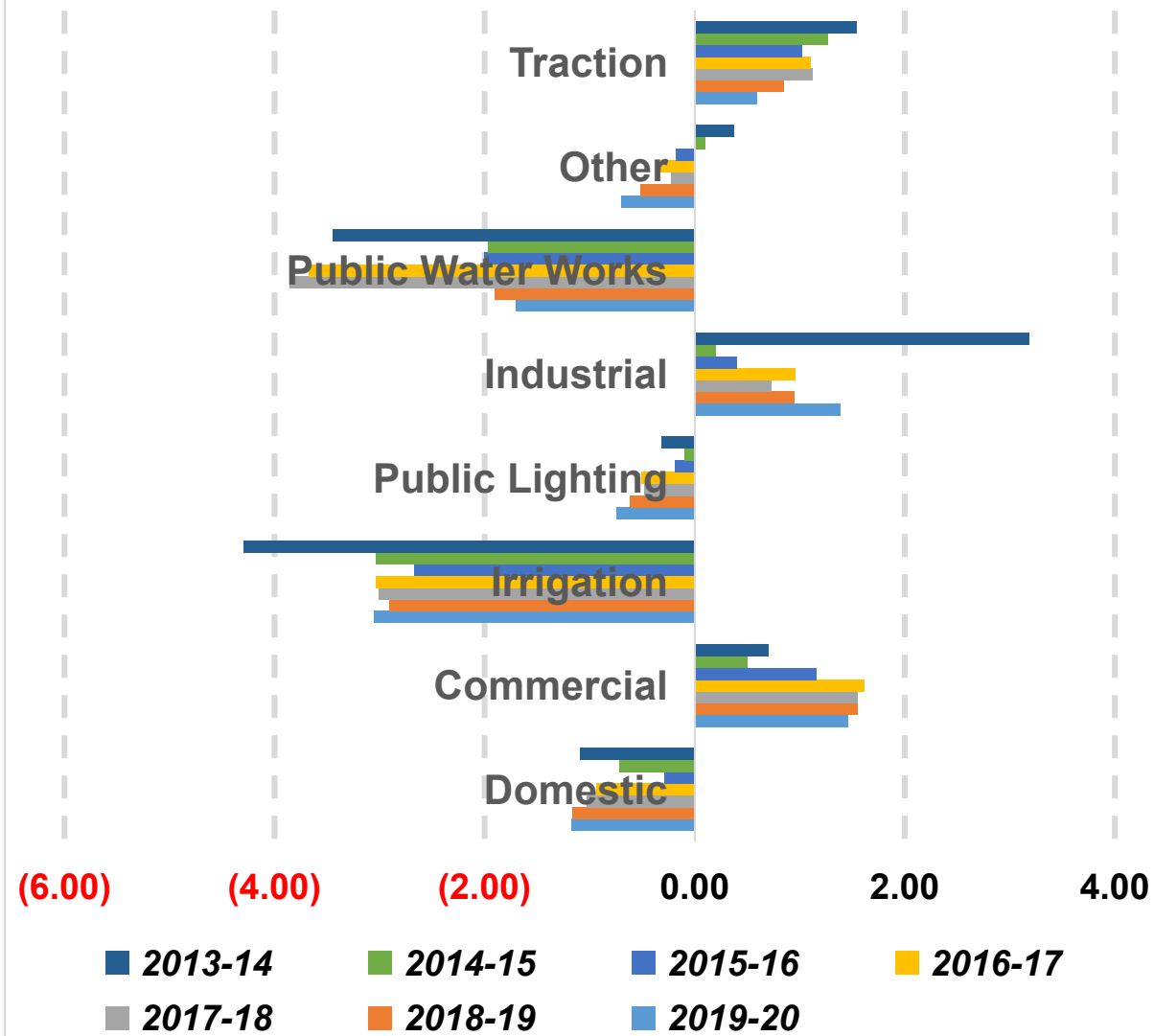
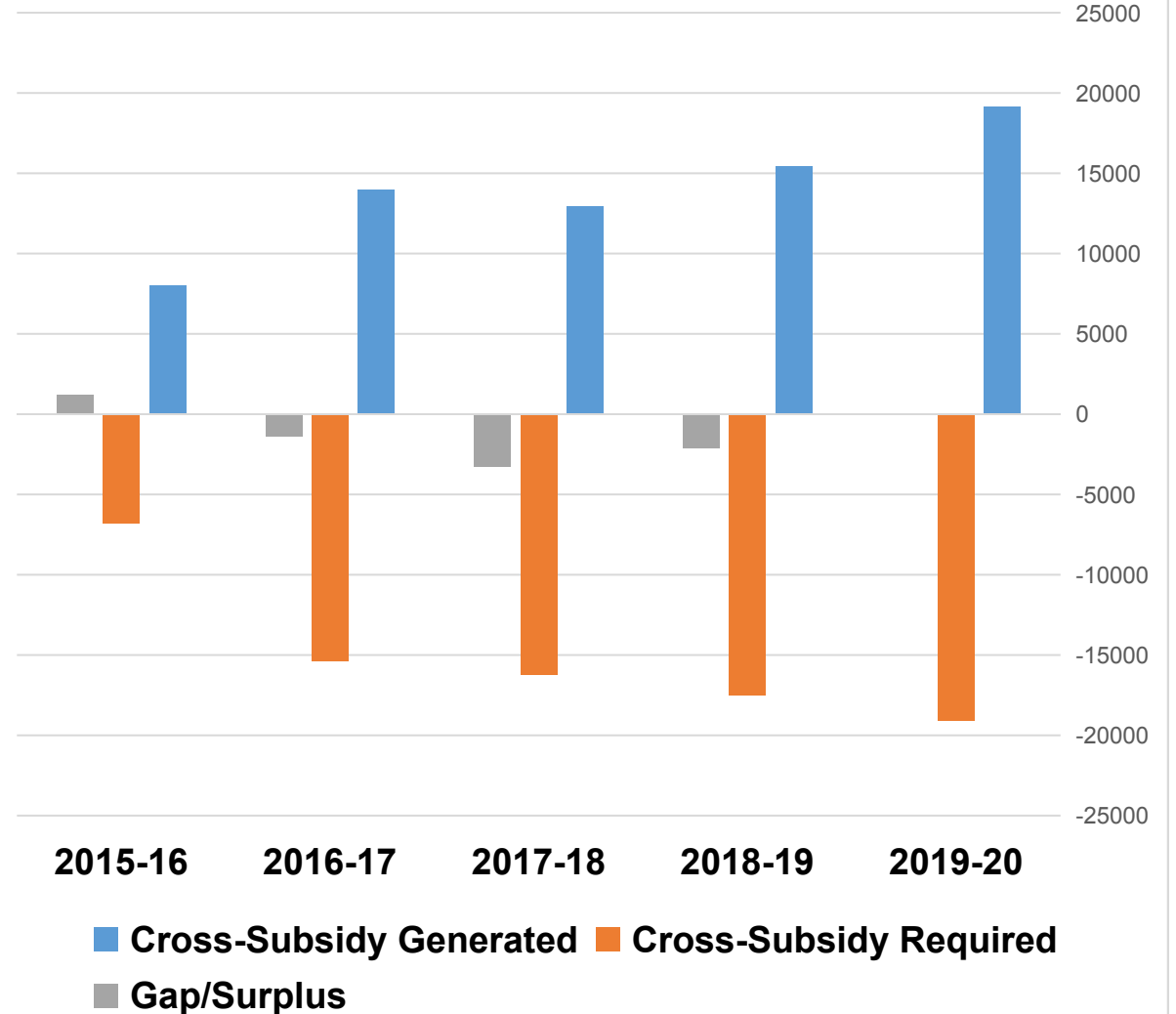


Summary - West Bengal - Cross Subsidy

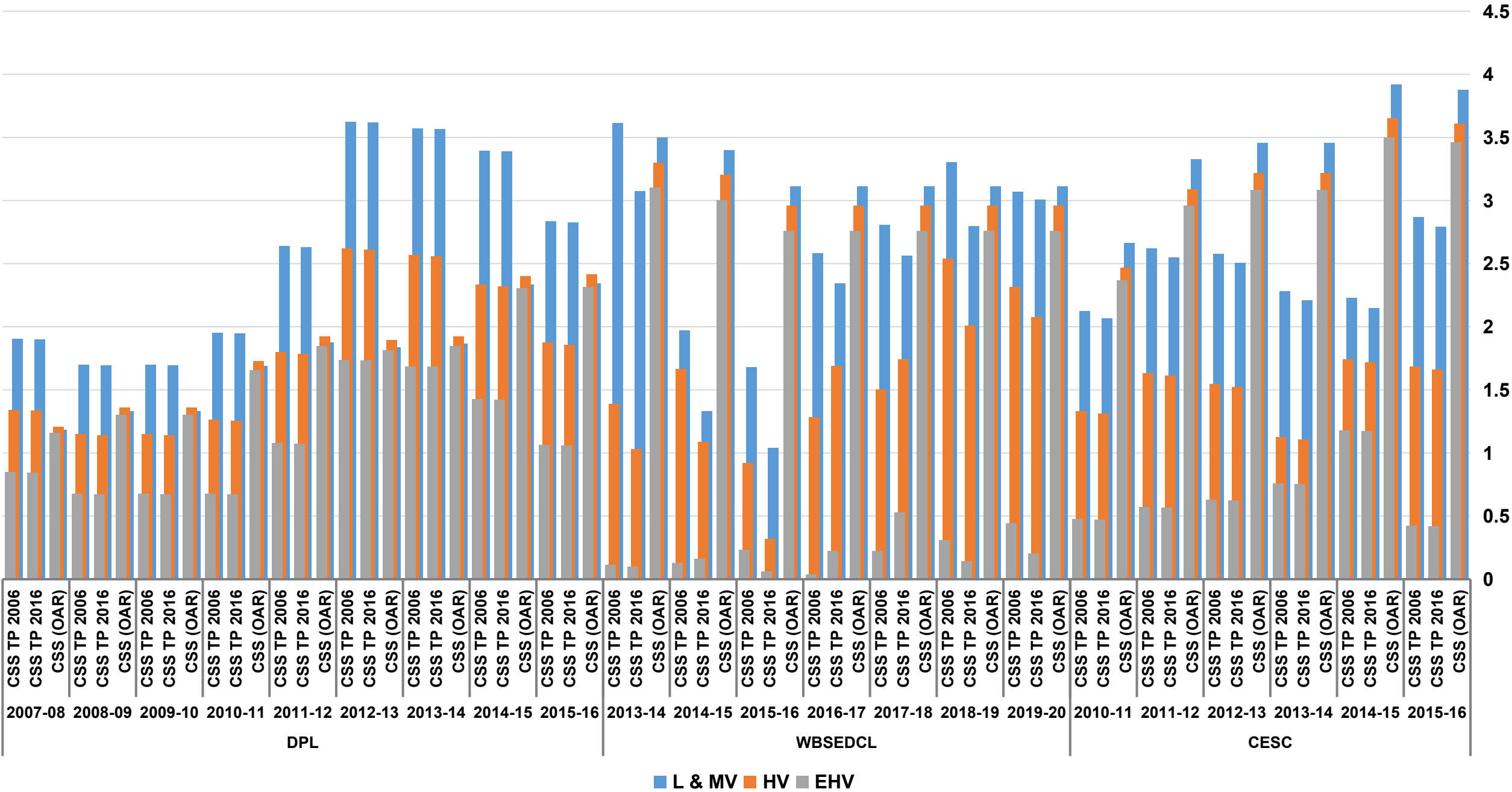
WBSEDCL Category-wise Cross-subsidy (Rs./kWh)



WBSEDCL Cross-Subsidy Generated/Required (Rs. Lakh)



West Bengal Cross Subsidy Surcharge across DISCOMs (Rs./kWh)



Project 2 : Presentation of West Bengal Cross Subsidy & Cross Subsidy Surcharge

Submitted to : Prof. (Dr.) Anoop Singh

Submitted by :

Janhvi Tomar

Shreeyash Nitin Malode

Outline

- Introduction & Brief Overview
- Regulations
- Methodology
- Cross-Subsidy
- Cross-Subsidy Surcharge

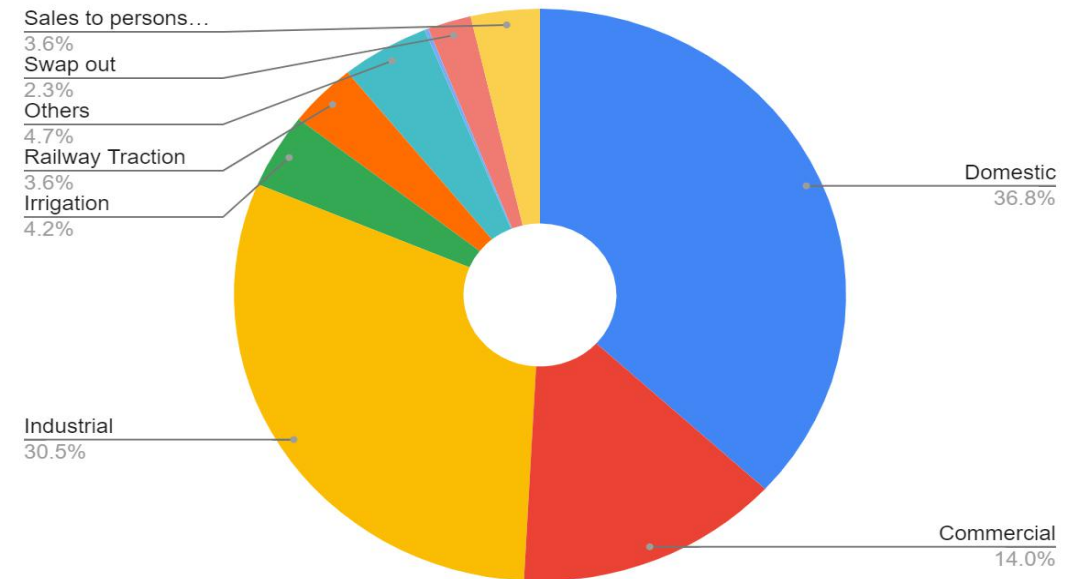
Data Sources

- Tariff Orders
- DISCOMs Annual Reports
- PFC Reports
- CER Regulatory Database

Introduction

About West Bengal:

- 10th largest consumer of electricity (4.38% of India's consumption)
- Total number of consumers in West Bengal = 22.471 millions
- Total connected load in West Bengal = 25554999 KW
- Distribution companies in WB:
- WBSEDCL, CESC, DPL, IPCL (Formerly knowns as DPSC), DVC



WBSEDCL distribution of sale of energy
for FY- 2019 - 20

WB Terms & Conditions Regulation for Determination of Tariff 2011

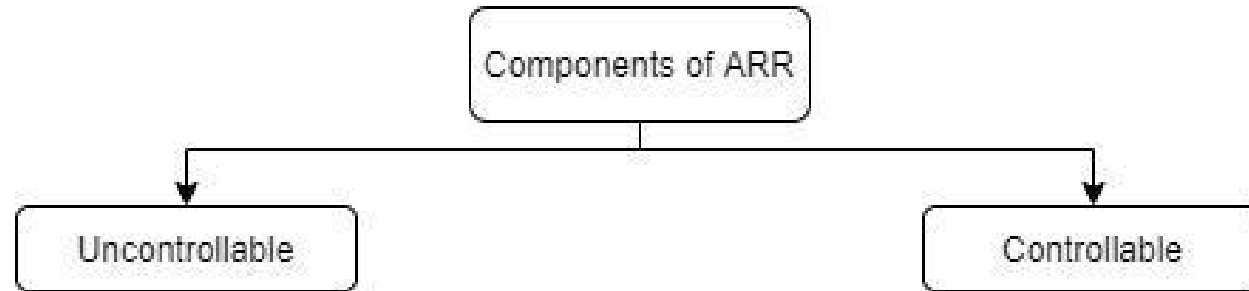
- **The Commission regulates** power purchases and procurement process of the DISCOMS
- **The Commission determines**
 - tariff with reference to terms and conditions regulation
 - open access charges / cross subsidy surcharge to open access customer or section of customers
- **MYT - Multi Year Tariff Framework**
 - ARR determination for each ensuing year
 - Tariff determination for first ensuing year
 - Amendment of tariff after and second and following ensuing years
- Control period has had been for annual(till 2005) but in the past years MYT is being followed where control period is 3 and 5 years.

WB Terms & Conditions for Determination of Tariff Regulation

Particulars	Tariff Regulation, 2007	Tariff Regulation, 2011
Control Period	1 year (FY 08), 3 years (FY 09 - 11)	3 Years (FY12 to FY14), 5 years (FY15-19)
ARR Determination	At the beginning of control period	At the beginning of control period
Tariff Determination	Multi year tariff & annual revision	Multi year tariff & annual revision
Truing Up	Annually (2 Years Prior to current year)	Annually (2 Years Prior to current year)
Debt - Equity Ratio	70:30	70:30

Source: WBERC Regulations Link - <https://wberc.gov.in/regulations-under-the-electricity-act-2003>

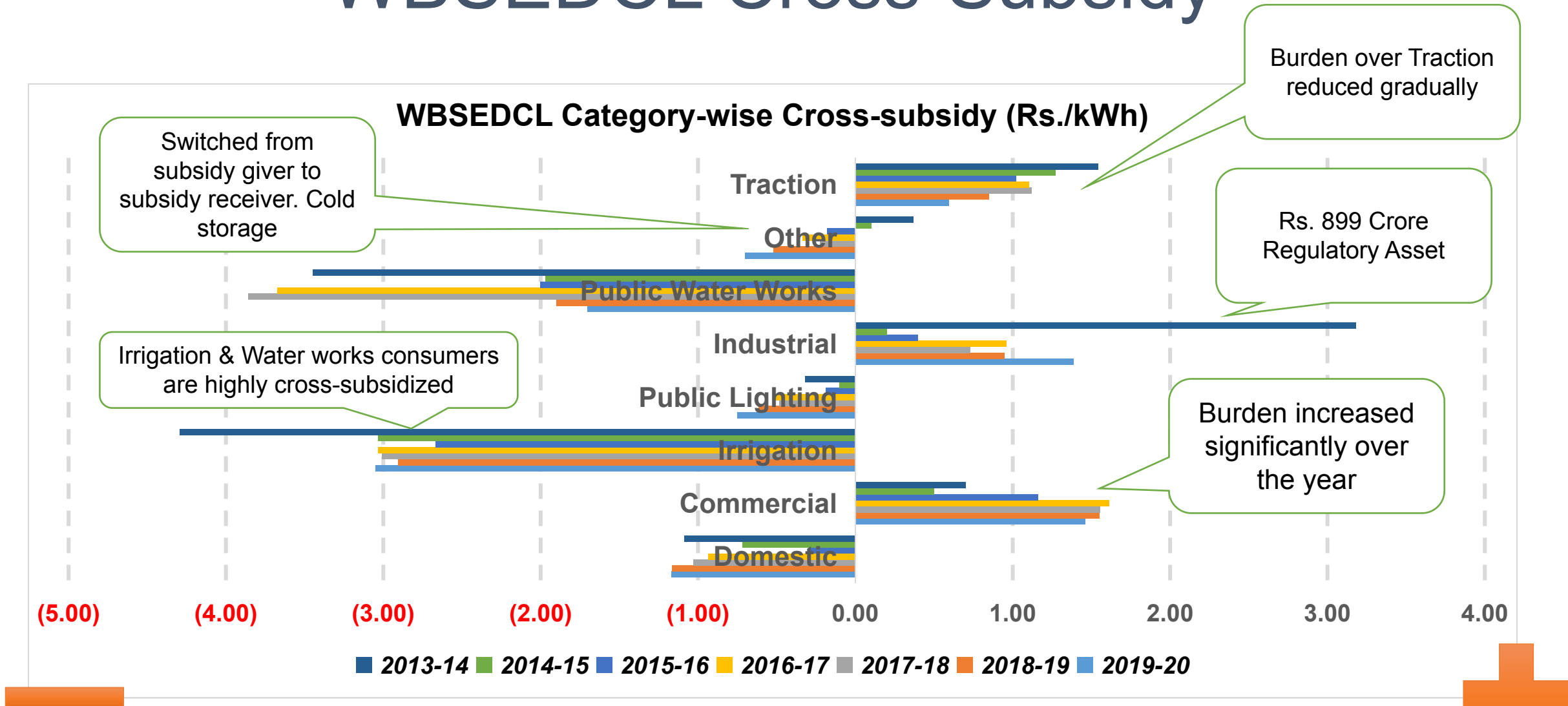
WB Terms & Conditions Regulation for Determination of Tariff 2011



- Fuel Cost
- Employee cost
- Outsourcing limited to employee cost
- Effect of rebate / surcharge
- Sales volume
- Non Tariff Income
- Taxes on Income, duties etc.
- Insurance premium
- Addition/reduction in Equity base, Capital loan base, depreciation of asset
- Interest rate and finance charges
- T&D losses

- Capital Loan Base
- Depreciation
- Repair & Maintenance Spares
- Administrative and general expenses
- O & M expenses
- Equity base subject to ceiling

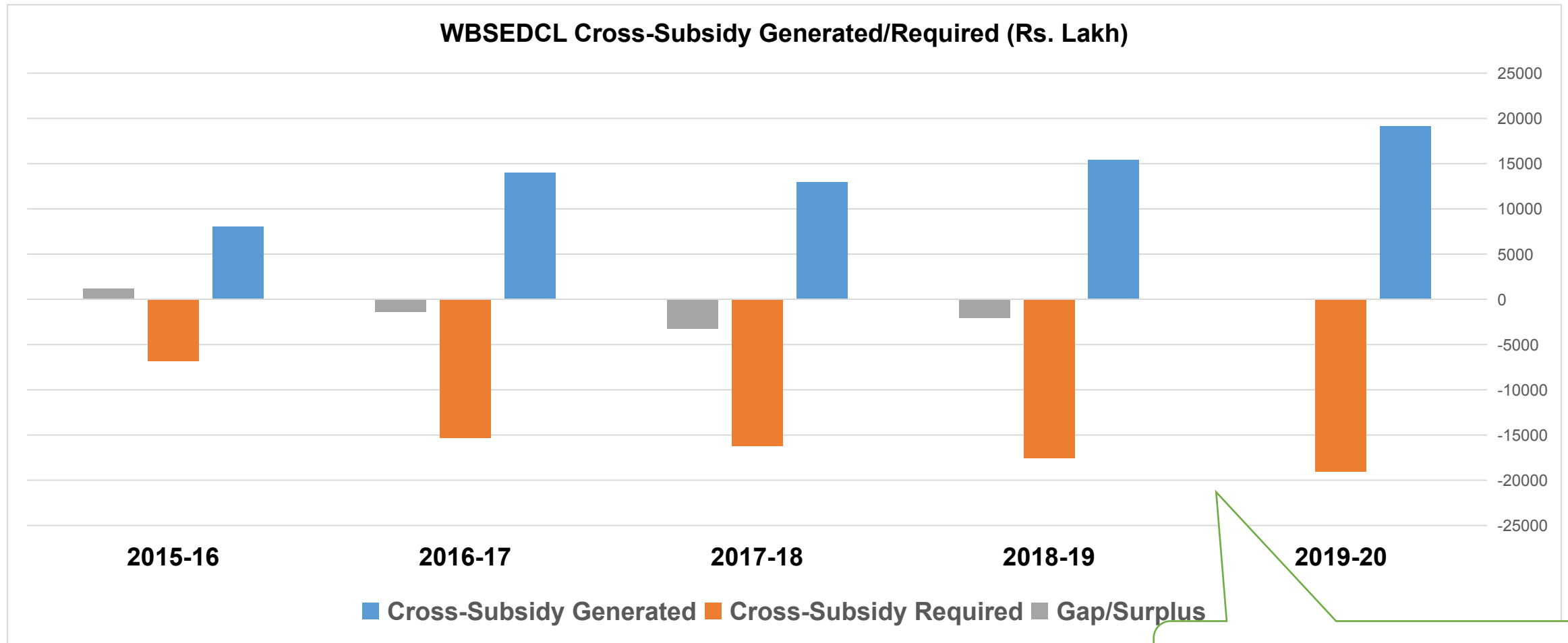
WBSEDCL Cross-Subsidy



Source: Computed from Tariff Order, Annual Reports



WBSEDCL Cross Subsidy Generated



Source: Computed

Cross-subsidy required increasing

CSS Methodology

Tariff Policy 2016:

$$S = T - [C / (1 - L / 100) + D + R]$$

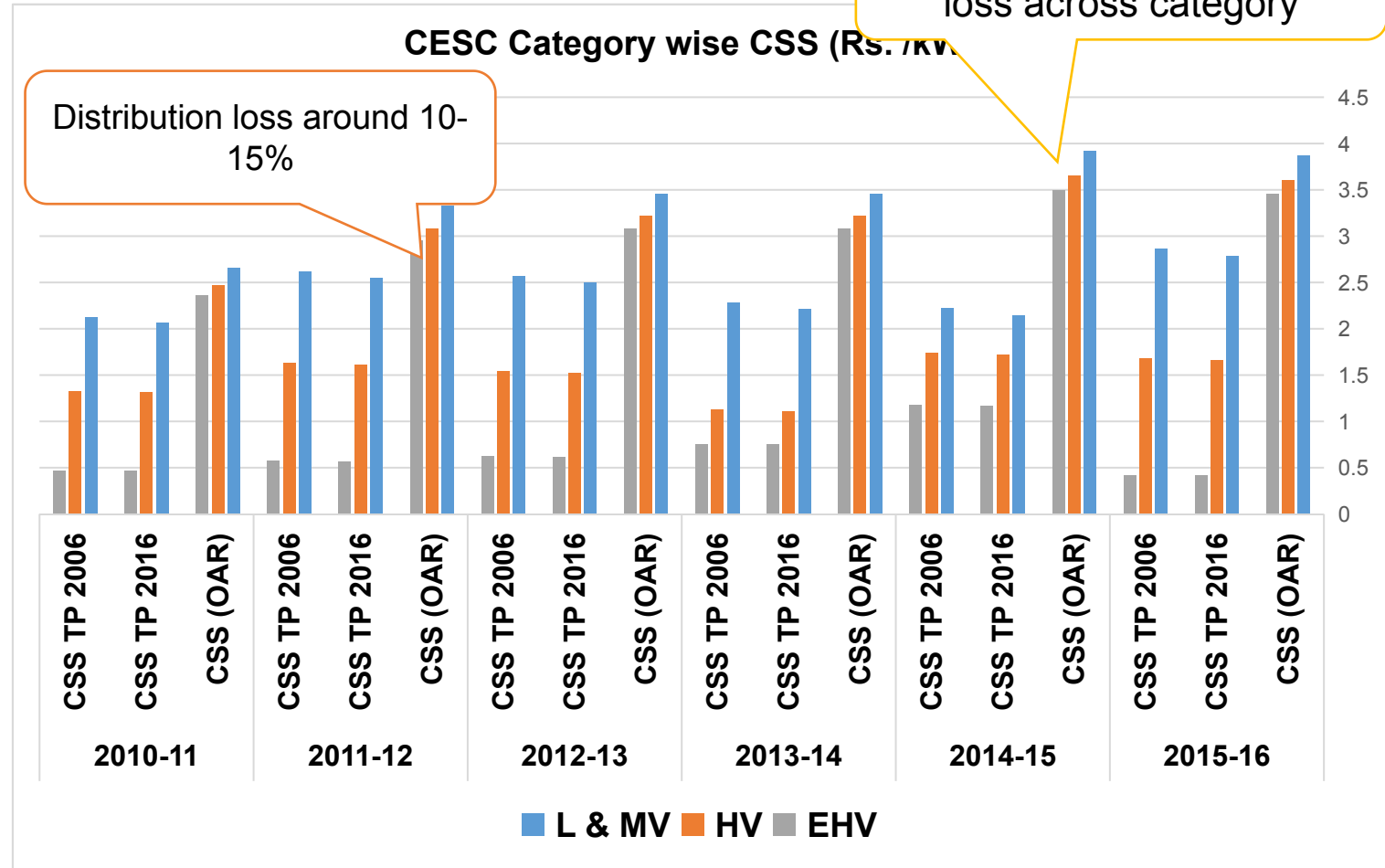
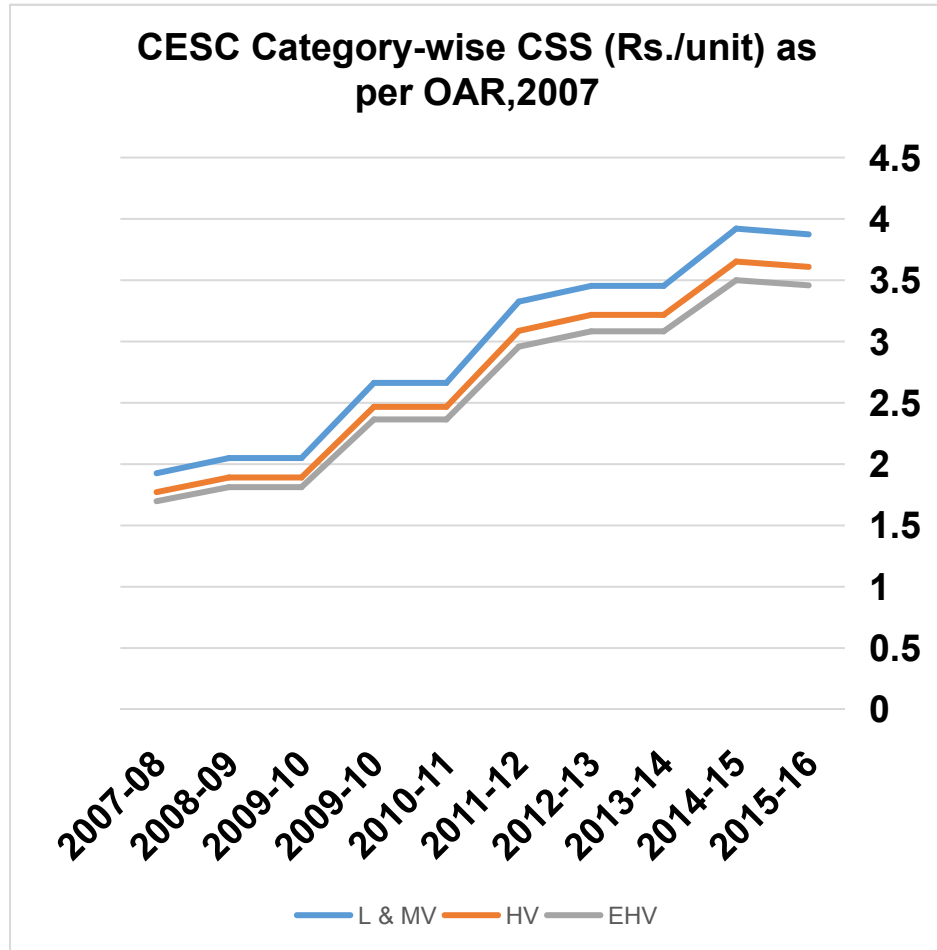
Tariff Policy 2006:

$$S = T - [C \times (1 + L / 100) + D]$$

WB Open Access Regulation 2007:

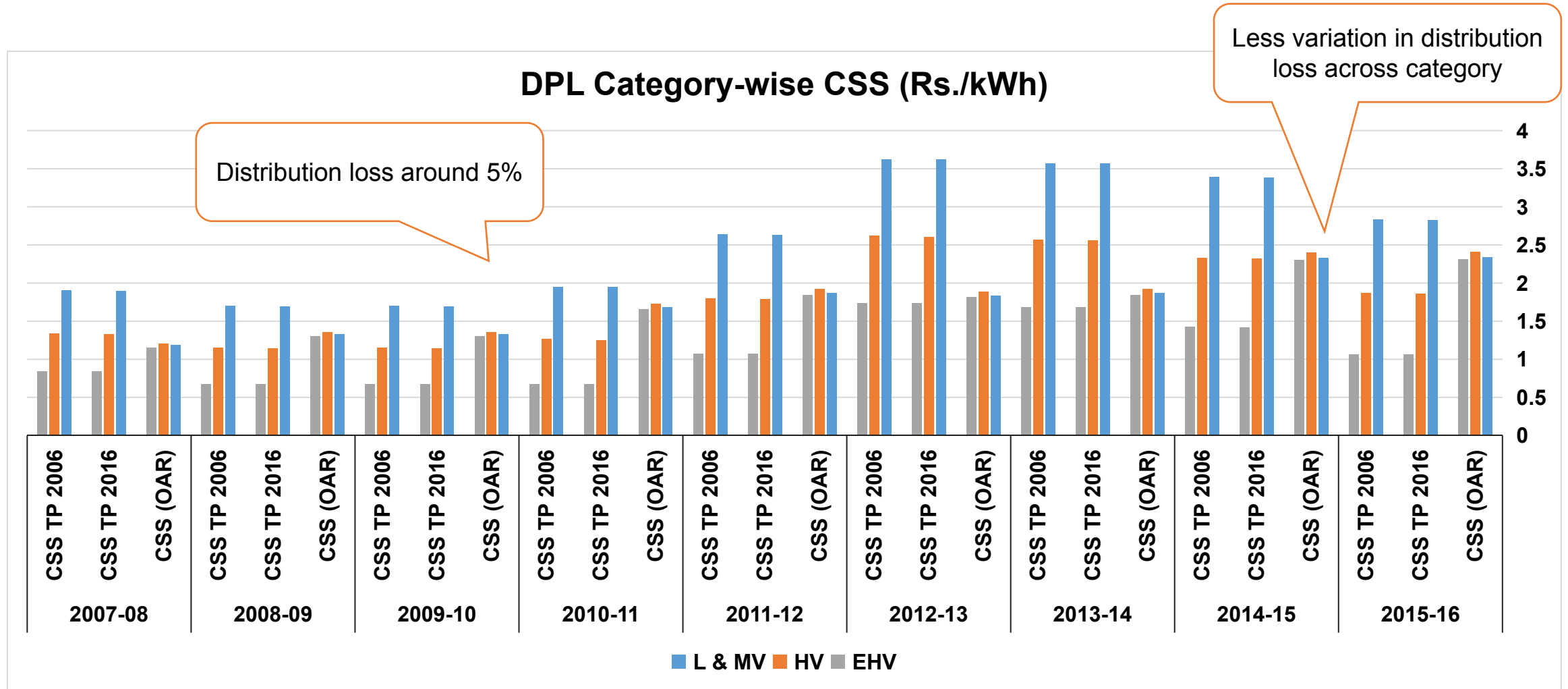
$$S = [C / ((100 - L) \times 0.01) + D]$$

CESC Cross-Subsidy Surcharge



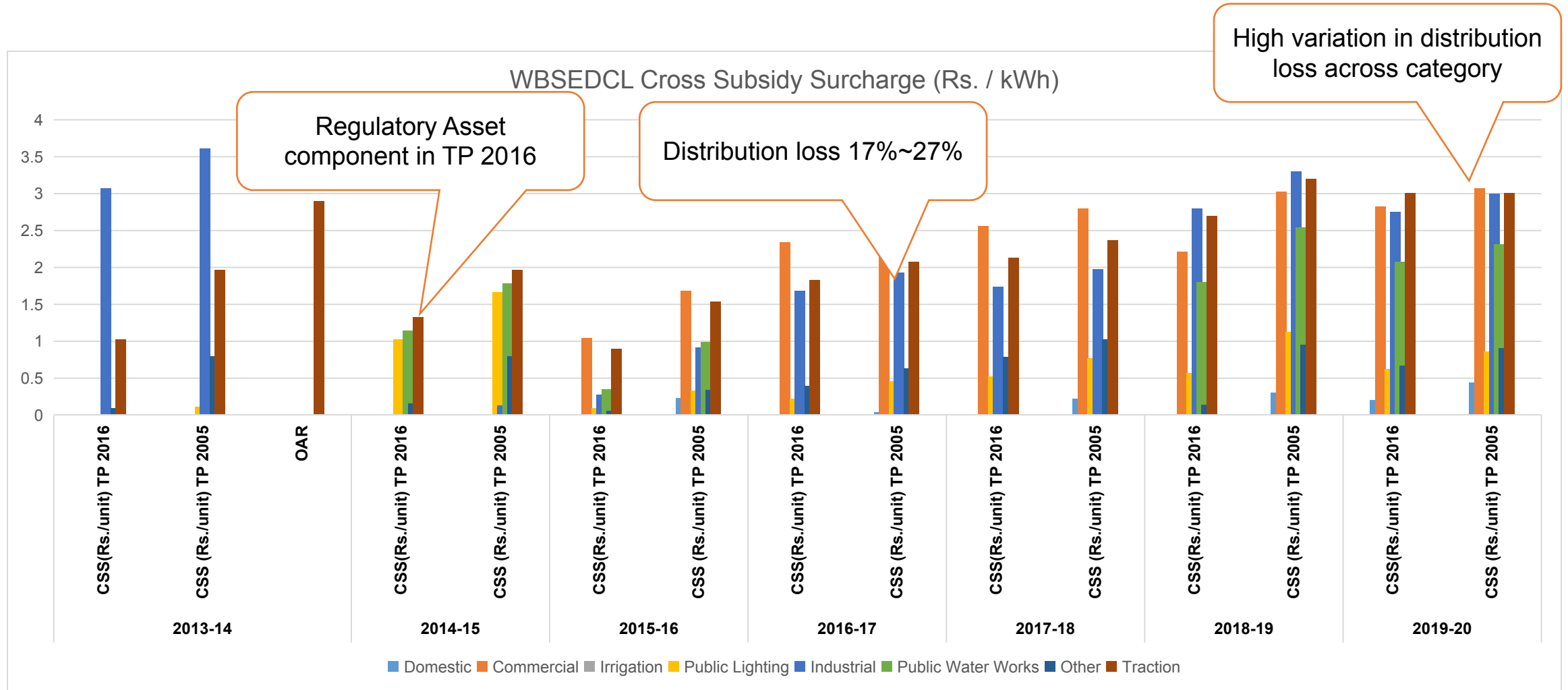
Source: Computed from Tariff Order & Wheeling Charges Order by WBERC

DPL Cross-Subsidy Surcharge



Source: Computed from Tariff Order & Wheeling Charges Order by WBERC

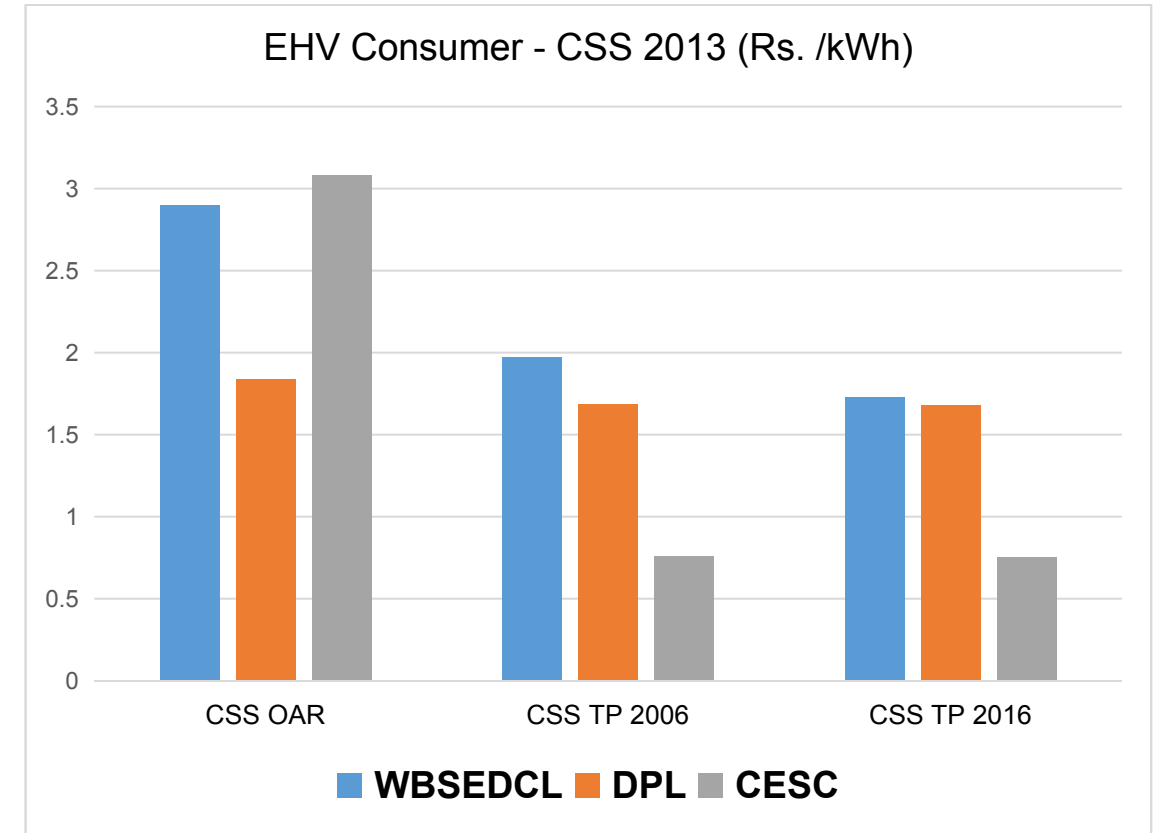
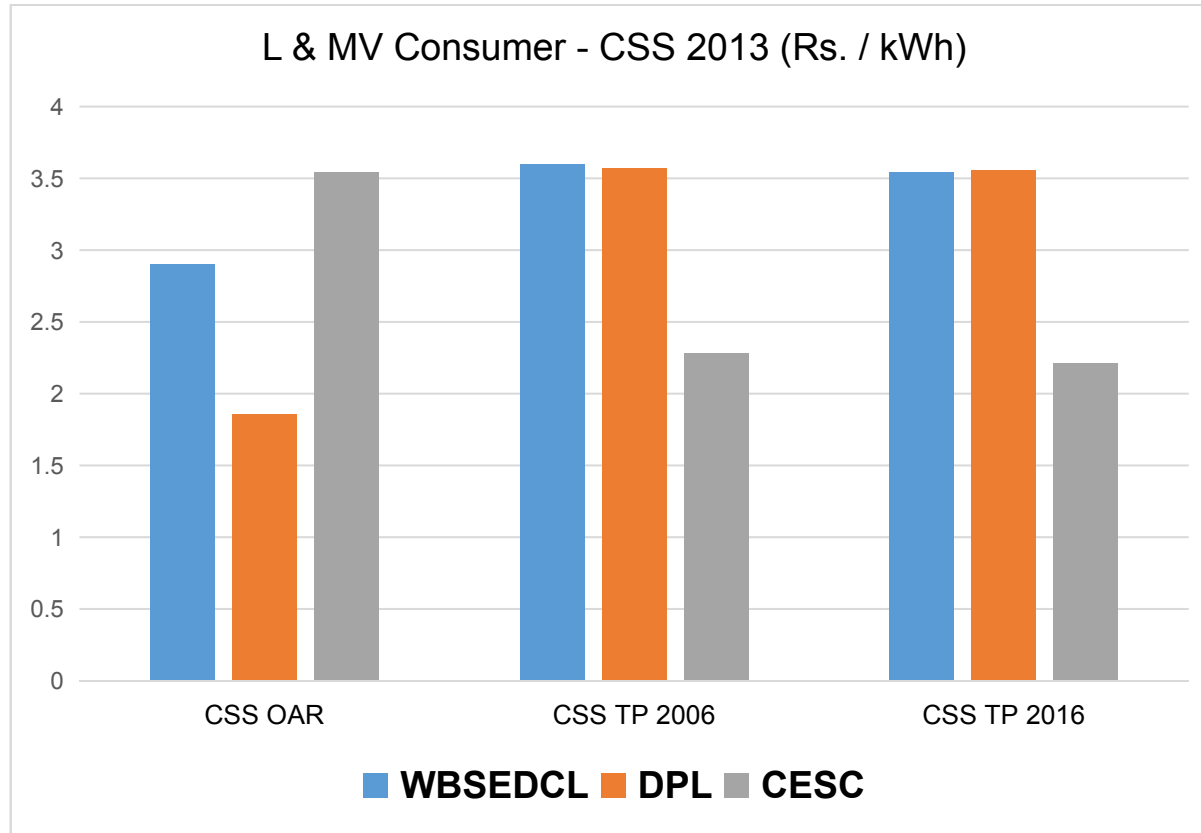
WBSEDCL Cross-Subsidy Surcharge



Source: Computed from Tariff Order & Wheeling Charges Order by WBERC

DISCOMs CSS Comparison across category

CSS calculation using WB Open Access Regulation benefitting L & MV consumer. Whereas, TP benefitting EHV.



Source: Computed from Tariff Order & Wheeling Charges Order by WBERC

Thank you