Central Electricity Regulatory Commission

New Delhi

Draft CERC(Fees and Charges of Regional Load Despatch Centre and other related matters) Regulations, 2019

Explanatory Memorandum

1.0 Background

1.1 The Central Electricity Regulatory Commission (CERC) (herein after referred as "the Commission") was constituted under the erstwhile Electricity Regulatory Commissions Act (ERC), 1998 and has been deemed to be constituted under the Electricity Act, 2003 (herein after referred as "the Act'), after enactment of the Act. The Commission has been vested with the power to make regulations in terms of clause (h) of sub-section 2 of section 178 read with sub-clause of section 28 of the Act to specify the levy and collection of fee and charges by the Regional Load Dispatch Centre (RLDC) from the generating companies or licensees.

1.2 The Commission, in exercise of the powers under Section 178 of the Act, had notified the Regulations for fixation of RLDC Fees and Charges called as CERC (RLDC Fees and Charges Regulations and other related matters) Regulations, 2009 (in short referred to as 'RLDC Regulations, 2009') on 18.09.2009. The Commission had also determined the RLDC Fees and Charges for the period 2009-14 for RLDCs and National Load Dispatch Centre (NLDC) on applications filed by them under the existing RLDC Regulations, 2009. Similarly, the Commission had notified the CERC (RLDC Fees and Charges Regulations and other related matters) Regulations, 2015 (in short refered to as the RLDC Regulations, 2015) on 18.05.2015 and had determined the RLDC Fees and

Charges for the control period 2014-19 for RLDCs and the NLDC on applications filed by them under the RLDC Regulations 2015.

1.3 The present control period will come to an end on 31.3.2019. Therefore, the Commission has now, proposed to specify the Central Electricity Regulatory Commission (RLDC Fees and Charges and other related matters) Regulations, 2019 (in short referred to as the "Draft Regulations') for the next control period applicable from 1.4.2019 to 31.3.2024.

2.0 Salient Features

The Commission has reviewed the various provisions of existing RLDC Regulations, 2015 keeping in view the developments in the power system, challenges faced by the system operators and experience of determining fees and charges of RLDCs and NLDC during 2014-19 period. Further, a sub-group was constituted under the aegis of the Standing Technical Committee of the Forum of Regulators (FOR) (in short for STC) vide communication dated 12.04.2018 to deliberate on various aspects on institution building and strengthening of load despatch centres in India. The Sub-group submitted its report namely - 'Capacity Building of Indian Load Despatch Centres' (CABIL) which was accepted by the FOR in its 65th meeting on 13.11.2018. A copy of the report is annexed at Annexure-I. Various recommendations of the report(CABIL) as well as the model regulations on LDC Fees & Charges have been duly considered while framing the Draft Regulations. The salient features of the Draft Regulations as under inter-alia contain the following.

2.1 Definitions

The following modifications have been proposed in the definition section of the existing RLDC Regulations 2015.

a. **Annual LDC charges** (ALC) has been defined in the draft regulations. This term has been introduced as common LDC charges by merging the erstwhile system operation charges and market operation charge in view of the growing convergence of SO and MO functions performed by the RLDCs/NLDC as observed by the FOR STC sub-group.
b. The term **Contingency Reserve** has been defined in the draft regulations. There was a provision for maintaining a separate account for contingency expenses for RLDCs and NLDCs in the existing RLDC Regulations 2015 (Regulation 24). The same was not explicitly defined therein.
c. The term'**Effective tax rate' (%)**used for calculation of tax on return on equity has been included in definition section.
d. The term **'Ergonomics'** has been included in the definition section in view of the established need for ergonomically designed control centres for the load despatch centres operating continuously on (24x7) basis. The definition is as suggested in 'ÇABIL' report.
e. The term **Forum of Load Despatch Centres (FOLD**) has been explicitly defined. The FOLD secretariat is co-located at NLDC and it plays a vital role in institutional capacity building of the load despatch centres pan-India apart from several other activities like collaborative research & survey through dedicated working groups etc. The expenses incurred for functioning of FOLD constitute a part of the NLDC and corporate office expenses.
f. CABIL report has suggested use of term LDC Empowerment Reserve in place of LDC Development Fund. However the term LDC Development Fund as used in earlier Regulations have been retained.
g. A definition has been introduced for '**Logistics Function'** being carried out by the RLDCs/NLDCs. These are the support functions apart from the core LDC

functions of system operation and market operation.

h. Similarly, the definition of **market operation (MO) and system operation (SO**) functions have been expanded to include several additional activities being performed by the load despatch centres.

i. Definition of OPEX has been introduced keeping in view the necessity to facilitate engaging of services related to the functions where a significant portion of delivery is through an annual recurring expenses mode rather than capital expenditure

j. A term '**other support functions'** has been introduced in definition section to factor in the significantly growing additional support functions of LDCs such as Legal and regulatory affairs, Taxation, TDS reconciliation etc.

k. Existing definition for the term **'Schemes'** have been expanded to include advanced systems and new centres such as Wide Area Monitoring Systems, weather information systems, renewable energy management centres (REMCs) etc.

l. Definition of **Users** has been expanded to cover existing & envisaged users of RLDCs/NLDC.

2.2 Registration

2.2.1 The registration of the users with the grid is a pre-requisite for grid access. The generating stations, licensees and/or any other user defined under the regulations 3(38) who are in operation as on 31.3.2019 have already been registered with RLDCs. The new generating stations or sellers, and licensees or buyers or any other user who are likely to integrate their projects with the grid and intend to avail the services of RLDCs or NLDC, will be required to apply for registration with the concerned RLDC. After registration, the users will avail the grid access for the purpose of transmission of electricity in accordance with the Grid Code.

2.2.2 RLDCs/NLDC coordinate with a host of entities other than the conventional users (Generating Stations, Distribution Licensees, and Transmission Licensees etc.) such as traders, power exchanges, EHV Test Labs. The RLDC Regulations 2015 provides for registration of Power Exchanges with NLDC & traders with RLDCs. Similarly, a EHV test lab has also been registered as user in past control period. In future, RLDCs/NLDC are likely to coordinate with several new entities such as Qualified Coordinating Agencies (QCAs), Aggregators, Electric Vehicle Charging Stations, Demand Response providers etc. All such entities may need to be registered as users with RLDCs as per upcoming requirement. It has been proposed to charge a onetime registration fee from these prospective users also.

2.2.3 Further a Clause has been included to de-register a user in case of persistent default. In Petition No. 243/MP/2016 vide Order dated 19.6.2017, following was noted:

"14. The Petitioner has further prayed that they be allowed to de-register Respondent No. 1 as a „user‟ of WRLDC in views of persistent failure in making payment of WRLDC fees and charges and to enable WRLDC to recover the approved fees and charges from the remaining users. Since, we have allowed time till 31.7.2017 to Respondent No. 1 to liquidate the outstanding dues, and if Respondent No. 1 fails to liquidate the outstanding dues by 31.7.2017, WRLDC shall take necessary steps to de-register Respondent No. 1 as a „User‟ of WRLDC."

Accordingly it has been proposed that, RLDC may, after issuing notice of at least one month, de-register a user in case of persistent default in payment of RLDC Fees and Charges for more than 90 days for termination of connectivity. A user can subsequently re-register once the default has been cured or connectivity re-established by paying 50% of the original registration charges.

2.2.4 All the registrations have been proposed to be done "online" for faster and easier communication with an auto generated acknowledgement.

2.3 Application for Determination of Fees & Charges

RLDCs/NLDC shall file the fees & charges petition with detailed plan for proposed CAPEX and REPEX, HR budget, operation & maintenance (O&M) expenses, interest on working capital (IOWC) etc. (duly approved by the competent authority within 30 days of notification of these regulations.

The Capex plan shall contain projected expenditure under - civil infrastructure, ergonomics & schemes for decision support system and operating aids, information technology and communication systems and any other capital asset**.**

HR expenses would be a significant proportion of the aggregate revenue requirement of RLDCs/NLDC.In order to ensure availability of adequate and capable human resources, the HR budget shall be duly filed by the LDCs in their petitions for approval of the Commission. A format for filing HR requirement has been provided as Appendix-VI. The approved manpower shall form the basis for calculation of HR expenses for the LDCs.

The individual RLDCs and NLDC shall ensure publication of their Fees & Charges applications in the newspapers having circulation in the States / Union Territories where the users are situated. Provision has been made for recovery of cost of newspaper publications from the respective users on pro-rata basis.

2.4 Reconciliation, Truing-up & Mid Term Review

There was a provision in the earlier RLDC Regulations 2015 as regards annual reconciliation of RLDC/NLDC fees and charges with the respective users followed by final truing up at the end of the 5 year control period. Amount under/over recovered at the end of control period shall be collected/refunded by the respective RLDCs/NLDC within three months of issuance of the Truing up order by the Commission.

A new provision has been made in the Draft Regulations for an optional midterm review under which the RLDCs/NLDC are allowed to file a mid-term true-up petition before completion of the control period to take care of any emergent/steep change in ARR against the approved expenses due to unforeseen/emergent requirements such as pay revision, wide variation in CAPEX / REPEX.

2.5 Debt-Equity Ratio

The actual debt-equity ratio as admitted by the commission for the control period ending 31.03.2019 shall be considered for calculation of opening capital cost of RLDCs/NLDC for the next control period. For the capital expenditure incurred or projected to be incurred on or after 1.4.2019, the debt-equity ratio shall be considered as 70:30. If the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan. Where the equity actually deployed is less than 30% of the capital cost, actual equity shall be considered for determination of return on equity.

2.6 Sharing of gains on refinancing of loan

It has been proposed to share the gains of refinancing in the ratio of 50:50 on lines of the Draft Central Electricity Regulatory Commission (Term and Conditions of Tariff) Regulations, 2019 (in short the 2019 Tariff Regulations).

2.7 LDC Development Fund& Contingency Reserve

Presently, there is a provision for LDC development (LDCD) fund for the RLDCs under over-sight of the commission. The LDCD fund provides ample financial autonomy & comfort to the RLDCs/NLDC in handling capital expenditure, procurement of additional IT infrastructure & software and meeting other unforeseen contingent expenses. The LDCD Fund would continue to be built-up by depositing the fees & charges collected under the heads viz. Registration/Grid Connection Fee, ROE, Depreciation, Interest on Loan etc. after meeting running expenses, payment of statutory taxes etc.

LDCD fund could be used for institutional capacity building and empowerment of LDCs. It can also be used for funding of Research & Development (R & D) projects, hiring consultancy service for learning & implementation of new technology & market products. The assets created out of drawal from this fundhas been allowed depreciation to ensure that the fund is recouped.

LDCD fund may be reviewed from time to time by the regulatory commissions.

Likewise the contingency fund created out of the income like short term open access charges, REC charges, PAT Charges etc. has been renamed as Contingency Reserve.

Surplus amount in contingency reserve after meeting contingency expenses would be periodically transferred to LDCD fund.

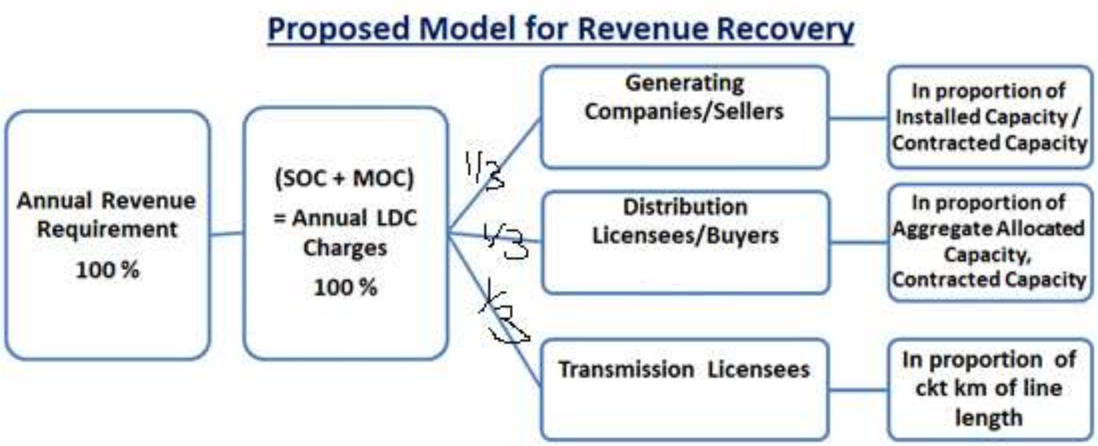
Recovery of contingency expenses incurred for works assigned by the Commission will be allowed after prudence check.There may be some requirements for which funds available under the contingency expenses are not enough to meet the unforeseen requirements. Such short fall can be met from the LDCD Fund.

2.8 Fees & Charges Structure and sharing amongst users

There is a growing convergence of System Operation (SO) and Market Operation (MO) activities performed by RLDCs/NLDC. Several products (ramping, load following, peaking, reserves) in the electricity market are being introduced to complement reliability (system operation) function. Further, in the changing regulatory regime with growing convergence of SO & MO functions, segregation of SO-service user & MO-service user is notional & does not make any value addition to the process of billing & collection. Thus to simplify the computation, billing and collection of charges, a consolidated charge (Annual LDC Charge or ALC) has been proposed in the Draft Regulations.

In the existing RLDC Regulations, 2015 the recovery from certain users like transmission licensees etc. is disproportionate to the services being availed from RLDCs/NLDC by these users. Significant resources are deployed at RLDCs/NLDC for rendering coordination services to them viz. switching & protection coordination for first time charging of new transmission elements, shut-down coordination for routine maintenance, transmission network restoration etc.

It is proposed that the Annual LDC charges be levied equitably among the 3 categories of users viz. Generating Stations/Sellers, Distribution Licensees/Buyers and Transmission Licensees in the ratio 1/3 :1/3: 1/3 as given under.



Within a particular category of users, the charges may be apportioned in proportion of installed capacity and/or aggregate allocated/contracted capacity (in case of generating company/ Seller or Distribution licensee/Buyer) and/or circuit kilometers of transmission lines (in case of transmission licensees). This formulation would simplify the apportionment and avoid uncertainty in charges payable by the users.

2.9 Components of Fees & Charges

The proposed components of RLDC fees & charges are as under:

a. Return on equity;

b. Interest on loan capital;
c. Depreciation;
d. Operation & maintenance (O&M) excluding human resource expenses:
    - Administrative and General Expenses (excluding HRD expenses);
    - Repair and Maintenance Expenses;
e. Human resource (HR) expenses including Human Resource Development (HRD) expenses;
f. NLDC & Corporate office expenses [applicable only for RLDCs]
g. Interest on working capital (IOWC);
h. Opex

Other significant changes from the existing regulations have been given under:

i. HR Expense

The LDCs are considered HR intensive and hence HR expense is a distinct accounting head separate from O&M expenses.

CABIL report has suggested following with respect to HR at LDCs.

(a) As per CABIL report, a large proportion of the staff in LDCs work in rotating eight hour shifts (Morning, Evening and Night). The emerging challenges and complexity call for having a real-time 'forecasting desk', 'scheduling desk', 'balancing desk', 'renewable desk' and 'reliability desk' under the oversight of a shift Incharge supported by personnel to maintain decision support system and Information and Communication Technology systems. The HR budget must factor capacity building, business travel, official nominations, special assignments, leave entitlements, contingency reserves, leave on extended weekends/festivals. Thus as per CABIL report, the real-time operations require five teams comprising of minimum three to eight persons per team.

(b) Considering their overarching role in the power sector, the LDCs need to be nurtured as centres of excellence. In addition to the personnel from Power system / Electrical / Electronic disciplines, recruitment / posting of few persons qualified in renewable technology, communication system, computer science, law, meteorology, public policy, economics, statistics, data science, finance and commerce is desirable. Specialization of HR needs to be encouraged.

ii. **HRD Expense under HR expenses**:

Human resource is the key asset for functioning of LDCs. Capacity building is a major thrust area for sustainability & growth of LDCs as an institution. Appropriate investment in HRD would convert the raw human resource into a useful asset. Thus, the expenditure made towards HRD needs to be given emphasis.

CABIL Report has stated that apart from induction level capacity building, the LDC personnel should be imparted domain-specific knowledge as well as capacity building on written/oral communication skills, behaviour, physical health, financial planning, social health, hard skills (forecasting, network simulation, market simulation, software development, optimization, research etc.), soft skills (public speaking, interpersonal skills, cognitive skills, emotional intelligence, aesthetics, public relations) etc. They shall also be given the relevant national / international exposure by encouraging them to present technical papers in conferences, journals and paying visits to other control centres in India & abroad. The Report also emphasises that minimum 7 man-days of capacity building program per person per year shall be ensured and that policies that encourage acquisition of higher qualification by LDC personnel and taking up applied research are desirable.

Further, the Forum of Load Despatchers (FOLD) needs to be strengthened as an institution to take up larger role in capacity building of the LDCs in India through certification programs, expert lectures, seminars, conferences, working groups, physical visits, national/international exposure etc.In addition to the capacity building of the employees of LDC, workshops / orientation programs needs to be organized for other stakeholders that will also form part of the HRD expenses. The expenditure of FOLD may be recovered through the NLDC fees and charges.

HRD expenses shall be booked under HR expenses instead of A&G expenses with a target to spend at least 5 % of total HR expenses in HRD in line with the National Training Policy. However, if the actual utilization towards HRD expenditure exceeds the 5% of HR expenses of any year, it shall be allowed at the time of truing up by the Commission after prudence check. In case of less than 5% utilization, it shall be refunded at the time of annual truing up.

Learning & growth of personnel at LDCs has been considered as an important dimension (KPI) for performance evaluation of RLDCs/NLDC.

iii. Normalisation of HR expenses of previous control period

POSOCO has recently got separated from its erstwhile holding company and has been made an independent Govt. of India company from 3rd January 2017. After separation, its manpower has seen significant increase when compared to previous years due to factors like requirements of a new organisation, expanding functions, increasing responsibilities to tackle the challenges of the rapidly growing Indian power system etc. Therefore, it may not be appropriate to consider all five years of the control period 2014-19 to arrive at the HR expenses for the control period 2019-24. In view of the same, HR expenses of last two years of the control period 2014-19 i.e. FY 2017-18 and FY 2018-19 only have been considered for the purpose of working out the HR expenses of the control period 2019-24.

iv. **Communication Expenses under O&M**:

The various functions discharged by LDCs are primarily dependent on information technology & communication infrastructure which require regular maintenance & upgradation. Hence it has been proposed for booking the communication expenses including those incurred for renewal of annual maintenance contracts for SCADA and communication systems of RLDCs/NLDCs under O&M head.

2.10 Performance linked incentive to RLDCs and NLDC

Performance linked incentives have been proposed at 15% of Annual LDC charges. The same has been derived keeping in view number of employees at each level, their basic pay and DPE Office Memorandum No. W-02/0028/2017-DPE (WC)-GL-XIII/ 17 dated 3.8.2017.

2.11 Certification &Retainer-ship

Certification of system operators should come as a culture in LDCs for ensuring quality in power system operation and for continuous knowledge upgradation & validation of the system operator's credentials. Presently, the National Power Training Institute (NPTI) is the nodal agency for conducting the examinations for different levels of certification of system operators' viz., basic level, specialist level etc. It is understood that a number of system operators at RLDCs/NLDC have been certified for basic as well as specialist levels in Reliability, Regulatory affairs and Logistics. It is recommended that specialist level certification programmes & examinations be conducted in the areas of electricity market operation and renewable integration.

The CABIL report provides that it is desirable that at least 75 % of the executives in a Load Despatch Centre are certified for basic level and at least 10-15% are certified for specialist level.

Provision for certification linked incentive is there in the RLDC Regulations, 2015 for basic & specialist levels in line with recommendations of the Satnam Singh Task force, Ministry of Power, Govt. of India.

The Commission would like to reiterate the need for encouraging certification of system operators. Accordingly, the Commission has considered the following provision for grant of a monthly certificate retainership amount.

SI. No.	Certification Level	Retainer-ship amount(Rs. Per Month)
1	Basic	7500
2	Specialist	10000
3	Management	12000

Further CEO. POSOCO vide his letter dated 18.6.2018 proposed that Certification linked incentive Scheme should be implemented for SLDCs System Operators also since RLDCs, NLDC and SLDCs work in close coordination while operating the grid. Moreover, economic value of the intervention of SLDCs in the system is substantially high and widely shared among stakeholders. Presently SLDC executives are trained at NPTI. However certified operators are not receiving any incentive for qualifying the certification examination conducted by NPTI as no regulatory provision exists for incentives. Accordingly Certification linked incentive for SLDCs have also been proposed to be paid by POSOCO under these Regulations.

2.12 Key Performance Indicators

The LDCs contribute significantly in reliable, secure, economic and sustainable operation of the interconnected grid formed by assets owned by diverse utilities. The evidence based inputs from LDCs to policy makers, regulators and planners are critical for strategic decision making at the highest level. The success of reform initiatives in the power sector largely depends on the efficiency of the internal processes of LDCs. Thus the services of the LDCs are mostly intangible and the economic value of the interventions of LDCs in the system are widely shared among the stakeholders at large. The LDCs are expected to be non-discriminatory, fair, transparent and profit-neutral entities. To ensure the altruistic, ethical and frugal character of LDCs, it is desirable that the performance of the LDCs be de-coupled from commercial profits of any kind.

In view of the above, it is proposed that the performance of the LDC could be evaluated in four dimensions-

- Stakeholder satisfaction
- Financial prudence
- Internal processes
- Learning & growth

Under each category, list of KPIs have been proposed. NLDC shall submit a detailed procedure for approval of Commission for evaluation and scoring of such KPIs within one month of publication of these regulations.

There is provision for the incentives linked to achieving the KPI targets set by the Commission. The RLDCs/NLDC shall file separate applications/petitions before the Commission after end of each financial year for approval of performance linked incentive (PLI) based on KPI scores.

2.13 Billing and payment of charges

The LDC charge collection cycle has been slightly modified w.r.t. the existing regulations. The users of RLDCs/NLDC shall be allowed to pay the monthly LDC charge within 45 days of issuance of bill without attracting any penalty. However, if payment of any bill for charges payable under these regulations is delayed by a user beyond a period of 45 days from the date of billing, a late payment surcharge at the rate of 1.25% per month shall be levied on the outstanding amount.

Appendix III, Depreciation Schedule

Present RLDC Regulations, 2015 provide for depreciation rate of 30 % on the capital expenditure of Software. The rate has now been proposed as 15% in Draft Regulations in line with the one for 2019 Tariff regulations.

2.14 Operational Expenditure (OPEX)

For an organisation like POSOCO, which is knowledge oriented asset lite organisation, considering the rapid changes in the technology coupled with fast changing regulatory environment, it would be prudent to opt forOPEXmodel, wherever possible based on the criticality of the project/service.

In view of the above, provision of OPEX has been made in the Regulations for execution of projects/ engaging services such as Cloud Computing, Data Storage, Data Centre, Big Data Analytics tools, Advanced data visualization tool (with GIS interfacing), Satellite Services, Weather Data Services, Forecasting Services, WebNetUse, PLEXOS license etc.

2.15 The Explanatory Memorandum covers issues which have proposed to be added or have been modified in RLDC Regulations, 2015. All other Provisions as per RLDC Regulations, 2015 have not been specifically explained again in Explanatory Memorandum.
