

CASE STUDY



PROJECT: Safeguarding transformer fleet | Jordan

ESTER TYPE: MIDEL 7131 synthetic ester

PURPOSE: Improve fire safety of distribution transformer fleet

[OVERVIEW]

The Jordanian Electric Power Company (JEPCO) operates a large distribution network, based in the capital city of Amman in Jordan and covering around 66% of the population of Jordan.

Like other utilities, JEPCO is facing the continuing growth of urban populations, meaning a significant increase in the amount of energy required, to the point where demand is now overtaking distribution capability. Across the world, established cities are struggling to meet this demand due to the age and condition of their networks and infrastructure.

JEPCO takes the safety and security of their electrical network very seriously and so are always looking to improve the performance, safety and reliability of its power network. They commissioned an engineering consultancy to look into options for improving fire safety in their distribution and small power transformers, in the knowledge that mineral oil carries some risk, due to its low fire point and potential flammability.



CASE STUDY



[SITUATION]

The consultants recommended one option that resonated strongly with JEPCO engineers; instead of using potentially flammable mineral oil in the transformers, it was recommended that they use MIDEL 7131 synthetic ester transformer fluid. This recommendation was enthusiastically received and JEPCO immediately began to specify MIDEL 7131 for all new indoor transformers.

Since then JEPCO has continued to specify MIDEL and report positively on their experience of using the fluid. To date they have installed thousands of MIDEL filled transformers, mostly in the basements of residential and commercial buildings.

[RESULT]

JEPCO purchases transformers from a number of different international manufacturers and frequently add new vendors to the list. Accordingly, when this happens the MIDEL technical team is called upon to liaise with a new manufacturer and provide them with the necessary information they need to design and build transformers suitable for MIDEL fluids.

For the majority of cases in distribution transformers there is little or no design change needed as compared to a mineral oil design, but for some of the larger units extra technical information is needed to ensure the design is suitable. MIDEL's technical experts are always on hand to provide support in these cases and once the design is complete, the customer service team ensure prompt delivery of MIDEL, anywhere in the world.

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The use of MIDEL ester fluids in this project supports the following UN Sustainable Development Goals:

