

**PUNJAB STATE ELECTRICITY REGULATORY COMMISSION  
SCO NO. 220-221, SECTOR 34-A, CHANDIGARH**

**Petition No.57 of 2011  
Date of Hearing 15.11.2012  
Date of Order: 12.12.2012**

In the matter of:      Petition under clause 51 of 'Conditions of Supply' for modification/clarification regarding clause 49 of the Conditions of Supply and for removing the anomaly regarding restricted load allowed to the Induction Furnaces and to Arc furnaces.

AND

In the matter of:      M/S Mithila Malleables Pvt. Ltd., G.T.Road, Village Harbanspura, Sirhind, District Fatehgarh Sahib through its Director Lakhbir Singh.

VERSUS

Punjab State Power Corporation Limited

Present:                      Smt.Romila Dubey, Chairperson  
   Shri Virinder Singh, Member  
   Shri Gurinderjit Singh, Member

**ORDER**

Mithila Malleables Private Limited, G.T. Road, Sirhind has filed this petition with the prayer for removal of anomaly in the restricted load of the arc furnaces and induction furnaces during peak load hours and submitted that induction furnaces may also be granted same restricted load as allowed to the arc furnaces.

2.                      During peak load hours the induction furnace consumers are allowed to run 5% of the sanctioned contract demand or 50 kW per furnace whichever is less, whereas, the arc furnace consumers are allowed to run upto 5% of the sanctioned contract demand. For running higher load during peak load hours, the consumer is required to seek permission from the licensee and pay higher charges as approved by the Commission.

3. The petition was admitted on 27.9.2011 and was heard on 1.11.2011, 15.11.2011, 6.12.2011, 27.12.2011, 24.1.2012, 21.2.2012, 20.3.2012, 17.4.2012, 8.5.2012, 29.5.2012, 3.7.2012, 10.7.2012, 24.7.2012 and 15.11.2012.

4. PSPCL filed its reply vide letter dated 5.12.2011 and submitted as under:

- (a) 50 kW of load per furnace is already allowed as restricted load and additional load if required can be availed against payment of PLEC.
- (b) 50 kW load per furnace is considered to be quite sufficient to meet the requirement of industry with induction furnace.
- (c) Restricted load to arc furnace and induction furnace consumers was allowed after carrying out a study and deliberations with the industry representatives. Such provisions are in operation since 1997.

5. During hearing of the petition on 27.12.2011, it was observed by the Commission that PSPCL had failed to explain the reasons for granting different restricted load without payment of additional charges during peak load hours for arc furnace and induction furnace consumers. PSPCL was accordingly directed to submit detailed justification in support of its stand.

6. In compliance of the Commission's directive, PSPCL informed the Commission that no induction furnace having more than 5 ton capacity is installed in the PSPCL network. PSPCL, on the basis of report submitted by the Committee constituted for this purpose submitted that in general, a five ton capacity induction furnace have a sanctioned contract demand of 2500 kVA and the auxiliary load required during peak load hours is about 65 kW, which do find usage but not concurrently.

7. During hearing of the petition on 29.5.2012, after hearing the views of the petitioner and the respondent, the Commission decided to implead the Steel Furnace Association of India (Punjab Chapter) also as a respondent and issued Notice to Steel Furnace Association for filing a reply to the petition.

8. Steel Furnace Association of India vide its letter dated 5.7.2012 made the following submissions:

- “(i) Process of arc furnace is completely different in the sense that after shutting down the main furnace some essential auxiliary has to run to safeguard the equipment and handle the liquid metal. This load works out to be more than 5% of the contract demand.
- (ii) If we get 5% of load in this situation, we are able to run a plant for 19 hours a day. In this way, we are not able to utilize the capacity to the desired level resulting in huge loss of production and loss of efficiency of the arc furnace”.

Further, the difference in Arc & Induction Furnace load requirement during peak load hours was explained as under:

- (i) In case of Induction Furnace, water circulation required after stoppage of furnace is less but in case of Arc Furnace, water cooled panels are required to be kept at reasonable temperature.
- (ii) Induction Furnace Plants do not have Vacuum Degassing Unit so power required for running V.D. Unit and Boiler is not there.
- (iii) The Induction Furnace Plants are of smaller capacity and so crane capacity of these plants is low, hence power requirement is also low.
- (iv) Induction Furnace Plants are manufacturing Ingots and power for running continuous casting machine is not required.
- (v) In case of Induction Furnaces, in-house workshop is not required as most of the parts are bought from the market.
- (vi) Oxygen is not used in Induction Furnace, so captive Oxygen Plant is not required.
- (vii) In case of Induction Furnace Plants, Ladle Refining Furnace, which has water cooled roof is not there.

The Association has further submitted that to run the essential operations, which cannot be stopped during power cut to save the liquid material or the equipment, essential load is ascertained and allowed during peak load hours when the main plant i.e. arc furnace is not working. No power is provided for other activities like rolling mill section during peak hours.

9. The petitioner vide its letter dated 8.8.2012, made the following submissions:

- (i) The respondent, being a state agency cannot discriminate between arc furnaces and induction furnaces while allowing restricted load during peak load hours.
- (ii) The requirement of power to both type of units is the same during peak load hours.
- (iii) The petition has been filed to remove anomaly regarding restricted load allowed to the induction furnaces and arc furnaces.
- (iv) It is not the function of the utility to decide as to what should be the essential load requirement. It has to be left to the consumer as to what load he considers as an essential load. For one consumer it may be essential to keep the air conditioning system of the laboratory equipments running and another consumer may like to run his EOT crane to process the steel produced from the furnace.
- (v) Arc furnace and Induction furnace are equipments used for melting of the metals and both have their own advantages & disadvantages. Both Arc/Induction furnaces are used to re-melt steel and other metals and their products are interchangeable. There are many induction furnaces which are producing alloy steels and use con-cast, ladle refining & other down stream processing equipments similar to the Arc furnaces.
- (vi) PSPCL has illogically fixed an essential load for an induction furnace as 50 kW irrespective of its size. Now a days 20 Ton, 30 Ton, 40 Ton and even 60 Ton induction furnaces are very common. Even in Punjab there are at least half a dozen induction furnaces ranging between 10 to 20 Ton and having concast facility.
- vii) In arc furnace one can use a dirty scrap & clean it by oxidizing the impurities, this results into oxidation of alloying elements like Cr, Si, Mn which have to be again added in the liquid metal to

achieve the desired composition whereas in case of induction furnace one has to be careful about cleanliness of the scrap but there is no loss of alloying elements during melting and only minor additions of alloys are required to achieve the desired composition. This advantage has practically wiped off 150 odd arc furnaces in the country.

- (viii) As per Section 62 of the Act, the Appropriate Commission shall not, while determining the tariff under the Act, show undue preference to any consumer of electricity but may differentiate according to
- a) Consumer's Load Factor.
  - b) Power Factor.
  - c) Voltage.
  - d) Total consumption of electricity during any specified period or the time at which the supply is required.
  - e) The geographical position of any area.
  - f) The nature of supply and the purpose for which the supply is required.

As none of the above factors is applicable while differentiating the charges to be charged from the Arc & Induction furnaces, it amounts to undue preference.

10. From the above submissions/discussions, Commission observed that the petitioner instead of justifying its requirement of more restricted load during peak load hours is stressing upon removal of anomaly in the prescribed quantum. From the literature submitted by the Petitioner, the Commission observed that the capacity of an induction furnace is not limited to 5 ton only as claimed by PSPCL in its submissions. There are higher capacity furnace units also installed in Punjab.

11. In view of the variation in requirement of restricted load depending upon the size of the furnace, which are available in various sizes, the Commission observed that the restricted load limit in case of induction furnace units should also be on the basis of percentage of Contract Demand rather than per furnace. Accordingly, the Commission, to mitigate the problems of

induction furnace consumers, proposed to make an amendment in clause 49.2(ii)(c) of the Conditions of Supply as under:

Existing Clause	Proposed Clause
Induction Furnace consumers: 5% of sanctioned contract demand or 50 kW per furnace whichever is less	Induction Furnace consumers: 2.5% of sanctioned contract demand or 50 kW per furnace whichever is more.

A Public Notice was issued in leading English and vernacular Newspapers on 23.10.2012 inviting comments/suggestions from general public and stake holders on the proposal so as to reach the Commission by 12.11.2012. Public Notice also mentioned that a public hearing shall be held in the office of the Commission. In pursuance to the Public Notice, a public hearing was held on 15.11.2012. The following were present in the public hearing:

Sr. No.	Name and Address
1.	Shri Subhash Bansal, Hansco Iron & Steel (P) Ltd, Mandi Gobindgarh.
2.	Shri Avtar Singh, Mithila Malleables Pvt. Ltd., Sirhind.
3.	Shri Sanjay Gupta, Jogindra Castings (P) Ltd., Mandi Gobindgarh.
4.	Shri C.P. Mittal, Mandi Gobindgarh Induction Furnace Association.
5.	Shri S.K. Sarwal, Addl. SE, PSPCL.

12. During public hearing, the majority of the representatives of the Induction Furnace industry pleaded for similar treatment in case of restricted load as is being allowed to Arc Furnace industry. It was pointed out by them that they have to spend extra for meeting the minimum required load during peak load hours by taking extra load than permitted, on payment basis, thereby increasing their cost of production. Before taking a final decision in the matter, the Commission directed PSPCL to supply information in respect of all Induction Furnace consumers who are availing peak load exemption in addition to restricted load.

13. The perusal of data supplied by PSPCL reveals that only limited number of the induction furnaces in the State are availing additional load for different spells, in addition to restricted load, during peak load hours on payment of peak load exemption charges.

Keeping in view the above submissions/analysis and the report of the Committee mentioned in para 6 of this order, the Commission decides to amend Clause 49.2(ii)(c) as under:-

Induction furnace consumers: 2.5% of sanctioned Contract Demand or 50 kW per furnace, whichever is more.

The Petition is disposed off accordingly.

Sd/-  
**(Gurinderjit Singh)**  
Member

Sd/-  
**(Virinder Singh)**  
Member

Sd/-  
**(Romila Dubey)**  
Chairperson

**Chandigarh**  
**Dated : 12.12.2012**