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Data Request Response #8

Corby Battery Energy Storage System Project (24-OPT-05)

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Prepared for

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Acronyms and Abbreviations

Applicant	North Bay Interconnect, LLC and Corby Energy Storage, LLC
Application	Opt-in Application
BESS	battery energy storage system
CEC	California Energy Commission
COC	Condition of Certification
DFD	Dixon Fire Department
Project	Corby Battery Energy Storage System Project
SDG&E	San Diego Gas & Electric

1.0 INTRODUCTION

This Data Request Response #8 to North Bay Interconnect, LLC and Corby Energy Storage, LLC's (Applicant)[1] Opt-in Application (Application) for the Corby Battery Energy Storage System Project (Project) (24-OPT-05) responds to specific requests made by California Energy Commission (CEC) Staff. During a meeting held on September 30, 2026, CEC Staff provided comments and requested additional information regarding potential water quality impacts associated with a battery energy storage system (BESS) thermal runaway event and proposed Condition of Certification (COC) WATER-5. These requests were conveyed through the meeting agenda and discussions during the meeting rather than a formal data request.

Each data request is presented below in its entirety, followed by the Applicant's response to the information requested.

2.0 WATER RESOURCES

2.1 COC WATER-5

The Applicant team and CEC Staff participated in a call on September 30, 2026, to discuss Staff's proposed COC WATER-5. This analysis is responsive to Staff's request for feedback.

Staff provided the following meeting agenda and questions ahead of the call:

> *Condition of Certification WATER-5 is intended to ensure that potential water quality impacts associated with an accidental release of contaminants are adequately prevented and mitigated. This meeting is intended to develop the condition in greater detail by discussing the mitigation approach, supporting design criteria, and information necessary for staff to evaluate its effectiveness and environmental implications.*
>
> *Meeting Objective: Discuss project design features and performance measures necessary to address potential groundwater contamination from a BESS thermal runaway event.*
>
> 1. *Potential Impact – Release of hazardous materials and/or contaminated fire suppression water to soil and groundwater during a thermal runaway event or other accidental release.*
> 2. *Proposed Mitigation – Project design features and performance measures required to prevent or contain releases and protect groundwater and surface water.*
> 3. *Environmental Review – Information CEC needs to evaluate the proposed measures and any associated environmental impacts or project changes.*
> 4. *Next Steps – Required information, CEC revisions to WATER-5, and timing for submittal/review.*

[1] North Bay Interconnect, LLC and Corby Energy Storage, LLC are both wholly-owned subsidiaries of NextEra Energy Resources. North Bay Interconnect, LLC will own and operate the interconnection facilities for the Project; and Corby Energy Storage, LLC will own and operate the BESS components of the Project.

Proposed Design Features and Performance Measures

Applicant to describe the specific measures proposed to prevent these impacts, including:

- *How contaminated liquids would be contained and prevented from infiltrating into soil or groundwater.*
- *How the containment system would be designed with sufficient capacity to capture and contain all contaminated water, including stormwater events that could be contaminated.*
- *How contaminated liquids would be isolated from stormwater facilities and off-site drainage.*
- *Proposed physical design features, such as liners, curbing, berms, sumps, containment areas, drainage controls, or other systems.*
- *How contaminated liquids would ultimately be collected, tested, removed, treated, or disposed of.*

Response:

As discussed during the September 30, 2026, meeting, the Applicant does not agree with Staff's assumption that redesign of the site drainage system is appropriate or warranted based on speculative potential future impacts that are not substantiated in the analysis. The impact analysis in the Water Resources section of the July 15, 2026, Staff Assessment is limited to one sentence on this topic (p. 5.16-10, paragraph 2):

> *In the event of an emergency such as a fire that would produce contaminated water, there is a risk that the shallow groundwater aquifer could be subject to an accidental release of hazardous material or other material that would violate water quality standards.*

The Staff Assessment did not evaluate potential groundwater impacts from a thermal runway event based on available studies, did not establish the existence of a significant impact, and did not provide any rationale explaining the basis for a potential significant impact requiring mitigation through site redesign. The Applicant has also reviewed the staff assessments for other projects proceeding through CEC's Opt-In Certification Program and has been unable to identify the inclusion of a COC substantially similar to WATER-5, even for much larger projects.

The Applicant's environmental, engineering, and fire-safety teams have evaluated the questions presented during the September 30, 2026, meeting held with CEC Staff and has concluded that, based on the available data, any potential contaminant releases during an unplanned and unanticipated thermal runaway event are appropriately addressed by the proposed site design and proposed emergency response approach, and do not warrant a substantial site redesign to contain all site runoff and avoid any infiltration. Further with the implementation of the multiple proposed COCs identified in the Staff Assessment, WATER-5 is redundant and unnecessary to address potential surface water and groundwater impacts, as further explained below.

The concerns raised by the CEC Water Resources Staff during the September 30, 2026, meeting were related to the potential for surface water or groundwater contamination resulting from runoff of fire suppression water. These potential impacts were analyzed and addressed within Section 5.7 Hazards,

Hazardous Materials/Waste and Wildfire (page 5.7-34), as well as Section 5.10 Public Health (pages 5.10-13 through 5.10-19) of the Staff Assessment. In both sections, Hazards and Public Health Staff found that with the implementation of COCs HAZ-5, HAZ-9, PH-2, WORKER SAFETY-2, WORKER SAFETY-6, WORKER SAFETY-7, WORKER SAFETY-8 for operations, and WORKER SAFETY-10, impacts to air, water, and soil would be less than significant.

Hazards and Public Health Staff came to this conclusion by reviewing available thermal runaway event incident data from the August 2025 document "Assessment of Potential Impacts of Fires at BESS Facilities" prepared by Fire & Risk Alliance, LLC (FRA 2025) reviewed sampling results for air, soil, and water and concluded contamination risks are minimal. As stated on page 6 of the FRA assessment, Section 1.5.2:

> *Crucially, environmental monitoring data from real-world BESS fire incidents does not support claims of widespread contamination. Airborne emissions are short-lived and localized, soil and water contamination risks are minimal, and existing firefighting strategies further mitigate potential environmental harm.*

The conclusion also states in Section 8, Summary and Conclusions:

> *In none of the reviewed cases of environmental sampling related to the BESS fire events were reported contaminant concentrations found that posed a public health concern or necessitated further remediation. This finding includes airborne contamination sampling conducted onsite, offsite, and within nearby communities, as well as relevant sampling of water from firefighting activities, suppression system run-off, and groundwater testing in specific instances.*

One main point within the FRA assessment is that with the evolving nature of BESS technology, firefighting strategies have changed over time and use of cooling water across the entire facility during a fire is no longer a recommended approach. The recommended practice is a nonintervention response identified as a best practice within the FRA assessment, Section 1.5.1:

> *Firefighting Water Runoff: The consensus best practice for response to a BESS fire is to allow the BESS to consume itself and provide cooling water to targets if needed.*

The primary water quality impact concern that has been articulated in connection with COC WATER-5 is specifically tied to firewater used during emergency response (i.e., water sprayed on an active BESS fire) that could become contaminated through contact with the affected equipment or smoke plume and then reaching soil or groundwater. However the current emergency response strategy developed in coordination with the Dixon Fire Department (DFD) for a thermal runaway incident is, consistent with recognized best practice, a nonintervention response for a fire within a BESS container. The Applicant coordinated with DFD regarding proposed WORKER SAFETY-7 fire protection requirements and docketed the results of that coordination on November 18, 2025 (TN# 267605). Based on follow-up communications with DFD in September 2026, DFD confirmed they would not generally use fire suppression water on a BESS unit under thermal runaway; rather, the onsite water supply would be used to replenish DFD equipment water supply for grass fire suppression or other needs at or in the vicinity of the Project site, consistent with National Fire Protection Association (NFPA) Standard 1142 requirements. The Applicant would welcome further joint discussion with both DFD and CEC Staff, if

Staff concludes that it would be helpful to learn more about the best practices for firefighting tactics that would be utilized in the event of an emergency.

As stated in the FRA (2025) assessment, Section 1.4.2:

> *Unless there is direct suppression water applied to the BESS on fire, any cooling water applied will be similar to rain and no potential contaminants will be included in any runoff.*

Section 1.4.2 also notes that, if cooling water does touch the BESS equipment:

> *While lithium-ion battery fires produce chemical byproducts, studies show that their solubility in water is low, limiting the potential for groundwater contamination if direct suppression efforts are performed. Additionally, standard stormwater management practices help prevent runoff from reaching natural water sources in the event that the fire department determines that suppression efforts are required.*

COC WATER-2, which requires the development of an operational Drainage, Erosion and Sedimentation Control Plan addressing stormwater controls, best management practices, materials management, inspections, and maintenance, will be in place. Additionally, the operational drainage system will route any site runoff through vegetated swales to one of two stormwater basins, which is standard engineering practice for facilities of this nature. The system is intentionally designed to allow for retention and gradual infiltration to absorb storm event peak discharge and allow for gradual groundwater recharge rather than increased off site discharge quantities or rates, in accordance with Solano County standards. In the unlikely event of a BESS fire and unanticipated fire suppression water use, sampling would be performed in accordance with COCs HAZ-9 and BIO-21 to document potential contaminant levels the ensure any significant impacts are fully addressed.

2.1.1 Relevant Lessons Learned from Past BESS Fire Incidents

While seven facilities were reviewed in the FRA assessment, three have been summarized below as they speak specifically to potential groundwater impacts.

San Diego Gas & Electric (SDG&E) BESS, Escondido, CA, September 2024

As discussed in Section 4.3.4 of the FRA assessment, during this fire event, water was not applied directly to the affected container and only sprayed on surrounding unaffected containers to reduce the potential for propagation. The affected container was left to burn itself out over the course of 13 hours. Runoff water sampling was conducted and analyzed for various metals (SDG&E 2024). As discussed in the sampling results from SDG&E:

> *The analysis of the samples collected from the runoff water suggests that the water quality is within acceptable limits for most contaminants, especially when considering public health standards for drinking water. The low levels of metals detected, combined with the absence of more toxic elements like lead and cadmium, suggest that the water poses minimal risk both to human health and the environment.*

In addition, well water was sampled for properties near the BESS site. Per the FRA assessment (Section 6.5):

> *In the specific case of the Escondido, CA fire event, sampling of well-water for properties near the BESS site was reported to take place for an unspecified period of time after the event, despite the fact that firefighting water was stated as being used only to provide exposure protection. No adverse outcomes were found in the literature associated with the well sampling.*

SDG&E did not identify contamination requiring remediation or other response actions. These findings indicate that widespread soil or groundwater contamination is not an expected outcome even in the event of a BESS fire, particularly for an outdoor, containerized facility using current technology.

Convergent Energy, Chaumont, NY, July 27, 2023

The Convergent Energy BESS fire was a 5-day fire event and, unlike at SDG&E's facility, a large volume of water was applied for the duration of the event. Firewater runoff was noted during this event and therefore groundwater and soil samples were taken and analyzed (NYSERDA 2023). The FRA assessment states:

> *No apparent fire contaminants were identified in any of the ground water samples and the State Department of Health notified the potentially affected residents.*

In addition, an Inter-Agency Fire Safety Working Group consisting of representatives from multiple federal and state agencies reviewed data from three separate BESS fires within the state, including the Chaumont, NY location, and stated (NYSERDA 2024):

> *Based on available analyses of air quality, soil, or water data collected in the days following the incidents, the Working Group concluded that there were no reported injuries and no harmful levels of toxins detected.*

Moss Landing Fire Event, Indoor BESS, January 2025

It should be noted that although Moss Landing is discussed within the FRA assessment, it was included only for completeness and not as a data point for analysis.

> *This facility, uniquely designed to operate within a historic, retrofitted former natural gas plant, is anomalous in several ways and would not be allowed under today's codes and standards. Accordingly, this incident is described separately in Appendix B and is not reflected in the conclusions of this report.*

There are multiple reasons this facility was not included, the primary ones being dated technology, use of noncontainerized battery racks, being an indoor facility, having been permitted under outdated NFPA requirements, and most importantly using batteries with a different chemistry, nickel-manganese-cobalt. In contrast, the Corby BESS Project is using new technology, employs batteries that follow 2026 NFPA 855 requirements by using a capacity of 1-5 megawatt-hours per container, is an outdoor facility, and most importantly utilizes lithium-iron-phosphate chemistry.

While Moss Landing has been well documented and has had several fire incidents, due to the differences between the two projects it is inappropriate to use this facility to evaluate potential impacts or develop mitigation for the Corby BESS Project. The two projects are fundamentally different in scope and design, making a direct comparison inappropriate. Therefore, the engineering assumptions, analyses, and design criteria for one project cannot be reasonably extrapolated to the other.

2.1.2 Conclusion

None of the reviewed cases of environmental sampling related to the BESS fire events found contaminant concentrations that posed a public health concern or necessitated further remediation. This finding includes airborne contamination sampling conducted onsite, offsite, and within nearby communities, as well as relevant sampling of water from firefighting activities, suppression system runoff, and groundwater testing.

In addition, Section 5.7 of the Staff Assessment specifically addresses potential water quality contamination associated with water used during BESS fire emergency response, including the concern of potential contamination caused by contact with the affected equipment or a smoke plume. Based on the available data, Staff concluded on p. 5.7-34:

> *With implementation of the proposed COCs HAZ-5, HAZ-9, PH-2, WORKER SAFETY-2, WORKER SAFETY-7 and WORKER SAFETY-8 for operations,* ***the impacts associated with hazardous materials releases from reasonably foreseeable upset and accident conditions of the BESS would be less than significant*** [emphasis added].

The Water Resources analysis in Section 5.16 of the Staff Assessment lacks substantial evidence of a significant impact to support the additional mitigation required by proposed COC WATER-5.

The Staff Assessment as written includes conditions that address routine water management and provide a response framework if an unanticipated release occurs:

- **WATER-2** requires an operational Drainage, Erosion and Sedimentation Control Plan addressing stormwater controls, best management practices, materials management, inspections, and maintenance.
- **HAZ-9** requires soil, surface water, and groundwater sampling, as applicable, following a BESS fire, along with appropriate testing, treatment or disposal, agency notification, and remediation if contamination is identified.
- **BIO-21** includes post-fire monitoring and remedial action where impacts are confirmed.

Taken together, the evidence, planned non-water emergency response, project drainage design, and existing COCs and analysis provide appropriate protection as well as a clear process for evaluating and responding to an actual release in the event one occurs. For this reason, the Applicant believes WATER-5 is duplicative and that requiring a separate Project-wide containment system would go beyond what is necessary or appropriate to address an unsubstantiated speculative potential impact associated with an unplanned and unanticipated emergency event.

To resolve this, the Applicant recommends that Staff revise the Water Resources section to:

1. Incorporate the evidence (FRA assessment and associated reports) previously discussed in the Public Health and Hazards sections, including the finding that historical sampling has not shown widespread soil or water contamination requiring remediation.
2. Reflect the current emergency response planning coordination with DFD, under which water would not be sprayed directly on a BESS unit to mitigate a thermal event, thereby removing the primary pathway for contaminated fire-response water to reach soil or groundwater.
3. Cross-reference WATER-2, HAZ-9, and BIO-21 as the conditions addressing routine stormwater management and any incident-specific sampling, containment, disposal, or remediation that may be warranted based on actual conditions.
4. Remove WATER-5 as a separate condition as the potential impact is adequately addressed through the planned emergency response, project design, and the more targeted requirements already included elsewhere in the Staff Assessment.

This approach would maintain appropriate protections while aligning the Water Resources Staff Assessment analysis with the analyses provided in the Hazards, Public Health, and Biological Resources sections.

2.2 COC WATER-3

In the course of responding to Staff's inquiry related to proposed COC WATER-5, the Applicant team identified an unrelated correction that should be made to COC WATER-3. Specifically, WATER-3, as formulated in the July 15, 2026, Staff Assessment, would require the Applicant to *"apply for a well installation permit from the Solano County Environmental Health Division."* However, as recognized by the CEC in the Updated Staff Assessment for the Darden Clean Energy Project: *"CEC staff agrees that due to in-lieu authority, the project owner is not required to obtain a well installation permit from Fresno County and COC WATER-5 in Section 5.16, Water Resources has been revised accordingly to address the CECs in lieu permitting authority. Revisions have been made under "5.16-5 Proposed Conditions of Certification" on page 5.16-24 of the Staff Assessment."*

The analogous Darden COC was edited as follows:

Page 5.16-24 of the Staff Assessment

WATER-5 Water for project operational use shall be groundwater produced from well(s) to be installed adjacent to the proposed O&M facility. ~~The project owner shall apply for a well installation permit from the FCPWPD~~. The groundwater production well(s) shall be installed and constructed per applicable California Water Code section, as well as DWR standards presented in bulletins 74-81 and 74-90, as well as applicable **Fresno County Department of Public Health (FCDPH)** ~~FCPWPD~~ well installation requirements.

Similar edits should be made to Corby COC WATER-3 to reflect the CEC's role and the fact that here, as in the Darden Project, the Applicant is not required to obtain a well installation permit from the

county. Proposed updated language for WATER-3, including the previously filed proposed edits, is provided below.

> ***WATER-3*** *To utilize groundwater as ~~operational~~ water supply, **a** production well~~(s) shall~~ **may** be installed adjacent to the proposed ~~O&M~~ facility. ~~To accomplish this, the project owner shall apply for a well installation permit from the Solano County Environmental Health Division (SCEHD).~~ The groundwater production well~~(s)~~ shall be installed and constructed per applicable California Water Code section, as well as DWR standards presented in bulletins 74-81 and 74-90, as well as applicable SCEHD well installation requirements.*
>
> ***Verification:*** *At a frequency determined by the CPM, the project owner shall keep the CPM appraised of all aspects of production well installation. ~~The project owner shall provide the CPM with a copy of the well installation permit.~~ The project owner shall file a well completion report to DWR for the extraction well. Any testing results or correspondence exchanged between the project owner and the California Department of Health Services or the SCEHD during operations shall be provided to the CPM in the annual compliance report. All results and diagrams associated with groundwater production well installation shall be included in the annual compliance report.*

3.0 REFERENCES

FRA (Fire Risk and Alliance, LLC). 2025. Assessment of Potential Impacts of Fires at BESS Facilities. Prepared for American Clean Power Association. August 21, 2025. Available online at: https://cleanpower.org/wp-content/uploads/gateway/2025/03/Assessment-of-Potential-Impacts-of-Fires-at-BESS-Facilities_FINAL_Sep-2025.pdf

NYSERDA (New York State Energy Research & Development Authority). 2023. New York State Inter Agency Fire Safety Working Group Air, Soil, and Water Findings. Albany, New York.

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SDG&E (San Diego Gas & Electric). 2024. Water Quality Report. Available online at: https://www.escondido.gov/DocumentCenter/View/6717/SDGE-Water-Run-Off-Report-PDF?bidId= (accessed October 2026).