

Conversion of electricity consumption to standard temperature conditions

Current version on climatic conversion method works only with one climatic quantity, average daily air temperature. The temperature data are obtained as an average value from 7 weather stations (meteorological observations) with following exponential straightening.

Air temperature is expressed in regressive equation in the form of the 5th degree rational function, next independent variables are sequence number of the day in a year and standard temperature conditions (long time temperature standard) for given day in the year. The assignment is treated by default en bloc for the whole calendar year (excluding days or periods of the year, which are characterised by untypical values of electricity consumption).

Temperature standard is for this time perceived as time series of 365 (if need be 366) average daily values of outside air temperature in last 20 year period between 1986 and 2005 (with additional straightening).

At climatic conversion of electricity consumption the temperature standard fulfil two principal functions:

In regressive equation it acts as one of independent variable. It characterise seasonal component (annual shape) of electricity consumption.

At the same time it serves as an etalon, to which the whole of the historical time series of the CR electricity consumption is being recalculated so that at evolutionary trends in electricity consumption analysis there is eliminated influence of outside temperature which is by far the most significant item of climatic (meteorological) factors influencing the electricity consumption.