Description of data (XLPE underground cable)

In this document, a description of a measurement for an 8 kV XLPE underground cable is provided. One-day measurement data for this cable is available for download (please refer to the link at the bottom of this document).

The measurement was performed at one end of the cable at a substation with a potential transformer (PT) and a current transformer (CT) as shown in Fig. 1. Three-phase voltages and currents were continuously measured (i.e. gap-less data recording) over 4-week period. Due to the size limitation, one-day data is provided. The parameters of the measurement are provided in Table I.

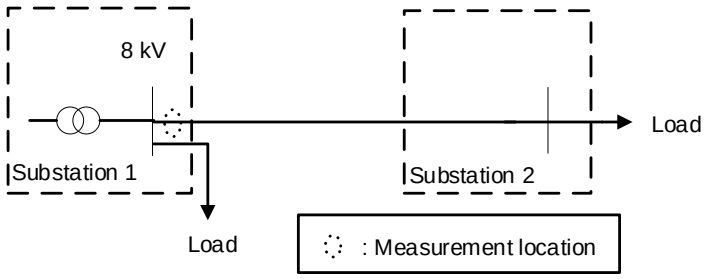

Fig. 1. Schematic diagram of the XLPE underground cable measurement.

Table I. Measurement parameters.

Cable type:	XLPE underground cable
Cable rating:	8 kV
Year of installation:	1991
PT ratio:	8050:115
CT ratio:	600:5
Measurement duration:	4 weeks
Sampling mode:	Continuous (gap-less) data recording
Sampling rate:	64 samples/cycle
Measured signals:	Three-phase bus voltages and feeder currents

Data format:

- The one-day data (24 hours) is separated into 24 ".mat" data files from "Hour_1.mat" to "Hour_24.mat". Each data file contains one-hour data and can be opened by MATLAB.
- There are 9 columns in each data file. The 9 columns from 1 to 9 are hour, minute, second, phase-A voltage, phase-B voltage, phase-C voltage, phase-A current, phase-B current and phase-C current, respectively.

Data available at:

https://drive.google.com/open?id=0B6vSVhUYNe86TGQ3bmgwdG1ySnM