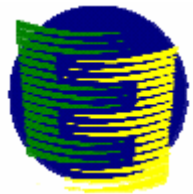
THE ENERGY CHARTER
SECRETARIAT



СЕКРЕТАРИАТ
ЭНЕРГЕТИЧЕСКОЙ ХАРТИИ

Workshop on

Best Practices in the Energy Sector

RESTRUCTURING, PRIVATISATION: THE ROAD AHEAD

May 12th , 2004

Energy Tariffs Design: Theory and Practice

Evangelos Penglis, KANTOR Management Consultants

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ENERGY TARIFFS AND PRIVATISATION

- **Privatisation** in the energy sector often produces benefits of enhanced efficiency and growth, as private culture, management, know-how and funding sets in.

- A key issue in assessing the privatisation impact, relates to the ability of the privatised entity to **set tariffs that reflect real costs**. Low energy prices and political control of tariff setting process affects the financial returns of the privatised companies and pose a threat to security of energy supply.

- The impact of Privatisation cannot be easily separated from the impact of **structural, regulatory and competitive changes** that often take place before privatisation.

- Competition, is difficult to introduce into markets where the industry structure is not appropriate e.g. in vertically integrated monopolies. **The introduction of competition and "fair play"** in market access, tariffs and consumer service **is largely controlled by regulators**.

- Regulators have the mandate to ensure that the **interests of companies and the public are balanced**: having cost reflective tariffs for the companies to achieve long term sustainability, and avoidance of abuse of companies' monopolistic powers

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GENERAL TARIFF PRINCIPLES

Properties	Description
Efficiency	Provide the right signals to promote economic efficiency
Cost recovery	Companies should recover the economic costs of their operations
Transparency	Clear, well defined and understandable tariff structure
Predictability Stability	Well defined procedure for tariff setting. Avoid frequent price fluctuations
Non-discrimination Cost reflectivity	Avoid cross subsidization between customers or customer categories Allocate costs fairly in full correspondence to business activities
Simplicity	Avoid unnecessary complication Minimise cost of tariff setting implementation

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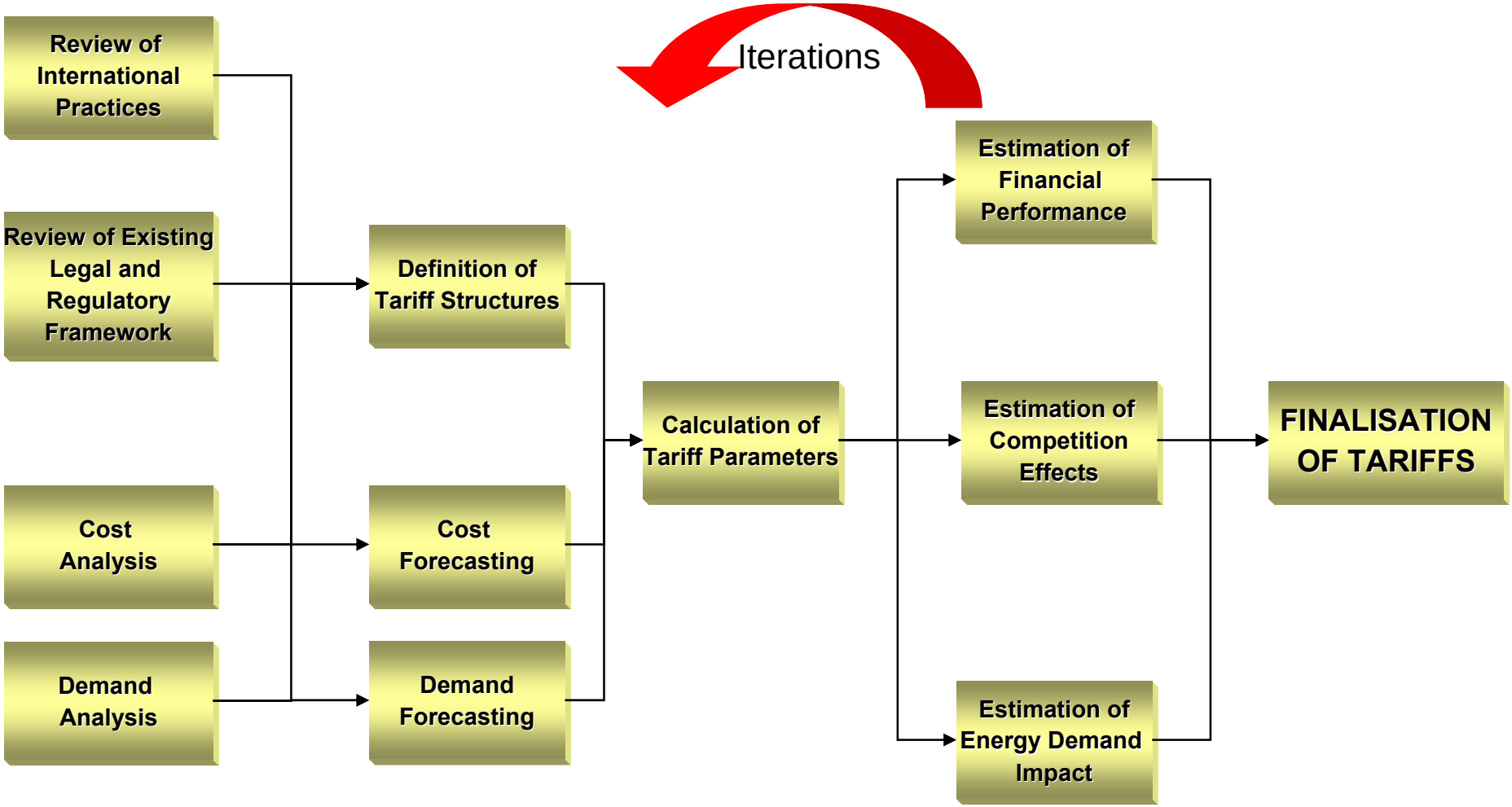
BASIC METHODOLOGICAL APPROACH



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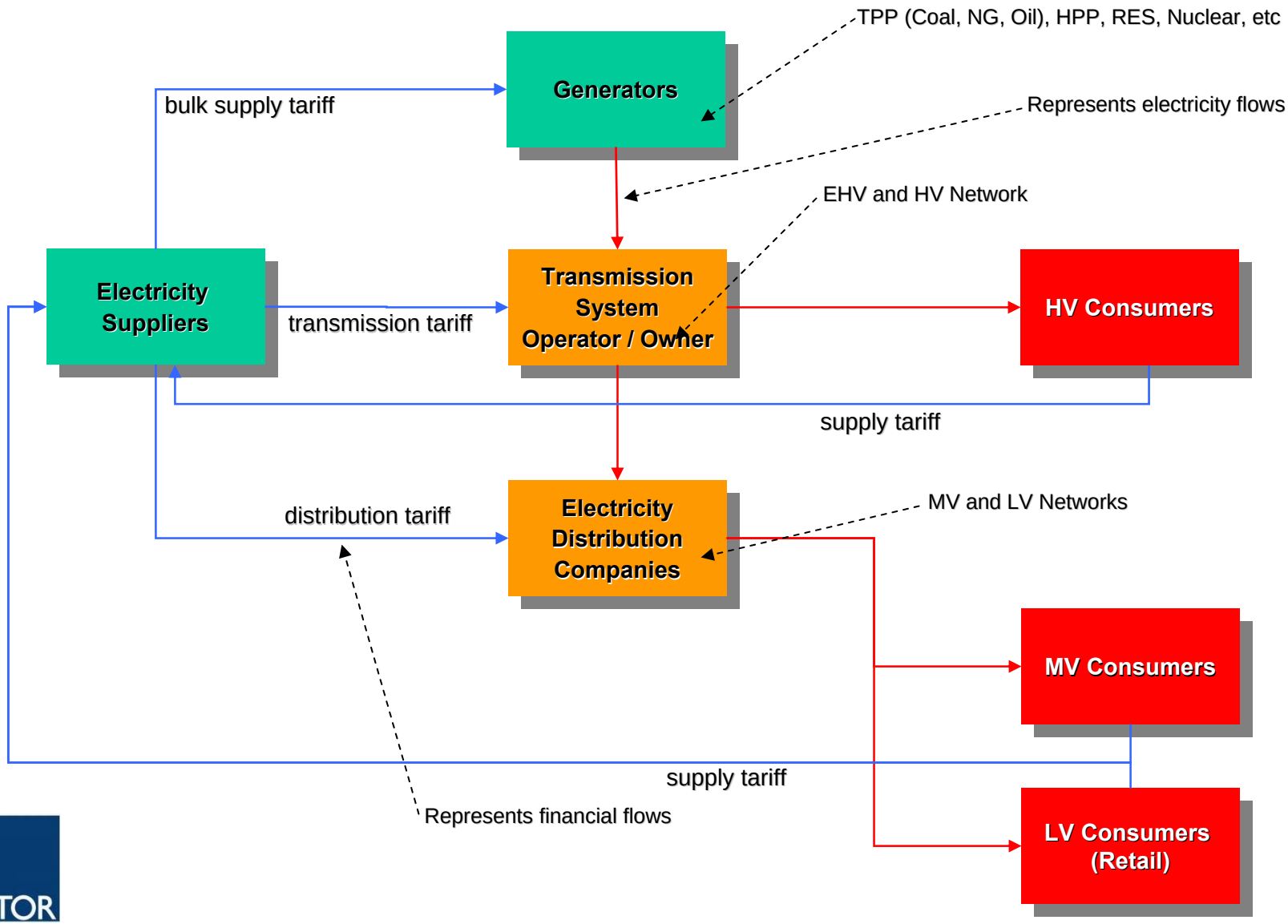
ENERGY TARIFF COMPONENTS

Electricity Sector Structure – Physical and Financial Flows



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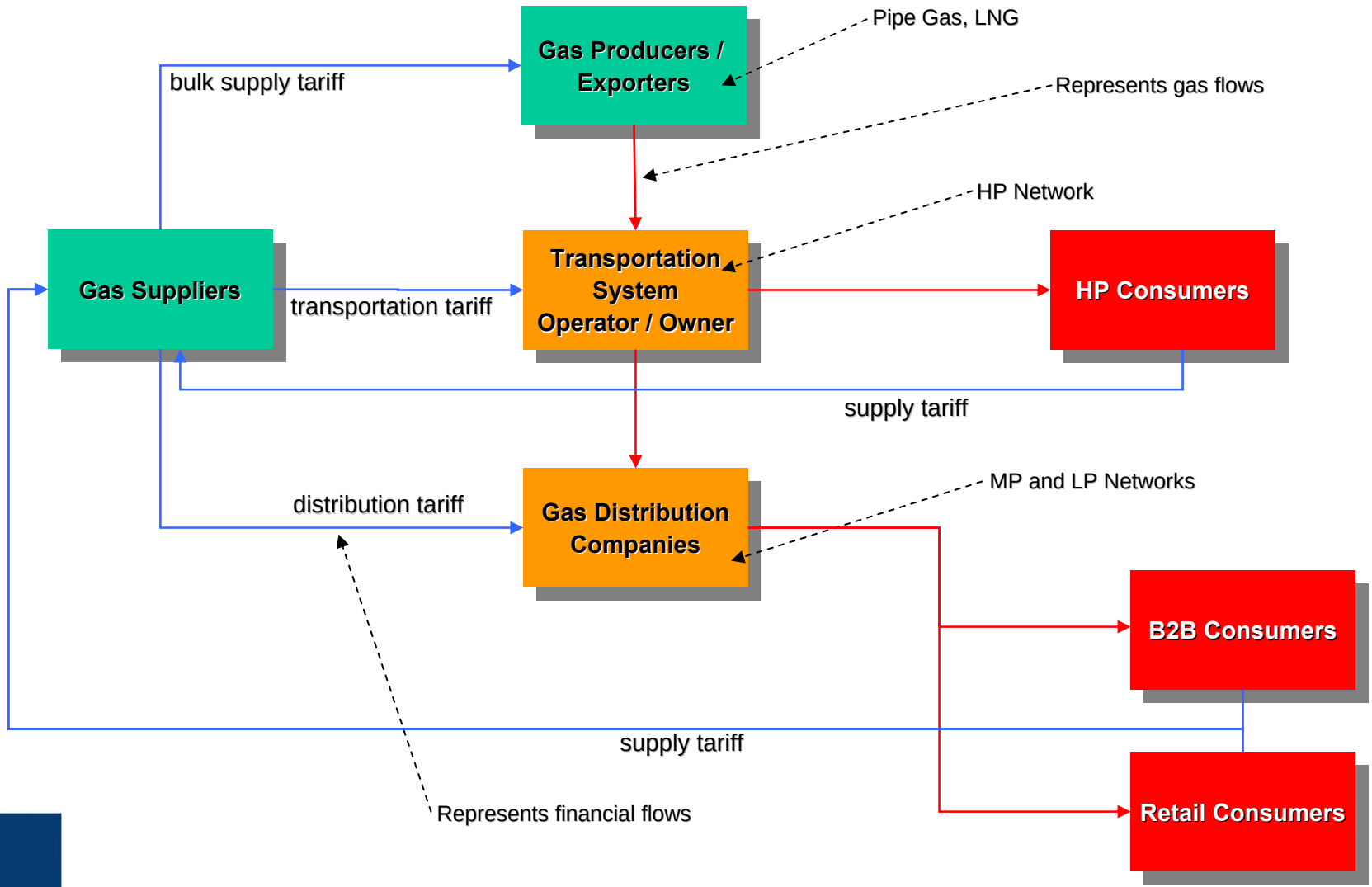
ENERGY TARIFF COMPONENTS

Gas Sector Structure – Physical and Financial Flows



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PRACTICAL TARIFFS

Obstacles to Calculation and Application of Economic Tariffs

➔ In theory, charges resulting from “economic” tariffs, perfectly reflect the cost each customer causes to the system as a result of his power and energy consumption

➔ The calculation and application of economic tariffs is not possible in practice:

- lack of sufficient data
- metering constraints on tariff applicability
- impossible to predict the behavior of the energy system in advance
- existence of Public Service Obligations
- undesirability of overly complex tariffs.

➔ Economic tariffs must be adjusted to derive **practical tariffs**.

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PRACTICAL TARIFF ISSUES

Practical Tariffs Approach

Lack of sufficient data: Individual customer load profiles

➔Allocate costs by grouping customers with a similar load profile and estimate their collective behavior in typical days and time zones (summer, winter, peak, off-peak, etc.)

Metering constraints: Lack of power meters in domestic customers

➔The power charge is transformed into a fixed or an energy charge, on the basis of assumptions as to the domestic customers' (known or estimated) load profile or connection characteristics.

Impossible to predict the behavior of the energy system in advance: Time of peak demand

➔We can define a period in which there is a very high probability (~1) of peak occurrence and then calculate tariffs on the basis of the estimated demand of customers during this time zone.

Existence of Public Service Obligations: Customers in non-interconnected systems

➔Calculate the cost differential and allocate this cost evenly to all customers through a PSO levy

Practical Tariffs Approach

Short run profitability versus Long run cost recovery

➔Smoothing periods for tariffs may need to be adjusted, especially for systems in the development phase, where the application of economic tariffs based on long run cost recovery can create cashflow and/or proftibaility shortfalls in the short run.

Economic tariffs versus competition prices

➔Review of tariffs vis a vis prices of competitive fuels, is always necessary, leading to adjustments. The existence of competitive fuels and therefore high elasticity of customer demand, will lead to shifts in demand if prices are not competitive.

Transition Strategy

- Transition strategy is an important issue in all energy markets on their way to liberalisation, since:
  - Former state ownership economic and social policy considerations in the tariff setting system, led to cross-subsidies between customer categories. The imposition of economic tariffs would require large changes in tariff levels in customers who were subsidized
  - New tariff structures outlined by European directives, national legislation and current regulatory practices are usually different to existing ones
- Transition strategies in electricity tariffs vary among European countries due to the particular circumstances (weather conditions, existence of competition, tariff levels, regulatory model, etc.). Some common points:
  - In many countries, the old tariff system remained for captive customers, while new tariffs were allowed for eligible ones.
  - Generally, only eligible customer tariffs appear to fully reflect real costs. Other costs (e.g. stranded costs) are recovered through captive customers.
  - Tariffs are adjusted on a yearly basis to reflect system and supplier costs.