Tariff Setting:
The Philippine Experience

Presented to the

CAREC Members Electricity Regulators Forum

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Energy Regulatory Commission

Outline

I. Criteria for an Effective Tariff Structure

II. Comparative Tariff Setting Methodologies: Philippine Experience

III. Comparative Tariff Structure: Philippine Experience

IV. Regulatory Framework

I. Criteria For An Effective Tariff Structure

A. Revenue-Related Criteria

- ☑ Rates should provide revenues sufficient for investment and quality service.
- ☑ Rates should allow stable and predictable revenues.
- ☑ Rates should be stable and predictable with a minimum of unexpected changes for consumers.

B. Cost-Related Criteria

- ☑ Rates should send price signals that encourage efficient operations.
- ☑ Rates should be fairly allocated among customers based on cost of service principle.
- ☑ Rates should not allow undue discrimination.

I. Criteria For An Effective Tariff Structure

C. Ease of Application

- ☑ **Rates should be simple to understand and acceptable to customers.**
- ☑ **Rates should be easy for the utility to implement.**

II. Tariff Setting Methodologies

A. Return on Rate Base (RORB)

- Applicable to National Power Corporation (NPC) and private distribution utilities

B. Cash-Based Methodology

- Applicable to electric cooperatives

C. Best New Entrant Approach (BNE)

- Applied to NPC for a limited time

A. Return On Rate Base (RORB) Methodology

Revenue Requirement Determination

Operating Expenses	Depreciation	Income Tax	Return on Rate Base
• Fuel • Purchased Power • Payroll • Administrative & General • Maintenance	• Defined as the replacement of asset under financial accounting • Defined as the Return of Capital under regulatory accounting • Rate of depreciation should vary per type of asset • Philippines adopts straight line method • Value is dependent on appraisal value of asset	• Not allowed to be passed on to customers based on a Supreme Court ruling	• Net Plant In Service • Cash Working Capital • Materials and Supplies Rate of Return is defined as percentage return on capital or percentage return on investments Rate of Return = r (Rate Base)

Revenue Requirement

B. Cash-Based Methodology

- Used in determining tariff levels for electric cooperatives
- Reinvestment fund is calculated as 5 % of Revenue Requirement

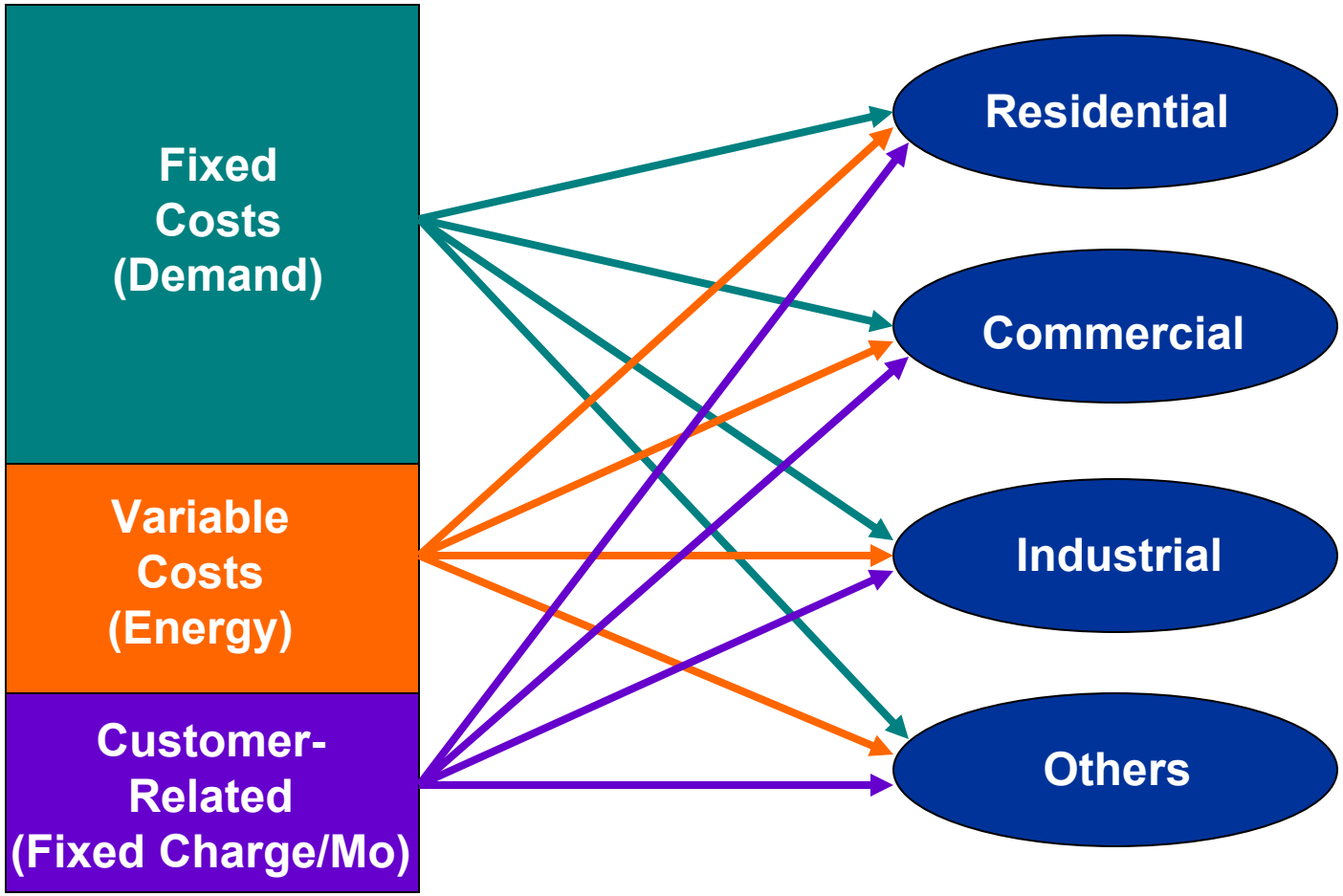
Operating Expenses	Reinvestment Fund	Debt Service
• Fuel • Purchased Power • Payroll • Administrative & General • Maintenance	• Calculated as 5% of revenue requirement • Should be used solely for upgrade & maintenance of distribution network • Should be used to reduce system loss • Should be placed in a separate fund	• Includes both principal & interest of approved loans

Revenue Requirement

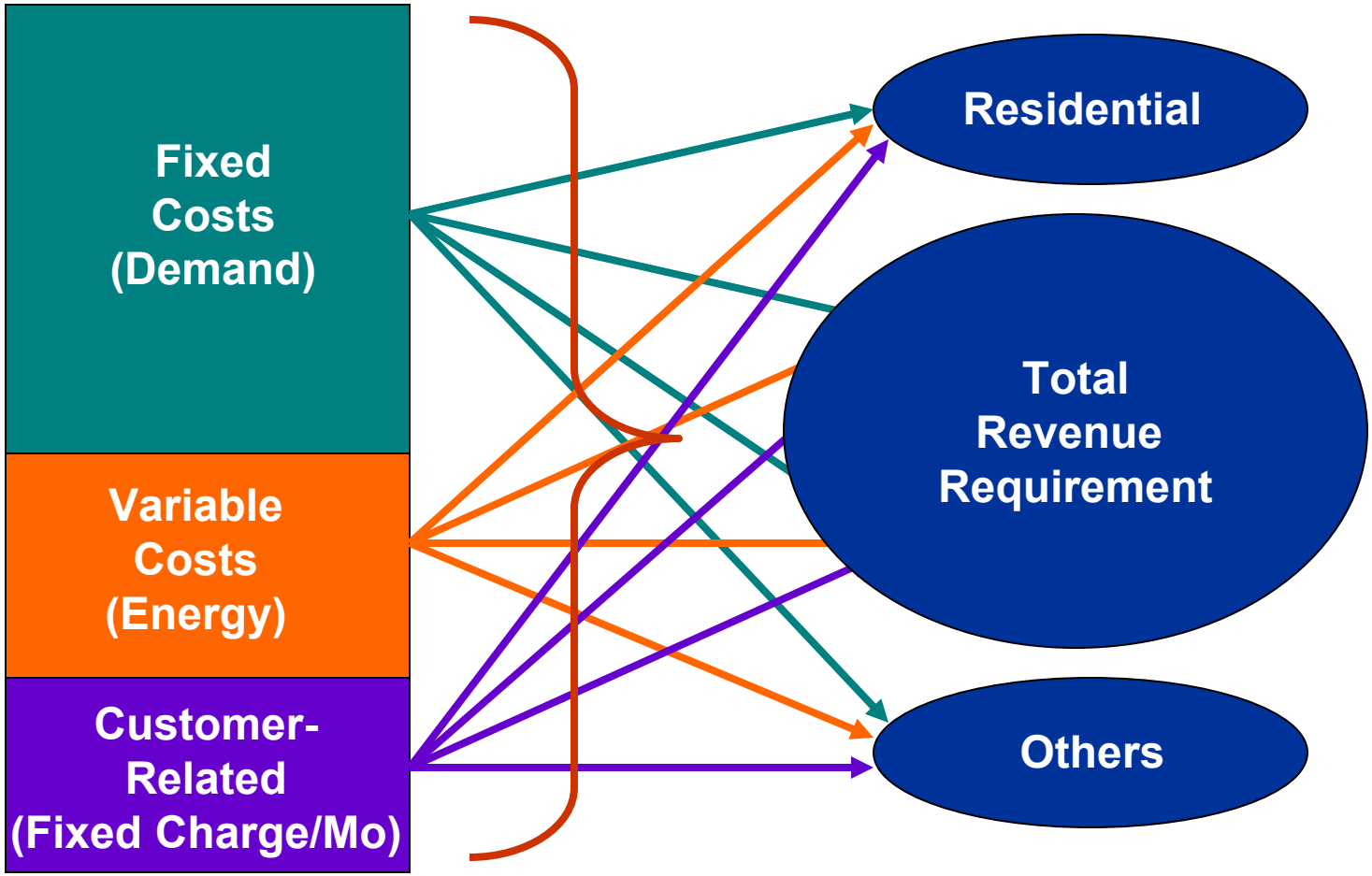
C. Best New Entrant Approach

- **Based on a *" Best New Entrant "* *(BNE)* standard**
- **BNE reflects the lowest total cost of an efficient and hypothetical new generating plant in the Philippines**
- **Based on the cost of a base load 400 MW coal power plant in Luzon**

Allocation of Cost Per Customer Class



Allocation of Cost Per Customer Class

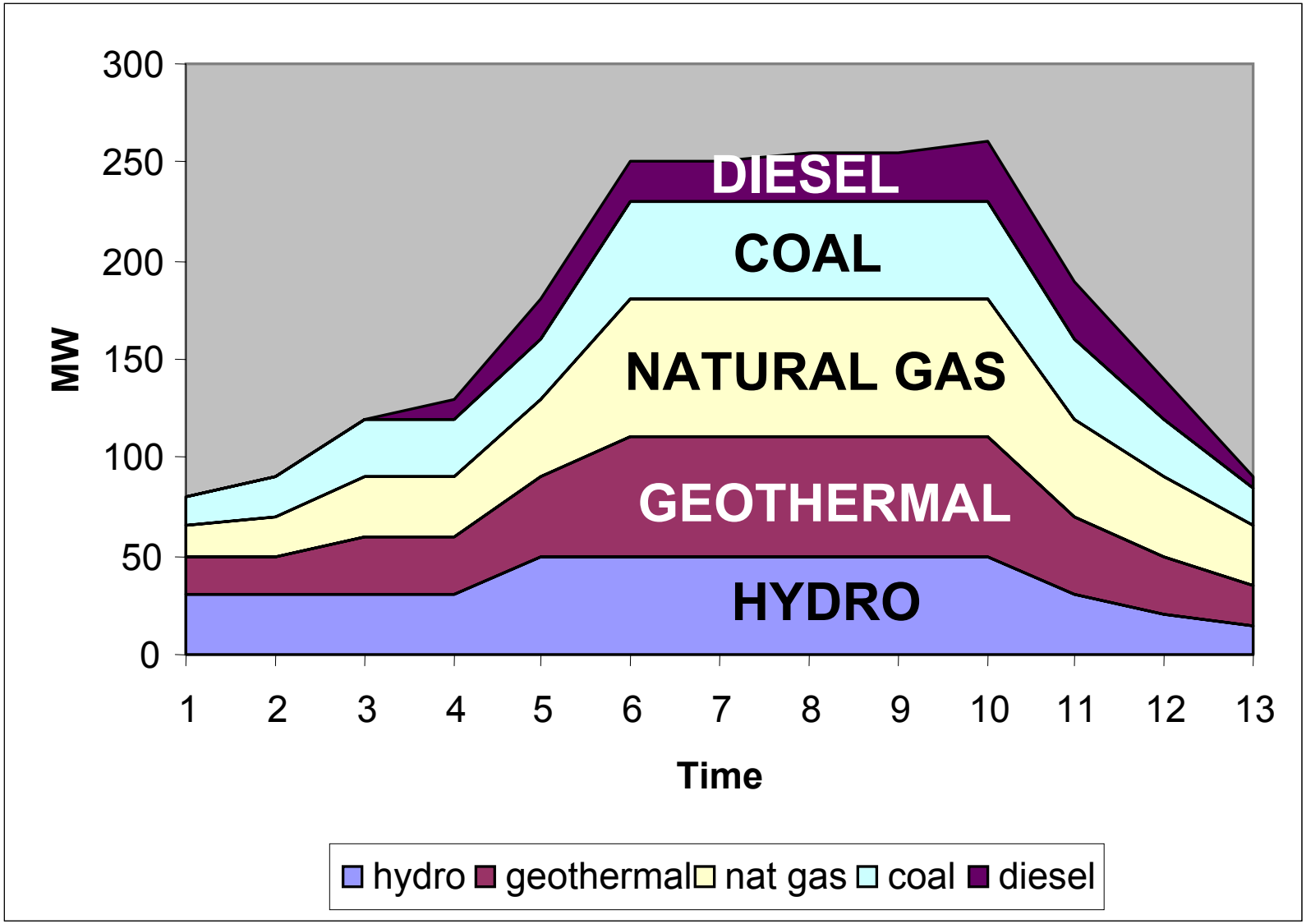


III. Types of Tariff Structure

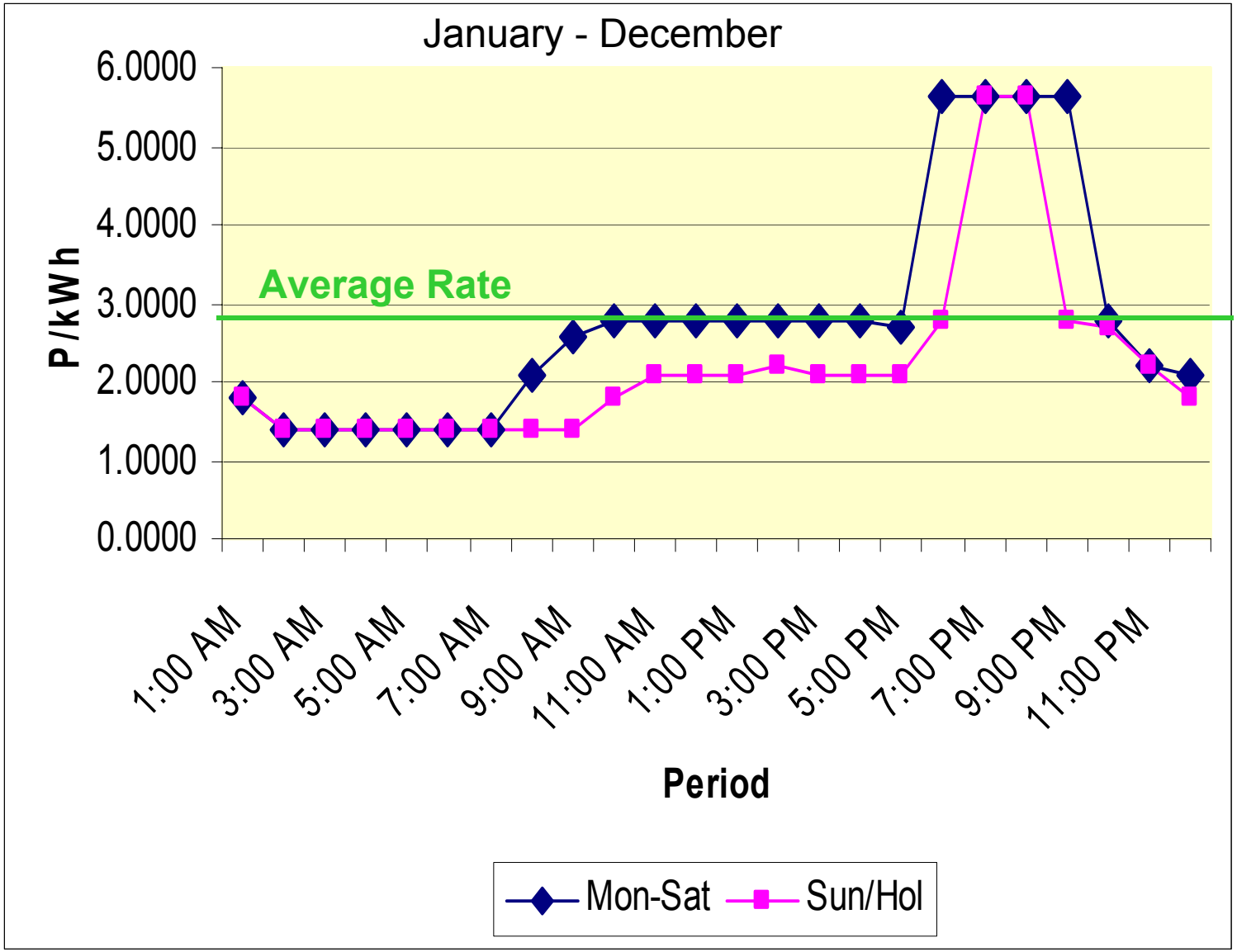
For Generation:

- **Two-tiered pricing: demand charge for capacity/energy charge for variable**
- **Declining block tariffs: price goes down as consumption increases**
- **Single tariffs: straight energy charge**
- **Time of Use pricing**

Merit Order Dispatch



Time Of Use Rates
Visayas Grid



IV. Regulatory Framework

A. Rate of Return Regulation

B. Performance-Based Regulation

A. Rate of Return Regulation

Inherent Weaknesses:

- Encourages over investment
- No real incentive for efficient operations
- Subject to regulatory lag
- Philippine case: income tax not allowed as an operating expense that can be passed on to consumers
- Jurisprudence set the rate of return to a maximum of 12 per cent per annum

B. Performance-Based Regulation

- A long-term commitment between the Utility and the Regulator
- Covers a five-year regulatory period
- Encourages optimal utilization of assets
- Encourages efficiency gains
- Customer benefits from efficient operations

Transition from ROR to PBR

- Shift to PBR should be done gradually since it is a complex process
- PBR requires a set of technical skills that may not be available within the manpower resources or capability of the Commission
- First regulatory reset very critical since rates are locked in for a specified period
- Costs and value of assets are projected; assumptions used should be validated

Mabuhay!

Website: http://www.erc.gov.ph