



KERALA STATE ELECTRICITY BOARD LIMITED

(Incorporated under the Companies Act, 1956)

CIN: U40100KL2011SGC027424, website: www.kseb.in

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ABSTRACT

Sub: RDSS - Project implementation in KSEBL - methodology for carrying out System Infrastructure works and AS for the project - sanction accorded- orders issued

Corporate Office (SBU D)

B.O (FTD) No: 463/2022 (CAPs/P2/RDSS/2022-23 Thiruvananthapuram;

Dated 30.05.2022

- Read: 1. Letter No. CAPs/P2/RDSS-GI/2021-22/330/ dated 02.03.22 - DPRs under KSEBL - of CMD, KSEBL
2. Sanction letter No. 02:10:RDSS:2021:I: KSEBL/076120/ dated 24.03.2022 from PFC Limited, New Delhi for RDSS in KSEBL
3. Proceedings No. Annual Accounts/AA9/Account code-5/2021-22 dated 15.01.2022 of the Financial Adviser
4. B.O(FTD) No. 307/2022 (CAPs)/RDSS/AEE2/21-22/ dated 12.04.2022
5. Note No. CAPs/P2/RDSS/2022-23 dated 26.04.2022 of the Chief Engineer (IT, CR & CAPs) - Agenda item No. 29/5/2022

ORDER

The 7th Monitoring Committee for RDSS held on 15.03.2022 approved the Action Plan & DPRs for Loss Reduction and Smart Metering works proposed by KSEBL. Sanction was accorded for the DPR proposals submitted as per letter read as 1st above, for a total amount of Rs. 10475.03 Cr. to achieve the Action Plan targets and the same was communicated as per letter read as 2nd above. The sanction communicated also includes the Smart System metering & Infrastructure work proposals from Cochin Port Trust (CPT) (later renamed as Cochin Port Authority, CoPA) amounting to Rs. 9.87Cr. The approved DPR cost and 60% GoI Grant for the Loss Reduction Infrastructure works (except Smart metering) under KSEBL is as follows:

SI No.	Description	Amount (Rs.Cr.)	Remarks
1	Loss Reduction works	2226.15	
2	GoI Grant for Loss Reduction works	1341.47	
3	PMA charges for Loss Reduction works	33.39	1.5% of Project Cost
4	PMA Grant	20.035	(60% of PMA charges)
5	Total eligible GoI Grant	1361.59	

Terms and conditions of the sanction are as given below:

- KSEBL to ensure implementation of the scheme in accordance with all the prescribed scheme guidelines including SBDs.
- KSEBL to appoint Project Management Agency/(ies) through Tendering based on SBD

- KSEBL to have an in-principal agreement w.r.t. works being sanctioned to CPT by Monitoring Committee

1. **Infrastructure works & PMA Charges:**

As per the detailed terms & conditions of sanction,

1. The projects shall be implemented as per the scheme Guidelines issued by MoP, Govt. of India and normally on Turnkey basis. However, certain works may be taken up on Partial Turnkey basis or Departmentally with the approval of DRC and consent of Nodal Agency, subject to, overall guidance of the Monitoring Committee.
2. Discom to follow Standard Bidding Document (**SBD**) as issued by Nodal Agencies for selection of AMI service provider, for Distribution infrastructure works, SCADA and PMA.
3. The DISCOMs may make minor changes in the SBD, while retaining its basic structure and essence, provided that the approval of the Nodal Agency is taken for the changes, subject to, overall guidance of the Monitoring Committee. Approval for the decision on the mode of execution other than Turnkey contracts will have to be obtained from DRC and consent of Nodal Agency with the overall guidance of Monitoring Committee
4. The sunset date for the scheme will be 31.03.2026, the works executed beyond which will not be eligible for release of Central Government grant.
5. Discom to ensure updation of MIS web portal to be developed by the Nodal Agencies for submission of Action Plan & DPRs, capturing baseline data, physical & financial progress, Quality reports, outcomes and achievements for evaluation under Result Evaluation Framework, Closure, etc.
6. KSEBL to meet the pre-qualifying criteria and achieve the specified marks in the Evaluation Matrix based on which DPR for Modernisation & System Augmentation shall be sanctioned
7. For qualifying in **the Result Evaluation Matrix**, KSEBL needs to score a minimum of 60 marks, based on the evaluations by appropriate third party/parties appointed by MOP / Nodal Agencies to assess / verify the achievements of DISCOMs with respect to the action plan finalized on periodical basis
8. Again, **Performance Evaluation of the scheme** will be carried out by a separate Third-party Agency/(ies) by the Nodal Agencies.
9. If by the end of financial year 2025-26, if KSEBL is not eligible for release of any grant, the initial advance of 10% of the grant component of the cost of DPR for Loss Reduction will have to be refunded by the KSEBL.

The Scheme Implementation Tripartite Agreement amongst KSEBL, Govt. of Kerala and Ministry of Power, Govt. of India has been executed on 29.03.2022 and the Dedicated Savings Bank Account for RDSS without CLTD facility was opened on 30.03.2022.

2. **Project Implementation Proposals under KSEBL**

The Loss Reduction DPR proposals along with SCADA-DMS for 3 towns - Thrissur, Kannur & Kollam were approved by MoP as phase I - for FY 2022-23. Of these, SCADA DMS works will be implemented on Turnkey basis.

Works Proposed:- The quantum of works proposed and sanctioned under RDSS - DPR for Loss Reduction including infrastructure works for the SCADA DMS proposals approved along with is attached as Table - 1

The abstract of major materials approximately required for Distribution works -Region wise & State total (calculated from Cost Data, in anticipation of requirement proposals from field) is attached as Table - 2.

33 kV sub transmission works will be executed by the Transmission wing.

3. Monitoring of award of Work & Progress of works for uploading data in web portal for RDSS

As per the Guidelines and the Sanction letter,

- a. Discom has to ensure updation of MIS web portal (to be developed by the Nodal Agencies) for submission of Action Plan & DPRs, capturing baseline data, physical & financial progress, Quality reports, outcomes and achievements for evaluation under Result Evaluation Framework, closure, etc.
- b. The DISCOM shall be responsible & accountable for assuring Quality in the scheme works. Accordingly, DISCOM shall formulate a comprehensive Quality Assurance (QA) and Inspection Plan with an objective to build quality infrastructure under the project. The QA and Inspection Plan shall be an integral Part of the contract agreement with turnkey contractor or equipment supplier/vendor and erection agency as the case may be in case of partial turnkey and departmental execution of works. Documentation with regard to **Quality Assurance & Inspection Plan** shall be maintained by DISCOM and kept in proper order for scrutiny during the course of project execution and for future reference. The DISCOM has to ensure that the quality of material/equipment supplied at site and field execution of works under the project is in accordance with Quality Assurance & Inspection Plan. DISCOM may use the MQP (Manufacturing Quality Plan) and FQP (Field Quality Plan) used in DDUGJY and IPDS schemes by suitably modifying as per requirement of this scheme.
- c. In addition to the in-house quality checks and processes followed by the DISCOM, the nodal agency shall carry out concurrent inspection of works through Third Party Quality Monitoring Agency (**TPQMA**).
- d. For release of funds under the Scheme, KSEBL has to ensure updation of baseline data, physical & financial progress, Quality Monitoring, Fund Management, Asset identification through Geo-tagging, outcomes and achievements for evaluation under Result Evaluation Framework, closure, etc. on the digital platform to be developed by the Nodal Agencies
- e. Hence in order to comply with the conditionalities as above from MoP, right from the initial stages of implementation, provision of the following data has to be incorporated in SAMAGRA portal
 - For capturing details of works awarded / completed against each work as per sanctioned DPR, mapped in the portal
 - To obtain **Geo tagged data** including photographs of the Asset created, (from the Contractor itself) while submitting claims for payment and the entry field to be made **mandatory**

- Provision for entering Separate Tax details including the Central & State share of the Tax against each payment. (Reimbursement of expenditure on Central Tax only will be eligible).
- To capture - "Sanctioned Quantity & Sanctioned Project Cost " and "Actual Quantity executed" & "Actual Expenditure - Material Cost (MCS) + Labour Cost" against the specified work, as Guidelines clearly specifies reimbursement of actual **Material + Labour** cost only
- Each completed work shall be measured and payment to be effected within 21 days from the date of completion in all respects and progress of works to be registered only after the same is accounted in separate Registers (BPRs) and passed for payment from the Electrical Circle and forwarded to CE(IT, CR & CAPs)
- Updation of the above in SAMAGRA" is to be "mandatory" as RDSS is strictly a Result linked project, for uploading relevant data as is required in MoP's web portal as well as for relevant verifications / inspections from TPQMA.

4. Work implementation - Organizational structure

Administrative Sanction for Phase -1 the scheme (RDSS - Loss reduction works including implementation of SCADA DMS) has to be issued based on the Sanction letter and methodology for implementation. The Organizational set up for implementation also has to be finalized.

As per RDSS Guidelines, "establishment of a dedicated project implementation cell at District level and a centralized cell at Head office level" has been insisted.

The matter was placed before the Full Time Directors as per note read as 5th above. Having considered the matter in detail, the Full Time Directors in its meeting held on 12.05.2022

A. Resolved to accord sanction to execute the Loss Reduction works (Phase 1) with the mode of execution -

i. a. For the Distribution Infrastructure works as follows:

<i>Distribution Region</i>	<i>Partial Turnkey mode</i>	<i>Departmental mode utilising normal Petty Contractors/ Departmental staff</i>
North Malabar (Kannur)	HT & LT Reconductoring, Conversion, HT & LT new bare OH lines, ABC/	Enhancement of DTRs / Aged Transformer replacement, Transformer insertion in existing lines, HVDS, uplifting of
North	Covered Conductor/UG Cables & RMUs etc. including supply of Transformers & Poles	Transformer / RMU foundations, Relocating transformers etc.

	(PSC Poles & A- type Poles)	
Central	ABC & Covered conductor including Transformers & supply of Poles (PSC & A-type Poles), Laying of UG cables, RMU installation	Reconductoring, Conversion, new 11kV & LT bare OH lines, Enhancement of DTRs / Aged Transformer replacement, Transformer insertion in existing lines, HVDS, Disaster resilient works - uplifting of Transformer / RMU foundations, Relocating transformers, 9kVAR Capacitor installation etc
South		

- b. For the **Sub-transmission works** - 33 kV Line Re-conductoring works & 11 kV feeder outlets at Substations (under Kannur & Thrissur Circles sanctioned as part of SCADA-DMS implementation in 3 Towns) executed from Transmission wing,
 - c. **Departmental execution** for Re-conductoring works with Bare ACSR conductor
 - d. **Turnkey execution** of 33 kV Re-conductoring works using 33 kV Covered Conductor & 33 kV UG Cables
 - e. Departmental execution using available Petty Contractors of 11 kV Feeder outlets proposed from the Substations in Kannur & Thrissur Towns
 - ii. Approval for the decision on the mode of execution other than Turnkey contracts be obtained from DRC and consent of Nodal Agency be obtained with the overall guidance of Monitoring Committee
 - iii. Procurement process for materials required for the Partial turnkey /Departmentally proposed works - under Distribution & Transmission wings - to be started from the Office of CE(SCM) after ascertaining exact requirement of such materials from field (procurement - either from SCM only or a particular material from a particular Circle only, instead of local purchase of same material from various levels leading to considerable variation in Per unit Rate & Quality).
- B.** The monitoring of Award of Work and Progress of works be done the updating of **SAMAGRA** portal as below –
- a. To capture details of works awarded / completed against each work as per sanctioned DPR, mapped in the portal
 - b. To obtain Geo tagged data including photographs of the Asset created, (from the Contractor itself) while submitting claims for payment and the entry field to be made mandatory
 - c. Provision for entering Separate Tax details including the Central & State share of the Tax against each payment. (Rejmbursement of expenditure on Central Tax only will be eligible).

- d. To capture – “Sanctioned Quantity & Sanctioned Project Cost ” and “Actual Quantity executed” & “Actual Expenditure – Material Cost (MCS) + Labour Cost” against the specified work, as Guidelines clearly specifies reimbursement of actual Material + Labour cost only
- e. Each completed work shall be measured and payment preferred within 21 days from the date of completion in all respects and progress of works to be registered only after the same is accounted in separate Registers (BPRs) -*provision of which will be provided through SAMAGRA* - and accounted and passed for payment from the Electrical Circle and forwarded to CE(IT, CR & CAPs)

C. Organizational Structure for RDSS be fixed as mentioned as below:

	Description	Officer nominated
1	Nodal Officer for RDSS at Corporate level	Chief Engineer (IT, CR & CAPs)
2	Corporate office-Single Point of Contact	
i	System Infrastructure works	Deputy Chief Engineer (CAPs)
ii	System Infrastructure works- Quality Assurance / Material inspections	Executive Engineer (CAPs)
iii	Smart Metering, SCADA implementation & IT/OT works	Deputy Chief Engineer (IT&CR)

Field Level Implementation Committee – for monitoring the progress of works:

Sl.No.	Description	Officer nominated
1	Nodal Officer for RDSS at Field level	Deputy Chief Engineer (Ele. Circle)
2	Member	Deputy Chief Engineer/(s) (Transmission)
i	Member	Exe. Engineers, Ele. Divisions & Exe. Engineers-(PMU) & Transmission Circle
ii	Circle level single point of Contact	Executive Engineer (PMU)

- D.** Resolved to address the State Government to provide 40% Counter Part Funding towards the project, as an aid to the Utility by including suitable budget provisions towards the same. **Director (Finance)** be entrusted to take up with the State Government through CMD, KSEBL

- E.** Further resolved to issue Administrative Sanction for the Loss Reduction DPR for RDSS as sanctioned by the Ministry of Power, for an amount of Rs.2226.16Cr including the SCADA – DMS works for 3 Towns amounting to Rs.252.9Cr which were originally included in the DPR as Phase – I DPR for Loss Reduction works under KSEBL. The Account codes for booking expenditure under RDSS Infrastructure works can be, as specified in the Proceedings dated 15.1.22 of the Financial Adviser read as 3rd above
- F.** Further resolved to accord sanction to execute the works included in the sanctioned DPR w.e.f the date of communicating the Sanction for RDSS in KSEBL by the Nodal Agency, M/s PFC Ltd. – ie; 24.03.2022, strictly in accordance with the scheme guidelines and the SBD issued by the Ministry of Power, Government of India.

Orders are issued accordingly.

By Order of the Full Time Directors.
Sd/-
Lekha.G
Company Secretary-in-Charge.

To
The Chief Engineer (IT, CR & CAPS)

Copy to:

1. All Chief Engineers (Distribution / Transmission)
2. All Deputy Chief Engineers (Distribution / Transmission)
3. The Financial Advisor / CIA/LA & DEO/CVO/CPRO.
4. The TA to CMD / Director (D & IT) / GC / T & SO / GE / REES including SOURA, Sports and Welfare / Planning, Safety & SCM)
5. RCAO/RAO/Company Secretary.
6. The PA to the Director (Finance)/CA to Secretary (Administration)
7. Records/Stock file and Library.

Forwarded / By Order


Assistant Exe. Engineer

Table -1 Works proposed under RDSS (Phase 1)- Loss Reduction

Sl.No.	Particulars	Total Quantity as per proposal
1.	33 kV Re-conductoring	499.81 ckt km
	33 kV ACSR Bare OH - Dog conductor	70.6 ckt.km
	33kV UG Cable	29 ckt.km
	33 kV Covered Conductor - Dog	400.21 ckt.km
•	11 kV Re-conductoring	
	ACSR Bare Raccoon OH	295.68 ckt.km
	Covered Conductor	1025.40 ckt.km
	ABC 120 sq.mm	966.16 ckt.km
	ABC 150 sq.mm	797.5 ckt.km
•	LT line Re-conductoring	
	ACSR Bare OH - Rabbit	1373.31 ckt.km
	Covered Conductor	501.64 ckt.km
	3 ph. ABC 3*(95/70/50) sq.mm	8006.44 ckt.km
	1 ph. ABC 50 sq.mm	51.09 ckt.km
•	Conversion of 1 ph to 3 ph.	
	using ABC 95 sq.mm	327.935 ckt.km
	ABC 70 sq.mm	141.83 ckt.km
	ABC 50 sq.mm	17 ckt.km
	With Bare ACSR OH	295.82 ckt.km
•	11 kV new ABC	
	3 *120 sq.mm	609.265 ckt.km
	3 *150 sq.mm	456.645 ckt.km
•	LT new ABC	
	95 sq.mm	134.35 ckt.km
	70 sq.mm	151.39 ckt.km
•	3* 300 sq.mm XLPE UG Cable	553.81 ckt.km
•	HVDS Transformer	
	16 kVA	17 nos.
	25 kVA	77 nos.
	63 kVA	1 no.
•	Capacitor Bank, 9 kVAR	22 nos.
•	11/ 0.415 kV Distribution Transformer	
	New installation - 100 kVA	858 nos.
	160 kVA	20 nos.
	250 kVA	3 nos.
	Enhancement - to 100 kVA	82 nos.
	to 160 kVA	362 nos.
	to 250 kVA	58 nos.
	to 315 kVA	2 nos.
	Aged replacement - 100 kVA	225 nos.
	160 kVA	150 nos.
	250 kVA	33 nos.
	315 kVA	4 nos.
	500 kVA	6 nos.

•	RMU	
	CC	4 nos.
	CTC	291 nos.
	CCC	6 nos.
	Add on C	37 nos.
	Add on T	18 nos.
	Bus Couplers/ CCCTT	9 nos.
•	Load Break Switch	22 Nos.
•	AB switch	13 Nos.
•	Rust Free Transformers	29 Nos.
•	Pole Insertion for ABC (additional)	
	HT 9m	2248 Nos.
	LT 8m	4929 Nos.
•	11kV feeder outlet	13 Nos.

Table - 2 Materials required (approximate) for the works proposed under RDSS (Phase 1)- Loss Reduction

RDSS - Major Materials - approximate requirement for FY 2022-23			
Item	Unit	F 2022-23	Total (for the entire project period)
PSC pole 9m	No.	35776	84806
PSC pole 8 m	No.	55117	143782
33 kV line Re-conductoring			
33 kV Covered Conductor	km	494.71	1260.65
33 kV UG Cable	km		30.45
33 kV ACSR Conductor	km		218.2
33 kV Tower materials			
ACSR			
ACSR Raccoon Conductor	km	434.454	913.6512
ACSR Rabbit	km	2787.73	7984.48
ABC conductor			
3ph (3X120 sq.mm)	km	718.6817	1732.929
3ph (3X150 sq.mm)	km	723.30555	1379.511
11 kV ABC (HT)		1441.98725	3100.5601
ABC 3 x 95 sq.mm	km	2384.28575	5332.5173
ABC 3 x 70 sq.mm	km	1650.0594	4305.6167
ABC 3 x 50 sq.mm	km	7.48	18.7
1.1 kV ABC (LT)		4041.82515	9656.834
1 Ph ABC	km	11.56	51.09
Covered Conductor			
Covered conductor (11kV)	km	1159.011	3230.00055
Covered conductor(LT)	km	560.83545	1598.51475
UG cable	km	247.653	581.5005
Distribution Transformer			
100kVA	No.	556	1165
160 kVA	No.	256	532
250kVA	No.	49	94
315 kVA	No.	1	6
500 kVA	No.	2	6
Transformers Total		864	1803
CC RMU module	No.	3	4
CTC	No.	157	291
CCC	No.	1	6
Add on C	No.	22	37
Add on T	No.	9	18
Others : CCCTT	No.	1	1
Others / Bus couplers	No.	2	8
RMU Total		195	365
AB Switch	No.	8	13
Load Break Switch	No.	16	22

Rust free transformer	No.	14	29
Capacitor Bank, 9kVAR	No.	21	22
HVDS Transformer			
HVDS Transformer, 16kVA	No.	5	17
HVDS Transformer, 25kVA	No.	37	77
HVDS Transformer, 63 kVA	No.	1	1