



# RJP POWER

An > ipsum Group Company

Scheme: Transformer Installation  
Location: Covent Garden  
Client: Royal Opera House  
Completed: August 2025

## CASE STUDY: ROYAL OPERA HOUSE

## OVERVIEW

RJ Power was tasked with replacing two Cast Resin Transformers at London's Royal Opera House. The existing had reached their design life expectations, so it was time to replace all in a phased process, with one more to replace in the summer of '26.

The process included the replacement of all the transformer single core cables, to supply and fit a bespoke busbar system to connect to the LV panel and to introduce a new thermal protection scheme. To complement the transformer works and satisfy the resilience works, we also retrofitted the incoming Masterpact M ACBs with MTZs, including new chassis, doors, controls and Castell key interlocks.

## CHALLENGES

RJ Power explored the option of installing ultra-low-loss transformers. However, due to site constraints, these units were deemed unsuitable – the proposed transformer's width of 980mm exceeded the available space between the existing switchgear arrangement.



## SOLUTION

The team sourced two Tier 2 aluminium-wound cast resin transformers from SGB-Smit Group. This model's more compact design allowed us to retain the existing transformer enclosures, meaning only internal copperwork modifications were required to achieve the necessary clearances between live conductors and earth.

To maintain building operations during the works, MEMs Power Generation provided a temporary supply via an 800 kVA generator.

Given the exceptionally tight route from loading bay to switch rooms, specialist plant movement contractor NIS was engaged to manage the manoeuvring process. Both transformers were safely delivered ahead of the planned weekend installation.

Big thanks to the team - our busbar specialist, NIS, MEMs and RJ Power's Andy Fitzgerald, Richard Gillan, Jacob Eames, Aaron Ellul and Dave Fone - for successfully completing the installation on schedule and within budget.



“ RJ Power have been instrumental in the successful replacement and upgrade works for the HV/LV transformer and LV air circuit-breaker works that have been carried out over the past two summer shutdown/maintenance periods. ”  
- **Jo Lilley, Senior Technical Project Manager, Royal Ballet & Opera**

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