e-ISJN: A4372-3114
p-ISJN: A4372-3115
ISSN: 2321-7782 (Online)
ISSN: 2347-1778 (Print)
Impact Factor: 7.327

Volume 6, Issue 2, February 2018

# **International Journal of Advance Research in Computer Science and Management Studies**

Research Article / Survey Paper / Case Study
Available online at: www.ijarcsms.com

# Impact of Reforms on Profitability of PSEB

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DOI: https://doi.org/10.61161/ijarcsms.v6i2.29

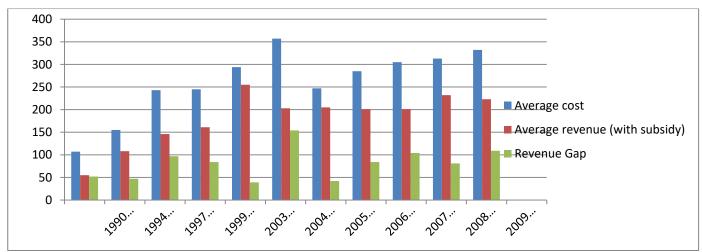
Overall profitability of a utility interrelated with its economical health. Any utility is said to be economic viable only and only if it is able to cover not only its operating expenses but also earn a reasonable rate of return on its capital. After independence, as the demand of electricity was going on hence there is a need to boost up the installed capacity all over the country. Hence. Therefore, all state Govt. made many efforts to increase their transmission and distribution network, about more than 32% total investment made in energy sector .According to electricity (supply) act, 1948 it was realised that every utility should be commercially viable at least it earns a rate of return @ 3% on its new invested capital after paying its operating expenses. But most of the SEBs including PSEB did not able to generate the wanted revenue surplus, as commercial losses of the utility going up rapidly, and the tariff for agriculture was so below from the cost power supply as the utilities was pressured by the govt. In this paper the economic viability of PSEB is highlighted taking some important indicator as cost of supply, average revenue realised from consumers and also examined electricity tariff status in comparison of cost of supply. Present paper have two main parts first part present the comparative profitable position of PSEB pre and post reform period and second part present the Conclusion.

#### Cost of Power Supply and Revenue Generated

Average cost of power supply include power Purchased cost, fuel cost maintenance cost, interest, depreciation cost. As there shown frequently increase in all the cost indicator above mentioned average cost of power supply increase rapidly.

Average revenue realised is the excess of amount generated on the average cost. Cost recovery ratio of average operating expenditure to average revenue realization. If less than one then cost of supply was higher than the average revenue realised.

A comparative analysis of cost revenue and their difference is presented that Diagram 1.1.



Above diagram present that average cost of power supply going increasing in pre reform period and after reform still increasing 332 paise per unit in 2009-10. Average tariff increased in pre reform from 55 paise per unit to 161 up to 1999-00 after reform it increased 223 paise per unit in 2009-10. The gap has shown fluctuating trend.

#### Situation of Cost Recovery Ratio of the Punjab Utility is as under and presented by the table

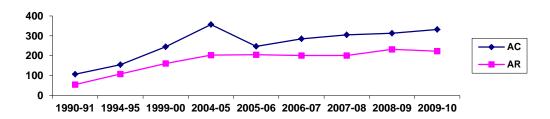
Table 1.1: Cost Recovery Ratio of PSEB

| Table 1.1: Cost Recovery Ratio of PSEB |                    |  |  |
|----------------------------------------|--------------------|--|--|
| Time Period                            | cost recovery      |  |  |
|                                        | ratio              |  |  |
| Pre Reform                             |                    |  |  |
| 1991-92                                | Above 50           |  |  |
| 1994-95                                | approx70           |  |  |
| 1997-98                                | Decline at60       |  |  |
| Post Reform                            |                    |  |  |
| 1999-00                                | Above 66           |  |  |
| 2003-04                                | Above 86           |  |  |
| 2006-07                                | Decline 71         |  |  |
| 2007-08                                | Further decline 66 |  |  |
| 2009-10                                | Improve 67         |  |  |

Source: Planning Commission, Oct. 2002 Electricity Statistics of PSEB PSERC, Tariff Order

Cost of recovery from tariff was above 50% in 1990-91 increased 70% 1994-95 in but again declined 1997-98 that the position of pre reform period. After reforms above 66% and again increased 86% in 2003-04 but declined 66 2007-08 as the Utility tried its best and slight improve up to 67%. Growing gap has adversely affected the profitability performance of Punjab Utilities.

Figure 1.2: Profitable posiblity Position



We can see from the diagram that utility shown highest gap in 2004-05 but improved in 2005-06. In subsequent years, shown fluctuating trend one an average revenue realization is very poor in the state; PSEB was unable to recover its cost through tariff. But cost recovery is not equel in various consumer categories an. Average tariff applicable to various consumer categories and shown large difference. As tariff of domestic and agricultural consumer is very little and they charged below than average cost of power supply. As in 1991-92, agriculture tariff was 10 paise and domestic was 87 paise whereas cost of supply was 94 paise. On the other as commercial, industrial etc. are paying very high tariff. As commercial users was 161 paise per unit in 1991-92. Hence there was a very high cross subsidisation. Industrial and Commercial consumers have to pay higher for meet revenue gap and generate surplus to cross-subsidise the agriculture sector.

Table 1.2: Consumer Category wise Average Revenue and Average Cost of Supply

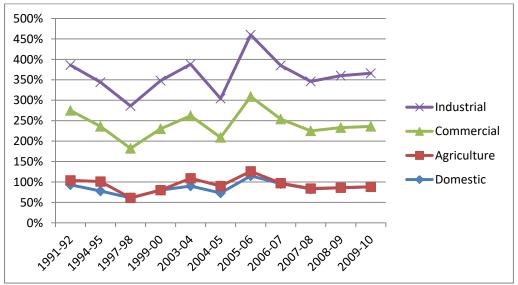
(Paise Per unit)

| Time Period | Average revenue |             |            | Average cost* |     |
|-------------|-----------------|-------------|------------|---------------|-----|
|             | House hold      | Agriculture | Commercial | Industrial    |     |
| 1991-92     | 87              | 10          | 161        | 104           | 94  |
| 1994-95     | 121             | 35          | 210        | 167           | 155 |
| 1997-98     | 149             | 00          | 294        | 252           | 243 |
| 1999-00     | 195             | 00          | 367        | 289           | 245 |
| 2003-04     | 266             | 57          | 451        | 371           | 294 |

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|---------|-----|----|-----|-------------------|-------------------|
| 2004-05 | 259 | 61 | 424 | 339               | 357               |
| 2005-06 | 283 | 28 | 451 | 373               | 247               |
| 2006-07 | 274 | 03 | 447 | 373               | 285               |
| 2007-08 | 253 | 02 | 431 | 368               | 305               |
| 2008-09 | 268 | 00 | 459 | 397               | 313               |
| 2000 10 | 202 | 00 | 402 | 421               | 222               |

Source Planning Commission Report on working of State Electricity Boards and Electricity Departments
Report of the Power Finance Corporation

Table presents that average revenue of the commercial sector was highest in FY 2009-10. And average revenue from Industrial sector is always higher than average cost of supply. Average revenue from the household and agriculture is much lower than average cost of supply, hence cost recovery form commercial and industrial sector is above 100%. In case of domestic and agriculture consumer categories, the cost recovery ratios was very low cost recovery ratios for various consumer categories are shown by the diagram 1.3



# Source: Planning Commission Report (2002)

# Tariff Orders of PSERC (From FY 2001-02 to FY 2011-12)

Table presents that cost recovery ratio of the commercial consumer category was the on the second after the industrial sector. It may be noted that actual average cost of electricity supplied to the industrial sector may be less than any other consumer category as it is demands the energy in bulk at a higher voltage level. Since most of the supply made to industrial sector is supplied though high tension (HT) voltage. Technically, the cost of supply at HT voltage is less than the cost at low tension lines. So, effectively the industrial as well as commercial consumer categories are generating surplus revenue to cross-subsidise the agricultural and domestic consumers. And average revenue of agriculture is 1/3 of power supplied to it. In spite of this farmers received power free of cost from April 1<sup>st</sup> 2006 (tariff Order 2006-07 issued by PSERC.

#### Issues in Subsidy and Cross Subsidy

As above stated cost recovery from agriculture sector was nil and enjoying free power supply since 1997-98. Which is a bad indicator for the financial health of utility. As the Chief Ministers's conference held in 1996, it was concluded that no state would supply power below the tariff Rs 0.50 per unit to the agricultural sector which had an objective to improve the financial health of the utility.

#### **Subsidies**

Punjab state government provides subsidy to beer the loss made by the free power supply to agriculture but that is not sufficient details of these subsidies are as under Figure 1.4

<sup>\*</sup> Average cost is for all consumer categories.

Figure 1.4 Subsidy Received from the Government (Rs Crore)

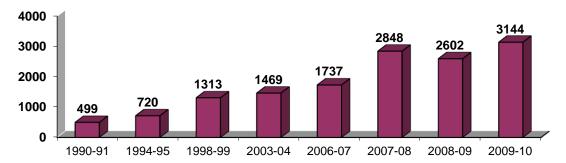


Diagram highlights that Agriculture subsidy increased from Rs.499 crore in 1990-91 to Rs. 1313 crore in 1998-99 and reached to Rs. 1773 crore in 2006-07. And subsidy amount of Subsidies jumped to Rs. 3144 crore in 2009-10.

Household sector is the second major beneficiary of the power subsidies but that is lowering the tariff payable by these consumers. Subsidy made available to domestic consumers is presented in the Figure 1.5

350 314.18 310 300 243 250 190.6 200 145.52 150 76.98 100 45.34 50 0 1990-91 1994-95 1997-98 1999-00 2003-04 2006-07 2008-09

Figure 1.5: Subsidy available for domestic consumers

Diagram present that subsidy for domestic consumers increased from Rs. 45.34 to 310.75 crore in pre reform period After reforms that, it reduced in 1999-00 and 2003-04 and further increased for upcoming years

### **Cross Subsidisation**

Punjab power utility follows the policy of cross subsidization to achieve additional revenue to fulfil the losses on account to agricultural and domestic consumers. And Average recovery has been more than 100% from the commercial as well as industrial consumer categories. However, industrial generate higher revenue surplus than commercial sector. As cost of supply for industrial sector is low and consumption is very high.

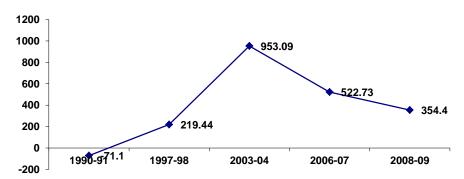


Figure 1.6: Cross Subsidies by Commercial and Industrial Sectors

Diagram present that in 1990-91 surplus generated by commercial and industrial users was negative. In 1997-98 and 2003-04 surplus generated by commercial and industrial sectors is more than gross subvention it is highest in 2003-04 but it declined in 2006-07 and 2008-09.

But the net adjusted subsidy in Punjab is very high because two main reason first total subsidies of agriculture and household sector and second cross subsidy level after the enactment of the Electricity Act 2003 has decreased subsidy bill of the state government has been increasing rapidly but relative share of subsidy received in the total revenue received was about 1/3. So, it shows that the dependency on the subvention received from the state government has increased in recent years.

Table 1.3 Share of subsidy in sale revenue (Rs Crore)

| Time Period | Subsidy received | Percentage of sale revenue |
|-------------|------------------|----------------------------|
| 2004-05     | 2285             | 15.78                      |
| 2005-06     | 1436             | 22.24                      |
| 2006-07     | 1424             | 20.94                      |
| 2007-08     | 2848             | 37.15                      |
| 2008-09     | 2602             | 29.84                      |
| 2009-10     | 3144             | 37.71                      |

Source: Report of the Power Finance Corporation on Performance of State Power Utilities (2004-05 to 2009-10)

It is shown by Table that subsidies showed increasing trend and their relative share increased 15% in 2004-05 to 38% in 2009-10. Hence ability of company to generate adequate revenue is declined.

## Commercial losses without and with subsidy

Commercial losses may be define as the gap between the total revenue and the total expenditure Table 4.10 presents the detail of commercial losses without and with subsidy.

Table 4.10: Commercial losses of the Company with and without subsidy

| Year    | Losses without subsidy | Losses with subsidy |
|---------|------------------------|---------------------|
| 1990-91 | 580                    | 580                 |
| 1995-96 | 644                    | 644                 |
| 1997-98 | 943                    | 943                 |
| 2002-03 | 2351                   | 1636                |
| 2003-04 | 2478                   | 1571                |
| 2004-05 | 2359                   | 1403                |
| 2005-06 | 2224                   | 1109                |
| 2008-09 | 3242                   | 640                 |
| 2009-10 | 2183                   | 1585                |

Source: Planning Commission and PFC Reports for the respective years

Table 1.5 presents that commercial loss with subsidy is increasing up to 2002-03 and this period gap between with subsidy losses is increasing so; there is a urgent need to provide adequate attention to reduce the losses increased by the utility.

#### Conclusion

We have seen that in spite of improving operational performance but the profitability position of the Utility is not satisfactory due to free power supply to the agriculture sector and very few tariffs for the household sector.

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