



Registrar

National Electric Power Regulatory Authority Islamic Republic of Pakistan

NEPRA Tower, Attaturk Avenue (East), G-5/1, Islamabad
Ph: +92-51-9206500, Fax: +92-51-2600026
Web: www.nepra.org.pk, E-mail: registrar@nepra.org.pk

No. NEPRA/DG(M&E)/LAT-01/ 31/5

February 26, 2025

Managing Director
National Transmission and Despatch Company Ltd. (NTDCL),
414-WAPDA House, Shahrah-e-Quaid-e-Azam
Lahore

Subject: **ORDER IN THE MATTER OF SHOW CAUSE NOTICE ISSUED TO NTDC
I.R.O FATAL INCIDENT UNDER SECTION 27B OF THE NEPRA ACT
READ WITH OTHER RELEVANT PROVISIONS OF THE NEPRA ACT**

Please find enclosed herewith, Order of the Authority (total 21 pages) in the subject matter for information and compliance.

Enclosure: **Order of the Authority**


(Wasim Anwar Bhinder)

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY (NEPRA)



ORDER

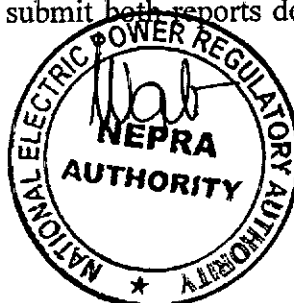
IN THE MATTER OF SHOW CAUSE NOTICE ISSUED TO NTDC I.R.O FATAL INCIDENT UNDER SECTION 27B OF THE NEPRA ACT READ WITH OTHER RELEVANT PROVISIONS OF THE NEPRA ACT

1. Pursuant to Section 17 of the NEPRA Act (now section 16 after promulgation of Regulation of Generation, Transmission and Distribution of Electric Power Amendment Act 2018), the Authority has granted a Transmission License (No. TL/01/2002, dated 31/12/2002) to National Transmission and Dispatch Company Limited (hereinafter referred to as the "Licensee") to engage in the transmission business as stipulated in its Transmission License.

Background:

2. Fatal incident of Mr. Zain Ul Abedeen (electrician) occurred on October 24, 2022, while performing routine work at 500 kV Dadu Grid Station. Subsequently, another fatal accident occurred on March 15, 2023, during the rehabilitation work (i.e. re-jumpering of blue phase) of tower No. 252 at 500 kV Guddu-Shikarpur Circuit-I resulting in the fatality of Mr. Khair Bux, LM-II. In this regard, NEPRA vide its emails dated April 17, 2023, May 03, 2023 and May 22, 2023 directed NTDC to constitute an Inquiry Committee to inquire into the matter and submit a detailed report to NEPRA. In response, NTDC vide its letter dated June 01, 2023 only submitted the Preliminary Inquiry Reports after lapse of eight (08) months of the incident.
3. Accordingly, both Preliminary Inquiry Reports were reviewed in detail and NTDC was directed vide letters dated June 26, 2023 to submit the detailed Final Inquiry Reports along with compliance/progress report on the recommendations by the Preliminary Inquiry Committee. However, NTDC failed to submit both reports despite passage of the given

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time period. Upon which, Final Reminders dated July 18, 2023, were issued to NTDC regarding the stated matter. However, despite issuance of the Final Reminders, NTDC failed to submit the stated reports. These accident raised serious concern regarding the safety and effectiveness of NTDC's transmission network and its ability to supply electricity while fully adhering to its statutory and license obligations.

4. Therefore, the Authority deemed it fit to order investigation of both accidents under section 27A of the NEPRA Act that appears to have occurred due to possible violations and potential breaches of NEPRA Act, as well as associated rules, regulations, standards, codes, SOP's, directives, license terms & conditions, consumer service manual and other applicable documents by Licensee. Accordingly, the following officers were appointed by the Honorable Authority to investigate both the above accidents;

Sr. No.	Name	Designation
1	Mr. Imran Kazi	Sr. Advisor (Monitoring & Enforcement)
2	Mr. Sohail Ahmad	Consultant (Health & Safety)
3	Syed Aqib Ali Shah	Dy. Director (Monitoring & Enforcement)

TORs of the Committee:

5. i. Collect relevant evidences and identified findings to determine whether the Licensee may have committed any potential violations, breaches, or substantial non-compliance with the NEPRA Act, as well as associated rules, regulations, standards, codes, SOP's, directives, license terms & conditions, grid code, safety code and other applicable documents that may have led to the incident within the Licensee's site, service territory, and jurisdiction
- &
- ii. To suggest corrective and preventive measures to minimize the reoccurrence of similar incident in future.

Proceedings of the Committee:

6. Pursuant to the approval of the Authority, a notice with regards to Investigation and constitution of the Investigation Committee along with Order and TORs in the matter was issued to NTDC under Section 27A of the NEPRA Act vide letter dated December 24, 2023. The Investigation Committee (IC) visited 500 kV Dadu Grid Station on December 25, 2023. Subsequently, IC also visited 500 kV Shikarpur Grid Station and the site of tower No. 252 at 500 kV Guddu-Shikarpur Circuit-I on December 26, 2023. IC met with NTDC concerned Officers/Officials from General Manager to Linemen (LMs) including Grid staff. Detailed discussions and deliberations were also made regarding the incident. In view thereof, a detailed comprehensive Investigation Report was prepared.

Show Cause Notice (SCN) to the Licensee:



7. The Inquiry Report was presented before the Authority on April 29, 2024, whereby the Authority decided to issue Show Cause Notice (SCN) to the Licensee. Accordingly, SCN in the subject matter was prepared and the same was issued on July 12, 2024 to the Licensee under NEPRA Fine Regulations, 2021 based on violations alleged in the Explanation. The salient features of the Show Cause Notice are as under:

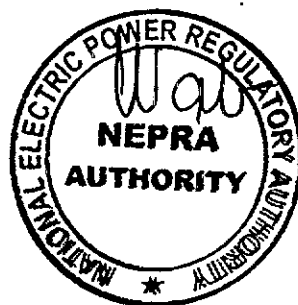
6. *WHEREAS, the investigation was concluded vide Investigation Report dated March 28, 2024, (hereinafter referred to as the "Investigation Report") which is attached as Annex A and as per the Authority directions NTDC is required to address and respond to each of the findings identified by the IC in its said report; and*

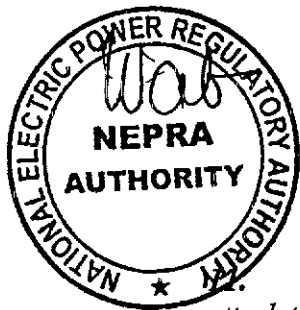
7. *WHEREAS, reportedly, a fatal incident of Mr. Zain ul Abedeen (electrician) occurred on October 24, 2022, while performing routine work at 500 kV Dadu Grid Station. Subsequently, another fatal accident occurred on March 15, 2023, during the rehabilitation work (i.e. re-jumpering of blue phase) of tower No. 252 at 500 kV Guddu-Shikarpur Circuit-I resulting in the fatality of Mr. Khair Bux, LM-II; and*

8. *WHEREAS, in terms of Investigation Report, it was revealed that after lunch, Mr. Ali Asghar (NTDC Foreman) and his team commenced their work on the yellow phase of 220kV Dadu-Khuzdar Circuit-I. They removed the conductor of the yellow phase surge arrestor from the top and shifted it to the new foundation with the help of crane. Afterwards, they (Mr. Ali Asghar & his team) removed the conductor from the top of the CVT and it was also shifted to the new foundation. Dropper jumper was removed from the isolator. To install the wave trap at yellow phase, the dropper jumper was removed from the line isolator D2Q10 and the same was hanging downward before the accident. In this condition, the dropper jumper was only connected to substandard temporary earthing cable, while the permanent earth protection D2E10 became disconnected (ineffective). There was poor or no site supervision of this critical activity by PTW Receiver Mr. Baqir Ali, Line Superintendent-II, Sub-Division EHV-II Hyderabad; and*

9. *WHEREAS, in terms of Investigation Report, the PTW #1510 was issued late in the morning at 10:20 hrs. leading to a delayed start of the work. When Ali Asghar and his team (NTDC) were working on the yellow phase in evening, it had become quite late. In Dadu, on October 24, 2022, the sunset occurred at 17:51 hrs. In the evening time as darkness fell, the induced voltage gradually started to increase after sunset. The accident of Zain ul Abedeen (victim) occurred at 19:15 hrs. It is important to highlight that Mr. Ali Asghar and his team possessed only three helmets, utilized by Mr. Ali Asghar himself, Mr. Amir Ali Shaikh (Naib Qasid), and Mr. Anwar (Mali). Notably, other crew members did not have any Personal Protective Equipment (PPE) including insulated rubber gloves, whereas, Mr. Ali Asghar and his team did not even bother to wear any safety shoes; and*

10. *WHEREAS, in terms of Investigation Report, thereafter, the dropper jumper of the yellow phase which was hanging downwards, needed to be re-attached to the isolator and the victim (Mr. Zain ul Abideen) tried to fix that. Concurrently, induced voltage traveled through the conductor held by Zain ul Abedeen (victim) through his bare hands, passing through his body. During that moment, the victim was electrocuted and fell down on the ground/yard. This can also be verified from the pictures below taken after the victim passed away. Furthermore, it can also be seen that at the time of death, the victim was wearing shalwar qameez and possibly no safety shoes either. Here it is important to mention that as darkness fell in the evening time, the induced voltage gradually started to increase after sunset; and*





11. **WHEREAS**, in terms of Investigation Report, the IC is of the view that in order to re-attach the hanging jumper, Mr. Zain ul Abedeen (electrician/victim) encountered induction on his hands, originated from the energized 220kV Dadu-Khuzdar Circuit-II. Moreover, during the proceedings, it was revealed that the voltage detector was not utilized to test the line at the site to verify the absence of induced voltage; and

12. **WHEREAS**, in terms of Investigation Report, NTDC Site Management at 500kV Grid Station AM(S), NTDC, Dadu, failed to provide a job plan for the critical task. Moreover, M/s. Sunir Iran Power Company (the Contractor) team and the grid maintenance foreman i.e. Mr. Ali Asghar, and his team performed the project job on-site instead of the contractor only, to whom the work was awarded to. Apparently, it has been revealed that NTDC employees i.e. Mr. Ali Asghar (Foreman), 500kV Dadu G/Station engaged in unauthorized work with the contractor. Furthermore, it has also been revealed that the said violation remained unreported by PTW Issuer and Receiver. Also, the crane # GP-25006 (25 Ton) was operated by Mr. Dhani Bakhsh, a driver holding an HTV license, who has no formal crane operation training; and

13. **WHEREAS**, in terms of Investigation Report, there is a lack of control of NTDC Site Management over its staff at 500kV Grid Station AM(S), NTDC, Dadu as it has been noted that employees are handling operational matters independently. Serious supervisory lapses leading to poor attitudes among employees have been observed by the Committee. From the perusal of available record, statements and documents/ information provided during the proceedings, it is observed that the inadequate and poor supervision by NTDC Site Management has contributed to this fatal accident. This can also be verified from the fact that Final Inquiry Committee vide its report dated December 04, 2023 constituted vide NTDC Order No. 1295-1300. dated October 10, 2023 has also raised similar concerns; and

14. **WHEREAS**, in terms of Investigation Report, the NTDC employees at 500kV Grid Station AM(S), NTDC Dadu are handling NTDC business in an unprofessional manner, highlighting serious absence of safety culture within NTDC. This proves the fact that NTDC has failed to inculcate the safety culture within its ranks and organization. Moreover, it was also observed that the shift staff is being assigned tasks that extend 24 hours a day for critical tasks beyond the permissible working hours specified in the Factories Act 1934 and labour regulations, exceeding the standard limits. It has been further noted by the Committee that NTDC employees are found to be involved in unprofessional and substandard workmanship by disregarding the relevant SOPs, putting their lives at danger, adopting casual attitudes at the site, taking shortcuts to expedite tasks or make them easier due to one reason or another; and

15. **WHEREAS**, in terms of Investigation Report, non-technical and illiterate staff, such as Mali/Gardner and Chokidar/Watchman, were assigned for critical tasks by NTDC without the relevant trainings and skill set due to a shortage of operational staff. The Managing Director is responsible and accountable for the failure to hire and fulfil the priority technical positions as per the established yardstick within its network, especially in the South region, where the lack of manpower has been highlighted a number of times by the field formations as well as the Authority; and;

16. **WHEREAS**, in terms of Investigation Report, an incorrect PTW # 1510 was issued, without opening of isolators D+Q11, D2Q12, D2Q31, and D2Q32 of the 220kV Dadu-Khuzdar Circuit-I, supposed to be opened to achieve complete isolation of the bay for Circuit-I. If Isolators D2Q11, D2Q12, D2Q31, and D2Q32 are not opened, then complete isolation for Circuit-I bay cannot be considered. Further, the IC is of the view that both Shift (A) and Shift (B) In-charges, along with the Permit to Work Issuer and Receiver, committed a serious error by not opening

isolators D2Q11, D2Q12, D2Q31, and D2Q32. This indicates a lack of necessary isolation/shutdown SOP, technical knowledge, and training for handling such technical tasks; and

17. **WHEREAS**, in terms of Investigation Report, the contractor's Site Electrical Engineer, Mr. Faisal Rehman, was not available at the job site on October 24, 2022 to supervise and oversee the critical task on behalf of the contractor. Mr. Mohammad Shahbaz, the Contractor's Foreman was present on-site on October 24, 2022, however, he failed to supervise the project task while Circuit-II was energized, which indicates that he failed to verify circuit isolation, ensure the correct use of PPE, or inspect the installation of PTG. Furthermore, the Contractors' foreman Mr. Mohammad Shahbaz failed to participate in any of the inquiry proceedings conducted in the subject matter. This further proves the Contractor's negligence towards adherence to safety standards and poor site management; and

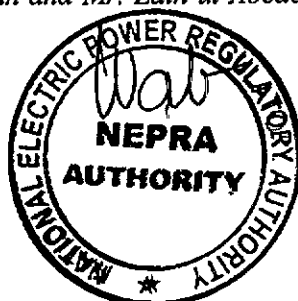
18. **WHEREAS**, in terms of Investigation Report, a substandard temporary earthing cable was used for the critical task. Further, during the proceedings, NTDC presented another PTG set that was not utilized on the day of the accident at 500kV Grid Station AM(S), NTDC, Dadu. Moreover, there was poor or no site supervision of this critical activity by PTW Receiver Mr. Baqir Ali, Line Superintendent-II, Sub Division EHV-II Hyderabad. This has also been mentioned in the Final Inquiry Committee Report dated December 04, 2023 constituted vide NTDC Order No. 1295-1300, dated October 10, 2023; and

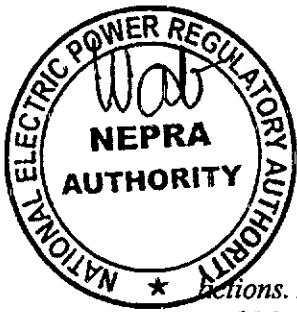
19. **WHEREAS**, in terms of Investigation Report, the 220kV Dadu-Khuzdar Circuit-II was energized while project work was in progress. The PTW # 1510 was issued late in the morning at 10:20 hrs, leading to a delayed start of the work. As a result, the tasks could not be finished before dark in evening, in the evening time as darkness fell, the induced voltage gradually started to increase after sunset. The relays on the 220kV Dadu-Khuzdar Circuit-1 detected induced voltages originated from Circuit-II. The accident of Zain ul Abedeen (victim) occurred at 19:20 hrs due to the presence of induced voltages originated from the energized Circuit-II. Moreover, voltage detector was not utilized to test the line at the site to verify the absence of induced voltage; and

20. **WHEREAS**, in terms of Investigation Report, the Committee has noted that there were consistent violations and failures being committed by NTDC employees which led to this unfortunate incident. Mr. Ali Asghar and his team had no necessary Personal Protective Equipment (PPE) for this critical task, such as non-conductive helmet with a strap, non-conductive safety shoes, Class-2 insulated electrical rubber hand gloves and sleeves, indicating unprofessional behavior by NTDC staff while handling critical tasks. The same can also be verified from the site picture shared in the Investigation Report; and

21. **WHEREAS**, in terms of Investigation Report, on October 25, 2022, six (6) employees from M/s Sunir Iran Power Company arrived at 500kV Grid Station AM(S), NTDC, Dadu. They opened the missing isolators D2Q11, D2Q12, D2Q31, and D2Q32 as indicated in the Log Sheet dated October 25, 2022, which were not opened earlier. At the end, it was the Contractor's team who connected the dropper jumper to energize the circuit. Moreover, on January 29, 2023, the contractor staff returned to complete the remaining project tasks for installing the wave trap. The circuit breakers D2Q1 and D2Q3 were opened, line isolator D2Q10 was also opened, the Earth Switch D2E10 was closed, and isolators D2Q11, D2Q12, D2Q31, and D2Q32 were also opened in accordance with PTW #1625; and

22. **WHEREAS**, in terms of Investigation Report, the Permit to Work Issuer and Receiver failed to identify unsafe conditions and practices at the site throughout the day. They did not intervene to prevent Mr. Ali Asghar Foreman and Mr. Zain ul Abedeen from engaging in unsafe





Actions. Further, Mr. Muzafar Ali (Contractor's Foreman), Mr. Ali Asghar (500kV Dadu Foreman) and Mr. Bakar Ali, LS-II, TLC, EHV- II, Hyderabad failed to supervise their teams at the site; and

23. **WHEREAS**, in terms of Investigation Report, despite regular accidents in NTDC, NTDC Leadership has not taken any serious step/action plan to develop a vibrant safety culture within its field formations, reflecting consistent irresponsible behavior. Further, NTDC HSE Directorate has insufficient safety personnel to oversee critical activities. The minimum number of HSE personnel in NTDC are to be evaluated based on the level of the risk, the criticality of activities, service territory/jurisdiction and the need for the supervision. Additionally, the Authority at number of times have directed NTDC to construct and operationalize a dedicated TSG training center for South region at Jamshoro, however, despite passage of sufficient time period. NTDC has failed to comply with the said directives of the Authority and TSG Centre (South) is being operated on interim basis in NPCC Jamshoro Back Up Control Centre; and

24. **WHEREAS**, in terms of Investigation Report, full compensation (PM package for assistance of employees who die during the service) is still pending and the same is required to be paid without any further delay. Further, despite repeated reminders (written and verbal directives) from the Investigation Committee as well the Authority, NTDC has failed to provide justification for the nearly one-year delay and the implementation status on the recommendations proposed by the Final Inquiry Committee constituted by NTDC in both fatal incidents; and

25. **WHEREAS**, in terms of Investigation Report, on February 28, 2023 at around 10:15 hrs, the 500kV Guddu-Shikarpur Circuit-I T/Line was tripped. Field patrolling revealed partial collapse of Tower No. 210, 211, and 212 of 500kV Guddu-Shikarpur Circuit-I which falls under the jurisdiction of Assistant Engineer Transmission (A.E.T) 500kV T/Line, Sub-division, Asset Management (South), NTDC, Guddu. The rehabilitation work for Tower No. 210, 211, and 212 was initiated by the contractor, M/S Construction & Project Management Services (CPM). Thereon, the de-jumpering of the said transmission line at the nearest dead-end towers, specifically Tower No. 171 & 252, was executed by the transmission line staff under R.E 500kV Grid Station A.M (S) NTDC Shikarpur. Whereas, the remaining portion of the transmission line was energized to prevent any theft of the conductor according to the NTDC Preliminary Inquiry Report. As per the available record, the contractor commenced the rehabilitation work on the partially collapsed towers on March 09, 2023, and successfully concluded the task on March 15, 2023; and

26. **WHEREAS**, in terms of Investigation Report, after completion of the rehabilitation work by the contractor, the re-jumpering of the transmission line at Tower No. 252 of 500kV Guddu-Shikarpur Circuit- I was initiated by Mr. Asad Murtaza (PTW Receiver) A.E.T 500kV T/L Sub-division A.M (S), NTDC, Shikarpur under PTW No. 507, issued at 08:50 hrs. on March 15, 2023, by A.E (Shift) 500kV Grid Station A.M (S) NTDC Shikarpur. Simultaneously, the re-jumpering of the transmission line at Tower No. 171 of 500kV Guddu-Shikarpur Circuit-I was commenced by Mr. Imran Ali (PTW Receiver), A.E.T 500kV T/L Sub-division A.M(S), NTDC, Guddu under PTW No. 508, issued at 08:50 Hrs. on March 15, 2023, by A.E (Shift) 500kV Grid Station A.M (S), NTDC, Shikarpur. Both PTWs were canceled at 15:40 hrs. on the same date; and

27. **WHEREAS**, in terms of Investigation Report, the temporary grounding/earthing was installed by transmission line staff under R.E 500kV Grid Station A.M (S) NTDC Shikarpur. While working on the tower at height approximately 14 meter (45 feet), the transmission line staff utilized lineman body belts (positioning belts) with single lanyards for protection against falls from height. Mr. Khair Bux performed the re-jumpering of the Red and Yellow phases of the transmission line at Tower No. 252 of 500kV Guddu- Shikarpur Circuit-I. This task was carried out under PTW No. 507, supervised by A.E.T 500kV Transmission Line Sub-division A.M (S), NTDC Shikarpur, in

collaboration with his team members on the tower, Mr. Manzoor Ahmed LM-1 and Mr. Lal Chand LM-2. Thereafter, Mr. Khair Bux, who was equipped with a lineman body belt (positioning belt) with a single lanyard, proceeded to the blue phase of the same tower to perform re-jumpering. While adjusting his position for the re-jumpering of the blue phase and maneuvering around the string insulator through corona plate, he detached the single lanyard from the anchorage point. While stepping on the string insulator, he lost his balance, slipped, and fell from a height of approximately 14 meters (45 feet) to the ground with his back falling on the ground. He was transported around 11:40 hrs. to the nearest Rural Health Centre Khanpur, where he was pronounced dead upon arrival; and

28. **WHEREAS**, in terms of Investigation Report, NTDC climbers, utilizing lineman body belts (positioning belts) with single lanyards even on heights of 45 ft without ensuring 100% tie-off for protection against falls from height has caused this fatal incident which could have been easily avoided by providing full body harness belts to the climbers working on towers. Moreover, only temporary grounding /earthing was installed on all the 3 Phases, when the conductor was being re-jumpered, however, the same consisted of few conductor strands only instead of proper earthing/PTG rods and this is required to be ensured by the site engineer/supervisor/PTW receiver; and

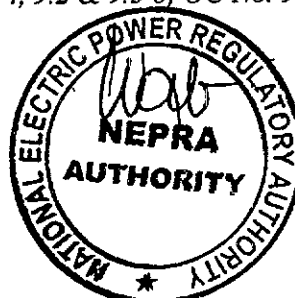
29. **WHEREAS**, in terms of Investigation Report, as per NTDC the transmission field staff have undergone necessary trainings. Regrettably, none of the T/Line staff could wear the safety belt correctly. During the investigation, the IC inquired the transmission field staff and officers to demonstrate the donning and doffing of a full-body safety harness with a single lanyard, but they were unable to do so. This is a serious observation, highlighting that the line staff, NTDC Site Management, NTDC trainers, and safety personnel lack knowledge and practice in the proper use of full-body safety harnesses. This indicates poor safety management by NTDC Site Management for sensitive tasks at 220kV and 500kV; and

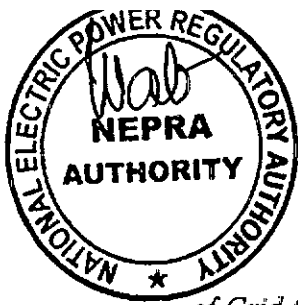
30. **WHEREAS**, in terms of Investigation Report, excessive workloads are being assigned to workers due to staff shortages and insufficient training. Since the re-jumpering work is physically demanding, the victim was tasked with re-jumpering the Red & Yellow Phases of Tower No. 252. Furthermore, the victim was once again assigned (either willingly or unwillingly) the task of re-jumpering the remaining Blue Phase, instead of utilizing other available line staff such as Mr. Bashir Ahmad LM-I, Mr. Manzoor Ahmad LM-I, & Mr. Lal Chand LM-II. This raises serious questions regarding the site supervision; and

31. **WHEREAS**, in terms of Investigation Report, in both Grid Stations (Dadu & Shikarpur), poor civil works and unsanitary/unhygienic conditions have rendered the premises unsuitable for human occupancy or residence. The poor civil works and unhygienic conditions were observed by IC at buildings, offices, restrooms, colonies, and switchyards, exhibiting issues such as excessive vegetation, broken trenches, exposed oil tanks, debris, and other equipment including insulators lying openly, posing safety hazards. Additionally, there is a lack of operational or available fire extinguishers. Moreover, there is urgent need for provision of human resources, hands on trainings, PPE, T&P, and vehicles for field formations stationed in remote areas in South region particularly at Dadu & Shikarpur Grid Station, including newly established T/L Divisions & Sub-Divisions. Moreover, a delay of more than 1 year has been noticed in opening of the accounts for newly created G/Stations, T/L Divisions & Sub-Divisions and the construction of a new dedicated TSG Centre at Jamshoro to provide hands-on training to local staff and officers, raises a serious question regarding efficiency and effectiveness of NTDC management; and

32. **WHEREAS**, in terms of Investigation Report, prima-facie violation of Section 18(1) of the NEPRA Act, Section 9.1.1, 9.1.2, 9.1.3, 9.1.4, 9.2 & 9.3 of OC No. 9 (Work Safety at the Interface)

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of Grid Code 2005, Section 7.15.14, 7.22.1.7.24.2, 7.24.4, 7.15.29, 7.25.2.(e), 7.25.2.(i), 7.20.1, 7.12.1 of Power Safety Code, 2021, Article 34 (Safety to Public), 35 (Health and Safety of Employees), Article 27 (Compliance with the Performance Standards) and Article 31 (Industry Standards & Code of Conduct) has been established. Additionally, it has also been proven that the NTDC has failed to indoctrinate the safety measures within its organization; and

Reply of the Licensee:

8. The Licensee was required to submit its response to the Show Cause Notice with fifteen (15) days. In response, the Licensee vide its email dated July 29, 2024 requested for extension of 2 weeks to finalize the reply in the subject matter. In view thereof, extension in the subject matter was granted to NTDC after getting Legal opinion and approval of the Authority in the subject matter. Finally, the Licensee submitted its response vide its letter dated August 13, 2024 (received on August 22, 2024) against the SCN dated July 12, 2024 issued by the Authority in the subject matter.
9. The Licensee reply against the above mentioned SCN dated July 30, 2022 was received by the Authority on August 22, 2024 whereby the Licensee stated as under:
 - i. **Reply of Para 6:** *The Authority directions (attached with this SCN dated 12.07.2024) will be addressed/responded accordingly.*
 - ii. **Reply of Para 7:** *Both incidents have already been reported to NEPRA accordingly.*
 - iii. **Reply of Para 8:** *In light of the Investigation Report regarding the incident involving Mr. Ali Asghar and his team, asserting our stance that adequate safety measures were in place and proper supervision was maintained throughout the critical activities described.*
 - iv. **Reply of Para 9:** *The delay in issuing PTW #1510 was due to the synchronizing of necessary resources to ensure smooth execution of the job. Regarding safety concerns, as per Clause No. 7.21, subclause No. 7.21.11 of NEPRA Power Safety Code for licensees (Second edition, June-2021), the de-energized 220kV Dadu-Khuzdar Circuit-I was grounded with grounding equipment on all sides of the location where the work was to be done. Therefore, possible effects of induced voltage were proactively being managed/ mitigated accordingly. Moreover, helmets were utilized by the staff deemed most at risk based on their proximity to induction zone. The PPEs utilized by crew members were based on a risk assessment of work being performed. All crew members adhered to established safety protocol strictly. Furthermore, adequate PPEs have been arranged and allocated for utilization by all crew members to prevent any such type happenings in future.*
 - v. **Reply of Para 10:** *While carrying out inspection, Mr. Zain Ul Abedeen (late), Electrician-II (BPS-09), followed safety protocols as per SoP such as wearing Safety Shoes. Unfortunately, an unforeseen moment resulted into fatal accident. Furthermore, induced voltage of all equipment installed in switchyard was mitigated through grounding, even after sunset as per practice in vogue. Moreover, in compliance of Inquiry Report, coveralls /dungarees have been provided to all crew members to ensure their safety while working at site in compliance to safety protocol in true letter & spirit.*
 - vi. **Reply of Para 11:** *Mr. Zain Ul Abedeen, a qualified official for grid station operations, was following established safety protocols, yet a tragic accident occurred unexpectedly. Regarding voltage induction, it is mitigated through grounding all metallic structures. Whereas, voltage detectors are not typically used to detect induced voltage on a de-energized line. These are*

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designed to detect the presence of steady state voltage on an energized circuit. However, as per directions of NEPRA, Voltage detector will be arranged for use in future.

vii. **Reply of Para 12:** NTDC's site management at 500kV Grid Station AM(S), Dadu, observed the all-operational tasks in accordance with authorized procedures and safety protocols. Asset Management South, Dadu was not obligated to provide job plan to the contractor, M/s Sunir Iran Power Company as it was the responsibility of the contractor. Mr. Ali Asghar (FM) was compelled and constrained by M/s Sunir Iran Power Company to assist the job during execution. It is also submitted that due to heavy rainfall received in Province in July 2022, the flood warning in Dadu City was issued by the concerned. For safety purposes a protection bund (soil) was erected around the 500 kV Grid Station (AM/GSO) NTDC Dadu. There was no road / approach path available to enter heavy machinery / crane in premises of Dadu Grid Station. Hence, contractor hired the crane a/w driver from AM/GSO [parked at Dadu Grid Station for maintenance purpose] on cash payment basis to carry out the work. Mr. Dhani Bakhsh, is operating the crane since considerable time at Dadu Grid Station successfully.

viii. **Reply of Para 13:** NTDC Site Management at 500kV Grid Station AM(S), Dadu, was/is always fully committed to stringent oversight and continuous improvement of operational practices to ensure safety and efficiency, as the grid station has been smoothly/efficiently working since 1984 as a part of National Grid System. There was no question of poor supervision by NTDC site management at Dadu, as the fatal incident occurred accidentally.

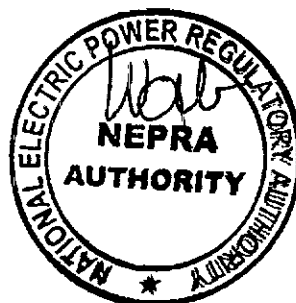
ix. **Reply of Para 14:** The employees at 500kV Grid Station NTDC Dadu are carrying out technical jobs with full devotion and dedication as per framed SOP and safety protocol, but fatal incident happened unfortunately. However, NTDC management is taking efforts to arrange safety seminars ARE BEING CARRIED OUT at respective grid stations to make the technical staff cognizant with safety protocols and code in order to avoid such occurrences in future. Regarding discharging of shift duties at 500kV Grid Station NTDC Dadu for 24 hours by shift staff, it is submitted that shift duties are being performed due to shortage of shift staff. Nevertheless, recruitment of shift staff is in rapid process by NTDC management and would be acquired accordingly. The persisting successful operations and workmanship being carried out at 500kV Grid Station NTDC Dadu, since its energization i.e., 1984, shows crystal clear the commitment, professionalism and performance of NTDC employees including safety culture towards their assigned jobs.

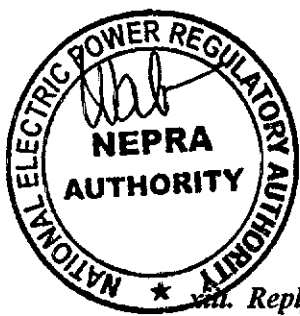
x. **Reply of Para 15:** No any critical tasks were assigned to non-technical or untrained staff. Their role was strictly limited to supporting the technical team to address manpower shortages, thereby facilitating skilled technical team to focus on critical O&M tasks effectively and timely. The persisting successful operations and workmanship being carried out at 500kV Grid Station NTDC Dadu, since its energization i.e., 1984, shows crystal clear the commitment, professionalism and performance of NTDC employees including safety culture towards their assigned jobs.

xi. **Reply of Para 16:** Regarding the issuance of PTW #1510 and the opening of isolators D2Q11, D2Q12, D2Q31, and D2Q32, it is clarified that no operation was performed by the shift staff on their own at Dadu, without prior instructions of NPCC. Moreover, operations were carried out as per job requirement while observing safety protocol.

xii. **Reply of Para 17:** In connection for negligence on the part of contractor, it is submitted that all safety and precautionary measures were adopted by shift staff at 500kV Grid Station NTDC, Dadu in the shape of closing of earth switches from both ends, and issuance of PTW duly got received from the recipient.

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- xiii. **Reply of Para 18:** It is submitted that there is no other PTG available at the Grid except the one which was used on 24.10.2022 and the same temporary earthing set is still available at 500kV Grid Station Dadu.
- xiv. **Reply of Para 19:** It is submitted that, when the work was carried out on 220kV Dadu-Khuzdar-I under PTW, the 220kV Dadu-Khuzdar-II circuit was energized. But no question of voltage induction arises at all, as PTGs were properly installed for ensuring the safety of the equipment and personnel. It is also, pertinent to mention that voltage detectors are not typically used to detect induced voltage on a de-energized line. These are designed/used to detect the presence of steady state voltage on an energized circuit. Nevertheless, voltage detector will be arranged for use in future, as per need.
- xv. **Reply of Para 20:** In this respect, it is submitted that the safety protocols were observed during execution of job at 500kV Grid Station, Dadu by NTDC Team. As in order to ensure the safety code and protocol, for using T&P and PPE properly, safety seminars had/have been arranged and physical awareness has been imparted as well among the employees so that such incidents could be avoided in future.
- xvi. **Reply of Para 21:** As per NTDC SoPs, all Grid operations are performed at 500kV Grid Station Dadu, in accordance with the System Operator (NPCC) requirements. Neither the contractor concerned nor any grid staff was authorized to make any operation on grid equipment at his own discretion.
- xvii. **Reply of Para 22:** It is submitted and clarified under peripheral conditions that Permit to Work Issuer and Receiver identified safe conditions and practices throughout the day proactively, but an unfortunate fatal accident took place at about 19:15 hours.
- xviii. **Reply of Para 23:** NTDC management has taken all out efforts for promoting safety culture and HSE environment within the formation. In this regard, Deputy Managers (Safety) have been discharging their obligations in respective circle offices. They do arrange seminars at different grid stations to familiarize employees for complying with the safety code and protocols. Regarding establishment of TSG training center, it is submitted that same is already operational under Chief Engineer TSG (South) NTDC Hyderabad at Jamshoro, and imparting trainings to employees satisfactorily. Improvement and desired goals are being achieved. It is also pertinent to mention here that land for construction of new training center at 500kV Grid Station Colony, Jamshoro for southern region has been allocated and civil department of NTDC has been directed by the NTDC management to complete pre-construction formalities and subsequently prepare the layout plan and map of the buildings to be constructed.
- xix. **Reply of Para 24:** All the service benefits have already been given to the legal heirs of deceased employee whereas compensation of PM package is pending due to court dispute of family of deceased employee. However, the case was pursued vigorously and succession certificate has been issued by honorable court which has now been forwarded to concerned department of NTDC for early payment of PM Package compensation.
- xx. **Reply of Para 25:** That the complete rehabilitation works of collapsed towers on February 28, 2023 and de-jumpering at dead end Tower No. 171 & 252 were successfully completed by 500kV Transmission Line staff Shikarpur Division and contractor by observing all the safety code with true spirit which is also acknowledged by NEPRA in its IC report findings.
- xxi. **Reply of Para 26:** That the two number PTW were taken by AET Guddu and Shikarpur for re-jumpering at dead end Tower No. 171 & 252 from Guddu and Shikarpur grid stations

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respectively. Rehabilitation works were completed by implementation of all the safety codes which is also acknowledged by NEPRA in its IC report findings.

xxii. Reply of Para 27: That Line staff at dead end Tower No. 252 installed temporary grounding for re-jumpering against electrical hazard as per safety code. While re-jumpering, Mr. Khair Bux LM-II utilized lineman body belt to prevent mechanical hazard. Moreover, Mr. Khair Bux with his team successfully completed re-jumpering of Red and Yellow Phases. While thereof, adjusting his position to proceed to blue Phase he detached his body belt, consequently an unfortunate accident occurred due to loss of balance, although at the time of work both electrical and mechanical safety measures were adopted. Further, in order to increase more safety against mechanical hazard full body harness with double lanyard had/have been provided to Line staff in order to strengthen more safety measures.

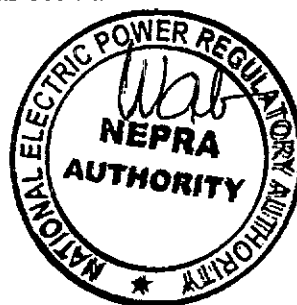
xxiii. Reply of Para 28: That, the officials were full trained and well aware about electrical and mechanical hazards for performing such type of activities. In this particular case, the said official had executed such nature of jobs, repeatedly. However, in order to enhance safety measures against electrical and mechanical hazards, PTG rod and full body harness with double lanyard had/have been provided to Line staff (replied in point 27). Working site Engineers have been directed to ensure use of PTG rod and full body harness with double lanyard for maintenance of Transmission lines.

xxiv. Reply of Para 29: It is submitted that the transmission line field staff were/are being trained from TSG formation for maintenance of transmission lines including use of PPEs. As far as donning and doffing of full body harness demonstration from the officer is concerned, the officer who was asked for demonstration was temporarily posted as Deputy Manager Safety from field formation whose training is still awaited. Or the Transmission line staff might be confused in front of honorable enquiry committee of NEPRA. Furthermore, regular demonstrations at site were/are also arranged for adoption and use of T&P and PPE in order to avoid such incidents in future.

xxv. Reply of Para 30: It is submitted that the shortage of staff is being addressed through new appointment process and will be completed soon. The officials deputed for re-jumpering were fully trained. The victim was assigned to complete the re-jumpering job at Tower No. 252 with two trained officials (Mr. Manzoor Ahmad LM-I, & Mr. Lal Chand LM-II) for assistance. Additionally, Transmission line team was also engaged in supporting them from ground. Hence, the site supervision was fully intact at the time of re-jumpering at tower No. 252.

xxvi. Reply of Para 31: It is submitted that even though infrastructure of Dadu and Shikarpur grid stations is quite old (about more than 40 years and 23 years respectively) but almost all 500/220kV grid station are equipped with potable water. Deputy Managers Dadu & Shikarpur grid stations have made efforts regarding material lying in the switchyards, and the same has also been shifted to site stores in compliance to enquiry report. The fire Extinguishers are available as per yard stick. PPEs and T&P for newly created subdivisions have also been provided. More PPEs procurement is under process, to be provided to grid stations and transmission line staff. The case for opening accounts for newly created divisions is under process with management. Moreover, Civil formation has been advised for improving of Civil structure of Dadu & Shikarpur grid station. In this regard they have prepared estimates for execution of civil works after completing all the codal formalities for improving esthetical appearance. Regarding Training center, it is submitted that NTDC management is taking keen interest in development of new training center at 500kV Grid Station Colony, Jamshoro for southern region. For this purpose, land has been allocated at Jamshoro and civil department of

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NTDC has been directed by the NTDC management to complete pre-construction formalities and subsequently prepare the layout plan and map of the buildings to be constructed.

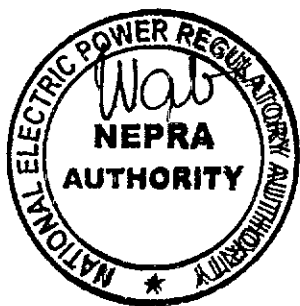
xxvii. Reply of Para 32: That it is worth mentioning here that compliance of NEPRA code is being implemented within NTDC formations and sub-formations in true letter and spirit by posting of DM (HSE) in all circles of NTDC, and are conducting safety seminars on regular basis for promotion of safety culture among field formations. Keeping in view of our above submissions & present financial difficulties being faced by NTDC due to the Amounts withheld (approx. Rs. 42 billion) at different instances since 2019 during FCA hearings of X-DISCOs and long-awaited approval of NTDC Tariff Petition since 2022 due to pending approval of TIP by NEPRA, it is humbly requested that subject Show Cause Notice may please be withdrawn or we may be given chance to be heard in person to clarify our position, at your convenience.

Hearing:

10. The Authority considered the response of the Licensee and decided to provide an opportunity of hearing. Accordingly, a hearing in the matter of SCN issued to NTDC was held on October 09, 2024. During the hearing, NTDC reiterated its earlier submissions made in its report submitted against the SCN dated July 12, 2024. During the hearing, NTDC denied the allegations alleged against it. NTDC reiterated the same stance as given in its reply and failed to produce any new evidence and convince the Authority in its defense against the SCN issued and response submitted by NTDC. Upon which, NTDC requested for additional time for submission of missing documentary evidences in the subject matter. However, no documentary evidence in this regard was submitted by NTDC.

Analysis/Findings of the Authority:

11. The licensee has been heard at length, its reply to the show cause, investigation report, and other relevant record has been examined and following has been analyzed;
 - i. At the outset, the NTDC was directed to address the findings by the Inquiry Committee (IC) in investigation conducted in the subject matter. In contrast to the said, NTDC has chosen to only address the Show Cause Notice (SCN) Paras only. Furthermore, one of the prime reason behind initiating investigation against NTDC was that NTDC reported these events at a very belated stage as NTDC submitted the copies of its Preliminary Inquiry Reports after lapse of eight (08) months of the incidents. Moreover, NTDC failed to submit the copies of Final Inquiry Report to the Authority before initiation of the investigation.



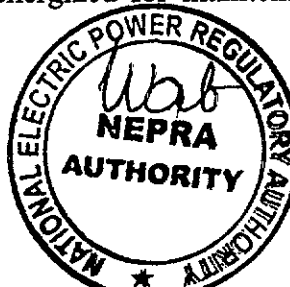
NTDC has reiterated its earlier concocted version regarding safety measures and supervision, which is contradictory to the ground facts. Here it won't be wrong to state that NTDC tried to mislead the IC into believing otherwise. Had the safety measures been adequate, then the said incident could have been easily avoided. Moreover, Mr. Ali Asghar & his team, who are actually employees of NTDC, wouldn't have engaged themselves working for a job which was purely supposed to be executed by the contractor. During the proceedings as well as the hearing, NTDC failed to submit any cogent justification regarding the fact that why its employees were found working for the contractor. Additionally, the usage of substandard earthing cable, ineffective permanent earthing and poor site

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supervision at such critical activity raises serious question mark over NTDC and its workers.

- iii. The response of NTDC w.r.t delay in issuing PTW can be considered. However, the delay in issuing PTW led to this unfortunate incident occurred at evening of October 24, 2022 around 19:15 without adequate lighting, T&Ps and PPEs. The de-energized 220kV Dadu – Khuzdar Cct – I was actually a double circuit transmission line, therefore, before grounding it as per 7.21, 7.21.11 of NEPRA Power Safety Code, its clause 7.21.12 also states to check and determine that whether the apparatus has been de-energized along with checking health of the grounding cable. However, the said clause followed by 7.21.13 & 7.2.14 and 7.22 were not followed by NTDC eventually leading to the unfortunate incident at 500kV Guddu Grid Station. The version of NTDC with regards to use of helmets, PPEs and adherence to established safety protocol is also negated as the situation on field/site was totally different than the stated scenario, wherein the workers at site were seen working without basic PPEs & T&Ps and mostly in slippers or sandals. However, during the proceedings of the hearing as well as in the response submitted by NTDC against the SCN issued by the Authority, it has come to the knowledge of the M&E department that NTDC has freshly procured PPEs and distributed amongst their field formations. However, strict adherence to safety protocols is required to be enforced within the ranks of NTDC field formations.
- iv. To begin with, if the site supervisor had been present and the area was cordoned off, then this unfortunate incident could have been easily avoided. Moreover, it was also observed by the IC that there were some induced voltages present in the de-energized 220kV Dadu – Khuzdar transmission line due to it being a double circuit line. Had NTDC adhered to proper safety measures as prescribed in the NEPRA Power Safety Code for de-energization and working on double circuit transmission line alongwith usage of applicable PPEs and T&Ps, then this event could have been easily avoided. The step of NTDC with regards to provision of Coveralls/Daangris & PPEs within its field formations is commendable, however, this practice needs to be exercised on regular basis instead of only doing it after some fatal/non-fatal incident or directions by the Authority.
- v. NTDC in both of its preliminary as well as final inquiry report failed to submit or highlight these facts i.e. the manner and cause of the death of its deceased employee in the incident mentioned in Para 11 of the SCN. Once again, poor supervision, lack of PPEs & T&Ps and adherence to safety protocols have led to this incident. It's a fact that this was not the employee fault, however, the onus of the responsibility squarely falls upon the shoulders of NTDC field formations i.e. LS, Foreman & its team, Permit Issuer, Permit Receiver, who failed miserably in adherence to safety protocols and use of PPEs and T&Ps during this important task being executed. Not only this, but even the involvement of NTDC workers in a task which was purely related to the contractor raises a serious question mark over the then management i.e. GM/CE of NTDC, during which this incident was reported. The use of voltage detector for the induction voltage while working on double circuit transmission lines is a very common practice throughout the world and power transmission network. When one circuit is de-energized for maintenance while the adjacent

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circuit remains live, electromagnetic induction can cause significant voltages on the inactive line. This poses safety risks to maintenance personnel. Therefore, employing voltage detectors is essential to ensure the de-energized line is safe to work on.

- vi. In the reply submitted by NTDC, it has continuously reiterated its version that all operational tasks are carried out in adherence to due procedures and safety protocols, which is again contradictory to the factual position as unearthed by the IC in the instant matter. As per 7.19 Risk Assessment / Job Safety Analysis of NEPRA power safety code 2021, NTDC was obligated to provide job plan either by itself or through contractor and carry out all of the relevant steps mentioned in 7.91 section above. Moreover, the statement that Mr. Ali Asghar (Foreman) and his team was constrained by the contractor M/s Sunir Iran Power Company to assist the job during execution reveals utter failure of the higher management of NTDC posted in Lahore and Hyderabad region. This statement raises a serious question over the efficiency of NTDC management and reveals the say/influence of contractors over daily affairs of NTDC. This not only portrays poor image and lackluster non serious attitude of senior leadership but also implies that NTDC is run by contractors and senior management has no say in the affairs where contractors are involved. The submissions of NTDC w.r.t hiring of crane on rent is plausible and accepted only.
- vii. The statement submitted by NTDC i.e. that there was no poor supervision by NTDC site management is in total contrast to even its own Final Inquiry report dated December 04, 2023. Thereby, the nature of duality of NTDC submitted in the instant version is flabbergasting and beyond any legal/ technical comprehension. As NTDC Final Inquiry Report also concluded "inadequate and poor supervision" as one of the prime reason behind this unfortunate incident. Furthermore, the version of NTDC with regards to shortage of staff is justified, however, for the last 2-3 years, the Authority has consistently directed NTDC to hire the relevant technical staff on priority, but to no avail. This once again raises serious question mark over the performance of NTDC management, who have failed to complete a simple hiring process even in 2-3 years. For critical assignments, NTDC is duty bound to utilize staff who are not tired or overworked and introduce such shift patterns which are legally, technical and morally reasonable.
- viii. If we take into account the version of NTDC with regards to not opening isolators of D2Q11, D2Q12, D2Q31 & D2Q32, then why did the contractor opened those isolators after occurrence of fatal incident and completed the remaining work without any incident. Moreover, as per the schematics / SLD and protection team, IC was of the view that these isolators were supposed to be opened before issuance of PTW # 1510 to achieve complete isolation of the bay for Circuit-I. Further, NTDC support for contractor is beyond any comprehension. This job was purely meant for and to be executed by the contractor, and the absence of the contractor and his site engineer and failure of the contractor's foreman who was present at the site to ensure correct use of PPE, installation of PTG is tantamount to the contractor's negligence towards safety protocols and inadequate site management resulting in this catastrophic and tragic incident. Therefore, NTDC justification in

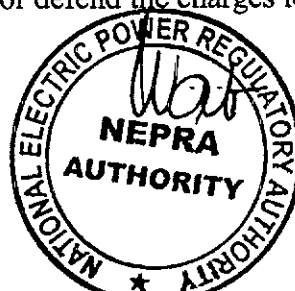


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this regard stand nullified and action is required to be taken against the contractor's negligence resulting in this unfortunate incident is of paramount importance and in line with the Authority's directions.

- ix. Additionally, once again NTDC has failed to submit any cogent reason or technical justification in its version with regards to opening of isolators D2Q11, D2Q12, D2Q31, and D2Q32 as indicated in the Log Sheet dated October 25, 2022, which were not opened earlier, when the victim was working. Even if we go by the logic of NTDC that it's the NPCC who directed the opening of these isolators, then why these isolators were not opened earlier? This raises a serious question mark over NTDC. And if we go by the version of NTDC with regards to operation on grid equipment and opening of isolators by NPCC, then NPCC is equally responsible along with NTDC. Further, when this investigation was being carried out, NPCC was and still an integral part of NTDC. Further, the IC did not find any supporting documented evidence as claimed by NTDC in its defence, despite repeated reminders and various opportunities provided to NTDC, including but not limited to provision of additional time and meetings. NTDC failed to produce any substantial evidence in this regard during the proceedings or thereafter. Therefore, had unsafe conditions and practices were identified by PTW issuer and receiver, and intervened to prevent Mr. Ali Asghar & Zain Ul Abdeen from engaging in work in unsafe conditions, which was purely supposed to be executed by the contractor at first hand, then this event could have been easily avoided.
- x. The Authority at multiple times has raised its serious concerns w.r.t inadequate safety culture and dedicated directorate with sufficient resources, vehicle and HSE personal to enable them to dispense their duties respectively. However, the same is yet to be materialized. Although the preparation of layout plan for construction of TSG center is appreciated. However, the Authority at multiple times for the last 2 years have directed NTDC to establish/construct a dedicated TSG center at Jamshoro (Hyderabad region) to impart training to field formations posted in South region, who are facing severe shortage of manpower and essential trainings to work on live/dead circuits, grid equipment and operations & maintenance in an effective manner. However, even after passage of nearly 2 years, the same has not been implemented by NTDC. This has not only lead to swift deterioration of billions of rupees of NTDC assets, but has also resulted in several fatal/non-fatal incidents. Moreover, NTDC has failed to submit any reasonable timeline for the construction of dedicated TSG center either, therefore this indicates the seriousness & lackluster attitude of NTDC management in adherence of the Authority directions and running its day to day affairs.
- xi. The Authority directed NTDC to submit documentary evidence in support of their claims and compensation paid to deceased employees and their families. However, the evidence was not provided by NTDC despite providing additional time period for the provision of the same. NTDC is required to ensure the provision of compensation to the deceased families and provide all required documentary evidences in this regard. Until then, the clarification submitted by NTDC is not justified as the same has not been supported by any supporting evidence. Moreover, NTDC failure to submit any response or defend the charges leveled against NTDC



i.r.o failure of non-provision of reports, documents, implementation status speaks volumes of its management's capacity and seriousness in addressing the issue of non-compliance of the directions of the Authority.

xii. In response to the issuance of SCN, NTDC has provided full body harness belts with double lanyard to its transmission line staff in field formations, although this action of NTDC demonstrates NTDC's intent to follow safety protocols. However, here it is also important to mention that the usage of single lanyards lineman body belts for fall protection is outdated and inadequate for working at heights on transmission towers. Moreover, the detachment of the lanyard was a critical moment where risk control failed as single lanyard belts' design inherently requires disconnection and reconnection during movement, creating moments of vulnerability. Due to this reason full-body harnesses with double lanyards or fall-arrest systems are used which allow continuous anchorage during movement. NTDC failure to utilize double lanyard belt along with fall arrest systems before this event has led to this unfortunate incident. This approach of NTDC implies a reactive rather than proactive approach to safety.

xiii. The NTDC has failed to address the observations of IC with regards to usage of lineman body belts (positioning belts) with single lanyards even on heights above 45 feet off the ground at 500kV Guddu – Shikarpur Circuit – I i.r.o another fatal case reportedly occurred on March 15, 2023. The lack of advanced personal protective equipment (PPE) prior to the incident reflects a gap in safety culture and risk assessment within NTDC's operations. Further, lineman body belts are primarily positioning devices, not fall-arrest systems. Their design does not protect against falls but only provides stability when attached to a structure and as per global safety standards (e.g., OSHA 1926.502) as well NEPRA Power Safety Code 2021, fall protection at heights above 6 feet requires a full-body harness with a fall-arrest system, which distributes the impact forces in case of a fall and prevents detachment. Therefore, fall protection systems like double lanyards should have been standard practice before the incident.



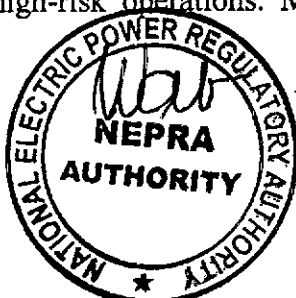
xiv. Furthermore, NTDC post-incident shift to full-body harnesses with double lanyards demonstrates recognition of this gap but highlights a reactive rather than proactive safety approach. Moreover, experience alone does not ensure safety compliance. Familiarity with tasks can sometimes lead to complacency, emphasizing the need for strict enforcement of safety protocols. The site engineer/supervisor bears significant responsibility for ensuring adherence to updated safety standards, including verifying the use of proper PPE (e.g., full-body harnesses) and robust grounding systems.

xv. The IC findings clearly point to insufficient training efficacy. Despite tall claims of training by NTDC, its staff were unable to perform a basic demonstration of donning and doffing a safety harness correctly. NTDC attributes this failure to either the temporary role of the DM Safety or nervousness of staff during the inquiry. However, these reasons do not address the root cause: a lack of hands-on, practical training that ensures consistent competency. Incorrect harness usage can render the equipment ineffective, making it a critical training priority. The IC

findings has proved that NTDC training programs fail to achieve this baseline competency. Despite of the said, NTDC has failed to commission the dedicated TSG center at Jamhsoro through which regular refresher courses can be made mandatory to reinforce the practical skills. This exposes deep-seated issues in NTDC safety management practices, particularly regarding PPE usage and training effectiveness. NTDC response, while acknowledging some gaps, deflects accountability by attributing the lapses to temporary postings and nervousness during inquiries. This reactive approach must shift to a proactive strategy focused on rigorous training, robust safety leadership, and a culture of accountability. Only then can NTDC ensure the safety of its line staff and prevent such incidents in future.

- xvi. NTDC stance regarding assigning such a demanding task to a single worker, even with assistance, reflects poor workload management and its acknowledgment of staff shortages confirms a systemic issue that likely contributed to the overburdening of the victim. Moreover, the promise of future appointments does not address the immediate lapse in workforce planning at the time of the incident. Furthermore, this highlights a gap in NTDC workforce and task management policies, where operational pressure is compromising worker safety and performance. NTDC observations about staff shortages may be valid, but it points to systemic and deep rooted issues in its workforce management and supervision as the Authority at number of times has directed NTDC to hire the required technical professionals on priority and impart trainings so they might be able to dispense their duties judiciously.
- xvii. NTDC actions appear to be of reactive nature rather than part of a structured program. Routine inspections, preventive maintenance, and timely repairs could have easily prevented this issues highlighted by the IC. Moreover, the absence of operational fire extinguishers and the unsafe conditions at grid stations reflect systemic lapses in accountability and oversight. This reflects NTDC management failure to address these issues proactively indicating disconnect between policy and implementation. Furthermore, the poor upkeep and unhygienic conditions of the office premises at Shikarpur, Guddu and other areas of South region raises a serious question mark over the performance of GSO, Civil & EHV departments who are directly and indirectly responsible for maintaining their respective offices in an orderly manner. This needs serious work, the Authority at various times have raised the issue of poor civil works at NTDC grid stations, for which NTDC spends billions of rupees annually, however, the quality of works is so poor that the buildings as well as switchyards are often flooded with sewage/rain water or walls are often found broken alongwith chips falling off the buildings. Further, no documentary evidences have been submitted by NTDC with regards to works that have been initiated at both of these sites i.e Guddu & Shikarpur.
- xviii. NTDC response of "pre-construction formalities" being underway with regards to construction of TSG center at Jamshoro lacks urgency, especially given that the land was allocated over a year ago. The absence of a dedicated training center in the South region underscores a failure to prioritize capacity building and the development of local talent for high-risk operations. Moreover, the delays in

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constructing the Jamshoro TSG Training Center has exacerbated the training gaps, leaving South region field staff ill-equipped to handle complex maintenance and safety tasks. This has led to more reliance and excessive work load on trained professionals posted at North region, who are frequently moved from their respective regions to carry out specific and urgent tasks. The investment plan of NTDC has been approved by the Authority in the month of September 2024. However, despite allowing 100 of billions of rupees, NTDC has failed to improve its conditions and reform itself.

12. Keeping in view the above arguments, the Authority is constrained to believe that the Licensee's claims made during the hearing and against SCN are unjustified, unwarranted and bears no ground.
13. In this regard, Section 18 of the NEPRA Act 2018 (amended time to time) is reproduced hereunder;

18. Responsibilities of National Grid Company. — (1) *The national grid company shall be responsible to operate and provide safe, reliable transmission and inter-connection services on a non-discriminatory basis, including to a bulk-power consumer who proposes to become directly connected to its facilities.*

(2) *Without prejudice to the foregoing responsibilities, the national grid company shall—*

(a) *make available to the general public the tariff specifying the Authority's approved rates, charges and other terms and conditions for transmission and inter-connection services;*

(b) *not levy any rate or charge or impose any condition for the transmission of electric power which has not been approved by the Authority as a tariff;*

(c) *not cause a division or any associated undertaking to engage in generation and distribution:*

Provided that this clause shall not apply to KESC and WAPDA so long as their electric systems remain integrated; and

(d) *develop, maintain and publicly make available, with the prior approval of the Authority, an investment program for satisfying its service obligations and acquiring and selling its assets.*

14. The Article 34 (Safety to Public) & Article 35 (Health & Safety of Employees) of the Transmission License states as under;

... the Licensee shall plan, design, operate and maintain its transmission system in such a manner so as not to endanger public life or property.

Further, as per the Article 35 (Health & Safety of Employees) of the Transmission License, the Licensee, in consultation with other licensees and representatives of the employees, shall establish and maintain an appropriate



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machinery of forum for the joint consideration of issues of mutual concern in respect of the health and safety of Licensee's employees at work ...

15. **The relevant provisions of NEPRA Safety Code 2021 are as under;**

7.15.14. Use cylinder trolleys, material baskets, cylinder racks, and other proper types of equipment to transport cylinders.

7.22.1. Only electrically experienced, trained and authorized employees contractors shall perform electrical work against approved "Permit to Work" under the continuous direction and supervision of the job in-charge.

7.24.2. All electrical circuit conductors and circuit parts shall be considered energized until the source(s) of energy is (are) removed, electrical energy discharged and de-energized through a mechanically secure connection to an effective ground potential. Electrical conductors and circuit parts that have been disconnected, but not under isolation, tested and grounded (where appropriate) shall not be considered to be in an electrically safe work condition, and safe work practices appropriate for the circuit voltage and energy level shall be used. Isolation requirements shall apply to fixed, permanently installed equipment, temporarily installed equipment and portable equipment.

7.24.4. Up-to-date drawings shall be considered a primary reference source for isolation location. When up-to-date drawings are not available, the company shall be responsible for ensuring that an equally effective means of locating all sources of energy is employed.

7.15.29. Crane operator shall possess a government license, valid for the type and size of the crane being operated and shall be certified and trained for the equipment he/she operate.

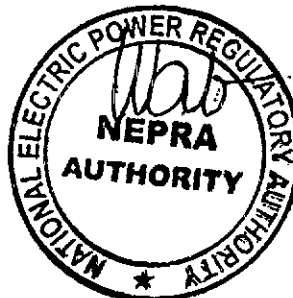
7.25.2 (e). Permit to Work shall be issued and received only by trained and authorized Permit to Work Issuer & Receiver. Licensee shall establish specific training requirements for these functions as well as maintain a list of staff who is authorized to act as a permit to work issuer or receiver.

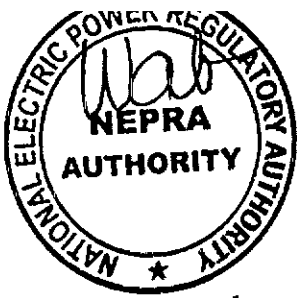
Permit to Work: 7.25.1. Licensee shall apply Permit to Work System and the work shall be carried out only when there is a valid permit to work issued for corrective and preventive maintenance activities, etc.

Personal Protective Equipment: 7.20.1. Personal Protective Equipment (PPE)/ Tools & Plants (T&P) shall be in accordance to Hazard Risk Category and/or PPE/T&P Assessment study to provide protection from hazardous conditions.

Standard Operating Procedure (SOP) Work Instructions 7.12.1. Licensee shall establish, implement and maintain "Standard Operating Procedure (SOP) Work Instructions" to describe Occupational Health, Safety, and Environment as per Licensee operational risks to ensure Licensee operations are carried out in a safe and environmentally responsible

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and protective ways; and to make safe and healthy work environment for employees and contractors.

16. From the above, it has been established that the Licensee has failed to discharge its statutory obligations to maintain safety standards and ensure that its Transmission network is operated and maintained in a safe manner. In view thereof, the Licensee has contravened above-stated provisions (including others) of the applicable Rules, Regulations, Codes, & NEPRA Act.

Decision:

17. Keeping in view of above and the relevant provisions of the NEPRA Act, Grid Code, Safety Code, NTDC License & other applicable documents, submissions of the Licensee and available record, the Authority observes that the Licensee has constituted violation of Section 18(1) of the NEPRA Act, Section 9.1.1, 9.1.2, 9.1.3, 9.14, 9.2 & 9.3 of OC No. 9 (Work Safety at the Interface) of Grid Code 2005, Section 7.15.14, 7.22.1, 7.24.2, 7.24.4, 7.15.29, 7.25.2.(e), 7.25.2.(i), 7.20.1, 7.12.1 of Power Safety Code, 2021, Article 34 (Safety to Public), 35 (Health and Safety of Employees), Article 27 (Compliance with the Performance Standards) and Article 31 (Industry Standards & Code of Conduct). Additionally, it has also been proven that the Licensee has failed to indoctrinate the safety measures within its organization.
18. The Authority has also noted that the Licensee has not given full compensation to the bereaved family of deceased victims and failure of NTDC to pay the applicable compensation to the families of the victims is inhumane, unjustified and bears no legal grounds. Therefore, ***the Authority hereby directs Licensee to give full compensation to the bereaved families as per the applicable Law.*** Further, the Licensee shall submit documentary evidence of its compliance in this regard to the satisfaction of the Authority within a period of one (01) month.
19. In addition to the above, the Authority through this fine Order hereby directs NTDC to ensure adequate safety protocols and enabling proper PPE and provide sufficient trainings and tools to the staff (south as well as north region on non-discriminatory basis), failing which, recurring fine will be imposed on NTDC.
20. In view of facts narrated above, the Authority observes that the deaths of Mr. Zain Ul Abedeen (electrician) occurred on October 24, 2022, while performing routine work at 500 kV Dadu Grid Station and Mr. Khair Bux, LM-II occurred on March 15, 2023, during the rehabilitation work (i.e. re-jumpering of blue phase) of tower No. 252 at 500 kV Guddu-Shikarpur Circuit occurred due to violation of NEPRA Power Safety Code, Grid Code, NEPRA Act, Rules & Regulations made thereunder (inter alia) as well as supervisory lapses, in-adequate trainings & staff in South region, lack of safety measures and sheer negligence of the Licensee in following the safety measures/SOPs. Therefore, the Authority decided to impose a fine of Ten Million Rupees (**Rs. 10 Million**) on the Licensee.
21. Accordingly, the Licensee is directed to pay the fine of Ten Million Rupees (**Rs. 10 Million**) in designated bank of the Authority within a period of three (03) months after the date of issuance of this order and forward a copy of the paid instrument to the Registrar

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Office for information, failing which the Authority shall recover the amount due under Section 41 of the NEPRA Act read with relevant provisions of the Fine Rules as arrears of the land revenue.

22. This Order shall not prejudice any other rights and remedies of the families of the victims as may be available to them under the applicable Law.

Authority

Rafique Ahmad Shaikh
Member (Technical)



Maqsood Anwar Khan
Member (Licencing)



Mathar Niaz Rana
Member (Tariff)



Amina Ahmed
Member (Legal)



Waseem Mukhtar
Chairman



Announced on 26th February, 2025 at Islamabad.

