

Office of The Chief Engineer
Maharashtra State Load Dispatch Center
Thane-Belapur Road, P.O. Airoli, Navi Mumbai Pin – 400 708.
Tele: 91-22-27601765 / 1766; Fax: 91-22-27601769
Email: cesldc@mahasldc.in

Ref: MSETCL/TECH/OP/FTC/

0 2 5 3 3

Date:

27 NOV 2018

To,

As per mailing list.

Sub: - Procedure for integration of New Transmission Elements belonging to any transmission Licensee in the State for First Time Charging (FTC) under MSLDC.

Ref: - POSOCO's Letter dated 26.05.2014, circulating procedure for First time charging (FTC).

As per Indian Electricity Grid Code, POSOCO vide its Letter dated 26.05.2014 has circulated 'Procedure for integration of a new network element of a transmission licensee into the grid and issuance of certificate by RLDC for successful trial operation of a transmission element'.

In this context, a Procedure for inter-connection of New Transmission Elements belonging to any transmission licensee in the State for **First Time Charging (FTC)**, along with requisite formats is formulated so as to comply with the above guidelines circulated by POSOCO.

The transmission network in Maharashtra is an integration of CTU and STU network. Hence, consent of RLDC is required for charging of important grid elements at 400 kV level and some of the elements at 220 kV level connected to CTU network for the first time.

In view of above, the procedure for First Time Charging (FTC) of new elements has been bifurcated in to two parts based on Consent from RLDC and Consent from MSLDC as follows:

Part –A: Procedure for seeking consent from RLDC.

Part – B: Procedure for seeking consent from MSLDC.

The said procedure along with required Formats is enclosed herewith. The implementation of the said procedure will streamline the process of integration of New Elements in the Grid with proper documentation and mis-communication will be avoided at the time of real time charging of the new element in the Grid.

In view of above, all the concerned offices are requested to adopt the abovementioned procedure and submit the proposals in requisite formats and adhere to the timelines as specified therein.

This procedure shall be implemented with immediate effect.

Sub: - Procedure for integration of New Transmission Elements belonging to any transmission licensee in the State for First Time Charging (FTC) under MSLDC.

Please note that henceforth proposals not submitted in requisite formats and within time lines, shall not be considered by MSLDC and any delay in the charging on account of non-compliance of the procedure shall be the sole responsibility of the Transmission licensee concerned.

The procedure is uploaded on the website of MSETCL (www.mahatransco.in), MSLDC (www.mahasldc.in) and employee portal of MSETCL (www.ep.mahatransco.in).

Encl: As above.


(Anil V. Kale)
Chief Engineer
(MSLDC)

Copy s.w.r.s to:

The Director (Operations / Projects), Prakashganga, CO, MSETCL, Mumbai.

Mailing List :-

1. The Chief Engineer, EHV Projects cum O&M Zone, MSETCL
Amravati / Aurangabad / Karad / Nagpur / Nashik / Pune / Vashi.
2. Shri. Rajan Sheth (Chief-Transmission)
The Tata Power Company Ltd.
Dharavi Receiving Station,
Near Shalimar Industrial Estate,
Matunga, Mumbai – 400019.
3. Shri. Vikas Sonar, Vice President (Head O&M)
The Adani Electricity Mumbai Ltd. (AEML),
220 kV Aarey RS, Goregaon (E), Mumbai.
4. The Superintending Engineer, EHV Projects Circle, MSETCL:
Amravati / Aurangabad / Kalwa / Kolhapur / Nagpur / Nashik / Pune.
5. The Superintending Engineer, EHV O&M Circle, MSETCL:
**Akola / Amravati / Aurangabad / Bhusawal / Chandrapur / Chandrapur HVDC / Kalwa /
Karad / Kolhapur / Nagpur / Nashik / Padghe / Panvel / Parli / Pune / Solapur**

Procedure for integration of New Transmission Elements belonging to any transmission licensee in the State for First Time Charging (FTC) under SLDC

As per Indian Electricity Grid Code, POSOCO vide its Letter dated 26.05.2014 has circulated 'Procedure for integration of a new network element of a transmission licensee into the grid and issuance of certificate by RLDC for successful trial operation of a transmission element'.

In this context, MSLDC has formulated the following procedures for inter-connection of New Transmission Elements belonging to any transmission licensees in the State for **First Time Charging (FTC)**, along with requisite formats so as to comply with the above guidelines circulated by POSOCO.

The transmission network in Maharashtra is an integration of CTU network and STU network. Hence, consent of RLDC is required for charging of important grid elements at 400 kV level and some of the elements at 220 kV level connected to CTU network for the first time.

In view of above, the procedure for First Time Charging (FTC) of new elements has been bifurcated in to two parts based on Consent from RLDC and Consent from SLDC.

The detailed procedure is as follows:

Part –A: Procedure for seeking consent from RLDC:

1. All the Transmission Licensees intending to commission any Transmission Element for the First Time, which is a part of Inter/ Intra State Transmission System, at 400 kV level or connected to CTU Network, shall intimate the MSLDC, the details in the below mentioned prescribed formats, generally (15) days prior to the anticipated date of FTC. After scrutiny of the proposal received from field office, the same will be forwarded to RLDC.
 - a. **ANNEXURE A-1:**
Intimation regarding anticipated charging of a New Transmission Element (Line/ICT/Transformer/Bus Reactor/Line Reactor/Bay/Series Capacitor/Series Reactor) along with the list of the desired documents being submitted as per **Format: I.**
 - b. **ANNEXURE A-2:**
List of Elements to be charged and Element Rating details as per **Format: I-A.**
 - c. **ANNEXURE A-3:**
Single Line Diagram of the concerned Sub-stations, along with status of completion of each dia/bus/breakers clearly indicating which elements are proposed to be charged.
 - d. **ANNEXURE A-4:**
List of SCADA points to be made available (as per standard requirement, SLDC would need all MW &MVA_r data, voltage & frequency of all the buses, all the breakers& isolator positions, OLTC tap positions, Main-1/Main-2 Protection operated signals)
 - e. **ANNEXURE A-5:**
Location of Energy meters as per relevant CEA regulations.
 - f. **ANNEXURE A-6:**
Connection Agreement, wherever applicable along with all annexures.

Procedure for integration of New Transmission Elements belonging to any transmission licensee in the State for First Time Charging (FTC) under SLDC

In additions to above mentioned documents, charging statutory permissions, details of the technical parameters of the transmission elements required for network modeling shall to be made available to MSLDC.

2. Within (3) days of submission of above information by the Transmission Licensee, MSLDC shall acknowledge the receipt of the same, as per **Format: II**, and seek clarifications, if any. The transmission licensee shall submit the desired information/documents to MSLDC within next (3) days.
3. The request for charging of new transmission element and towards start of the trial operation as per **Format: III** shall be submitted by the Transmission Licensee to the MSLDC, generally three (3) days prior to the date of first-time charging.

The Transmission Licensee shall also submit the following documents in this regard:

- a. **ANNEXURE B-1:**
Request for charging of the new transmission element along with the summary of the undertakings being submitted as per **Format: III**.
- b. **ANNEXURE B-2:**
Undertaking in respect of Protective systems as per **Format: III-A**.
- c. **ANNEXURE B-3:**
Undertaking in respect of Telemetry and communication as per **Format: III-B**.
- d. **ANNEXURE B-4:**
Undertaking in respect of Energy metering as per **Format: III-C**.
- e. **ANNEXURE B-5:**
Undertaking in respect of Statutory clearances as per **Format: III-D**.
4. On satisfying itself with the submitted information, MSLDC in consultation with RLDC (required for critical grid elements) would issue “**a provisional approval for charging**” to the Transmission Licensee as per **Format: IV within two days** of receipt of above documents. On the designated day, the transmission licensee shall charge the transmission line and do trial operation as per the timeline mentioned in **Format: III**, after obtaining the real time code from MSLDC/WRLDC.

All attempts would be made by the real time operating personnel at the MSLDC/WRLDC to facilitate charging and commissioning of the new element at the earliest, subject to availability of real time data and favorable system conditions.

5. Post successful trial operation, following documents shall be submitted by the Transmission Licensee:
 - a. **ANNEXURE C-1:**
Request for issuance of successful trial operation certificate as per **Format: V** (If applicable).
 - b. **ANNEXURE C-2:**
Values of the concerned line flows and related voltages as per local SCADA just before and after charging of the element.

Procedure for integration of New Transmission Elements belonging to any transmission licensee in the State for First Time Charging (FTC) under SLDC

- c. **ANNEXURE C-3:**
Special Energy meter (SEM) Reading.
 - d. **ANNEXURE C-4:**
Output of Disturbance Recorders / Event Loggers.
6. Within three (3) working days of submission of the information mentioned above, WRLDC concerned shall issue the certificate (if applicable) for successful completion of trial run of the transmission element as per **Format: VI.**

Part – B: Procedure for seeking consent from SLDC:

1. All the Transmission Licensees intending to commission any Transmission Element **other than the Elements as per Part A above**, which is a part of Intra State Transmission System, shall intimate the MSLDC, the details in the below mentioned prescribed formats, generally (15) days prior to the anticipated date of FTC.
 - a. **ANNEXURE D-1:**
Intimation regarding anticipated charging of a New Transmission Element (Line/ICT/Transformer/Bay) along with the list of the desired documents being submitted.
 - b. **ANNEXURE D-2:**
List of Elements to be charged and Element Rating details.
 - c. **ANNEXURE D-3:**
Single Line Diagram of the concerned Sub-stations, along with status of completion of each dia / bus / breakers clearly indicating which elements are proposed to be charged.
 - d. **ANNEXURE D-4:**
List of SCADA points to be made available (as per standard requirement, SLDC would need all MW & MVAr data, voltage & frequency of all the buses, all the breakers & isolator positions, OLTC tap positions, Main-1 / Main-2 Protection operated signals)
 - e. **ANNEXURE D-5:**
Location of Energy meters as per relevant CEA regulations.
 - f. **ANNEXURE D-6:**
Connection Agreement, wherever applicable along with all annexures.

In additions to above mentioned documents, charging statutory permissions, details of the technical parameters of the transmission elements required for network modeling shall to be made available to MSLDC.

Within (3) days of submission of above information by the Transmission Licensee, SLDC shall acknowledge the receipt of the same, as per **Format: II,** and seek clarifications, if any. The transmission licensee shall submit the desired information/documents to MSLDC within next (3) days.

The FTC formats should be sent respective ALDC/SLDC by mail. Mail to be sent at the address at msldcoutage@gmail.com and msldc_outage@mahasldc.in to SLDC **prefixing FTC** in the subject.

Procedure for integration of New Transmission Elements belonging to any transmission licensee in the State for First Time Charging (FTC) under SLDC

Documents to be submitted by the Transmission Licensee to SLDC for First Time Charging (FTC)

Annexure	Particulars	Formats
For Transmission Elements under RLDC Control:		
ANNEXURE A-1	Intimation regarding anticipated charging of a New Transmission Element (Line/ICT/Transformer/Bus Reactor/Line Reactor/Bay/Series Capacitor/Series Reactor)	Format: I
ANNEXURE A-2	List of Elements to be charged and Element Rating details	Format: I-A
ANNEXURE A-3	Single Line Diagram of the concerned Sub-stations, along with status of completion of each dia /bus/breakers clearly indicating which elements are proposed to be charged	
ANNEXURE A-4	List of SCADA points	
ANNEXURE A-5	Location of Energy meters	
ANNEXURE A-6	Connection Agreement, wherever applicable	
ANNEXURE B-1	Request for charging of the new transmission element along with the summary of the undertakings	Format: III
ANNEXURE B-2	Undertaking in respect of Protective systems	Format: III-A
ANNEXURE B-3	Undertaking in respect of Telemetry and communication	Format: III-B
ANNEXURE B-4	Undertaking in respect of Energy metering	Format: III-C
ANNEXURE B-5	Undertaking in respect of Statutory clearances	Format: III-D
ANNEXURE C-1	Request for issuance of successful trial operation certificate	Format: V
ANNEXURE C-2	Values of the concerned line flows and related voltages as per local SCADA just before and after charging of the element	
ANNEXURE C-3	Special Energy meter (SEM) Reading	
ANNEXURE C-4	Output of Disturbance Recorders / Event Loggers	
For Transmission Elements under SLDC Control:		
ANNEXURE D-1	Intimation regarding anticipated charging of a New Transmission Element (Line/ICT/Transformer/Bus Reactor/Line Reactor/Bay/Series Capacitor/Series Reactor)	Format: I
ANNEXURE D-2	List of Elements to be charged and Element Rating details	Format: I-A
ANNEXURE D-3	Single Line Diagram of the concerned Sub-stations, along with status of completion of each dia /bus/breakers clearly indicating which elements are proposed to be charged	
ANNEXURE D-4	List of SCADA points	
ANNEXURE D-5	Location of Energy meters	
ANNEXURE D-6	Connection Agreement, wherever applicable	
ANNEXURE D-7	Undertaking in respect of Protective systems	Format: II-A
ANNEXURE D-8	Undertaking in respect of Telemetry and communication	Format: II-B
ANNEXURE D-9	Undertaking in respect of Energy metering	Format: II-C
ANNEXURE D-10	Undertaking in respect of Statutory clearances	Format: II-D

Format: I

Intimation by Transmission Licensee regarding anticipated charging of new elements

Name of Transmission Licensee: _____

Name of the Transmission Element: _____

Type of Transmission Element: *(Please tick appropriate)*

***Transmission Line / ICT / Bus Reactor / Line Reactor / Bus / Bay
/ Series Capacitor / Series Reactor***

Voltage Level: _____ kV

Owner of the Transmission Asset: _____

Likely Date and time of Charging: Date: _____; Time: _____

Likely Date and time of start of Trial Operation: Date: _____; Time: _____

Details of Standing Committee / Scheme Approval:

Date of Meeting	Standing Committee Meeting Number	MoM Item No / Point No / Serial No	Page Number

Place: _____

Date: _____

Sign: _____

Name: _____

Designation: _____

Seal:

List of enclosures:

- ANNEXURE A-2: Format IA: List of elements to be charged and Element Rating details
- ANNEXURE A-3: Single line diagram of the concerned sub stations, along with status of completion of each dia/bus/breakers
- ANNEXURE A-4: List of SCADA points
- ANNEXURE A-5: Location of installation of Energy meters as per relevant CEA regulations
- ANNEXURE A-6: Connection Agreement, if applicable, along with all annexures
- Standing Committee / Scheme Approval – relevant Pages

Format: I-A

List of Elements to be Charged and Element Rating Details

1. List of Elements to be charged:

2. Element Rating Details:

a. Transmission Line:

1	From Sub-Station	
2	To Sub-Station	
3	Voltage Level (kV)	
4	Line Length (km)	
5	Conductor Type	
6	No. of sub conductors per phase	

b. ICT / Power Transformer / Station Transformer / Start-up Transformer:

1	Voltage Level (HV kV/LV kV)	
2	Capacity (MVA)	
3	Transformer Vector Group	
4	Total No. of Taps	
5	Nominal Tap Position	
6	Present Tap Position	
7	Tertiary Winding Rating and Ratio	
8	% Impedance	

c. Shunt / Series Reactor:

1	Sub-Station /Line Name	
2	Voltage (kV)	
3	MVAR Rating	
4	Switchable/Non-Switchable	
5	In case of Line Reactor, whether it can be taken as Bus Reactor	

d. Generating Transformer (GT):

Sign: _____

Name: _____

Designation: _____

Seal:

ANNEXURE A-4

List of SCADA points

(as per standard requirement, RLDC would need all MW and MVA_r data, voltage and frequency of all the buses, all the breaker and isolator positions, OLTC tap positions, Main-1/Main-2 protection operated signals)

Name of Transmission Licensee /
Generating Station : _____

Name of the Transmission Elements:

Sr. No.	List of SCADA Points	IEC Address
1	Analog Point	
2	Digital Point	
3	SOE	

Sign: _____

Name: _____

Designation: _____

Seal:

ANNEXURE A-5

Type and Location of Energy meters as per relevant CEA regulations

Name of Transmission Licensee /
Generating Station : _____

Name of the Transmission Elements:

Sr. No.	Name of Sub-Station	Feeder Name	Make of Meter	Meter No.	CT Ratio	PT/CVT Ratio

Sign: _____

Name: _____

Designation: _____

Seal:

Format: II

Acknowledgment of Receipt of intimation towards FTC of new elements

Name of SLDC: _____

This is to acknowledge that the intimation of likely charging of _____ (*Name of the transmission element*) has been received from _____ (*Name of the owner of the transmission asset*) on _____ (*Date*).

Kindly complete the technical formalities in connection with energy metering, protection and real time data and communication facilities and inform us of the same three (3) days before charging of the above transmission element as per Formats III, III-A, III-B, III-C and III-D.

Or

The intimation is incomplete and the following information may be submitted within three (3) days of issue of this acknowledgment receipt:

- 1.
- 2.
- 3.

Date: _____

Sign: _____

Name: _____

Designation: _____

Seal of SLDC:

Format: III

Intimation by Transmission Licensee/Generating Station regarding First Time Charging and start of Trial Operation

Name of Transmission Licensee /
Generating Station : _____

Past Reference: _____

Name of the Transmission Element: _____

Type of Transmission Element: *(Please tick appropriate)*

***Transmission Line / ICT / Bus Reactor / Line Reactor / Bus / Bay
/ Series Capacitor / Series Reactor***

Voltage Level: _____ kV

Owner of the Transmission Asset: _____

Proposed Date and time of Charging: Date: _____; Time: _____

Proposed Date and time of start of Trial Operation: Date: _____; Time: _____

Details of Standing Committee / Scheme Approval:

Date of Meeting	Standing Committee Meeting Number	MoM Item No / Point No / Serial No	Page Number

Place: _____

Date: _____

Sign: _____

Name: _____

Designation: _____

Seal:

List of enclosures:

ANNEXURE B-2: Undertaking in respect of Protective systems as per Format III-A

ANNEXURE B-3: Undertaking in respect of Telemetry and communication as per Format III-B

ANNEXURE B-4: Undertaking in respect of Energy metering as per Format III-C

ANNEXURE B-5: Undertaking in respect of Statutory clearances as per Format III-D

Format: III-A

Undertaking by Transmission Licensee/Generating Station in respect of Protective systems

Name of Transmission Licensee /
Generating Station : _____

The following transmission element is proposed to be charged on _____(date) tentatively
at around _____ hours.

Sr. No. and Name of Transmission Element:

1. It is certified that all the systems as stipulated in Part-III of the Central Electricity Authority (Technical Standards for Connectivity to the Grid) Regulations, 2007 (as amended from time to time) have been tested and commissioned and would be in position when the element is taken into service.
2. The protective relay settings have been done as per the guidelines of the Regional Power Committee (RPC) as per section 5.2 (I) of the Indian Electricity Grid Code (IEGC). The necessary changes have also been made/would be made appropriately for the following lines at the following substations:

Sr. No.	Name of Sub-Station	Name of Transmission Element

Place: _____

Date: _____

Sign: _____

Name: _____

Designation: _____

Seal:

Format: III-B

Undertaking by Transmission Licensee/Generating station in respect of Telemetry and communication

Name of Transmission Licensee /
Generating Station : _____

The following transmission element is proposed to be charged on _____ (date) tentatively
at around _____ hours.

Sr. No. and Name of Transmission Element:

The list of data points that would be made available to RLDC in real time had been indicated vide communication dated _____. It is certified that the following data points have been mapped and real time data would flow to RLDC immediately as the element is charged and commissioned.

S. No.	Name of substation	Data point (Analog as well as digital) identified in earlier Communication dated	Point to point checking done jointly with RLDC (Y/N)	Data would be available at RLDC (Y/N)	Remarks (path may be specified)
1	Sending End	Analog			
		Digital			
		SOE			
		Main Channel			
		Standby Channel			
		Voice Communication (Specify:(Mobile No /Landline No)			
2	Receiving End	Analog			
		Digital			
		SOE			
		Main Channel			
		Standby Channel			
		Voice Communication (Specify:(Mobile No /Landline No)			

It is also certified that the data through main channel is made available to RLDC as well as alternate communication channel is available for data transfer to RLDC to ensure reliable and redundant data as per IEGC (as amended from time to time). Also, Voice communication is established as per IEGC. The arrangements are of permanent nature. In case of any interruption in data in real time, the undersigned undertakes to get the same restored at the earliest.

Date: _____

Sign: _____

Place: _____

Name: _____

Designation: _____

Seal:

Format: III-C

Undertaking by Transmission Licensee/Generating station in respect of Energy Metering

Name of Transmission Licensee /
Generating Station : _____

The following transmission element is proposed to be charged on _____ (date) tentatively
at around _____ hours.

Sr. No. and Name of Transmission Element:

Special Energy Meters (SEMs) conforming to CEA (Installation and Operation of Meters) Regulations, 2006 have been installed and commissioned. The SEMs are calibrated in compliance of regulation 9 of Part-I of CEA (Technical Standard for Grid Connectivity) Regulations 2007 as per the following details:

Sr. No.	Name of Sub-Station	Feeder Name	Make of Meter	Meter No.	CT Ratio	PT/CVT Ratio
1	Sending End					
2	Receiving End					

Data Format Conformity : Yes / No
Polarity as per Convention : Yes / No
Time Drift Correction carried out : Yes/No

The data from the above meters would be forwarded on weekly basis to the RLDC as per section 6.4.21 of the Indian Electricity Grid Code (IEGC) (as amended from time to time) and also as and when requested by the RLDC.

(RLDC to indicate the email ids where the data has to be forwarded).

Date: _____

Sign: _____

Place: _____

Name: _____

Designation: _____

Seal:

Format: III-D

Undertaking by Transmission Licensee/Generating station in respect of Statutory Clearances

It is hereby certified that all statutory clearances in accordance with relevant CERC Regulations / CEA standards / CEA regulations and PTCC route approval for charging of _____ have been obtained from the concerned authorities.

Date: _____

Place: _____

Sign: _____

Name: _____

Designation: _____

Seal:

Format: IV

Provisional Approval for Charging and Trial Run

Name of SLDC: _____

Approval No. _____

To,
The Transmission Licensee,

Sub: Charging and trial run of _____ (*Name of Transmission element*).
Provisional approval there of...

Ref: 1) Your application dated _____ in Format I
2) RLDC response dated _____ in Format II
3) Your request and details forwarded on dated ____ in Format III, III-A, III-B III-C and III-D

Dear Madam/Sir,

The above documents have been examined by RLDC/SLDC and permission for charging of _____ (*Name of Transmission element*) on or after _____ (date) is hereby accorded. This approval is provisional and in the intervening period, if any of the conditions given in the undertakings submitted by you are found to be violated, the approval stands cancelled. Kindly obtain a real time code from the appropriate RLDC/SLDC for each element switching as well as commencement of trial operation.

The following shortcomings have been observed in the documents at Sr. No. (3) above.

- a.
- b.
- c.

Please rectify the above shortcomings at the earliest to enable RLDC to issue the provisional approval for test charging, commissioning and trial operation of _____ (*Name of transmission element*).

Thanking you.

Yours faithfully,

Date: _____

Sign: _____

Name: _____

Designation: _____

Seal of SLDC:

Format: V

Transmission Licensee request for issuance of successful trial operation certificate

To,
<Name of RLDC/SLDC>

Sub: Successful trial operation of _____ (*Name of Transmission element*).
Request for issue of certificate.

Ref: i) Our application dated _____ in Format I.
ii) Your acknowledgement dated _____ in Format II.
iii) Our application dated ____ in Format III, along with Format III-A, III-B III-C and III-D
iv) Provisional approval dated ____ issued by your office.
v) Real time codes from RLDC/SLDC on dated _____.

Madam/Sir,

Referring to the above correspondence, this is to inform you the successful charging and trial operation of _____ (*Name of Transmission element*) from ____ to ____ (time & date).

Please find enclosed the following:

1. A plot of the MW/MVAr power flow during the 24-hour trial operation based on the substation SCADA is enclosed at **Annexure C-2**.
2. The Energy Meter readings have already been mailed to your office on _____. The 15-minute time block wise readings for the trial operation period is enclosed at **Annexure C-3**.
3. Event Logger and Numerical Relay or Disturbance Recorder outputs at **Annexure C-4** indicating all the switching operations related to the element. It is further to certify that the time synchronization of numerical relay, event logger and Disturbance recorder has been established.

It is requested that a certificate of successful trial operation may kindly be issued at the earliest.

Thanking you,

Yours faithfully,

Date: _____

Sign: _____

Place: _____

Name: _____

Designation: _____

Seal:

Encl:

Annexure C-2: Plot of MW/MVAr flow during 24-hour trial operation.

Annexure C-3: Energy Meter.

Annexure C-4: Reading Numerical relay or Disturbance Recorder (DR) output and Event Logger output.

Intimation by Transmission Licensee/Generator regarding anticipated charging of new elements (SLDC)

Name of Zone : _____

Name of Circle : _____

Name of Division : _____

Name of Transmission Licensee /

Generator : _____

Name of the Element: _____

Type of Transmission Element: *(Please tick appropriate)*

Generator / Transmission Line / ICT / Transformer / Bus / Bay / Reactor / Capacitors

Voltage Level: _____ kV

Owner of the Asset: _____

Likely Date and time of Charging: Date: _____; Time: _____

Place: _____

Date: _____

Sign: _____

Name: _____

Designation: Superintending Engineer
EHV O&M Circle, MSETCL: _____

Seal:

List of enclosures:

- ANNEXURE D-2: List of elements to be charged and Element Rating details
- ANNEXURE D-3: Single line diagram of the concerned sub stations, along with status of completion of each dia/bus/breakers
- ANNEXURE D-4: List of SCADA points
- ANNEXURE D-5: Location of installation of Energy meters as per relevant CEA regulations
- ANNEXURE D-6: Connection Agreement, if applicable, along with all annexures

List of Elements to be Charged and Element Rating Details

1. List of Elements to be charged:

2. Element Rating Details:

a. Generator:

1	Generation Capacity (MW / MVA)	
2	Technical Minimum Capacity (MW)	
3	Capability of absorption/injection of Reactive Power (MVA _r)	
4	Attach Capability Curve	
5	Voltage Level (LV/HV)	
6	Droop Setting	
7	Status of RGMO installation <i>(If applicable)</i>	

b. Sub-Station / Bus / Bay:

1	Name of Sub-Station	
2	Details of the Bus to be charged	
3	Bus Voltage Level (kV)	
4	Configuration of Bus	
5	Type of Bus Conductor	
6	Bay Number	
7	Bay Voltage Level (kV)	

c. ICT / Power Transformer:

1	Name of ICT/Transformer	
2	Voltage Level (HV kV/LV kV)	
3	Capacity (MVA)	
4	Existing Capacity of Sub-Station (MVA) <i>(Excluding capacity of proposed ICT/PTR)</i>	
5	Transformer Vector Group	
6	Total No. of Taps	
7	Nominal Tap Position	
8	Present Tap Position	
9	Tertiary Winding Rating and Ratio	
10	% Impedance	
11	Capacity Augmentation or Replacement	
12	If Replacement, date of failure at existing location	

13	Any Bay modifications carried out? Please mention details.	
----	---	--

d. Transmission Line:

1	From Sub-Station	
2	To Sub-Station	
3	Voltage Level (kV)	
4	Line Length (km)	
5	Conductor Type	
6	No. of sub conductors per phase	
7	Whether newly constructed or Re-oriented	
8	Whether Radial or Grid line	
9	Tower Configuration (SC/DC/MC)	
	In case of M/C, specify circuit position (<i>bottom, middle, upper, etc</i>)	

e. Reactors / Capacitors:

1	Whether Line Reactor or Bus Reactor	
2	If Line Reactor, Name of the line	
3	Name of Sub-Station where Reactor/Capacitor is installed	
4	MVA Capacity	

f. Attachments:

1	Details of meters (in case of Evacuation/EHV Consumer)	Please attach Soft copy
2	Permission from Electrical Inspector. (<i>Please mention Permission Letter No.</i>)	Please attach Soft copy
3	SLD of Sub-Station & Sketch of inter-connected lines to nearest next higher voltage level Sub- Station	Please attach Soft copy of Sketch with distances
4	Capability Curve of Generator	Please attached Scanned Copy
5	Remarks, If any	

Sign: _____

Name: _____

Designation: Superintending Engineer
EHV O&M Circle, MSETCL: _____

Seal:

List of SCADA points

(as per standard requirement, SLDC would need all MW and MVAr data, voltage and frequency of all the buses, all the breaker and isolator positions, OLTC tap positions, Main-1/Main-2 protection operated signals)

Name of Transmission Licensee /
Generating Station : _____

Name of the Transmission Elements:

Sr. No.	List of SCADA Points	IEC Address
1	Analog Point	
2	Digital Point	
3	SOE	

Sign: _____

Name: _____

Designation: Superintending Engineer
EHV O&M Circle, MSETCL: _____

Seal:

ANNEXURE D-5

Type and Location of Energy meters as per relevant CEA regulations

Name of Transmission Licensee /
Generating Station : _____

Name of the Transmission Elements:

Sr. No.	Name of Sub-Station	Feeder Name	Make of Meter	Meter No.	CT Ratio	PT/CVT Ratio

Sign: _____

Name: _____

Designation: Superintending Engineer
EHV O&M Circle, MSETCL: _____

Seal:

Format: II-A

Undertaking by Transmission Licensee/Generating Station in respect of Protective systems

Name of Transmission Licensee /
Generating Station : _____

The following transmission element is proposed to be charged on _____(date) tentatively
at around _____ hours.

Sr. No. and Name of Transmission Element:

1. It is certified that all the systems as stipulated in Part-III of the Central Electricity Authority (Technical Standards for Connectivity to the Grid) Regulations, 2007 (as amended from time to time) have been tested and commissioned and would be in position when the element is taken into service.
2. The protective relay settings have been done as per the guidelines of the Regional Power Committee (RPC) as per section 5.2 (I) of the Indian Electricity Grid Code (IEGC). The necessary changes have also been made/would be made appropriately for the following lines at the following substations:

Sr. No.	Name of Sub-Station	Name of Transmission Element

Place: _____

Date: _____

Sign: _____

Name: _____

Designation: _____

Seal:

Format: II-B

Undertaking by Transmission Licensee/Generating station in respect of Telemetry and communication

Name of Transmission Licensee /
Generating Station : _____

The following transmission element is proposed to be charged on _____ (date) tentatively
at around _____ hours.

Sr. No. and Name of Transmission Element:

The list of data points that would be made available to SLDC in real time had been indicated vide communication dated _____. It is certified that the following data points have been mapped and real time data would flow to SLDC immediately as the element is charged and commissioned.

S. No.	Name of substation	Data point (Analog as well as digital) identified in earlier Communication dated	Point to point checking done jointly with SLDC (Y/N)	Data would be available at SLDC (Y/N)	Remarks (path may be specified)
1	Sending End	Analog			
		Digital			
		SOE			
		Main Channel			
		Standby Channel			
		Voice Communication (Specify:(Mobile No /Landline No)			
2	Receiving End	Analog			
		Digital			
		SOE			
		Main Channel			
		Standby Channel			
		Voice Communication (Specify:(Mobile No /Landline No)			

It is also certified that the data through main channel is made available to SLDC as well as alternate communication channel is available for data transfer to SLDC to ensure reliable and redundant data as per IEGC (as amended from time to time). Also, Voice communication is established as per IEGC. The arrangements are of permanent nature. In case of any interruption in data in real time, the undersigned undertakes to get the same restored at the earliest.

Date: _____

Sign: _____

Place: _____

Name: _____

Designation: _____

Seal:

Format: II-C

Undertaking by Transmission Licensee/Generating station in respect of Energy Metering

Name of Transmission Licensee /
Generating Station : _____

The following transmission element is proposed to be charged on _____ (date) tentatively
at around _____ hours.

Sr. No. and Name of Transmission Element:

Special Energy Meters (SEMs) conforming to CEA (Installation and Operation of Meters) Regulations, 2006 have been installed and commissioned. The SEMs are calibrated in compliance of regulation 9 of Part-I of CEA (Technical Standard for Grid Connectivity) Regulations 2007 as per the following details:

Sr. No.	Name of Sub-Station	Feeder Name	Make of Meter	Meter No.	CT Ratio	PT/CVT Ratio
1	Sending End					
2	Receiving End					

Data Format Conformity : Yes / No
Polarity as per Convention : Yes / No
Time Drift Correction carried out : Yes/No

The data from the above meters would be forwarded on weekly basis to the SLDC as per section 6.4.21 of the Indian Electricity Grid Code (IEGC) (as amended from time to time) and also as and when requested by the SLDC.

(SLDC to indicate the email ids where the data has to be forwarded).

Date: _____

Sign: _____

Place: _____

Name: _____

Designation: _____

Seal:

Format: II-D

Undertaking by Transmission Licensee/Generating station in respect of Statutory Clearances

It is hereby certified that all statutory clearances in accordance with relevant CERC Regulations / CEA standards / CEA regulations and PTCC route approval for charging of _____ have been obtained from the concerned authorities.

Date: _____

Place: _____

Sign: _____

Name: _____

Designation: _____

Seal:

Format: VI

Acknowledgment of Receipt of intimation towards FTC of new elements (SLDC)

Name of SLDC: _____

This is to acknowledge that the intimation of likely charging of _____ (*Name of the transmission element*) has been received from _____ (*Name of the owner of the transmission asset*) on _____ (*Date*).

Kindly complete the technical formalities in connection with energy metering, protection and real time data and communication facilities and inform us of the same three (3) days before charging of the above transmission element.

Or

The intimation is incomplete and the following information may be submitted within three (3) days of issue of this acknowledgment receipt:

- 1.
- 2.
- 3.

Date: _____

Sign: _____

Name: _____

Designation: _____

Seal of SLDC: