

**SOCIO-ECONOMIC BENEFITS OF
METEOROLOGICAL AND HYDROLOGICAL SERVICES**

INVENTORY OF DECISION SUPPORT TOOLS

DRAFT INVENTORY FRAMEWORK

ITEM	DESCRIPTION
Sector	Energy
Sub-sector	Demand forecast
Tool Name	PREMIS
Tool Description	PREMIS is an electricity demand forecasting model
Weather, Climate or Water inputs	Temperature and cloud cover
Specific weather, climate, water data required	T2m and cloud cover on a panel of meteorological stations in France. Data used are observations and forecasts (from ECMWF EPS and METEO-FRANCE ARPEGE models)
Spatial resolution	Gridded data downscaled to point data
Temporal resolution	3h, from t to t+10 days
Delivery methodology	Historical data are used to tune the model parameters, then real time forecasts are used to run the demand forecasts.
Frequency of data requirement	Several times a day
Other	PREMIS is an EDF tool, similar in its characteristics to other demand forecasting models
Detailed Tool Description	PREMIS is based on a statistical model, for which the parameters are estimated regularly with observed T2m, cloud cover and demand data. It makes demand forecasts over France up to 10 days. A long-term version uses historical data only to make 1 to 5 years demand forecasts.
Spatial resolution	Averaged demand for France
Temporal resolution	1/2h, from t to t+10 days
Delivery methodology	Demand forecasts aggregated for France
Frequency of provision	Several times a day
Other	PREMIS can be used for other countries if data are available
Benefits of tool application	PREMIS allows to make accurate demand forecasts up to 10 days (ensemble predictions). These forecasts are then used in the production/demand balance optimisation tools and in the decision processes.
Possible future advances	Longer term (up to 14 days, as ECMWF VAREPS for example) could benefit to PREMIS by extending the range of the forecasts. Monthly and/or seasonal forecasts could be used in the future to make longer-term demand predictions
Comments	
URL	
Others	