June 23, 2026

Tokyo Electric Power Company Holdings, Inc.

Board of Directors

# Nuclear Safety Reforms Monitoring Results

## -23rd Nuclear Reform Monitoring Committee-

In September 2012, the Tokyo Electric Power Company (Currently Tokyo Electric Power Company Holdings, Inc., hereinafter referred to as, "TEPCO HD") established the Nuclear Reform Special Task Force in light of its regrets over the Fukushima Daiichi Nuclear Power Station Accident. At the same time, it also created the Nuclear Reform Monitoring Committee (hereinafter referred to as, "NRMC"), the purpose of which is to monitor and supervise nuclear safety initiatives from an external point of view.

The NRMC has monitored and supervised reform initiatives that will enable TEPCO HD to become a nuclear operator with the highest levels of "safety awareness," "technological capability," and "ability to engage in dialogue" with society.

During the 22nd meeting of the Nuclear Reform Monitoring Committee, the NRMC deemed that steady progress is being made with nuclear safety reforms. However, troubles, such as human errors, etc., continue to occur, and it is important that TEPCO HD employees come together with contractors under the leadership of upper management to further strengthen initiatives for improving safety culture and safety while taking the initiative to continue nuclear safety reform initiatives implemented to date.

Therefore, in light of the results from the previous meeting, the NRMC has monitored and supervised nuclear safety reforms from the perspectives of the continuity of nuclear safety reforms implemented to date, and whether or not the independent improvements being made in the pursuit of nuclear safety are sustainable.

Being that it has been 15 years since the Fukushima Daiichi Nuclear Power Station Accident, the NRMC looked back on nuclear safety reform initiatives and structures that have been implemented to date to examine how TEPCO HD has been transformed since the aforementioned accident.

Since its last meeting, the NRMC has exchanged opinions with upper management, visited, and performed reviews o,f the Fukushima Daiichi Nuclear Power Station (1F) (two times in total on October 22, 2025 and other dates), the Fukushima Daini Nuclear Power Station (2F) (two times in total on October 22, 2025 and other dates), and the Kashiwazaki Kariwa Nuclear Power Station (KK) (Four times in total on December 15, 2025 and other dates).

At today's meeting, the 23rd of its kind, the NRMC received a report from TEPCO HD on the status of nuclear reform initiatives implemented to date.

○ At 1F, the ocean discharge of ALPS treated water commenced on August 24, 2023 and 20 discharges have been implemented as planned without any significant troubles over the last three years. The fifth and most recent safety review by the International Atomic Energy Agency (IAEA) task force, which have been conducted since the commencement of discharge, took place between December 15~19, 2025 thereby illustrating efforts to ensure transparency through third-party review missions.

In light of the body contamination of a worker in the additionally installed ALPS building, the four troubles, and the suspension of fuel debris retrieval work that occurred since October 2023, work inspections are currently jointly implemented by contractors and TEPCO HD employees prior to starting any task. The objective of this is to strengthen assessments for identifying risks from the same viewpoint as workers in the field. Furthermore, in an effort to solve problems as mutually trusted colleagues, since April 2025, TEPCO HD employees have been dispatched to contractors (a pilot form of the "One Team" approach) during ALPS maintenance tasks as part of initiatives to create a feeling of "One Team." As a result, the incidence of significant troubles has decreased.

In regards to fuel debris retrieval, trial retrieval at Unit 2 began in September 2024 and fuel debris was successfully retrieved in November of the same year and April 2025. During FY2026, a robotic arm will be used to implement internal investigations of the Unit 2 primary containment vessel (PCV) and retrieve more fuel debris samples. Since using the robotic arm to retrieve fuel debris will be an unprecedented task, in light of risks identified through past verification tests and the countermeasures implemented to address those risks, safety must be prioritized during decision-making. And, in the event that unforeseen circumstances arise, it is imperative that conservative decisions be made, and steady progress resumed only after ascertaining the causes of such circumstances and formulating countermeasures to address them.

In regards to Unit 3, in July 2025, TEPCO HD told the Nuclear Damage Compensation and Decommissioning Facilitation Corporation's (NDF) Fuel Debris Retrieval Construction Method Evaluation Subcommittee that under certain assumptions, approximately 12 to 15 years will be required to make preparations for the full-scale retrieval of fuel debris, and that it will perform field reviews and design reviews over the next one to two years.

Decommissioning is entering an unprecedented phase of long-term, technically difficult fuel debris retrieval, so in order to ensure safety, it is vital that coordination and a sense of unity with contractors be strengthened while also securing and training human resources.

○ At 2F, the decision to decommission all reactors was made on July 31, 2019, and decommissioning commenced on June 23, 2021. The decommissioning process shall consist of four phases and during the current Phase 1 (Dismantling preparations: 10 years), methods for dismantling equipment outside controlled areas and disposing of waste are being deliberated. Going forward, the plant must be steadily decommissioned while prioritizing safety and the spent fuel kept stable and cool.

○ At KK, control rods were withdrawn from Unit 6 on February 9, 2026, and following interim shutdown commercial operation was recommenced on April 16 after approximately 14 years. During the startup process there were several troubles, such as the control rod pairing error and Rod Control & Information System minor malfunction (serious inverter malfunction) discovered on January 17, and the generator sensitive ground fault relay alarm on March 12, but each time, power station executives made the appropriate decision to stop startup thereby showing that they are prioritizing safety. Furthermore, power station executives should be commended for presenting themselves to the public to explain the situation surrounding Unit 6 startup thereby showing to the community their stance on prioritizing safety. It is important to continue to make conservative decisions like this in the future even after restart.

Furthermore, in October 2025, the Kashiwazaki-Kariwa Nuclear Power Station Steering Committee (KK Steering Committee) was established as a new governance body with the authority to directly report to, and advise, the Board of Directors. With the knowledge and perspectives brought to the table by its external members (from both within Japan and overseas) the KK Steering Committee shall meet quarterly to discuss business plans during the planning stages and has already met in February and June 2026.

And, in light of the rash of work accidents in conjunction with specialized safety facility (SSF) construction, all work was suspended in October 2025 for a comprehensive safety inspection. As a result, the incidence of accidents has decreased. Additionally, safety exchanges between 1F and

KK that began in light of the good practices at 1F are being held, and the NRMC expects to see the level of safety improve through voluntary efforts to reflect these practices in safety activities. Taken in conjunction with the informal gatherings attended by both contractors and power station personnel, it is expected that these initiatives will further reduce the number of work accidents.

The following are the NRMC's findings pertaining to the continuity of nuclear safety reform initiatives and the sustainability of independent improvements made in the pursuit of nuclear safety (sustainability), and TEPCO HD's transformation since the Fukushima Daiichi Nuclear Power Station Accident.

○ Nuclear safety reform continuity and the sustainability of independent improvements

As a whole, nuclear safety reform initiatives implemented to date by TEPCO HD continue under the leadership of upper management and in unity with contractors, and efforts are being made to ensure the sustainability of systems/mechanisms for making independent improvements in pursuit of nuclear safety. The following are representative examples of these efforts.

The Nuclear Safety Oversight Office (NSOO), which is an internal department for monitoring nuclear safety formed after the Fukushima Daiichi Nuclear Power Station Accident, directly monitors the conditions in the field at 1F, 2F and KK as an independent entity, and provides advice and reports to the executive board and the Board of Directors. Based on field observation and troubles, the NSOO conducts quarterly quantitative assessments (Red, Yellow, Green) of performance in 12 target areas including nuclear safety culture. The improvement suggestions aimed at excellence that are given without becoming complacent with the current situation contribute to the independent improvement of nuclear safety at TEPCO HD, and the NRMC expects to see more good things from the NSOO in the future.

As mentioned earlier, with the awareness that "there is no end to independent improvements" and with the participation of experts from within and outside Japan, representatives of regional organizations rooted in Niigata Prefecture, and regional business leaders, the KK Steering Committee, which was established in October 2025, deliberates and monitors the management of the entire power station. It is positioned as a body that serves the role of strengthening independent improvement by both making suggestions and putting those suggestions into practice. The NRMC expects to see steady progress with initiatives aimed at gaining trust under the governance of the KK Steering Committee based on the issues and opinions about trust that have been elicited from the community.

Since 2018, efforts have been made to root safety culture by repeatedly subjecting all employees to safety awareness activities and training through which they learn about the regrets and lessons learned from the Fukushima Daiichi Nuclear Power Station Accident. TEPCO HD can also be commended for workplace dialogue held every year between all employees that enables the growing number of next-generation workers that did not experience the accident to inherit the lessons learned from the accident.

○ How has TEPCO HD been transformed since the Fukushima Daiichi Nuclear Power Station Accident?

Since the formulation of the Nuclear Safety Reform Plan in March 2013, reform initiatives, TEPCO HD has engaged in reforms, presented reports to the NRMC a total of 23 times, and conducted self-assessments of its nuclear safety reforms (hereinafter referred to collectively as, "self-assessments").

Out of the many troubles that have occurred in the past, the NRMC has focused on cases where notification of external parties was inappropriate in some manner (Public announcement of the leak of contaminated water within the power station port (4th meeting); public release of information pertaining to drainage channel K at the Fukushima Daiichi Nuclear Power Station (8th and 9th meetings); seismic isolation building issue at Kashiwazaki-Kariwa (13th, 14th , and 15th meetings)), the series of incidents pertaining to physical protection; and, unfinished safety measure renovations (18th, 19th, and 20th meetings), and demanded improvements as necessary.

In regards to self-assessments in particular, the NRMC pointed out at the 16th meeting that, "We have been forced to ask just how critically TEPCO HD is being in its evaluations. When performing self-assessments, we want you to critically assess your own departments and point out weaknesses, in particular." As a result, thereafter, TEPCO HD began to identify its own problems pertaining to nuclear safety reforms through self-assessments which finally led to the beginning of a continuous improvement cycle that has led to corrections. Additionally, the string of incidents pertaining to physical protection and incomplete safety measure renovations served as a new opportunity to revise and strengthen nuclear safety reform initiatives.

The NRMC's findings pertaining to how TEPCO HD has been transformed since this point in time have been outlined below from the perspectives of safety awareness, technological capability, and the organization's ability to engage in dialogue.

[Safety awareness]

Prior to the Fukushima Daiichi Nuclear Power Station accident, TEPCO HD, and in particular, the Nuclear Power Division, had a tendency to engage its duties with the mentality that, "safety can be ensured if rules are followed." However, after experiencing the accident, through performing critical self-assessments and understanding the critical manner in which society views troubles, safety culture has changed from one of merely abiding by rules, to a culture in which the organization independently and continually pursues higher levels of safety, and safety awareness has improved on a daily basis as a result.

TEPCO HD can be commended for engaging in initiatives to address two major issues that are necessary for ensuring nuclear safety. Namely, "Stopping" when something doesn't feel right in order to ascertain the cause and implement suitable countermeasures; and, fully understanding the importance of internal communication when it comes to cultivating a sense of unity between employees, contractors, and field workers.

By leveraging the various systems mentioned earlier that were created after the accident (in particular, reflecting the strict monitoring results from the NSOO that critically monitors safety from a broad and multi-faceted viewpoint in safety countermeasures), and conducting sit-down circle discussions at the safety awareness facility (*The truth about, and lessons learned from, 3.11*), TEPCO HD has developed and expanded its initiatives aimed at cultivating human resources in not only the Nuclear Power Division, but also other departments, that can understand, and are aware of, issues from different points of view.

In addition to this, the creation and launch of the risk communicator (RC) system has enabled not only highly transparent and easy-to-understand explanations to be given to external parties, but also feedback about stakeholder perspective and response to be given to field workers thereby contributing to an improvement in safety awareness amongst engineers, in particular. Engineers now also attend press conferences which improves their awareness of social issues and enables them to reflect that awareness in field work. Through these initiatives TEPCO HD is making efforts to leverage stakeholder perspectives to better improve safety culture and safety awareness.

With the understanding that developing internal communication is the starting point of safety awareness, upper management frequently goes into the field in order to close the [communication] gap with field workers an internal shift in awareness from "conveying information" to "conveying information that is easily understood" is taking place through, for example, initiatives aimed at creating an atmosphere in which younger employees can freely state their opinions.

Additionally, it is clear that upper management is respecting and supporting the decisions of field workers, and an environment is being created in which field workers can take the lead and make the decision to "stop" in the event of trouble. These changes are indicative of a mature safety culture. A good example of this field-focused mentality is the immediate support and action that was given/taken by upper management when the Site Superintendent decided to stop the startup of KK Unit 6 amidst various troubles even though there had been tremendous organizational pressure to start the reactor that stemmed from schedule restrictions and the fact that restart had been long-awaited.

There has been a shift from the pre-accident safety measure mentality of merely preparing documents and following procedures, to awareness that focusing on dialogue in the field is indispensable for safety, and direct discussion of risk in the field between employees and contractors has become commonplace. By focusing on safety measures that foster unity with contractors, TEPCO HD is engaging in efforts to escape multi-tiered client/vendor relationships, and create "One Team." By having employees and contractors meet together in the field to discuss countermeasures when troubles occur, having contractors engage in activities to promote workers to greet each other at the front gate at Kashiwazaki-Kariwa, and conveying information on troubles and countermeasures in an easy-to-understand manner through the Site Superintendent's in-house blog, a unified sense of safety awareness is deepening.

Furthermore, with the understanding that nuclear safety is a precondition for work safety, initiatives are under way to decrease the incidence of work accidents. In regards to ascertaining and analyzing the causes of work accidents, at KK, a shift has been made from conventional human error assessments, to human performance assessments, as efforts are being made to enhance analysis methodology and countermeasures. Additionally, efforts are being made to strengthen management observation in cooperation with contractors and also safety countermeasures, such as by engaging in daily initiatives through which employees and field workers identify potential sources of danger prior to beginning a task.

While work in high dose environments continues at 1F, the environment at 2F has changed relatively little, which requires personnel to remain vigilant and continually question current conditions. And, at KK, while the transition from restart to commercial operation is being made, large-scale construction, such as the restart of other reactors and specialized safety facility construction, continues thereby illustrating that there is no end to the nuclear safety issues that must be addressed.

It would be beneficial to further root a culture in which nuclear safety is demonstrated not just

through words, but also through action.

[Technological capability]

Since the accident, TEPCO HD has substantially built new technological capability in areas where technical prowess had been lacking prior to the accident, or in other words, severe accident management and damaged plant decommissioning. These capabilities have steadily taken form in the shape of more advanced equipment configurations, the systematic creation of procedures, and the formation of groups of engineers with expertise. It is not just important to have these capabilities, but also to leverage them during daily operation, maintenance, and decision-making, or in other words, utilize them to improve the quality of daily tasks. Even though there are currently discrepancies in the level of maturity between power stations and indicators, this indicates that there is room for further advancement through practical application at each site and that the overall level of technological capability continues to be improved.

Compared to before the accident, steady progress has also been made with emergency response training through increases in training frequency and the rooting of a post-training improvement cycle. Going forward, it is important that these initiatives serve as the foundation for a more practical and advanced capabilities. In particular, advancement of training scenarios, the ability to respond to compound disasters that exceed design standards, the quality of decision-making and action of personnel in environments where information is uncertain, the completion of corrective measures within set deadlines, and the revision history of severe accident management guidelines (SAMG) and clarification of the basis for such revisions, should be internalized and reviewed through daily activities. Treating these things not just as indicators, but continually ascertaining and improving them through independent improvement cycles, will lead to the establishment of effective technological capability.

In regards to facilities, defense-in-depth has been substantially strengthened through initiatives to enhance alternate cooling systems, distributed backup power supplies, and seismic resistance/tsunami countermeasures. This hardware is an important foundation, but it only functions when combined with human performance in the field made possible through quality training and adherence to daily procedures. The lessons learned from the Fukushima Daiichi Nuclear Power Station accident have showed us that it is necessary to look at technological capability not just in terms of equipment, but as a comprehensive entity that also comprises the behavior of people and the organization as a whole in the course of daily duties.

Important progress has been made with the decommissioning of 1F through the accumulation

of project management skills and field management skills that previously did not exist. As a result, knowledge is gradually expanding. However, the plant is now in a phase where future initiatives will be used to a acquire knowledge pertaining to the full-scale retrieval of fuel debris and long-term contamination management, and the ability to respond to uncertainty must be improved through daily tasks.

The restart of KK Unit 6 is an important milestone and a reflection of the safety measures and multitude of preparations that have been implemented to date. At the same time, effectiveness has been seen in the areas of schedule management, equipment reliability assurance, and the reliable implementation of security measures during the restart process, thereby making restart a significant opportunity for further improvement. It is expected that through the experience of operating a reactor, the power station will be able to strengthen both his technological and organizational capabilities.

In regards to the organization, steady progress has been made with the systematic accumulation of knowledge and organizational learning by leveraging corrective action programs (CAP) and operating experience. In particular, it is important that knowledge reliant upon certain individuals previously is been shared throughout the organization and mechanisms for leveraging that knowledge in daily tasks are being created. Going forward, it is important that technological capability be continually improved by further rooting daily activities to prevent the recurrence of similar events such as past troubles, small mistakes, and nonconformities.

[Ability to engage in dialogue]

TEPCO HD's ability to engage in dialogue has steadily improved as a whole from the perspectives of risk communication and building a relationship with society. In light of the regrets of the accident, in addition to expanding and developing mechanisms for information disclosure, the idea of cultivating trust through dialogue with stakeholders has permeated throughout the organization.

In particular the training and use of risk communicators (RC) has improved the comprehension of ALPS treated water discharge amongst field workers. In regards to briefings given to external parties, the NRMC has seen a willingness in TEPCO HD to not just provide information, but also address the concerns and interests of society. Initiatives such as these will contribute to improving TEPCO HD's ability to engage in dialogue.

There is, however, further room for improvement when it comes to risk communication. For

example, there is room for improvement when it comes to conveying information quickly and in an easy-to-understand manner during accidents or emergencies (crisis communication), and continual improvements should be made in regards to how information is provided while considering the level of comprehension and interests of the receiver by engaging in risk communication during times of normalcy and leveraging that experience during times of crisis. In addition to increasing the amount of information disclosed, it is also of further importance to not merely "convey information" but "convey information that is easily understood."

Initiatives implemented to date should serve as the foundation for further developing mechanisms to quickly provide information that is easy to understand when accidents or troubles occur while also promoting further dialogue about safety with stakeholders, including regional residents, during times of normalcy. It is important to leverage these initiatives to maintain and improve trust with society.

## Conclusion

Decommissioning and the nuclear power business are long-term endeavors. As such, decreases in the number of people that experienced the accident first-hand and the dwindling labor population are elements of instability. The issues that need to be continually addressed are also clear, such as securing human resources, further strengthening skill transfer, and leveraging new technologies, etc. Various countermeasures to combat this have been devised, one of which is the use of physical artificial intelligence (AI) robots in the decommissioning field, which is an appealing field of innovation that may serve to attract human resources. As these multifaceted initiatives are engaged in, TEPCO HD must also develop education for younger employees (including expanding opportunities for to gain experience overseas) in addition to creating systems that focus on diversifying human resources that can continually execute measures over the long-term, including expanding opportunities for participation by females, while also considering bottlenecks such as dose limits. It is also important to continue initiatives aimed at maintaining and becoming more imaginative when it comes to risk to ensure the ability to address uncertainties in the future.

For more than 13 years TEPCO HD has continued reforms based on the Nuclear Safety Reform Plan and the NRMC commends TEPCO HD for making steady progress. However, "safety is a journey, not a destination" and there should be no end to nuclear safety initiatives. Safety must also continue to strive for ever higher levels and relentlessly pursue continuous improvement.

Going forward, it is important that sustainable systems, mechanisms, and cultures be rooted with the cooperation of contractors so that initiatives implemented to date are not dependent upon the presence of specific people, and necessary that the mid and long-term issues mentioned above are continually addressed upon this foundation.

The reason why the NRMC can say with confidence that TEPCO HD has made progress with reforms is because of the stance it has taken to ensure access and be frank and sincere with the NRMC throughout the monitoring process. This continual engagement with the NRMC is itself an important achievement that serves as the foundation for the effectiveness of TEPCO HD's reforms.

Furthermore, the discipline to continually subject itself to regulatory review, international peer reviews by the World Association of Nuclear Operators (WANO) and the IAEA, etc., and external reviews, such as assessments by independent experts, is an important structural element of mature nuclear safety culture. It is important that TEPCO HD continue to be proactively open to external criticism and challenges, and to maintain and develop a posture of sincerely addressing this criticism. It would be good if TEPCO HD continues to accommodate various external reviews in good faith and expand its opportunities to do so. This continual openness and willingness to engage in dialogue with external parties is an important indicator that will show the strength of nuclear safety culture of the company in the future.

TEPCO HD needs to get back to the basics of learning from the accident and its regrets over it, and thoroughly ensure that all employees and contractors share the basic principle of prioritizing nuclear safety.

TEPCO's resolution to, "*Never forget the Fukushima Daiichi Nuclear Power Station accident and become a nuclear operator that continues to create unparalleled levels of safety thereby making today safer than yesterday, and tomorrow safer than today*," which is the foundation for its nuclear safety reforms that show its willingness to prioritize the cultivation and improvement of safety culture in light of its deep regrets over the accident, is of vital importance and the core of nuclear safety reforms. The NRMC strongly hopes that it will continue to pass on this resolve into the future and strive to further apply and deepen nuclear safety through independent improvements.

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