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ODISHA ELECTRICITY REGULATORY COMMISSION
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Present: Shri Pradeep Kumar Jena, Chairperson
Shri S. K. Ray Mohapatra, Member

Case No. 22/2025

M/s. Hindalco Industries Ltd. Petitioner
Vrs.
OPTCL & Others Respondent

In the matter of: Application under Section 86(1)(k) of the Electricity Act, 2003 read with Regulation 201 of the OERC (Conditions of Supply) Code, 2019 and Regulation 78 of OERC (Conduct of Business) Regulations, 2004, seeking permission to avail emergency power for CPP units and associated Aluminum Smelter from 132 kV Sub-station at Burla Power House during complete power outage through existing 220 kV Hindalco-Katapali transmission line.

For Petitioner: Sri Rajesh Patnaik, Sr. GM (Corporate) along with Sri Kamadev Roulo, AVP-Corporate Legal,

For Respondent: Ms. Banishree Pradhan, DGM (RT&C), OPTCL, Sri K.C. Nanda, Sr. GM (RA & Strategy), TPWODL and the Representatives of GRIDCO & SLDC

ORDER

Date of Hearing: 06.05.2025

Date of Order: 05.07.2025

The Petitioner-M/s. Hindalco Industries Ltd. (M/s. HIL) has filed the present application under Section 86(1)(k) of the Electricity Act, 2003 read with Regulation 201 of the OERC (Conditions of Supply) Code, 2019 and Regulation 78 of OERC (Conduct of Business) Regulations, 2004 seeking permission of the Commission to avail emergency power for its CPP units and associated Aluminum Smelter from 132 kV Sub-station at Burla Power House during complete power outage in the existing 220 kV Hindalco-Katapali feeder.

2. The Petitioner-M/s. HIL has submitted that:

- a) The Petitioner is engaged in manufacturing of aluminum and related products, having aluminum smelter of 214 KTPA capacity and a CGP of 467.5 MW at Hirakud in the district of Sambalpur, Odisha. The Petitioner-M/s. HIL is presently connected to 220 kV Katapali Grid Sub-station of OPTCL through 220 kV D/C line. Earlier, it was availing power supply from the Grid through 132 kV double circuit lines namely, ALCO-1 and ALCO-2 emanating from Burla Power House with CD of 40 MVA. Subsequently, in order to cater the power requirement of additional smelting capacity & for reliability, its connection status was switched over from 132 kV to 220 kV voltage level and got

connectivity with the 220 kV Katapali Grid Sub-station of OPTCL with 15 kms long interconnecting D/C lines.

- b) In May, 2023, the ALCO-II circuit was diverted by OPTCL for connectivity between Burla Power House & newly constructed 132 kV Grid Sub-station at Hirakud. But the ALCO-I line & its associated bay is still remaining idle, intact and in discharged condition since the disconnection of this line from Petitioner's premises.
- c) The Aluminum industry is not only power intensive, but also the Aluminum smelters are highly sensitive to power interruptions. The smelting process is vulnerable to power fluctuations and any outage of power lasting longer than one hour can result in equipment damage, production down time and substantial financial losses. In case of any eventuality/exigency in 220 kV system or Katapali-Hindalco line, it does not have any source of power for black start to prevent the Aluminum Potlines from freezing, as the hot metal freezes within half an hour in case of non-availability of power.
- d) In FY 2024 and FY 2025, there were 46 instances when the Petitioner's plant got islanded from the grid on account of grid disturbance. In one such instance, on 29.08.2024, the Katapali 220 kV grid Sub-station of OPTCL was completely blacked out for almost 58 minutes. Therefore, the Petitioner desires for getting emergency power supply to the tune of 25 / 30 MW from the grid in such scenario, for start-up and feeding critical sections of its Smelter to avoid damage and loss.
- e) The Petitioner had made a representation to OPTCL in this regard, seeking permission to draw emergency power requirement of its aluminum smelter through the existing idle 132 kV transmission line connected with the Sub-station at Burla Power House. However, OPTCL rejected this proposal of the Petitioner by citing Regulation 64 of OERC Distribution (Conditions of Supply) Code, 2019 and stating that OPTCL cannot allow the aforesaid proposal without specific approval of this Commission. Therefore, the Petitioner has filed the present application seeking permission to avail emergency power to its premises only during the complete black-out condition through the old infrastructures, i.e. the idle 132 kV transmission line (ALCO-1) & the bay, connected with Burla Power House Sub-station and in such period, there shall be full proof isolation of the system from the existing 220 kV supply. According to the Petitioner, it shall confirm to abide by the Grid Code and follow any Standard Operating Procedure (SOP) i.e. guidelines, coordination methodology & billing process, devised for the purpose of such connectivity and stability of both the 220 kV and 132 kV systems when it avails emergency power at 132 kV level.
- f) The Commission has wide powers under the framework of the Electricity Act, 2003, specially under Section 86(k) of the said Act and under Regulation 78 of the OERC

(Conduct of Business) Regulations, 2004, which empowers the Commission to remove the difficulties by a general or special order.

3. In its additional submission, the Petitioner has stated as under:
 - a) The Petitioner agrees to conduct regular maintenance of the 132 kV circuit (ALCO-1) intended for emergency power off-take, for the duration of its availability for the use of the Petitioner.
 - b) The currently open jumper shall be connected at tower location 18, near the plant site, to ensure that the circuit is ready for emergency power off-take, with the 132 kV outgoing breaker at the Burla Power house end and the 132 kV incomer breaker at the Petitioner's Hirakud Plant end, kept switched off.
 - c) In case OPTCL agrees to keep the line charged all the time then the Petitioner shall bear the line losses on monthly basis as recorded in the meter installed in the 132 kV feeder at Burla Power house end.
 - d) If the line remains switched off, a Standard Operating Procedure (SOP) shall be developed and mutually adhered to by the parties during its energization, to prevent any mishap or inadvertent mixing of power at different voltage levels.
 - e) In the event of an emergency, defined as a black out at Petitioner's Hirakud Plant lasting beyond 30 minutes, the Petitioner agrees to pay the demand charges to the authorized Distribution Licensee for the duration of emergency power drawn through this circuit, in addition to the applicable energy charges.
4. The submissions of OPTCL are as under:
 - a) The Regulation 64 of the OERC (Conditions of Supply) Code, 2019 stipulates that, *"Unless otherwise agreed to, the supply shall be at a single point at the out-going terminals of the licensee/supplier, xxxxxx."*

Accordingly, connectivity at both the voltage levels, as sought for by the Petitioner-Consumer, may not be allowed. However, the Commission earlier in certain cases had allowed dual connectivity for supply of power at two voltage levels for a maximum period of two to three months only for stabilization of the new 220 kV / 400 kV system adopted by the then industrial consumers, with the condition that, (a) in no case, the industrial consumer shall draw power simultaneously at both the voltage levels (b) the consumer shall be prepared to take care of all the possible contingency anticipated during transition prior to shifting from existing voltage level to higher voltage level (c) necessary agreement between OPTCL, concerned DISCOM and the consumer to this effect, shall be signed considering all technical and commercial issues.
 - b) The Commission, vide its order dated 31.10.2019 passed in Case No.20 of 2019, while allowing the present Petitioner-M/s. HIL to transmit own CGP power to its own Flat

Rolled Product (FRP) plant at Hirakud, had observed that, *“the unit of the Petitioner will be connected to Grid only at 220 kV Katapali Sub-station after charging of the new line”*.

Since 2019, M/s. HIL and its FRP plants are connected to the Katapali S/s of OPTCL in its benefit and in line with the aforesaid order dated 31.10.2019 of the Commission.

- c) Further, Regulation 63 of the OERC (Conditions of Supply) Code, 2019 stipulates that, *“The entire service line, notwithstanding that whole or portion thereof has been paid for by the consumer, shall be the property of the licensee/supplier and shall be maintained by the licensee/supplier who shall always have the right to use it for the supply of energy to any other person unless the line has been provided for the exclusive use of the consumer through any arrangement agreed to in writing”*.
- d) The State Generator like Burla Power House should be connected to the S/s of the STU (OPTCL) and the consumer like M/s. HIL should be connected to the S/s of the Licensee. Now, the 132 kV ALCO-2 feeder from Burla power house is utilized for connecting to 132/33 kV Grid S/s at Hirakud and the existing 132 kV ALCO Ckt-1 feeder from Burla power house will be used by OPTCL for providing connectivity to the upcoming Grid Sub-Stations.
- e) There were instances in FY 2024 & FY 2025, when the Petitioner got islanded from the Grid. But only on 29.08.2024, there was a black-out at Katapali S/s. In this incident, there was loss of generation at Burla and Chiplima power houses. So, extension of power supply from Burla Power House to M/s. HIL would not have served the purpose as proposed by the Petitioner. In this incident, power supply was availed from Lapanga Grid S/s and extended to the Petitioner’s plant. OPTCL had analyzed the tripping and has changed the relay setting at Burla Power House for avoiding similar fault. So, reliability provided by OPTCL system to M/s. HIL is not questionable.
- f) On acceptance of the prayer of the Petitioner, the bus at Burla Power House will act as standby for all the time to come while the Petitioner will normally draw power from the Katapali GSS of OPTCL. In such case, OPTCL would not be able to allot proposed quantum of power in that command area of OPTCL, which may attract revenue loss to OPTCL, as OPTCL has to deny access to any applicant due to reservation of the power corridor by the Petitioner for its proposed emergency use to the tune of 25 / 30 MW.

Therefore, OPTCL cannot reserve the transmission line as stand by source for an industry.

5. The Respondent-SLDC has submitted that M/s. Hindalco Industries Ltd. is having connectivity with Katapali Grid S/s of OPTCL through 220 kV D/C lines and the industry has got its own islanding system in place. Thus, the availability and reliability of power supply from the grid are understood to be well within the considerable limits and not in the

vulnerable scene owing to 220 kV D/C lines and an operational islanding system at the times of disturbances are of rare occurrence at 220 kV voltage level. Besides, such less frequency of interruptions and the duration of interruptions are also very short averaging to less than ten minutes as per the islanding records submitted by the Petitioner.

6. The Respondent-TPWODL has submitted as under:

- a) The Petitioner is now availing power supply from Katapalli Grid Sub-station through 220 kV D/C line. In the present application, the Petitioner intends to explore alternate back up options to mitigate the risk of unforeseen power outage. In terms of the Regulation 64 of the OERC Distribution (Conditions of Supply) Code, 2019, electricity supply is to be provided at a single point unless otherwise agreed upon by both the supplier and the consumer. Any alternate or additional point of supply including that proposed under the present petition for emergency drawal shall be subject to mutual agreement between the licensee and the consumer, in compliance with the applicable regulatory provisions including prior approval of the Commission.
- b) Earlier, the Commission have allowed dual connectivity to some industrial consumers for stabilization of new system at higher voltage level for a maximum period of 2-3 months, directing OPTCL to do the needful for smooth changeover of the supply during the period of transition and in no case, the industrial consumer shall draw power simultaneously at both the voltage levels. The Petitioner had also previously availed such temporary dual connectivity on temporary basis when shifting from 132 kV to 220 kV connectivity to ensure stability during the transition period and is currently operating efficiently.
- c) In the instant case the proposed emergency drawal from Burla Power House Sub-station through 132 kV ALCO-1 feeder requires detailed examination considering existing infrastructure and operational constraints. The critical aspects such as the impact on existing consumers connected to the sub-station, stability & reliability of the 132 kV network under contingency condition and transformer loading must be thoroughly evaluated. Any such emergency drawal, if found technically feasible, should be strictly limited to the critical auxiliary load and essential smelter operations. Further, proper energy accounting and system integrity must be ensured through deployment of dedicated metering arrangements to distinctly capture the emergency power drawal, along with strict adherence to applicable Standard Operating Procedures (SOPs) and provisions of Grid Code.
- d) At present the Applicant seeks to retain dual connectivity on a permanent basis as a standby arrangement, intended for use only during emergencies while the Regulation generally prohibits dual connectivity unless specifically approved, the Licensee-TPWODL has no objection to this arrangement, provide that the Applicant agrees to pay

the requisite charges. The Section 43(2) of the Electricity Act, 2003 permits imposition of charges as determined by the Commission, where the consumer requests or continues to receive dual connectivity. The Petitioner currently operates its own CGP and is capable of functioning in islanding mode. Should the Applicant seek additional redundancy through an N-2 level arrangement, such a facility must justifiably come with additional charges/price. Accordingly, the Licensee-TPWODL submits that dual connectivity may be approved by the Commission, subject to payment of separate demand charges. However, the idle 132 kV line (ALCO-1) may be used by OPTCL for establishing future connectivity, for which necessary permission from OPTCL is inevitable.

- e) If dual connectivity is permitted, then the Applicant has to bear the demand charges for both the connectivity separately. As the Petitioner wants to avail additional connectivity from Burla Power House Sub-station also, subject to approval of the Commission, it has to bear the fixed cost for the existing CD of 40 MVA connectivity. Further, the Commission, appropriate directions may be issued by the Commission for necessary agreement between the Respondent-Licensee (TPWODL), OPTCL and the Petitioner, needs to be executed to this effect, addressing all the technical and commercial considerations.
 - f) In such case, the Licensee-TPWODL shall not bear any responsibility or liability for line losses, energy accounting discrepancies or any other commercial implications, resulting from the parallel usage of the existing 220 kV connectivity from Katapali GSS and the proposed 132 kV emergency connectivity from Burla Power House Sub-station. All such losses or implications shall entirely borne by the Petitioner-M/s. HIL.
7. Heard the Parties through hybrid arrangement and also considering their written notes of submissions, the Commission observes asunder:
- a) The Petitioner-M/s. HIL is engaged in manufacturing of power intensive Aluminum and related products having Aluminum Smelter of 214 KTPA capacity and FRP plant with CGP of 467.5 MW at Hirakud. The plant was connected to Burla power house through 132 kV D/C line (ALCO Circuits-1 & 2) for a CD of 40 MVA. To cater to additional power requirement due to additional smelting capacity, the single point connectivity at 220 kV level with OPTCL's 220 kV GSS at Katapali through D/C line (15 Kms.) was allowed for both smelter and FRP plant. The Aluminum industry is not only power intensive but also the Aluminum Smelters are highly sensitive to power interruption as Aluminum potlines freezes within half an hour in case of non-availability of power.
 - b) The ALCO Circuit-2 (132 kV) has been diverted by OPTCL for connectivity with newly constructed 132 kV GSS at Hirakud and ALCO Circuit-1 (132 kV) is idle & not in charged condition.

- c) According to the Petitioner-M/s. HIL, 46 numbers of power interruptions have occurred during the period from FY 2024 to FY 2025 and Petitioner's plant got islanded from the grid due to grid disturbances and complete black out (for 58 minutes) of 220 kV GSS of OPTCL at Katapali. The Petitioner has requested for emergency power supply to the tune of 25/30 MW through idle 132 kV transmission line (ALCO Circuit-1) for start-up and feeding critical sections of the smelter in such scenario in order to avoid any damage and loss.
- d) The Petitioner has offered the following:
- i) To conduct regular maintenance of 132 kV circuit (ALCO-1) proposed for emergency power offtake.
 - ii) To bear 132 kV line losses on monthly basis, if the line is kept in energized condition, for which mutually agreed SOP shall be developed to avoid any mishap or inadvertent connectivity at both the voltage levels (220 kV & 132 kV).
 - iii) To pay demand charge & energy charge to Distribution Licensee for the duration of availability of emergency power through the said 132 kV line.
- e) The averments of the Respondent-OPTCL are that:
- i) The Petitioner may not be allowed to have connectivity at both the voltage levels (220 kV and 132 kV)
 - ii) The blackout at Katapali GSS was only on 29.08.2024 and relay setting at Burla power house has been changed to avoid such situation. The reliability of power supply from OPTCL system to M/s. HIL is unquestionable.
 - iii) One of the 132 kV circuit (ALCO-2) has been utilized for connecting 132/33 kV GSS at Hirakud. Similarly, other 132 kV circuit (ALCO-1) can be used by OPTCL in the command area for some other purpose and OPTCL cannot reserve the transmission line (132 kV ALCO Circuit-1) on a permanent basis as a stand by source for an industry by losing its expected revenue.
- f) According to the Respondent-SLDC, the system operator of the State, the availability and reliability of power supply from grid through 220 kV D/C line from Katapali GSS of OPTCL is well within limit and the industry has its own islanding system in place. The operational islanding at the time of disturbance is very rare. The frequency of system interruptions is very less and duration of such interruption is also very short (less than ten minutes).
- g) According to the Respondent-TPWODL, in terms of the Regulation 64 of the OERC Distribution (Conditions of Supply) Code, 2019, electricity supply is to be provided at single point unless otherwise agreed upon by the parties. Any alternate or additional point of supply including that proposed under the present petition for emergency drawal shall be subject to mutual agreement between the licensee and the consumer, in compliance

with the applicable regulatory provisions including prior approval of the Commission. Since the present Petitioner operates its own CGP, it is capable of functioning in islanding mode. However, TPWODL has no objection to the proposal of the Petitioner-M/s. HIL provided the Petitioner agrees to pay the requisite charges as determined by the Commission addressing all technical and commercial considerations.

8. In view of above observations and considering the present scenario of reliability and availability of power supply to the Petitioner-M/s. HIL through 220 kV D/C line from Katapali GSS of OPTCL and the capability of M/s. HIL to function in islanding mode (own islanding system is in place), the Commission feels that the Petitioner-M/s. HIL may not require another connectivity at 132 kV level on permanent basis as a standby source for its industry. Further, the subject idle 132 kV circuit (ALCO-1) would be utilized by OPTCL in future for some other purposes in its command area for the interest of the consumers of the State. However, the Commission allows the Petitioner-M/s HIL to use the 132 kV transmission line (ALCO Circuit-1) of OPTCL for emergency power supply only on temporary basis till this line is allotted by OPTCL to any Utility in its command area, because the subject 132 kV line is now in idle condition and the Petitioner-M/s HIL has agreed to carry out maintenance of the said line. This shall not be construed as precedent for any consumer to avail power supply from the Licensee at two voltage levels. Since the subject 132 kV transmission line (ALCO Circuit-1) has emanated from the switchyard of Burla Power House, this should be operated very carefully, when in use, so that it should not affect the generation at Burla Power House. Therefore, for such temporary use of the subject 132 kV line (ALCO Circuit-1), a Standard Operating Procedure (SOP) needs to be developed mutually and adhered to by the concerned parties. Hence, a tripartite agreement would be executed between M/s HIL (Petitioner), Distribution Licensee (TPWODL) & the STU (OPTCL) stating the methodology of energy accounting, billing & payment of applicable charges on a mutually agreed terms and the aforesaid SOP shall form the part of this tripartite agreement. Further, at no point of time the power supply to the Petitioner-M/s HIL through both the existing 220 kV and proposed 132 kV line shall not be allowed simultaneously from the OPTCL's system. The parties are directed to act accordingly.
9. With the above observations and directions, the Case is disposed of.

Sd/-
(S.K. Ray Mohapatra)
Member

Sd/-
(P. K. Jena)
Chairperson