



Project Highlight

Royal Marsden Hospital London, UK

AMERESCO 

Facility Upgrades Reduce
Costs and CO₂ Emissions
While Enhancing Resiliency

Technology Type:

Cogeneration/CHP | Building Management Systems |
Energy Efficiency

CHP Capacity

1000kWe / **970**kW Thermal Power
Generation Capacity

Energy Project Size

£3.5 million

Annual CO₂ Reduction

420 te

Total Cost Savings

~£710K



Summary

Royal Marsden Hospital (RMH) is a progressive Trust which continues to work towards the carbon reduction targets set by the UK's National Health Service (NHS). Working with RMH, Ameresco has achieved significant carbon savings by replacing the ageing plant and implementing new equipment across the site, which offers increased resiliency and reduced backlog maintenance.



Solution

Ameresco installed a Combined Heat and Power (CHP) system to provide a high efficiency power output to meet the majority of RMH's power demand. This system also provides a more efficient and reliable source of thermal energy for the existing heating and hot water systems. A major challenge throughout the project was the installation of the CHP and district heating system during the COVID lockdown period in 2020/21. Ameresco worked closely with RMH by enforcing closures and organising time schedules to crane lift the CHP engine over the external face of the building, through a central courtyard and into the hospital basement. Other solutions included:

- Installation of a 28 meter tall flue and vent to ensure the CHP had adequate exhaust and ventilation
- 1km of high specification stainless steel pipework was installed to connect the various heating systems to the CHP
- A bespoke interlock and electronic control system was also used to allow the CHP to safely export electrical power to the grid automatically
- Fitted CHP with a catalytic reactor to reduce emissions



Royal Marsden Hospital worked with Ameresco who designed and installed our new CHP as well as de-steamed the hospital. This complex project was delivered during the COVID Lockdown. We worked with Ameresco to address all challenges that arose during construction.



Ehsan Sattar
*Energy & Sustainability Manager,
The Royal Marsden NHS Foundation Trust*



Benefits

In addition to guaranteed overall cost savings including £52k annual maintenance savings, the project delivered the following benefits:

- Improved energy performance of RMH assets through measured and verified energy efficiency improvements
- De-steaming the site with a hot water network, leading to less heat loss, higher boiler efficiency, improved safety and savings.
- Reduction in CO₂ emissions
- 65% of diversified peak heating load met

Ameresco's team of energy experts can assist you in identifying the solution that fits your needs.

For more information about Ameresco and our full-range of energy efficiency and renewable energy solutions, please call **1-866-AMERESCO** or visit **ameresco.com**.

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