

Generating companies with cross-owned distribution utilities:

- digital substations (e.g., Davao Light, a DU), power plant control centers (e.g., HEDCOR's centralization for its portfolio of hydros), battery storage systems, robotic process automation (software robots) in utility operations



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