

Master Thesis Work Description

Background

E-Bridge Consulting B.V. is looking for an enthusiastic master student who will work on improving E-Bridge's electricity market simulation tool.

The market tool at E-Bridge is based on the current ATC market coupling mechanism, and is able to optimize the electricity market outcome (e.g. net position, zonal prices, cross-border exchanges, etc) based on given inputs (e.g. installed capacity, fuel prices, transmission capacity, wind power infeed, network constraints, etc). The market tool is developed in Matlab. In the current version of the tool, many assumptions have been applied. These assumptions have certain impacts on the simulation results, and thus need to be carefully evaluated and validated.

It is foreseen that the EU energy market is gradually moving from an ATC to a Flow-based (FB) mechanism. The implementation of the FB market mechanism in the Matlab tool is an additional task.

Scope

The aim of the master thesis work is to validate and calibrate the market simulation tool, by investigating the assumptions that are being used in the current tooling development. Bug fixes in Matlab are also expected during the internship. A FB market mechanism needs to be developed implemented in the tool as well. The qualified thesis student will be supervised by Dr. Zongyu Liu, the consultant who built the market tool, in close cooperation with other experts within the company.

Prerequisites

The qualified master student is expected to have an electrical power engineering and/or mathematics/optimization background. Good command of Matlab scripting is essential. Communication in English is a must, knowing Dutch is certainly a plus. The internship requires full-time (40 hours/week) working at E-Bridge Consulting B.V. in Oosterbeek.

Duration

6 months standard internship period.

Remuneration

The qualified student (full-time) will receive a fixed compensation of 400 euros per month.

Working location

E-Bridge Consulting B.V. is based in Oosterbeek, the Netherlands. For more information about E-Bridge Consulting B.V., please visit <http://www.e-bridge.com/> or contact Dr. Zongyu Liu via email at zliu@e-bridge.com or at +31 26 700 9792.