EMPURON **HIS**
Historical Information System

EMPURON HIS – Historical Information System

With the Database solution **EMPURON HIS** (Historical Information System) **EMPURON** provides a scalable database in the terabyte dimension. Time series of large enterprises can be hold in access over several years online. The associated long-term archive allows an extension of the archive periods for time series on the entire life of the PV plant.

- Historical Information System for 15-, 30- und 60-minutes-time series
- Short-cyclical time series (< 15 min) and long-cyclical time series (> 60 min)
- Spontaneous values recording
- Messages und status information

EMPURON HIS OPC-Server

The access to data of the **EMPURON HIS** database is supported by standard and open interfaces: Besides an API interface the **EMPURON HIS** OPC Server provides access to arbitrary data of the **EMPURON HIS** database.

EMPURON HIS Calculation Module

The **EMPURON HIS** Calculation Module provides possibilities to aggregate values and to create values as derivatives from other values within **EMPURON VISUAL**. The components are:

- **Calculation of values derived from other values:** Creation of new data objects -values or statuses - as a combination of associated values or statuses are derived from values and/or statuses of other data objects. These values are stored in the database and can be accessed by the user the same way as the base values.
- **Value Aggregation on demand:** Momentary values are compiled into values for time intervals, such as 5 minute average or 24h integral. These values are calculated from the momentary (or derived) values upon the user's request.
- **User interfaces:** For value aggregation on demand the **EMPURON VISUAL** wizard provides the selections: The aggregation method can be chosen (e.g., 5min, 15min, hour, day). In the chart, the aggregation method is shown together with the data object name.
- **Editing formulas:** The formula editor of the **EMPURON VISUAL** administration provides an easy to use interface for creating and maintaining formulas. Aggregations can be combined with functions (trigonometric and statistical), constants and control statements for operating conditions in formulas.

Dimensioning (example customer installation)

- 350.000 time series in 15-, 30- oder 60-minutes-cycle
- In total 1,2 Mio. Data objects (addresses)
- Archive period in online access: freely definable (e. g.: 2 to 5 years)
- Long-term-archive for variable periods (up to 20 years or more)
- Based on ORACLE 10g (alternative „EnterpriseDB")

Strategies for long-term data storage

- Long-term data storage manual or automatic (e.g. in monthly cycle)
- Formats of the long-term data storageare based on ASCII or XML