

EthosEnergy partners with SWM during the life of its assets and beyond

GOALS

- Integrating ESG best practices into asset management
- Reducing the risk of catastrophic failure



GE gas turbine services and the zero waste 5R rule





Gas turbines



Munich, Germany

A PARTNERSHIP OF SHARED VALUES

Co-operation from start to finish

Stadtwerke München (SWM) is the City of Munich's municipal utilities company and one of the largest energy and infrastructure companies in Europe. It's also one of the most innovative players in the energy sector. For instance, in 2008 – long before Germany decided to work towards carbon neutrality - SWM became a pioneer in the energy transition among power generation companies. So it has been a privilege for EthosEnergy to have partnered with SWM for over 15 years.

Good partnerships are founded on trust, cooperation, and shared values. Great partnerships look to further those principles even as their working relationships are coming to an end.

That's true of the gas turbine maintenance we provided SWM for two GE Frame 9E units at its Munich Power Plant. We also collaborated closely with SWM to ensure that as many of the components from the turbine generators as possible were repurposed and incorporated into the two new replacement generators they purchased.

KEY FACTS

- Gas turbine maintenance provided over the lifetime of two GF Frame 9F units
- SWM partnered with us beyond the operation of the assets to ensure practical application of the 5R rule: Refuse, Reduce, Reuse, Repurpose, Recycle

Building trust in a challenging environment

You would normally expect a power plant to be located in an industrial park or on the outskirts of a city. But SWM's power plant is by the River Isar not far from downtown Munich, within 200–300 meters of the city's ring road and close to numerous Italian food distributors.

In such an environment, catastrophic failure would have an enormous impact on neighboring infrastructure. So when the two Frame 9Es came out of warranty, it was vital for SWM to have a service partner with the highest standards of health and safety. And to have complete confidence in the people who were on site.

Trust builds over time. From the outset, we offered reassurance by structuring our gas turbine servicing contract. By applying our experience, we were able to align with the client's key financial drivers, sharing risk and reward across the contract.

Then, in carrying out around 30 outages – two every year – we ensured continuity of personnel. We had a dedicated project manager with a firm grasp of the site criteria, and we always came with the same team. People who knew the plant. People who prepared diligently. People SWM could trust.





PARTNERS BEYOND OPERATION OF THE ASSETS

The zero waste 5R rule in action

Acting responsibly is central to the ethos of both our companies. And as part of our ESG mission statements, we both encourage the zero waste rule with its "5 R's". In hierarchical order, these are:

- 1. Refuse waste production in the first place
- 2. Reduce your use of harmful, wasteful, and non-recyclable products
- 3. Reuse items
- 4. Repurpose (or "upcycle") items that you aren't able to refuse, reduce, or reuse
- 5. Recycle this should be a last resort

So when SWM decided to replace the two Frame 9Es, we were delighted to have the chance to partner with them again and help put the 5R rule into action. To make sure as many, if not all, parts of the units were reused.

SWM bargained the turbine rotors away, but were left with the hot gas path components, auxiliary equipment, or consumables. Not wanting those parts to go to waste, SWM asked if we would be interested in buying them back at a fair price. In our portfolio, we already had long-term service agreements with a number of clients who use GE Frame 9E gas turbines. So SWM could be confident we would be able to find a home for the majority, if not all, of the spare parts.

Together, we made this a win-win situation. We did so while paying tribute to the spirit of another "R". Bavaria is famous internationally for its Oktoberfest. But while that was going on, we took part in another local tradition: "Ramadama!" This roughly translates as "We are cleaning!" or "We do tidy up!" and stands for joint cleanup activities where Bavarian citizens come together to make their cities cleaner.

Such was the level of trust we enjoyed that SWM were happy to give us the keys to the warehouse and let us get on with packing up the parts. Like a good house guest, leaving nothing but our footsteps. As a valued partner, leaving a legacy of trust and cooperation.

WORK WITH A POWER GENERATION SERVICES PARTNER YOU CAN TRUST



