

CASE STUDY

NRA GUY WIRE REPLACEMENT

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INTRODUCTION

Located offshore on Australia's Northwest Shelf, the North Rankin Complex (NRC) Facility processes gas for transfer to the Karratha Gas Plant. The complex includes North Rankin A and B platforms and a Flare Bridge supporting the Flare Stack along with high and low-pressure piping. Due to flare heat radiation risks, access to the stack was only possible when offline, creating significant challenges for overdue maintenance—specifically the replacement of critical guy wires, made more complex by the unavailability of crane equipment.

PROCESS

The client engaged Vertech to deliver a solution using rope access in place of cranes. A comprehensive four-phase approach was adopted. The initial phase involved a replacement study for the eight guy wires using rope access during the limited "gas to gas" shutdown window. This was followed by intensive planning and engineering, including work method statements, material lists, tensioning procedures, and a full onshore trial.

Prior to shutdown, Vertech performed detailed inspections, NDT, rigging setup, and safety measures. Rope access teams, scaffolding, and dropped object protection were implemented, along with fabric maintenance to ensure a safe working environment. The final phase executed the wire replacement in line with the planned sequence, completing all tensioning and de-rigging activities.

OUTCOME

The entire scope was executed safely over a four-week period, involving complex rigging and coordinated rope access work. The team adapted dynamically to evolving site conditions and delivered the project without incident. This successful collaboration between the client, Vertech, and other specialists ensured the continued integrity of the NRC flare system—setting a benchmark for safe, innovative offshore maintenance.

