

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. RP/06/2014**

**Coram:**

**Shri Gireesh B.Pradhan, Chairperson**

**Shri M. Deena Dayalan, Member**

**Shri A.K.Singhal, Member**

**Date of Hearing: 22.4.2014**

**Date of order : 20.1.2015**

**In the matter of**

Review Petition under Regulation 12 of the Central Electricity Regulatory Commission (Deviation Settlement Mechanism and related matters) Regulations, 2014 effective from 17.2.2014.

**And**

**In the matter of**

Tripura State Electricity Corporation Limited  
Commercial and System Operation  
Banamalipur, Agartala-799 001

**....Petitioner**

**Vs.**

1. North Eastern Regional Power Committee  
Meghalaya State Housing Finance Co-operative Society Ltd.,  
(Behind Bethany Hospital), Nongrim Hills, Shillong-793 003
2. North Eastern Regional Load Despatch  
Shillong-110 016
3. National Load Despatch Centre  
B-9- 1st Floor, Qutub Institutional Area,  
Katwaria Sarai, New Delhi-110 016.
4. M.P.Power Management Company Ltd.  
Block No. 11, 1st Floor, Shakti Bhawan,  
Jabalpur-482 008

**.....Respondents**



**The following were present:**

Shri Mahananda Debbarma, TSECL  
Shri A. Gan Chaudhuri, TSECL  
Shri Manoj Dubey, Advocate, MPPMCL  
Shri K.K. Agrawal, MPPMCL  
Shri T.S. Singh, NERLDC  
Shri S.S. Barpanda, NLDC

**ORDER**

The petitioner, Tripura State Electricity Corporation Limited (TSECL) has filed the present petition under Regulation 12 of the Central Electricity Regulatory Commission (Deviation Settlement Mechanism and related matters) Regulations, 2014 (Deviation Settlement Mechanism Regulations) for review of some of the provisions of the Deviation Settlement Regulations.

2. At the outset it is clarified that the petitioner has filed the present petition for relaxation of provisions of Regulation 5 (1) (iii) and Regulation 7.3 of the Deviation Settlement Mechanism Regulations by invoking the power under Regulation 12 of the said Regulation. Though the petition has been filed as a review petition and has been registered by the Registry of the Commission as a Review Petition, the petition is actually not in the nature of a Review Petition. The petition has been treated as a miscellaneous petition and is disposed of accordingly. Consequently, the petition has not been considered in accordance with the provisions of Section 94 (f) of the Electricity Act, 2003 read with Order 47 of the Code of Civil Procedure, 1908.

**Submission of the petitioner**

3. The petitioner has submitted that after notification of the Deviation Settlement Mechanism Regulations on 6.1.2014 effective from 17.2.2014, the petitioner has been

expressing difficulties for implementing Regulations 5.1 (iii) and 7(3) of the Deviation Settlement Mechanism Regulations, which provides as under:

"5.1.(iii) The Charges for the Deviation for the under draws by the buyer in a time block in excess of 12% of the schedule or 150 MW, whichever is less, shall be zero."

"7.(3) The Additional Charges for the Deviation for the over draws by the buyer in a time block in excess of 12 % of the schedule or 150 MW, whichever is less."

4. The petitioner has submitted that under drawal by a utility takes place under the following circumstances:

- (a) Occasional or sudden load crashes due to storm, heavy rain fall, etc.
- (b) Increase in generation due to sudden inflow in RoR (Run of River) based hydro stations;
- (c) Non-availability of corridor or congestion resulting in inability to schedule surplus power through open access/Power Exchange.

5. The petitioner has submitted that in the above circumstances, the distribution companies take the following initiatives:

- (a) Restoration of system normalcy by the distribution companies takes about 5 to 12 hours depending upon severity of contingency and till such time, continuous under drawal takes place.
- (b) Utility immediately calls for revision of drawal schedule from various generating stations but such requests for revision of drawal schedule are not accepted by RLDC/ISGS in totality on the plea of technical constraints i.e. technical minimum for operating the generating station.

(c) Under such circumstances, forced under drawal continues as deviation. The Deviation Settlement Mechanism Regulations would force the utility without any compensation though the utility has no control over the above circumstances.

(d) Since the State utilities are responsible for paying full capacity charges and energy charges of generating stations and transmission licences, further burdening the utilities with zero deviation (UI) price for under drawal for no fault of the utilities will make the consumers to pay higher price.

6. The petitioner has submitted that overdrawal by the distribution companies takes under the two circumstances, vis (a) Generation outage for both State owned generating station and inter-State Generating Station; and (b) Curtailment of drawal through open access due to network congestion.

The petitioner has submitted that the State utility take immediate initiative on occurrence of the above circumstances to control the over-drawal from the grid by curtailment of load within the State. Otherwise, the additional charges required to be paid for over-drawal under present situation which is beyond the control of State utilities, have to be borne by the consumers leading to tariff hike. The petitioner has submitted that the present peak demand of the State of Tripura is around 205 MW (winter) and 255 MW (summer) and off-peak demand is around 120 MW (winter) and 150 MW (summer). Revision of schedule for transaction through Power Exchange and bi-lateral sale on the basis of real time depending upon generation availability by State utility is not available as per the DSM Regulations. In case Pallatana project or similar major

generation project(s) get tripped and restoration gets delayed, the entire power is to be managed through massive load shedding to avoid over-drawal which is not practically possible as the entire State will remain in dark and will lead to law and order problems.

7. In the light of above, the petitioner has prayed as under:

- "(a) To introduce continuous trading in Power Exchanges or implement other suitable trading mechanism so that State utility can participate in purchase of additional power / sale of surplus power in less than an hour's notice in case of any eventuality to supplement efficient Grid operation. Presently such mechanism is not operational which is essential for operation of 6 time block intra-day power trading.
- (b) At present hydro ISGS are not on requisition based scheduling procedure. But this may be implemented fully and made mandatory before proposed Regulation is made effective.
- (c) Application of these Regulations may be deferred till continuous trading in Power Exchanges or other suitable trading mechanism is fully implemented in the country.
- (d) Alternately, Regulations may be made for over drawal in excess of 12% of the schedule or 150 MW, whichever is higher instead of less for NER States."

8. The petitioner vide affidavit dated 22.3.2014 has prayed that the limit of deviation for under-dawal and injection may be considered as 12% of 150 MW if the schedule is less than 150 MW.

9. After hearing the representative of the petitioner on 28.2.2014, the Commission admitted the petition and directed the petitioner to implead North Eastern Regional Power Committee (NERPC), North Eastern Regional Load Despatch Centre (NERLDC) and National Load Despatch Centre (NLDC) as parties to the petition.

10. NLDC and NERLDC have filed their joint reply to the petition vide affidavit dated 19.3.2014 and the petitioner, vide its affidavit dated 21.3.2014, has filed its rejoinder to the replies of NLDC and NERLDC. NERPC vide letter dated 13.3.2014 has filed its reply.

11. Meanwhile, Madhya Pradesh Power Management Company Limited (MPPMCL) made a representation dated 14.2.2014 to the Commission regarding Regulation 7 of the Deviation Settlement Mechanism Regulations, particularly pertaining to the limits on deviation volume and the consequences of crossing the limits which was received in the Commission on 17.2.2014. MPPMCL also filed a Writ Petition No. 3125 of 2014 in the Hon'ble High Court of Madhya Pradesh, Jabalpur on 18.2.2014 challenging Regulation 7 of the Deviation Settlement Mechanism Regulations. Hon'ble High Court in its order dated 21.2.2014 while issuing the notice to the Commission issued the following direction:

“In the meantime, respondent No.3 is directed to decide the representation of the petitioner Annexure P/7, which is stated to be pending with it, on filing an application in this regard by the petitioner within a period of three working days from today.”

12. In compliance with the said directions of the Hon'ble High Court, MPPMCL vide letter dated 3.3.2014 served a copy of the Hon'ble High Court's order dated 21.2.2014 on the Commission. The Commission vide order dated 21.3.2014 disposed of the petition of MPPMCL. In para of the order dated 21.3.2014, the Commission observed as under:

"It is pertinent to mention here that Tripura State Electricity Corporation Limited has filed a Petition (6/RP/2014) in which certain difficulties have been highlighted regarding operation of Regulation 7 of DSM Regulations. The Commission has issued notice in the matter. Whatever decision will be taken in

the said matter will be applicable in case of MPPMCL. We also grant liberty to MPPMCL to participate in the said proceedings and present its case."

13. The petition was heard on 27.3.2014. The Commission in Record of Proceedings directed MPPMCL to submit its response in detail. The Commission also directed NLDC to submit the following information:

(i) A detailed report on the operation of grid after promulgation of DSM Regulations from 17.2.2014;

(ii) Frequency profile of grid after 17.2.2014 to till date; and

(iii) A detailed note regarding the effect on grid if the request of TSECL and MPPMCL is accepted.

14. MPPMCL, vide its affidavit dated 29.3.2014, has filed its detailed submission. NLDC vide affidavit dated 17.4.2014 has submitted the information called for. The petitioner vide its affidavit dated 19.4.2014 and 2.5.2014 has filed additional submissions.

15. The petition was heard on 22.4.2014. The Commission directed the petitioner to file the details of instances when Palatana Station tripped since its operationalisation from January, 2014 till date and how TSECL could manage such deviations before 17.2.2014 and after 17.2.2014 giving details of UI/ Deviation charges payable by it. The Commission directed MPPMCL to submit (a) how MPPMCL was managing prior to 17.2.2014, (b) how it has become difficult after 17.2.2014 to manage its drawal as per its schedule and (c) the details of instances when MPPMCL faced difficulties after

implementation of Deviation Settlement Mechanism Regulations with effect from 17.2.2014.

16. The petitioner and MPPMCL have filed the information vide affidavits dated 15.5.2014 and 16.5.2014 respectively.

17. MPPMCL in its reply dated 29.3.2014 has submitted as under:

(a) The Deviation Settlement Mechanism Regulations prescribe that deviation of a Designated Inter-State Transmission System Customers (DICs) should not exceed 12% of its scheduled drawal or 150 MW, whichever is lower. It implies that DICs (viz. the States) having scheduled drawal of 1250 MW and above are expected to limit their deviation to only 150 MW whereas beneficiaries having scheduled drawal below 1250 MW are allowed deviation of 12% of their scheduled drawal. The implication is that the limit of allowed deviation continues to decrease in percentage as the scheduled drawal increases. A beneficiary having higher scheduled drawal practically requires more deviation in MW terms. Had the Deviation Settlement Mechanism Regulations prescribed that deviation would not exceed 12% of its scheduled drawal or 150 MW, whichever is higher, instead of whichever is lower, then DICs could have managed well within the limits of deviation?

(b) There is unjust inequality created by the Deviation Settlement Mechanism Regulations among the States, as can be gathered from the following table, which reveals that a very small State and a large State are put on the same

footing and allowed deviation volume of 150 MW only:

State	Actual Demand (MW)	Forecasted demand during 2013-14 (MW)	Allowed deviation volume(MW)	Percentage deviation allowed with respect to column 2
1	2	3	4	5
Delhi	5942	6100	150	2.52
<b>Uttar Pradesh</b>	13940	14400	150	1.08
<b>Uttarakhand</b>	1759	1900	150	8.53
Chandigarh	340	370	41	12.00
<b>Madhya Pradesh</b>	10077	9494	150	1.49
<i>Maharashtra</i>	17934	18250	150	0.84
Goa	524	460	63	12.00
<b>Bihar</b>	2198	2750	150	6.82
<b>Jharkhand</b>	1263	1285	150	11.88
West Bengal	7107	8045	150	2.05
<b>Andhra Pradesh</b>	14582	15955	150	1.03
<b>Puducherry</b>	348	363	42	12.00
Kerala	3578	3731	150	4.19

(Source LGBR 2013-14 issued by CEA)

(c) MPPMCL, being a holding company of all three Distribution Companies in the State of Madhya Pradesh, aggregates the power requirement of the entire State and, accordingly, schedules power from various generating stations on behalf of the State of Madhya Pradesh through SLDC. The actual demand in the State depends on around 100 lakh consumers in the State and MPPMCL is only an aggregator of individual demands of these consumers. The projection of demand is made on the basis of historical, seasonal, cultural and meteorological data, all

of which can only give a rough idea of future demand and can never predict the demand with certainty. Since MPPMCL has a bigger system, having peak demand of around 10000 MW, it is practically impossible to limit the volume of deviation within the range of 150 MW only, which is just 1.5% of the peak demand.

(d) For compliance of Regulation 7 of the Deviation Settlement Mechanism Regulations, MPPMCL is expected to restrict its maximum drawal from grid within 150 MW of the scheduled drawal in order to avoid levy of additional charges for deviation under Regulation 7 (iii). With its best efforts, it is not practically possible to maintain the actual drawal from the grid within 150 MW as prescribed in the Deviation Settlement Mechanism Regulations. Further, this deviation within 150 MW has to be maintained in each 15 minute block, i.e., in all the 96 time blocks in the day.

(e) MPPMCL has been experiencing practical difficulty on account of non-availability of actual figure of instant drawal from the grid. MPPMCL has to rely on and act through SLDC, based on information acquired from remote locations of the Western Region, which are corroborated and thereafter, uploaded on the website of WRLDC and SLDC. The actual figure of instant drawal from the grid is not available and the real time data available at the website of WRLDC is indicative only, as mentioned under the "notes" column extracted hereunder:

"Note: Figures shown above are indicative only and are calculated based on the data acquired from remote locations in Western Region, over existing communication links."

(f) The data available in the website of WRLDC and SLDC do not truly depict the summation of interface meters on the basis of which the actual billing is done by WRPC. In the past, there was a vast difference between the data reflected on websites of WRLDC and SLDC, and the data available from meter readings of interface meters readings. The reason further mismatch in the data is attributed to communication lag, non-operation of any communicational link, non-operation of any data centre etc. MPPMCL has relied on the following data in support of its contention:

Week ending	Energy and Charges account as per WRPC		Energy and charges account as per website	
	Energy in MU	Amount in crore (₹)	Energy in MU	Amount in crore (₹)
15.9.2013	93.43	3.084	(-)93.52	(-)1.884
22.9.2013	63.00	1.56	(-)221.48	(-)2.749
1.12.2013	(-)193.43	(-)3.942	(-)328.08	(-)6.099
22.12.2013	47.434	2.737	(-)98.88	(-)0.737
29.12.2013	25.481	2.388	(-)134.28	(-)1.404

(g) The penal charges on account of deviation from volume beyond 150 MW, particularly when there is over drawal with frequency above the norm of 50 Hz and when there is under drawal with frequency below the norm of 50 Hz, are illogical because in such conditions, the over-drawing or under drawing utility is helping the grid to get back the system frequency to the norm of 50 Hz. However, the Deviation Settlement Mechanism Regulations provide for penalty by way of

additional deviation charges for over drawal and by way of not compensating for under drawals, even in the mentioned conditions.

(h) As a consequence, the crossing of limits of deviation makes MPPMCL liable to pay penal charges as mentioned under Table-A of Regulation 7 (iii) of the Deviation Settlement Mechanism Regulations, which are at double the normal rate if deviation is beyond 250 MW. The penal charges so billed to and paid by MPPMCL are ultimately passed on to the consumers of the State.

18. MPPMCL has submitted that the following factors have also compounded the problem related to 150 MW limit on deviation:

(a) Unpredictable injection of renewable energy sources into the Grid on Deviation Settlement Mechanism: The renewable energy generators having about total capacity of 656.82 MW (Wind 324.50 MW, Solar 255.45 MW, Bio-mass 33.45 MW, Bio-gas 2.40 MW and small hydro 40.70 MW) have been integrated into the MP State grid. The renewable energy sources in MP are on increasing trend and in near future it shall constitute considerable portion in total availability. The unpredictable injection of power from renewables into the grid, in particular the wind generation, has an adverse impact on the drawl pattern of schedule power from the grid. Due to unpredictable nature of such un-forecasted power, the deviation volume is likely to cross any time by 12% of the schedule or 150 MW, whichever is lower, on which the State of MP will have no control. Therefore, by promoting the renewable sources in the State, the licensees are bound to get

penalized by way of imposition of deviation charge and penalties, which is against the principle of natural justice.

(b) Improper primary response from generators: All India installed capacity of renewable is about 12% of total installed capacity and they do not have primary response and most of them have been kept out of purview of forecasting their available generation. Further, thermal generating units below 200 MW capacity and gas and nuclear based generating stations in the country (which comprise 11% of total installed capacity) are exempted from implementation of FGMO/RGMO. Moreover, most of the eligible thermal and hydro units have so far not implemented the FGMO/RGMO for various reasons. The primary response which is necessary to automate the frequency response in real time operation, in the Indian context is extremely poor causing manual intervention, and wide variations on this account would cause difficulties in managing drawal within + 150 MW volume.

(c) Penalizing under Deviation Settlement Mechanism for implementation of Automatic Demand Management Schemes and AUFLS: As per the Regulation 5.4.2 (d) of the Grid Code, distribution licensees are required to implement automatic demand management schemes to adhere to their scheduled drawal. CEA has recently amended Automatic Under Frequency Load Shed (AUFLS) plan and one more stage has been introduced to already existing 3 stages. At present, each stage of AUFLS shall give load relief of about 460 MW in each stage when the frequency falls below the predefined limits. The same has been

implemented in the State of MP. The State is also in the process of implementing the Automatic Demand Management Scheme (ADMS) and till such time automatic actions are available, the manual action is being taken in compliance with Grid Code, if required. In case of zero over-drawal in the State of MP, if the frequency falls below specified limit due to over-drawal by some other Region/States/beneficiaries, AUFLS shall also operate in MP forcing it to go into under drawal by about 460 MW and be penalized under DSM which is against the principle of natural justice. This aspect should have been addressed by this Commission while framing the Deviation Settlement Mechanism Regulations.

(d) Penalizing the State contributing to the grid security by way of Deviation Settlement Mechanism: Number of the beneficiary States are penalized for supporting the system security and reliability. Whenever the frequency is below 50.0 Hz, it is expected that the beneficiaries should not overdraw from the grid which may further deplete the frequency and thereby endanger the security and reliability of the grid. However, if any entity under-draws at low frequency, it supports the grid not only by arresting frequency depletion but also by contributing in improvement in frequency profile. In order to comply with the existing Deviation Settlement Mechanism Regulations, surrendering the under drawal power would further deplete the frequency. In doing so, the entity if under drawing by more than 150 MW is penalized for supporting the reliability and security of the grid. Similar is the case of overdrawal by more than 150 MW or 12% of schedule, whichever is less, when the frequency is within 50.00-50.05 Hz. In this range, if any entity overdraws, it helps the grid in arresting the

frequency whereas volume deviation in this range also attracts additional charge (penalty). The entity contributing to the grid safety, security and reliability should not be penalized.

(e) Multiple 'penalties' for single violation: The Deviation Settlement Mechanism Regulations violates the basic principle of one penalty for single violation. If an entity under-draws by more than 150 MW at frequency below 50.10 Hz, it does not get a single paisa for the entire under-drawal of power and in addition, penalty of ₹1.78/kWh is levied on the entire volume. Penalizing twice for a single deviation is against the principle of natural justice. In such situation, if the congestion charge is also applied, additional penalty shall also be levied which is as high as ₹5.45 lakh. Therefore, in case of under-drawal at frequency above 50.10 Hz when the congestion charge is also applied, the entity will (i) not get the charge for the under-drawal of power, though it is paying for the same, (ii) be penalized at ₹1.78/kWh as per DSM and (iii) be penalized at ₹5.45 lakh under congestion charge. The Commission should have addressed these issues while framing the Deviation Settlement Mechanism Regulations to avoid multiple penalties for single deviation.

(f) Effect of sudden tripping of bigger size units: The State has increasing trend of commissioning of bigger size units (500 MW and above) and in near future, bigger size units shall dominate the total availability. Sudden tripping of bigger size units or sudden reduction in generation by outage of any auxiliary may lead to overdraw or under injection more than 150 MW which cannot be brought down

immediately. However, in Deviation Settlement Mechanism Regulations, it has not been addressed.

(g) STOA customers and captive power producers: The Short-term Open Access customers are constantly on rising trend in the State of MP and change in their injection/drawal schedule directly affects drawal schedule of the State at inter-State boundary. Similarly, there are 21 captive power producers in the State of MP having total installed capacity of 1331.51 MW which will increase to 1781.51 MW shortly. Whenever captive generating unit trips or captive load is varied, there would be unpredictable drawal/injection of power which also affects the State's drawal. This issue has not been addressed in the Deviation Settlement Mechanism Regulations.

(h) Injection of infirm power into the grid: New generators with high capacity i.e.>250 MW capacity are being added into the grid now and then. Prior to COD of such generators, they have to be facilitated to inject their infirm power into the grid. Such infirm generation would cause deviation more than 150 MW at State periphery. Hence, the volume limit specified for the State should be suitably adjusted during injection of infirm power. The effect of infirm generation by embedded State generators should be nullified at State periphery,

(i) Intra-State ABT in MP: MPPMCL took the initiative and became the first State in the country to implement intra-State ABT mechanism from November 2009 whose objective was to maintain grid discipline by intra-State entities as envisaged under the Grid Code by controlling the users of the grid in scheduling,

despatch and drawl of electricity. Madhya Pradesh Electricity Regulatory Commission (MERC) has adopted the CERC UI Regulations for intra-State entities having three distribution companies, which is now replaced by Deviation Settlement Mechanism Regulations. With the introduction of Deviation Settlement Mechanism with the tight band of 12% of schedule or 150%, whichever is less (specified volume limits), it will be violation in natural manner inadvertently as distribution companies are scheduling power with their demand forecasting mechanism/load diversity and seasonal variation. Therefore, it calls for enhancing the volume limits up to 49.70 Hz.

- (j) Technical Minimum of thermal power stations: In order to control the drawal, SLDC submits its request for zero/less quantum of Central Sector generation well in advance. However, RLDC allots quantity required for technical minimum capacity of Central Sector machines. The same applies with intra-State scheduling. Therefore, intra-State entities have to accept the same though it is not required. Moreover, Regional Load Despatch Centre, sometimes revise the injection schedule from Sardar Sarovar HPS to control WR-NR flow which is generally on higher side as NR entities normally overdraw from the grid which result in deviation in drawal schedule of the State which also leads to further drawal deviations and are quite unavoidable.

There are international allocations from ISGS of NTPC situated in Western Region, like allocation to Bangladesh. In order to ensure uninterrupted power supply to international allottees, the particular generating station has to be

remain operative even in extremely low demand situation which results in to obligation of technical minimum on other beneficiaries of that particular station and may result in under-drawal due to low system demand.

(k) Sign Change: The clause related to change of sign after 12 time-blocks seems to be counterproductive and the consumers will suffer due to shedding of load owing to grid constraint which are not within the control of system operator on many occasions. Moreover, frequent start/stop of hydel units would create equipment safety concerns. If, there is equal contribution from supply side such as RGMO/FGMO, quick ramp rate gas based generator (which MP do not have), there would be substantial support to maintain drawl, but today it is missing. Moreover, SSGS Hydel generating units of 1435 MW capacity (only Indirasagar HPS qualify for Deviation Settlement Mechanism), Sardar Sarovar HPS having 1450 MW capacity (MP's share 826.5 MW) are out of purview of Deviation Settlement Mechanism. Similarly, the thermal generating units below 200 MW and gas and nuclear based generating stations in the country (which comprise of 11% of total installed capacity) are exempted from implémentation of RGMO. In short, primary frequency response in Indian context is limited. The seasonal pattern of MP load is such that during rainy season there is abundant availability as almost all 42 Nos. SSGS Hydel units (2435 MW) along with 12 SSP units (1450 MW) run continuously. Even though putting thermal units under reserve shutdown, backing down of other power and banking/sale of power MP remains in underdrawal conditions as sometimes its schedule will be very low and sometimes may be negative and this same should be taken into account.

During rainy season when demand crashes drastically and despite surrender of power, State will continue under-draw it will not be at all possible to change the sign after 12 time blocks. Similar is the case with the tripping of 500 MW SSGS unit as per scheduling procedure in three time blocks, actual will be zero. However, schedule will remain 500 MW and it will not at all be possible for generator to change the sign after 12 time blocks. To summarize, the change of sign within 12 time-blocks seems to be counterproductive and consumer will suffer due to shedding of load on account of grid constraint or the seller and buyer will also suffer as the same is not many times in the control of system operator/seller/buyer.

- (l) Volume limits: In ISGS/SSGS, revision would become effective from 4<sup>th</sup> time block. In case of tripping of the unit, the State would continue to deviate the limits of 12% of schedule or 150 MW, whichever is less. In case of sudden tripping (forced outages) of SSGS/ISGS units of 500 MW or above State/distribution companies will immediately come in the State of over-drawal and as per scheduling procedure, it will take time to revise schedule after 3 time blocks. In any case, State will overdraw beyond specified limits and volumes. Similarly, in above case, SSGS will become in the State of under injection by 500 MW which is again much more than the specified limits and volumes for the circumstances beyond its control. Number of States are having their demand of the order of 10000 MW or more and at least 3 to 5% deviation of their demand/generation may cause deviation of 300 to 500 MW. The over drawl/under drawl limits at State periphery should be enhanced.

(m) Development of Spot Market and Ancillary Services: The management of under drawal by utilities without a mechanism to take care of market operation on real time basis will be difficult. Prior to implementation of proposed Deviation Settlement Mechanism Regulations, real time market operations (spot trading in Power Exchange) need to be in place. Deviation Settlement Mechanism Regulations also do not address the deviation management issues in case of sudden demand crash as well as stranded generation resulting out of the conservative corridor ATC, non-utilization of transmission capacity due to rescheduling of generation etc. The incentives policy for ancillary service support is also absent which may play catalyst role in managing system more effectively and reliably.

(n) Poor performance of Wideband Communication Link between Jambua to WRLDC Mumbai: The Wideband Communication link between Jambua and WRLDC frequently goes out and under such situation, Central Sector data required for real time calculation of drawal from the grid goes out. Manual updating of the same by contacting sub-stations one by one takes very long time and the drawal under such situations do not match with actual drawal and when real time operations are replaced by meter data which result in huge deviations on account of black-out of real time data due to communication problem. UI account of December 2013 proves the same. As per SCADA data MP had to receive about ₹9.00 crore but as per actual UI accounts, MP was payable by ₹5.31 crore.

(o) Manifold effect of Deviation Settlement Mechanism: As per UI charge accounts issued by WRPC for the month of December 2013, net UI charges payable by the State of MP was ₹5.54 crore (UI Charge ₹5.31 crore + additional charge ₹0.23 crore). However, if Deviation Settlement Mechanism would have been applicable in December 2013, State of MP would have to pay ₹22.14 crore (Deviation Settlement Mechanism charge ₹12.451 crore + additional charge ₹9.73 crore). Such stringent four time penalty is not justified at all.

19. MPPMCL has submitted that the collective actions of all above events would cause deviation at State periphery. In such circumstances, generation would have to be picked up/backed down quite frequently from on bar State generating stations or from ISGS to curb over-drawal /under-drawl of the State as a whole. The revisions would become effective from 4<sup>th</sup> time block. The State would continue to deviate from the limits of 12% of schedule or 150 MW, whichever is less. With many States having their demand of the order of 10000 MW or more, at least 3 to 5% deviation of their demand/generation may cause deviation of 300 to 500 MW. MPPMCL has suggested that the scheduling procedures also need to be revised. MPPMCL has further submitted that in accordance with Balancing and Settlement Code, 2009 notified by Madhya Pradesh Electricity Regulatory Commission (MPERC), the basic UI rate as well as additional charges for intra-State entities in Madhya Pradesh would be in line with the CERC notifications on the matter as amended from time to time. Therefore, the provisions of Deviation Settlement Mechanism Regulations are causing concern to MPPMCL. MPPMCL has prayed for modification of the provisions of the Deviation

Settlement Mechanism Regulations, particularly, Regulation 7 regarding limits on deviation volume and consequences of crossing limits.

**Submissions of Respondents:**

20. Northern Eastern Regional Power Committee (NERPC) has submitted that Deviation Settlement Mechanism Regulations was discussed with constituents of NER in a special meeting held in the office of NERLDC on 7.2.2014 and was also deliberated in the 94<sup>th</sup> and 95<sup>th</sup> OCC meeting of NERPC. NERPC has submitted that the following issues were raised by the beneficiaries and generating companies of the region during the deliberation:

- (i) NER is the smallest of all five regions in the country in terms of installed capacity and energy requirement and is therefore, different from other regions in number of ways. The maximum demand and the energy demand met of the region is about 1300 MW (off-peak)-2200 MW (peak) and 32 MU-37MU per day respectively. The maximum demand and the energy demand met of small States such as Arunachal Pradesh, Manipur, Mizoram and Nagaland is of the order of 70 MW-120MW and 1.2 MU-1.5 MU per day respectively. The geographic location, terrain category and climate and weather condition of States is different from other regions. Unlike other regions, the generating stations of this region are predominantly gas or hydro based. Gas based stations are operating as base load plants and at present, there is no coal/ lignite based thermal power plant in the region. Working months are very limited. Most of the transmission lines pass

through hilly and difficult terrain, dense forests and cross major rivers like Brahmaputra, etc.

(ii) 132 kV networks constitute the backbone of the transmission systems unlike the other regions. Most of the 132 kV lines being S/C lines, redundancy level is very low and N-1 criteria cannot be applied in many corridors. The redundancy level and transformation capacity is also inadequate at many sub-stations. The transmission constraints in other regions, particularly in ER, restrict the TTC/ATC limits, resulting in curtailment of STOA.

(iii) Arunachal Pradesh, Manipur, Mizoram and Nagaland are without proper SLDC. It is difficult to monitor grid parameters, over drawl and under drawl in the absence of fully functional SLDC.

(iv) All gas based generating stations of NER have agreements with gas supplying agencies such as ONGC/GAIL. The reduction in utilization of quantum of gas supply below a certain level i.e. 80% or 90% of the contracted quantum, raises contractual issues with the gas supplying agencies and attracts penalty.

(v) Sudden load crash due to disruption of distribution network of the utilities is a common phenomenon in NER during monsoon period/ during unexpected heavy rainfall. As a result, utilities/ beneficiaries of NER are forced to go in under drawl mode. However, there is surplus power which cannot be sold on Power Exchange due to day ahead concept and transmission constraint in evacuation of surplus power outside the region. Moreover, the utilities will have to pay

unnecessarily the capacity charge for the DC of generators till the revival of the distribution system, which normally takes 2-12 hours depending on severity of damage. In the process, the utilities are penalized heavily. Although in four (4) time blocks, the schedule of generation is modified by RLDC, but it is limited to technical minimum declared/specified by generating companies.

(vi) The unit size of gas based power plant of NEEPCO is small i.e. of the order of 21 MW (GT) /63.5 MW (GT: 33.5MW + ST: 30MW). However, the unit size of combined cycle gas based power plant of OTPC is of order of 363.3 MW (GT: 232.39 MW + ST: 130.91MW) which is the biggest gas based generating unit in the region. This generating station cannot operate in open cycle mode and constitute about 28% of off-peak demand of the region (i.e. about 1300 MW). The availability and non-availability of such unit affect drastically the drawal pattern of beneficiaries/utilities and leads to deviation from schedule, which would attract penalty to generators / beneficiaries. Similar is the situation in the case of Ranganadi HEP with installed capacity of (3x135 MW).

(vii) Deviation Settlement Mechanism Regulations does not provide for techno-economic/techno-commercial minimum generation for gas/thermal based generating stations. However, in general, DC of generators of gas based generating station is found to be above certain level (techno-economic/ techno-commercial minimum) so that PAFM as per CERC norms is achieved and quantum of gas supply do not go below a certain level in order to avoid penalty of gas supply agency (s), even if demand is not there.

(viii) As per the present practice, there is a gap of three/four hours between trading and delivery time. The faster intra-day trading in Power Exchange, continuous trading and introduction of Ancillary Services Market would help to tide over the issues of deviation settlement mechanism to a great extent. The benefit of such concepts was also highlighted in 95<sup>th</sup> OCC deliberation.

### **Submission by NLDC and NERLDC**

21. NLDC and NERLDC in their joint reply dated 19.3.2014 have submitted as under:

(a) According to the petitioner under-drawal may take place due to sudden load crash, or inflow in Run of River (RoR) based hydro station. In this regard, it is clarified that Regulation 6.4.6 of the Central Electricity Regulatory Commission (Indian Electricity Grid Code) Regulations, 2010 (Grid Code) provides that the *regional entities shall regulate their generation and / or consumers' load so as to maintain their actual drawal from the regional grid close to the above schedule.* Accordingly, the petitioner is required to regulate its own generation/consumer load to maintain drawal close to the schedule and should not rely on the grid to take care of load crash, etc.

(ii) NLDC and NERLDC deny congestion in the inter-regional corridor between ER and NER except in case of planned shutdown and contingencies. While the TTC/ATC in ER-NER direction always remained around 550/500 MW, which was subsequently increased to 720/640 MW since, November 2013 after commissioning of 400 kV Purnea-Biharshariff D/C line, TTC/ATC in NER-ER direction remain around 600/500 MW.

(iii) The petitioner has submitted that in case of contingencies, till restoration of normalcy, under drawal takes place. In this regard, it is clarified that instead of leaning on the grid and continuing to under-draw, the petitioner has the option of backing down its own generation.

(iv) Request for the downward requisitions of beneficiaries are being implemented by revising the schedules in real time by NERLDC in a non-discriminatory manner considering the technical minimum generation levels as declared by generators and in line with the decisions taken in RPC/OCC forums. This is also in terms of Regulation 6.5.14 of the Grid Code to ensure operationally reasonable schedule for the generators.

(v) It is not correct to say that the utility has no control over the circumstances leading to under-drawl. It is relevant to mention here that there was 'zero' deviation price even as per the earlier UI Regulations above a threshold frequency. Now this Commission has additionally brought in 'zero' deviation price above the specified volume limits for secure grid operation.

(vi) Regulations 6.5.12 and 6.5.13 of the Grid Code specifically deal with scheduling of hydro stations. Therefore, if the proposal of the petitioner is accepted, the same will not be in line with the provisions of the Grid Code. Further, in terms of Regulation 6.5.13 of the Grid Code (prior to amendment of 6.1.2014) any generation less than the DC declared by hydro generator on 1<sup>st</sup> day would result in reduction of the 4<sup>th</sup> day schedule and thus, reduce the availability of other beneficiaries. Accordingly, in OCC forum of NERPC it was

decided that downward revision of hydro schedules should be avoided and all the beneficiaries agreed to that.

(vii) Since the Deviation Settlement Mechanism Regulations have already been implemented and the Commission after considering all aspects and comments of the stakeholders, has decided on the figure of 12% or 150 MW, whichever is lower, therefore, the petition is liable to be dismissed.

22. NLDC, vide Record of Proceedings for the hearing dated 27.3.2014, was directed to submit the following information:

- (i) A detailed report on the operation of grid after promulgation of Deviation Settlement Mechanism Regulations from 17.2.2014;
- (ii) Frequency profile of grid after 17.2.2014 to till date; and
- (iii) A detailed note regarding the effect on grid if the request of TSECL and MPPMCL is accepted.

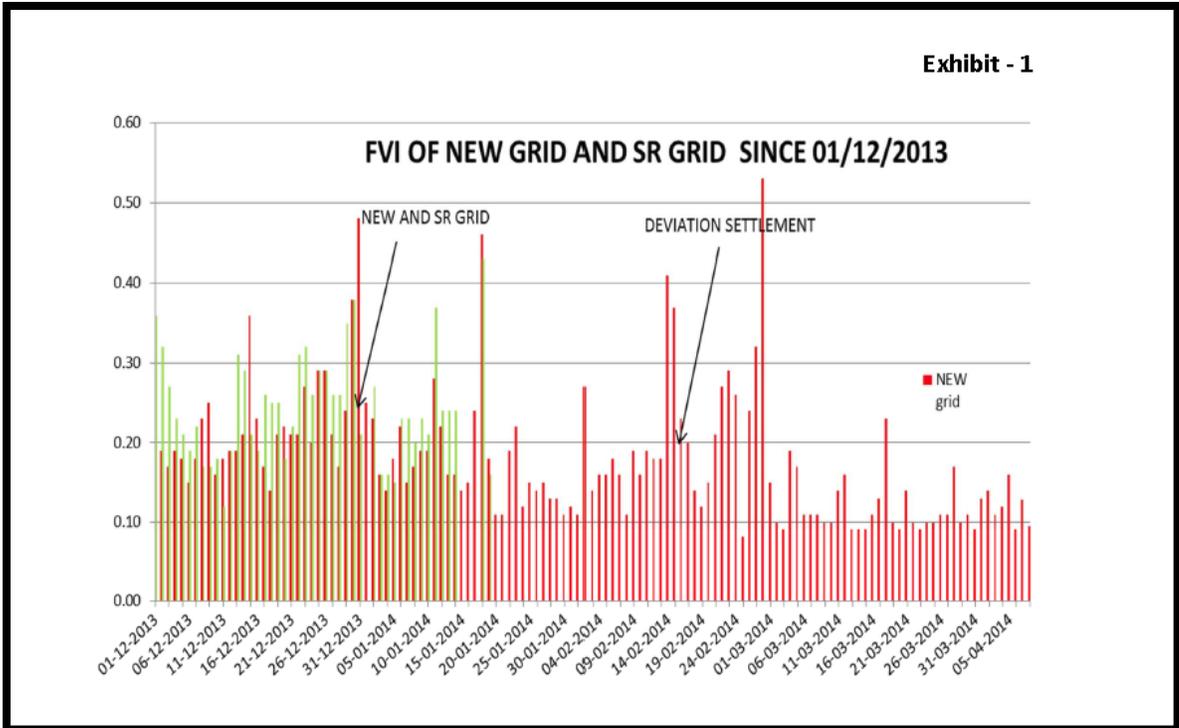
23. NLDC vide affidavit dated 17.4.2014 has submitted the information called for as under:

**(a) Report on the operation of grid after promulgation of Deviation Settlement Mechanism Regulations from 17.2.2014:**

- (i) Implementation of the Deviation Settlement Mechanism Regulations was need of the hour in view of synchronization of NEW grid with SR grid and it would have been difficult to

manage two large grids synchronized through a single line without tight controls on deviations.

- (ii) In a large grid, tight controls are necessary to keep line flow on different corridors within safe limits. Tightening of frequency band coupled with imposition of volume limits has been very helpful in secure operation of the system.
- (iii) After implementation of Deviation Settlement Mechanism, improvement in frequency profile has been observed. Average frequency of the day remains close to 50 Hz. Though frequency fluctuations are observed due to absence of primary and secondary control, manual action is being taken by number of utilities to bring down deviation from schedule. Frequency variation index below 0.1 has been achieved on a number of days. NLDC has submitted the Plot of FVI for the period 1.12.2013 to 5.4.2014 as under:



- (iv) After implementation of the new Deviation Settlement Mechanism, most of the regional entities are maintaining drawal close to the schedule. NLDC has also furnished schedule vs. actual drawal plots of 2 constituents in each region on the representative date i.e.11.3.2014.
- (v) NLDC has submitted the plot of total UI volume of the country for the period 1.1.2014 to 23.3.2014 underlining that UI volume has gone down after implementation of new Deviation Settlement Mechanism which has happened despite a number of generating units injecting infirm power under UI mechanism.

**(b) Frequency profile of grid after 17.2.2014 to till date**

NLDC has furnished the frequency profile of the National Grid for the period 17.2.2014 to 15.4.2014 with its affidavit which shows that Frequency Variation Index has come down and remained below 0.1 on a number of days.

**(c) Note regarding the effect on grid if request of TSECL and MPPMCL is accepted**

(i) The petitioner in its rejoinder dated 21.3.2014 has prayed that the limit of deviation for under-drawl and injection may be considered as 12% of 150 MW if the schedule is less than 150 MW. This request may be accepted, as it will mean that under-drawl to the extent of  $0.12 \times 150$  i.e. 18 MW may be allowed without any additional charge.

(ii) The petitioner has also prayed that liability of additional charge and penalty for injection of power may be excluded during contingency/force majeure such as tripping of generation/sudden outage of generation/breakdown of transmission and distribution system due to storm, rainfall, cyclone etc. If this prayer is accepted, it will unsettle the accounting and settlement system and the entire process would become subjective and prone to disputes. As per provisions of the Grid Code, in case of load crash, the utility is required to request RLDC for revision of schedule. On the other hand, in case of contingencies like tripping of units etc., utility may purchase power through the products available in the Power Exchanges or through bilateral contingency transactions from other sources, including un-requisitioned power.

(iii) The petitioner has also prayed for full implementation of requisition based drawl schedule and condonation of additional charges and penalty out of new Regulations. NERLDC and NLDC in their joint reply have already stated that as per provision of the Grid Code, the Regional Load Despatch Centers are required to ensure that generation schedules of reservoir based and RoR with pondage stations are prepared and the stations dispatched for optimum utilization of available hydro energy except in the event of specific system requirements/constraints. Further as per Regulation 6.5.14 of the Grid Code, RLDCs are required to ensure that the dispatch schedule given to ISGS is operationally reasonable. Subject to these provisions, RLDCs shall endeavour to schedule as per requisition given by the beneficiaries to the extent that the same is feasible.

(iv) Additional charges and penalty should not be condoned and the regional entities are required to maintain drawl as per schedule. Any such condonation, even for a specific period will create a wrong precedent and the regional entities may request for the same on one pretext or other.

(v) MPPMCL in terms of the Commission's order dated 21.3.2014 in Reference No. 01/RPN/2014 has prayed that "if the Regulation had prescribed for deviation not to exceed 12% of its scheduled drawal or 150 MW, whichever is higher, instead of whichever is lower, then DICs could have managed well within the limits of deviation." If MPPMCL prayer is accepted it would jeopardise secure operation of the National Grid. If all the utilities in one region tend to over-draw/

under-draw to the extent of 12% of schedule, it may lead to severe network congestion with catastrophic consequences which can be explained by giving two examples. Firstly, Southern Region is connected to rest of the grid through only one AC line and HVDC links. Total drawl schedule of the major States of Southern Region is of the order of 10000 MW. Thus, if the limit is enhanced to 12%, the States of SR will be able to over-draw by about 1200 MW, which will reflect flow through the lone AC link i.e. 765 kV Raichur-Sholapur with severe constraints in upstream and downstream networks. Secondly, due to the high level of generation in Western Region and demand in Northern Region, power flow to NR takes place primarily through 765 kV Gwalior-Agra 2 circuits. Total scheduled drawl of Northern region constituents remains of the order of 15000 MW during lean hydro season and 20000 MW during high hydro season. Thus, if deviation of 12% is allowed, and all the States in NR over-draw within these limits, total flow through inter-regional links would go up by 1800-2400 MW, major part of the flow going through 2 circuits of 765 kV Gwalior-Agra.

(vi) NLDC has requested that the proposal should not be considered as it will be detrimental to secure operation of the grid. Even, the present limit of 12% or 150 MW, whichever is lower, may be tightened progressively over a period of time and the regional entities should be directed to adhere to drawal schedule by taking measures like secondary control, maintaining spinning reserve, automatic demand management, procurement/sale through contingency transactions etc.

24. The petitioner has submitted that the under-drawal from drawl schedule occurs under three circumstances. Firstly, drawl schedule of regional entity is determined in advance on day a head basis. However, this schedule is dynamic in nature during the day of operation and subject to number of revisions depending upon generation availability which is beyond the control of TSECL. Secondly, sudden load crash due to storm and heavy rain fall which is beyond the control of TSECL. Thirdly, increase in generation due to sudden inflow in RoR based hydro generation is beyond the control of TSECL.

25. The petitioner has submitted that for balancing drawal and schedule, TSECL immediately sends request to NERLDC for downward revision of drawal schedule from generator on merit order in addition to backing down of State generation. However, the requests of TSECL were not fully implemented in many occasions for technical minimum limit stated by Inter-State generator and in the absence of requisition based drawl schedule in NER.

26. The petitioner has submitted that after a long persuasion, it has been recently agreed by the concerned generating companies to specify the technical limit of 70% for AGTPP and AGBPP of NEEPCO and 65% for Palatana. However, these limits have not yet been implemented. The petitioner has submitted that in terms of the Commission`s order in Petition No. 104/2000, the beneficiary utilities are free to give minimum requisition level. Therefore, the issue of fixation of technical limit does not stand.

27. The petitioner has submitted that TSECL has mainly gas based generating station. Therefore, any reduction in generation to match with the drawl schedule results in wastage of natural gas together with payment of 90% off take charge of gas. Thus, it calls for optimum and economic schedule of own generation otherwise per unit cost of generation will abruptly go up with no fault of TSECL. As such, the limit of deviation as fixed by this Commission has a cumulative impact on TSECL to pay penalty for under drawal as well as to pay more for cost of gas without matching generation. The petitioner has submitted that the specified limit of "12% or 150 MW, whichever is less" resulted in the allowable deviation of the order of 1 MW, 2 MW, 3 MW and so, in varying time during off-peak hours as a result/operation within such a narrow limit is practically not possible by TSECL. In order to match drawal schedule and avoid penalty for under drawal beyond limit, TSECL is continuously backing down its own generation resulting in huge flaring of natural gas.

28. The petitioner has submitted that the situation of power system operation in the State reached as was prevailing before implementation of ABT in 2003. Therefore, all commercial impact and liability are to be paid by consumer which is contrary to the National Electricity Policy and Tariff Policy. The petitioner has submitted that recently, load crash has taken place on 20.3.2014 at 01.00 hrs to 04.00 hrs which continued up to 10.00 hrs due to sudden pre-monsoon cycle and rain and about 50MW load crash has taken place in Tripura. TSECL has back down its own generation for about 8/9 hrs resulting in huge flaring of natural gas. During low grid frequency, TSECL is not either encouraged or allowed to inject power in to the grid due to very narrow limit of deviation

such as 1MW, 2MW, 3MW etc. The petitioner has submitted that due to corridor congestion, sometimes TSECL is not able to schedule surplus power.

29. The petitioner has submitted that spirit of the provision of the Electricity Act, 2003 is to ensure independent system operation through NLDC, RLDC and SLDCs. Load Dispatch Centers are responsible for efficient, economic, optimum scheduling and dispatch of electricity in the region and as a whole of the country. Backing down of generation and wastage of natural gas for compliance of such stringent regulation will definitely deteriorate the financial health of utility. In such a situation, the utility would be unable to service the consumer at an affordable and reasonable cost as per mandate of National Electricity Policy read with the Electricity Act, 2003. As such, TSECL is unable to exercise the option of continuous backing down of own generation to meet such a narrow band of deviation limit. The petitioner has submitted that the issue of technical minimum generation level and deviation settlement mechanism is contradicting each other and therefore, in depth analysis is required to implement the deviation settlement mechanism Regulations in letter and spirit.

30. The petitioner has submitted that the present petition has been filed for seeking relaxation in the event of contingency/force majeure when the situation is totally beyond its control. In earlier UI Regulations, the frequency band was wide and in absence of penalty in under drawal, TSECL used to avail benefit through compliance of Regulation. During that time, TSECL's performance was good which can be authenticated from NERLDC record/ report. However, due to reducing /tightening of frequency band along with imposition of stringent un-maintainable limit, the

performance of TSECL is being deteriorated and the survival of the corporation will be a question in future.

31. The petitioner has submitted that the respondents have agreed to the proposal for continuous trading. The petitioner has stated that TSECL being petitioner could foresee the difficulties likely to arise out of implementation of deviation settlement mechanism and to overcome such difficulties and avoid the wastages of resources like flaring gas due to backing down of generation, implementation of continuous trading less than 1(one) hour notice is essential to be implemented early.

32. The petitioner has submitted that unless requisition based drawal schedule is fully implemented irrespective of type of generation balancing of drawal and schedule is beyond the control of utility. Under Deviation Settlement Mechanism Regulations, deviation is strictly discouraged with heavy penalty beyond limit. The limit for TSECL is in the order of 1 MW, 2 MW, 3 MW and so on, during off peak hours. Unless hydro generation is also brought under preview of requisition based schedule full implementation of deviation settlement mechanism is not possible which calls for amendment of the Grid Code in line with Deviation Settlement Mechanism Regulations.

33. According to the petitioner, the share allocation of Palatana Unit # 1 is almost equivalent to State Off Peak demand. Thus, in the eventuality of failure of Palatana, the entire State to be put on load shedding to meet the revised drawal schedule but practically it is not possible as TSECL is responsible to meet the essential power supply requirement like hospital, airport, drinking water supply, police, etc. On the other hand TSECL is committed to make the liability of penalty under deviation settlement

mechanism for the reason beyond the control of TSECL. The frequent tripping of Palatana Unit 1 (363 MW) during February and March 2014 has led to a liability on TSECL of an amount of ₹89,80,419/- as penalty (Deviation charge) for no fault of TSECL for 14 days. Therefore, the reply of NLDC on suggesting to regulate the own generation and consumer load to maintain drawal close to schedule is not a practical and maintainable suggestion. The Commission vide corrigendum dated 17.2.2014 has expanding the limit of deviation for over-drawal as 12% of 150 MW for the smaller State. However, the additional charge beyond limit during contingency/force majeure such as tripping of generation, curtailment of open access etc. which is beyond the control, of State Utility is still continued to be paid by entity.

34. The petitioner has further submitted that historical data speaks about performance of TSECL since inception of ABT in NER from 2003. TSECL has been doing well consistently in compliance with regulation issued by the Commission from time to time. TSECL has established as best performing State in power system operation in NER at various forum. However, under Deviation Settlement Mechanism Regulations, TSECL has continuously and heavily panelized. Record reveals TSECL in payable mode perpetually for both over-dawal and under drawal and seems to be, worst performing State despite close and effective monitoring of the system.

35. The petitioner has submitted that all liability in respect of deviation settlement will form a part of expenditure and have to be recovered through tariff from the consumers. These expenses likely to be paid as additional charges at no fault of consumers but to be paid as per norms of regulation in addition to normal power purchase liability.

36. The petitioner has stated that under the regime of the Deviation Settlement Mechanism all the generating stations including Palatana are also liable to pay penalty/ additional charges. As all the expenses of generating stations are adjusted during truing up as per regulation and liabilities are passed through and paid by beneficiary utility. However, there are certain situation, deviation has occurred due to the fault of generator and if accounts for such additional charges are not separately maintained the cost of inefficiency/default of generator also have to be paid by State Utility.

37. The petitioner has therefore, prayed for the following reliefs:

(i) The limit of deviation for under drawal and injection as 12% of 150MW if the schedule is less than 150 MW;

(ii) The liability of additional penalty for injection of power may be excluded during contingency / force majeure such as tripping of generation/ sudden outage of generation / breakdown of transmission and distribution system due to storm, rainfall, cyclone etc; and

(iii) Since TSECL has foreseen the difficulties from the draft stage of deviation settlement mechanism and made a reference to NERPC and the Commission, vide letter NO.AGM/C&SO/2485-90 dated 07-01-2014 for full implementation of requisition based drawal schedule in NER before implementation of deviation settlement mechanism followed by petition before Commission on 18/01/2014 for removal of difficulties before new regulations came in to force w.e.f. 17.02.2014, therefore, the additional charges and penalty out of new regulations may be condoned.

### **Submissions of the petitioner and NLDC during the hearing**

38. The representative of the petitioner had during the course of hearing on 22.4.2014 referred to the reply of NLDC and submitted as under:

(a) NLDC has placed on record the graph for Schedule vs Drawal under normal situation. Under normal situation, there is no problem with DSM. However, TSECL has filed the present petition for 'Removal of difficulty against contingency'. It appears from the submission of NLDC that it agreed for relaxation of deviation from 12% or 150 MW to 12% of 150 MW. However, one issue is still alive i.e. over-drawal during contingency which is beyond the control of the utilities.

(b) NLDC has not accepted the submission of the petitioner for relaxation of deviation charges during contingency situation. Contingencies may arise due to generation, transmission and distribution failures.

(c) Under Deviation Settlement Mechanism, utility has to pay additional charges for overdrawal due to contingency arising out of failure of generator. During such situation, utilities are paying fixed charges for generator, normal DSM charges to meet the contingency and additional DSM charges. Utilities are penalized with these charges without any fault. Accordingly, additional DSM charges should not be levied on utilities as they are not the defaulters for failure of generation.

(d) If removal of additional deviation charge is considered, justice will be done to the utilities and to the consumers and about ₹100 crore of consumers throughout the country will be benefitted.

(e) With regard to contingency due to transmission failure and distribution failure, utilities are paying some cost for buying power from generators or through open access. However, if the utility is unable to draw the power or sell the power either due to transmission failure or distribution system failure it is also penalized in the form of zero penalty for injection and for over and above it has to pay additional charges of ₹1.78/kWh. These are the root cause of high tariffs to the consumers.

(f) The interest of the consumers as well as the utilities needs to be safeguarded in line with the objectives of the Electricity Act, 2003.

(g) Another issue is that the generators, with flexibility of 1 hour notice, contingency may be allowed, but for their planned maintenance work during a day of operation, generators are safe by giving 1 hour notice, before taking the shut down, but utility is unable to arrange power within 1 hour. If the shutdown is taken at 1.00 O, clock, utility has to wait till 10 O, clock in the next morning when the market opens and the actual trading takes place at 2.00 O, clock i.e. after 4 hours from the opening of market. Thus, utility has to wait about 12-13 hours before getting power through Power Exchange. To make Deviation Settlement Mechanism successful, continuous trading should be available through market. if

Palatana goes out, they are paying about ₹1 crore towards Deviation Settlement Mechanism charges in a day.

39. The representative of the petitioner further submitted that TSECL also appreciate the Deviation Settlement Mechanism and the following directives may be issued by the Commission for successful operation of Deviation Settlement Mechanism:

- (i) Implementation of full Requisition based Drawal Schedule.
- (ii) Technical limits of the generators.
- (iii) Requisition based generation of Hydro Power.
- (iv) Relaxation of Deviation Settlement Mechanism limit.
- (v) Removal of additional Deviation Settlement Mechanism charges for over drawal and penalty for under drawal during contingencies.
- (vi) Continuous trading with 1 hour notice.
- (vii) Separate accounting for Deviation Settlement Mechanism charges for un-requisitioned and merchant power by the generators.
- (viii) No revision from day ahead entitlement/DC for planned maintenance work by generators.

40. During the course of hearing on 22.4.2014, the representative of NLDC submitted that after implementation of Deviation Settlement Mechanism Regulations

w.e.f. 17.2.2014, improvement in frequency profile has been observed and average frequency of the day remains close to 50 Hz. Frequency variation index remained below 0.1 for about 61% of the time. Further, most of the regional entities are maintaining drawal close to the schedule.

41. With reference to the specific issues raised by the petitioner during contingency, the representative of NLDC submitted as under:

(a) TSECL has raised issue of contingency during tripping of a unit like Palatana. It is true that if Palatana Gas Based Station (GBS) trips it causes large deviation for Tripura as it has substantial share in Palatana GBS. In such a situation, there are different possibilities, one is that Tripura can at least partly sell under bi-lateral transactions, instead of entire sale being through Power Exchange then naturally it cannot be revised.

(b) Under bi-lateral transactions, as per the provision of Grid Code, TSECL can get the schedule revised in case of unit tripping, if TSECL indicate while submitting open access application that its source of power is Palatana, then in case of tripping of Palatana, it can revise its schedule. Other option is that for first 4 blocks, the deviation is taken care of by generating station itself and it has no impact on drawee utilities. Another option is continuous market. At present Tripura is selling all its power through Power Exchange. In Power Exchange, it cannot be revised as source and sink are not known. Instead, it should sell part of its power through bi-lateral transaction, which can be revised.

(c) Un-Requisitioned Surplus (URS) power is also available and as per the Commission`s direction, all the RLDCs are uploading details of URS in their web-site. Tripura can purchase URS of NTPC stations through the trading arm of NTPC. Moreover, there is another option of purchasing power from traders. There are number of traders, who are open on round the clock basis. Through these traders, the petitioner can source some power.

(d) In case of sudden load crash, it can reduce its requisition from thermal generating station or Gas Turbine Stations. NERLDC has agreed to bring down the technical minimum limit of Palatana to 65% and for other thermal power stations to 70%. If utilities want, they can maintain drawal as per schedule.

42. In response to NLDC`s submission in regard to the options available under bi-lateral transaction and URS for selling/buying of power during contingency, the representative of the petitioner submitted that TSECL has tried many times for bi-lateral transaction but for selling power through bi-lateral, tie-up should be made three months before. After three months also TSECL tried but could not succeed. The representative of the petitioner further submitted that Power Exchange is the only source for continuous trading. However, Power Exchange cannot revise on the day of operation. With regard to Un- requisitioned Surplus, the representative of the petitioner submitted that machine trips at any time of the day i.e. from 0.00 hrs. to 24.00 hours. On 28.2.2014, Palatana tripped after mid night and Tripura made some arrangement for purchasing power through trader, namely NVVN and power supply was started only after 10 O'clock in the morning.

43. The representative of MPPMCL submitted that as per the Commission`s direction, MPPMCL has filed written submission in which most of the issues are similar to TSECL. The representative of MPPMCL further submitted that various renewable energy categories are not coming under the ambit of DSM. States having more quantum of wind energy suddenly inject power into the system and due to sudden inflow of wind energy in the system, States are being penalized on account of underdrawal. Deviation Settlement Mechanism does not allow deviation of more than 150 MW, while MP has more than 200 MW of wind energy. In such a situation, the State generating stations have to back down. Wind energy coming into the system and getting their energy charges without coming under Deviation Settlement Mechanism. Therefore, wind energy should also come under the purview of Deviation Settlement Mechanism.

44. The petitioner vide Record of Proceedings for the hearing dated 22.4.2014 was directed to submit the details of instances when Palatana Station tripped since its operationalisation from January, 2014 till date and how the petitioner could manage such deviations before 17.2.2014 and after 17.2.2014 giving details of UI/ Deviation charges payable by it. MPPMCL was directed to file on affidavit the details of instances when MPPMCL faced difficulties after implementation of Deviation Settlement Mechanism Regulations since 17.2.2014 and how MPPMCL was managing prior to 17.2.2014 and how it has become difficult now in managing drawal as per its schedule.

45. The petitioner vide affidavit dated 2.5.2014 has submitted details of Deviation Settlement Mechanism and additional Deviation Settlement Mechanism calculated and

published by NERPC for the period from 17.2.2014 and 12.4.2014. The petitioner has submitted that the following is observed from Deviation Settlement Mechanism:

(i) Deviation Settlement Mechanism charges computing low during February, 2013 due to transition period of winter and summer and frequency profile was better; and

(ii) The charges during March and April trends to be high due to onset of summer and frequency profile remained below 50 Hz. in most of the period.

46. The petitioner vide its affidavit dated 15.5.2014 has submitted its observation from UI/ Deviation Settlement Mechanism account as under:

(a) TSECL was found UI charges receivable in 5 days out of total 12 days of Palatana outage UI charges during 4.1.2014 to 16.2.2014 and it met additional requirement of power during such instances of Palatana tripping mostly through UI drawal. The amount of total UI charges payable to the pool for 6 days of Palatana outage close to the receivable amount for 5 days thereby causing minimum financial impact on TSECL during 4.1.2014 to 16.2.2014.

(b) Since implementation of Deviation Settlement Mechanism Regulations w.e.f. 17.2.20114 to 12.4.2014, TSECL was found to be Deviation Settlement Mechanism charges payable for every instances of total 35 days Palatana outage during 17.2.2014 to 12.4.2014. TSECL tried to keep the total payable Deviation Settlement Mechanism charges minimum by resorting load shedding in the State except meeting a small amount of requirement form open access and

Power Exchange, which is not viable due to frequent revisions of schedules by Palatana.

47. MP Power Management Company Ltd., vide its affidavit dated 16.5.2014, has submitted information regarding deviation.

48. We have considered the submissions of the petitioner, MPPMCL and the respondents and perused documents on record.

### **Analysis and Decisions**

49. In view of the above, the following issues arise for our consideration:

- (a) What are the objectives behind promulgation of the Deviation Settlement Mechanism (DSM)?
- (b) Whether the difficulties highlighted by the petitioner and MPPMCL can be addressed within the ambit by the DSM Regulations or not?
- (c) What relief can be granted to the petitioner and MPPMCL?

#### **Issue 1: Objectives behind the promulgation of Deviation Settlement Mechanism**

50. In March 2009, the Commission notified the Central Electricity Regulatory Commission (Unscheduled Interchange charges and related matters) Regulations, 2009 (UI Regulations). The objective of these regulations was to maintain grid discipline as envisaged under the Grid Code through the commercial mechanism of Unscheduled Interchange (UI) Charges by controlling the users of the grid in scheduling, despatch

and drawal of electricity. Before coming into force of the Deviation Settlement Mechanism Regulation, the frequency bands in operation during different periods were as under:

Period	Frequency Band	Variation
1.2.2000 till 31.3.2009	49.0 – 50.5 Hz	Variation 1.5 Hz
1.4.2009 till 2.5.2009	49.2 – 50.3 Hz	Variation 1.1 Hz
3.5.2010 till 16.9.2012	49.5 – 50.2 Hz	Variation 0.7 Hz
17.9.2012 till 16.2.2014	49.7 – 50.2 Hz	Variation 0.5 Hz

51. In the last three revisions, the frequency band was narrowed gradually in order to improve the grid discipline and to ensure grid security. The last time it was amended in March 2012 to be effective from 1.4.2012. However, it came into effect from 17.9.2012 on vacation of stay granted by High Court of Madras.

52. The concept of UI charges has served its useful purpose over all these years and there had been a marked improvement in the grid discipline. There was no major grid failure since the introduction of UI for a decade. However, there were two major grid failures in the country on 30.7.2012 and 31.7.2012. In the wake of these grid disturbances, the Government of India appointed an Enquiry Committee under Chairmanship of Chairman, CEA. The Enquiry Committee identified over-drawls as one of the causes of grid disturbance. The Enquiry Committee inter-alia recommended as under:

(a) Frequency band needs to be further tightened and brought closer to 50 Hz.

(b) A review of UI mechanism should be carried out in view of its impact on recent grid disturbances. Frequency control through UI may be phased out in a

time bound manner and generation reserves/ancillary services may be used for frequency control.

53. Prior to notification of present Deviation Settlement Mechanism Regulations, there was no volume limitation on UI at grid frequency of 49.8 Hz and above. The UI mechanism acted as market in the grid frequency above 49.8 Hz. There was a perverse signal for over-drawal/under-drawal or under injection/over injection without any regard to other grid parameters like transfer capability, voltage level, faults level, etc., which got ignored. The grid failures in July 2012 underlined that the grid frequency is not the only parameter to be monitored and controlled for the grid security. Other grid parameters, such as, transfer capability of transmission lines, voltage, etc., were equally important and were required to be closely monitored and controlled. Large quantum of unscheduled over- drawals/ under-drawals even when the frequency is within the normal band could give rise to transmission constraints and jeopardize grid security. Frequency is not the only consideration in reliable grid operation as there can be instances where system frequency is within the range and large unscheduled power flows on certain elements can result in catastrophic grid failure.

54. It has been clarified by the Commission from time to time that Unscheduled Interchange (UI) should not be used as a route for trading of electricity. The Commission has also brought about substantial changes in the UI Regulations with the objective of encouraging the distribution utilities to go for planned procurement of electricity and creating an environment for investors to set up new power plants. The utilities have overlooked the need for planning generation adequacy over a period and

have not gone for adequate capacity additions and relied on over-drawal from the grid to meet their consumer`s demands. This Commission is consistently of the view that the utilities should plan for procurement of power on long-term, medium-term and short-term basis instead of resorting to over-drawls through UI. The Commission has also taken a strict view of the continued grid indiscipline by some State utilities and penalties have been imposed in certain cases after due regulatory process. The grid security is of paramount importance and cannot be compromised. Further, due to integration of regional grids, the economic cost of grid failures is too high which needs to be avoided at all cost.

55. In due consideration of the above, Commission repealed the UI Regulations and promulgated the Deviation Settlement Mechanism Regulations which calls for taking measures for enforcing grid discipline more stringently along with narrowing of grid frequency range from 49.7 Hz-50.2 Hz to 49.90 Hz to 50.05 Hz after following the due process of stakeholder consultations. Safe, secure and economic operation of the grid being primary consideration, the Commission is of the view that Deviation Settlement Mechanism Regulation is a measure in right direction and should be complied with by all concerned.

**Issue No. 2: Difficulties highlighted by the petitioner and MPPMCL for implementation of the Deviation Settlement Mechanism**

56. The main concern of the petitioner and MPPMCL is with regard to strict volume limits imposed by the Commission in the Deviation Settlement Mechanism Regulations. Both MPPMCL and TSECL have explained the difficulties in adhering to the volume limit specified in the DSM Regulation on account of the factors like (a) increase in the

number of open access customers; (b) revision of schedule in 4 time blocks in the event of tripping of generating units of such open access customers or their own generating stations; (c) integration of renewable sources of energy on account of their unpredictable nature of generation.

57. While the Commission appreciates the concern expressed by MPPMCL and TSECL, it needs to be understood that grid security is paramount and the challenges to ensure safe and secure operations of the grid have to be addressed without endangering the grid. Tripping of a generating unit cannot be ruled out and to meet such eventuality, contingency plans need to be chalked out in advance by the distribution companies. Similarly, the variation in generation from renewable energy sources need to be dealt with meticulous planning with suitable contingency plan and by remaining vigilant. Such an approach would definitely help in mitigating the effect of variation between load and generation and maintaining the volume limit.

58. The petitioner and MPPMCL have also expressed difficulty in adhering to schedules given by respective RLDCs corresponding to the technical minimum of generating units under low demand conditions such as during monsoon season. The technical minimum for the generating units is governed by the commercial consideration of minimum generation level which can be sustained without oil support in case of coal/lignite based generating stations and the heat rate deterioration. This is presently pegged at around 65% to 70% of unit loading. In case of gas based stations, minimum off take condition and heat rate deterioration governs the technical minimum. CEA vide

its letter dated 12.9.2013 in Petition No.142/MP/2012 has submitted its views on the issue of technical minimum which is extracted as under.

"The control range for coal fired units is generally taken as 50% to 100% MCR and the rated steam temperature can be maintained in this range. However, the units can operate at any lower load without any limits; and minimum load without oil support is taken as about 30% MCR and operation below this limit needs oil support. The CEA Technical Standards for Construction of Electric Plants and Electric Plants and Electric Lines Regulations – 2010 prescribe a control load of 50% MCR. The operating capability generally specified in the technical specifications also stipulate continuous operation without oil support above 30% MCR load and control load range of 50% to 100% TMCR

Thus unit operation may be envisaged as indicated above, barring any specific operating constraints brought out or recommended by OEMs with proper technical justification."

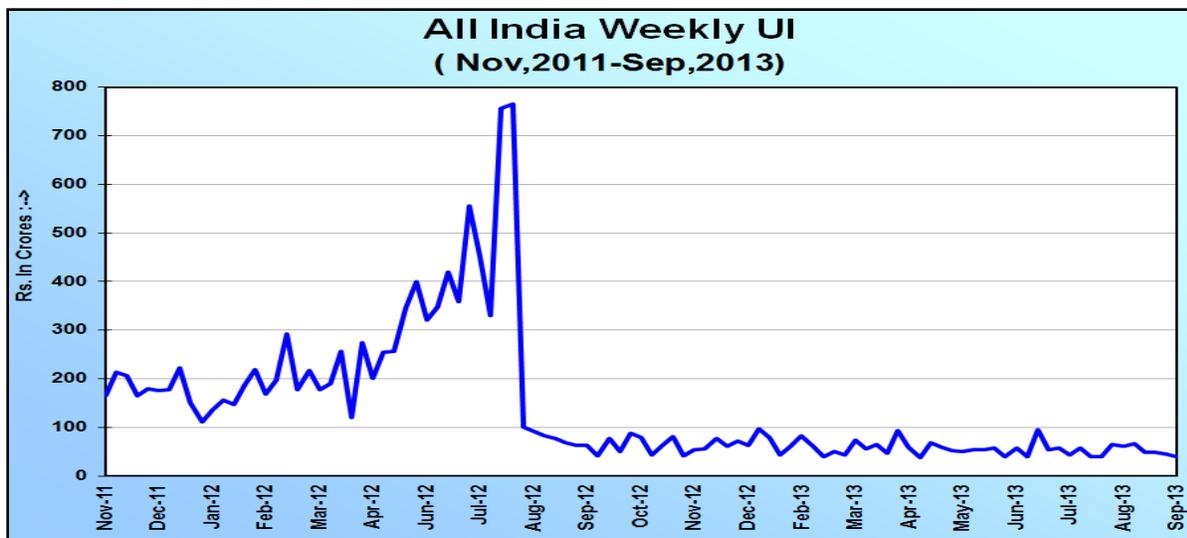
However, CEA has not expressed any view with regard to the gas based generating stations.

59. With the substantial capacity addition during the 11<sup>th</sup> Plan and capacity addition of around 88,537 MW planned during the 12<sup>th</sup> Plan, it is likely that there may be surplus situation during certain periods requiring generating units to shed load even below 65%-70% of unit loading. The Commission is open to any useful suggestion in this regard. In any case, the Commission will deal with the issue of technical minimum in Petition No. 142/MP/2012.

60. During the process of framing of Deviation Settlement Mechanism Regulations, the petitioner, MPPMCL, Power Exchanges and a few other distribution companies have also drawn the attention of the Commission for providing mechanism for the real time balancing by introducing ancillary services, trading product for the extended period in a day or round the clock, trading product at the Power Exchanges, and cutting short

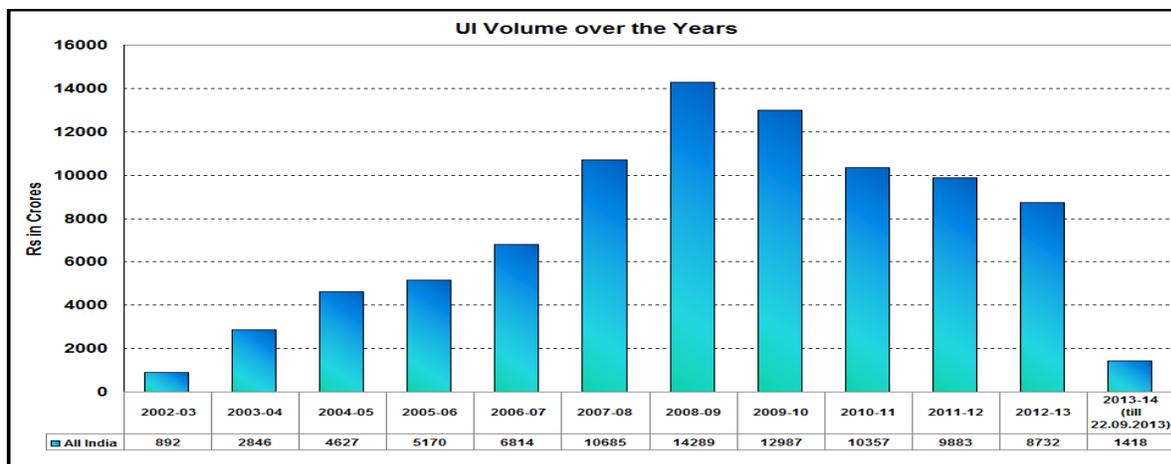
the time for revision of schedule. The Commission in due consideration of their suggestion has already provided for the reduction in time required for revision of schedule from 6 time blocks to 4 time blocks. Introduction of ancillary services in Indian power markets has been under consideration of the Commission for quite some time and is on the anvil. Similarly, for introducing extended period of trading over a day or round the clock trading product at the Power Exchanges, the Commission has already brought out a concept paper inviting comments and suggestions from the stakeholders. Though the petitioner, MPPMCL and some other distribution companies in their representations have stressed the need of such trading products but they have not made any comment specifically on the concept paper. As regards non-preparedness of the distribution companies to trade electricity on a continuous basis, it is felt that with the implementation of Deviation Settlement Mechanism Regulation, the distribution companies will start looking for more avenues and will get ready for trading on continuous basis. In view of above, it is felt that the decision to narrow down operating range of grid frequency and imposition of volume limits would only facilitate introduction of such products in due course of time.

61. MPPMCL has contended that integration of renewable sources of energy is posing problems for the distribution companies. It has also been argued that increase in the number of open access customers embedded within the State also poses problem in controlling the drawals in real-time. It is observed that this apprehension of MPPMCL is not very evident from the All India Weekly UI data. POSOCO in its submission during the hearing has submitted the following graphs of All India Weekly UI:



Source: POSOCO

62. It can be seen that the weekly UI volume has come down from around ₹800 crore to less than ₹100 crore post grid disturbances of July 2012. The UI Volume over the years is as under:



Source: POSOCO

63. The UI volumes have come down drastically post grid disturbances despite integration of renewable and increase in the number of open access customers. Moreover, grid cannot allowed to be put under stress and the challenges posed due to integration of renewable or due to open access customers may have to be dealt with.

We are very hopeful that with the support of the States and other stakeholders, it is possible to manage the grid operation within the specified frequency band. In this backdrop, imposition of volume limit was considered necessary.

64. The petitioner and MPPMCL have expressed their difficulties to implement Regulation 7 of the Deviation Settlement Mechanism Regulations. Since the UI Regulations have been repealed through Deviation Settlement Mechanism Regulations, it is essential to highlight the corresponding provisions of UI Regulations and Deviation Settlement Mechanism Regulations in order to appreciate the grievances of the petitioner in the correct perspective. Regulation 7 of the UI Regulations is extracted as under:

“7.(1) The over-drawal of electricity by any beneficiary or a buyer during a time block shall not exceed 12% of its scheduled drawal or 150 MW, whichever is lower, when frequency is below 49.8 Hz and 3% on a daily aggregate basis for all the time blocks when the frequency is below 49.8Hz.

Explanation: The limits specified in this clause shall apply to the sum total of over-drawal by all the intra-State entities in the State including the distribution companies and other intra-state buyers, and shall be applicable at the inter-State boundary of the respective State.

(2) The under-injection of electricity by a generating station or a seller during a time-block shall not exceed 12% of the scheduled injection of such generating station or seller when frequency is below 49.8 Hz and 3% on daily aggregate basis for all the time blocks when the frequency is below 49.8Hz.”

65. Regulation 7 of the Deviation Settlement Mechanism Regulations as amended provides as under:

“7. Limits on Deviation volume and consequences of crossing limits:

(1) The over-drawal/under-drawal of electricity by any buyer during a time block shall not exceed 12% of its scheduled drawal or 150 MW, whichever is lower, when grid frequency is “49.70 Hz and above” and “below 50.10 Hz”:

Provided that no overdrawal of electricity by any buyer shall be permissible when grid frequency is "below 49.70 Hz" and no under-drawal of electricity by any buyer shall be permissible when grid frequency is "50.10 Hz and above".

(2) The under-injection / over-injection of electricity by a seller during a time-block shall not exceed 12% of the scheduled injection of such seller or 150 MW, whichever is lower when frequency is "49.70 Hz and above and below 50.10 Hz":

Provided that –

(i) no under injection of electricity by a seller shall be permissible when grid frequency is "below 49.70 Hz" and no over injection of electricity by a seller shall be permissible when grid frequency is "50.10 Hz and above".

(ii) any infirm injection of power by a generating station prior to COD of a unit during testing and commissioning activities shall be exempted from the volume limit specified above for a period not exceeding 6 months or the extended time allowed by the Commission in accordance with the Connectivity Regulations.

(iii) any drawal of power by a generating station prior to COD of a unit for the startup activities shall be exempted from the volume limit specified above when grid frequency is "49.70" Hz and above".

(3) In addition to Charges for Deviation as stipulated under Regulation 5 of these regulations, Additional Charge for Deviation shall be applicable for over-drawal as well as under-injection of electricity for each time block in excess of the volume limit specified in Clause (1) and (2) of this regulation when average grid frequency of the time block is "49.70 Hz and above" at the rates specified in the table A & B below in accordance with the methodology specified in clause (7) of this regulation:"

66. The difference between the provisions of Regulation 7 of UI Regulations and Deviation Settlement Mechanism Regulations are explained in the table as under:

UI Regulations	Deviation Settlement Mechanism Regulations
<p>Over-drawal by a beneficiary or buyer when frequency is below 49.8 Hz:</p> <p>(i) For each time block: Not to exceed 12% of scheduled drawal or 150 MW whichever is lower, and</p> <p>(ii) For all time blocks in a day: Not to exceed 3% of scheduled drawal on a daily aggregate basis</p>	<p>Over-drawal/Under-drawal by a buyer when frequency is "49.70 Hz or above and below 50.10 Hz":</p> <p>For each time block: Not to exceed 12% of scheduled drawal or 150 MW whichever is lower.</p>

<p>Over-drawal by beneficiary or buyer when frequency is below 49.7 Hz:</p> <p>Not permissible. For each time block: Additional UI rates as specified by the Commission.</p>	<p>Over-drawal by beneficiary or buyer when frequency is below 49.7 Hz and under-drawal by beneficiary or buyer when frequency is 50.10 Hz and above.</p> <p>Not permissible. For each time block: Additional Charges for Deviation as specified by the Commission.</p>
<p>Under-injection by a generating station or seller when frequency is below 49.8 Hz:</p> <p>(i) For each time block: Not to exceed 12% of scheduled injection, and</p> <p>(ii) For all time blocks in a day: Not to exceed 3% of scheduled drawal on a daily aggregate basis</p>	<p>Under-injection/over-injection by a seller when frequency is “49.7 Hz and above and below 50.10 Hz”.</p> <p>For each time block: Not to exceed 12% of scheduled injection or 150 MW whichever is lower</p>
<p>Under-injection by beneficiary or buyer when frequency is below 49.7 Hz:</p> <p>Not permissible. For each time block: Additional UI rates as specified by the Commission</p>	<p>Under-injection by a seller when grid frequency is below 49.7 Hz :</p> <p>Not permissible. For each time block: Additional Charges for Deviation as specified by the Commission</p> <p>Over-injection by a seller when grid frequency is 50.10 Hz and above:</p> <p>Not permissible. For each time block: Additional Charges for Deviation as specified by the Commission</p>

67. It may be seen from the above table that UI mechanism was being treated as a market mechanism when the grid frequency was 49.8 Hz and above and there was no volume limit on UI at the grid frequency of 49.8 Hz and above. There was a perverse tendency for over-drawal/under-drawal or under injection/over injection without any regard to other grid parameters like transfer capability, voltage level, fault level, etc., which were being ignored. The grid failures in July 2012 underlined that the grid frequency is not the only parameter to be monitored and controlled for the grid security.

Other grid parameters, such as, transfer capability of transmission lines, voltage, etc., are equally important and are required to be watched and controlled. Large quantum of unscheduled over-drawals/under-drawals even when the frequency is within the permissible frequency band can give rise to transmission constraints and jeopardize grid security. It is underlined that frequency is not the only consideration in reliable grid operation as there can be instances where system frequency is within range and large unscheduled power flows on certain elements can result in catastrophic grid failure.

**Relief, if any, to be granted to the petitioner and MPPMCL**

68. In the Deviation Settlement Mechanism Regulations, volume limit has been specified and beyond the specified limit of 12% or 150 MW, whichever is lower, no over-drawal is permissible. MPPMCL has submitted that the limit of “12% of scheduled drawal or 150 MW whichever is lower” should be replaced with “12% of scheduled over-drawal or 150 MW whichever is higher”. NLDC in its submission dated 17.4.2014 has stated that the proposal, if accepted, would jeopardize secure operation of the National Grid and if all the utilities in one region tend to over-draw / under-draw to the extent of 12% of schedule, it may lead to severe network congestion with catastrophic consequences. We are in agreement with the submission of NLDC. In this connection, it is reiterated that safety and security of the grid are paramount and cannot be compromised for commercial considerations. The petitioner and the MPPMCL as responsible State Utilities should confine their net drawal to the schedule and help in maintaining the grid discipline. The plots submitted by MPPMCL for the month of March 2014 and April 2014 indicate that the actual drawals were close to the schedules. MPPMCL has not been able to make out a case for any real problem in managing the

load balance which is different from that prevailing prior to operation of Deviation Settlement Mechanism Regulations. It is also pertinent to mention that the Deviation Settlement Mechanism is in operation for about eleven months now and has resulted in maintaining the good frequency close to 50 Hz. The other concerns of MPPMCL have already been considered and decided by the Commission in its order dated 21.3.2014 in Reference No. 01/Rpn/2014 and the same is not being repeated for the sake of brevity.

69. MPPMCL has raised a new issue of "Multiple penalties" for single violation. MPPMCL has stated that if an entity under-draws by more than 150 MW at frequency below 50.10 Hz, it does not get a single paisa for the entire under drawal energy as the UI rates at this frequency is zero and an additional penalty of ₹1.78/kwh is also levied on the entire volume. MPPMCL has also stated that penalizing twice for a single deviation is against the principle of natural justice. We notice that MPPMCL is referring to Regulation 7 (4) of Deviation Settlement Mechanism Regulations which is extracted as under:-

“7 (4) In addition to charges for deviation as stipulated under Regulation 5 of these regulations, additional charge for deviation shall be applicable for over-injection/under drawal of electricity for each time block by a seller/buyer as the case may be when grid frequency is “50.10 Hz and above” at the rates equivalent to charges of deviation corresponding to the grid frequency of “below 50.01 Hz but not below 50.0 Hz.”

As per the above regulations, additional charges are applicable at grid frequency of 50.10 Hz and above. There is no additional charge for under-drawal below 50.10 Hz as submitted by the petitioner. As such there is no double penalty. It is clarified that the basic objective of the Deviation Settlement Mechanism Regulations is to achieve operation of the grid near the grid frequency of 50.0 Hz with graded

incentives/disincentives. In the event of underdrawal by an entity at frequency above 50.10 Hz, the disincentive of (-) ₹1.78/kWh is payable and cannot be considered as a double penalty. Therefore, there is no merit in the argument of MPPMCL.

70. The main plank of argument of the petitioner is that the limit of "12% of schedule or 150 MW whichever is less" as specified in the DSM Regulations has resulted in the allowable deviation of the order of 1MW, 2MW, 3MW and so on. As a result, operation within such a narrow limit is very difficult. We find merit in the submission of the petitioner. NLDC is also agreeable for relaxation of deviation from "12% or 150 MW, whichever is lower", to "12% of 150 MW in case schedule is lower than 150 MW". It is noted that such a dispensation already exists in the DSM Regulations for over-drawals. In our view, allowing deviation of upto about 50 MW for seller/buyer having low drawal schedules/injection schedule from the grid is unlikely to jeopardize grid security. We are therefore, inclined to provide such relaxation to all the sellers/buyers whose schedule is less than 400 MW. The additional charges for deviation shall be based on percentage of deviation worked out with reference to schedule of 400 MW instead of 150 MW as provided in the DSM Regulations. This will allow deviation limit of 48 MW across the board for the purpose of additional charges for deviation and it will also take care, to some extent, the concern expressed by MPPMCL with regard to integration of renewables and increase in the number of open access customers. This will necessitate relaxation of Regulations 5 and 7 of Deviation Settlement Mechanism Regulations.

71. Regulation 12 of the Deviation Settlement Mechanism Regulations empowers the Commission to relax any of the provisions of the said regulations on its own motion or

on an application made by an interested person. In exercise of power under Regulation 12 of the Deviation Settlement Mechanism Regulations, we relax the Regulations 5 (1) (iii), 5 (1) (iv) and Regulation 7 (3) of the DSM Regulation in respect of utilities having schedule of 400 MW or below with effect from 2<sup>nd</sup> February, 2015 as under:-

(a) In case of utilities having schedule of 400 MW or below, Deviation Charges shall be receivable:

- (i) for under-drawal upto 48 MW in relaxation of Regulation 5 (1) (iii) of the DSM Regulations, and
- (ii) for over-injection upto 48 MW in relaxation of Regulation 5 (1) (iv) of the DSM Regulations.

(b) Proviso below Table II under clause (3) of Regulation 7 of DSM Regulations is relaxed to provide as under:-

“Provided further that when the schedule is less than or equal to 400 MW, the additional charges for deviation shall be based on percentage of deviation worked out with reference to schedule of 400 MW as per Table-I (A) and Table-II (A) above.”

72. We direct RLDCs to give publicity to the above for compliance by all concerned.

73. The petition is disposed of with the above directions.

sd/-  
**(A.K. Singhal)**  
Member

sd/-  
**(M. Deena Dayalan)**  
Member

sd/-  
**(Gireesh B. Pradhan)**  
Chairperson