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DIRECTOR'S REPORT

The Board of Directors take immense pleasure in presenting the 48th Annual Report on the business and operations of the Corporation with the audited statement of accounts for the year ended March 31, 2018.

I. Financial Performance:

Financial Results	For the year ended 31-Mar-18 (Rs.in crores)		For the year ended 31-Mar-17 (Rs.in crores)	
	Standalone	Consolidated	Standalone	Consolidated
Gross income from				
Sale of energy	6774.19	6774.19	8588.64	8588.64
Less: Advance Against Depn. for Current Year	(9.28)	(9.28)	(74.99)	(74.99)
Add: Reversal of AAD	26.87	26.87	27.04	27.04
Less: Pre Commissioning Revenue	0.00	0.00	(39.22)	(39.22)
Net income from sale of energy	6791.78	6791.78	8501.47	8501.47
Other Income	1216.26	1216.26	1177.10	1177.11
Total Income	8008.04	8008.04	9678.57	9678.58
Operating Expenditure	5469.27	5469.40	6807.08	6807.02
Operating Profit	2538.77	2538.64	2871.49	2871.56
Finance Charges, Depreciation. & prior period adjustments & extraordinary item	2363.04	2363.11	2098.95	2099.02
Profit before tax	175.73	175.53	772.54	772.54
Provision for Tax expenses	112.03	112.03	284.66	284.66
Profit after tax	63.70	63.50	487.88	487.88
Share of loss in JV - RPCL	-	(826.87)	-	(41.77)
Other Comprehensive Income(OCI) for the year (Net)	(25.45)	(25.45)	(55.57)	(55.57)
Profit after OCI	38.25	(788.82)	432.31	390.54

Standalone & Consolidated financial statement as on 31.03.2018:

(Rs.in crores)

Particulars	Standalone	Consolidated
Assets		
Non-Current Assets		
Property, plant and equipment	10435.94	10450.73
Capital work-in-progress	1337.43	2561.95
Other intangible assets	0.31	0.31
Financial assets		
Investments	1278.32	398.84
Loans	314.20	314.20
Others	0.92	0.92
Non-current tax assets	178.32	178.32
Other non-current assets	75.03	77.87
Employee benefits	8.04	8.04
	13628.51	13991.18
Current Assets		
Inventories	568.80	568.85
Financial assets		
Trade receivables	15574.62	15574.62
Cash and cash equivalents	24.19	24.47
Bank balances other than (iii) above	11.20	11.20
Loans	1263.75	1042.71
Others	2.16	2.16
Current tax assets (net)	42.47	42.47
Other current assets	552.42	660.27
Assets held for sale	-	-
	18039.61	17926.75
TOTAL ASSETS	31668.12	31917.93
EQUITY AND LIABILITIES		
Equity		
Equity share capital	4769.45	4769.45
Other Equity	4731.06	3851.38
TOTAL EQUITY	9500.51	8620.83
Non-Current Liabilities		
Financial Liabilities		
Borrowings	3695.03	4548.10
Trade payables	20.09	20.09
Other financial liabilities	3.96	3.96
Provisions	722.52	723.22

	Deferred tax liabilities (Net)	616.19	616.19
	Other non-current liabilities	-	20.00
	Deferred income	276.79	276.79
		5334.58	6208.35
	Current Liabilities		
	Financial Liabilities		
	Borrowings	14250.71	14250.71
	Trade payables	751.39	751.43
	Other financial liabilities	1172.16	1256.02
	Other current liabilities	461.77	633.59
	Provisions	79.75	79.75
	Deferred income	117.25	117.25
	Liabilities held for sale	-	-
		16833.03	17088.75
	TOTAL EQUITY AND LIABILITIES	31668.12	31917.93

Profit before Tax

- Profit before tax during the year is Rs.175.73 crores as against Rs.772.54 crores during the previous year.

Turnover

- Turnover during the year was Rs.6791.78 crores as against Rs.8501.47 crores during the previous year, due to decrease in energy sales in Thermal Stations.

Share Capital

- The Authorised Share Capital of the Company is Rs.6100,00,00,000 and the paid up capital is Rs.4769,44,86,000/- as on 31.03.2018.
 - A) Issue of equity shares with differential rights – Nil
 - B) Issue of sweat equity shares - Nil
 - C) Issue of employee stock options - Nil
 - D) Provision of money by company for purchase of its own shares by employees or by trustees for the benefit of employees – Nil

Generation

- Generation during the year was 21912 MUs as against 24614 MUs during the previous year

Dividend

- In view of the low profitability during the year, the Board has not proposed declaration of the dividend for the year 2017-18.

Special Reserve

- An amount of Rs.1.59 crores, equivalent to 2.5% of the profit after tax is transferred to a separate reserve to meet the contingencies in operation and maintenance of the plants

Change in nature of Business, if any

- There has been no change in the nature of business of the Company during the year.

Material Changes affecting the financial position of the Company

- There has been no changes affecting the financial position of the Company during the year

II. Financial Management

Financial Initiatives

With the regulatory environment prevailing in the State, the company has been pursuing with various initiatives to reduce the cost of borrowings.

III. Realisation of dues from KPTCL/ESCOMs

As part of the reforms in the power sector, GoK vide GO No. EN 131 PSR 2003 Bangalore dated 10.05.2005 ordered for assignment of PPAs to all the ESCOMs for purchase of power from KPCL with effect from 10.06.2005. Accordingly, KPCL has been selling power directly to ESCOMs w.e.f.10.06.2005. Total realization from ESCOMs/KPTCL during the year was at Rs. 8742.51 crores. The outstanding dues from ESCOMs/KPTCL as on 31.03.2018 are Rs.15564.56 crores.

IV. Power Purchase Agreements

The Power Purchase Agreements for the existing hydel stations, ADPH, RTPS Units 1 to 7 & DG Plant were approved by KERC on 03.08.2009, which were executed on 24.05.2010. KERC has issued order for determination of tariff in respect of 1x250 MW RTPS, BTPS Unit-2 and Hydro Station of erstwhile VVNL. Power purchase Agreement initialed for Malaprabha Mini Hydel project between M/s Tungabhadra Steels Products Limited and HESCOM is adopted by the Corporation. Power Purchase Agreements for the BTPS Unit -1 had been executed on 18.12.2010. Power Purchase Agreement of Solar 5MW and 10 MW at Shivanasamudra Belakawadi village, Mandya District with NTPC Vidyut Vyapar Nigam Ltd. was executed on 07.01.2011 and with Solar Energy Corporation of India was executed on 27.03.2014 respectively. Power Purchase Agreement of 10MW Solar PV Plant at Chandapura Village, Shiggaon Taluk, Haveri District was executed on 02.08.2016 with Solar Energy Corporation of India. The Power Purchase Agreement for the ongoing and new projects have been initialed on 18.12.2010 for capacity addition. Further, KERC vide its Order dated 25.02.2016 has approved for the revision in O&M expenditure w.e.f.2014-15.

V. Corporate Governance

A) Best Practices

- To meet the challenges of a competitive scenario in the power sector
- Cost consciousness and transparency in transactions
- Adaptations to reduce time and cost element in project execution
- Benchmarking with the best in India and abroad
- Proper budgetary control system
- Financial and commercial systems to ensure fair play for stakeholders like vendors, contractors and lenders
- Importance for obtaining lawful consents, permits and clearances in the activities
- Contractors, suppliers and other business associates are expected to comply with all relevant legal requirements
- To reflect faithful compliance to the tenets of public governance
- Savings to be obtained through a professional approach in design, execution and operation & maintenance of projects
- Enhancement of knowledge and skills of employees through training

B) Social contributions

- Maintaining aesthetic gardens at the Kidwai Oncology Hospital, project locations, Corporate Office and park with an attractive water fountain at west gate of Vidhana Soudha
- Passing on the benefit of cost cutting in construction, finance and operations to the consumers
- High performance levels to reduce cost and ensure reliable power supply
- Making available corporation-run schools, hospitals and community centers for the general public in the project areas
- Maintaining interior roads near project locations
- Strict compliance to environmental laws, regulations and norms

C) Board of Directors

Sl. No	Name of Directors Shriyuths/Smt	Post held	Period	
			From	Up to
1	H D Kumaraswamy	Chairman	30.05.2018	-
2	Siddaramaiah	Chairman	21.05.2013	28.05.2018
3	DK Shivakumar	Vice Chairman	13.02.2014	29.05.2018
4	G Kumar Naik, IAS	Managing Director	22.04.2016	-
5	P Bhaskar	Technical Director	05.03.2013	30.04.2018
6	R Nagaraja	Finance Director	03.03.2010	-
7	Rajneesh Goel, IAS	Director	10.03.2017	21-10-2017
8	P Ravikumar	Director	21-10-2017	-
9	ISN Prasad, IAS	Director	06.09.2013	-
10	Jawaid Akhtar, IAS	Director	27.05.2015	13.08.2018

11	Rakesh Singh, IAS	Director	08.03.2016	-
12	M Lakshminarayana, IAS	Director	30.05.2018	27.06.2018
13	Smt. Renuka Chidambaram, IAS	Director	30.05.2018	08.08.2018
14	E V Ramana Reddy, IAS	Director	27.06.2018	-
15	S Selvakumar, IAS	Director	13.08.2018	-
16	Smt. C Shikha, IAS	Director	13.08.2018	-
17	LK Atheeq, IAS	Director	19.05.2016	30.05.2018
18	Smt. Suma Vasantha	Director	29.06.2015	29.05.2018
19	R B Patil	Director	07.04.2016	29.05.2018
20	Bakkappa M Sherikar	Director	07.04.2016	29.05.2018
21	Muniraju	Director	07.04.2016	29.05.2018
22	Shivappa Bharamappa Ambli	Director	27.04.2016	29.05.2018

The Board places on record its appreciation of the services rendered by the outgoing/ceased Directors during their tenure.

Note: *The Company being a fully owned Govt. of Karnataka undertaking, the Board of Directors are appointed by the Govt. through orders depending on the requirements and whenever the officials in Government are transferred, retired, etc.*

Sriyuths Poondla Ravi Kumar, ISN Prasad, and Rakesh Singh have been appointed as independent directors vide Government of Karnataka vide order No. EN 152 Samanvaya 2015 dated 21.9.2015, order No. EN 35 Samanvaya 2016 dated 31.8.2016 and order No. EN 55 EEB 2017 dated 10.03.2017.

D) Constitution of Committees

i) Technical Committee

The Technical Committee has been constituted by the Board to assist to advise the MD in respect of all technical and commercial issues referred by the MD. Further, Board has set up a Technical Advisory Committee to examine the proposals in detail and furnish their report / recommendations to the Technical Committee and has approved the constitution of these Committees with the following members / Directors:

A. Technical Advisory Committee:

- 1) Managing Director, KPCL
- 2) Technical Director, KPCL
- 3) Finance Director, KPCL
- 4) Director General, CPRI or his nominee
- 5) Secretary, Water Resources Dept.
- 6) Sri MC Rangarajan- Retd. ED/KPCL
- 7) Director (Transmission) - KPTCL
- 8) A thermal expert - to be nominated separately

B. Technical Committee:

- 1) Managing Director, KPCL
- 2) Technical Director, KPCL
- 3) Finance Director, KPCL

Presently the Technical Committee comprises of Shriyuths G Kumar Naik, IAS - Managing Director, P Bhaskar - Technical Director (up to 30.04.2018) and R Nagaraja - Finance Director

ii) Audit Committee

Pursuant to Section 177 of the Companies Act, 2013(earlier section 292A of the Companies Act, 1956) Audit Committee was constituted in the Corporation in the year 2001 with the following terms of reference:

- A) Members of the Audit Committee shall elect a Chairman from amongst themselves
- B) (a)The Audit Committee shall have discussions with the auditors periodically about the working of existing internal control systems for improving the same. The recommendations of such review shall be placed before the management for implementation.
 - (b) The Audit Committee shall review half yearly and annual financial statements. Recommendations arising out of such review shall be carried out before placing the same to the Board.
 - (c) The review and recommendations of Audit Committee on internal control systems shall be placed before the Board for implementation.
 - (d) The Audit Committee shall have powers to investigate into any matter in relation to specified circumstances in the Section 177 of Companies Act 2013, or referred to it by the Board and shall have access to information and records. If necessary, engage external professional auditors for the purpose.
 - (e) The recommendations of the Audit Committee on any matter relating to financial management shall be binding on the Board of Directors. If Board does not accept the recommendations, it shall record the reasons and it should be communicated to shareholders.
 - (f) The Chairman of the Audit Committee shall attend the annual general meeting to provide any clarification on matters relating to audit.
 - (g) The Audit Committee shall meet at least thrice in a year.
 - (h) One meeting must be held before finalisation of Annual Accounts and one necessarily every six months.

The statutory auditor, the internal auditor and the director in charge of finance shall attend and participate in meetings of the Audit Committee.

Consequent to transfer / retirement of members of the Audit Committee, the Committee has been re-constituted with the following members to review and advice on the Annual Accounts 2017-18:

Shri Rajneesh Goel, IAS up to 21.10.2017 – Chairman

Shri P Ravikumar, IAS from 21.10.2017 - Chairman

Shri ISN Prasad, IAS - Member

Shri Rakesh Singh, IAS – Member

Shri P Bhaskar, Technical Director up to 30.04.2018 - Member

In the meeting held on 26.03.2018 the Managing Director briefed the Committee about the proposed Revenue Budget proposals for the year 2018-19 along with the actual/budgeted/revised estimates for the years 2017-18 and 2018-19. In its meeting held on 06.08.2018, the Audit Committee reviewed in detail the annual accounts for the year 2017-18 and recommended the same for consideration by the Board.

iii) CSR Committee:

A CSR Committee has been constituted by the Board comprising the following members:

Shri Rajneesh Goel, IAS up to 21.10.2017 - Chairman

Shri P Ravikumar, IAS from 21.10.2017 - Chairman

Shri G Kumar Naik, IAS - Member

Shri ISN Prasad, IAS - Member

The CSR Committee in its meeting held on 06.08.2018 had reviewed status of works under CSR up to 31.03.2018 by the company.

It is to state that schemes costing Rs.4,689.15 lakhs have been approved; an amount of Rs.2,229.12 lakhs has been spent up to 31.03.2018. This includes Rs.825.69 lakhs spent for the current year against the CSR obligation of Rs.693.31 lakhs. The Managing Director was authorised by the Board to suitably vet, priorities and implement in due course the already approved proposals in the vicinity of the project areas. Some of the approved works could not be taken up as they require clearance/approval of local authorities and the same are being closely followed up and are proposed to be continued.

CSR Policy:-

- To direct KPCL's CSR Programmes, inter alia, towards achieving one or more of the following – enhancing environmental and natural capital; supporting rural development; promoting education; providing preventive healthcare, providing sanitation and drinking water; creating livelihoods for people, especially those from disadvantaged sections of society, in rural and urban India; preserving and promoting sports.
- To engage in affirmative action interventions such as skill building and vocational training, to enhance employability and generate livelihoods for persons from disadvantaged sections of society;

- Adopt an approach that aims at achieving a greater balance between social development and economic development.

Focus areas:-

KPCL CSR Policy focused mainly on the following areas:

- Rural Development Projects
- Healthcare including sanitation and drinking water
- Education & Vocational Skills (incl. Educational Infrastructure)
- Any other item/s under Sch.VII of The Companies Act 2013 or as may be prescribed from time to time.

Details of CSR works carried during the year are furnished in the *Annexure – A*.

iv) Internal Financial Control:

Policies and procedures for ensuring the orderly and efficient conduct of its business, including adherence to the Company’s policies, the safeguarding of its assets, the prevention and detection of frauds and errors, the accuracy and completeness of the accounting records, and the timely preparation of reliable financial disclosures are in place.

v) Disclosure under the Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013

The Company (KPCL, the holding company’s policy & rules applicable) has in place Anti Sexual Harassment Policy in line with the requirements of The Sexual harassment of Women at the work place (Prevention, Prohibition and Redressal) Act,2013. Internal complaints committee has been set up to redress complaints received regarding sexual harassment. All employees (Permanent, contractual, temporary, trainees) are covered under this policy. The following is a summary of Sexual harassment complaints received and disposed off during the year:

Year	Complaints received	Complaints disposed off
2017– 18	0	0

E) Meetings of the Board, sub-committees & management committees pertaining to the financial year

i) Board level

Board	: Five/Seven
Sub Committees – Board	: Three
Technical Committee	: Eight
Audit Committee	: Three
CSR Committee	: One
Technical Advisory Committee	: Eight

ii) Management level

Contract Management Group (CMG) : Twenty Five (25)

iii) General Meetings held in previous 3 years at the Regd. Office, No. 82, Shakti Bhavan, Race Course Road, Bangalore-560 001:

Meeting No.& Date	Special Resolutions
EGM - 20.03.2015	Special Resolutions for borrowing of funds and to mortgage.
45 th AGM – 30.09.2015	Ordinary Resolutions for Enhancement of Authorised Share Capital - Amendment to clause V of the Memorandum of Association.
EGM – 21.05.2016	1.Approval to transfer the assets of the Company at Yelahanka DG plant to KPC Bidadi Power Corporation Pvt. Ltd.2.Authorizing the Board of Directors for borrowing funds
46 th AGM – 29.09.2016	Special Resolutions for a)Approval to mortgage the assets b)Payment of compensation to KECML and creation of charge on the assets
47 AGM 28.12.2017	Ordinary Business- Ordinary Resolutions: i) Adoption of Directors' Report and audited accounts for 2016-17 ii) To declare Dividend on Equity Shares iii) Appointment and Payment of Remuneration to the Cost Auditors

iv) Meetings of Board of Directors:

All the directors have regularly attended the meetings.

v) Declaration by Director(s):

All the Directors have furnished declarations as to their qualification for being appointed as Directors and Disclosure of Interest in other bodies corporate in Form MBP-1 as required under the Act.

F) Managerial Remuneration

Extract of Annual Return of the Company in Form MGT-9 is annexed to this Report. (Please refer *Annexure-D*)

G) Right to Information Act

The Corporation, as a public authority, has taken steps towards the compliance of the Right to Information Act 2005. Public Information Officers and First Appellate Authorities have been nominated as contemplated under the Act. Suo-moto disclosure of information on the activities of the Corporation under various heads in addition to the mandatory requirement under the RTI Act 2005 is made available on website: www.karnatakapower.com. During the year, 590 applications were received and processed. Information was furnished for 579 applications and 11 applications are pending to provide information as on 31.3.2018. These have been attended to within the time limit thereafter.

VI. Capital Expenditure

Capital Expenditure incurred by the Corporation amounts to Rs.1207 crores.

VII. Operation & Maintenance:

The Corporation operates 16 hydel stations, 5 mini hydel stations and 3 thermal power plants (Yeramarus Thermal Power - A joint venture of KPCL), 1 wind energy farm and 1 diesel generating plant and 6 solar PV plants with a total installed capacity of **8846.305 MW** as on 31.03.2018 (Hydel: 3679.75 MW : Thermal : 5020 MW: Wind : 4.555 MW, Diesel Generator: 108 MW and Solar PV Plants: 34 MW): Energy generated during the year 2017-18 from Hydel:7012.80MU, Thermal:15852.01MU, Wind: 7.21 MU and Solar PV Plants: 36.75 MU, totalling to **21912.34 MU**. The inflows to the three major reservoirs viz., Linganamakki, Supa and Mani is about 195.92 TMC (up to May-2018) and the maximum levels reached during 2017-18 is 1799.20 ft. 549.44 M and 587.57 M respectively.

Generation from Thermal Stations during 2017-18:

- a) BTPS Unit-1 generated 1348.30 MU with a PLF of 30.78%
- b) BTPS Unit-2 generated 1845.95 MU with a PLF of 42.15%
- c) BTPS Unit-3 generated 826.88 MU with a PLF of 13.48%
- d) RTPS Unit 1 to 7 generated 8967.15 MU with a PLF of 69.64%
- e) RTPS Unit 8 generated 1867.40MU with a PLF of 85.27%

Operational performance in terms of plant availability factor, plant load factor, forced outages, specific coal and oil consumption per KWH and auxiliary consumption was maintained at optimum level. The performance parameters of thermal and major hydel projects for the year are indicated below:

A. Generation performance of KPCL Stations

Generation	2017-18	2016-17
Thermal	14855.69	17905.82
Hydro	7012.80	6667.95
DG	0	0
Wind	7.21	8.01
Solar	36.75	32.38
Total	21912.34	24614.16

B. Performance of RTPS

Particulars	2017-18		2016-17	
	U 1 to 7	U 8	U 1 to 7	U 8
Generation in Mus	8967.15	1867.40	9750.668	1745.004
Aux. consumption in Mus	828.35	172.51	841.237	150.55
Aux. Consumption in %	9.24	9.24	8.63	8.63
Plant load factor	69.64	85.27	75.72	79.68
Coal consumption (lakh MT)	57.37	11.94	65.86	11.76
Specific coal consumption (Kg/KWh)	0.640	0.640	0.675	0.674
Specific oil consumption (ml/KWh)	0.97	0.60	0.79	0.46
Plant availability factor	78.06	91.05	88.17	96.29
Units in operation	7	1	7	1

C. Performance of BTPS

Particulars	2017-18			2016-17	
	U 1	U 2	U3	U 1	U 2
Generation in Mus	1348.30	1845.95	826.88	3422.53	2476.13
Aux. consumption in Mus	94.76	129.74	58.12	219.28	158.64
Aux. Consumption in %	7.03	7.03	7.03	6.41	6.41
Plant load factor	30.78	42.15	13.48	78.14	56.53
Coal consumption (lakh MT)	8.37	11.30	4.93	22.96	16.51
Specific coal consumption (Kg/KWh)	0.621	0.612	0.597	0.671	0.667
Specific oil consumption (ml/KWh)	1.012	0.559	5.888	0.337	1.113
Plant availability factor	62.70	66.62	24.64	98.62	94.03
Units in operation	1	1	1	1	1

D. i) Performance of Major Hydro Stations

Stations	2017-18				2016-17			
	Generati on in MU	Plant load factor %	Plant availabili ty factor %	% Auxiliary consumpt ion	Generati on in MU	Plant load factor %	Plant availabili ty factor %	% Auxiliary consumpti on
Sharavathy	2695.12	29.73	90.37	0.89	2683.64	29.60	68.20	0.73
Nagjhari	1521.88	19.30	92.02	1.36	1334.06	16.92	87.61	1.39
Varahi	762.60	18.92	93.74	2.62	719.22	17.85	90.07	2.90

ii) Performance of Minor Hydel Stations (100 MW & above)

Minor Stations	2017-18			2016-17		
	Generation in MU	Plant load factor in %	Availability factor in %	Generation in MU	Plant load factor in %	Availability factor in %
Supa	289.89	33.09	98.47	238.94	27.28	99.99
Gerusoppa	278.67	13.26	98.97	274.84	13.07	95.79
Kadra	190.79	14.52	93.73	174.25	13.26	87.42
Kodasalli	168.05	15.90	94.65	152.40	14.42	94.81
MGHE	190.76	15.64	63.70	286.06	23.46	82.08
Almatti	441.56	17.38	88.63	404.04	15.90	82.75

E. Station wise Generation in Mu's

Station	2017-18	2016-17
Raichur Thermal Power Station	10834.55	11495.67
Bellary Thermal Power Station	4021.14	6410.14
Sharavathy Generating Station	2695.12	2683.64
Gerusoppa Dam Power House	278.67	274.84
Linganamakki Dam Power House	123.23	104.86
Nagjhari Power House	1521.88	1334.06
Supa Dam Power House	289.89	238.94
Kadra Dam Power House	190.79	174.25
Kodasalli Dam Power House	168.05	152.40
Varahi Underground Power House	762.60	719.22
Mani Dam Power House	17.48	15.79
Almatti Dam Power House	441.56	404.04
Ghataprabha Dam Power House	48.26	48.62
Bhadra Dam Power House	15.55	24.40
Kalmala, Sirwar, Ganekal, Mallapur & Malaprabha	0.10	0.00
Shivasamudram	166.14	143.18
Shimshapura Hydro Electric Station	53.28	31.84
Mahatma Gandhi Hydro Electric Station	190.76	286.06
Munirabad Power House	49.26	31.81
DG Plant Yelahanka	0.00	0.00
Kappatagudda Wind Farm	7.21	8.01
Solar PV Stations at Kolar & Belgaum	36.75	32.38
Total	21912.34	24614.16

YTSP has generated 996.32 MU's for the year 2017-18 (A joint venture of KPCL)

F. Level reached by the hydel reservoirs during the year 2017-18

Reservoir	Full level	Min draw down level	Highest level in 2017-18	Date	% Capacity
Linganamakki	1819 ft	1715 ft	1799.20	20.10.2017	61.94
Supa	564 mts	494 mts	549.44	24.10.2017	61.68
Mani	594.36 mts	565.1 mts	587.57	22.10.2017	62.24

VIII. Ongoing Power Projects:

1. Yeramarus (2x800 MW) Thermal Power Station

- vide GOK letter no. EN90 PPC2008 dtd.03.01.2009 KPCL has signed the agreement for implementation of Yeramarus (2x800MW) Thermal Power Station in joint venture with BHEL on 12.01.2009.
- Environmental clearance for the project has been accorded by Ministry of Environment & Forest (GOI) on 17.11.2009.
- LOA has been issued for supply and services on 09.04.2010 for BTG, agreed BOP and associated civil works on M/s BHEL.
- LOA for supply & services for CHP, AHP & MRHS has been awarded on M/s BHEL ISG on 21.03.2012.
- The project execution is completed and able to generate power except some balance works in the main path of the Coal Handling System (CHS), which is likely to get completed by the end of Dec 2018. The revised capital cost of the project is Rs.12778 crores approximately. The estimated generation from the project is 11913MU per Annum at 85% PLF.
- COD of the Unit - 1 successfully achieved on 07.3.2017. The reliability operation of the unit-1 completed on 12.01.2018. The unit has generated 257 MU during March 2018.
- COD of the Unit - 2 successfully achieved on 06.04.2017. The reliability operation of the Unit will be carried out shortly.
- YTPS has generated about **996 MU** of energy for the financial year **2017-2018**.
- The installation of Flue gas De-sulphurization Plant (FGD) will be implemented to meet the revised emission norms as per MOEF notification 07.12.2015
- 3 stations on Ambient Air Quality Monitoring station (AAQMS) around the plant area has been installed and commissioned. Online data is being obtained and displayed in front of the plant gate. Work on up-linking of the server to the KSPCB server is under progress for real time monitoring of the emission data on line.
- **RSMY works:** The work of RSMY outside the plant area is completed but the work within the plant boundary is in progress and will be completed shortly.
- **CHP & AHP:** The work on regular path of CHP is in progress, the coal is presently being fed through contingency path of ERH for generation from

the Units. Work on dry ash evacuation system work is in progress and will be completed within 3 months

- YTPS has generated about **996 MU** of energy for the financial year **2017-2018**
- Generation from Unit-2 will commence shortly

2. Bellary Thermal Power Station, Unit-3: (1x700 MW)

BTPS 3rd unit (1x700MW) is implemented with Super Critical Technology at the approximate estimated cost of Rs.4686 crores on EPC basis. This station will generate 5212MU per year; Environmental clearance for the project has been accorded by Ministry of Environment & Forests. LOA has been issued on 28.09.2010 for the supply and services. The project has been commissioned and is presently generating power. The generation achieved during the financial year of 2017-18 is 826.88 MU.

The tenders for installation of Flue gas De-sulphurization Plant (FGD) will be issued shortly to meet the revised emission norms as per MOEF notification 07.12.2015

3. Nagjhari P H- R M & U of Unit-6

Upgradation work of Unit 6 from 135 MW to 150 MW completed and unit synchronised on 25.11.2015

4. Additional Units at Ghataprabha (16 MW)

Based on the order of Hon'ble High Court dated 14.01.2016 & power studies it is now proposed for implementation of 2x8MW additional units in place of 2x10MW additional units proposed earlier. DPR has been prepared to accommodate implementation of both 4MW hydro power project by M/s Rio Energy Pvt. Ltd & 16MW Power project by KPCL across Ghataprabha right bank canal of Hidkal Dam without overlap. The report on implementation of 2x8MW additional units at GRBC has been submitted to Energy Department, GoK with a request to demarcate the project area and to allot the project to KPCL.

5. Munirabad P H (10 MW)

Engineering, procurement, and construction contract of 1x10 MW Additional Generating Unit at Munirabad Dam Power House (Left Bank of Tunga-Bhadra Dam), Munirabad (Koppal Dist.) was awarded to M/s Allonward-SSIPL- KR & Co consortium on 04.02.2012 at a cost of Rs.37.19 crores. The site was handed over to Consortium on 19.02.2013 after getting clearance from CE(ICZ), Munirabad. Consortium request for grant of time extension to complete the project up 30.11.2017 is approved.

❖ **Civil Works:**

Parapet wall construction work completed. TRP hard rock cutting work completed. Intake service gate No.01 & gate No.02 roller assembling work completed. All major civil works have been completed.

❖ **Electro -Mechanical works:**

○ **Turbine:**

Erection of Spiral casing, Runner, Guide vanes, Turbine, Governor & its auxiliaries have been completed. SAC water pipeline hydro testing completed. Governor pipeline for GV/RB welding completed. For all cooling water and oil pipeline welding and hydro test has been completed. Intake hoist mechanism positioning work lifting hook plate fitup and welding work completed. Cooling water and oil pipeline painting work completed. Monorail hoist circular rail second number fitup has been completed. Tail race water level sensor protective cover fabrication and fixing work is completed. Top cover de-watering DC motor Protective guard fabricated. Cooling water pump new gland changed. Turbine floor cable trench angle fixing work completed. Support cover is assembled to turbine shaft. Mechanical over speed test at 145% of rated speed conducted. Mechanical spinning conducted at rated speed 187.5rpm and measured vibration & noise on 25%,50%,75%,100%.

○ **Generator & Switch- yard:**

Erection of Stator, Rotor and accessories completed. Erection of generator LGB, UGB completed. Alignment completed. Erection of Switchyard equipments and generator transformer completed. All panels are erected. Erection of cable trays, laying of control & power cables completed. Lower air baffle assembling work completed. UGB cooler water pipeline welding completed. Oil head drainage and Shaft seal welding is completed. Servomotor lock pipeline and Shaft seal pipeline hydro test has been done. Generator transformer warm up completed. LGB oil vapour extractor outlet pipeline fitup and welding work completed. Lighting protection work completed. DC panel charging is completed. Cable termination checking completed. Co2 system cylinder assembling completed. Electrical over speed test at 140% of rated speed conducted. SCC & OCC tests on Generator & Transformer completed. Unit was synchronized on 23.11.2017 (loaded up to 2.15MW) and problems that arose during synchronization of machine are attended. Reliability test run is completed. Oil header oil level indicator fixed.

Pressure gauge fixed on De-watering outlet pipelines. Governor& Control panel emergency push button connection made. Switch yard illumination, Intake gate, DT gate, Escape canal and Power house illumination works are completed. Intake gate limit switch fixing work completed. DT gate checker plate fixing work

completed. Other pending works as per the list of pending works are under progress.

6. Yelahanka Combined Cycle Power Plant (1x370 MW)

LoA dated 03.11.2015 for supply and services of the entire gas plant systems had been issued to BHEL.

Project Highlights:

1	Capacity	370MW
2	Annual Energy Generation	2755 MW @85% PLF
3	Project cost	Rs.1571 crores
4	Water	15MLD tertiary treated sewage water from BWSSB, Jakkur plant
5	Fuel	1.5MMSCMD RNLG GAIL network
6	Power evacuation	220kV KPTCL substation
7	EPC contract	Contract agreement between KPCL & BHEL was entered into on 19.03.2016
8	LOA date	03.11.2015
9	EPC cost & Additional works (amendment No. 3)	□Rs.1202+17.13 crores (Supply □Rs.882+11.07 crores, Services □320+6.06 crores)
10	Project schedule	30 months from LOA (May 2018)

- Allotment: GO No. EN 28 PPC 2014 dated 28.07.2014
- Amount Rs.2045.9 lakhs towards the execution of evacuation system works being carried out for YCCPP under DCW basis with KPTCL

Progress of YCCPP

- About 98% of the project Engineering completed
- 100% of the supply of materials to project site completed
- Erection work under progress (Civil/Mechanical/Electrical/ Instrumentation)

Statutory Clearances:

For establishment of Plant, NOC is obtained from MOEF, Airport Authority of India, KSPCB, Dept. of Health and family welfare, Fisheries, BBMP, Archaeological Survey of India, Ministry of Defence and Govt. Flying Training School, Jakkur, Bengaluru.

Land issues:

Registration process for 98 acres land completed on 31.03.16. Rectification of all the documents and the execution of sale deed at Yelahanka Sub Registrar office is completed on 01.12.16.

Water issues:

Water issues: Pipe line works 4.2 km / 4.5km completed. RW pond inlet pipe line laying work within the premises is in progress. Rs.48.35 crores out of Rs.60 crores released to BWSSB. Likely to commence water supply by October 2018.

Gas issues:

M/s GAIL have completed Gas pipe line erection and testing within the plant area 2 Nos. Gas skids erected, temporary control room works completed. Regular control room civil works is under progress Gas early supply interconnection line to the regular line within the plant erection & testing is completed, and Nitrogen gas is charged up to M/s GAIL metering station. Regular Gas piping works in the city premises is in progress.

Financial progress:

Year-wise	Supply	Services	Total (Rs.in crores)
2015-16	88.2	32	120.2
2016-17	68.4	28.1	96.5
2017-18	618.6	139.5	758.1
Total	775.2	199.6	974.7

7. R, M & U, R&M of existing hydro stations of KPCL:

Most of the hydro stations of KPCL have completed life of 30 years & some of the plants have completed life of 50 years. Normal life of Hydro plant as per CERC is about 35 years. In order to enhance the life span of Hydro plants the Corporation has taken up R and D activities i.e., R and M of existing generating units through improvements and also to adopt new technology for higher efficiencies in operation and maintenance of plants. Order has been placed on IIT, Roorkee for study of optimization of hydro resources in the state of Karnataka. IIT, Roorkee has submitted the draft reports of R&M works of existing stations. Renovation and modernization of existing plants is planned to be completed on a phased manner.

a. R &M of Units 1, 2 & 3 at Nagjhari Power House:

DPR for R&M of Nagjhari power house has been prepared in association with IIT Roorkee for Rs.222.79 crores. DPR has been approved by the Board on 03.01.2018. Concurrence has been received from Hon'ble KERC and all ESCOMS to take up the works as proposed in the DPR.

Order placed on M/s BHEL (OEM) for R&M of Units 1,2 & 3 of Turbine & Generators works at Rs.99.25 crores. Contract agreement has been executed by M/s BHEL. 10% advance payment released to the firm as per the contract.

b. R&M of Supa Power House:

DPR for R&M of Supa dam power house prepared in association with IIT Roorkee for Rs.47.91 crores. DPR has been approved by the Board on 03.01.2018. DPR has been sent to Hon'ble KERC and all ESCOMS for their concurrence to take up the works as proposed in the DPR.

c. R &M of Kadra & Kodasalli Power House:

The major activities planned are refurbishment of turbine & associated equipments, generator & its auxiliaries, renovation of excitation system along with replacement of DVR of latest version. Construction of 220 kV/11 kV terminal Bay with 220 kV switchyard for augmenting alternate station auxiliary supply is planned at Kodasalli Power House.

DPR for R&M of Kodasalli dam power house prepared in association with IIT Roorkee for Rs.50.60 crores. DPR has been approved by the Board on 24.06.2017. Hon'ble KERC & CESCO, BESCO, GESCO have concurred the DPR and concurrence from MESCOM & HESCO is awaited. M/s BHEL visited the site and has furnished Techno commercial offer for R&M works. The techno commercial offer received from M/s BHEL is under scrutiny.

DPR for R&M of Kadra dam power house prepared in association with IIT Roorkee for Rs.44.47 crores. DPR has been approved by the Board on 24.06.2017. Hon'ble KERC & CESCO, BESCO, GESCO have concurred to the DPR and concurrence from MESCOM & HESCO is awaited. M/s BHEL visited the site and have furnished Techno commercial offer for R&M works. The techno commercial offer received from M/s BHEL is verified and M/s BHEL has been requested to furnish the price offer.

d. R & M of Linganamakki Dam power house:

DPR for R&M of Linganamakki dam power house prepared in association with IIT Roorkee for Rs.56.20 crores. DPR has been approved by the Board on 24.06.2017. Hon'ble KERC & CESCO, BESCO, GESCO have concurred to the DPR and concurrence from MESCOM & HESCO is awaited. M/s GE Hydro power and M/s Voith Hydro have visited the site and has furnished Techno commercial offer for R&M works. Techno commercial offer for R&M works is under scrutiny.

e. R &M of MGHE:

DPR for R&M of MGHE is prepared in association with IIT Roorkee for Rs.97 crores. Strengthening of switchyard & R&M works of turbine & other associated activities are being planned. The DPR is approved by Technical Committee and is to be processed for approval of Board.

f. R & M of Sharavathy Generating station:

DPR for R&M of Sharavathy Generating Station house prepared in association with IIT Roorkee for Rs.196.56 crores. DPR has been approved by the Board on 03.01.2018. DPR has been sent to Hon'ble KERC and all ESCOMS for their concurrence to take up the works as proposed in the DPR.

The detailed R&M proposals to be taken up during next 5 years was prepared in association with IIT, Roorkee. After the visit of the team, there was a fire accident at SGS on 18.02.2016. During the restoration works some of the works identified earlier by the team have been carried out at SGS in consultation with IIT, Roorkee. The total cost of Restoration Works (Civil Works + E/M) amounts to Rs.54,10 crores.

g. R & M of Gerusoppa Dam power house:

DPR for R&M of Gerusoppa dam power house prepared in association with IIT Roorkee for Rs.59.66 crores. DPR has been approved by the Board on 24.06.2017. Hon'ble KERC & CESCO, BESCO, GESCOM have concurred to the DPR and concurrence from MESCOM & HESCO is awaited. M/s BHEL visited the site and is yet to furnish Techno commercial offer for R&M works.

h. R & M of Shivasamudram Power house:

DPR for R&M of Shiva power house has been prepared for Rs.146 crores. The DPR is approved by Technical Committee and is to be processed for approval of Board

i. R & M of 2x12 MW river bed units of Bhadra hydroelectric project:

R & M works of 2x12 MW capacity river bed units of Bhadra hydroelectric project has been taken up and almost all the components of the unit except generator portion are being refurbished / replaced with the equipment of latest technology. R&M works of unit -2 was completed during 2016-17.

Additional orders were placed on the existing contractor M/s Andritz Hydro Pvt Ltd. on 10.04.2017, for 'Rotor refurbishment works of Unit-1. Unit-1 Rotor was removed from the pit, complete rotor Electrical test before dismantling of rotor poles, de-soldering/de-brazing of pole to pole connections were carried out and the Generator rotor shaft, rotor poles were transported to vendor's works in Chennai for rectification and runout checks. After completion of machining/ refurbishment work, Generator rotor assembly works, complete Electrical test of Generator rotor, poles and other components, matching of magnetic centre line of rotor poles w.r.t existing Generator Stator was carried out.

Erection works of Unit-1 was completed and mechanical spinning was carried out. During spinning, some unusual noise was observed from turbine assembly. After inspection, Turbine Guide Bearing (TGB), rotating sump and fixed sump were dismantled. It was observed that rotating sump and fixed sump were worn out at some areas and the same were machined. The assembly works of Unit-1 was completed on 07.02.2018.

Water was released from the dam by M/s KNNL on 23.03.2018. Preliminary checks of Generator, Turbine and auxiliaries were carried out. Mechanical spinning of the Unit was taken up on 28.03.2018. Unit was brought to the rated speed of 250 rpm slowly, to check the performance of bearings & other auxiliaries. Further tests and synchronization of the unit could not be taken up, as M/s KNNL have stopped releasing the water from 29.03.2018. On releasing of water by M/s KNNL, further tests will be completed and the Unit will be synchronized.

8. Taking over of 2x1.2 MW = 2.4 MW Malaprabha Mini Hydel Plant from M/s TSPL:

- Malaprabha Mini Hydel Plant (2x1.2 MW) 2.4 MW has been set up in 20000 Sqm. (2 Hectares) area near Saundatti Town, Karnataka State, was leased by Government of Karnataka to M/s TSPL, for a period of 40 years from 1st January 1994 under Survey No.976, 977 and 978.
- The proposal of taking over of Malaprabha mini hydel plant from M/s TSPL was approved in 258th Board of Directors meeting of KPCL on 04.05.2017.
- Memorandum of Understanding (MOU) for taking over of Malaprabha mini hydel plant from M/s TSPL with its assets at present book value of Rs.147.21 lakhs was executed on 09.06.2017.
- Malaprabha mini hydel power house(MMPH) was taken over by KPCL and O&M works is assigned to CE (O&M) Kali .
- Tripartite agreement was executed at Saundatti, Belgaum district on 15.03.2018 between M/s KNNL represented by Executive Engineer of MRBCC, Byahatti, M/s TSPL represented by the Chairman & Managing Director and M/s KPCL represented by Chief Engineer(O&M)Kali, KPCL.

9. 10MW Solar Power Plant at Malavalli:

The 10MW Solar PV Plant, Shivanasamudra - Belakavadi was commissioned on 22.06.2015 and the plant is under O&M with M/s BHEL. Energy generated for the Year 2017-18 is 15.8346 MU at CUF of 18.07%

10. Capacity addition:

- YTPS Unit-2 COD was declared on 06.04.2017;
- COD of 1x10 MW Additional Unit at Munirabad Power House was declared on 28.11.2017;
- 2x1.2 MW (2.4 MW) Malaprabha Mini Hydel Plant has been taken over from M/s TSPL on 15.06.2017;
- 10 MW Solar Plant at Chandapur, Haveri Dist. has been commissioned on 26.10.2017;

Total installed capacity of KPCL now is 8738.31 MW.

IX. New and Proposed Power Projects

1. Edlapur Thermal Power Station

The estimated cost of the project is Rs.4,960 crores with annual generation of 5,957 MU. However, MoEF clearance is not yet obtained & coal block allotted for this project is withdrawn.

2. 2x800 MW Thermal Power Plant near Godhna Village in Chhattisgarh State

The estimated cost of the project is Rs.11,355 crores with annual generation of 11914 MW. It is expected to complete within 45 months from the date of LoA. Necessary agreements are signed with GoC & Chhattisgarh Power Holding Co on 29.6.2010. Detailed Project Report is prepared and NOCs from Airport Authority & Defence Ministry received. Clearance from MoEF is awaited. 1,260 Acres of land allotted to the project. 1016.23 Acres of private land taken possession and the process of taking possession of remaining land is in progress. A barrage to store allotted water of 1.84 TMC from Mahanadi River is under progress. Company has sought annual requirement of 7.56 MT of coal from Gogarpalli village of Orissa.

• Coal:

GoK is giving importance for Indian coal, total coal required for this project is 7.56 MT per year. Joint Secretary, MoC, GoI on 20.03.2018 informed ACS, Energy department, GoK that “it has been decided by competent authority to allot Gogarpalli & Dip side of Gogarpalli Coal Blocks to Coal India Ltd, as such these two Coal blocks are now not available for allocation to KPCL and however KPCL may apply as & when applications are invited by MoC /Nominated authority for allocation of Coal Blocks. Further Based on the recommendation of Sri A K Sahay, Technical Consultant, KPCL has submitted application for Allotment of Durgapur II / Taraimar Durgapur II / Sarya & Utkal Coal Blocks under Coal Mines (Special Provisions) Act, 2015 and MMDR Act, 1957 Godhna TPS Unit 1 & 2 (1600 MW).

- **Power Evacuation and PPA:**M/s Power Grid Corporation has granted long term open access for evacuation of power to KPCL and an agreement has been signed with PGCIL on 06.01.2011 for evacuation of 763 MW of power from Chhattisgarh plant to Karnataka State. A letter has been addressed to PGCIL regarding rescheduling the commissioning dates for Unit- 1 & 2. Power Purchase Agreement has been signed with Chhattisgarh Power Trading Company Limited on 05.01.2011. Transmission service agreement was signed with PGCIL on 24.01.2013.
- **Project consultancy works:**Tenders were invited for consultancy work and L1 bidder was finalized but due to delay in allotment of coal block, LOA was not issued to L1 bidder. Finally it was decided to cancel the bids and fresh tenders may be invited after coal block is allotted by MoC/GoI.

3. **Tadadi Combined Cycle Power Plant (2,100 MW)**

Govt. of Karnataka vide G.O.No.CI 222 SPI 2009, Bangalore, dated.16.11.2009 has accorded approval to establish Gas based “**Tadadi Combined Cycle Power Plant**” of 2100 MW capacity. The estimated cost of the project is Rs.7350 crores with annual generation of 15637 MU. PFR has been prepared and action is being taken for obtaining statutory clearances from various departments. KIADB has allotted 400 acres of land for the project. Study report on “Off-Shore / On-shore” LNG terminal is prepared & approval sought from various departments. PPA has been initialed with ESCOMS on 18.12.2010. The lease cum sale agreement registration of land is in process.

4. **Bidadi Combined Cycle Power Plant (700 MW \pm 20%)**

KPCL had planned to set up a Gas based power plant of 700 MW \pm 20% capacity at Bidadi at a total estimated cost of Rs.2,500crores. It would generate 5,212 MU of energy annually. Preliminary works like acquisition of land, construction of compound wall around the plant area etc., has already been completed. All statutory clearances including MoEF have been obtained. Site grading work in power block area is completed. GoK vide order dated 28.09.2012 had accorded approval for entering into Gas Transportation Agreement with GAIL and the agreement entered into on 18.02.2013. EPC tender process was stayed by the Hon’ble High Court and subsequently disposed of as KPCL decided to cancel the tender and deferred for time being.

5. **Gundia Hydel Scheme (400 MW)**

The proposed Gundia Hydel scheme with an ultimate installed capacity of 400 MW is located in Hassan / Dakshina Kannada District. The estimated cost of the project is Rs.1,333.00 crores. It would generate 1,002 MU of

energy per annum. Techno-Economic clearance is obtained from CEA on 25.04.2008 for I phase (1x200 MW at a cost of Rs.868.73 crores). Clearance from MoEF is awaited. In view of GoK taking up the Yettinahole drinking water Project, the water for generation purpose would not be available. Hence, the project is kept on hold.

X. FUTURE SCHEMES OF KPCL

1. Shivasamudram run of the river project:

The project is proposed to be implemented with an installed capacity of 200 MW. GoK vide its Order No. EN 11 PPT 2016, dated 26.12.2016 has approved 2x100MW Shivasamudram Run of the River Project. DPR for E&M works prepared. The process of obtaining necessary statutory clearances including MoEF clearance is under progress.

2. Rubber Dam based Small Hydro Plants:

It is planned to implement Rubber Dam based SHP scheme in downstream of river Kali in between Supa dam & BP Dam. The scheme consists of series of eight rubber dam with 2 units of 1.5MW each generating an average annual energy of 15.74MU. The project proposes to add 24MW to the grid and expected annual generation is about 126 MU.

Letter has been addressed Energy Department, GoK on 25.03.2017 with a request to allot the proposed “Rubber Dam Based Project in Cascade between Supa Dam & Bommanahalli Pickup Dam” to KPCL. Topographical survey has been carried out at the site and it was found that the said reach between Supa dam downstream upto Bomanahalli pick up dam is being utilized for water rafting and related water sport activities by number of agencies. After detailed deliberation the scheme is now deferred for time being.

3. Power system development fund for renovation & upgradation of protection related deficiencies in KPCL stations

- a) All approved works under PSDF scheme were completed. Work completion certificates are received from respective projects except for DR system at SGS. Proposal for release of funds by NLDC under process.
- b) As per latest protection audit conducted by Protection Audit Committee on KPCL Generating Stations, New DPR Prepared for R,M&U of 220/400 kV Switchyards of KPCL Stations. Board Approved the above proposal for

implementation of Renovation & Modernization & upgradation of 220/400 KV Switchyards of both Thermal & Hydel Stations by utilizing PSDF funds.

- c) DPR submitted to KPTCL (STU), SRPC, NLDC.
- d) KPTCL appraisal report received.
- e) SRPC appraisal report received.
- f) Suggestions / observations furnished by KPTCL and SRPC have been incorporated in the DPR and revised DPR for total estimate of Rs.156 crores submitted to NLDC, MoP/CEA for approval for utilization of PSDF funds.

4. Grid connected Chandapur 10 MW solar PV plant, Shiggaon Taluk, Haveri dist

- 77 acres of land has been allotted to KPCL by GoK.
- SECI has issued RfS on 15.02.2016 for setting up 1,000 MW Grid connected solar projects under Phase-II, Batch- III, Tranche-V of JNNSM in Karnataka.
- KPCL Board accorded approval for establishment of 10 MW Solar PV plant at Haveri Dist under JNNSM phase-II, Batch-III, Tranche-V initiated by SECI, New Delhi. Accordingly KPCL participated in the RfS and got qualified.

Estimated cost	Rs.60.00 crores
Estimated annual energy	14.892 MU
Capacity Utilisation factor(CUF)	17%
Completion	13 months from date of execution of PPA
Tariff fixed	Rs.4.43 per kWh for 25 years
VGF granted by SECI	Rs.13.0749 crores
Power evacuation	33kV line connecting 110/33/11kV Shiggaon MUSS

SECI has allotted 10MW capacity Solar PV project at Chandapur village, Haveri dist under JNNSM Phase-II, B-3, T-V to KPCL through tender.

SECI issued LOI to KPCL on 02.07.2016 with VGF of Rs 1,30,74,900/- per MW @ Tariff of Rs. 4.43 per kWh. PPA executed with SECI on 02.08.2016. As per PPA, the project has to be commissioned within 02.09.2017.

On 25.08.2016, the Board has approved to entrust the EPC works of 10MW solar plants at Chandapur to M/s. BHEL on negotiated basis by obtaining exemption under KTPP Act.

The EPC contract including 5 years O&M of 10MW solar PV plant at Chandapur has been entrusted to M/s BHEL, Bangalore for an amount of Rs.56 crores after obtaining KTPP exemption from GoK. As per LOA, the

plant works has to be completed before 05.08.2017 for commissioning of the plant and balance civil works before 05.11.2017.

The construction of 33kV Transmission line of about 9km was entrusted to HESCOM on DCW basis and construction of 33kV Terminal bay at 110/33/11kV substation was awarded to M/s Sahyadri power, Bangalore and both the works has been completed.

The CEIG approval for 10MW Solar PV plant obtained on 07.10.2017 and for 33KV transmission line & 33KV Terminal bay were obtained on 23.10.2017.

Interconnection approval from KPTCL was obtained on 26.10.2017 and the plant was synchronized to grid on 31.10.2017 in presence of KPTCL & HESCOM officials. The plant is continuously generating power from 31.10.2017.

Further, the commissioning committee constituted by SECI including officials from KREDL, KPTCL and HESCOM witnessed the commissioning of 10MW Solar PV plant on 07.11.2017.

State nodal agency M/s KREDL issued commissioning certificate with effect from 07.11.2017 as per the directions of SECI and declaration of COD is awaited from SECI.

5. Wind Energy Projects:

a) Kappatagudda Wind Energy Farm (KGWEF):

KPCL had set up its first demonstration wind power project of 2.025MW capacity during the year 1994-95 at Kappatagudda Hills, Mundargi Taluk, Gadag Dist under MNRE scheme. The demonstration wind farm project included 9 Nos. of 225kW Vestas make WEGs. KPCL further commissioned 2.530 MW by installing 11 Nos. of 230kW Enercon Make WEGs during 2002, totaling 4.555 MW capacity.

Capacity enhancement of Stage-I WEGs at KGWEF:

As the WEGs have completed their life period of 20 years and have become obsolete, it is proposed for replace them with latest machines of higher capacity to harness more power in consultation with NIWE (formerly C-WET). KPCL obtained GO No.EN 22 NCE 2016 Dated 08.03.2016 for enhancement of capacity from **2.025 MW to 8.4 MW**

Lease period of the Forest land granted in F.Sy No. 219 of Doni Village of Mundargi range for establishment of wind farm of 2 MW to KPCL expired during August 2004. Regional Empowered committee conveyed the in-principle approval for renewing the lease period of 30 years w.e.f 09.08.2004 for the diversion of 12.0 Ha of forest land vide letter Dtd. 30.12.2015.

Accordingly, payment is made to DCF, Gadag and Partial Compliance report submitted. The works stipulated in the in-principle approval are completed and PCCF(FC) requested to recommend the proposal to MoEF for “Diversion of 12.00Ha Forest Land granted in F Sy No. 219 of Doni village of Mundargi Range of existing Kappatagudda Wind Energy farm” for obtaining Final (Stage-II) approval for renewal of lease. On receipt of the said approval, replacement work will be taken up.

Height Clearance (NOC) has been obtained from Airport Authority of India (AAI) and Regular evacuation scheme has also been accorded by KPTCL for evacuation of enhanced power of 10.93MW from 110/33/11kV Dumbal substation.

b) Kappatagudda 52.25 MW New Wind Energy Project:

Govt. of Karnataka has allocated 39.75 MW out of 56.50 MW proposed by KPCL vide GoK Order No. EN 569 NCE 2009 Bangalore dtd.26.11.2009 to develop additional wind power at Kappatagudda. GOK vide GO No. EN 162 NCE 2015 dated 24.08.2015 has allocated additional 12.5 MW along with the earlier allocation of 39.75 MW totaling to 52.25 MW capacity.

GoK granted Time extension for completion of the 39.75 MW capacity for the further period of 5 years w.e.f 26.11.2015 vide GO No. EN 235 NCE 2015 Bangalore Dtd.11.11.2015 subject to the payment of extension fees and other fees as prescribed by KREDL. KPCL approached Forest Dept regarding diversion of 65.5 Ha Forest land to KPCL at Kappatagudda & also to carry out WRA studies.

Meanwhile, GoK notified Kappatagudda hills as Kappatagudda Conservation Reserve vide GO No. FEE 291 KWL 2015 Dtd. 19.12.2015 and the land allocated to KPCL for taking up new project comes under this reserve area. Hence, KPCL proposal for diversion of 65.5 Ha of land was withhold by Forest Dept as the area was declared as Conservation Reserve.

KPCL has intimated the Energy Dept., GoK about the non-possibility of implementing the 52.25MW Wind Project allocated to KPCL at Kappatagudda since the file pertaining to diversion of land has been closed by Forest dept.

XI. Management of coal

A. Coal for RTPS

KPCL has established 7 Units of 210 MW and 1 Unit of 250 MW capacity in the coal based Thermal Power Station at Shakthinagar, near Raichur. Coal requirement is about 27,000 tonnes per day for operation of eight units. Supply of coal is from (i) Singareni Collieries Company Ltd., Telangana, (ii) Western Coalfields Ltd., Maharashtra, (iii) Mahanadi Coalfields Ltd., Odisha.

Coal receipt and consumption during the year 2017-18 was 72.70lakh MT (71.35lakh MT of raw coal, 1.35 lakh MT of washed coal) and 69.32 lakh MT

respectively. The specific coal consumption was about 0.640 kg/kwh. The coal receipt details are as hereunder:

		Qty. in lakh MT
Sl.No.	Source	Coal Receipt
1	SCCL	38.23
2	WCL – Raw	12.10
3	WCL – washed	1.35
4	MCL	21.02
	Total	72.70

B. Coal for BTPS Units - 1,2 (2x500MW) & 3 -(1x700MW):

Requirement of coal for BTPS Units 1, 2 and 3 per day is around 25000 MT. The coal received and consumed during 2017-18 is 23.79 lakh MT and 24.60 lakh MT respectively. The specific coal consumption was about 0.612 kg/kwh. The coal receipt details are as hereunder:

		Qty. in Lakh MT
Sl.No.	Source	Coal Receipt
1	SCCL	17.16
2	MCL *	6.63
	Total	23.79

* From MCL on account of RTPS and consumed at BTPS.

Baranj I to IV, Manoradeep and Kiloni Coal Blocks / Mines in Chandrapur District of Maharashtra have been re-allotted to KPCL to meet the coal requirements of Bellary Thermal Power Station Units 1 & 2 by Ministry of Coal, GoI vide Allotment Order dated 31.03.2015. Tender for selection and appointment of new mine operator was quashed by the Hon'ble High Court of Karnataka, Bengaluru Bench and Special Leave Petition has been filed before the Hon'ble Supreme Court of India. Final outcome of the appeal is awaited. In the meanwhile all necessary clearances are processed for restarting the mine.

Pending commencement and supply of coal from these mines, coal was sourced from SCCL under MoU basis and also utilized some coal lifted from MCL on account of RTPS at BTPS to meet the generation target.

C. Coal for YTPS Units – 1 & 2 (2x800 MW)

Requirement of coal for YTPS Units 1& 2 per day is around 19,000 MT. The coal received and consumed during 2017-18 is 6.50 lakh MT and 6.34lakh MT respectively. The specific coal consumption was about 0.637 kg/kwh. The coal was received from SCCL at RTPS and transferred to YTPS by road since railway infrastructure was not ready at YTPS.

Coal requirement for Bellary TPS Unit 3 (1x700 MW), Yermarus TPS

Units 1&2 (2x800 MW), Edlapur TPS (1x800 MW) and Godhna TPS Unit 1&2 (2x800 MW):

1. KPCL had applied for allotment of coal blocks to meet the coal requirements of Yermarus TPP (2x800 MW), Edlapur TPP (1x800MW) and BTPS Unit 3 (1x700 MW). Ministry of Coal, GOI, vide letter dated 6.09.2013 jointly allocated Deocha-Pachami coal block to the entities of 6 States viz. West Bengal, Karnataka, Bihar, Uttar Pradesh, Punjab and Tamil Nadu.
2. A meeting was held in the Ministry of Coal with the JV partners of the Deocha-Pachami coal block to review the progress of development of this coal block. It was brought to the notice that due to joint-allocation, difficulties are being faced in operationalization of this coal block. On the suggestion of various joint venture partners and in view of the requests received from Government of West Bengal, it was decided with the approval of competent authority to allocate Deocha-Pachami coal block to one State and separate coal blocks to each of the other States in terms of their requirement.
3. In view of the above, Ministry of Coal, GoI, has invited applications from the above states vide Notice Inviting Application dated 03.10.2016 for allotment of coal blocks.
4. KPCL has submitted Application to Ministry of Coal, GoI, for allotment of 'Ghogarpalli & Dip side of Ghogarpalli Coal Block' situated in Odisha having reserves of 1163MT of coal on 20.10.2016 under auction by competitive bidding of coal mines rules,2012 for the following Projects:

Sl. No	Name of the Thermal Power plant	Capacity in MW	Coal Requirement (in Million Tonnes /Annum)
1	Bellary TPS Unit 3	700	3.45
2	Yermarus TPS Unit 1 & 2	1600	7.88
3	Edlapur TPS -1	800	3.95
4	Godhna TPS Unit 1 & 2	1600	7.88
	Total	4700	23.16

5. In the meanwhile, KPCL requested Ministry of Coal, GoI to allocate Bridge Linkage to 1x700 MW Unit-3 of Bellary TPP and 2x800 MW, Unit-1 & 2 of Yermarus TPP from SCCL. Ministry of Coal, GoI, recommended Bridge Linkage from M/s SCCL vide File No.23014/2/2016/CPD, dt.11.4.2016 for a period of 3 years from the date of allotment of Coal Block as per the terms and conditions of OM

No.23021/3/2015-CPD, dt. 8.2.2016. MoC vide letter dated 26.10.2016 extended the bridge linkage for 1 year from the date on which the bridge linkage has expired. i.e., upto 15.09.2017. Further, MoC vide letter dtd. 26.09.2017 extended the Bridge linkage for one more year i.e., upto 14.08.2018.

6. MoC vide letter No. 23021/3/2015-CPD/CLD dtd. 8.03.2018 had intimated that MoC vide letter No. CBA1-38011/2/2017 dated 5.12.2017 addressed to Chief Secretary, Govt. of Karnataka had communicated regarding cancellation of Deocha-Pachami coal block and supplies under Bridge Linkage shall be discontinued after 31.05.2018 and advised GoK&KPCL to apply for coal linkage through SHAKTI policy or for coal block allocation.

Accordingly, KPCL vide letter dtd. 17.03.2018 informed MoC & MoP that without prejudice to pending application for fresh coal blocks, requested MoC to allocate coal linkage of 30 lakh MT to BTPS Unit-3 and 60 lakh MT to YTPS 1 & 2 under SHAKTI Policy.

7. Further, MoC, GoI, vide letter dated 20.03.2018, communicated that Ghogarpalli and Dipside Ghogarpalli coal blocks are not available for allocation to KPCL and requested KPCL to apply as and when applications are invited by Ministry of Coal/Nominated Authority for allocation of coal mines and the applications so received will be considered as per rules.
8. MoC in the meeting of the Standing Linkage Committee (Long Term) for power sector held on 10.04.2018 has recommended for linkage under SHAKTI Policy for 1x700 MW Bellary Unit-3 and 2x800 MW Yeramarus TPP from SCCL for 3 years from the date of signing of FSA and thereafter the full linkage of all these units shall be transferred to CIL.
9. Further, in view of utilisation of some coal lifted from MCL on account of RTPS at BTPS, to meet generation target at RTPS, additional coal from SCCL under MoU basis was also used at RTPS over and above the Fuel Supply Agreement quantity during 2017-18.
10. Considering the above, KPCL entered into MoU with SCCL for supply of coal under MoU basis to BTPS, YTPS & RTPS during FY 2017-18 as under:

Sl. No.	TPS	Qty. in Lakh MT
1	BTPS & RTPS	62.00
2	YTPS	30.00
	Total	92.00

XII. Evacuation of Fly Ash from RTPS, BTPS and YTPS

RTPS:

KPCL has entered into agreements with end-users of fly ash for 100% evacuation and utilization of fly ash from RTPS. KPCL is issuing fly ash free of cost to SSI units as per MoEF stipulation.

KPCL has long term agreements for ten years with M/s ARV Cement Society for lifting of 8 lakh MT p.a. of fly ash from Units 1 to 6 and with M/s Kalburgi Cement for lifting of 2 lakh MT p.a. of fly ash from Unit#7. KPCL has an agreement with M/s ARV Cement Society for lifting of 3.00 lakh MT p.a. of fly ash from RTPS Unit#8 for a period of 3 years. Fly ash issued subject to M/s Kalburgi Cement subject to HC stay order dated 23.09.2014.

Details of quantity of fly ash lifted during 2017-18 are as hereunder:

Agency	Unit No./s	Quantity in Lakh MT
M/s ARV Cement Society	1 to 6	8.811
M/s Kalburgi Cement Pvt. Ltd.	7	1.306
M/s ARV Cement Society	8	0.609
SSI Units	1 to 8	1.848
KPCL Nominees / Private Agencies	1 to 8	0.387
	Total	12.961

During 2017-18, total production of ash is 24.010 lakh MT out of which fly ash available for lifting is 17.288 lakh MT. The quantity of fly ash lifted during the year 2017-18 is 12.961 lakh MT and the fly ash utilization is 74.97%. The average ash content of the coal is 34.66%.

BTPS:

KPCL has entered into agreements with end-users of fly ash for 100% evacuation and utilization of fly ash from BTPS.

KPCL has long terms agreements with M/s Rain Cement Ltd., Hyderabad and M/s Ultratech Cements Ltd., Tadapatri, A.P for lifting of fly ash from Unit 1 and 2 respectively.

Contract agreements for lifting fly ash from BTPS Unit#3 have been entered into for a period of three years with three agencies, viz., M/s ACC Limited for 2.50 lakh MT p.a, M/s The Ramco Cement Ltd., for 30,000 MT p.a and M/s J.K.Cement Ltd., for 36,000 MT p.a.

Details of quantity of fly ash lifted during 2017-18 are as hereunder:

Agency	Unit No./s	Quantity in Lakh MT
M/s Rain Cement Ltd.	1, 2 & 3	1.255
M/s UltraTech Cement Ltd.	1, 2 & 3	1.525
M/s Ramco Cement	3	0.011
SSI Units and Pond ash lifted by agencies	1, 2 & 3	1.641
	Total	4.432

During 2017-18, total production of ash is 8.89 lakh MT out of which fly ash available for lifting is 7.11 lakh MT. The quantity of fly ash lifted during the year 2017-18 is 4.43 lakh MT and the fly ash utilization is 62.33%. The average ash content of the coal is 36.28%.

YTPS:

KPCL has finalized the tendering process with end-users of fly ash for 100% evacuation and utilization of fly ash from YTPS. RPCL is in the process of entering into contract agreements for a period of three years with 9 (nine) agencies for lifting of 9.90 lakh MT per annum.

Coal companies to supply coal with ash content of less than 34 %

SCCL, WCL and MCL have been requested to supply coal of different grades including washery grade coal by maintaining quarterly weighted average ash content of coal at less than 34% to comply with MOEF stipulation.

XIII. Conservation of energy, Research and development, Technology absorption, Foreign Exchange earnings and outgo:

1. Research and Development (R & D)- Hydel

Innovative activities:

- a) Supply, Retrofit, Testing and commissioning works of Dynamic Disturbance Recorder & GPS for Sharavathy Generating Station completed.
- b) Implementation of AR scheme in 220kV line of RTPS, Gerusoppa, Kadra and Kodasalli Power house were completed.
- c) All approved works under PSDF scheme were completed. Work completion certificates received from respective projects except DR system at SGS yet to obtain. Letter along with 3rd Installment (Balance payment) details yet to be addressed to NLDC.
- d) Work order issued for Re- Construction of Air Insulated Outdoor switchyard structures & Supply, Retrofit, Testing & Commissioning of switchyard equipment and Numerical Distance Line Protection Relays for

Mahatma Gandhi Hydro Electric Station under buy back of released equipment & structures.

- e) As per the recommendations enquiry committee constituted vide GOK Order No EN 4 PPT 2016 Bangalore, dated 29.02.2016, Strengthening/ refurbishment of 220KV switchyard earthing / earthmat at Sharavathy Generating Station is completed.
- f) As per CEA & SRPC norms, Work Order placed for Providing power supply to KPCL Colony at Ganeshgudi & auxiliary supply to power house from 110kV switchyard at Supa Power House.
- g) As per latest protection audit conducted by Protection Audit Committee on KPCL Generating Stations, New DPR Prepared for R,M&U of 220/400 kV Switchyards of KPCL Stations. Board Approved the above proposal for implementation of Renovation & Modernization & upgradation of 220/400 KV Switchyards of both Thermal & Hydel Stations by utilizing PSDF funds.
- h) In this regard DPR submitted to KPTCL (STU), SRPC, NLDC.
- i) KPTCL Appraisal report received.
- j) SRPC Appraisal report received.
- k) Suggestions / observations furnished by KPTCL and SRPC has been incorporated in the DPR and revised DPR for total estimate of Rs. 156 crores submitted to NLDC, MoP/CEA for approval for utilization of PSDF funds.
- l) The major works planned are
 - a. Supply & Retrofit of Numerical Distance protection relays with existing relays as Main-I & Main-II for all 220kV lines, Bus couplers, Bus Bar protection, SF6 Breakers, CVTs, PTs, wave traps at switchyard of RTPS, Sharavathy Generating Station, Almatti power house, Gerusoppa Dam Power House, Kadra Dam Power House & Kodalalli Dam Power Houses of Karnataka Power Corporation Limited.
 - b. Supply & Retrofit of Distance protection relays, SF6 Breakers, CVTs, CTs, isolators, wave traps at 400kV switchyard of RTPS and BTPS.

A) New Proposals:

- i. Run off river scheme at Cauvery Right Bank near Shivasamudram comprising of an underground power house of 2x100MW capacity has been envisaged and DPR submitted to GoK. NOC from Fisheries Department, GoK, Archeological Survey of India, GoI, Ministry of tribal Affairs, GoI, Ministry of Social welfare and Justice, GoI have been received. Approval requested for extension of time for the TOR issued during 2009 from MOEF & CC, GoI. MoEF & CC have rejected the proposal for extension of validity. Online application for issue of fresh TOR was submitted to MoEF & CC. The Expert Appraisal Committee did

not recommend accordance of TOR for the project as is inside the Eco sensitive zone of the Cauvery Wildlife Sanctuary and has directed take up the matter with Ministry, GoI for the implementation of the project in the ESZ area. A letter has been addressed to ACS, energy to appraise ACS, Forest dept GOK to recommend for exemption to implement the SRRP project to MOEF. DCF, Cauvery Wild Life Sanctuary have visited the SRRP site on 21.06.2018 for joint inspection of the proposed components with in the ESZ area and have collected the reports and DPR of the project. Consent for Exemption from ESZ area is awaited.

ii. Two Pumped storage schemes of one at Sharavathy Valley and another at Varahi are proposed. Board has accorded approval for preparation of DPR for both the schemes.

a) **Sharavathy Pumped Storage Scheme:** M/s.WAPCOS have been appointed as Consultant for preparation of PFR & DPR.M/s.WAPCOS have submitted PFR for implementation of 2000MW capacity pumped storage scheme and EAC of MOEF & CC has given scoping clearance(TOR) for conducting EIA & EMP studies. Preparation of DPR has been taken up.

b) **Varahi pumped storage scheme:** Preliminary studies have been conducted by KPCL. PFR prepared for an installed capacity of 1500 MW (6x250 MW) reversible fixed speed Francis turbines. Technical committee accorded approval for the PFR and for DPR preparation and to seek the approval of Board for GoK allotment of the project to KPCL. As the proposed project is within the declared Someshwara and Mookambika Wildlife Sanctuaries it is mandatory to get the approval from National Board of Wild Life for carrying out further survey and investigation works which are necessary for the preparation of the DPR. In this regard letter has been addressed to ACS, Energy on 21.07.2018 for getting the project allotted to KPCL from Govt. of Karnataka and subsequently online application for Wild life clearance will be applied for getting consent from the National Board of Wildlife.

B) Restoration of Sharavathy Generating Station:

A fire incident had taken place on 18.02.2016 at SGS. GoK declared this as an emergency under section 4(a) of KTPP act for restoration of SGS.

The following works were carried out during 2017-18:

1. Distributed Bus Bar protection system with Main – 1, Main – 2 & Check Zone features located at both the Kiosks.
2. Ultrasonic Flow measurement for Units.

3. Vibration sensors at different locations of bearings and Online Vibration Monitors are installed to Condition monitor the condition of the Bearings at centralized location.
4. Modernized Control Room with LVS screen and Consoles with Separate Operating Work Station & Engineering Work Station, Historians, Servers have been installed to Control & Monitor Units & Lines.
5. CCTV surveillance for the Station monitored at two locations.
6. Fire Protection System with Inert Gas IG – 55 for Control Room & Kiosks and MVWS system for Cable Ducts is installed.
7. Replacing all old cables of DC power, Control and Instrumentation cables with new Zero Halogen Fire Retardant Low Smoke (ZHFRLS) Cables
8. Installation works of Stand alone Disturbance Recorder completed .

C) Benefits derived as a result of above R and D are as follows:

R&M of hydro stations will increase PAF of the units and extension of life by 10 to 15 years at lower capital investments. Adopting bay control based line protection system along with distributed control system and plant SCADA has minimized the occurrence of accidents.

D) Energy Conservation, Technology absorption, Adaptation and Innovation:

Reduction in Auxiliary consumption, increase in PAF and improvement in heat rate is being constantly given priority.

E) Highlights of Generation:

1. Maximum Hydro Generation of 39.076 MU's per day achieved on 08.08.2017
2. Maximum thermal Generation(Net) of 68.378 MU's per day achieved on 04.04.2017
3. Maximum Generation(Net) of 38.170 MU's per day achieved at RTPS on 04.04.2017
4. Maximum Generation(Net) of 25.050 MU's per day achieved at BTPS on 25.01.2018
5. Maximum Generation(Net) of 19.365 MU's per day achieved at YTPS on 04.04.2017
6. YTPS Unit-2 (800 MW) COD achieved on 06.04.2017
7. Units at RTPS have achieved record generation by completing 100 days of continuous operation and the details is as follows:

RAICHUR THERMAL POWER STATION		
Unit No.	No. of days of continuous operation	Period of continuous operation
2	102	31.05.2017 to 10.09.2017
3	168	03.11.2017 to 20.04.2018
4	103	09.08.2017 to 20.11.2107
5	209 (till 13.09.2018)	Still running 16.02.2018

2. Research and Development (R&D)- Thermal Projects(RTPS)

A) Innovative activities:

- a. Testing of transformer oil for condition monitoring has been done by utilizing mobile testing facility of CPRI, Bangalore.
- b. Incorporating updated protection scheme for line protections i.e., Main and Backup protection system of different operating Principle/different manufacturers.

B) R,M&U and R&M of Hydel Stations:- NA

C) R,M&U and R&M of Thermal Stations

a) R&M of older units

- Five Nos. of LP turbine compensators were replaced with new compensator Bellows (U1).
- HP Heater-5 shell make-up piece replaced with available spare (U2).
- PLSH, FSH and RH coils were replaced (U2).
- Air Pre-Heater modules were replaced (U1,2).
- All 6 Mills hot air, cold air ducts, dampers, gates and expansion joints were replaced.(U2)
- Excitation Field breaker replaced (U2).
- Retrofitted TG C&I with modern system (U1,2)
- Supply& Installation of On-line Stack Emission Monitoring System for Unit 1,2,3,4,5,6&7
- Supply & Installation of online effluent Monitoring system.
- Providing of microprocessor based intelligent addressable Fire Alarm system for Units-1&2
- Retrofitting of microprocessor based controllers in place of analog type controllers for ESP for efficient fly ash collection and to achieve statutory limits of KSPCB for Unit-3

- Providing Energy efficient LED lighting at UCB (Unit Control Board) of Unit-1&2.
- Retrofitting of Sequential Event Recorder (SER) with the latest QNET 4100 system including Time Synchronization in 400KV Switchyard control room.
- Installed the Online Insulation Monitoring & DC Earth Fault location system for DCDB located at 400 KV Switch Yard Control room.
- Retrofitting of existing Electro mechanical/Staticre lays with Numerical Protection Relays for Generator, Generator Transformer & UATs Protection for Unit-5, Unit-6 & Unit-7. Installed the GPS in the Unit control room. Time Synchronization with GPS and Networking of all the Numerical Relays of Units-5, 6, 7 & 8 have been completed.

b)New Projects in progress :

- Providing Energy efficient LED lighting
- Up-gradation of 220KV & 400KV Circuit Breakers & Current Transformers to higher rating.
- More energy efficient BFPs proposed
- Engineering, Testing, Installation & Commissioning of Energy Management System (EMS) through Ethernet for Unit#1 to 8.
- Implementation of ISO - 45001 is under progress.
- Installation of CCTV inside the RTPS Plant premises and guest house of RTPS Colony.
- Retrofitting of Numerical Protection Relays by releasing of existing Static/ Electromechanical protection relays for Reactor of 400KV Mahbubnagar line, Tie Breaker bays of 400 KV Munirabad line, ICT-1, ICT-2 and LBB relays of BTPS line along with tripping relays, Auxiliary relays and Trip circuit supervision relays.
- Retrofitting of 69 Nos. of 0.2s Class 3Ph, 4 wire Energy meters with ABT feature having Ethernet TCP/IP communication port with DLMS protocol, time synchronizing with GPS along with Server Systems, Operating Stations and accessories to complete ABT metering Management system for Unit 1 to 8, 400KV lines and 220 KV lines and 220 KV Bus coupler

- Providing concrete pavement for the road stretches from Beereshwar temple to Old railway gate at RTPS-Estimate under process
- Providing concrete pavement for the road connecting ware house No.02 junction and 275.0 N road at RTPS – estimate under process
- Providing UCR/CC drain in the colony. –CMG opined for site inspection.
- Providing pavement concrete to the Oxidation Pond with necessary side lining works. -To arrest seepage of Sewage water into ground. – Pollution control board stipulation.
- Development of roads in the Colony area. –To provide better roads in colony.
- Up gradation / renovation of old residential quarters. –To extend life of building and fit for occupation.
- R&M works of UGD lines. –To upgrade the UGD system for efficient working.
- Renovation / up gradation works at Shakti and Krishna Guest house. – To give facelift to the Guest House.-Work under progress.
- Augmentation of water supply - Providing 300mm dia DI pipeline from existing pump house (Unit-8 - Clarifier pump house) to OHT No.5 i.e. up to Bus stand tank) –To upgrade the system and to give drinking water facility to surrounding under CSR.
- Renovation works for Hospital at colony. –Work order issued.
- R&M works to the existing STP. –Modernisation of STP and to increase the capacity to accommodate surrounding areas as per CSR.
- Construction of Shuttle court at colony –approval under process.
- Construction of pavilion & gallery at Cricket ground. –estimate under process.
- Construction of VVIP suit rooms adjacent to Shakthi Guest House at RTPS colony. –To accommodate VVIP's.
- Upgradation of Foot paths of Main road from Colony Ist crosses entrance to Dr.B.R.Ambedkar Park in RTPS colony. –To give face lift to main road.

- Providing staircase & Repairs to OHT No. 1&2 and providing painting to all OHT's (7 No's) in RTPS colony. –To strengthen the existing OHT.
- Providing & laying CC road for transportation of mill reject between Coal Bhavan to mill reject yard-Estimate submitted.
- Reconstruction of the damaged portion of Unit-3 Chimney platform at EL: 45.00m at RTPS.- Estimate under process.
- Improvements/Renovation works for DGMHRDT, System, DGM (F)RTPS and DGM(I/A) offices at Administrative building at RTPS-Estimate under process.
- Providing false ceiling to UCB 1 to 4 at RTPS -Estimate under process.
- Providing Galv. Sheet roofing for boiler of Unit 1 to 4-Estimate under process.
- Providing water proof treatment over the roof of Station building, ESP, AHP Control room, ODY-Estimate under process.
- Supplying, laying and relaying of 40mm aggregates in ODY switch yard and transformer area at RTPS-Estimate under process.
- Supplying, laying and relaying of 40mm aggregates in ODY switch yard and transformer area at RTPS-Estimate under process
- Construction of open shed in ODY area-under process
- Construction of vehicle parking sheds in different areas of station building area-Estimate prepared. Location to be finalised.

c) Benefits derived as a result of above R and D

- Prior intimation on impending problems, if any, in the critical transformers by mobile oil testing.
- Improved protection/analysis of ODY & transmission equipment's by numerical relays.
- Higher PLF by improved load sharing due to additional ICTs.
- Better compliance to Environmental norms by retrofitting ECs, emission monitoring devices etc.
- Better control over the boiler so as to operate at optimum level.

- Maximizing the generation due to improvement in condenser vacuum due to reduction of scale formation on account of supply of clarified water.
- GPS Time stamped events are helpful to Analyse the exact event during the fault in 400KV system.
- Insulation monitoring system monitors the insulation continuously and the events triggered in the SER makes easy to detect and isolate the faulty system early by using DC earth fault location system.
- Pre-fault as well as post fault data stored in the memory of Numerical relays is extremely useful during Grid disturbances and Unit/Line trips to analyze the faults and to take necessary corrective action and restore the system in short time. Disturbance Recorder and the events available to analyze the fault. Reduction in down time. Multi functions and Multi group settings in one Relay.
- To increase the remaining life of Cooling tower and Chimney of Unit 1 and 2

3. Energy Conservation, Technology absorption, Adaptation and Innovation

- a) Reduction in Auxiliary consumption and improvement in heat rate is being constantly given priority. Efforts are being made to comply to PAT scheme of BEE thereby achieving reduction in Specific Energy Consumption (SEC).
- b) Maximum utilization of fly ash has been given top priority. This saves water and energy also.
- c) Replace existing Lighting with Energy Efficient LED lighting.

Highlights of Generation during the year :

B) Performance of RTPS	
Particulars	2017-18
Generation in MU	10834.55
Aux. Consumption in MU	1000.86
Aux. Consumption in %	9.24
Plant load factor in %	71.91
Coal Consumption in MT	6932319
Specific Coal Consumption (kcal/kWh)	0.640

Specific Oil Consumption (kl/kWh)	0.90
Plant Availability factor in %	79.68
Units in operation	8

1. Foreign Exchange: NA

2. Employees Strength

	RTPS	YTPS
Corporate	662	179
Non-Corporate	994	42
Women Employees	254	-
SC/ST Employees	423	-

3. Capital Expenditure

- Construction of New Office Complex/Administrative building green building with LEED facilitation at RTPS, Shakthinagar-Rs.16.45 crores.
- Construction of Gated Barrage and appurtenant works across Krishna river on the U/s of confluence of Bhīma and Krishna river near Girijapur village, Raichur-Rs.90.95 crores

XIV. Management Initiatives for Improvement

1) Training

The Corporation emphasizes on the need to update the competencies of its employees on a continuous basis so as to equip them to keep abreast of latest developments in the Industry. It lays stress on developing the skills and competencies of the employees in order to achieve the goals on economic principles in the competitive environment. With this objective, the Corporation draws a systematic training plan every year so as to suit the employees at every level.

During the year 2017-18, 10 In house training programmes were conducted and 16 External training programmes by various training agencies.

Important trainings imparted to the employees during the year are as under:

IN HOUSE TRAINING

Sl No.	Name of the Programme
1	Effective Leadership/Interpersonal Skills
2	Physical Fitness and Good Health Habits
3	Personality Development as a tool for Achieving your dreams
4	Finance for Non-Finance Executives
5	Development of Wind/Solar Power Project
6	O&M of EHV station Equipment Earthing
7	Plan for better retired Life/Manage your Finance for better future

8	How to Lead a satisfying life at any age
9	Instrument transformers and Protection of Generators
10	Finance in terms of proposals savings Investment & Soft Skills

EXTERNAL TRAINING

1	Study for optimization of Hydro Power resource in the state of Karnataka Workshop for Model demonstration
2	Concept to Commissioning of Solar Power Plants including O&M
3	Public Procurement and contract Management
4	Flexibilisation of Thermal Power Plant learning for German experiences on 1 st December 2017
5	Two days indo us workshop on Revisiting Industrial Chemical Disaster
6	3days workshop on vigilance Awareness & preventive Vigilance for containing corruption malpractices and Deficit in Governance
7	Recent Trends in Insulating Fluids for Electrical equipment
8	Workshop on performance and Reliability Audit Boiler and water treatment System
9	Awareness training programme on Bio-Medical waste Management
10	The Sexual Harassment of Woman at work place Act-2013
11	Training programme on Electricity Act, Tarrif Grid regulations and Power Market
12	Training programme for First appellate Authorithes/Public information Officers/ Alternate Public Information Officers/Assistant Public information and Nodal Officers on the right to information Act 2005
13	Contract management Public Policy of India and Bi-parti in Arbitration
14	Workshop on Power Transformers Testing Commissioning Protection and Maintenance
15	Attending and presenting paper at the International O&M Conference IPS-2018, Organized by M/s NTPC at New Delhi regarding (Environmental Management tolls and environmental sound technologies for coal based Thermal Power Plants)
16	NPTC International O&M Conference, Presentation of Technical paper regarding post commissioning stabilization issues and effective O&M at STRP hydro units of KPCL in the India State of Karnataka

2) Career Growth

Upon implementation of career growth scheme, employees were upgraded/re-designated as under during the year 2017-2018.

To the level of EEs & Equivalent .	-
To the level of AEEs &Equivalent .	-
To the level of AEs &Equivalent .	-
To the level of AAO &Equivalent .	-
Workmen level	460

During 2017-2018 there were no up-gradation/re-designation in corporate cadre employees, as per DPAR letter No. DPAR 182 SRR 2011 dated: 22.03.2017.

XV. Employees Strength

Particulars of Employees	As on 31.03.2018	As on 31.03.2017
Total Strength	4807	4930
Corporate	2267	2348
Workmen	2540	2582
Entry of employees	234	49
Exit of employees *	101	377
Exit of employees under VES	03	0
SC employees – in percentage	18.71%	17.58%
ST employees – in percentage	4.33%	4.19%
Handicapped employees in percentage	1.37%	1.13%
Ex-servicemen	07	08
Installed capacity in MW	8823.905	8023.905
Man/MW ratio	0.5447	0.6144

*Employees Retirement / VR/Resignation/Expired taken from 01.04.2017 to 31.03.2018.

Break up in Corporate Cadre

Engineering Professionals – 1943

Other Professionals – 324

XVI. Public Deposits

The Corporation has stopped accepting the deposits from Public from Nov. 2002. Deposits from past and present employees were accepted/renewed till September 2005. At the end of the year, unclaimed deposits stood at Rs.12.82 lakhs. These are pending because of litigations by the claimants in various Courts.

XVII. Auditors

(i) Statutory Auditor:

The C&AG have appointed M/s. Guru & Jana, Chartered Accountants, as the Statutory Auditors for the year 2017-18. The auditors visited all accounting units, verified the records, obtained explanations and finalized the audit work in a reasonable time.

(ii) Internal Auditors:

External Chartered Accountants were appointed in order to strengthen the Internal Audit at RTPS, BTPS and Hydro stations.

(iii) Cost Auditor:

Government of India has introduced cost audit for Generation Companies from financial year 2005-06. The Company has appointed M/s. JH & Associates, Cost Accountants as Cost Auditors for the year 2017-18. Cost

Auditors have carried cost audit and have furnished their report and the same will be filed with MCA after taking the same on record.

(iv) Secretarial Auditors:

M/s K Narayana Swamy & Co., Company Secretaries were appointed as Secretarial Auditors to carry out the Secretarial Audit for the year 2017-18 pursuant to Section 204 and the applicable Rules (Appointment and Remuneration of Managerial Personnel) of the Companies Act 2013. Report of the Secretarial Auditors is annexed herewith as *Annexure B* to this Report.

XVIII. Review by the Comptroller & Auditor General

Comments on working results of the Corporation by the Comptroller and Auditor General of India are annexed herewith as *Annexure C* to this Report.

XIX. Particulars as per Companies (Particulars of Employees) Rules 1975 and as amended

None of the employees of the Company was in receipt of remuneration amounting to Rs.1,02,00,000/- and above per annum or at the rate of Rs.8,50,000 and above per month during the financial year.

XX. Subsidiary Company, Joint Venture and allied activities

The Corporation has a Subsidiary Company viz. KPC Gas Power Corporation Ltd.(formerly known as KPC Bidadi Power Corporation Pvt. Ltd) which has been established to implement the combined Gas based project at Yelahanka near Bangalore.

Joint Venture Companies where the Corporation is a stake holder are as under:

- a) Raichur Power Corporation Limited.
- b) Karnataka EMTA Coal Mines Limited.
- c) Bengal Birbhum Coalfields Limited.

Statements as required under Section 129 of the Companies Act 2013 is attached as-*Annexure E*

XXI. IT and Computerization

The Corporation has taken a number of IT initiatives to meet its business commitments. Some of the IT activities/infrastructure are as detailed below:

- 1) **Hardware platform:** Provided Blade Servers and Rack Servers with Windows 2008 at Corporate office and Projects sites. Provided Core to Duo/i3/i5/i7 PCs installed with Windows 7/8 and MS office 2010/2013

software along with printers up to the level of Executive Engineers and all critical users at corporate office and projects.

- 2) **Connectivity:** Established; OFC connectivity between all major power houses and office complex, Local Area Network and Wide Area Network through MPLS/MLLN circuits of BSNL at corporate and major project offices. Provided internet and mailing up to the level of Executive Engineers and critical users.
- 3) **Application Software:** The application software developed in house and implemented are:
 - a) Fuel Management System.
 - b) Integrated Inventory Management System.
 - c) Bank Guarantee Management System.
 - d) Cash & Compilation Management System.
 - e) Fixed Asset Management System.
 - f) Salary & Pension.
 - g) Provident Fund.
 - h) Generation Management System
 - i) Plant Monitoring System.
 - j) Drawing Management System.
 - k) Human Resource Information System.
 - l) Disciplinary Proceedings System.
 - m) Training System.
 - n) Hospital Management System.
 - o) Management Information System.
 - p) Inward and outward.
- 4) **Website:** Website in bilingual (English and Kannada) and providing links for Joint Ventures, Tenders awarded, Media centre, National training centre for solar technology, uploading of tenders from all project sites and Bengaluru offices, etc.
- 5) **Other software:** AutoCAD, STAAD, Adobe software and e-tab are being used extensively at Design offices. Oracle 9i/11g database, Oracle 10g Application server, Oracle Forms 6i and Reports 6i are used for application software.
- 6) **E-procurement:** Government of Karnataka e-procurement portal is being used for procurement of goods and services as per the transparency act at corporate office and project sites as per KTCP Act.

7) **Enterprise Resource Planning(ERP)** : Computerization carried out by development and implementation of software by in-house team in stages to automate various functional areas like Finance and Accounting, Asset Management, Salary and Pension, Human Resource, Fuel management, Purchase and Inventory Management, Operations and Maintenance, Generation Management, Provident fund management, Hospital management, etc. to meet some of the needs of the Corporation, which communicate to each other in a limited way, lack of true enterprise wide business processing and existence of manual intervention, which implies that there is a scope for significant improvement in the existing software. Hence, it has been decided to implement Enterprise Resource Planning solution across KPCL. Implementation of enterprise wide ERP solution requires lot of expertise on issue such as licensing, preparation of RFP, planning, implementation and roll out ERP solution, hence, corporation has availing the consultancy services from M/s PWC Pvt. Ltd. For implementation of ERP solution across KPCL. M/s. PWC Pvt Ltd., have furnished the Detail Project Report. Decision has been taken to develop in-house ERP software by suitably upgrading to Oracle web suite latest technology and providing training to all the Systems Engineers of KPCL. Teams have been formed to undertake development of in-house ERP Software. The implementation of HRMS, Integrated Works Management Software & F&A software is going on across KPCL. The tender for Procurement of latest Oracle software, high-end Server, Migration of software and imparting training is under finalization to implement the ERP Software.

XXII. Extract of Annual Return

Extract of Annual Return of the Company in Form MGT-9 is annexed herewith as *Annexure D* to this Report.

XXIII. Corporate Communications

Media Relations: Maintaining good rapport with print & Electronic media, coverage of news items relating to the activities undertaken by the Corporation, etc.

- Organized various meetings, functions and seminars, brainstorm sessions, etc.
- Corporate film & laser show on KPCL were produced and screened during the annual day and other occasions to educate the public
- Publishing the Annual Report, Corporate Brochures and other statutory information and other publications required from time to time
- Corporate image building in newspaper and magazines released on important occasions
- Development of literature and documents of the company

- Enhancing the image of the Corporation through various sponsorships and financial assistance to educational institutions, associations, hospitals, district festivals, sports personnel, and blind associations/orphanages at community service measures
- Constant upgrading the image of the company and maintaining cordial relations with opinion makers and pressure groups etc.

XXIV. Important Events

26.01.2017	Celebration of Republic Day
05.04.2017	Meeting with CMD Tungabhadra Steel Power Limited
06.04.2017	Commercial Operation Declaration of unit II of Yeramurus Thermal Power Station
20.04.2017	Dedication of 10 MW Solar Power Plant at Shivasamudram at Mandya
24.06.2017	Gas supply of and transmission agreement for the gas required for the Yelahanka Combined Cycle Power Plant was signed by M/s KPCL & GAIL(Gas Authority of India Limited) in the presence of Hon'ble Chief Minister of Karnataka Sri Siddaramaiah, Hon'ble Minister for Power Sri DK Shivakumar , ACS Energy Dr. Rajaneesh Goel, IAS, Managing Director of KPCL Sri G Kumar Naik, IAS. The agreement signed by Sri. D. Chandrakanth, CE(GSW) on behalf of M/s KPCL and Sri Sumit Kishore DGM(Marketing) on behalf of M/s GAIL
28.12.2018	47 th Annual General Meeting at KPCL registered office, Bangalore
02.01.2018	Distribution of Dividend of Rs.47.69 crores to Govt. of Karnataka for FY 2016-17
03.01.2018	Contribution to Rs.3 crores to Chief Ministers Relief fund
27.02.2018	Dedication of 1600 MW YTPS Project in presence of Sri Siddaramaiah, Hon'ble Chief Minister & Chairman,KPCL and Sri DK Shivakumar, Hon'ble Power Minister & Vice-Chairman,KPCL
02.03.2018	Restoration of Sharavathy Generating Station & unveiling of Bharat Rathna Sri Lal Bahadur Shastri, Former Prime Minister of India & Bharath Rathna Sir M. Vishweshvaraya Burst
23.3.2018	Women's Day Celebration
28.06.2018	Celebration of Dr.B R Ambedkar's 127 th Birthday at Bengaluru
20.07.2018	49 th KPCL Foundation Day celebrated

XXV. Directors' Responsibility Statement:

Pursuant to Section 134(5) of the Companies Act, 2013, the directors wish to state that to the best of their knowledge:

- i. in the preparation of the annual accounts for the year 2017-18, the applicable accounting standards have been followed along with proper explanation relating to material departure;
- ii. accounting policies have been selected and applied consistently and made judgments and estimates that are to be reasonable and prudent so as to give a true and fair view of the state of affairs of the company at the end of the financial year and of the pre-operative expenses of the company for the period;
- iii. Proper and sufficient care has been taken for the maintenance of adequate *accounting records in accordance with the provisions of the Companies Act* for safeguarding the assets of the company and for preventing and detecting fraud and other irregularities;
- iv. Internal financial controls have been laid down that are adequate and are operating effectively;
- v. Proper systems to ensure compliance of all applicable laws and that such systems are adequate and are operating effectively;
- vi. Annual accounts have been prepared for the financial year ended March 31, 2018 on a going concern basis;
- vii. Internal controls have been laid down to be followed by the Corporation and such internal controls are adequate and were operating effectively;
- viii. Systems to ensure compliance with the provisions of all applicable laws are in place and were adequate and operating effectively

XXVI. General

The Board would like to place on record its appreciation of the following:

- Government of India, Government of Karnataka, the Comptroller & Auditor General of India and other agencies such as CEA, CWC, Registrar of Companies, KERC, Statutory Auditors and Cost Auditors, Secretarial Auditors for their assistance, guidance and cooperation;
- Commercial Banks such as State Bank of India, Canara Bank, Syndicate Bank, State Bank of Mysore, Vijaya Bank, Union Bank of India, ICICI Bank, IDBI Bank, Bank of Baroda, Punjab National Bank, Indian Overseas Bank, Central Bank of India, Federal Bank, Allahabad Bank, Bank of India, State Bank of Patiala, State Bank of Travancore, Andhra Bank, Corporation Bank, State Bank of Hyderabad, UCO Bank, United Bank of India, Indian Bank, Dena Bank, State Bank of Bikaner & Jaipur, South Indian Bank, Oriental Bank of Commerce, Karnataka Bank, Jammu & Kashmir Bank, Lakshmi Vilas Bank, Karnataka State Co-operative Apex Bank, Kotak Mahindra Bank, Punjab & Sind Bank, Karur Vysya Bank, Bank of Maharashtra, and financing agencies such as LIC, PFC,

REC, IDFC, SIDBI, HUDCO, SAIL, ICICI Home Finance, HDFC for their financial support;

- KPTCL, ESCOMS, PCKL, SLDC, RLDC and Electrical Inspectorate for their co-operation;
- General public, for supporting the activities of the company;
- Employees' Unions and Associations, for their collective participation;
- Media – both electronic & print media for their efforts in spreading the awareness amongst the stake holders.

The Board would also like to place on record its appreciation of the dedicated services rendered by the employees of the Corporation.

Place: Bangalore

Dated:

For & on behalf of the Board of Directors

(H D Kumaraswamy)
Chairman

Corporate Social Responsibility (CSR)

[Pursuant to clause (o) of sub-section (3) of section 134 of the Act and Rule 9 of the Companies (Corporate Social Responsibility) Rules, 2014]

1. A brief outline of the Company's CSR policy, including overview of projects or programs proposed to be undertaken:

- ❖ To direct towards achieving and enhancing environmental and natural capital; supporting rural development; promoting education; providing preventive healthcare, providing sanitation and drinking water; creating livelihoods for people, especially those from disadvantaged sections of society, in rural and urban India; preserving and promoting sports.
- ❖ To enhance employability and generate livelihoods for persons from disadvantaged sections of society;
- ❖ Adopt an approach that aims at achieving a greater balance between social development and economic development.
- ❖ To carry out CSR Programmes in relevant local areas to fulfill commitments arising from requests by government/regulatory authorities.

2. The Composition of the CSR Committee:

- | | | |
|---|-------------------------|-----------------------------|
| 1 | Shri Rajneesh Goel, IAS | : Chairman up to 21.10.2017 |
| 2 | Shri P Ravikumar, IAS | : Chairman from 21.10.2017 |
| 3 | Shri ISN Prasad, IAS | : Member |
| 4 | Shri G Kumar Naik, IAS | : Member |

3. Average net profit of the company for last three financial years: Rs.346,65,67,140/-

4. Prescribed CSR Expenditure (two per cent of the amount as in item 3 above):
Rs.6,93,31,343/-

5. Details of CSR spent during the financial year:

(a) Total amount to be spent for the financial year: Rs. 6,93,31,343/-

(b) Amount unspent, if any: Nil

(c) Manner in which the amount spent during the financial year is detailed in Annexure – A1.

6. The Company has approved to take up CSR works amounting to about Rs.4689.15 Lakhs which are in various stages of progress and an amount Rs.2229.12 Lakhs expenditure made up to 31.03.2018. During the year 2017-18 it has booked an expenditure of Rs.825.69 Lakhs.

7. Responsibility Statement: The CSR Committee hereby confirm that the implementation and monitoring of CSR Policy is in compliance with CSR objectives and Policy of the Company.

Managing Director

Chairman
(CSR Committee)

Annexure-A1

Details of CSR spent during the financial year 2017-18

Sl. No	CSR project or activity identified	Sector in which the Project is covered	Projects or programs (1) Local area or other (2) Specify the State and district where projects or programs was undertaken	Amount outlay (budget) project or programs wise (In Rs.)	Amount spent on the projects or programs Sub – heads: 1 .Direct expenditure on projects or programs 2. Overheads	Cumulative expenditure upto to the reporting period	Amount spent Direct or through implementing agency
1	2	3	4	5	6	7	8
1	Rural development projects	Development	A) Construction of RCC drains compound wall & leveling the playground in Government High School of Deosugur village, Raichur	-	-	1150699.00	-
			B) Supply and commissioning of medium size steel launch to Linganamakki back water at Muppene to Halke village, Karur Barangi Hobli, Sagara Taluk, Shivamogga district village	-	-	5201308.00	-
			C) Street lighting works in Kudutini Village	-	-	10239888.00	-
			D) Construction of CC Roads, Drains & Culverts for development of Kudutini Village	-	-	22309731.00	-
			E) Construction of Road side drains & Culverts for diverting storm water at Kadra RH Centre	-	-	1825750.00	-
			F) Providing git				-

			profiled sheets to trangit sheds at Kadra RH centre	-	-	1606705.00	
			G) Construction of water closets units at Kadra RH centre	-	-	1373215.00	-
			I) Construction of 3 Sabhabhavan at Kodasalli RH centers-Heggar, Kalleshwar, Halavalli	-	-	3935000.00	-
			J) Improvements like replacement of roofs, floorings, doors & windows etc to Kadra RH centre	-	-	2063428.00	-
			K) Improvements to Kadra RH centre	-	-	101454.00	-
			L) Upgrading of damaged road from sub-base to asphalt surface of Ramanagar RH center	-	-	37963215.00	-
			TOTAL			87770393.00	

SECRETARIAL AUDIT REPORT

(Form No.MR-3)

FOR THE FINANCIAL YEAR ENDED 31st MARCH, 2018

[Pursuant to Section 204 (1) of the Companies Act, 2013 and Rule No.9 of the Companies (Appointment and Remuneration Personnel) Rules, 2014]

To,

The Members,

Karnataka Power Corporation Limited.

We have conducted the Secretarial Audit of the compliance of applicable statutory provisions and the adherence to good corporate practices by Karnataka Power Corporation Limited (hereinafter called 'the Company' CIN:U85110KA1970SGC001919). Secretarial Audit was conducted in a manner that provided us a reasonable basis for evaluating the corporate conducts/statutory compliances and expressing our opinion thereon.

Based on our verification of the Company's books, papers, minute books, forms and returns filed and other records maintained by the Company and also the information provided by the Company, its officers, agents and authorized representatives during the conduct of Secretarial Audit, we hereby report that in our opinion, the Company has, during the audit period covering the financial year ended on 31st March, 2018 complied with the statutory provisions listed hereunder and also that the Company has proper Board-processes and compliance-mechanism in place to the extent, in the manner and subject to the reporting made hereinafter.

We have examined the books, papers, minute books, forms and returns filed and other records maintained by the Company for the financial year ended on 31st March, 2018 which were made available to us according to the provisions of:

- (i) The Companies Act, 2013 (the Act) and the Rules made thereunder;
- (ii) The Securities Contracts (Regulation) Act, 1956 ('SCRA') and the Rules made thereunder;
- (iii) The Depositories Act, 1996 and the Regulations and Bye-laws framed thereunder;
- (iv) Foreign Exchange Management Act, 1999 and the Rules and Regulations made thereunder to the extent of Foreign Direct Investment, Overseas Direct Investment and External Commercial Borrowings; and
- (v) The Regulations and Guidelines prescribed under the Securities and Exchange Board of India Act, 1992 ('SEBI Act').

We report that during the year under review, except the activities envisaged under Sl. No.(i), there has been no activity which calls for any compliance under Sl. No. (ii), (iii), (iv) & (v) above.

We further report that we have also examined the relevant documents and records, on test-check basis, and also the compliance mechanism prevailing in the Company under the following industry specific laws as applicable to the Company :

- (a) The Electricity Act, 2003 (as amended in 2013)
- (b) Central Electricity Authority (Technical Standards for Construction of Electrical Plants and Electric Lines) Regulations, 2010;
- (c) Central Electricity Authority (Measures relating to Safety and Electricity Supply) Regulations, 2010 (as amended in 2015);
- (d) Central Electricity Authority (Safety requirements for construction, operation and maintenance of electrical plants and electric lines) Regulations, 2011;
- (e) Indian Electricity Grid Code Regulations, 2010;
- (f) Energy Conservation Act, 2011;
- (g) Forest (Conservation) Act, 1980;
- (h) The Karnataka Preservation of Trees Act, 1976;
- (i) The Water (Prevention and Control of Pollution) Act, 1974;
- (j) The Air (Prevention and Control of Pollution) Act, 1981;
- (k) The Environmental Protection Act, 1986;
- (l) The Hazardous Waste (Management and Handling) Rules, 1989 (as amended in 2000);
- (m) Indian Boilers Act, 1923 (as amended in 2007);
- (n) The Karnataka Transparency in Public Procurements Act, 1999;
- (o) The Factories Act, 1948;
- (p) Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013 and
- (q) Applicable Labour Laws.

We have also examined compliance with the applicable secretarial standards with regard to meetings of the Board of Directors (SS-1) and General Meetings (SS-2) issued by the Institute of Company Secretaries of India (ICSI).

Accordingly, we state that during the period under review there were adequate systems and processes in place to monitor and ensure compliance with various applicable laws and that the Company has complied with the provisions of the Acts, Rules, Regulations, Guidelines, Standards, etc., mentioned above.

We would like to state that since the provisions relating to Audit of Accounts and Financial Statements of the Company were dealt with under separate Audits, the same are not covered under the Secretarial Audit.

We further report that:

The Board of Directors of the Company is duly constituted with proper balance of Executive Directors, Non-Executive Directors and Independent Directors. The changes in the composition of the Board of Directors that took place during the period under review were carried out in compliance with the provisions of the Act.

Adequate notices were given to all Directors to schedule the Board Meetings and Agenda and detailed notes on Agenda were sent to all the Directors in advance and a system exists for seeking and obtaining further information and clarifications on the Agenda items before the meeting and for meaningful participation at the Meeting.

As per the minutes of the Board Meetings duly recorded and signed by the Chairman, the decisions at the Meetings were unanimous inasmuch as minutes of the Meetings were self-explanatory.

We further report that based on the information provided and representation made by the Company, there were adequate systems and processes in the Company commensurate with the size and operations of the Company to monitor and ensure compliance with applicable Laws, Rules, Regulations and Guidelines.

For K. Narayana Swamy & Co.,

Company Secretaries

Sd/-

(K. Narayana Swamy)

FCS 1838 / CP 9878

Place : Bengaluru

Date : 27th September, 2018

Note: This Report is to be read with our letter of even date which is annexed as 'Annexure - A' and forms an integral part of this Report.

Annexure – A

To,

The Members,

Karnataka Power Corporation Limited.

Our Report of even date is to be read along with this letter.

1. Maintenance of secretarial records is the responsibility of the Management of the Company. Our responsibility is to express an opinion on the secretarial records based on our audit.
2. We have followed the audit practices and processes as were appropriate to obtain reasonable assurance about the correctness of the contents of secretarial records. The verification was done on test basis to ensure that correct facts are reflected in the secretarial records. We believe that the processes and practices we followed provide a reasonable basis for our opinion.
3. We have not verified the correctness and appropriateness of financial records and Books of Accounts of the Company like, Income Tax, Central Excise, Customs, etc.
4. Wherever required, we have obtained the Management representations about the compliance of applicable Laws, Rules and Regulations and happening of events.
5. The compliance of the provisions of Corporate and other applicable Laws, Rules, Regulations, Standards is the responsibility of the Management in terms of Section 134 (5) (f) of the Companies Act, 2013. Our examination was limited to the verification of procedures on test basis.
6. The Secretarial Audit Report is neither an assurance as to the future viability of the Company nor of the efficacy or effectiveness with which the Management has conducted the affairs of the Company.

For K. Narayana Swamy & Co.,

Company Secretaries

Sd/-

(K. Narayana Swamy)
FCS 1838 / CP 9878

Place: Bengaluru

Date: 27th September, 2018

Annexure – C

COMMENTS OF THE COMPTROLLER AND AUDITOR GENERAL OF INDIA UNDER SECTION 143(6) (b) OF THE COMPANIES ACT, 2013 ON THE FINANCIAL STATEMENTS OF KARNATAKA POWER CORPORATION LIMITED FOR THE YEAR ENDED 31 MARCH 2018

Enclosed as Annexure C

Annexure – C1

COMMENTS OF THE COMPTROLLER AND AUDITOR GENERAL OF INDIA UNDER SECTION 143(6) (b) READ WITH SECTION 129(4) OF THE COMPANIES ACT, 2013 ON THE CONSOLIDATED FINANCIAL STATEMENTS KARNATAKA POWER CORPORATION LIMITED FOR THE YEAR ENDED 31 MARCH 2018

Enclosed as Annexure C1

**FORM NO. MGT 9
EXTRACT OF ANNUAL RETURN**

**As on financial year ended on 31.03.2018
Pursuant to Section 92 (3) of the Companies Act, 2013 and rule 12(1) of the Company
(Management & Administration) Rules, 2014.**

I. REGISTRATION & OTHER DETAILS:

1.	CIN	U85110KA1970SGC001919
2.	Registration Date	20/07/1970
3.	Name of the Company	KARNATAKA POWER CORPORATION LIMITED
4.	Category/Sub-category of the Company	Company Limited by shares/ State Government company
5.	Address of the Registered office & contact details	Shakthi Bhavan No.82 Race Course Road BANGALORE - 560 001 Karnataka
6.	Whether listed company	Unlisted
7.	Name, Address & contact details of the Registrar & Transfer Agent, if any.	Not Applicable

II. PRINCIPAL BUSINESS ACTIVITIES OF THE COMPANY (All the business activities contributing 10 % or more of the total turnover of the company shall be stated)

S. No.	Name and Description of main products / services	NIC Code of the Product/service	% to total turnover of the company
1	Generation of Electricity	35102	100%

III. PARTICULARS OF HOLDING , SUBSIDIARY & ASSOCIATE COMPANIES

Sl. No.	NAME COPMANY	CIN	HOLDING/ SUBSIDIARY/ ASSOCIATE	% OF SHARES HELD	APPLICABLE SECTION
1	KPC GAS POWER CORPORATION LIMITED ("FORMERLY KNOWN AS KPC BIDADI POWER CORPORATION PVT. LTD.")	U40102KA1996SGC020337	Subsidiary	100	Section 2(87)(ii)
2	RAICHUR POWER CORPORATION LIMITED	U40101KA2009PLC049582	Joint Venture	53.80	Section 2(6)
3	KARNATAKA EMTA COAL MINES LIMITED	U01010KA2002PLC031322	Joint Venture	26	Section 2(6)
4	BENGAL BIRBHUM COALFIELDS LIMITED	U10300WB2015SGC207911	Joint Venture	18.20	Section 2(6)

IV. SHARE HOLDING PATTERN (Equity Share Capital Breakup as percentage of Total Equity)

A. Category-wise Share Holding

Category of Shareholders	No. of Shares held at the beginning of the year[As on 31-March-2017]			No. of Shares held at the end of the year[As on 31-March-2018]			% Change during the year
	Physical	Total	% of Total Shares	Physical	Total	% of Total Shares	
A. Promoter s							
(1) Indian							
a) Individual/HUF	--	--	--	--	--	--	--
b) Central Govt	--	--	--	--	--	--	--
c) State Govt(s)	4,76,94,486	4,76,94,486	100	4,76,94,486	4,76,94,486	100	
d) Bodies Corp.	--	--	--				
e) Banks / FI	--	--	--				
f) Any other	--	--	--				
Total shareholding of Promoter (A)	4,76,94,486	4,76,94,486	100	4,76,94,486	4,76,94,486	100	
B. Public Shareholding							
1. Institutions	--	--	--	--	--	--	--
a) Mutual Funds	--	--	--	--	--	--	--
b) Banks / FI	--	--	--	--	--	--	--
c) Central Govt	--	--	--	--	--	--	--
d) State Govt(s)	--	--	--	--	--	--	--
e) Venture Capital Funds	--	--	--	--	--	--	--
f) Insurance Companies	--	--	--	--	--	--	--
g) FIIs	--	--	--	--	--	--	--
h) Foreign Venture Capital Funds	--	--	--	--	--	--	--

i) Others (specify)	--	--	--	--	--	--	--
Sub-total (B)(1):-	--	--	--	--	--	--	--
2. Non- Institutions							
a) Bodies Corp.	--	--	--	--	--	--	--
i) Indian	--	--	--	--	--	--	--
ii) Overseas	--	--	--	--	--	--	--
b) Individuals	--	--	--	--	--	--	--
i) Individual shareholders holding nominal share capital upto Rs. 1 lakh	--	--	--	--	--	--	--
ii) Individual shareholders holding nominal share capital in excess of Rs 1 lakh	--	--	--	--	--	--	--
c) Others (specify)	--	--	--	--	--	--	--
Non Resident Indians	--	--	--	--	--	--	--
Overseas Corporate Bodies	--	--	--	--	--	--	--
Foreign Nationals	--	--	--	--	--	--	--
Clearing Members	--	--	--	--	--	--	--
Trusts	--	--	--	--	--	--	--
Foreign Bodies- DR	--	--	--	--	--	--	--
Sub-total (B)(2):-	--	--	--	--	--	--	--
Total Public Shareholding (B)=(B)(1)+ (B)(2)	--	--	--	--	--	--	--
C. Shares held by Custodian for GDRs & ADRs	--	--	--	--	--	--	--
Grand Total (A+B+C)	4,76,94,486	4,76,94,486	100	4,76,94,486	4,76,94,486	100	

B. Shareholding of Promoter-

SN	Shareholder's Name	Shareholding at the beginning of the year			Shareholding at the end of the year			% change in shareholding during the year
		No. of Shares	% of total Shares of the company	% of Shares Pledged / encumbered to total shares	No. of Shares	% of total Shares of the company	% of Shares Pledged / encumbered to total shares	
1	P Ravikumar, IAS	4,76,94,480	100	-	4,76,94,480	100	-	
2	ISN Prasad, IAS	1	0	-	1	0	-	
3	G Kumar Naik, IAS	1	0	-	1	0	-	
4	R Nagaraja	1	0	-	1	0	-	
5	P Bhaskar	1	0	-	1	0	-	
6	Vishwanath P Hiremath	1	0	-	1	0	-	
7	B V Srinivasaiah	1	0	-	1	0	-	

C. Change in Promoters' Shareholding (please specify, if there is no change) - There was no change.

SN	Particulars	Shareholding at the beginning of the year		Cumulative Shareholding during the year	
		No. of shares	% of total shares of the company	No. of shares	% of total shares of the company
	At the beginning of the year				
	Date wise Increase / Decrease in Promoters Shareholding during the year specifying the reasons for increase / decrease (e.g. allotment / transfer / bonus/ sweat equity etc.):				
	At the end of the year				

D. Shareholding Pattern of top ten Shareholders: (Other than Directors, Promoters and Holders of GDRs and ADRs):

SN	For Each of the Top 10 Shareholders	Shareholding at the beginning of the year		Cumulative Shareholding during the year	
		No. of shares	% of total shares of the company	No. of shares	% of total shares of the company
	At the beginning of the year	As at Item IV (B)			
	Date wise Increase / Decrease in Promoters Shareholding during the year specifying the reasons for increase / decrease (e.g. allotment / transfer / bonus/ sweat equity etc.):	- " -			
	At the end of the year	- " -			

E. Shareholding of Directors and Key Managerial Personnel: NIL

SN	Shareholding of each Directors and each Key Managerial Personnel	Shareholding at the beginning of the year		Cumulative Shareholding during the year	
		No. of shares	% of total shares of the company	No. of shares	% of total shares of the company
	At the beginning of the year				
	Date wise Increase / Decrease in Promoters Shareholding during the year specifying the reasons for increase /decrease (e.g. allotment / transfer / bonus/ sweat equity etc.):				
	At the end of the year				

V) INDEBTEDNESS -Indebtedness of the Company including interest outstanding/accrued but not due for payment.

	Secured Loans excluding deposits	Unsecured Loans	Deposits	Total Indebtedness
Indebtedness at the beginning of the financial year				
i) Principal Amount	69360961069	114810000000	1282000	184172243069
ii) Interest due but not paid				
iii) Interest accrued but not due	20019173	874900	64412	20958485
Total (i+ii+iii)	69380980242	114810874900	1346412	184193201554
Change in Indebtedness during the financial year				
* Addition		27920000000		
* Reduction	7365767402	19320154381		
Net Change				
Indebtedness at the end of the financial year				
i) Principal Amount	61995193155	123409845619	1282000	185406320774
ii) Interest due but not paid				0
iii) Interest accrued but not due	19464262	136110	64412	19664784
Total (i+ii+iii)	62014657417	123409981729	1346412	185425985558

VI. REMUNERATION OF DIRECTORS AND KEY MANAGERIAL PERSONNEL-

A. Remuneration to Managing Director, Whole-time Directors and/or Manager:

SN.	Particulars of Remuneration	Name of MD/WTD/ Manager			Total Amount (Rs)
		G Kumar Naik	R Nagaraja	P Bhaskar	
1	Gross salary				
	(a) Salary as per provisions contained in section 17(1) of the Income-tax Act, 1961	3,286,734.00	2,165,120.00	2,277,633.00	7,729,487.00
	(b) Value of perquisites u/s 17(2) Income-tax Act, 1961	3,314.00		129,061.00	132,375.00
	(c) Profits in lieu of salary under section 17(3) Income- tax Act, 1961	6,578.00	7,000.00	7,000.00	20,578.00
2	Stock Option				
3	Sweat Equity				
4	Commission - as % of profit / others				
5	Others, please specify				
	Total (A)	3,296,626.00	2,172,120.00	2,413,694.00	7,882,440.00
	Ceiling as per the Act				

B. Remuneration to other directors - NIL

SN.	Particulars of Remuneration	Name of Directors				Total Amount
		-----	----	----	---	
1	Independent Directors					
	Fee for attending board committee meetings					
	Commission					
	Others, please specify					
	Total (1)					
2	Other Non-Executive Directors					
	Fee for attending board committee meetings					
	Commission					
	Others, please specify					
	Total (2)					
	Total (B)=(1+2)					
	Total Managerial Remuneration					
	Overall Ceiling as per the Act					

C. REMUNERATION TO KEY MANAGERIAL PERSONNEL OTHER THAN MD/MANAGER/WTD

(Rs)

SN	Particulars of Remuneration	Key Managerial Personnel			
		CEO	CFO	CS	Total
1	Gross salary				
	(a) Salary as per provisions contained in section 17(1) of the Income-tax Act, 1961	-	-	954800.00	954800.00
	(b) Value of perquisites u/s 17(2) Income-tax Act, 1961	-	-		
	(c) Profits in lieu of salary under section 17(3) Income-tax Act, 1961	-	-		
2	Stock Option	-	-		
3	Sweat Equity	-	-		
4	Commission	-	-		
	- as % of profit	-	-		
	others, specify...	-	-		
5	Others, please specify	-	-		
	Total		-	954800.00	954800.00
	Overall Ceiling as per the Act				

VII. PENALTIES / PUNISHMENT/ COMPOUNDING OF OFFENCES - NIL

Type	Section of the Companies Act	Brief Description	Details of Penalty / Punishment/ Compounding fees imposed	Authority [RD / NCLT/ COURT]	Appeal made, if any (give Details)
A. COMPANY					
Penalty					
Punishment					
Compounding					
B. DIRECTORS					
Penalty					
Punishment					
Compounding					
C. OTHER OFFICERS IN DEFAULT					
Penalty					
Punishment					
Compounding					

For& on behalf of the Board of Directors

(H D Kumaraswamy)
Chairman

Place: Bangalore
Dated: 29.09.2018

Form AOC-I

(Pursuant to first proviso to sub-section (3) of section 129 read with rule 5 of Companies (Accounts) Rules, 2014)

Statement containing salient features of the financial statement of subsidiaries/ associate companies/ joint ventures

Part "A": Subsidiaries

(Information in respect of each subsidiary to be presented with amounts in Rs.)

1. **Sl. No.**
2. **Name of the subsidiary - KPC GAS Power Corporation Limited (Formely KPC Bidadi Power Corporation Pvt Ltd.,)**
3. **Reporting period for the subsidiary concerned, if different from the holding company's reporting period - As per the holding company**
4. **Reporting currency and Exchange rate as on the last date of the relevant financial year in the case of foreign subsidiaries. - NIL**
5. **Share capital – RS.14,05,00,000**
6. **Reserves & surplus – RS.206,79,70,000**
7. **Total assets - RS. 1350,32,83,000**
8. **Total Liabilities – RS. 1350,32,83,000**
9. **Investments - NIL**
10. **Turnover - NIL**
11. **Profit before taxation –(RS.303,91,000)**
12. **Provision for taxation - NIL**
13. **Profit after taxation –(RS.303,91,000)**
14. **Proposed Dividend - NIL**
15. **% of shareholding - 100%**

Notes: The following information shall be furnished at the end of the statement:

1. Names of subsidiaries which are yet to commence operations - **KPC Gas Power Corporation Ltd., (Formely KPC Bidadi Power Corporation Pvt Ltd.,)**
2. Names of subsidiaries which have been liquidated or sold during the year- NIL

Part "B": Associates and Joint Ventures

Statement pursuant to Section 129 (3) of the Companies Act, 2013 related to Associate Companies and Joint Ventures

Name of Associates/Joint Ventures	Raichur Power Corporation Limited
Latest audited Balance Sheet Date	31.03.2017
Shares of Associate/Joint Ventures held by the company on the year end	53.80%
No. of shares	127,70,00,000
Amount of Investment in Associates/Joint Venture	1277,00,00,000
Description of how there is significant influence	Holding more than 20% Share Capital
Reason why the associate/joint venture is not consolidated	-
Net worth attributable to Shareholding as per latest audited Balance Sheet	1116,84,66,000
Profit / Loss for the year	
i. Considered in Consolidation	(826,86,74,000)
i. Not Considered in Consolidation	-

Name of Associates/Joint Ventures	Bengal Birbhum Coal Fields Limited
Latest audited Balance Sheet Date	31.03.2017
Shares of Associate/Joint Ventures held by the company on the year end	18.20%
No. of shares	18,173
Amount of Investment in Associates/Joint Venture	1,81,730
Description of how there is significant influence	Holding more than 10% Share Capital
Reason why the associate/joint venture is not consolidated	Non- availability of financial information
Net worth attributable to Shareholding as per latest audited Balance Sheet	NA
Profit / Loss for the year	
i. Considered in Consolidation	NA
i. Not Considered in Consolidation	NA

Name of Associates/Joint Ventures	Karnataka Emta Coal mines Limited
Latest audited Balance Sheet Date	31.03.2017
Shares of Associate/Joint Ventures held by the company on the year end	26.00%
No. of shares	13,00,000
Amount of Investment in Associates/Joint Venture	1,30,00,000
Description of how there is significant influence	Holding more than 20% Share Capital
Reason why the associate/joint venture is not consolidated	Non- availability of financial information
Net worth attributable to Shareholding as per latest audited Balance Sheet	NA
Profit / Loss for the year	
i. Considered in Consolidation	NA
i. Not Considered in Consolidation	NA

- Names of associates or joint ventures which are yet to commence operations — **Bengal Birbhum Coal Fields Limited**
- Names of associates or joint ventures which have been liquidated or sold during the year- **NIL**
- The financial statements of joint venture entity Bengal Birbhum Coal Fields Limited and Karnataka EMTA Coal Mines Ltd. has not been consolidated during the year due to non-receipt of financial statements/information.