

# OVERVIEW OF ELECTRICAL ENERGY

**OCTOBER 2009**

The purpose of this document is to provide information on the results of operation of the French public transmission network and power system during the past month. Information sources : electricity generators, ERDF, METEOFRANCE, RTE. The data published are interim figures dated **6 November 2009**, unless indicated otherwise.

## NATIONAL ELECTRICITY CONSUMPTION - perimeter France

### Results at end of past month

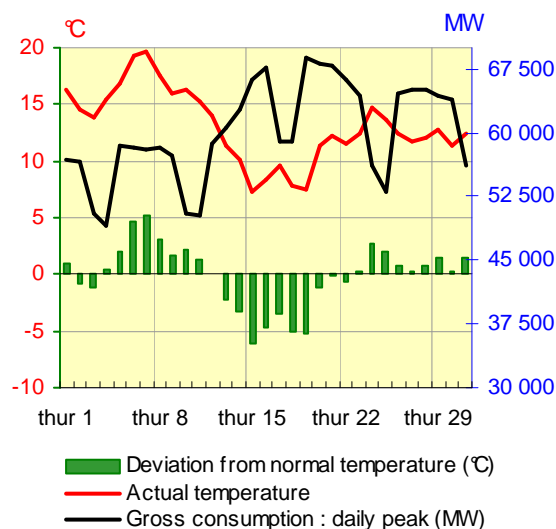
	October 2009	Trend compared with oct 2008	Cumulative trend since 1 <sup>st</sup> january	Cumulative trend over last 12 months
Gross consumption	39,4 TWh	-3,1%	-1,4%	-1,4%
Adjusted consumption *	38,7 TWh	-1,3%	-2,5%	-2,3%

\* adjusted for winter and summer climate contingencies and the inclusion of 29 February 2008

### Temperature

Monthly average	13,1 °C
Deviation from normal temperature	- 0,1 °C/normale
Deviation from october 2008	+ 1,1 °C

RTE-in house reference drawn up on basis of METEOFRANCE data



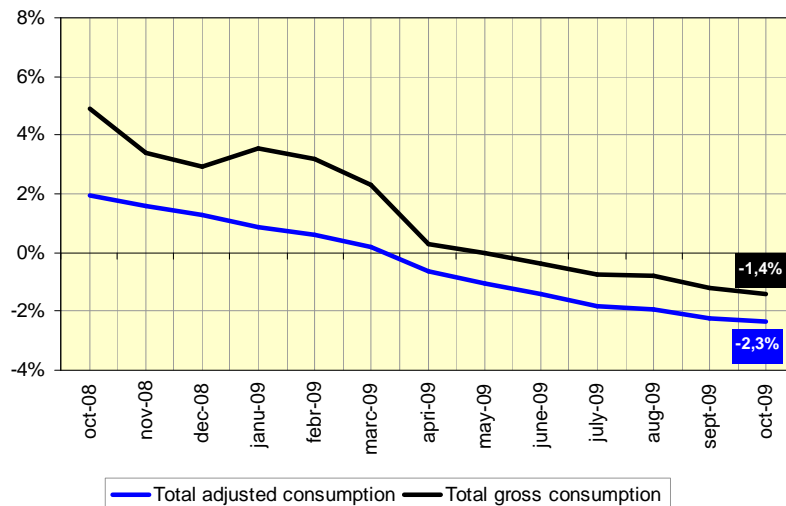
In october 2009, compared with october 2008, with an average temperature 1,1°C higher and a slightly unfavourable calendar effect, the gross demand was down by 3,1%. Adjusted for climatic contingencies, monthly consumption was down by 1,3%.

### Cumulative trend over last 12 months

In cumulative figures over a sliding 12 month period, the rate of growth in gross consumption shrank compared with the previous month, from -1,2% at the end of september 2009, to -1,4% at the end of october 2009.

In cumulative figures over 12 months, the falling trend in adjusted consumption\* continued ; the growth rate slowed from -2,2% at the end of september, to -2,3% at the end of october 2009.

### Evolution of National consumption in sliding year



\* adjusted for winter and summer climate contingencies and the inclusion of 29 February 2008.

## BALANCE OF ELECTRICAL ENERGY IN FRANCE

### Results at end of past month

	October 2009 (GWh)	Deviation from Oct 2008 (GWh)	Deviation from Oct 2008	Cumulative trend since 1st January	Cumulative trend over last 12 months
<b>NET GENERATION</b>					
Nuclear	30 930	-3 019	-8,9%	-5,9%	-4,5%
Fossil-fuel thermal generation	4 710	309	7,0%	1,1%	-3,6%
Hydro-electric	3 011	-738	-19,7%	-8,1%	-2,9%
Wind	572	119	26,3%	23,2%	23,2%
Other renewable sources *	329	24	7,9%	5,2%	5,1%
<b>Total net generation</b>	<b>39 552</b>	<b>-3 305</b>	<b>-7,7%</b>	<b>-5,2%</b>	<b>-3,8%</b>

### GROSS NATIONAL CONSUMPTION

End customers connected to the RTE network **	7 392	-1	0,0%	-10,0%	-11,0%
Other customers and losses on all networks ***	32 047	-1 263	-3,8%	0,6%	0,6%
<b>Total gross national consumption</b>	<b>39 439</b>	<b>-1 264</b>	<b>-3,1%</b>	<b>-1,4%</b>	<b>-1,4%</b>
<b>Energy extracted for pumping</b>	<b>571</b>	<b>-135</b>	<b>-19,1%</b>	<b>4,6%</b>	<b>-0,7%</b>
<b>Balance of physical exchanges (export)</b>	<b>-458</b>	<b>-1 906</b>	<b>-131,6%</b>	<b>-43,2%</b>	<b>-31,8%</b>

\* mainly : household waste, paper waste, biogas

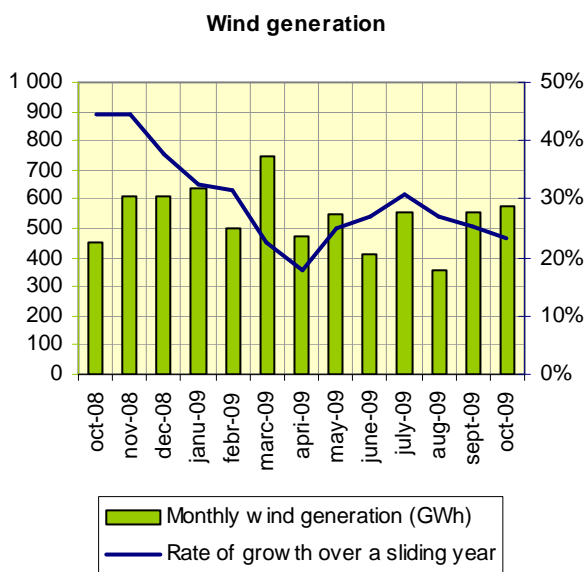
\*\* extractions by these consumers on the RTE network

\*\*\* SME, SMI, business and private consumers supplied by the distribution networks + generation auto-consumed by industrials at their sites + losses on the transmission and distribution networks

The monthly balance of physical exchanges was negative (-458 GWh) this month for the 1st time since winter 1982-1983.

### Development of wind generation in France

With installed capacity up by 1 200 MW at the end of October 2009 compared with the same time the previous year monthly wind generation was up by 26,3%. In cumulative terms over 12 months, the rate of growth in wind generation remains high with a value of +23,2% at the end of October.

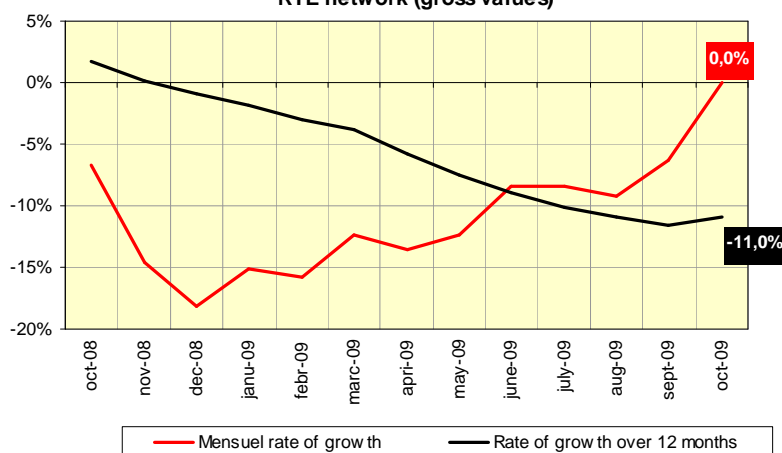


### Development of extractions by large-scale industry

In monthly figure, the fall in extractions by consumers connected directly to the RTE network reached its lowest value in December 2008 (-18,2%). Between January and May 2009, monthly extractions remained 12% to 15% below those of the previous year; over the months June-July-August, they were down by approximately 9% on the same period the previous year; in September and October 2009, the decline slowed rapidly to 6,4%, and then 0%. However, it should be noted that the month of October 2008 marked the start of the crisis, with extractions down by 6,7% compared with October 2007.

The rate of growth in extractions by consumers connected directly to the RTE network went from -11,5% at the end of September 2009, to 11,0% at the end of October 2009. Adjusted for the impact of 29/02/2008, this rate is -10,7%.

### Evolution of extractions by end customers connected to the RTE network (gross values)



### EXTREME values for consumption, exchanges – perimeter France\*

		October		Last 12 months		Absolute **	
<b>Gross national consumption</b>	Maximum	1 465 GWh	Tuesday 20	2 035 GWh	07/01/2009	2 035 GWh	07/01/2009
		68 924 MW	Monday 19	92 400 MW	07/01/2009	92 400 MW	07/01/2009
	Minimum	1 004 GWh	Sunday 4	903 GWh	09/08/2009	856 GWh	06/08/2006
		34 906 MW	Sunday 11	31 456 MW	09/08/2009	29 816 MW	06/08/2006
<b>Balance of physical exchanges ***</b>	Maximum	145 GWh	Sunday 11	264 GWh	11/11/2008	298 GWh	08/05/2008
		9 329 MW	Sunday 11	13 746 MW	11/11/2008	13 746 MW	11/11/2008
	Minimum	-123 GWh	Monday 19	-123 GWh	19/10/2009	-123 GWh	19/10/2009
		-7 711 MW	Monday 19	-7 711 MW	19/10/2009	-7 711 MW	19/10/2009

\* Excluding Corsica . \*\* The minimum values concern the last 30 years for the balance of physical exchanges, and the last 5 years for consumption.

\*\*\* A positive value indicates a net export balance, a negative value indicates a net import balance.

### ELECTRICITY MARKET MECHANISMS

#### CONTRACTUAL CROSS-BORDER ELECTRICITY EXCHANGES

	EXPORTS			IMPORTS			CUMULATIVE TOTAL			EXPORT BALANCE *		
	October 2009 (GWh)	Trend / oct 2008	Cumulative trend since 1st Jan	October 2009 (GWh)	Trend / oct 2008	Cumulative trend since 1st Jan	October 2009 (GWh)	Trend / oct 2008	Cumulative trend since 1st Jan	October 2009 (GWh)	Trend / oct 2008	Cumulative trend since 1st Jan
Belgium	71	-72%	-74%	542	54%	278%	613	1%	-36%	-471	397%	-122%
Germany	430	21%	9%	2 262	16%	-6%	2 692	17%	-2%	-1 832	15%	-14%
Switzerland	2 127	-1%	-1%	870	0%	22%	2 997	-1%	5%	1 257	-2%	-11%
Italy	1 576	4%	1%	426	35%	-50%	2 002	10%	-4%	1 150	-4%	6%
Spain	287	-22%	-5%	262	-26%	19%	549	-24%	3%	25	102%	-29%
Great Britain	151	-82%	-41%	815	208%	258%	966	-11%	-22%	-664	-218%	-63%
<b>TOTAL</b>	<b>4 642</b>	<b>-15%</b>	<b>-17%</b>	<b>5 177</b>	<b>26%</b>	<b>+19%</b>	<b>9 819</b>	<b>2%</b>	<b>-6%</b>	<b>-535</b>	<b>-139%</b>	<b>-43%</b>

\* A negative value indicates a net import balance.

#### BALANCING MECHANISM - BALANCE RESPONSIBLE ENTITIES

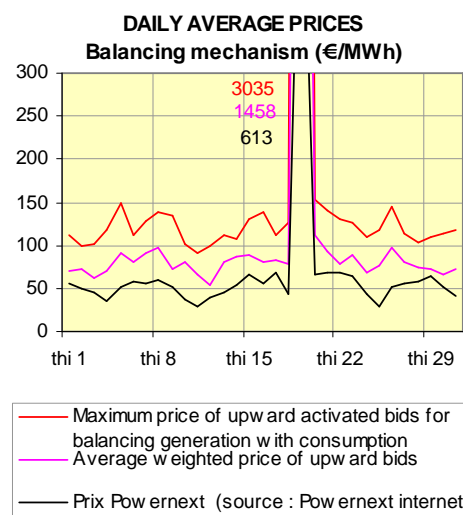
	October 2009	Deviation compared with Oct 2008	Trend compared with Oct 2008	Cumul. trend since 1st January
<b>Balancing Mechanism</b>				

Total energy activated upward	322 GWh	172 GWh	115%	45%
Total energy activated downward	361 GWh	-156 GWh	-30%	-4%
Number of actors	36	-1		

#### Exchanges between Balance Responsible entities\* (BR) via block exchange notifications (NEB)

Energy exchanged between BR via NEB	29 840 GWh	+6 260 GWh	+27%	-1%
Number of BR	146	+5		

\* Balance Responsible Entity : any legal entity who is committed to RTE, under a Balance Responsible contract, to settling the costs of the imbalances calculated a posteriori, on behalf of one or more network users attached to its scope. These imbalances result from the difference between all of the supplies and consumption for which it is responsible.



### TRANSMISSION NETWORK DEVELOPMENT

In October, the following installations entered service on the 400 kV and 225 kV networks :

-the 400 kV Avelin-Warande n2 line between Dunkerque and Lille, following work to replace conductors to strengthen the network in the Nord region ; the 400 kV Trans substation, with an overhead line from Néoules and a 400/225 kV (600 MVA) autotransformer, to increase transmission capacities to the Alpes-Maritimes and eastern Var regions;

-the 225 kV Berge substation, connected to the Cantegrit-Marsillon n2 line, with a 225/63 kV (170 MVA) transformer to strengthen the supply to the Dax area; the 225 kV Nanterre-Nourottes underground cable, as part of work to improve the power supply to the Cergy area ; a 225/63 kV (100 MVA) transformer at the Allinges substation, to strengthen the supply to the Chablais area of Haute-Savoie.