International Journal of Academic Research
ISSN: 2348-7666; Vol.5, Issue-11, November, 2018
Impact Factor: 6.023; Email: drtvramana@yahoo.co.in

Functional and operational Dimensions of Power Distributors in Andhra Pradesh- A Perceptional Analysis

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Abstract: The performance of a company is generally measured against established standards, benchmarks, prescribed indicators of effectiveness, efficiency, ecological guidelines, environmental responsibility, productivity, waste reduction and regulatory compliance etc. this paper attempts to unfold the perceptions of the power consumers on different aspects, issues, concerns and problems they encounter or deemed to encounter in the distribution of power and the associated functions. Here, operational efficiency, the functional effectiveness and the service efficacy of the entities, as perceived by the consumer respondents, stand as the performance indicators of the power distribution companies under study.

Key words: Power distribution, operational performance, functional performance, DISCOMS

Introduction

In the present globalised competitive corporate environment the competence, competitive edge, performance re-gearing through performance measurement, management based upon SWOT analysis etc. assume significance. At the macro level, the economies especially of the third world economies are re-gearing through economic reforms. At the micro level the strategic, managerial and functional shifts are affected at the corporate level in order to keep the corporate entities successful and sustainable. It is true across the sectors of the economy. Regarding the functional areas of management, the performance of a company is measured or evaluated by identifying the strategic variables in the respective functional areas. Therefore, the evaluation of the functional performance of the power distribution companies [APEPDCL and APSPDCL] in the state of Andhra Pradesh form the subject matter of the present study. The perceptional analysis of the identified categories of consumers with reference to the power distribution is the basis for the evaluation of the functional performance of DISCOMS. Here, operational efficiency, the functional effectiveness and the service efficacy of the entities as perceived by the consumer respondents, stand as the performance indicators of the power DISCOMS under study.

Objectives:

- To assess the functional and operational dimensions and problems of the selected power distributors through the consumers perspective.
- To study the problems faced by consumers of power distributed by the selected DISCOMS
- To offer suggestions for improvement and efficiency re gearing in the functional domain of the DISCOMS.

Research Methodology:

Source of data: The main source of data is primary and is collected from consumers through a pre designed schedule.

Sample size: A total of 450 respondents from various categories of consumers like domestic, commercial and industry are selected , 225 from each DISCOM area.

Research area: Two districts (Krishna & west Godavari) from among the 13 district operational domain of the Two DISCOMS. Krishna district comes under the domain of APSPDCL and west Godavari lies in the ambit of APEPDCL.

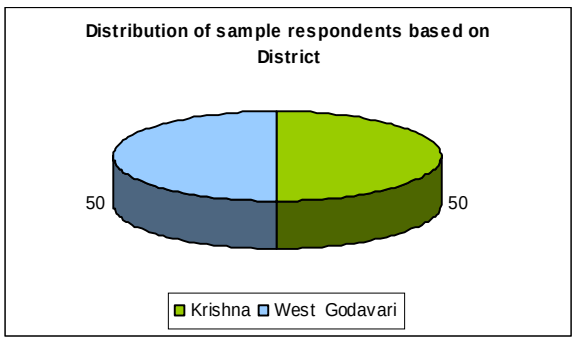
Statistical tools: Percentage distribution, cross table analysis, t- test, are employed . Data analysed was presented using tables and diagrams.

Data Analysis & Interpretation Table-1 presents the details of the district-wise distribution of the sample of respondent consumers based on power distribution companies. It is evident from the table that out of the total 450 sample of respondent consumers 50 per cent (225) each are from the respective DISCOMs- APSPDCL and APEPDCL- with equal weightage and it is pictorially presented below.

Table -1:District-wise Distribution of the sample of consumer respondents

District	Frequency	Per cent
Krishna (APSPDCL)	225	50.0
West Godavari (APEPDCL)	225	50.0
Total	450	100.0

Source: Survey data



Source: Table-1

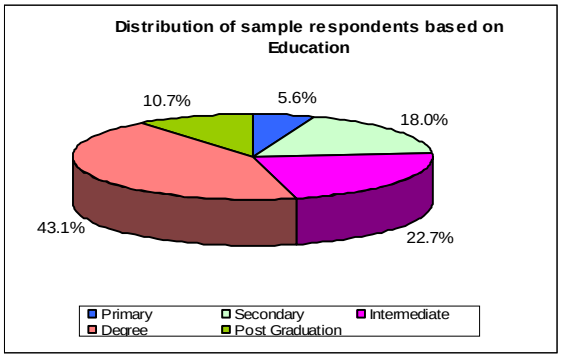
Table – 2: Distribution of sample respondents by Education level

Education	Frequency	Percent
Primary	25	5.6
Secondary	81	18.0
Intermediate	102	22.7
Degree	194	43.1
Post Graduation	48	10.7
Total	450	100.0

Source: Survey data

Table-2 presents the distribution of the sample of consumer respondents by their education level. As evident from the table, a majority of 194 of the sample of the respondents i.e., 43.1 per cent are reported to be graduates. It is followed by those with intermediate education 102 (22.7 per cent), secondary education 81 (18 per cent), post graduation 48(10.7 per cent) and by those with primary education25 (5.6 per cent). It could be observed from the analysis that a majority of 76.5 per cent (342) of the sample of the consumer respondents are with intermediate and above level of education.

Figure – 2



Source: Table 2

Lead Note on Perceptional Dimensions

The perceptions of the identified categories of consumer respondents on the operational aspects of the DISCOMs are elicited and presented for analysis and interpretation. Different operational aspects that are closely connected and are expected to highly influence the customer feelings are regarding the agencies of billing, mode of bill payment, power meter related problems, billing related issues, over billing, non- receipt of bills in time, power supply related issues, voltage problems ,power interruptions, cost of power supply ,scarcity of power and the power cuts and a host of other issues.

Table-3: Perception of priority of collection agencies preferred by consumers for bill payment

Table-3: Perception of priority of collection agencies preferred by consumers for bill payment

S. No	Statement	1st	2nd	3rd	4th	5th	Total
	Scale Value (SV)	5	4	3	2	1	
1	Online payment	231 (51.3)	59 (13.1)	48 (10.7)	45 (10.0)	67 (14.9)	450 (100.0)
	Frequency x Scale Value	1155	236	144	90	67	1692 – I
2	Any Time Payment machine	74 (16.4)	150 (33.3)	91 (20.2)	68 (15.1)	67 (14.9)	450 (100.0)
	Frequency x Scale Value	370	600	273	136	67	1446 – II
3	ECS Facility (Auto pay from bank)	37 (8.2)	50 (11.1)	135 (30.0)	120 (26.7)	108 (24.0)	450 (100.0)
	Frequency x Scale Value	185	200	405	240	108	1138 – V
4	E – Seva Centre	43 (9.6)	92 (20.4)	91 (20.2)	100 (22.2)	124 (27.6)	450 (100.0)
	Frequency x Scale Value	215	368	273	200	124	1180 – IV
5	Centers at Section Office Premises	66 (14.7)	98 (21.8)	85 (18.9)	117 (26.0)	84 (18.7)	450 (100.0)
	Frequency x Scale Value	330	392	255	234	84	1295 – III
	Total score for bill payment						6751
	Maximum Possible Score	5 (Maximum score points) X450 (number of respondents) X 5 (number of statements)					11250
	Percentage of score of collection agencies preferred by consumers for bill payment	Total score for window display/Maximum Possible Score X 100					60.0

Source: Survey data

Consumer preference for collection agencies for Bill payment

Table-5.4 presents the perceptions of priority of collection agencies preferred by consumers for electricity bill payment. It is represented that the 1st rank is given to 'online payment' with a scale value of 1692 in which half of the consumers i.e. 51.3 per cent gave first priority, whereas 10.0 percent gave fourth priority. 2nd rank is given to payment through ATM with a scale value of 1446 from which 33.3 percent offered second priority and 15.1 percent have selected fourth priority. 3rd rank is given to 'centers at section office premises' with a scale value of 1295 in which 26.0 percent have chosen fourth priority whereas 14.7 percent gave first priority. Further, it is observed that 4th rank is given to payment through 'E - seva centre' with a scale value of 1180 in which 27.6 per cent gave fifth priority, whereas 9.6 percent gave first priority. 5th rank is given to 'ECS Facility (Auto pay from bank)' with a scale value of 1138 from which 30.0 percent offered third priority and 8.2 percent gave first priority. The total percentage of score of collection agencies preferred by consumers for bill payment is 60.0 percent.

As per the analysis so far ,based on the rankings and preferences of the consumers, it could be concluded that the consumer preferences of 'Online payment' and payment through 'Any Time Payment machine' are with greater

than the average value i.e. 1350. On the contrary remaining modes of payment agencies like ts 'Centers at Section Office Premises', 'E – Seva Centre' and 'ECS Facility (Auto pay from bank)' are found to be with less than average value and these are observed to be rated a nd ranked with a negative sense by a sizable proportion of the consumer respondents.

Table-4: Rank order perception of consumers on meter related problems

S. No	Meter related problems	1st	2nd	3rd	4th	5th	Total
	Scale Value (SV)	5	4	3	2	1	
1	Replacing burnt & struck up meters	80 (17.8)	186 (41.3)	85 (18.9)	99 (22.0)	-	450 (100.0)
	Frequency x Scale Value	400	744	255	198		1597 –II
2	Meter seals are cut or running high	203 (45.1)	82 (18.2)	102 (22.7)	62 (13.8)	1 (0.2)	45 (100.0)
	Frequency x Scale Value	1015	328	306	124	1	1774 – I
3	Meter is lost or stolen	94 (20.9)	78 (17.3)	58 (12.9)	220 (48.9)	-	450 (100.0)
	Frequency x Scale Value	470	312	174	440		1396 – IV
4	Disconnecting meter for delay in payment	73 (16.2)	102 (22.7)	206 (45.6)	68 (15.1)	1 (0.2)	450 (100.0)
	Frequency x Scale Value	365	408	618	136	1	1528 – III
	Total score for meter related problems						6745
	Maximum Possible Score	5 (Maximum score points) X450 (number of respondents) X 4 (number of statements)					9000
	Percentage of score of Rank orders response of consumers on meter related problems	Total score for window display/Maximum Possible Score X 100					74.9

Source: Survey data

The power consumers' opinions are elicited regarding the frequent problems encountered by them relating to the power consumption meters used as the basis for billing. The problems generally reported encountered by the consumers are problems associated with replacing burnt and struck up meters, cutting of the meter seals and high of the meters, theft or loss of the meters, disconnecting meter for delay in payment etc.

Table-4 presents the perceptional Rank order response of consumers on meter related problems posed to them as statements. As evident from the table, the total score for meter related problems stands at 6745, the maximum possible score is 9000 and the percentage of score of rank order response of consumers on meter problems is 74.9 per cent. It is evident from the table that 41.3 per cent of the respondents have given second priority and 17.8 per cent gave first priority to the statement that the meter related problem lies with replacing burnt & struck up meters, 45.1 per cent have offered first priority whereas 0.2 per cent have accorded fifth priority to the statement 'Meter seals are cut or running high'. It is also found that 48.9 per cent

have offered fourth priority whereas 12.9 per cent have given third priority to the statement that 'Meter is lost or stolen'. Further, 45.6 per cent of the consumer respondents have given third priority and 0.2 percent of the respondents have accorded fifth priority to the statement 'Disconnecting meter for delay in payment' is a problem.

On the basis of the data analysis it is clear that the 1st rank is given by the consumer respondents to the statement that 'Meter seals are cut or running high' with a scale value of 1774, 2nd rank is given to 'Replacing burnt & struck up meters' with a scale value of 1597, 3rd rank is given to 'Disconnecting meter for delay in payment' with a scale value of 1528 and 4th rank is given to 'Meter is lost or stolen' with a scale value of 1396. The total percentage of score of Rank orders response of consumers on meter related problems is 74.9 percent.

As per the above analysis and the information, it could be concluded that the statement or the problem that 'Meter seals are cut or running high' is considered to be with greater than average value i.e. 1686. On the other hand the rest of the statements like 'Replacing burnt & struck up meters', 'Disconnecting meter for delay in payment' and 'Meter is lost or stolen' are found to be with less than the average value and these ,meter related problems are assigned a lesser intensity and assumed a lighter vein and less negativity among all the respondents.

Table-5: Rank order perceptions of consumers on billing related problems

S. No	Billing related problems	1st	2nd	3rd	4th	5th	Total
	Scale Value (SV)	5	4	3	2	1	
1	Bill issued without visiting premises	46 (10.2)	140 (31.1)	113 (25.1)	151 (33.6)	-	450 (100.0)
	Frequency x Scale Value	230	560	339	302	-	1431 – III
2	Feel bill is rather high than consumption	227 (50.4)	69 (15.3)	107 (23.8)	47 (10.4)	-	45 (100.0)
	Frequency x Scale Value	1135	276	321	94	-	1826 – I
3	Non-receipt of bill	86 (19.1)	67 (14.9)	102 (22.7)	194 (43.1)	1 (0.2)	450 (100.0)
	Frequency x Scale Value	430	268	306	388	1	1393 – IV
4	Wrong reading taken by meter reader	88 (19.6)	167 (37.1)	132 (29.3)	61 (13.6)	2 (0.4)	450 (100.0)
	Frequency x Scale Value	440	668	396	122	2	1628 – II
	Total score for Billing Related problems						6278
	Maximum Possible Score	5 (Maximum score points) X450 (number of respondents) X 4 (number of statements)					9000
	Percentage of score of Rank order response of consumers on Billing Related problems	Total score for window display/Maximum Possible Score X 100					69.7

Source: Survey data

Perceptions of the consumers with respect to the billing related problems are elicited and presented for analysis. The different billing related problems put for the consumer perception include issue of bills without visiting the consumer premises, bill amount is rather higher than the actual consumption, non-receipt of the bill and wrong reading. Table-5 presents the perceptional rank order responses of consumers on billing related problems. The total score for billing related problems is 6278 and the maximum possible score is 9000. Further, the percentage score of the rank order response of the consumers on billing related problems is 69.7 per cent.

It is evident from the table that 33.6 per cent of the respondents have given fourth preference whereas 10.2 per cent have assigned first priority to the statement that power bill is issued without visiting the premises of the consumers. Further, 50.4 percent of them have given first priority and 10.4 percent have given fourth priority to the statement that they are with a feel that the bill is rather high than the actual consumption. Through the analysis it is also noticed that 43.1 per cent of the consumers have assigned fourth rank whereas 0.2 percent have given fifth priority to the statement that there are occasions of Non-receipt of bill'. Further, 37.1 per cent of the consumers have given second priority and 0.4 percent have assigned fifth priority to the statement that 'Wrong reading is taken by meter reader.

The data from the table evinces that the consumers assigned 1st rank to the statement that they 'Feel the bill amount is rather higher than the actual consumption' and it is with a scale value of 1826. The 2nd rank is given to the statement that 'Wrong reading is taken by meter reader' and it is with a scale value of 1628. The 3rd rank is given to the statement that the 'Bill is issued without visiting the consumer premises' and this stands with a scale value of 1431.In the order the 4th rank is given to 'Non-receipt of bill', stands with scale value of 1393. The total percentage of score of Rank order responses of consumers on Billing Related problems is 69.7 percent.

Based on the above analysis, it could be concluded that the statements 'Feel bill is rather high than consumption' and 'Wrong reading taken by meter reader' are considered to be with higher than the average value of 1569. On the contrary the rest of the statements, like 'Bill issued without visiting premises' and 'Non-receipt of bill,' are noticed to be with less than the average value and these are obtained negative sense among all the sample respondents.

The perceptions of all the three categories of the power consumers, regarding the power supply related problems, are elicited and the rank orders are presented in table 5.20. It is evident from the table that the total score of the power supply related problems is 6294 and the maximum possible score is 9000. The percentage of score of rank orders response of consumers on supply related problems is 69.9 per cent. It is observed from the analysis that nearly fifty percent(49.6 per cent) of the respondents have given second and 14.2 per cent have assigned fourth priorities to the statement Low voltage problem. Around fifty per cent of the consumers i.e. 49.1 per cent have assigned first priority, whereas 12.9 per cent of them have awarded fourth priority to the problem of

High Voltage as a problem and it is further found that 36.0 per cent have given third rank, whereas only 0.2 per cent have given fifth priority to the statement of the problem i.e., 'Partial supply of power /Flickering of lights. And 46.2 per cent of them have assigned fourth rank and 0.7 have given fifth and least priority to the statement 'Non supply'.

Table-6: Rank order perception of consumers on supply related problems

Table-6: Rank order perception of consumers on supply related problems

S. No	Statement	1St	2nd	3rd	4th	5th	Total
	Scale Value (SV)	5	4	3	2	1	
1	Low voltage problem	91 (20.2)	223 (49.6)	72 (16.0)	64 (14.2)	-	450 (100.0)
	Frequency x Scale Value	455	892	216	128	-	1691 – II
2	High Voltage problem	221 (49.1)	70 (15.6)	101 (22.4)	58 (12.9)	-	45 (100.0)
	Frequency x Scale Value	1105	280	303	116	-	1804 – I
3	Partial supply/Flickering of lights	83 (18.4)	86 (19.1)	162 (36.0)	118 (26.2)	1 (0.2)	450 (100.0)
	Frequency x Scale Value	415	344	486	236	1	1482 – III
4	Non supply	54 (12.0)	73 (16.2)	112 (24.9)	208 (46.2)	3 (0.7)	450 (100.0)
	Frequency x Scale Value	270	292	336	416	3	1317 - IV
	Total score for supply related problems						6294
	Maximum Possible Score	5 (Maximum score points) X450 (number of respondents) X 4 (number of statements)					9000
	Percentage of score of rank orders response of consumers on supply related problems	Total score for window display/Maximum Possible Score X 100					69.9

Source: Survey data

As per the data analysis , it is also observed that the 1st rank is given to the statement 'High Voltage problem' with a scale value of 1804, 2nd rank is given to 'Low voltage problem' with a scale value of 1691, 3rd rank is given to 'Partial supply/Flickering of lights' with a scale value of 1482 and 4th rank is given to 'Non supply' with a scale value of 1317. The total Percentage of score of rank order response of consumers on supply related problems is 69.9 percent.

As per the inferences above, it could be concluded that the problem statements of 'High Voltage problem' and 'Low voltage problem' are considered to be with greater than average perceptional value i.e. 1573. On the contrary remaining problem statements of 'Partial power supply/Flickering of lights' and 'Non supply' are found to be with less than average value and these are almost negated by the power consumers and stood in the negative domain in the perception among all the respondent consumers.

Table-7: Perception of consumers on power problems and alternative sources of Power Supply

S. No	Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Total
	Scale Value (SV)	1	2	3	4	5	
1	There is scarcity in power supply	16 (3.6)	287 (63.8)	56 (12.4)	66 (14.7)	25 (5.6)	450 (100.0)
	Frequency x Scale Value	16	574	168	264	125	1147 – V
2	There is uncertainly in power supply	31 (6.9)	305 (67.8)	57 (12.7)	48 (10.7)	9 (2.0)	450 (100.0)
	Frequency x Scale Value	31	610	171	192	45	1049 –VI
3	Cost of Power is High	34 (7.6)	57 (12.7)	52 (11.6)	278 (61.8)	29 (6.4)	450 (100.0)
	Frequency x Scale Value	34	114	156	1112	145	1561 – II
4	Existing Slab system is defective	39 (8.7)	66 (14.7)	47 (10.4)	282 (62.7)	16 (3.6)	450 (100.0)
	Frequency x Scale Value	39	132	141	1128	80	1520 – IV
5	Solar power is alternative to Thermal power	15 (3.3)	51 (11.3)	65 (14.4)	296 (65.8)	23 (5.1)	450 (100.0)
	Frequency x Scale Value	15	102	195	1184	115	1611 – I
6	Solar power is very useful to High Tension (HT) consumers	31 (6.9)	71 (15.8)	55 (12.2)	282 (62.7)	11 (2.4)	450 (100.0)
	Frequency x Scale Value	31	142	165	1128	55	1521 – III
	Total score for Power Supply						8409
	Maximum Possible Score	5 (Maximum score points) X450 (number of respondents) X 6 (number of statements)					13500
	Percentage of score of Problems and Alternative method of Power Supply	Total score for window display/Maximum Possible Score X 100					62.2

Source: Survey data

Table-7: presents the perceptions of power consumers regarding the power problems and the alternative sources of power supply. The perceptible problems of the power consumers are scarcity of power, uncertainty in power supply, high cost of power, defective slab system existing etc. The promising alternative source of power supply is solar power. Regarding these issues the perceptions of the power consumers are elicited and presented.

It is evident from the table that with regard to the alternative sources of power, the 1st rank is given by the consumer to the statement that 'Solar power is alternative to Thermal power' with a scale value of 1611. In this regard a majority of . 65.8 per cent of the consumers have asserted and agreed and 5.1 per cent strongly agree with the statement whereas 3.3 percent are strongly disagreed. Regarding the usefulness of the solar power to the high tension consumers ,62.7 per cent agree and 2.4 per cent strongly agree. On the other hand 15.8 per cent disagree and 6.9 per cent strongly disagree. The consumers assigned third rank to the statement that 'Solar power is very useful to High Tension (HT) consumers' with a scale value of 1521.

With regard to the perceptions of the consumers towards the identified power problems it is evident that the problem of high cost of power is given the 2nd rank with a scale value of 1561.With the problem of high cost of power a majority

of 61.8 per cent of the consumers have agreed and 6.4 per cent have strongly agreed. The problem of the defectiveness of the existing slab system is ranked fourth with a scale value of 1520. Moreover, a majority of 62.7 per cent of the power consumers have agreed in this regard, whereas 3.6 per cent of them strongly agreed. With respect to the problem of scarcity of power supply, the consumers assigned 5th rank with a scale value of 1147.Further, 63.8 per cent of the consumers have disagreed in this regard and 3.6 per cent are strongly disagreed. Regarding the uncertainty of the power supply, the respondent consumers gave 6th rank with a scale value of 1049. In this regard 67.8 percent of the respondents have disagreed and 6.9 per cent strongly disagreed with respect to the problem of uncertainty of power supply. The total percentage of score of power problems and alternative method of power supply is 62.2 percent.

According to the above analysis, it could be concluded that the score values given by the consumers, for the statements of 'Solar power is alternative to Thermal power', 'Cost of Power is High', 'Solar power is very useful to High Tension (HT) consumers' and 'Existing Slab system is defective', are considered to be higher than average value i.e. 1401. On the other hand remaining statements 'There is scarcity in power supply' and 'There is uncertainly in power supply' are found to be with lower than average value and these are thus negated by the power consumers.

Table – 8: Opinions of sample consumers on efficiency of Power Distribution Company in their area

Responses	Frequency	Per cent
Very Low	15	3.3
Low	82	18.2
Can't say	243	54.0
High	86	19.1
Very High	24	5.3
Total	450	100.0

Source: Survey data

Table-8 presents opinions of the consumer respondents regarding the efficiency of power distribution. As evident from the table 54.0 per cent of the consumers responded that they can't say. Only 19.1 per cent asserted that the efficiency of power distribution is high and on the other hand 18.2 per cent of the consumers said that it is low. But 5.3 per cent of the consumers opined that the efficiency of power distribution is very high and contrarily 3.3 per cent of them stated that it is very low. The analysis indicates that a majority of 54 per cent of the respondents are undecided and stated cant say with respect to the efficiency of the DISCOMs in the distribution of power and only 19.1 per cent and 5.3 per cent of the consumers assertively stated that the efficiency in the distribution of power is high and very high respectively.

Table – 9: Perceptional statistic of the power consumers of SPDCL and EPDCL on problems faced regarding power supply in their respective districts.

District	N	Mean	Std. Dev	Std. Error	t-value	p-value
Krishna	225	18.27	3.523	0.235	9.219**	0.003
West Godavari	225	19.11	2.193	0.146		

**Significant@1%level; Source: Survey Data

Table-9 presents the perceptions of SPDCL and EPDCL consumers on problems faced with respect to power supply in their areas. It is found that the highest mean value of 19.11 is obtained in the case of the consumers of power in the West Godavari district, as against the 18.27 with respect to the Krishna District regarding the problems of power supply. The calculated t-value of 9.219 is found significant at one percent level as the p-value of 0.003 stands lower than 0.01. This helps to infer that there is a significant difference in the perceptions of consumers of power of SPDCL and EPDCL in the respective districts of West Godavari and Krishna regarding the problems perceived by them with respect to the power supply in their areas.

Table – 10: Perceptional statistic of power consumers with different education levels regarding problems of power supply

Education	N	Mean	Std. Dev	Std. Error	f-value	p-value
Primary	25	18.84	3.508	0.702	4.258**	0.002
Secondary	81	18.20	3.590	0.399		
Intermediate	102	18.33	3.292	0.326		
Degree	194	19.29	2.048	0.147		
PG	48	17.75	3.455	0.499		
Total	450	18.69	2.961	0.140		

**Significant@1%level; Source: Data collection

Table-10 presents the perceptional statistic of power consumers with different education levels with respect to the problems of power supply . It is noticed that the highest mean score value of 19.29 is noticed in the case of the consumers with degree level of education followed by the mean value of 18.84 (primary), 18.33 (Intermediate), 18.20 (secondary) and 17.75(P.G.). The

calculated chi-square value is 4.258 and found significant at one percent level as the p-value of 0.002 is less than 1 percent level. This statistical analysis helps to infer that there is significant difference in the perceptions of different power consumers with different levels of education with respect to the problems encountered in power supply in their areas.

Findings

- Distribution of sample respondents based on District, it is noticed that the sample respondents are equally distributed from APSPDCL and APEPDCL i.e. 50.0 per cent each.
- Distribution of sample respondents based on Education, it is observed that the sample respondents are distributed to more than half of the members i.e. 43.1 per cent are having degree, 22.7 per cent are having intermediate, 18.0 per cent are with secondary education, 10.7 per cent are having PG and 5.6 per cent are with primary education.
- Perception of priority of collection agencies preferred by consumers for bill payment, concluded that the statements 'Online payment' and 'Any Time Payment machine' are greater than the average value i.e. 1350. On the contrary remaining statements 'Centers at Section Office Premises', 'E – Seva Centre' and 'ECS Facility (Auto pay from bank)' are found to be less than average value and these are obtained to be negative sense among all sample respondents.
- Perception of Rank order response of consumers on Billing Related problems, it is terminated that the statements 'Feel bill is rather high than consumption' and 'Wrong reading taken by meter reader' are considered to be higher than average value i.e. 1569. On the contrary remaining statements 'Bill issued without visiting premises' and 'Non-receipt of bill' are noticed to be less than average value and these are obtained negative sense among all the sample respondents.
- Opinions of sample respondents on efficiency of Power Distribution Company, indicates the majority of respondents i.e. 54.0 percent have answered that they don't have any opinion on efficiency of power distribution companies.
- Opinions of different categories of power consumers on efficiency of Power Distribution Company, total response of the consumers is most of them i.e. 54 percent cannot say the efficiency of power distribution company.

Suggestions

- For rationalisation and for strengthening the coffers of the power distributors, the power distributors like the APEPDCL and the APSPDCL should initiate the steps like mandating and monitoring the BEE standards, initiating the Energy saving campaign driven by social media outreach, implementing agricultural feeder separation to provide uninterrupted power supply to domestic and industrial consumers in rural areas, implementing industrial feeder segregation to provide uninterrupted power supply to industrial consumer and introducing solar agricultural pump sets.
- For a better customer focus, in these days of IT boom and spread, it is the need of the hour to set up call centres with toll free number for timely agricultural DTR replacement, besides setting up on line application tracking mechanisms through SMS and mobile apps to provide regular status

updates to customers and implementing a system to seek IVRS – driven customer feedback on performance of DISCOMS.

- In the state of Andhra Pradesh , power generation at present is mostly thermal based. Hydro and nuclear power generation has been lagging behind. It is essential to make use of the potential for hydro power generation. For this purpose, inter-state river water disputes have to be resolved as early as possible so that hydro power projects may be constructed for further generation of power. Nuclear power generation also has to be given priority. To take these steps, which are matters of policy, political wisdom and forethought are necessary.
- The solar and wind energy available in abundance in the state should be exploited to the maximum possible extent. For this purpose, the government can offer a package of incentives to encourage potential entrepreneurs. By resorting to these non-conventional sources of energy the hazards of pollution caused by thermal power can be avoided to a great extent in the state.

Scope for further research

Performance is a dynamic concept and though numerous studies have been made on this area, there lies a greater scope for further research to touch different dimensions of the problem and explore more versatile results. This would help to shape the concept and customize more the entire gamut of power distribution companies. Human Resource performance Appraisal, Human Resource Development, Customer Relationship Management , Relevance and the Practices of Budgeting are some of the potential areas for further research. There is also scope for further research in the areas of Transmission and istribution losses in the power sector and also the Application of the Information Technology in the power distribution. The other potential areas for pursuing the purposeful are the psychology based studies in the area of organisational behaviour with special reference to the job challenges, job satisfaction and motivation of the power sector employees.

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