A COMPARATIVE STUDY ON PERFORMANCE OF HUBLI ELECTRICITY SUPPLY COMPANY LTD. KARNATAKA WITH TORRENT POWER LTD. GUJARAT

[1]Pramod Halli, [2]Dr. A.M Kadakol
[1]Student, [2]Professor
[1]Kousali Institute of Management Studies,
[1]Karnatak University, Dharwad, India.

Abstract: During this pandemic, the power sector is one of the most worst affected sector in India. As all the industries and factories were closed down and Indian power sector follows cross subsidy policy which states that costs are reduced to a particular type of customers or regions by increasing the costs to other customers or regions. Therefore the focus of the power sector reforms is being shifted to privatization of distribution companies. However no agency or international institution has carried a detailed review of performance between private and public distribution companies. Privatization of distribution has limited scope in India. Hence a detailed performance review of existing private and public distribution companies can offer valuable insights which would be helpful while making the decisions regarding the restructuring of the power sector. This study attempts to draw lessons that can greatly help in avoiding structural inefficiencies in redesigning of the power sector. This is crucial when important features of the sector like tariff policies are being redesigned.

***Keywords* – T&D, Tariffs, Purchase Cost, Privatization.**

I. INTRODUCTION

One of the important factors in assessing a distribution utility is T&D (Transmission & Distribution) losses and purchase cost. On the one hand the Transmission & Distribution losses in the power sector occur when the amount of electricity generated is more than the amount of electricity is delivered to the end-consumers whereas purchase cost is cost at which the distribution company purchase electricity from the desired energy supplier. T&D and Purchase cost go hand in hand as they talk about the weakness of the discoms. In May 2020, as said by the Union Power Minister Raj Kumar Singh, the ministry is going to the privatization of electricity distribution companies (Discoms) in all eight union territories of country and are going to explore public-private partnerships for power distribution in some states, as the current aggregate technical & commercial losses (AT&C) is 21.4% causing serious problems to the distribution companies, and therefore planning to reduce it to 12%. Hence such a study helps the discoms in restructuring their tariff policies.

1.1 Distribution Utilities:

Hubli Electricity Supply Company Ltd (HESCOM): Hescom was established in 2002. Hescom operates from Hubli city and is giving more emphasis on agricultural use. The company is functioning as a commercial unit in line with power sector reforms undertaken by Government of Karnataka today. Currently Hescom is having its power distribution services in Dharwad, Gadag, Vijayapura, Bagalkot, Uttara Kannada, Haveri and Belgaum districts. (Source: www.hescom.co.in)

Torrent Power Ltd: Torrent Power was established in 1996. Torrent mainly operates from Gujarat and it has a portfolio of coal based, gas based and renewable power plants with an aggregate capacity of 3879MW. Currently, Torrent distributes its power to over 3.65 million customers and operates in Ahmedabad, Gandhinagar, Surat and Dahej SEZ in Gujarat, Bhiwandi in Maharashtra and Agra in Uttar Pradesh. It has a prominent presence in generation sector to distribution utilities through an effective transmission network. (Source: www.torrentpower.com)

II. STATEMENT OF THE PROBLEM

The study of factors which are affecting in designing the tariff rates or plans is a very important decision for any Union/State Electricity Regulatory Authorities as its scale and long term nature of the consequences would lead to taking important decisions regarding to restructuring of power sector reforms. It has been observed that if any company is characterized by high tariff rates, then it would affect the management and functioning of the company very badly like; Firstly it would increase the distribution and generation costs, Secondly it would decrease the quality of supply of energy (Voltage, Frequency, and Reliability), Thirdly it would affect the quality of the consumer service, And lastly the Discoms would be unable to generate the expected revenue that will be able to settle the borrowings and expenditure.

Hence, the study aims to review performance of existing private utility and public utility that can offer valuable insights, which would be useful while making decisions regarding the restructuring of the power sector.

III. REVIEW OF LITERATURE:

Performance of private electricity distribution utilities in India, Prayas Occasional Report (2003), this study attempts to focus on one major area that has remained completely neglected in the Indian power sector, even after so much debate on the privatization of power sector, i.e., evaluation of the performance of existing private distribution companies in the country. The objective of this report is to draw some observations about the performance of the utilities, and emphasises the need for a detailed performance review. The report is not intended to either rank the private utilities or to draw some conclusions regarding the ownership debate.

PHD Research Bureau, PHD chamber of commerce and industry (2011), this study attempts to observe that states with high average tariff rates like Delhi, Punjab and Haryana have resulted in low power deficits while the states with low average tariff rates have resulted in high deficits such as J&K and UP. While Delhi has marked with high average energy charges with the highest per capita energy consumption, while UP with the lowest per capita energy consumption and has marked with low energy charges. This is due to as the population of the country is increasing the availability, accessibility and affordable power is becoming limited.

Center for study of science, technology and policy (CSTEP) (2013), this study is undertaken to evaluate the Karnataka's current and future power position till the year 2021-22. This study attempts to provide a detailed analysis of the issues in State's power sector and discuss the options available to address them. The main objective of the study is to estimate the electricity demand expected to arise for the State, appraising or evaluating the existing capacity addition plans, estimating the potential shortcomings and recommend the options which are available to decision makers in the power sector. For this study the government agencies, policy makers and the power sector experts are taken into consideration.

Comparison of electricity prices in major North American Cities, Hydroquebec.com (2019), this study attempts to compare the monthly electricity bills of Quebec customers in the residential, commercial, institutional and industrial sectors of the customers of those utilities which are serving in 21 major North American cities. The main objective of the study is to draw conclusions of the comparative analysis of prices which are in effect on April 1, 2019. There are mainly three sections which the study focuses on; the first, it states the method to be used to estimate the electricity bills, secondly it evaluates the highlights of the seven consumption levels analysed, with the help of charts and figures. And thirdly it shows the results of the 21 consumption levels for which data has been collected and presented in the form of summary and detailed tables.

CRISIL S&P global company Niti Aayog (2019), this study aims to save the domestic power distribution sector as the Indian government has made multiple attempts in the past two decades. Despite this, it continued to be the weakest link of the country's electricity value chain. The main objective of the study is to evaluate the Inadequate tariffs, Aggregate Technical and Commercial (AT&C) losses, lack of sufficient investment in infrastructure, out-dated networks and inadequate maintenance are some of the issues that still impacts the sector, more than a decade after the Electricity Act, 2003, was notified.

IV. OBJECTIVES:

- To study the factors that impacts the tariff structure of the distribution companies.
- To study the power sector reforms and policies that will impact the distribution companies during this pandemic.

V. RESEARCH METHODOLOGY

The research approach used for the study are comparative analysis of major items of annual reports and ratio analysis which will be very useful in order to analyse and interpret the performance of Hubli Electricity Supply Company Limited, Karnataka and Torrent Power Limited, Gujarat.

After the data has been collected, it was tabulated and findings of the study were presented followed by analysis and interpretation to reach certain conclusions.

5.1 Data Source

For this study secondary data has been collected, from the website of HESCOM the annual reports and tariff orders for the company are obtained from 2014-15 to 2018-19. Then from the website of Torrent Power the annual reports are obtained from 2014-15 to 2018-19. And from the website of GERC the tariff orders for the company are obtained from 2014-15 to 2018-19.

VI. RESULTS AND DISCUSSIONS

Table 1: transmission & distribution losses

Years	Hescom (in %)	Torrent (in %)
2014-15	16.74	7.34
2015-16	16.89	7.15
2016-17	15.56	6.53
2017-18	14.76	6.31
2018-19	14.62	5.61

Source: companies' annual reports and tariff orders

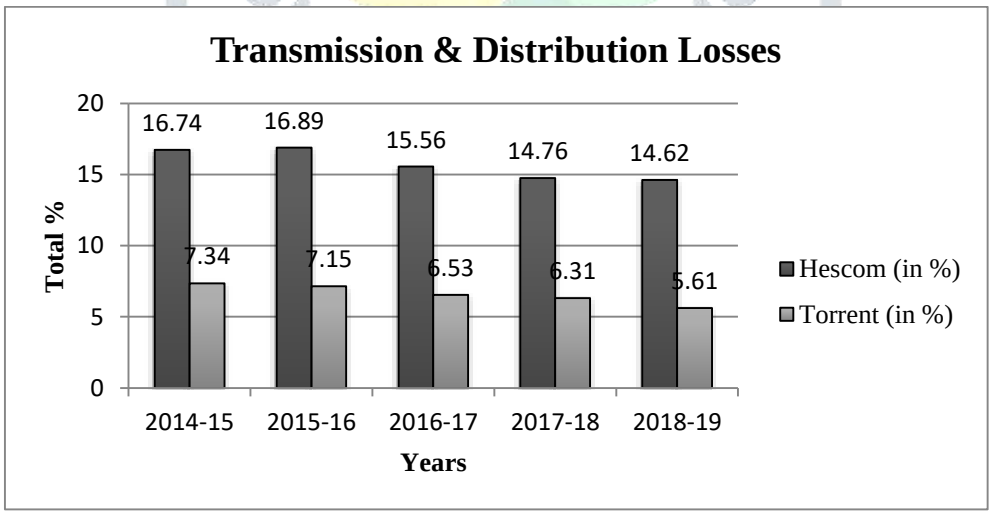

Figure 1: transmission & distribution losses of hescom and torrent

By analysing the above chart, it has been observed that T & D Losses are decreasing year after year for both the companies, for Hescom in the year 2014-15 it was 16.74 % and in 2018-19 it reduced to 14.62 %, and for Torrent in the year 2014-15 it was 7.34% and in 2018-19 it considerably reduced to 5.61%, it is a good sign for both the companies as the continuous reduction of T&D losses is expected to be the most important benefit of any company. But compared to Hescom, Torrent are far better in managing their T&D losses because of their better distribution services than Hescom.

Table 2: tariff rates

Years	Residential Purposes		Private Institutions/Hospitals	
	Hescom (Rs/unit)	Torrent (Rs/unit)	Hescom (Rs/unit)	Torrent (Rs/unit)
2014-15	6.15	4.80	6.95	4.90
2015-16	6.65	4.80	7.18	4.90
2016-17	7.05	4.80	7.48	4.90
2017-18	7.30	4.80	7.68	4.90
2018-19	7.55	4.80	7.88	4.90

Source: companies' annual reports and tariff orders

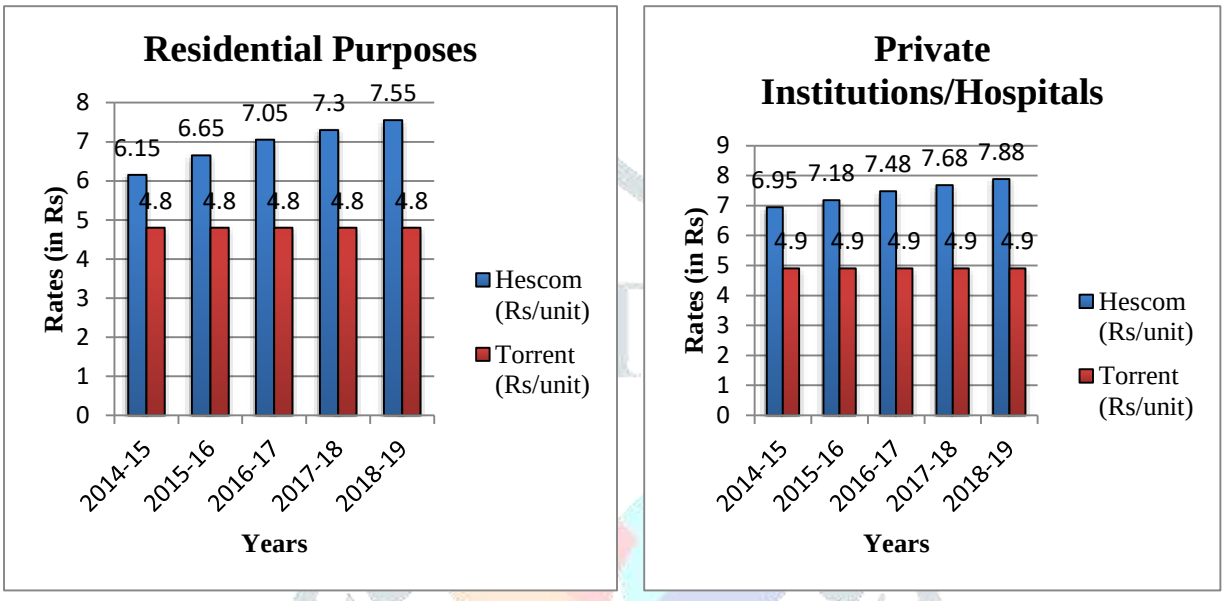

Figure 2 & 3: tariff rates of hescom and torrent

By analysing the above charts, it has been observed that the tariff rates are increasing year after year for the Hescom, that is in the year 2014-15 it was Rs. 6.15/unit and in 2018-19 it increased to Rs. 7.55/unit for residential purposes, and for private institutions/hospitals in the year 2014-15 it was Rs.6.95/unit and in 2018-19 it increased to Rs.7.88/unit, and for the Torrent for all the five years they were constant, that is Rs.4.80/unit for residential purposes and Rs.4.90/unit for Private Institutions and hospitals, This is a great move by the Torrent, but this does not mean that the company is not making sufficient profits; the sales are also increasing year after year at a constant rate. Hence the Hescom has to come with better tariff policies and control their expenditure in order attract more consumers.

Table 3: receivables

Years	Amount (in crores)		Receivables Collection Period	
	Hescom (in Rs.)	Torrent (in Rs.)	Hescom (in months)	Torrent (in months)
2014-15	1,825.24	874.31	4.5	1.0
2015-16	1,802.89	1,048.92	3.9	1.1
2016-17	1,797.08	968.91	3.6	1.2
2017-18	1,406.97	1,124.48	2.5	1.2
2018-19	1,534.92	1,170.53	2.3	1.1

Source: companies' annual reports and tariff orders

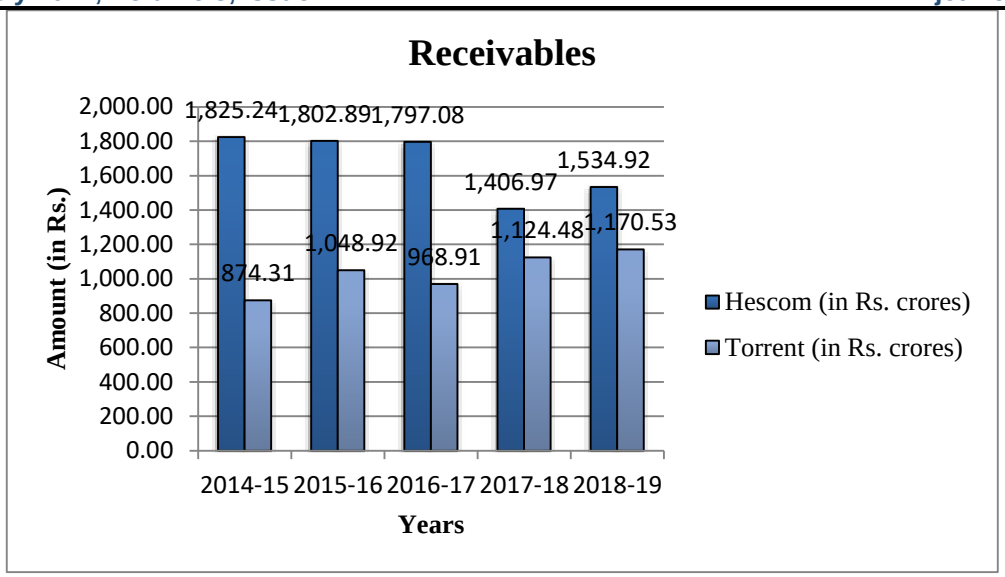

Figure 4: receivables of hescom and torrent

By analysing the above chart, it has been observed that the receivables are not in a constant pattern year after year for the companies, for Hescom in the year 2014-15 it was Rs. 1,825.24 crores and in 2018-19 it reduced to Rs. 1,534.92 crores and for Torrent in the year 2014-15 it was Rs. 874.31 crores and in 2018-19 it considerably increased to Rs. 1,170.53 crores. Although the Hescom is collecting its dues better than the Torrent, but it is taking more time to recover those dues compared to Torrent. And also as per several Regulatory Commissions (RCs) as well as the World Bank loan conditions have indicated that receivables should be equivalent to the billing of 2 to 2.5 months. Therefore, the Hescom has to come with better recovery policies, which will be an added advantage for the company when compared with other factors.

Table 4: revenue from operations / sales

Years	Amount (in crores)		Net Profit/Loss Ratio	
	Hescom (in Rs.)	Torrent (in Rs.)	Hescom (in %)	Torrent (in %)
2014-15	4,851.58	10,247.42	0.62	7.24
2015-16	5,520.79	11,668.21	(6.75)	6.99
2016-17	5,990.05	10,014.58	(15.75)	4.25
2017-18	6,887.55	11,448.86	(2.04)	8.17
2018-19	7,764.56	12,977.52	8.89	6.80

Source: companies' annual reports and tariff orders

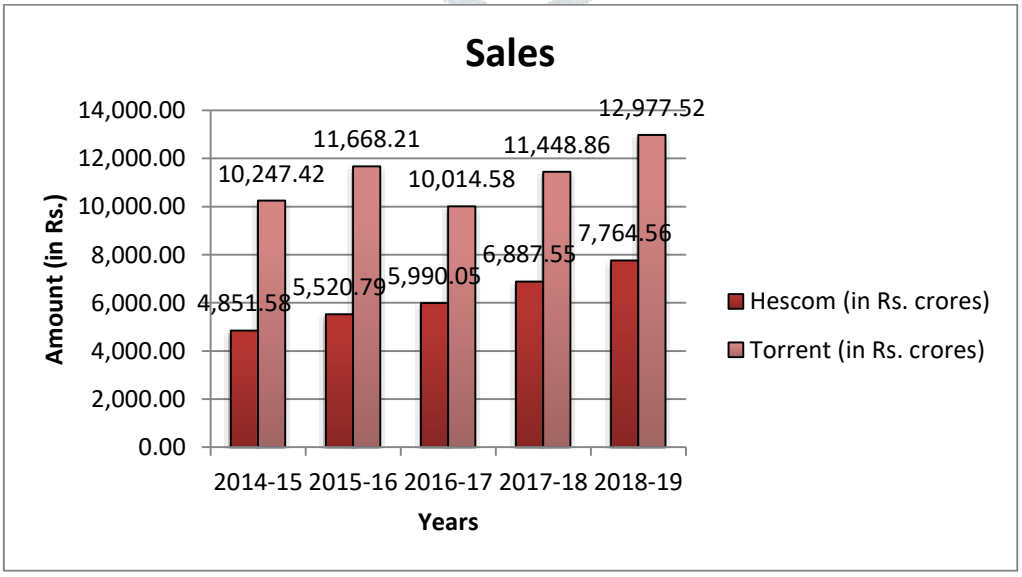

Figure 5: revenue from operations/ sales of hescom and torrent

By analysing the above chart, it has been observed that the sales are increasing year after year for both the companies, for Hescom in the year 2014-15 it was Rs. 4,851.58 crores and in 2018-19 it increased to Rs. 7,764.56 crores and for Torrent in the year 2014-15 it was Rs. 10,247.42 crores and in 2018-19 it considerably increased to Rs. 12,977.52 crores, it is a good sign for both the companies as the continuous increase of sales is expected to be the most important benefit of any company. But the volume of sales of Hescom is less compared to Torrent; the main reason is increase in the purchase cost of power. And also the Torrent is better than Hescom in earning sufficient profits for providing sufficient returns to their shareholders.

Table 5: capital investments

Years	Amount (in crores)		Return on Capital Employed	
	Hescom (in Rs.)	Torrent (in Rs.)	Hescom (in %)	Torrent (in %)
2014-15	1,178.00	225.96	1.66	8.23
2015-16	797.50	356.45	(20.52)	9.62
2016-17	500.00	409.42	(96.53)	7.31
2017-18	806.05	731.89	(54.37)	11.21
2018-19	743.55	645.75	(13.99)	7.86

Source: companies' annual reports and tariff orders

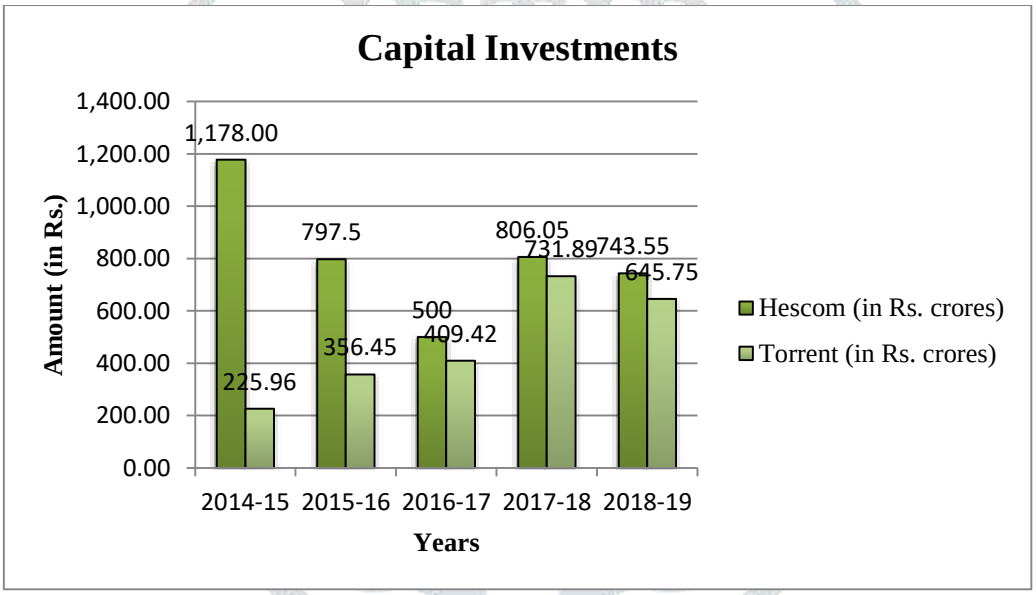

Figure 6: capital investments of hescom and torrent

By analysing the above chart, it has been observed that the capital investments are in unusual pattern year after year for the both the companies, for Hescom in the year 2014-15 it was Rs. 1,178.00 crores and in the year 2018-19 decreased to Rs. 743.55 crores and for Torrent in the year 2014-15 it was Rs. 225.96 crores and in 2018-19 it considerably increased to Rs. 645.75 crores. And also Torrent is better in earning reasonable return on their capital employed than Hescom. The tariff impact of capital investments comes through several components like, the reasonable return (or allowed profit) of the utility is dependent on the capital investments. Therefore the both companies have to invest their capital for the smooth functioning of their organization, or else it may affect the company's earnings in the long run.

Table 6: manpower cost

Years	Hescom (in Rs. crores)	Torrent (in Rs. crores)
2014-15	455.46	338.15
2015-16	483.13	399.28
2016-17	525.44	415.72
2017-18	687.72	465.32
2018-19	781.79	484.21

Source: companies' annual reports and tariff orders

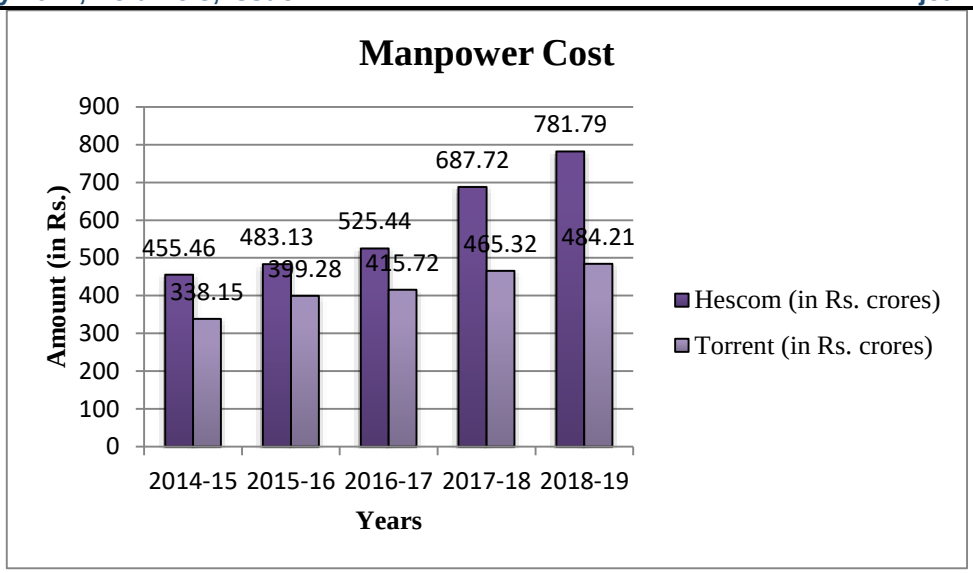

Figure 7: manpower cost of hescom and torrent

By analysing the above chart, it has been observed that the manpower costs are increasing year after year for the companies, for Hescom in the year 2014-15 it was Rs. 455.46 crores and in 2018-19 it increased to Rs. 781.79 crores and for Torrent in the year 2014-15 it was Rs. 338.15 crores and in 2018-19 it considerably increased to Rs. 484.21 crores, it might not be a good sign for both the companies, but as the human resource is the important asset for the companies, hence the companies should control the other employee benefits costs. Other than this, the financial health of both the companies is good as it showing the sign of positive results in the coming years. But compared to Torrent, Hescom has to control its employees cost as it is almost 2 times more than the Torrent.

Table 7: purchase of power

Years	Hescom (in Rs. crores)	Torrent (in Rs. crores)
2014-15	3,785.59	4,649.66
2015-16	4,722.15	3,391.90
2016-17	5,695.61	3,634.17
2017-18	6,344.85	3,584.78
2018-19	6,665.49	4,116.50

Source: companies' annual reports and tariff orders

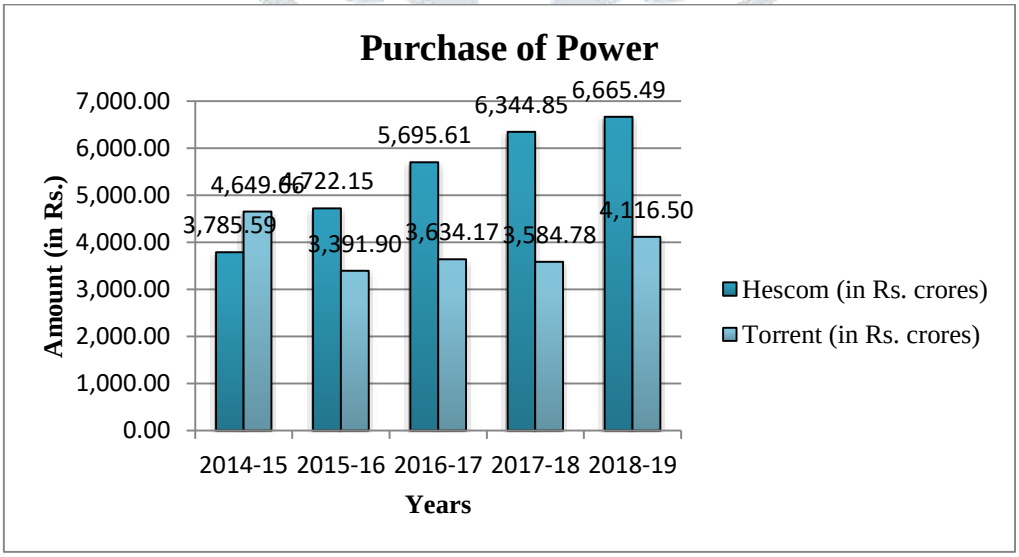

Figure 8: purchase of power of hescom and torrent

By analysing the above chart, it has been observed the cost of purchase of power is increasing year after year for the Hescom in the year 2014-15 it was Rs. 3,785.59 crores and in the year 2018-19 it increased to Rs. 6,665.49 crores and for Torrent in the year 2014-15 it was Rs. 4,649.66 crores and in 2018-19 it considerably decreased to Rs. 4,116.50 crores, it is a good sign for the Torrent. But for the Hescom the purchase cost is increasing at faster rate, the

main reason for continuous increase is the cost of rebate from generators that has almost doubled since the last five years. Hence the Hescom has to reduce the cost and redesign their purchase policy, or else it will have negative impact on the overall performance of the company.

Table 8: O&M expenses

Years	Hescom (in Rs. crores)	Torrent (in Rs. crores)
2014-15	549.85	259.40
2015-16	580.96	268.41
2016-17	617.52	290.26
2017-18	685.66	308.13
2018-19	874.08	312.77

Source: companies' annual reports and tariff orders

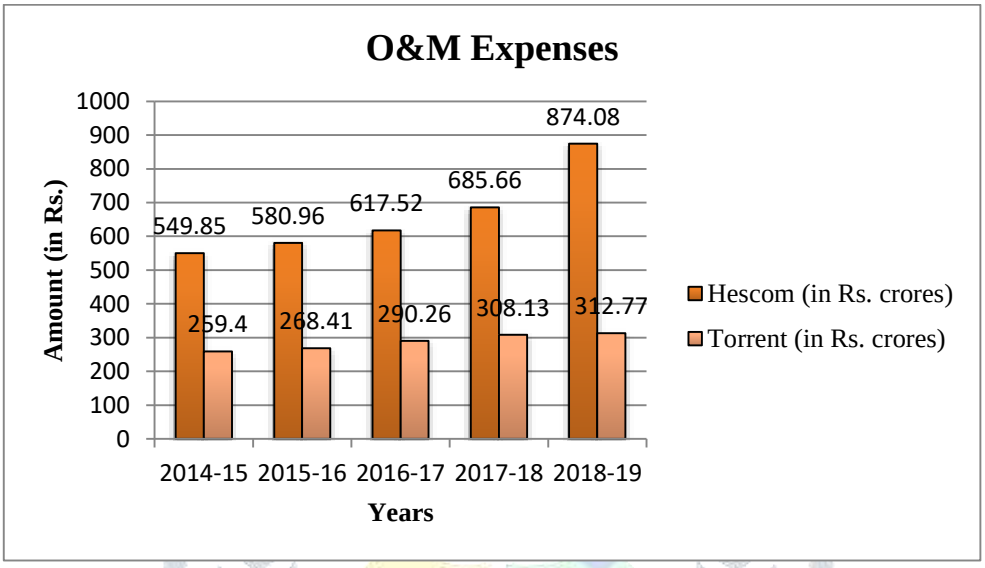

Figure 9: operations & maintenance expenses of hescom and torrent

By analysing the above chart, it has been observed that the O&M expenses are increasing year after year for both the companies, for Hescom in the year 2014-15 it was Rs. 549.85 crores and in the year 2018-19 it increased to Rs. 874.08 crores and for Torrent in the year 2014-15 it was Rs. 259.4 crores and in 2018-19 it considerably increased to Rs. 312.77 crores, it is not good sign for the companies. O&M expenses is one of the most important factor as the continuous increase will affect the financial health of the company and also affects the tariff rates as day to day operations are crucial for every company. Hescom has a serious concern, as the O&M expenses is almost doubled every year compared to Torrent, the main reason is increase in employee cost, hence it should come up with better HR policies and pay their employees based on performance pay approach.

VII. FINDINGS

- In **Transmission & Distribution Losses**, for Hescom in the year 2014-15 it was 16.74 % and in 2018-19 it reduced to 14.62 % and for Torrent in the year 2014-15 it was 7.34% and in 2018-19 it considerably reduced to 5.61%.
  But compared to Hescom, Torrent is better in reducing the T&D losses because of their better distribution services
- In **Tariff Rates,** for the Hescom, that is in the year 2014-15 it was Rs. 6.15/unit and in 2018-19 it increased to Rs. 7.55/unit for residential purposes, and for private institutions/hospitals in the year 2014-15 it was Rs.6.95/unit and in 2018-19 it increased to Rs.7.88/unit, and for the Torrent for all the five years they were constant, that is Rs.4.80/unit for residential purposes and Rs.4.90/unit for Private Institutions and hospitals.
  Compared to Hescom, Torrent is better in determining and designing their tariff plans.
- In **Receivables,** for Hescom in the year 2014-15 it was Rs. 1,825.24 crores and in 2018-19 it reduced to Rs. 1,534.92 crores and for Torrent in the year 2014-15 it was Rs. 874.31 crores and in 2018-19 it considerably

increased to Rs. 1,170.53 crores. And average collection period of Hescom is more than 2 months and for Torrent is less than 2 months.

By comparing Hescom is collecting its dues better than the Torrent, but it is taking more time to recover those dues compared to Torrent.

- In **Sales,** for Hescom in the year 2014-15 it was Rs. 4,851.58 crores and in 2018-19 it increased to Rs. 7,764.56 crores and for Torrent in the year 2014-15 it was Rs. 10,247.42 crores and in 2018-19 it considerably increased to Rs. 12,977.52 crores.

  In **Net Profit/loss ratio**, for Hescom in the year 2014-15 it was 0.62 % and in 2018-19 it increased to 8.89% and for Torrent in the year 2014-15 it was 7.24% and in 2018-19 it considerably decreased to 6.80%.

  By comparing the volume of sales of Hescom is less than Torrent.
- In **Capital Investments,** for Hescom in the year 2014-15 it was Rs. 1,178.00 crores and in the year 2018-19 decreased to Rs. 743.55 crores and for Torrent in the year 2014-15 it was Rs. 225.96 crores and in 2018-19 it considerably increased to Rs. 645.75 crores.

  In **Return on Capital Employed**, for Hescom in the year 2014-15 it was 1.66% and in 2018-19 it decreased to (13.99) % and for Torrent in the year 2014-15 it was 8.23% and in 2018-19 it considerably decreased to 7.86%.

  By comparing, Torrent's capital investments are increasing than Hescom.
- In **Manpower Cost,** for Hescom in the year 2014-15 it was Rs. 455.46 crores and in 2018-19 it increased to Rs. 781.79 crores and for Torrent in the year 2014-15 it was Rs. 338.15 crores and in 2018-19 it considerably increased to Rs. 484.21 crores.

  By comparing, Torrent has controlled its employee cost better than Hescom.
- In **Purchase of Power,** for the Hescom in the year 2014-15 it was Rs. 3,785.59 crores and in the year 2018-19 it increased to Rs. 6,665.49 crores and for Torrent in the year 2014-15 it was Rs. 4,649.66 crores and in 2018-19 it considerably decreased to Rs. 4,116.50 crores.

  By comparing, for Hescom the purchase cost is increasing at faster rate, the main reason for continuous increase is the cost of rebate from generators that has almost doubled since the last five years.
- In **O&M Expenses,** for Hescom in the year 2014-15 it was Rs. 549.85 crores and in the year 2018-19 it increased to Rs, 874.08 crores and for Torrent in the year 2014-15 it was Rs. 259.40 crores and in 2018-19 it considerably increased to Rs. 312.77 crores.

  By comparing, Hescom has a serious concern in its increasing O&M expenses, as it is almost doubled every year compared to Torrent.
- In general, Hescom is much better in maintaining its information and reports on its website compared to Torrent Power Ltd, because as per schedule 6 of Electricity Supply Act, 1948 (ES Act) and Indian Electricity Rules (IE Rules) all the electricity organizations (licensees) in India are required to prepare and publish the annual financial statements periodically.

VIII. SUGGESTIONS

- Hescom should think of privatization as there is much intervention of state government in its activities and is also affecting the tariff structure as it is increasing year after year; as compared to Torrent they are constant in their rates.
- Hescom has to control the volume of their spending and reduce the distribution losses in order to effectively manage its distribution services.
- The volume of sales of Hescom is less than compared to Torrent, the main reason is increase in the purchase cost of power; hence the Hescom should try to reduce the cost of its purchase of power by planning for Private Public Partnership model.
- Hescom has to reduce the cost and redesign their purchase policy, or else it will have negative impact on the tariff rates of the company.
- Hescom has a serious concern in its increasing O&M expenses, as it is almost doubled every year compared to Torrent; as the main reason is increase in employee cost, hence it should come up with better employment policies like on performance pay approach.

- Torrent has to make sure that all the reports are made available clearly and Gujarat Electricity Regulatory Commission should periodically evaluate the details furnished by the companies in the state.

IX. MANAGERIAL IMPLICATIONS

The study may help the management to identify the reason of variation in the actual performance and helps in taking necessary steps in order to take decisions which will be profitable to the company. If the study is extended and compared with other states in the country it helps the management for proper planning, organizing, staffing, directing, and controlling the activities of organization. And also it checks the industrial performance by way of comparing it with the budgeted performance.

X. CONCLUSION

The study aims at analysis of Hescom Ltd, Karnataka and Torrent Power Ltd, Gujarat for the period of 2014-15 to 2018-19. From the above findings it has been concluded that the overall performance of Hescom Ltd, Karnataka is not much promising, as their consumers are more than Torrent Power Ltd, Gujarat but they are not able generate sufficient revenue and also they are not able to frame the reasonable tariff rates for the consumers and has resulted in increase in the overall costs of the company, thus the company should vigorously evaluate the key factors which are affecting their performance and tariff structure.

It is generally expected that the regulatory commissions would evaluate performance of the licensees and would take adequate actions on the basis of the findings. Though true to a certain extent, but the regulatory evaluation during the process of tariff revision is likely to be of limited in nature. The tariff process has to be completed within 3 to 4 months, leaving little scope for in-depth evaluation of these complex issues.

XI. ACKNOWLEDGMENT

The successful completion of any task would be incomplete without mentioning the people who have helped me to complete the study and have a source of encouragement and support to me. Firstly, I would like to thank my institute guide Dr. A.M Kadakol, Professor, Kousali Institute of Management Studies, Karnatak University Dharwad for his support and guidance during the study. I would also like to thank Dr. Prakash B. Kundaragi, Asst. Professor, AIMR, Sankeshwar and the faculty members of Kousali Institute of Management Studies, Karnatak University Dharwad for their constant support and encouragement. And also my deepest thanks to my parents, family and friends for their support directly or indirectly during the study.

REFERENCES

- Performance of Private Electricity Distribution Utilities in India, Prayas Occasional Report (2003), pp.1-20 http://www.prayaspune.org/peg/publications/item/118-performance-of-private-electricity-distribution-utilities-in-india-need-for-in-depth-review-and-benchmarking.html
- Comparative study on power situation in northern and central states of India, PHD Research Bureau, PHD Chamber of Commerce and Industry (2011), pp.1-19 https://www.phdcci.in/wp-content/uploads/2018/11/COMPARATIVE-STUDY-ON-POWER-SITUATION-IN-NORTHERN-AND-CENTRAL-STATES-OF-INDIA.pdf
- Karnataka's power sector roadmap for the year 2020-21, Center for Study of Science, Technology and Policy (CSTEP) (2013), pp.1-41 http://www.indiaenvironmentportal.org.in/files/file/Karnataka%20Power%20Sector%20Roadmap_FINAL%20report.pdf
- Comparison of Electricity Prices in Major North American Cities, Hydroquebec.com (2019), pp.1-80 http://www.hydroquebec.com/data/documents-donnees/pdf/comparison-electricity-prices.pdf
- Diagnostic study of the power distribution sector, CRISIL S&P Global Company, Niti Aayog (2019), pp.1-160 https://niti.gov.in/sites/default/files/2019-08/Final%20Report%20of%20the%20Research%20Study%20on%20Diagnostic%20Study%20for%20power%20Distribution_CRISIL_Mumbai.pdf