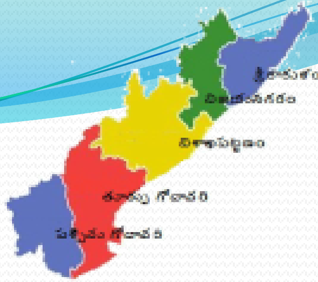


# EASTERN POWER DISTRIBUTION COMPANY of A.P LTD.,

## Presentation on

## Cost of Supply – Methodology

- APEPDCL is following **Embedded Cost methodology** for arriving Cost of Service **(CoS)** for **different consumer categories** and filing ARR before APERC.

**Expenditure Functionalization:**

The **expenditure** pertaining to EPDCL is taken as per the ARR.

- Power Purchase Cost
- Transmission and SLDC charges
- Distribution Cost
    - = O&M Cost
    - = ROCE
    - = Depreciation
    - = Interest on Security Deposit

The above **expenditure** is classified into;

- **Demand related**
- Energy related
- 80% Demand, 20% Customer
- Customer related

- **Arriving above Demand through Category wise Load Curves:**

  **-** Load Shapes of different categories of consumers are constructed based on the hourly demand data from feeder samples.

  - Data is collected from sample feeders from all the circles/zones for each category.

  - From each sample feeder hourly data was collected for upto 10 days per quarter.

  - The samples include normal working days as well as non-working days like Sundays, Festivals and other Holidays.

  - Based on the collected feeder samples, load curve for each category will be arrived.

## ✓ Estimation of Coincident and Non-Coincident Demand for each Category

- Demand at customer voltage level is estimated using the load curves of each category.

- Hourly demand for each category is grossed up with respective T&D losses to arrive at the demand contributed by each category to the grid demand.

- Maximum Demand of each category is considered as Non-Coincident Demand.

- Based on the hourly demands of each category at the grid level the peak time is arrived.

- Corresponding demand contributed by each category during the peak hour is considered as Coincident Demand.

## ✓ Allocation of expenditure to consumer categories

**Power Purchase Cost Allocation**

- As fixed costs of power purchase is driven primarily by the system peak demand, hence fixed cost component of Power Purchase is allocated to various categories based on the Coincident Demand.

- Variable costs are allocated based on the energy requirement of each category

**Transmission Cost Allocation**

- Transmission Costs including PGCIL Costs, SLDC Costs and ULDC charges is dependent on the Non-Coincident Demand and hence are allocated in proportion to the Non-Coincident Demand of each category.

**Distribution Cost Allocation**

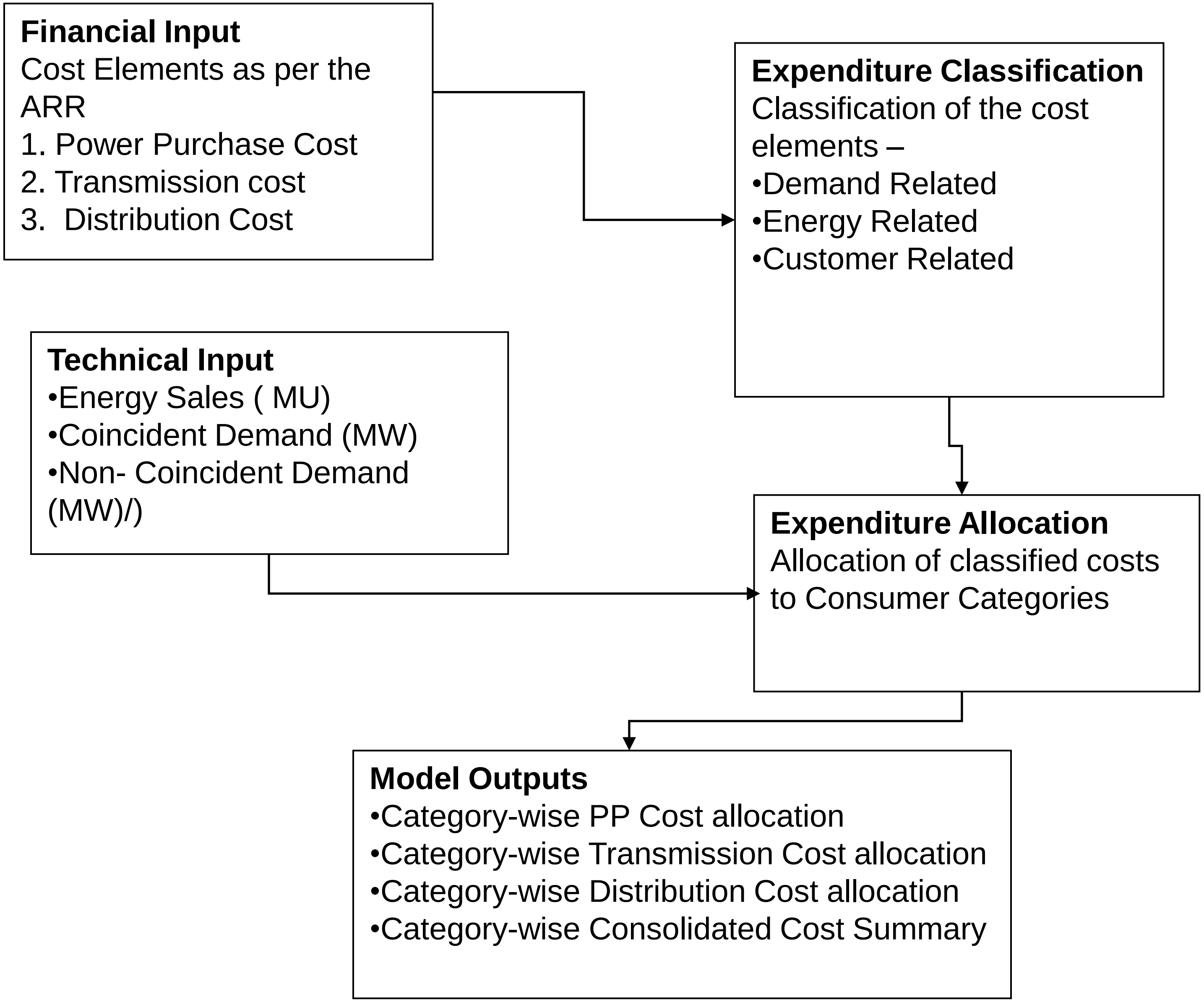
- Distribution Cost consists of Employee Expenses, Interest and Depreciation costs of Distribution Assets. These costs are dependent on both the Non-coincident Demand of each category as well as on the number of customers.

- 80% of the distribution cost of the licensee is allocated based on the Non- Coincident Demand.

- 20% of the distribution costs is allocated in the proportion of number of consumers in each category.

**Interest on Security Deposit**

- As Consumer Security Deposit is dependent on the energy consumed by each category, interest on CSD is allocated based on the energy requirement of each category


Financial Input
Cost Elements as per the ARR
1. Power Purchase Cost
2. Transmission cost
3. Distribution Cost
Expenditure Classification
Classification of the cost elements –
•Demand Related
•Energy Related
•Customer Related
Technical Input
•Energy Sales ( MU)
•Coincident Demand (MW)
•Non- Coincident Demand (MW)/)
Expenditure Allocation
Allocation of classified costs to Consumer Categories
Model Outputs
•Category-wise PP Cost allocation
•Category-wise Transmission Cost allocation
•Category-wise Distribution Cost allocation
•Category-wise Consolidated Cost Summary

**AP DISCOMs** are following **“Embedded Cost Approach”** and filing ARR considering the following merits in the methodology:

1. Historical data is used, that can be made available.

2. Capacity costs are used in the allocation.

3. Costs classification are very much aligned **w.r.t.** revenue requirement.

4. This methodology **reflects** the **true nature of costs** incurred by the utility to supply single unit (Rs/KWH) to each & every category of consumer depending on their **Voltage** of use & **Purpose** of use.

# Thank You…