

## September 2011

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: ERDF, METEOPFRANCE, electricity generators, RTE. The data published are correct as of **10 October 2011**, unless indicated otherwise.

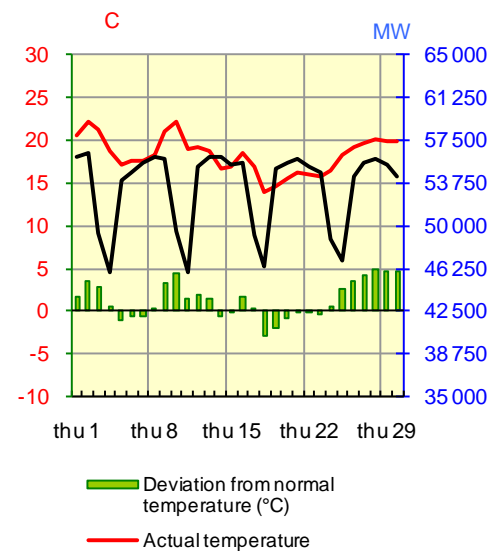
### INTERNAL ELECTRICITY CONSUMPTION - perimeter France

#### Results at end of past month

	September 2011	Trend since September 2010	Cumulative trend since Jan 1 <sup>st</sup>	Cumulative trend over last 12 months
National consumption	34.2 TWh	-2.7%	-4.7%	-1.0%
Adjusted consumption *	34.0 TWh	-2.3%	-0.2%	+0.4%

Temperature	
Monthly average	18.3 °C
Deviation from ref. value	+1.3 °C/reference
Deviation from September 2010	+2.3 °C

RTE-in house references drawn up on basis of METEOPFRANCE data



The month of September saw a high average temperature equal to 18.3°C; temperatures remained around the reference temperature (within a range of 1.0°C either side) on 12 days, above the reference temperature on 15 days (by 4.9°C on the 28th) and below the reference temperature on 3 days (by 2.8°C on the 18th).

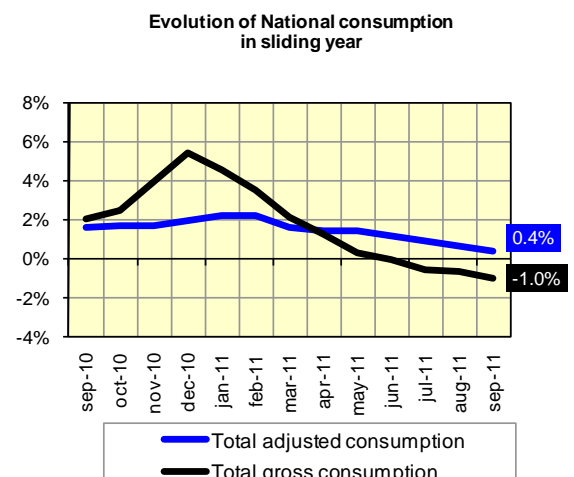
Gross consumption fell by 2.7% compared with September 2010. Adjusted for meteorological contingencies, monthly consumption was down by 2.3% compared with September 2010, continuing the trend observed in August (-2.0%), July (-3.0%) and June (-1.9%). Excluding the energy sector, consumption rose by 0.2%.

#### Cumulative trend over last 12 months

In cumulative figures over a 12 month period, gross consumption was down by 1.0% on September 2010. The rate of growth in gross consumption has been falling steadily since December 2010 (+5.5%), and has been negative since the end of July (-0.5%).

The rate of growth in adjusted consumption\* was up by 0.4% at the end of September, having been slowing steadily since the end of May (+1.5%), following a rise in excess of 2% at the end of February and January. Excluding the energy sector, adjusted consumption was up by 1.4% at the end of September, following rises of +1.7% recorded at the end of June, +2.0% at the end of March and +2.5% at the end of February.

\* adjusted for the impact of climatic contingencies in winter and summer



## BALANCE OF ELECTRICAL ENERGY IN FRANCE

### Results at end of past month

	September 2011 (GWh)	Deviation from September 2010 (GWh)	Trend vs. September 2010	Cumulative trend since Jan 1 <sup>st</sup>	Cumulative trend over last 12 months
<b>NET GENERATION</b>					
Nuclear	31 482	-175	-0.6%	+5.4%	+6.3%
Fossil-fuel thermal	2 720	-245	-8.3%	-12.5%	-6.2%
Hydro	3 251	-343	-9.6%	-26.4%	-14.5%
Wind	837	+268	+47.0%	+19.5%	+14.5%
Other renewables *	606	+157	+34.9%	+34.7%	+31.2%
<b>Total net generation</b>	<b>38 896</b>	<b>-338</b>	<b>-0.9%</b>	<b>+0.1%</b>	<b>+2.9%</b>
<b>GROSS INTERNAL CONSUMPTION</b>					
Consumers directly connected to the RTE grid **	6 257	-949	-13.2%	-6.7%	-3.2%
Other consumers and losses on all networks ***	27 899	-15	-0.1%	-4.4%	-0.6%
<b>Total gross internal consumption</b>	<b>34 156</b>	<b>-964</b>	<b>-2.7%</b>	<b>-4.7%</b>	<b>-1.0%</b>
<b>Energy extracted for pumping</b>	<b>496</b>	<b>-20</b>	<b>-4.0%</b>	<b>+7.1%</b>	<b>+6.3%</b>
<b>Balance of physical exchanges ****</b>	<b>4 244</b>	<b>+646</b>	<b>+18.0%</b>	<b>+65.3%</b>	<b>+69.8%</b>

\* mainly: household waste, paper waste, biogas, solar

\*\*\* SMEs, professional and individual consumers served by the distribution networks, generation auto-consumed by industrials at their sites, losses on the transmission and distribution networks

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

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

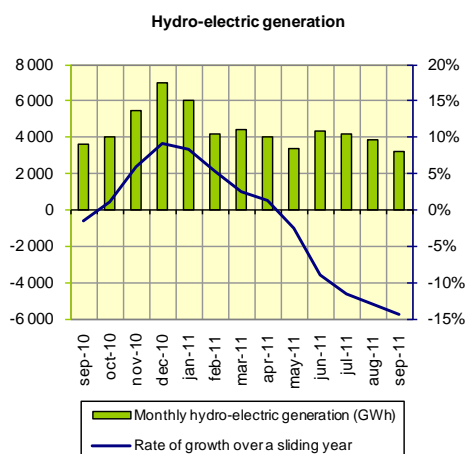
Nuclear generation for the month (31.5 TWh) was close to the levels seen in 2008 (31.2 TWh) and 2010 (31.7 TWh), higher than those of 2009 (28.7 TWh).

Generation from renewable sources other than hydro and wind power has shown monthly growth in excess of 30% since March, with +35% in September, thanks to threefold growth in solar power over the first nine months of 2011, compared with the first nine months of 2010.

The export balance was 4.2 TWh, up by 18% on September 2010. France was a net importer of power temporarily on the 13th. In cumulative terms since the start of the year, the export balance is 65% higher than 2010, when it was 10.6% higher than the first nine months of 2009.

### Hydro-electric generation

Monthly hydro-electric generation (3.25 TWh) was lower in September 2011 compared with September 2010 (-9.6%), continuing the trend observed in August (-10.7%), but the drop was less marked than those observed between February and July (with rates varying from -23% to -47%). the level of generation this month was the lowest for a month of September since 1990 (2.9 TWh), with the exception of September 2009 (3.0 TWh).



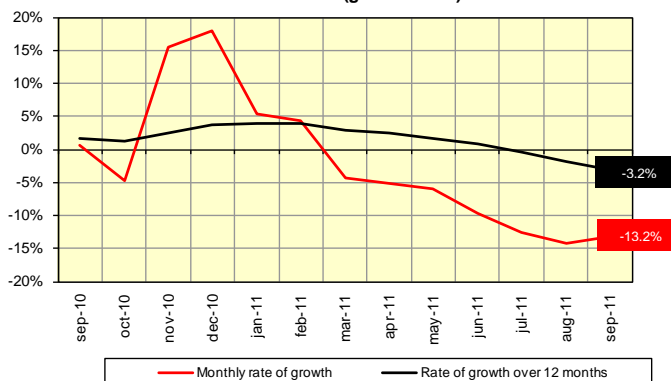
### Extractions by heavy industry

In September 2011, the rate of growth in monthly extractions by consumers directly connected to the RTE network (-13.2%) was similar to that observed in August (-14.2%) and July (-12.6%), having fallen continuously since March 2011 (-4.3%).

Excluding the energy sector, the monthly growth rate remained negative (-1.1%) as in August and July (-0.9%, -0.4%), having slowed steadily in the first half of the (+1.9% in June, +4.6% in March, +12.4% in December 2010). Extractions in September 2011 were 2.0% higher than in September 2009, but still down by approximately 7.0% on September 2008 and September 2007.

The rate of growth in extractions by consumers connected directly to the RTE network, over a sliding year, continued to slow (-3.2%), following figures of -1.9% recorded in August and -0.5% in July; it has been slowing steadily since March (+2.8%), after reaching a plateau around +3.8% over the period December 2010-February 2011.

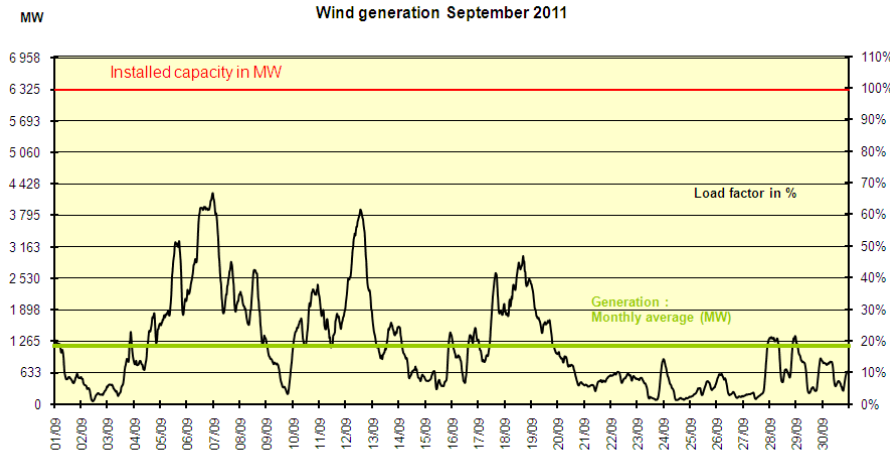
Evolution of extractions by end customers connected to the RTE network (gross values)



**Wind generation over the past month**

**Wind generation and installed capacity**

At the end of September, installed capacity was approximately 6 325 MW. Average wind generation for the month was 1 159 MW. There was more wind in September 2011 than in September 2010; the load factor was 18%, compared with 15% in September 2010 (when average generation was 787 MW for installed capacity of 5 314 MW).

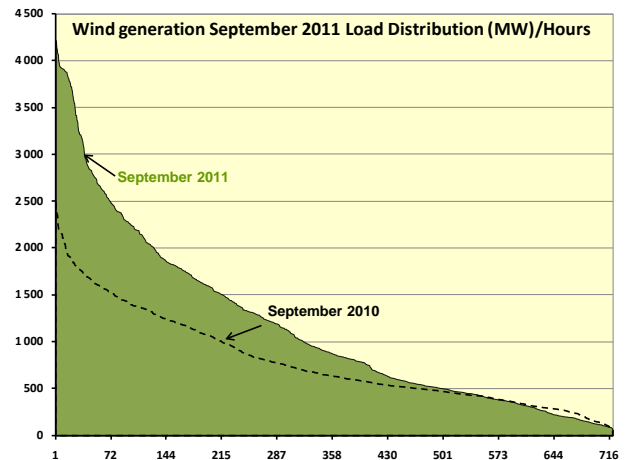


	Wind generation (MW)	Load factor (%)	Date/time
Max value	4 220	67%	Tues 6th at 12am
Mean value	1 159	18%	
Min value	63	1%	Fri 2 <sup>nd</sup> at 11am

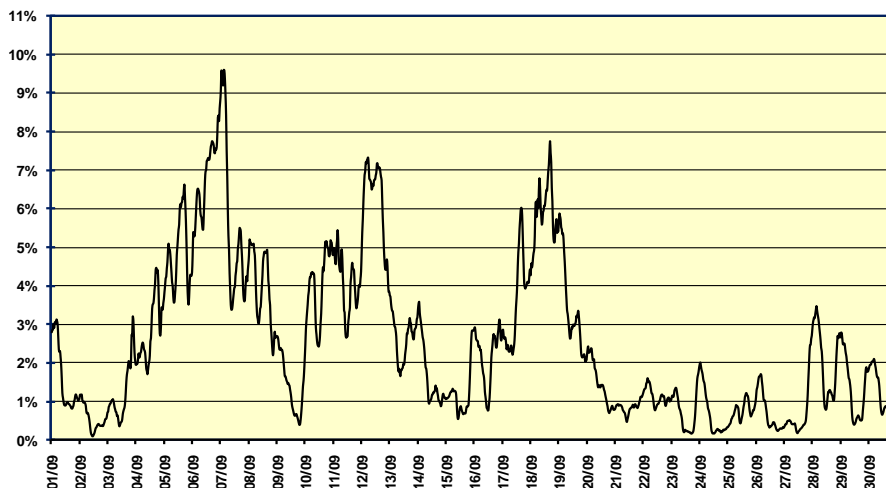
**Hourly coverage rate**

The average rate of coverage of demand by wind generation was 2.5%, compared with 1.7% in September 2010.

Sep-11	Coverage rate	Date/time	Wind generation	Consumption
Mean value	2.5%			
Max value	9.6%	Weds 7th at 3am	3 819 MW	39 823 MW
Value at consumption peak	0.2%	Fri 2 <sup>nd</sup> at 1pm	120 MW	56 345 MW



**Rate of coverage of consumption by wind generation (%)**



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

		September			Last 12 months			Absolute **		
Gross internal consumption	Maximum	1 197 GWh	Weds 21	2 096 GWh	15/12/2010	2 096 GWh	15/12/2010	2 096 GWh	15/12/2010	
		56 345 MW	Fri 2	96 710 MW	15/12/2010	96 710 MW	15/12/2010	96 710 MW	15/12/2010	
	Minimum	960 GWh	Sun 25	894 GWh	07/08/2011	894 GWh	07/08/2011	894 GWh	07/08/2011	
		33 684 MW	Sun 25	31 037 MW	07/08/2011	31 037 MW	07/08/2011	31 037 MW	07/08/2011	
Balance of physical exchanges ***	Maximum	199 GWh	Sun 11	277 GWh	15/01/2011	298 GWh	08/05/2008	298 GWh	08/05/2008	
		10 179 MW	Sat 10	13 887 MW	16/01/2011	13 887 MW	16/01/2011	13 887 MW	16/01/2011	
	Minimum	91 GWh	Tues 13	-117 GWh	21/10/2010	-140 GWh	16/12/2009	-140 GWh	16/12/2009	
		-26 MW	Tues 13	-7 111 MW	18/10/2010	-7 795 MW	06/01/2010	-7 795 MW	06/01/2010	

\* Excl. Corsica \*\* The minimum values concern the last 30 years for the physical exchange balance, and the last 5 years for consumption.

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

**THE ELECTRICITY MARKET****CONTRACTUAL CROSS-BORDER ELECTRICITY EXCHANGES**

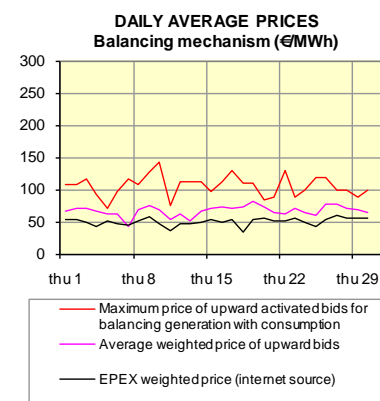
	EXPORTS			IMPORTS			CUMULATIVE VOLUME OF EXCHANGES			EXPORT BALANCE*		
	September 2011 GWh	Trend vs. Sep-10	Cum. trend since Jan 1 <sup>st</sup>	September 2011 GWh	Trend vs. Sep-10	Cum. trend since Jan 1 <sup>st</sup>	September 2011 GWh	Trend vs. Sep-10	Cum. trend since Jan 1 <sup>st</sup>	September 2011 GWh	Trend vs. Sep-10	Cum. trend since Jan 1 <sup>st</sup>
Belgium	615	57%	123%	153	-44%	-70%	768	16%	19%	462	n.s**	n.s***
Germany	777	-2%	11%	496	-43%	-48%	1 273	-23%	-23%	281	n.s**	n.s***
Switzerland	2 165	2%	8%	212	-59%	-53%	2 377	-10%	-2%	1 953	22%	24%
Italy	781	-41%	-12%	6	n.s**	12%	787	-41%	-11%	775	-42%	-12%
Spain	487	55%	88%	138	-44%	-20%	625	12%	21%	349	n.s**	n.s***
GB	419	-40%	-10%	97	-57%	-50%	516	-44%	-25%	322	-32%	42%
<b>TOTAL</b>	<b>5 244</b>	<b>-7%</b>	<b>10%</b>	<b>1 102</b>	<b>-48%</b>	<b>-48%</b>	<b>6 346</b>	<b>-18%</b>	<b>-9%</b>	<b>4 142</b>	<b>18%</b>	<b>+67%</b>

\* A negative value indicates a net import balance \*\* in September 2010, imports from Italy were 2 GWh, whilst net exports to Belgium totalled 119 GWh, net imports from Germany were 76 GWh, and net exports to Spain were 70 GWh \*\*\* in cumulative terms since January 1st 2011, the overall balance shows total net exports to Belgium of 5 554 GWh (compared with net imports of 506 GWh over the same period in 2010), and net exports of 3 154 GWh to Germany (compared with net imports of 3 036 GWh over the same period in 2010); net exports to Spain total 912 GWh (compared with net imports of 1 045 GWh over the same period in 2010).

**BALANCING MECHANISM - BALANCE RESPONSIBLE ENTITIES**

	September 2011	Deviation from Sep-10	Trend vs. Sep-10	Cum. trend since Jan 1 <sup>st</sup>
<b>Balancing Mechanism</b>				
Total energy activated upward	219 GWh	-46 GWh	-17%	-26%
Total energy activated downward	284 GWh	-13 GWh	-4%	+4%
Number of parties	39	+2		
<b>Exchanges between Balance Responsible entities* via (NEBs)</b>				
Energy exchanged between BRs via NEBs	29 583 GWh	+5622 GWh	+23%	+6%
Number of BRs	159	+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 retrospectively, 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.

**NEW or REFURBISHED INSTALLATIONS**

In September, the following RTE installations were electrified for the first time: the 400 kV substation at **Molière**, connected to the 400 kV **Domloup-Les Quintes n° 2** overhead line in the Sarthe department; the 225 kV **Ampère-Seine n°2** underground line, in Seine-Saint-Denis; two new 225/63 kV (170 MVA) transformers: one at the **Landerneau** substation in Finistère, and the other at the **Rospetz** substation in Côtes-d'Armor; the 90 kV **Coutances-La Haye du Puits-Terrette n° 2** overhead-underground line, in the Manche department; several underground lines: the 63 kV **Geispolsheim-Graffenstaden n° 2** line in Bas-Rhin, the **Montboucons-St Ferjeux n° 1** line in Doubs, the **Cluses-Pressy n° 1** line in Haute-Savoie, and the **Billancourt-Porchefontaine n° 1** line in Hauts-de-Seine.