



Siemens Transformers – Case Study

Fast-track power-transformer replacement

Joint forces for a valued customer

The challenge

Sometimes it seems you seem to run out of luck. For example if a transformer unit fails and the summer season with all people turning their AC on is approaching. This is what happened to a transformer at a substation in Manhattan – of all places one of the most vital cities on earth. But the population of the Big Apple is lucky to have a utility that is at the same time visionary, protective and caring. They were determined to take care of preventing their area from any harm and to get a replacement as soon as possible.

Usually purchasing a transformer is quite a long process: From the request for proposal to the decision for a manufacturer and then designing, manufacturing, testing and transporting a transformer takes its time. But good partners should be a friend in need. Just like Siemens Transformers was for their customer.



The solution

What was needed was a 134/69 kV auto-transformer with 130 MVA and a separate cooling-device. And it was needed fast. The challenge was to have the units on site only 5 months after order placement.



Transformer in the testbay in Nuremberg.

Luckily, what was needed was a unit that already had been purchased years ago – from the Siemens Transformer plant in Nuremberg. So, there was a chance to shorten the proposal-time and to cut the design-stage of the process to get this done as fast as possible.

Each and every employee was keen on realizing this project in time – without foregoing on preciseness and quality in the production and testing phase. The motivation was very high to demonstrate that speed and flexibility are able to go hand in hand with reliability and first-class transformer production.

The usage of an approved Siemens transformer design and already proved track record with several units in service was key to be able to set up such a tight schedule for a power transformer – and to be able to keep this schedule.

In the end, Siemens Transformers was able to shorten even this tight schedule and factory production was reduced to only 4.5 months. A real fast-track success!

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Special features of the fast-track project

1. Approved repeat design

Being in a hurry, there simply was no time to design a transformer from scratch. Thus the customer and Siemens agreed to revert to an existing design for a 130 MVA, 134/69 kV auto-transformer with separate cooling-unit. However, it was a design whose reliability and efficiency was already proven by several units in service.

2. Strategic tricks to save time

For a transformer manufacturer, there's always two sides to have strategic alliances with: On the one side, there is the customer, without whom there was no business at all. On the other side, there are many different sub-suppliers, on whom the manufacturers are dependent as well up to a certain level.

In this project, an elaborate sourcing strategy led to extra time-savings. The monitoring devices for the power transformer were shipped directly from the sub-supplier to the end customer instead of being shipped to the transformer plant and assembled there before forwarding to their final destination. The cooling-parts were not only sourced at one supplier, but the order was split up. And the manufacturing scope for the main tank and cooling unit at the sub-suppliers was enlarged especially for this project.

For the testing of the cooling equipment, a sub-supplier was brought on board by using his factory to test the cooling unit there instead of testing it at the transformer plant.

But for sure, Siemens Transformers always kept the lead of the responsibility. Thus constant support for the main tank and cooling unit sub-supplier was delivered to make sure they met the high requirements of both, the manufacturer and the end customer.

Joint forces for maximal success

A fast-track project will never be the usual way of a power transformer order. But if a customer is in need and Siemens is able to assist, it can be made possible. It is our principle to contribute to our customer's success, and we are happy to be able to prove this in projects like this.

„We are glad we could assist our valued partner in this project. The high motivation of everybody involved was a real pleasure for me to see as well.“

Frank Hofmann, CEO Siemens Transformer plant Nuremberg

What are the prerequisites for a fast-track project to be realized?

Fast-track power transformer producing is not the norm. What preconditions have to be fulfilled to be able to produce a unit in less than 6 months:

- Reliability and renomme for best quality products is even more important than usual.
- Find a partner, who will not produce failures just because he's in a hurry.
- Global presence of the manufacturer might be helpful to use best sourcing and transportation channels.
- If possible, try to use an existing design to save time in the designing stage.
- Define which parts are really necessary and what can be neglected due to the tight schedule.
- Together with the manufacturer: be prepared to think out of the box to implement special solutions and processes to stick to the dates given.

Talk to us! We love to prove ourselves!

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