

1.13. SOFTWARE COMPLEX "KORASP"

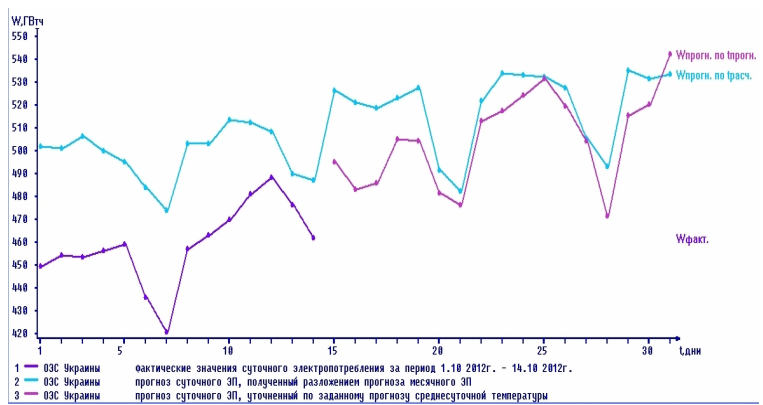
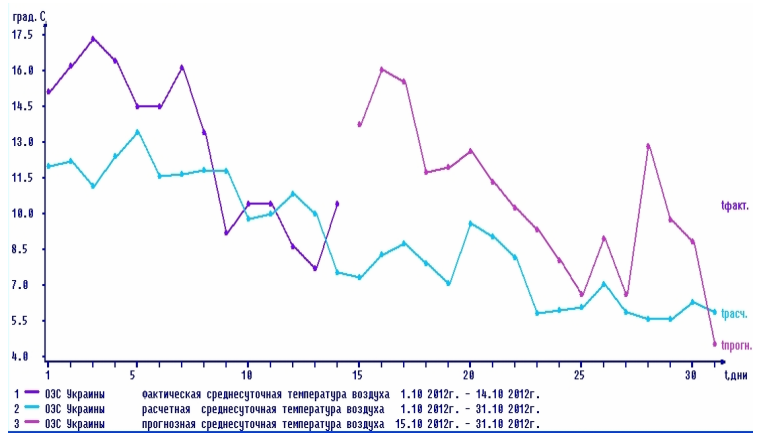
The software complex is intended for retrospective analysis and midterm forecasting of electric power consumption (EPC) and electrical energy consumption (EEC) from one month to two years. The software verifies information available in the databases, performs its statistical processing and analysis, and provides data and calculation results in the form of tables and graphs.

The complex ensures a performance of the following tasks of midterm modes' planning:

1. **Forecasting of monthly electrical energy consumption** via IPS from one month to two years. Calculations are performed independently by three algorithms using the following information:
 - daily EEC of the integrated power system (one-level forecast);
 - daily EEC via regional power systems (two-level forecast);
 - monthly EEC by groups of the country's industries (forecast based on a structure of electrical energy consumption).
2. **Forecasting of weekly and monthly minimum and maximum values of the consumed electric power** via integrated power system, which is performed by using hourly values of EPC of IPS.
3. **Forecast adjustment of EEC of power system of the instant month** by using actual values of a daily electrical energy consumption for a previous period, by taking into account intramonthly trend and short-term forecast of an air temperature, weekly imbalance of the daily EEC.

High accuracy and reliability of the results can be achieved due to methodology that takes into account a structure of the integrated power system, energy consumption dynamics by different industries, electrical energy losses in the network, trending and seasonal components of EEC, an influence of an average air temperature and calendar factors (number of working days in a month, number of weekends and holidays per year).

Уточнение прогноза месячного ЭП						
Уточнение прогноза месячного ЭП на октябрь 2012г. по фактическим данным на 14.10 2012г.						
Дата, день недели	Среднесуточная температура			Суточное ЭП [ГВтч]		
	средне-много-летняя	трасч. (выч. по тр-мес)	2012г. факт и прогноз	ЭП, вычисленное по трасч.	факт и уточн. прогноз	
Прошедший период месяца						
1.10, пн	12.0	12.0	15.1	501.9		449.2
2.10, вт	12.1	12.2	16.2	501.0		454.3
3.10, ср	11.1	11.2	17.3	506.3		453.3
4.10, чт	12.3	12.4	16.4	500.0		456.2
5.10, пт	13.3	13.4	14.5	494.8		458.9
6.10, сб	11.5	11.6	14.5	483.7		435.7
7.10, вс	11.6	11.6	16.1	473.7		420.4
8.10, пн	11.8	11.8	13.4	502.9		457.1
9.10, вт	11.7	11.8	9.2	503.1		462.8
10.10, ср	9.7	9.8	10.4	513.4		469.9
11.10, чт	10.0	10.0	10.4	512.2		481.1
12.10, пт	10.8	10.8	8.6	508.1		488.3
13.10, сб	10.0	10.0	7.7	489.7		476.3
14.10, вс	7.5	7.5	10.4	486.8		462.0
Прогнозируемый период месяца						
15.10, пн	7.3	7.3	13.6	526.1	493.7	496.6
16.10, вт	8.2	8.3	15.9	521.0	481.9	494.0
17.10, ср	8.7	8.7	15.4	518.7	484.5	489.6
18.10, чт	7.9	7.9	11.6	523.0	504.0	492.7
19.10, пт	7.0	7.1	11.8	527.3	503.0	491.1
20.10, сб	9.5	9.6	12.5	491.4	480.2	470.0
21.10, вс	9.0	9.0	11.2	482.1	475.1	453.6
22.10, пн	8.1	8.1	10.1	521.8	511.7	489.4
23.10, вт	5.8	5.8	9.2	533.8	516.3	504.6
24.10, ср	5.9	5.9	7.9	533.2	523.0	511.1
25.10, чт	6.0	6.1	6.5	532.3	530.2	518.1
26.10, пт	7.0	7.0	8.8	527.4	518.4	515.1
27.10, сб	5.8	5.9	6.5	505.5	503.0	499.3
28.10, вс	5.5	5.6	12.7	493.1	470.4	476.2
29.10, пн	5.5	5.6	9.6	534.9	514.3	519.7
30.10, вт	6.2	6.3	8.7	531.4	518.9	521.3
31.10, ср	5.8	5.8	4.4	533.6	541.0	520.2
Результат за месяц	Среднее за месяц			Сумма за месяц		
	8.9	8.9	11.5	15814.1	14994.8	1488.0



Forecast adjustment of a monthly electrical energy consumption of the IPS of Ukraine. Forecasting error was reduced from 5.2 to 0,7%

The "KORASP" complex is designed for being used in different services of the integrated power system, in regional power systems, and also in the design institutes. It also can be used in other organizations engaged into analysis and planning of electrical energy consumption in separate regions, by different industries and by country as a whole.