SBB
INNOVATION IN ALUMINIUM

SCOTLAND

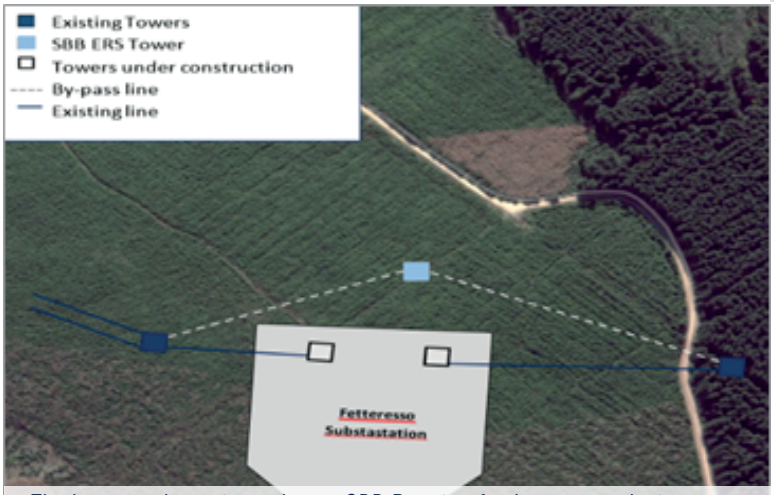
LIMITING COSTS OF TOWERS CONSTRUCTION AT A NEW SUBSTATION

THE CHALLENGE

NorPower was commissioned by the Scottish and Southern Energy company (SSE) to build new 275kV towers at Fetteresso substation in Aberdeenshire.

In order to maintain the power flow throughout the construction, the contracted company had the challenge to find a cost effective and secure way to by-pass over 500 meters of construction site with a temporary line.

The new towers had to be erected in line with the existing 275kV double circuit line.



The by-pass plan using only one SBB Running Angle tower to deviate one circuit of the power line.

THE SOLUTION

This situation was an opportunity for SSE to see other possible applications of SBB Emergency Restoration System (ERS) that they had previously acquired for crane applications.

SBB worked in close partnership with the client to overcome various challenges. The engineering team decided to use of one running angle tower to ensure that one power circuit remains available. This type of configuration ensures easier connection to the existing line.

SBB ERS provided features that enabled fast, efficient and safe work.
Some of these features are presented hereinafter:

1. PLS Software and Site training:
SBB provided complete training and assistance in order to enable the user to quickly appraise practical solutions adapted to the situation.

2. Easy Transportation:
Given that SBB towers are made from modular components, the team was able to quickly mobilize the material to the site without the need for heavy machinery.

3. Erection Method:
The team made the assembly on the ground and used a boom truck to lift the tower (SBB also offers other erection methods suitable for limited work area).

4. Tower's Design:
In order to make the installation easier, SBB's R&D team continuously improves the tower components, including the sliding gin pole, the fall arrest and the resting platforms. This allows the working team to feel safer and perform better in high stress situations.

SBB ERS BENEFITS ON THE PROJECT:

- The By-pass work was achieved in less than one day;
- No down time: One circuit was always available throughout the new towers construction;
- The security was maintained throughout the project;
- NorPower and SEE made significant financial and time savings by using SBB ERS towers instead of conventional towers.

Neil Lamont, Operations Director for NorPower, Scotland on SBB Emergency :
'' (...) Because of a short timeline, we were looking for a quick solution. We needed a handy, easy to install and reliable way to help us with this challenge so we decided to go ahead with the installation of a temporary SBB mast to divert one high voltage circuit. SBB engineers offered us an excellent technical assistance during the planning process. Fetteresso project was our second time using SBB mast for substation works. Our first project was in Berryburn substation. Compact design of SBB mast makes it easy to manipulate and transport to remote areas (...)''

CONTACT US —

+ 1 450 970-3055

10, rue Émilien Marcoux,
J7C 0B5 Blainville (QC), Canada

www.sbb.ca

info@sbb.ca

@SBBstructures