

# Historic crane modernization

SSE, Lochay Power Station, UK







# Preserving a historic structure

**Lochay Power Station, nestled in the scenic Scottish Highlands near Killin, has been generating hydroelectric power for SSE since 1958. As part of a modernization project, Konecranes was tasked with upgrading the station's original crane to enhance its reliability and operational precision, ensuring it meets future demands.**

The original crane was installed to place the turbines, which are now due for major overhauls. However, modernizing the crane presented notable challenges. Given the historic significance of the building, structural modifications—such as removing the roof or creating an access hole—were strictly prohibited. This required Konecranes to conduct all operations within the confined space of the power station, necessitating highly controlled lifting practices.

Additionally, removing the entire crane was not feasible due to the building's size and restrictions on structural alterations. Instead, Konecranes conducted an extensive survey to assess the crane's condition, confirming that it had no fatigue issues, as it had only performed a few lifts related to the turbines.



## The solution: Precision engineering

To meet the modernization goals, Konecranes replaced the trolley and control systems, specifically the crab unit. The existing trolley was cut in half, stripped down, and extracted using a telehandler. Given the constraints, the components were carefully maneuvered onto wheels to be positioned correctly before lifting.

Konecranes then replaced it with the new hoist and crab unit back onto the existing crane structure. The newly installed equipment features Konecranes CXT hoist units, with a single trolley and two hoists: a 60-tonne main hoist and a 10-tonne auxiliary hoist. The modernization also included new electrical panels and control systems.

The main advantage for SSE is the significantly improved control of crane movements. The upgraded system allows for slower, smoother, and more precise operations, which is crucial when handling large and delicate turbines. With frequency controls ensuring gentle movements, the risk of damage during lifting operations is minimized.

## Overcoming remote location challenges

Lochay Power Station's remote location, two miles from the nearest main road, posed logistical hurdles for transporting equipment. The narrow access track complicated delivery and unloading operations, while unpredictable Highland weather—including sleet and snow—added further complexity. Despite these challenges, the team successfully managed to execute the project without delays.

## A Team Effort: Experience Meets Training

The project not only required technical expertise but also provided an opportunity for knowledge transfer. An experienced team led the modernization efforts, working alongside a newer team member and an apprentice gaining hands-on experience. This approach ensured that essential modernization skills were passed on to the next generation of crane specialists.



## A successful modernization

After five weeks of meticulous work, the project is set to conclude with a fully modernized crane. SSE will benefit from a highly reliable and precise lifting solution, ensuring smooth turbine handling for years to come. As Bob Street, Lead Project Engineer at Konecranes UK, put it, "At the end of the five weeks, we have a happy customer, and we can turn around and say—yeah, we did that one."







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