

Arbiter Systems, Inc. 1324 Vendels Circle, Suite 121 Paso Robles, CA 93446 United States of America

11.10.2010 nr PV-VHO-JUH/1007

Reference Statement

Dear Mr. De Vries,

We hereby confirm that 10 PMU's of model 1133A Power SentinelTM from Arbiter Systems, Inc. were installed to the Estonian transmission system. These PMUs are connected to a WAMS system from the company ELPROS d.o.o. using the software WAProtectorTM.

The Estonian WAMS system consists of the following functionality:

- The measurements of appropriate system state variables and determine the system operation in real time and increase security of supply.
- Observance of fast system processes, record, analyze and transmit the recorded information to Control Centre.
- The data received by WAMS system are used for system studies and validation of Estonian power system dynamical model.

The Estonian WAMS system is able to observe and perform analysis for possible inter-area oscillations, system separation and resynchronization, black-start observation and analysis, frequency stability, voltage magnitudes and angles between different parts of the systems and form appropriate signals or information to system operators in the case of parameters derating.

The Estonian WAMS system is able to communicate with other neighboring WAMS systems (Russian, Latvian and Lithuanian), exchange data and other information, have cyclic database of parameters for 14 days with 20ms resolution, events database for 10000 records and oscillographic database for disturbance recording.

With kind regards,

Kalle Kilk

Member of the Management Board

Jako Kilter +372 71 51 340

www.elering.eu