

PUNJAB STATE ELECTRICITY REGULATORY COMMISSION
SITE NO. 3, BLOCK B, SECTOR 18-A MADHYA MARG, CHANDIGARH

Petition No. 08 of 2021
Date of Order: 31.03.2021

Petition under section 23 of the Electricity Act, 2003 for authorizing the PSPCL to impose Power Cuts and other Power Regulatory Measures for the year 2021-22.

AND

In the matter of: Punjab State Power Corporation Limited (PSPCL), The Mall, Patiala.

Present: Ms. Anjuli Chandra, Member
Sh. Paramjeet Singh, Member

ORDER

PSPCL has filed this petition under Section 23 of the Electricity Act, 2003 seeking regulatory guidance and concurrence of the Commission for taking measures for load regulation and imposing power cuts in case of exigencies and system operational requirements.

2. The submissions made by PSPCL in the Petition are summarized as under:

- i) The endeavor of PSPCL as a distribution licensee is to ensure uninterrupted power supply to all of its consumers and regulate the supply only in case of unavoidable exigencies.
- ii) In currently applicable deviation settlement mechanism, violations beyond specified limits attract severe penalties against overdrawal from the system in real time operation. Also after applicability of the new DSM regulations 2018, the

frequency band has become 49.85 to 50.05 Hz. and, with the linking of market clearing price of exchange with DSM rate, operation of power system on day to day basis has become more rigid and in case of sudden outage of power system elements, the safety of the grid is the priority of power regulation.

- iii) There would be a surplus availability of electricity to PSPCL during FY 2021-22 and it is expected that the requirement to regulate supply to consumers and imposing power cuts would be minimal, only to take care of unexpected events and circumstances.
- iv) That post grid collapse of 30 & 31.7.2012, the stringent grid regulations are applicable for deviation from the schedule which includes severe penalties in terms of high deviation charges. The availability of power has to be maintained around the running load at all the times for safeguard of the grid.
- v) With the introduction of capping on volume limits on over drawl from the grid in the currently applicable deviation settlement mechanism, the violations beyond the specified limit attract severe penalties against over drawl from the system in real time operation as such the regulation of load through the implementation of the power regulatory measures may be necessitated on real time basis. Moreover, after applicability of new DSM regulation 2018 w.e.f 1.1.2019, the frequency band has now become 49.85 to 50.05 HZ which was earlier 49.70 to 50.10 HZ. By linking market clearing price of exchange with the DSM rate, the operation of power system on day to day basis has become

more rigid and in case of sudden outages of power system elements, the power regulation may be the utmost requirement in the interest of safety of grid.

- vi) However, even in case of surplus scenario, eventualities mentioned below cannot be ruled out in the power system which may require regulation of load and supply:
- a) The forced outage of the generating units especially of larger capacity IPPs in the State for longer duration.
 - b) Any downward revision in the Central Sector schedule due to longer duration on account of forced outage of Central Sector Generating Units, in which the State has a major stake.
 - c) In the event of any reduction/restriction of internal generation due to forced outage/unforeseen reasons and limitation of the transmission/ sub transmission network.
 - d) Any reduction in internal generation due to forced outage may require the emergent imposition of the power regulatory measures to keep the system running within the limitation of grid code.
 - e) Any restrictions due to overloading of inter-regional lines may also necessitate load shedding within the state
 - f) Any other contingency, where available power is not able to meet the demand.
- vii) In the scenarios and circumstances as mentioned above, PSPCL may be required to bridge the demand / supply gap within Punjab control area on real time basis by imposing

various regulatory measures. Under the Electricity Act, 2003 while the management of load is to be taken care of by the licensees, a provision in Section 23 enables the Commission to decide the principles and basis on which the regulation in power can be done, to the extent possible in case of exigencies and circumstances that may arise.

- viii) PSPCL proposes the following regulatory measures to be taken in case it becomes imperative to impose power regulatory measures and impose power cuts:
- a) To regulate the supply by imposing power cut on feeders controlling supply to the 24 hours UPS/Urban-Industrial Cat-1/Main cities / District Head Quarters.
 - b) To impose weekly off day(s) on LS & MS category of industrial consumers fed from category 2 & 3 industrial feeders.
 - c) To restrict the drawal of the LS & MS category consumers (fed from category 2&3 feeders) to the extent required for keeping the system running within the grid code limitations during peak load hours as well as off-peak hours.
 - d) To restrict the drawal of power by continuous process (category 4) consumers to the extent of their continuous process load allowed to them during peak/ off peak load hours, as per the policy approved by the Commission.
 - e) To regulate power supply to AP consumers.
 - f) Any other additional regulatory measures to the left out category of consumers in case of exigencies of outage of own / central sector generating units or transmission/

sub-transmission network of ISTS/ STU or any of the major grid elements ICTs etc.

g) The priority order of imposing power cuts/regulatory measures generally be followed as:

1. **AP Feeders:** Power Cut (opening of Breakers from the Grid Substations for certain period in rotation depending on the requirement in real time) for safeguard of grid. Thereafter, all possible efforts will be made to compensate the AP supply within 24 Hrs.
2. **UPS/Category-1 High Loss Feeders:** Power Cut for opening of Breakers from the Grid Substations for certain period in rotation depending on the requirement in real time.
3. **Kandi feeders/UPS Feeders:** Power Cut for opening of Breakers from the Grid Substations for certain period in rotation depending on the requirement in real time.
4. **Category-1 feeders:** Power Cut for opening of Breakers from the Grid Substations for certain period in rotation depending on the requirement in real time.
5. **Category-2 feeders:** Restricting the drawal of the LS & MS category consumers to the extent required for keeping the system running within grid code limitations / Imposing Weekly-Off Day on LS & MS Category consumers.
6. **Category-3 feeders:** Restricting the drawal of the

LS & MS category consumers to the extent required for keeping the system running within grid code limitations /Imposing Weekly-Off Day on LS & MS Category consumers.

7. **Category-4 feeders feeding continuous status process industrial consumers:** To restrict the drawl of power by Continuous process consumers to the extent of their continuous process load allowed to them during peak/off-peak load hours.

- ix) PSPCL further stated that in FY 2021-22, the regulatory measures shall be imposed on the real time basis depending upon the real time gap in the demand and supply of power and other system constraints.
- x) PSPCL shall however make its best endeavor not to impose any regulatory measures and shall on its part:
 - a) Impose minimum Scheduled Power Regulatory Measures/Scheduled Power cuts for which the consumers will be informed in advance about the schedule of power cuts and regulatory measures in case of outages/exigencies for long durations without any scope of alternate arrangement of power.
 - b) Unscheduled load shedding, if any, shall only be imposed during sudden outage of generating units or exigencies in the grid. Duration of such load shedding shall be kept to be as minimum as possible
- xi) The petitioner has prayed to:
 - a) Admit and take on record the present petition filed by PSPCL on the regulatory measures proposed to be

taken for the purpose of maintaining equitable distribution of power supply throughout the State of Punjab and to operate the grid in a most economical and efficient manner in compliance to the IEGC/State Grid Code provisions.

- b) Provide guidance on the regulatory measures proposed by PSPCL as detailed hereinabove and make such modifications in the proposal of PSPCL as the Commission may deem just.
- c) Pass such further Order(s) as the Commission may deem just in facts of the present case.

3. Vide Order dated 23.02.2020 the petition was admitted and was fixed for hearing as well as public hearing on 17.03.2020. PSPCL issued the public notice for inviting comments/objections/suggestions from general public and stake holders, which was published on 26.02.2021 in the leading newspapers namely, 'Punjab Kesari', 'The Tribune', 'Ajit' and 'Rozana Spokesman'.

4. In response to the public notice issued by PSPCL, suggestions/ comments were received from the following objectors:

- i) M/s Mandi Gobindgarh Induction Furnace Association, Mandi Gobindgarh, Punjab
- ii) Siel Chemical Complex, Rajpura, Punjab
- iii) Cycle Trade Union (Regd), Ludhiana, Punjab
- iv) Machine Tools Manufacturers & Maintenance, Ludhiana Punjab

- v) Chamber of Industrial & Commercial Undertakings,
Ludhiana, Punjab

5. The suggestions/comments received from objectors relating to the petition, have been summarized as under:

I) Siel Chemical Complex and Mandi Gobindgarh Induction Furnace Association:

- 1) PSPCL may be directed to regulate power supply strictly keeping in view the factors of Power Intensive LS industrial units having high load factor, connected at 66/11KV voltage level, maintains high power factor, providing dependable base load, large revenue paying entities with minimum Technical & Commercial losses etc" and therefore should be the last category to be asked to give relief through regulatory measure.
- 2) The assumptions taken for calculations of power availability and consumption and actual power cuts imposed during last two years and relief obtained from each category have not been made available for information of the stake holders. In the absence of the detailed data the stakeholders are unable to completely analyze the effect of prayers on their working and make any assessment of the scenario.
- 3) The data of energy requirement needs to be reconciled as PSPCL is giving different figure in every submission.
- 4) Category 3 feeders be exempted from the power cut/regulatory measures for non paddy period.

During the paddy period, only minimum restrictions be imposed before or after the peak load period so that losses to industry are minimized and the deployment of Labour can be done accordingly to not suffer any loss.

- 5) General introduction of process of manufacturing is continuous in nature. Being a project with the initiative of GoP, SIEL chemicals should be out of perspective of imposing power cuts.
- 6) There is surplus scenario in all the 12 months of the year and still PSPCL is seeking regulatory guidance on proposals to meet emergent shortages. PSPCL has to focus on the 5 months i.e. Oct., Nov., Dec., Jan. & Feb. for reducing its idle capacity. PSPCL and the Commission need to provide incentive to maximise usage, low tariff for seasonal industry, fast tracking of release of connections, revival of sick and temporarily disconnected industries. Threshold consumption needs to be replaced with Load factor rebate . Special night rebate need to be extended as it helps in flattening of load curve. However, the limit on power supply during 12 hours of day period needs to be increased to 15% of total consumption of 12 hours of usage.
- 7) There is surplus scenario in FY 2021-22 even in paddy season and as such there should not be any pre-planned power regulatory measures. PSPCL should encourage the consumers to consume more in order to avoid back downing of their power plants.

If at all required these shall only be on real time shortages.

- 8) The industry being the backbone of economy for any state should be the last to bear the Power Regulatory Measures. Merit Order of the categories/services for imposing regulatory measures needs to be strictly followed as detailed in the petition.
- 9) PSPCL has shown short term power purchase for paddy season even when power is being received under banking and there is net surplus. The energy and peak power requirement as increased by PSPCL has not such indicated how it proposes to meet the peak demand. The Commission may direct PSPCL to not to impose any regulatory measures on LS industries of the Objector's category fed from category 4 feeders.
- 10) In case PSPCL still seeks permission to impose regulatory measures on the industry, then payment of Fixed Charges also need to be regulated i.e. reduced in proportion to the twice the duration of regulatory measures to compensate the consumers.

II) M/s Mandi Gobindgarh Induction Furnace Association:

- 1) The Commission has introduced Special Night Rebate for LS industry opting to consume power exclusively during night rebate. Many of our members opted for the same to optimize on the

production costs and are also helping PSPCL to flatten its load curve particularly during winter/non-paddy months when PSPCL consumption drastically reduces. As power for such consumers is available only for 12 hours, any power cut on such consumers will hit them financially and may make their option totally unviable. Therefore such consumers need to be exempted from any Regulatory measure.

- 2) It is submitted that as there is sufficient power and energy with PSPCL as per Annexure-A of the petition, category -3 feeders be either exempted from the power cut/ regulatory measures for non paddy period and only minimum restrictions before or after the peak load period be imposed so that they can plan deployment of labour accordingly and do not suffer any loss.
- 3) Steel industry in Punjab is still passing through a critical time and have to run the industry sometimes at part or even at a loss just to sustain itself. Under these circumstances, any power cut/ weekly off will turn the industry into red.

III) Cycle Trade Union (Regd) and Machine Tool Manufacturers & Maintenance, Ludhiana :

- 1) Not to allow Power Cuts in the shape of Direct Power Cut, Peak Load Hours restrictions and weekly off days etc. during FY 2021-22 when Punjab is a surplus state to avail monetary benefits by PSPCL in shape of fixed charges from the energy reading of

meters of all types of consumers. Moreover PSPCL should make alternate arrangement to tide over the supply shortage situations and provide 24 hours uninterrupted power supply to its consumers.

**IV) Chamber of Industrial & Commercial Undertakings,
Ludhiana:**

- 1) PSPCL is hardly doing any kind of rigorous and consistent efforts to adopt the latest technology in power transmission & distribution systems. The same old equipment & technology are being used since last many years and no effort has been made to use the latest technologies such as Smart Grids and distribution system automation to reduce outage time /maintenance /man-power cost. It needs to adopt latest cost effective technology and compact man-less power plants/sub stations to reduce its operation cost.
- 2) Adoption of strong will power and dedicated behaviour towards change in policies of PSPCL and Punjab Govt. are really required in the interest of general public.
- 3) PSPCL need to increase the operational efficiency in the generation of power through adoption of latest technology and optimum utilisation of scarce resources rather than resorting to power cuts and hike in tariff rates which will never help in the long term to survive and also not good in the public interest. The Punjab Govt. and PSPCL need to do

collective efforts to tackle the problem. Repeated tariff revisions to get temporary relief will not serve the purpose.

- 4) The supply of electricity is a profit making business. Quality power supply should be provided for 24 hours. Frequent scheduled/unscheduled power cuts with poor power supply must be controlled at all costs.
- 5) PSPCL should make an effective policy to improve its internal operational efficiency by optimum utilisation of resources and adoption of latest technologies which would definitely contribute to the revenue of PSPCL. Further there is still a big scope in saving of fixed and variable expenditures by managing them in a strategic manner rather than always resorting to increase in tariff.
- 6) PSPCL is not providing the details of the theft penalty imposed/realised and number of FIR registered and conviction obtained etc. it should be made transparent to all consumers with progress in control of theft of electricity and other penalties realisation etc.
- 7) Suggestions:
 - i) PSPCL is a service sector utility and it should operate at optimum efficiency by utilising the optimum use of resources, may it be material or man power. Efficient utilisation of all these would help in reducing its overhead charges. It should

increase its productivity and reduce its losses by introducing the latest technologies rather than charging extra cost from the consumers.

- ii) More and more power transformers are being added at the existing grid sub stations in the cities instead of erecting new sub stations near the load centre. New sub stations are being proposed/erected at technically-non-suitable locations under compulsions, which are resulting in more T & D losses and poor quality of power. State Govt. should be impressed upon to provide land to PSPCL for construction of more substations in the cities to ease the bottlenecks of grid constraints so that the atmosphere is more conducive for growth of the industry.
 - iii) During the heavy rain/storms, all feeders get tripped. On those days, the demand decreases due to tripping of all the feeders and drastic fall in temperature and the power plants of PSPCL run without load. It is felt that it may not be possible to re-energise all feeders in short span of time to ensure continuity of supply under all weather condition. But few feeders having prominent/bulk industrial & commercial loads (which are independent of weather) should be robust enough to with stand it, so that power is used and billed in that period.
- 8) The entire world and the leading states of India are going for green energy whereas Punjab is still going

for the old technology of thermal plants only. Since carriage of coal is much costlier than carrying the power (transmission of power), there are no efforts to install green energy projects i.e. solar and hydro electric power plants in the suitable areas of Punjab and jointly with States of H.P., J&K and Uttrakhand etc.

- 9) PSPCL is going for system up-gradation and network augmenting work in all major cities of Punjab through R-APDRP .On the one hand PSPCL is charging higher tariff from industrial consumers which is revised frequently many times in a year and on the other hand nothing is being done to ensure the reliability of supply of power to the industry.

6. PSPCL submitted its replies to the objections as under:

I) Siel Chemical Complex and M/s Mandi Gobindgarh Induction Furnace Association:

- 1) Chronological order for power regulations generally followed by PSPCL has already been submitted in the instant petition. The continuous process status industry is already placed last. The regulation of load shall only be carried out depending upon the real time shortages and the nature of fault in the power system equipment. In recent years, no notified power cuts have been required / imposed by PSPCL on any category of industrial consumers of PSPCL
- 2) Availability is calculated by taking generating targets of different plants/sources. Demand is calculated by

CAGR method. The power cuts are imposed on real time basis subject to bridging the gap between availability & demand in case of exigencies, in the interest of grid security. In addition to this, no notified power cuts have been required/ imposed by PSPCL on any category of consumers of PSPCL in recent years.

- 3) The difference in surrendered power is due to the fact that in the ARR figures of power surrendered is that from center sector plants and long term plants while in the current petition the same includes surplus energy from own thermal plants also.
- 4) The Consumers have already been exempted from observing weekly off days/power regulatory measures as per PR Circular 06/2010. Further, all continuous process industries (declared) being fed through independent feeders are exempted from observing compulsory weekly off days as per PR circular No. 11/2010.
- 5) PSPCL has anticipated surplus scenario throughout the year but unexpected fault in the power system or some other exigencies cannot be ruled out leading to mismatch between demand & supply and thus necessitating the imposition of power cuts / regulatory measures on to the consumers. Moreover, the power system is managed in an optimum way by keeping costly powers surrendered. PSPCL always opts out best option to operate the idle capacity remaining un-utilized during winter months where the

consumer's demand is less, by way of export arrangements with other states and with every feasible possibility of sale of power.

- 6) In recent years, no notified power cuts and regulatory measures have been required / imposed on various categories of consumers including the industrial units. PSPCL always exercises the best options to meet the gap in the demand and availability but there may be instances to regulate the power to the consumers in case of exigencies.
- 7) The relief available from each measure is highly dependable upon situation persisting at the time like winter/summer, day/night, rainy day or particular period of the day and same is further fine tuned on real time based on exigencies occurring at that time and accordingly the relief measures are taken as per merit order of the categories as brought out in the petition. PSPCL proposes to impose Power Regulatory Measures to impose in an equitable manner by following the order of priority as detailed in the petition.
- 8) The figures of Banking import and export depicted in annexure A are anticipated figures for FY 2021-22 which may vary based on real time scenario. PSPCL has tied up power under Short term purchase for paddy months to explore all sources of power available as per its economic and commercial consideration. PSPCL will be able to arrange sufficient availability by banking and purchase both

and will meet peak demand successfully.

- 9) Present petition has been filed for obtaining guidance of the Commission for regulation of power in case of exigencies as the probability of fault in the power system cannot be ruled out. Thus, PSPCL has no other option left out but to regulate the power to bring the grid in healthy state till some alternate arrangement is made. Thus, while applying the regulatory measures, the nature as well as the type of fault will be important on which the duration of outage of grid element may be assessed in the real time situation.
- 10) The power regulation will be done only in case of exigencies as explained in the petition. Moreover, occurrences of such type of exigencies are unforeseen and may not directly be under the control of PSPCL. The Commission has implemented two part tariff w.e.f. 01.01.2018, which is a breakup of the existing single part tariff structure/including MMC into Two Part Tariff comprising of fixed (Load/Demand) charges & Energy charges in order to ensure predictable recovery of fixed costs commitment of the Utility, which are to be incurred to meet the demand of its consumers on one hand, and to reduce the marginal cost of energy charges to the consumers, on other hand. Only a small part of fixed cost is being recovered through fixed charges and that too on 80% of sanctioned contract demand or actual whichever is higher. Therefore, the payment

of fixed charges need not be regulated. However, PSPCL will try its best to minimize the duration of regulation of power at its minimum by applying rotational power cuts as per priority order till some alternate arrangement is made. The request of the objector that it may be exempted from imposition of regulatory measures may not be accepted by the Commission

II) M/s Mandi Gobindgarh Induction Furnace Association:

- 1 & 2) The power cuts are proposed to be imposed in case of exigencies only as per priority order at para 11 of the petition. The Arc/ Induction furnace industry is already placed at second last in the above order. In recent years, no notified power cuts have been required/ imposed by PSPCL on any category of industrial consumers of PSPCL.
- 3) Present Petition has been filed for obtaining guidance of the Commission for regulation of power in case of exigencies since the probability of fault in the power system can't be ruled out. Thus, PSPCL has no other option left out but to regulate the power to bring the grid in healthy state till some alternate arrangement is made.

III) Cycle Trade Union (Regd) and Machine Tool Manufacturers & Maintenance, Ludhiana

- 1) The petition has been filed with the objective of seeking regulatory guidance for regulating the

power supply to its various categories of consumers in case of various exigencies as enumerated in the instant petition. The power supply is regulated only if the stringent conditions prevail and no other option is left except for imposing power cuts to safeguard the Grid in the interest of nation.

Moreover, PSPCL always strives for providing 24 Hours Power supply to its consumers by arranging power from various available economical sources. However, in the event of occurrence of exigencies detailed in the petition, the power supply needs to be regulated in the interest of grid health and stability. Thus it is not under the direct control of PSPCL to prevent the exigencies.

It is also to submit that in recent years no notified power cuts have been imposed on any category of consumers.

IV) Chamber of Industrial & Commercial Undertakings, Ludhiana

- 1 to 4) This petition is not related to operational cost or hike in tariff rates etc. pointed out by the objector. Further, PSPCL always strives for providing 24 Hrs Power supply to its consumers by arranging power from various available economical sources. However, in the event of occurrence of exigencies detailed in the petition, the power supply needs to be regulated in the interest of grid health and stability. Thus it is not under the direct control of

PSPCL to prevent the exigencies. In recent years, no notified power cuts have been required/ imposed by PSPCL on any category of industrial consumers of PSPCL.

5 This petition is not related to fixed and variable expenditures, hike in tariff rates or details of theft penalty imposed/realized and number of FIR registered and conviction obtained etc. pointed out by the objector.

6 It is wrong to say that all feeders get tripped during heavy rain/storm. Other points raised by the objector are not related to this petition.

7 PSPCL is making continuous efforts to increase the share of Green Energy and its installed capacity is increasing every year. Further, PSPCL always endeavours to ensure the reliability of supply of power to its consumers but the fault in the power system or some other exigencies explained out in the instant petition cannot be ruled out and thus necessitating the imposition of power cuts/regulatory measures on the consumers. In recent years, no notified power cuts and regulatory measures have been required/ imposed on various categories of consumers including the industrial units.

7. Commission's Observations and Findings

The Petition was taken up on hearing on 17.03.2020 at 11.00 A.M. Two objectors Cycle Trade Union and Chamber of

Industrial & Commercial Undertakings physically attended the public hearing while representatives of PSPCL attended the public hearing through virtual mode. PSPCL was directed to submit the information with regard to the power cuts/trippings in FY 2020-21. PSPCL vide Memo No. 3504 dated 25.03.2021 submitted the details of outages due to breakdown/fault or any other system constraints with remarks that the trippings are within norms and that PSPCL is doing requisite maintenance to reduce the trippings/breakdowns. After considering the submissions made by PSPCL, objections/comments raised/made by the consumers/organizations and reply of PSPCL thereon, the Commission observes and decides as under:

- a) The Commission is of the view that since PSPCL is having surplus power capacity, as such no power cut /regulatory measures are required to be imposed. However, unexpected events and circumstances resulting in imbalance in power, cannot be ruled out and may require to impose regulatory measures to maintain grid security. Since these are imposed for minimum necessitated periods/short periods on feeders/ consumers scattered across the State, the demand for waiving off/ regulating the fixed charges during the closure of a unit due to imposition of power regulation does not appear to be feasible.**
- b) Therefore PSPCL is authorized to impose regulatory measures including rotational power cuts so as to bridge the gap between demand and supply, in case**

of exigencies & system requirements only. The approval in this respect is subject to the following:

- i) In view of surplus power available with PSPCL, routine power cuts and compulsory weekly off day(s) will not be imposed in Punjab, on any category of consumers.**
- ii) However, if regulatory measures for maintaining Grid are necessitated in case of any exigency; PSPCL may take Regulatory Measures/ impose rotational Power cuts for which, information will be given to the concerned consumers through SMS/E-Mail (including written intimation, wherever possible) and same shall also be uploaded on its website.**
- iii) Unscheduled load shedding, if any, shall only be imposed during sudden outage of generating units or exigencies in the grid. The duration of such load shedding shall be kept to be as minimum as possible.**
- iv) The Commission shall be informed regarding emergency situations and resultant system constraints, reasons thereof and details of power cuts imposed feeder wise along with duration and its impact on PSPCL revenue at the earliest.**

The petition is disposed of accordingly.

Sd/-

(Paramjeet Singh)
Member

Sd/-

(Anjuli Chandra)
Member

Chandigarh
Dated:31.03.2021