

REAL-TIME INFORMATION EXCHANGE

1 Introduction

This instruction shall be applied to the real-time information exchange related to the maintenance of system security and to the technical implementation and definition of real-time information exchange. The detailed information to be exchanged shall be agreed upon separately with each customer to the extent that Fingrid or the Customer requires the information in the maintenance of the system security of the power system. A list of the exchanged real-time information is maintained in Appendix 3 of the main grid contract.

2 Information concerning the maintenance of system security, required from the Customer

- Active power, reactive power and voltage measurement information on the network as well as state information on switching devices. This applies to the information on those parts of the network which are in parallel operation with the main grid and, when so agreed upon with the Customer, information on substations connected to the main grid.
- Real-time active power and reactive power measurement information of individual generators of at least 10 MVA and the state information on circuit breakers. The measurement information shall primarily be delivered as a net measurement.
- With generators of 1-10 MVA, the above measurement information can be supplied as a producer-specific sum. The measurement information shall primarily be delivered as a net measurement. Information on wind power production shall be delivered separately from other production.
- Real-time information does not need to be delivered on individual generators of below 1 MVA or on reserve power plants used for securing electricity supply.

The necessary real-time measurement and state information shall be available in Fingrid's operation control system when a new power plant or substation is connected to the electricity network.

3 Information supplied by Fingrid to the Customer

Fingrid shall provide the Customer with the following information upon request:

- Real-time active power and reactive power measurements and state information on the Customer's connecting bay.
- State information on Fingrid's transmission line bays, bus voltages and state information on the circuit breakers of compensating equipment at the Customer's connecting substation.
- Alarms in a scope to be agreed upon separately.

- If the Customer is connected to Fingrid's grid through a branch line, the above information on substations located at the ends of the trunk line shall be supplied.
- Real-time information on substations shall be delivered to the Customer only in the event that the information does not include third-party measurement information. This information may be submitted if the Customer acquires the necessary permit from the third party in question.

The control possibilities of switching devices in bays subject to a right of use shall be agreed upon separately.

4 Nature of information exchange

The update cycle of real-time information exchange shall be 3 minutes or more frequent.

In fault situations, that contracting party which finds a fault in the information exchange shall inform the other party of the situation. The contracting party responsible for the delivery of information shall take care of the correction of the fault in co-operation with the other party.

5 Interfaces of information exchange

The below information exchange techniques shall be used in information exchange between Fingrid and the Customer.

5.1 Operation control systems

The real-time information exchange between the contracting parties' systems shall mainly use the FEN network. The protocols to be used in real-time information exchange are Elcom (TASE.1), ICCP (TASE.2) or IEC 60870-5-104.

5.2 Remote terminal units of substations

At a substation in the main grid, both contracting parties may have their own remote terminal units or a shared remote terminal unit provided with separate telecommunications links and potential links for the supply of various information.

Potential information exchange between the remote terminal units shall always be agreed upon separately. Remote terminal units are used for transferring linked operation control information from a substation.

5.3 Other interfaces

Upon separate agreement, other communications interfaces are also possible (such as the web data transfer service provided by Fingrid for incoming data) if these are technically easy to use, reliable and cost effective.