

**TAMIL NADU ELECTRICITY REGULATORY COMMISSION**  
**(Constituted under section 82 (1) of the Electricity Act, 2003)**  
**(Central Act 36 of 2003)**

**PRESENT:-**

**ThiruS.Akshayakumar**

.... **Chairman**

**and**

**Dr.T.PrabhakaraRao**

.... **Member**

**M.P.No.43 of 2012**

Tamil Nadu Electricity Consumer's Association,  
Represented by the President  
1<sup>st</sup> Floor, SIEMA Building, P.B. No.3847,  
8/4 Race Course Road, Coimbatore – 641 018.

... Petitioner  
(ThiruArunAnbumani,  
Advocate forPetitioner)

Vs.

Tamil Nadu Generation and Distribution  
Corporation Ltd.  
Represented by its Chairman & Managing Director  
144, Anna Salai  
Chennai – 600 002

....Respondent  
(ThiruM.Gopinathan  
Standing Counsel for TANGEDCO)

**Dates of hearing : 04-12-2012; 14-12-2012; 27-02-2014;  
13-01-2015; 13-02-2015; 17-04-2015;  
20-04-2015; 27-04-2016; 19-09-2017;  
25-10-2017, 16-11-2018 and 31-01-2019.**

**M.P.No.44 of 2012**

Tamil Nadu Generation and Distribution  
Corporation Limited (TANGEDCO),  
Represented by its Chief Engineer / Commercial  
No.144, Anna Salai,  
Chennai – 600 002.

... Petitioner  
(ThiruM.Gopinathan  
Standing Counsel for TANGEDCO)

Vs

Nil

..... Respondent

**Dates of hearing** : 04-12-2012; 08-02-2013; 27-02-2014;  
13-01-2015; 13-02-2015; 17-04-2015;  
20-04-2015; 27-04-2016; 19-09-2017;  
25-10-2017,16-11-2018 and 31-01-2019.

**M.P.No.7 of 2013**

Coimbatore District Small Scale  
Industries Association,  
Represent by its President  
CODISSIA, G.D. Naidu Towers,  
Huzur Road, Coimbatore – 641 018.  
(ThiruR.S.Pandiyaraj,

...Petitioner

Advocate for the petitioner)

Vs.

Tamil Nadu Generation and Distribution  
Corporation Limited  
Represented by its Chairman & Managing Director,  
No.144, Anna Salai, Chennai – 600 002.  
(ThiruM.Gopinathan

....Respondent

Standing Counsel for TANGEDCO)

**Dates of hearing:** 12-04-2013; 18-02-2014; 27-02-2014;  
13-01-2015; 13-02-2015; 17-04-2015;  
20-04-2015; 27-04-2016; 19-09-2017;  
25-10-2017;16-11-2018 and 31-01-2019.

**Common Order Dated: 22-02-2019**

The M.P. Nos.43,44 of 2012 and 7 of 2013 came up for final hearing on 31-01-2019 and upon perusal of the Petition, Counter affidavit and all other connected records and after hearing the arguments of ThiruN.L.Rajah, Senior Advocate, who appeared for the Counsel for Petitioner in M.P.No.43 of 2012, ThiruR.S.Pandiyaraj, Advocate and Thiru. M.Gopinathan, Standing Counsel for TANGEDCO, the Commission passes the following:

**ORDER**

**1.(i)** Prayer of the Petitioners in M.P.Nos.43of 2012 and M.P.No.7 of 2013 are similar i.e.,

To direct the respondent to impose only those restriction and control measures which have been specifically approved/sanctioned by the Commission and to equitably distribute such restriction and control measures without exempting any class or category of consumers from such restrictionand control measures and pass further orders as the Commission may deem fit in the facts and circumstances of the case.

**(ii)** Prayer of the petitioner in M.P No.44 of 2012:-

The prayer of the petitioner is to permit the petitioner for continuation of adoption of the present system of distribution to overcome the deficit in supply of power.

**2.** The counsel for the petitioners in M.P.Nos.43 of 2012 & 7 of 2013 submitted that theTANGEDCO (then TNEB)was unable to supply sufficient quantity of power fromasearly as April 2007, had been imposing unscheduled power cuts and load shut downs to the extent of 14 to 16 hours a day which is approximately 58% to 67% a day. The petitioners are unable to run their industries and are put to huge loss on account of the illegal acts of the TANGEDCO. The HT consumers like the Petitioner's members are heavily dependent on stable and good quality power supply. However, the TANGEDCO has been unable to produce the same. The Government of Tamil Nadu, purportedly in exercise of their powers under Regulation 38 of the Electricity Distribution Code, had vide directions dated 22-10-2008 issued directions to the TANGEDCO (then TNEB) for imposing restrictions on the consumption of power by HT consumers. These directions imposed a cut of 40% on HT Industrial and Commercial Consumers, in the same letter dated 22-10-2008, the

Government directed to reduce the demand charges proportionately to the consumers whose demand and consumption have been restricted to extent of 40% per month.

3. Based on the directions of the Government dated 22-10-2008, the TANGEDCO imposed 40% demand and energy cut on the base demand and base consumption on and from 01-11-2008 onwards and consequently demand quota and energy quota have been revised when power cut was introduced under Restriction and Control Measures (R&C measures) with effect from 01-11-2008, with the approval of the Commission under M. P. No.42 of 2008 dated 28-11-2008. The base demand and the base energy is based on the calculated demand and energy consumption during the period between October 2007 and September 2008. As far as the demand is concerned, the highest recorded demand of consumption between October 2007 and September 2008 was taken into consideration for fixing demand quota. As far as the energy is concerned, the three consecutive months' average energy consumption advantageous to the consumers was to be taken for base period.

4. In order to tide over the power crisis, HT consumers/ members of associations sourced power from captive power plants by subscribing shares in such companies and wheeled power as allowed by the Government of India. Further, similar arrangements were made to source wind energy on captive basis for generating wind energy to meet their energy requirements for their captive consumption or have been purchasing power from Power Exchanges and other Third Party Sources. Several of the HT consumers have been purchasing power not only from the Respondent but also from private power producers to meet the shortage. The HT

consumers incur enormous expenditures in this regard and the power so procured is transmitted through TANTRANSOCO. The Commission, by its Order dated 07-09-2010, has permitted the consumers to avail Third Party power over and above the Respondent's quota and up to the consumers' sanctioned demand, without incurring excess demand and excess energy charges.

5. The petitioners in the above said M.Ps filed Writ Petitions before the Hon'ble High Court, Madras, viz., W.P. Nos.11292 and 11998 of 2011 praying for the issuance of a Writ of Mandamus directing the TNEB and the Respondent to approach the Commission for Orders directing equitable distribution of R&C measures including load shedding without exempting any class or category of consumers from such R&C measures. This was because the extent of power cuts in all other areas except Chennai and its suburbs were considerably higher. Further certain industries set up in areas like SEZ enjoyed zero load shedding. After hearing all parties, the Hon'ble High Court, Madras on 30-06-2011 has directed the petitioner to approach the Commission.

6. In the meantime, pursuant to an Order dated 11-01-2011 passed by the Appellate Tribunal for Electricity (APTEL), New Delhi, the Respondent filed a Petition in M.P.No.15 of 2011 before the Commission terming the same as a Comprehensive Proposal to overcome the power shortage in the State of Tamil Nadu to enable the lifting of R&C measures.

7. The Associations including the Petitioner herein took part in the proceedings relating to the above Petition before the Commission and raised objections during the hearing held on 23-01-2012 and requested the Commission to pass directions for

equal distribution of power for all consumers across the State of Tamil Nadu including Chennai, which would be in consonance with the Order dated 30-06-2011 passed by the Hon'ble High Court, Madras. The Commission passed detailed Orders in the above Petition on 22-03-2012. *The operative portion of the Order dated 22-03-2012 passed by the Commission is as under:*

"4. Finding of the Commission

*4.2 After considering the written pleadings and the arguments during the hearing, the Commission passes the following Order :-*

*The restriction and control measures cannot be a permanent one. But at the same time it is possible to lift the restriction and control measures only when sufficient generation capacity is available within the State or sufficient financial resources are available with TANGEDCO for procuring additional power at competitive rates so that adequate power supply can be maintained. Neither adequate generation and transmission capacity exists in the system nor adequate funds are available with the TANGEDCO at present for procuring power for meeting the entire demand. This problem of non adequacy of generation/transmission facilities is a phenomenon which has occurred over 10 years time period. The only silver lining is that some additional capacity will be getting commissioned during the years 2012 and 2013. The wind season also would be commencing from May 2012 and will last upto October / November 2012. A large number of industrial consumers also enjoy wheeling of electricity from their wind generators for their captive consumption. In addition the wind generators are also enjoying banking of wind energy. TNERC has also enabled all industrial consumers to avail open access w.e.f 17-2-2010 by issuing an amendment to the Open Access Regulations. Since then many industrial consumers, at times varying from 250 to 400 such consumers avail open access of upto 250 to 400 MWs either through traders or through the Power Exchanges. In view of this, problems during the period May to October/November is expected to recede. As some generating units are getting commissioned, albeit with certain delays, the Commission is not inclined to lift the entire R & C measures by end of June 2012, as proposed by TANGEDCO in their petition. The Commission is of the view that such an Order for lifting R & C totally by end of June 2012 would only create chaos in the distribution of Electricity in the State. Keeping the practical position of commissioning of various units, which are delayed for one reason or the other, the Commission would like to go in for a graded lifting of R&C measures duly linked to the commissioning of various generating units.*

4.3.....

4.4 .....

*4.5 The TANGEDCO shall also revisit the load shedding pattern in the entire State to make it more equitable.*

*4.6 The Commission would like to place on record its appreciation of various stake holders who furnished their comments and also appeared before the Commission in expressing their views enabling the Commission to pass this Order."*

8. The Commission specifically directed that the Respondent shall also revisit the load shedding pattern in the entire State to make it more equitable. However, despite such clear directions from the Commission, the Respondent has not taken any steps to equitably distribute the R&C measures. On the other hand the disparity between consumers of electricity in Chennai and those in other areas has escalated steeply leading to a very inequitable situation. In the meantime, with a view to unilaterally appropriate power to impose R&C measures to itself and thus defeat the mandates of the Act, the Chief Engineer/Commercial of the Respondent issued Memo. No.CE/Comml/EE/R&C/F. Power Cut/D.No.39/2012 dated 25-02-2012 introducing Additional R&C measures on HT Industrial and Commercial services. Further, on 29-02-2012, the Chief Engineer/Commercial of the Respondent issued another Memo.No.CE/Comml/EE/R&C/ FPower Cut/D.No.4/ 12 prohibiting purchase of Third Party power as well as Exchange power during power holidays and during load shedding period and further prohibiting banked wind energy adjustment upto 31-03-2012.

9. In the Writ petitions filed before the Hon'ble High Court of Madras, an interim injunction was granted on the above circulars on 2.3.2012. On 9.3.2012, the following Interim Order was granted:

*"All the matters are adjourned to 16.03.2012 to enable the respondents to file counter. The respondents are directed to file counter by 15.03.2012, giving copies thereof to the respective counsels appearing for the petitioners so that the matter can be proceeded with on 16.03.2012, as agreed by both the parties.*

*2. The interim order which came to be passed in each of the matters shall continue till 16.03.2012. By such orders, I have restrained the respondents from preventing the petitioners in any manner, from buying and consuming power from third party sources/self generating power/ wind mill generation/C.P.P./Banked units to meet the petitioners power requirements during power holidays and load shedding periods. The banking adjustments shall also be permitted in the same manner, as was being done prior to the impugned proceedings dated 25.02.2012 and 29.02.2012.*

*The above said interim order is continued on the following conditions:*

*(i) The petitioners undertake through their counsels that they shall not consume more power than what they purchase from the third party sources/self generating power/wind mill generation/C. P. P./Banked units/banking adjustments.*

*(ii) If the petitioners use more than the power purchased from the third party sources/self generating power/wind mill generation/C.P.P./Banked units/banking adjustments, the respondents are at liberty to take action against the concerned petitioners in accordance with the regulations. "*

**10.** The above Order was extended by the Hon'ble Court from time to time. On 27-03-2012, the Hon'ble High Court, Madras disposed the batch of Writ Petitions directing the Respondent to approach the Commission within 10 days with an appropriate application and that the Commission will decide the application within 30 days thereafter. Till such time the Hon'ble High Court granted protective Orders in terms similar to the Interim Orders, referred to supra.

**11.** Pursuant to the above Orders passed by the Hon'ble High Court, the Respondent filed M.P.No.10 of 2012 before the Commission and a hearing restricted to the Writ Petitioners (i.e., those who had challenged the Memos dated 25-02-2012 and 29-02-2012 was conducted by the Commission on 10-07-2012. One of the issues that arose for consideration of the Commission was:

*"3. Whether the approval of the Commission is mandatory for Restriction and Control Measures in the light of the stand taken by TANGEDCO that there is no such requirement under Regulation 38 of the TN Electricity Distribution Code?"*

*The Commission upon hearing the parties in its order dated 28-09-2012 has set aside the Memos dated 25.2.2012 and 29.2 2012 as the same have been issued in violation of provisions of Electricity Act, 2003 and as well as the orders of the Commission. It has also been held that collection of excess demand and energy charges, if any, collected for the period 29-2-2012 to 5-3-2012 shall be refunded. TANGEDCO is directed to ensure that approval of the Commission is obtained beforehand before issue of circulars concerning Restriction and Control Measures. "*

**12.** The Respondent has filed a Review Petition in R.P.No.4 of 2012 before the Commission seeking to review the Order dated 28-09-2012 passed in M.P.No.10 of 2012.

**13.**The Commission in its order dated 19.10.2012 has directed that its Order dated 28-09-2012 shall not be given effect to in so far as it sets aside certain portions of the Memo dated 25-02-2012. However, these portions of the Memo dated 25-02-2012 (i.e., Clauses iv and v) were already part of the R&C measures sanctioned by the Commission in M.P.No.42 of 2008. Depending upon the power scenario, the power cut was being varied from 10% to 40%. Before the Memo dated 25-02-2012, the power cut was 20%. By virtue of the said Memo, the power cut was increased to 40%. Peak hour cut has also been in vogue since M.P.No.42 of 2008. In effect, the Order dated 19-10-2012 does not give any benefit to the HT consumers.

**14.**The Load shedding measures imposed on the Petitioner's members are discriminatory and are thus opposed to Section 23 of the Electricity Act,2003. Section 23 of the Electricity Act, 2003 contemplate equitable distribution of electricity. However certain categories of consumers, i.e., HT consumers located in and around

Chennai, units situated in SEZ and certain other foreign companies have been totally exempted from power cut. This is inequitable and opposed to Section 23 of the Electricity Act, 2003. While Section 62 of the Electricity Act, 2003 relating to tariff fixation permits discrimination on the basis of load factor, consumption, geographical location, etc., Section 23 of the Electricity Act, 2003 provides no such facility.

**15.**The main demand of consumers and industrial associations in Tamil Nadu is to plan and follow a schedule of load shedding and bring Chennai and all classes of consumer under load shedding. Under the present system of Load Shedding measures, Chennai and its suburbs are subjected to 2 Hrs and rest of Tamil Nadu facing 14 to 16 Hrs load shedding. It is relevant to note that at this juncture that any decision relating to load shedding can only be approved by the Commission and the TANGEDCO cannot act on its own or on the directions of the Government. The proposal dated 01-11-2008 submitted by the Respondent to the Commission makes no mention of the fact that Chennai and its suburbs and certain other classes of consumers would be totally exempt from Load Shedding measures. In addition to being constitutionally discriminatory, the selective application of 12 to 14 Hrs of unapproved Load shedding measures is also violative of the provisions of the Electricity Act, 2003. The acts and deeds of the Respondent and its officers are also violative of the rights of the Petitioner's members enshrined under Articles 14, 19 and 21 of the Constitution of India. The Petitioner is aggrieved by such discriminatory application of the unapproved Load shedding measures since if the load shedding is equitably distributed without excluding any class of consumer wherever situated in Tamil Nadu, the impact of the load shedding on the members of the Petitioner would be considerably reduced.

**16.**ThiruM.Gopinathan, Standing counsel for TANGEDCO has submitted the following points:

16.1 The Restriction and Control Measures were framed in a manner that the burden of load shedding is borne by all categories of consumers, namely Industrial, Agricultural, Commercial, Domestic and others. This has been equitably distributed to cover all areas of the States to the extent feasible.

16.2 The increase in demand has been significant due to industrial and other sector growth and the modern life style, which is largely dependent on the use of electricity in gadgets like air conditioners, refrigerators, induction stoves and other home appliances. In addition to that new service connections are given to all categories of consumers. New service connections resulted in increase in demand.

16.3 It is the responsibility of the State Load Despatch Centre to maintain the grid discipline i.e. maintaining the system frequency voltage and other parameters as per the limit specified in the Indian Electricity Grid Code.Reduction of availability is due to reduced generation. Reduced generation could be due to outages of generating stations. The outages could be of two kinds-Forced outages and Planned outages. When the generating machine suddenly develops some repairs, it has to be tripped and it will be out of service for some time till it is repaired. It is called Forced outage. Planned outage means the generating station being taken out of service for annual maintenance.To meet the reduced availability, the demand also has to bereduced so that demand and supply match.In order to reduce the demand, certain Restriction &. Control (R &. C) measures are adopted as approved.This is the basic set of demand reduction measures. However when the availability goes down further due to forced outage or any other reason, further demand reduction measures by way of additional load

shedding have to be resorted to.

16.4 Load shedding is effected to prevent the grid collapse. If grid collapse happens the entire State will be affected. By effecting load shedding, the overdrawal of electricity from the Grid by the consumers is prevented. If there is any failure to prevent overdrawal of electricity from the grid, it would lead to grid collapse and thereby the entire State of Tamil Nadu will be in dark and all the essential services will be affected by causing irreparable loss and hardship to the general public at large. In case of grid collapse it will take several hours to restore the grid and resume power supply.

16.5 When there are forced outage of Central Generating Stations and State owned stations additional load shedding is being resorted for the safety and security for the Grid. In effect, the load shedding means equitable distribution and grid management. In other words, the demand and supply has to be matched otherwise grid will collapse. Hence, load shedding is inevitable. Present level of generation of electricity in the State is not matching the demand

16.6 The Load shedding is not carried out district wise. The distribution lines throughout the State other than Chennai are divided into 10 groups i.e, 4 rural groups and 6 urban groups of nearly equal load. According to the load relief requirement, load shedding is being done group-wise in a systematic manner throughout the State. It is also submitted that there is no discrimination between districts. The Distribution of electricity system in our State of Tamil Nadu is divided into 4 Rural and 6 Urban groups of lines for the equitable distribution and power management only.

16.7 The Government of Tamil Nadu has also recently unveiled the possibility of exploring the solar power to the extent of 3000 MW and action has already been initiated in this respect to complete the process in war-footing.

16.8 In order to operate the grid in secured manner and with utmost safety the unscheduled power cut were warranted and thereby the Petitioner pray for a suitable enforcement mechanism to overcome the unscheduled power cut.

16.9 The City of Chennai as a metropolitan city had been exempted from substantial hours of load shedding taking into consideration of the factors which reads as follows:-

- a. Chennai being the State Capital with the establishment of the State Legislative Assembly, Hon'ble High Court, State Secretariat, major chunk of the State machinery including the State owned / controlled organizations, the offices of consulate and Embassy of foreign States, International / National Airports, a major port for clearing goods, Major Hospitals, Police Head Quarters, tourism and business hub and the connecting city for the National and International Tourists to visit other parts of Tamil Nadu, uninterrupted supply of power is very much essential for the welfare of the State.
- b. It is further stated that, the petitioner would bring to the notice of this Commission with regard to the cramped status of the distribution network in Chennai and thereby at this juncture the pillar box fuses would not last after a prolonged duration of load shedding and restoration afterwards due to concentrated loads and UPS being recharged almost in every service connection.

- c. It is further stated that, the establishment of multi-storey buildings with lifts used for domestic, commercial and hospital purposes activities long hours of load shedding would cause hardship in the capital city of Tamil Nadu.
- d. It is respectfully submitted that, the Chennai Transmission Network inclusive of both EHT lines and auto Transformers are also highly loaded.

16.10 With regard to the practice being adopted in the State of Karnataka for load shedding, it may be stated that Bangalore being the capital city of Karnataka, has been totally exempted from load shedding and in other parts in the State of Karnataka, load shedding has been imposed.

**17. Energy conservation measures:**

- a. The Government of Tamil Nadu vide its G.O.Ms.No.126, dated 10.11.2008 has issued the guidelines for achieving energy conservation and has banned the usage of Incandescent Bulbs (ICBs) and to use Compact Fluorescent Lamps (CFL) in place of Incandescent Bulbs in all the Govt. Departments, Public Sector Undertakings, Boards, Societies, etc. vide G.O.Ms.No.75 dt.20.08.2010.
- b. Further, the Government of Tamil Nadu has ordered usage of LED lamps in locations such as pathways, entrances, corridors, rest rooms, etc. Electrical equipments and appliances with minimum 3 star rating label to be procured and installed in the Government offices and buildings vide its G.O.95, dt. 02.08.2012. The above G.O.Nos.126,75

and 95 have already been communicated to all CEs of TANGEDCO, TANTRANCSO and TNEB for strict adherence.

- c. As per the advice of the Hon'ble Madurai Bench of Madras High Court in W.P. (MD) No.13434 of 2012, the Secretary Public Works Department has been requested to revise the guidelines on number of electrical fittings and fixtures provided to Government buildings to save substantial quantum of electrical energy. Also field engineers have been advised to educate the public about the restriction on use of exterior lights in wedding and other type of function.
- d. Apart from the above, the TANGEDCO has taken all steps on its own in creating wide awareness among general public on the need for energy conservation and on the methods available as follows :-
- e. The adoption of Star labeled domestic appliances like Ceiling fans, Refrigerators, AC units, Tube lights, etc.
- f. The Energy Conservation Day/Week every year during December across the state is arranged to be celebrated in a grand manner by organizing various events.
- g. TANGEDCO through Hello FM has created awareness among the Chennai Public on issues relating to general in nature, LT billing and Energy conservation on 14.08.2012.
- h. TANGEDCO has celebrated "Electricity Awareness Week" in all districts across the State between 21<sup>st</sup> and 27<sup>th</sup> of August 2012 to create awareness on Electrical safety, Electrical Theft and prevention of theft and Energy conservation by disseminating a Handbook on the same which was released by the Hon'ble Minister for Electricity on 21.08.2012 at Chennai.

- i. TANGEDCO is taking steps to issue one CFL at free of cost to the hut services across the State and at subsidized rate of Rs.15/- per CFL to metered domestic services to offset the peak demand as announced by the Hon'ble Chief Minister of Tamil Nadu and the Hon'ble Minister for Electricity, Excise and Prohibition in the Legislative Assembly.
- j. Energy Conservation tips along with other suggestions have been displayed in the web-site of TANGEDCO for wider publicity among the public.
- k. The need for energy conservation is being emphasized in all training programmes / workshops / seminars conducted by TANGEDCO.

**18.**In the hearing held on 27.2.2014, petitioners insisted on the need for forming a Committee to go into the details of load shedding prevailing in Maharashtra. Commission directed Secretary/TNERC to constitute a Committee consisting representatives from TANGEDCO,SLDC, one representative from the petitioners, TECA, CODISSIA, consumer representatives and complete the exercise within two weeks.

**19.**Accordingly, a committee was formed by TNERC with the following members as below:-

- a. Chief Engineer / Commercial / TANGEDCO
- b. Chief Engineer / Operation / TANTRANSCO
- c. ThiruElango, Coimbatore, Petitioner Representative
- d. ThiruBalasundaram, Coimbatore, Petitioner Representative
- e. Dr.K.S.Palaniswamy, Chennai, Consumer Representative

**20.** The Committee had met two times on 18.03.2014 and 20.05.2014. It had been discussed and explained by Chief Engineer / Commercial about the Load Shedding Protocol followed in Maharashtra to the Load Shedding Protocol Committee on 18.03.2014 (i.e. during the First meeting). Further the committee members Chief

Engineer / Operation, and Chief Engineer / Commercial had written to the Secretary, TNERC vide letter dt. 28.04.14 & 09.06.14 with a suggestion that the formation of Load Shedding Protocol Committee is not required at present since the scheduled load shedding has also been withdrawn from 01.06.2014. The licensees also stated the salient features of protocol being followed by grouping of feeders and that from 01.06.2014 to 12.02.2015 (total 257 days) there was no load shedding for 217 days. They submitted that Chennai being the state capital with Legislature and highly populous with many high rise buildings, ensuring sufficient availability of power as far as possible is a primary requirement in the interest of State's economy. They cited examples of Karnataka and Andhra Pradesh with no load shedding or selective load shedding in state capitals.

**21.** Not satisfied with the reply of TANGEDCO, Commission directed on 13.1.2015 to file additional affidavits. In the hearing on 27.4.2016, TANGEDCO, the counsel for the petitioners submitted that the issue had become infructuous but prayed that the respondent be asked to submit a protocol that would be followed in case of exigency situation warranting load shedding for a considerable time. In an affidavit filed by TANGEDCO on 30.5.2016, TANGEDCO stressed on the fact that restriction and control of supply was totally withdrawn from 5.6.2015. In the subsequent hearing, TANGEDCO promised to file the load shedding protocol.

**22.** They submitted that as the load shedding in the State had been fully withdrawn and the R&C measures has also been lifted, the supply arrangements is ensured round the clock to all category of consumers and hence, framing of Load Shedding protocol at this stage may be projected by some as if load shedding and shortage of power is existing contrary to truth. TANGEDCO further stated that since the present

power position scenario is comfortable, the load shedding and other R&C measures would not be resorted in the State thereafter and hence, the necessity of framing of load shedding protocol does not arise.

**23.** During the hearing held on 16-11-2018, the Commission directed the Respondent to file Protocol of load shedding in the event of any future load shedding.

**24.** Accordingly, the TANGEDCO has filed the latest Protocol dated 29-12-2018 to be followed in case of unexpected load shedding for the areas including Greater Chennai.

24.1 Consequent to the complete withdrawal of load shedding with effect from 01.06.2014, reliable power supply is being provided to all categories of consumers. The demand and energy cut imposed on HT Industrial and Commercial consumers were totally withdrawn from 05.06.2015. Due to revoking of the direction issued under sub-section (1) of section 11 of Electricity Act, 2003 vide G.O.(Ms) No.41, Energy (A1) Department, dated 31.05.2016, the private generators were permitted for sale of power outside the State of Tamil Nadu with effect from 01.06.2016.

24.2 Due to the present scenario of power position based on the conventional and non-conventional energy, surplus power is available in the State as of now. Taking into account, the ongoing projects and new project proposals, there may not be any power deficit in the days to come.

24.3 In managing the demand and supply of electricity, it is the responsibility of the SLDC to maintain the Grid discipline i.e., maintaining the system frequency bandwidth between 49.90 Hz. To 50.05 Hz as per Indian Electricity Grid Code

(IEGC). In this regard, it is stated that Tamil Nadu SLDC is managing the grid with the present average power demand of about 14,800 MW to 15,300 MW in a day. An all time high demand and consumption of 15,440 MW and 355.733 MU respectively were met on 27.04.2018. Solar generation of a quantum of 400 to 1600 MW is being realized during day time. Subject to good season, Tamil Nadu is managing the grid with a receipt of 2000-5000 MW infirm power from wind, solar, co-generation and bio-generation.

24.4 With the installed capacity of 8152 MW wind power, an all time high generation of 5095.6 MW and an all time high maximum energy of 107.317 MU were reached on 27.07.2017 and 19.07.2018 respectively.

24.5 The generation from the co-generation plants accounts to 688.40 MW while from Bio-mass is 237.67 MW. Due to availability of power and commissioning of various new projects, the demand is being managed throughout the year without any hassles.

24.6 Further, to meet out the future demand of the State, TANGEDCO targeted to install new projects of about 6200 MW before the end of 2021-22. The ongoing projects are listed below;

Sl. No.	Name of the Project	Capacity (MW)
1	ETPS – Expansion Thermal Power Project (1 x 660 MW)	660
2	Ennore SEZ Power Project (2 x 660 MW)	1320
3	North Chennai Thermal Power Station Stage III (1 x 800 MW)	800
4	Uppur Thermal Power Project (2 x 800 MW)	1600
5	Udangudi Thermal Power Project Stage I (2 x 660 MW)	1320

6	Kundah Pumped Storage Hydro Electric Project (4 x 125)	500
	Total	6200

24.7 Further, new projects of capacity of about 13,800 MW are proposed to cater to the future power requirement of the State. The following are the proposed new projects.

Sl. No.	Name of the Project	Capacity (MW)
1	Ennore Replacement Thermal Power Project (1 x 660 MW)	660
2	Udangudi Expansion Project Stage II (2 x 660 MW)	1320
3	Udangudi Expansion Project Stage III (2 x 660 MW)	1320
4	Sillahalla Pumped Storage HEP (8 X 250 MW in 2 stages)	2000
5	Kadaladi Thermal Power Project State (5 x 800 MW)	4000
6	Cheyyur Ultra Mega Power Project (5 x 800 MW)	4000
7	Kadaladi Ultra Mega Solar Photo Voltaic Power Park Project (500 MW)	500
	Total	13800

24.8 Being a power surplus State having an installed capacity of 18,747 MW of conventional energy and 11,113 MW of non-conventional energy, the present average demand of 14,800 MW to 15,300 MW is being managed throughout the year without any hassles.

**25.**The load shedding protocol filed by TANGEDCO as directed by the Commission in the daily order dated 16.11.2018 is as follows:

25.1. The distribution network throughout the State including Chennai suburbs except the Corporation of each District are divided into 10 groups (4 rural and 6 urban) of nearly equal loads. Each Corporation of all Districts including Greater Chennai is divided into 6 groups of nearly equal loads.

25.2. In case of any emergency, in order to maintain grid discipline, load shedding may be adopted according to the requirement of load relief in the following sequence:

- i) To get a load relief for 1 hour/2 hours, supply to each rural group on 15/30 minutes rotation will be restricted.
- ii) To get a higher quantum of load relief for 1 hour/2 hours, supply to each rural group on 15/30 minutes rotation and to each urban group on 10/20 minutes rotation will be restricted.
- iii) In case of any exigency arises, in order to get a higher quantum of relief for 1 hour/2 hours in addition to the rural and urban groups, supply to each group of Corporation of Districts including Greater Chennai on 10/20 minutes rotation will be restricted.
- iv) Groups will be changed on rotation basis to have uniformity as far as possible.

25.3. In case of unforeseen circumstances, such as outages of generating units, sudden dip in wind generation and reduced solar generation on cloudy days, the loads will be restricted on emergency to maintain grid discipline.

25.4. During examination time, the feeders feeding the school/examination centers will be exempted from the purview of load shedding.

25.5. During religious festival times, the respective places will be exempted from the purview of load restrictions.

25.6. The HT consumers who are fed by 110/230 kV sources are not coming under load restrictions.

25.7. The Government of Tamil Nadu had directed TANGEDCO to ensure three phase supply for 12 hours in the Cauvery Delta Districts and three phase supply for

9 hours for other than Cauvery Delta areas. However, presently, three phase power supply is being maintained beyond the said specified duration.

25.8.1.Chennai being the State Capital of Tamil Nadu, a commercial and tourist hub having Airport, Harbour, State Legislature, High Court, Government Head Quarters Hospitals, State Secretariat, Major Chunk of State Machinery and its administrative offices, office of foreign Embassies and Consulates, Police Head Quarters, Information and Technology related industries etc., ensuring availability of sufficient power as far as possible is a primary requirement in the interest of State's economy and also to avoid unnecessary law and order issue.

25.8.2.Chennai City is populous and also cramped with many high rise buildings. Since the distribution system is feeding all type of consumers, it may not be possible to precisely segregate the consumers as essential or non-essential sector.

25.8.3 Since the feeders are connected with assorted type of loads through underground system in Chennai, schedule for load shedding based on types of consumer may not be feasible.

25.8.4 Load has to be restricted only during abnormal and unforeseen conditions according to the quantum of deficit and weather conditions to maintain grid discipline and security as per IEGC 2014.

## **26. Findings of the Commission:-**

**26.1**Tamil Nadu Electricity Consumers Association(TECA) filed M.P No.43 of 2012 for directions to the respondent Tamil Nadu Generation and Distribution Corporation (TANGEDCO) to impose only those measures under Restriction and Control of supply approved by this Commission vide M.P No.42 of 2008 and for equitable distribution of R&C measures without exempting any class or category of consumers. The petition, M.P No.44 of 2012, was filed by Tamil Nadu Generation

and Distribution Corporation (TANGEDCO) pursuant to the direction of the Hon'ble Madurai Bench of Madras High Court in the Writ petition No.13434 of 2012, filed by ThiruB.Muthukumar who prayed for issue of a direction to TANGEDCO to inform the period of load shedding through newspapers, to approach TNERC for orders.TANGEDCO has prayed for continuation of adoption of the system being followed to overcome deficit of power. The petition filed by Coimbatore District Small Scale Industries Association (CODISSIA) in M.P No.7 of 2013 also had the same prayer as that of M.P No.43 of 2012 filed by M/s.TECA.

**26.2** In the hearing on 27.2.2014, all three miscellaneous petitions that relate to the measures to be taken to tide over a power crisis and for proper implementation of measures on restriction and control of supply were clubbed together. Since the hearing in all three cases have been conducted considering it as a single issue of tiding over of situations of power deficit through load shedding, Commission issues this common order in all three miscellaneous petitions. The petition filed by the Federation of Consumer and Service Organisations, Tiruchirapally by impleading in the case has also been taken cognizance of.

**26.3** The petitions filed before the Commission by the Consumer association and Industries association, Coimbatore, in M.P Nos. 43 of 2012 and 7 of 2013 were for the purpose of revising the load shedding pattern as observed in M.P No.15 of 2011, to make load shedding more equitable in the State and act on restriction and control of supply as approved by the Commission in M.P No. 42 of 2008, the petition filed by TANGEDCO seeking approval to implement its various measures on restriction and control of supply in the State from 1.11.2008. Based on directions of Hon'ble APTEL in Appeal Nos.111,114,119 etc. of 2010 on the petitions filed by various consumer

associations, industrial associations on the restriction and control implemented in the State, Commission had passed a detailed order in M.P No.15 of 2011 on lifting of Restriction and Control (R&C) measures after obtaining a comprehensive proposal from the Distribution licensee, TANGEDCO, wherein it was observed that ,

*“4.5 The TANGEDCO shall also revisit the load shedding pattern in the entire State to make it more equitable.”*

**26.4** According to the petitioners in M.P No.43 of 2012 and M.P No.7 of 2013, TANGEDCO did not take steps for equitable distribution of power. Not only did TANGEDCO take any steps to equitably distribute R&C measures but also the disparity in load shedding between consumers of Chennai and those situated outside Chennai only escalated. They have recounted the circular issued by TANGEDCO unilaterally imposing additional measures of R&C like introduction of power holidays, prohibiting purchase of third party power purchase through power exchange during power holidays, which were not approved by the Commission and the steps taken by them to approach the Hon'ble High Court of Madras, challenging the same. The Hon'ble High Court granted an interim direction and disposed the petitions with a direction to approach the Commission with proper application. Commission had set aside the circulars vide M.P No. 10 of 2012 and R.P No. 4 of 2012 to the extent of issues unapproved by the Commission.

**26.5** The intention of the petitioners is for application of R&C measures in an equitable manner to all classes of consumers, to plan and follow a schedule for load shedding and to bring Chennai and all classes of consumers under load shedding. Any decision relating to load shedding and restriction and control measures has to be with the approval of the Commission. The petitioners have furnished data that show unscheduled load shedding of more than 3 hours that went upto 10 to 12 hours

in most parts of the State other than Chennai. The data furnished by the petitioners relate to the period of high deficit in availability of power.

**26.6** TANGEDCO in the petition M.P No.44 of 2012 contended that additional hours of load shedding were enforced to maintain the frequency bandwidth within norms and prayed to continue with the existing system adopted for load shedding.

**26.7** The petitioners themselves suggested for formation of a Committee to go into the details of load shedding followed by the State of Maharashtra in order to formulate a load shedding plan. As suggested by the petitioners, a committee was formed by the Commission with representatives from the associations of the petitioners, other consumers and officials of TANGEDCO, TANTRANSOCO as members. When the proceedings of the Committee were taking place, TANGEDCO informed on 9.6.2014 that Government of Tamil Nadu has, in the letter dt.29.5.2014 issued orders as below, and that framing of revised load shedding protocol may not be required:

*“a. 20% power cut on base demand and energy for HT Industrial and Commercial services during normal hours is withdrawn.*

*b. 90% power cut on demand and energy for HT Industrial and Commercial services during peak hours (6.00 PM to 10.00 PM) is withdrawn.*

*c. The scheduled load shedding also stands withdrawn.”*

**26.8** The date of complete withdrawal of restriction and control measures on supply is confirmed as 5.6.2015. The counsel for the petitioners in M.P No.43 of 2012 and M.P No.7 of 2013 during the hearing on 27.4.2016 though submitted that the issue in the case had become infructuous, wanted TANGEDCO to submit a load shedding protocol in place to be followed in any exigency that warrants load shedding for a considerable period of time.

**26.9** The petition of TANGEDCO filed in 2012 in M.P No.44 specified the measures taken for short term, long term power purchases, measures for conservation of energy, the capacities of ongoing power projects that were to be commissioned in a period of 3 to 12 months expressing the need to exempt Chennai from substantial hours of load shedding. Consequent to the petitioners request for a load shedding protocol to be followed in any exigency and the directions of the Commission to submit a protocol for load shedding, TANGEDCO filed revised submissions detailing the approach being followed and that would be followed.

**26.10** In all the submissions made by the distribution licensee, TANGEDCO, detailing load shedding schemes, they are reluctant to impose load sheddings in Chennai in the same manner as enforced in other parts of the State. The reasons spelt out are numerous, the prime reason is Chennai being the State capital houses major part of the State machinery. Further, they have cited the responsibility of SLDC/TANTRANSCO to maintain the frequency bandwidth as per norms of 49.9 to 50.05 Hz while managing demand and supply that may result in unscheduled load sheddings. TANGEDCO expressed confidence that there will not be power deficits anymore due to the ongoing projects for a capacity of 6200 MW and new projects proposed for a capacity of 13800 MW.

**26.11** Power deficits occur whenever there is a mis-match between supply and demand. TANGEDCO has vast resources of infirm power. It is necessary to provide supply efficiently without disparity among consumers and therefore Commission in the hearing on 16.11.2018 directed TANGEDCO to come out with a load shedding protocol.

**26.12.1** In reply to the direction of the Commission on 16.11.2018, TANGEDCO has still reiterated the aspects of Chennai being the State capital with Legislature, High Court, State Secretariat, offices of foreign embassies and Consulates etc. and the need to ensure supply as far as possible. Their submissions are as follows:

*“Chennai being the State capital of Tamil Nadu, a commercial and tourist hub having Airport, Harbour, State Legislature, High Court, Government Headquarters, Hospitals, State Secretariat, major chunk of State machinery, administrative offices, offices of foreign embassies and Consulates, Police headquarters, Information and Technology related industries etc., ensuring availability of sufficient power as far as possible is a primary requirement in the interest of State’s economy.”*

**26.12.2** Other reasons are that Chennai is populous with many high rise buildings. It may not be possible to precisely segregate essential, non-essential sectors and effect load shedding. Feeders are connected with assorted type of loads through underground cables and therefore load shedding based on consumer types may not be possible. Load restrictions will be during abnormal, unforeseen conditions to maintain grid discipline and comply with grid frequency norms.

**26.13** The Licensee, has however filed the load shedding protocol making it applicable to Corporation areas in each District of the State including Greater Chennai while maintaining that there is adequate power in the State and there may not be any power deficit in the days to come.

**26.14** The load shedding protocol submitted by TANGEDCO is as follows:

**26.14.1** The distribution network throughout the State including Chennai suburbs except the Corporation of each District are divided into 10 groups i.e 4 rural and 6 urban groups of near equal loads. Each Corporation of the Districts including Greater Chennai are divided into 6 groups of near equal loads.

**26.14.2** In case of any emergency, in order to maintain grid discipline, load shedding will be adopted according to the requirement of load relief in the following sequence:

i) For a load relief for 1 hour/2 hours, supply to each rural group will be restricted on 15/30 minutes rotation.

ii) To get a higher quantum of relief for 1 hour/ 2 hours, supply to each rural group will be restricted for 15/30 minutes rotation basis and each urban group on 10/20 minutes rotation.

iii) In case of any exigency, to get a higher quantum of relief for 1hour / 2 hours in addition to the rural and urban groups, supply to each group of Corporations in the Districts including Greater Chennai will be restricted for 10/20 minutes on rotation.

iv) The groups will be changed on rotation basis to have uniformity as far as possible.

**26.14.3** In case of unforeseen circumstances, such as outages of generating units, sudden dip in wind generation and reduced solar generation on cloudy days, the loads will be restricted on emergency to maintain grid discipline.

**26.14.4** During the periods of examination taken by students, the feeders feeding school/examination centres will be exempted from load shedding.

**26.14.5** During the period of religious festivals, respective places will be exempted from the purview of load restrictions.

**26.14.6** HT consumers fed by 110/230 kV sources do not come under load restrictions.

**26.14.7** Government of Tamil Nadu has directed TANGEDCO to ensure 3 phase supply for 12 hours in the Cauvery delta districts and three phase supply for 9 hours other than Cauvery Delta areas. However, three phase supply is being maintained beyond the specified duration.

**26.14.8** Load has to be restricted only during abnormal and unforeseen conditions according to the quantum of deficit and weather conditions to maintain grid discipline and security as per IEGC.

**26.14.9** The load shedding protocol submitted by the licensee does not state any grouping sequence of operations and is for 15/30 minutes limited to 1 to 2 hours. Powers are vested with the licensee to execute load shedding for short durations in exigent circumstances in the provisions of the Grid code and Distribution code. The provisions on Demand management/load shedding in the Tamil Nadu Electricity Distribution Code is extracted below:

Regulation 15(6) of TNE Distribution code :

*“15. The Procedures and practices -----  
-----*

*(6) Demand Management / Load Shedding: On getting directions from the SLDC rolling blackouts for short duration shall be carried out by the Licensees to maintain the load generation balance and security of the network. This may also be necessary due to the loss of any circuit, equipment or any other operational contingency that may occur in their Distribution Networks also. The Licensee shall estimate the loads that may be shed in discrete blocks at each interconnection point after consultation with the consumers if possible and submit the same to the SLDC. The consumers shall cooperate with the Licensee in this regard. The Licensee shall work out the modalities of the load shedding. A detailed procedure shall also be furnished to the SLDC and other officials in charge of the downstream substations of the Licensee, where such load shedding / rolling blackout are to be carried out. When provisions are available for the automatic load shedding with the aid of under frequency relays, the circuits involved and the quantum of load to be shed shall be intimated to the SLDC and officials persons in charge of downstream substations of the Licensee. The settings adopted for the UF relays shall also be furnished. If any constraint or bottleneck in the transmission system and/or distribution system, warrants rotational load shedding then it shall be resorted to by the Licensees in their distribution system. On such occasions, the public shall be promptly informed of such arrangements through the media. Large consumers with contract demands of 1 MW and above and essential services such as hospital, public water works etc. shall be notified through telephone/ fax/ e-mail or any other communication systems”.*

**26.14.10.** The licensee can manage short durations of load shedding following the

above provisions. It is for the duration of power cuts that persists for a considerable period of time that load shedding protocol is required.

**26.14.11.**The Restriction and Control measures have been withdrawn from 5.6.2015. Since the withdrawal of R&C measures on supply of electricity, the distribution licensee is able to meet the demand with its availability of power. When there is mis-match between demand-supply that is bound to persist for longer duration that a load shedding protocol that will bring about equitable sharing of shortages among all consumers is to be followed. TANGEDCO has furnished that an average demand of 14800 MW to 15300 MW(15440 MW met on 27.4.2018) is being managed for the past one year without any hassle.

**26.14.12.**Commission has taken note of the measures taken by TANGEDCO to converge the demand supply gap and their assurance that the situation that prevailed prior to withdrawal of R&C measures in 2015 would not occur considering the planned addition of generation capacities. However, Commission desired to have a protocol in place which may be followed in cases of such exigencies. Accordingly, Commission directed TANGEDCO to file a protocol and TANGEDCO has filed a protocol as ordered. Commission in principle approves the load shedding protocol submitted by TANGEDCO detailed in para26.14 (except para 26.14.2.) that may be adopted for any mismatch of demand – supply necessitating load shedding for longer duration. Commission is of the opinion that Para 26.14.2. requires modifications to cater to longer durations of power cuts and specify grouping sequences.

**26.14.13.** The load shedding protocol furnished by licensee in para26.14.2,

creates 10 feeder groupings, i.e 4 for Rural feeders that may be grouped as R1,R2,R3,R4 and 6 for Urban groups as U1,U2,U3,U4,U5,U6. They have also created another category that feeds all Corporations including Greater Chennai into six groups. Segregation of loads in Corporations from urban group has to be clearly made. Commission directs that an exercise to segregate feeder groupings in Corporation areas and feeding of essential services may be done by the licensee. Commission agrees to the concerns expressed by the petitioners that load shedding has to be executed in a fair and equitable manner across the State but at the same time also acknowledges the fact that the load shedding to the State capital has to be carefully done so that there is no breakdown in the functioning of the State machinery. It may be noted that the protocol of Maharashtra chosen by the petitioners for reference, MSEDCL, the distribution licensee, in Maharashtra does not meet the entire supply of the Municipal Corporation in the State's capital, Mumbai. Considering the principle that at times of power scarcity, energy should be efficiently used without any wastage, and at the same time, consumers are not subjected to hardships with long durations of power cuts, para 26.14.2 which licensee's proposal is modified as follows:

26.14.2. For unforeseen outages and when there is a mismatch between demand and supply, load shedding shall be executed as follows:

(1) For a power deficit upto 4% of average demand, supply to each rural group (R1,R2,R3,R4) and each urban group (U1,U2,U3,U4,U5,U6) shall be restricted by 30 minutes/ 1 hour on rotation depending on the duration of shortage of power that would exist.

(2) For a power deficit beyond 4% of average demand, restriction shall be in the following grouping sequence:

i. R1,R2 -1hour/2 hours

- ii. R3,R4-1hour/2 hours
- iii. U1,part of U2 – 1 hour.
- iv. part of U2,U3 -1 hour
- v. U4,part of U5-1 hour
- vi. U5,part of U6 – 1 hour
- vii. part of U6,Corporation in Districts- 1 hour
- viii. Greater Chennai excluding Govt. machinery, essential services – 30 minutes and non-essential loads as estimated and identified by distribution licensee.

(3) If the shortages in power supply are bound to exist for prolonged hours or when the extent of deficit necessitates longer hours of load shedding, the duration of load shedding may be in proportionate multiples of that specified in (2) above and the groups are to be cyclically altered on rotation basis. For minor variations in the extent of relief brought about by the above protocol, SLDC, in consultation with the distribution licensee, may take decisions suitably.

**26.14.14.** In addition to the proposal approved above, the following shall be observed by TANGEDCO:

1. Supply to hospitals may be exempted in the State. Supply to other essential/emergency services like water supply may be restricted to a minimum level.
2. Duration of power cuts in an area may be publicized through newspapers or electronic media a week ahead or day ahead.
3. TANGEDCO has enumerated many energy conservation measures taken. The same may be continued. The suggestions of the Hon'ble High Court of Madras in W.P No.13434 of 2012, to advertise energy conservation measures may be followed so as to create awareness of availability of energy efficient gadgets, equipments and instill responsibility of conserving energy among the consumers.

4. The Distribution licensee, TANGEDCO, SLDC/TANTRANSCO may take steps for demand forecasting, demand estimation and proper scheduling of power as envisaged in the Distribution code and Grid code.

**26.15.** For any deviations from the approved R&C measures by the Commission and load shedding pattern, TANGEDCO shall take prior approval of the Commission through filing of a petition, with complete details of demand supply position, as per the Commission's Conduct of Business Regulations.

With the above directions, the petitions are disposed of.

**27. Appeal:-**

An appeal against this order shall lie before the Appellate Tribunal for Electricity under section 111 of the Electricity Act, 2003 within a period of 45 days from the date of receipt of a copy of this order by the aggrieved person.

(Sd.....)  
**(Dr.T.PrabhakaraRao)**  
**Member**

(Sd.....)  
**(S.Akshayakumar)**  
**Chairman**

/True Copy /

Secretary  
Tamil Nadu Electricity  
Regulatory Commission