

OVERVIEW OF ELECTRICAL ENERGY

December 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 **7 January 2009**, unless indicated otherwise.

NATIONAL ELECTRICITY CONSUMPTION - perimeter France

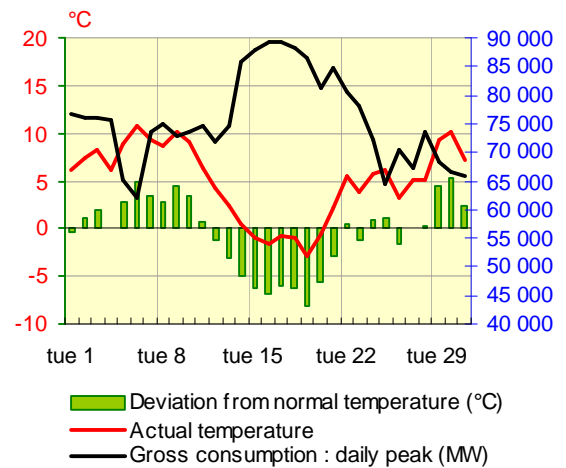
Results at end of past month

	December 2009	Trend compared with dec 2008	Cumulative trend since 1 st january
Gross consumption	50,7 TWh	-1,4%	50,7
Adjusted consumption *	49,9 TWh	0,9%	49,9

Temperature

Monthly average	5,0 °C
Deviation from normal temperature	- 0,4 °C/normale
Deviation from december 2008	+ 0,8 °C

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



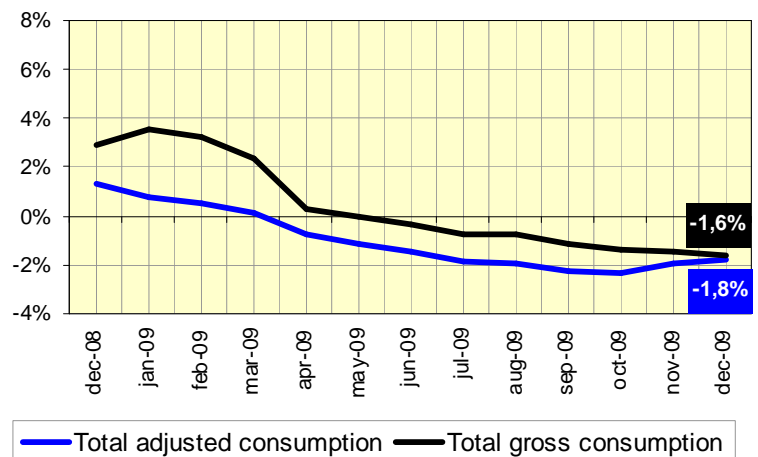
In december 2009, with an average temperature 0,8°C higher but with a favourable calendar effect, gross consumption was down by 1,4% compared with december 2008. Adjusted for climatic contingencies, monthly consumption rose by 0,9%, continuing the increase recorded in november 2009 (2,2%).

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 -1,4% at the end of november 2009, to -1,6% at the end of december 2009.

In cumulative figures over 12 months, the falling trend in adjusted consumption* slowed at the end of the year ; the growth rate rose from -2,3% at the end of october, to - 2,0% at the end of november, and then to 1,8% at the end of december 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

	December 2009 (GWh)	Deviation from Dec 2008 (GWh)	Deviation from Dec 2008 (%)	Cumulative trend since 1st January
NET GENERATION				
Nuclear	37 853	-3 456	-8,4%	-6,8%
Fossil-fuel thermal generation	7 638	586	8,3%	3,1%
Hydro-electric	5 227	-406	-7,2%	-9,2%
Wind	969	357	58,3%	39,9%
Other renewable sources *	411	42	11,3%	7,5%
Total net generation	52 098	-2 877	-5,2%	-5,5%
GROSS NATIONAL CONSUMPTION				
End customers connected to the RTE network **	5 392	84	1,6%	-8,6%
Other customers and losses on all networks ***	45 311	-792	-1,7%	-0,2%
Total gross national consumption	50 703	-708	-1,4%	-1,6%
Energy extracted for pumping	620	-105	-14,5%	1,4%
Balance of physical exchanges (export)	775	-2 064	-72,7%	-46,5%

* 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

With installed capacity up by 1 070 MW at the end of 2009 compared with the end of the 2008, wind generation reached 969 GWh in december 2009 (an increase of 58% on december 2008).

Development in the balance of physical exchanges

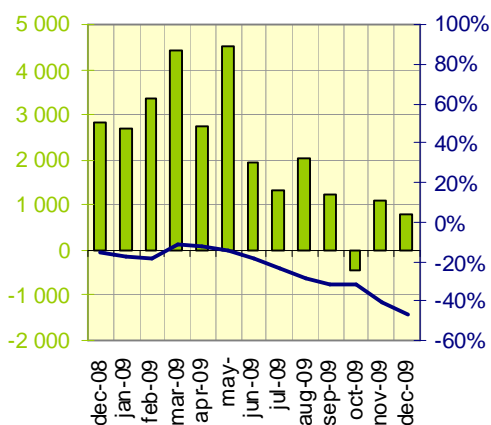
This month, the daily balance of physical exchanges reached a 30-year low on wednesday 16th, with an import balance of 140 GWh. The balance of physical exchanges was negative (importing) in energy terms on 10 days, and in power terms over several time intervals on 8 other days.

Development of extractions by large-scale industry

In monthly figures, the fall in extractions by consumers connected directly to the RTE network reached its lowest value since the start of the economic crisis in december 2008 (-18,2%). In december 2009, for the first time since september 2008, monthly extractions were up (+1,6%). Consequently, extractions during Q4 2009 reached the level of Q4 2008, but overall remained below Q4 2007 (-12,6%).

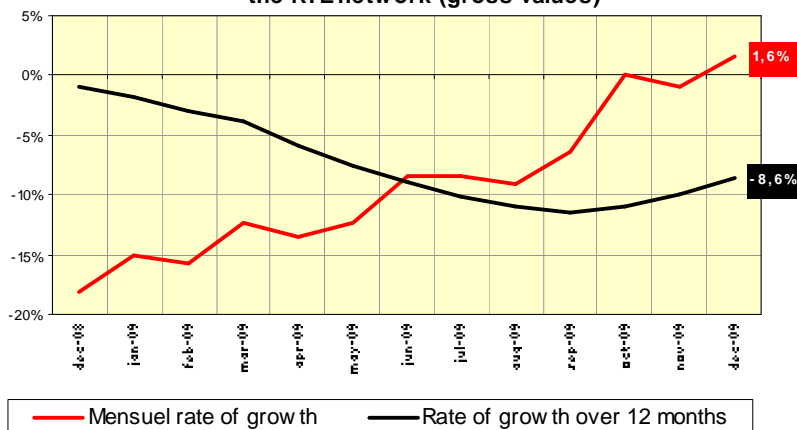
Over a sliding year, the rate of growth in extractions by consumers connected directly to the RTE network went from -10,0% at the end of november 2009, to -8,6% at the end of december 2009.

Balance of physical exchanges



■ Monthly balance of physical exchanges (GWh)
 — Rate of growth over a sliding year

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



— Mensuel rate of growth — Rate of growth over 12 months

EXTREME values for consumption, exchanges – perimeter France*

		December		Last 12 months		Absolute **	
Gross national consumption	Maximum	1 953 GWh	thursday 17	2 035 GWh	07/01/2009	2 035 GWh	07/01/2009
		89 404 MW	wednesday 16	92 400 MW	07/01/2009	92 400 MW	07/01/2009
	Minimum	1 316 GWh	sunday 6	903 GWh	09/08/2009	856 GWh	06/08/2006
		47 493 MW	sunday 6	31 456 MW	09/08/2009	29 816 MW	06/08/2006
Balance of physical exchanges ***	Maximum	153 GWh	wednesday 30	239 GWh	08/05/2009	298 GWh	08/05/2008
		10 135 MW	tuesday 8	12 114 MW	29/03/2009	13 746 MW	11/11/2008
	Minimum	-140 GWh	wednesday 16	-140 GWh	16/12/2009	-140 GWh	16/12/2009
		-7 322 MW	wednesday 16	- 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 *		
	December 2009 (GWh)	Trend / dec 2008	Cumulative trend since 1st Jan	December 2009 (GWh)	Trend / dec 2008	Cumulative trend since 1st Jan	December 2009 (GWh)	Trend / dec 2008	Cumulative trend since 1st Jan	December 2009 (GWh)	Trend / dec 2008	Cumulative trend since 1st Jan
Belgium	126	-43%	-73%	595	64%	207%	721	24%	-32%	-469	231%	-131%
Germany	460	75%	12%	1 982	26%	1%	2 442	33%	4%	-1 522	16%	-5%**
Switzerland	2 123	-11%	-2%	469	22%	20%	2 592	-6%	3%	1 654	-17%	-10%
Italy	1 631	-14%	-1%	232	92%	-34%	1 863	-7%	-4%	1 399	-21%	2%
Spain	345	-30%	-8%	526	79%	28%	871	11%	4%	-181	-191%	-47%
Great Britain	412	-32%	-40%	726	95%	202%	1 138	16%	-16%	-314	-234%	-70%
TOTAL	5 097	-13%	-17%	4 530	46%	+25%	9 627	7%	-4%	567	-79%	-47%

* A negative value indicates a net import balance - ** decrease in the import balance

BALANCING MECHANISM - BALANCE RESPONSIBLE ENTITIES

	December 2009	Deviation compared with dec 2008	Trend compared with dec 2008	Cumul. trend since 1st January
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Balancing Mechanism

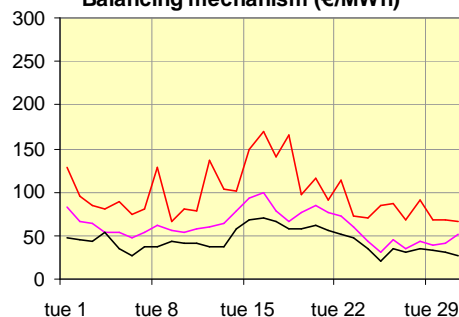
Total energy activated upward	365 GWh	22 GWh	6%	36%
Total energy activated downward	446 GWh	172 GWh	63%	2%
Number of actors	39	+1		

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

Energy exchanged between BR via NEB	30 870 GWh	+ 5 853 GWh	+23%	+3%
Number of BR	145	+0		

* 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

DAILY AVERAGE PRICES Balancing mechanism (€/MWh)



— Maximum price of upward activated bids for balancing generation with consumption
— Average weighted price of upward bids
— EPEX Spot (source internet)

TRANSMISSION NETWORK DEVELOPMENT

In december, the following new installations entered service on the 400 kV, 225 kV and 90 kV networks : two 400/225 kV (600 MVA) auto-transformers, one at the **Trans** substation in the Var department, the other at the **Chesnoy** substation in Seine-et-Marne ; the **225 kV Avelin-Haut Vinage-Hellemmes** line, to strengthen the supply to the east of Lille ; the **225 kV Aubange-Mont St Martin, Aubange-Moulaine and Mont St Martin-Moulaine** interconnection lines, following work to replace the conductors to strengthen the France-Belgium interconnector ; the **225 kV Port Jérôme-Rougemontier** line in the Eure and Seine-Maritime departments, following partial replacement of the conductors ; a 225/63 kV (170 MVA) transformer at the **Chevire** substation, near Nantes ; the **90 kV substation at La Foucaudière** in the Sarthe department, to strengthen the power supply to the south of Le Mans ; the **90 kV Hordain-Prémy** line, and a 90/63 kV (100 MVA) transformer at the **Prémy** substation, in response to the development of a business park in Cambrai, in the Nord department.

APPENDIX TO THE OVERVIEW OF ELECTRICAL ENERGY PROVISIONAL 2009 DATA AVAILABLE AS OF 08/01/2010

BALANCE OF ELECTRICAL ENERGY IN FRANCE

Values are given in GWh, except for consumption adjusted for climatic contingencies, which is given in TWh.

Year 2009 – provisional balances	January	February	March	April	May	June
NET GENERATION						
Nuclear	43 093	37 051	35 932	30 862	29 883	27 129
Fossil-fuel thermal generation	7 934	6 842	6 152	2 568	1 787	2 064
Hydro-electric	6 069	5 777	6 194	6 581	7 049	6 309
Wind	646	505	756	478	552	418
Other renewable sources ¹	381	354	382	296	386	346
Total net generation	58 123	50 529	49 416	40 785	39 657	36 266
GROSS NATIONAL CONSUMPTION						
End customers connected to the RTE network ²	5 624	5 321	6 064	6 716	6 969	7 120
Other customers and losses on all networks ³	49 089	41 196	38 319	30 722	27 534	26 777
Total gross national consumption	54 713	46 517	44 383	37 438	34 503	33 897
Energy extracted for pumping	724	652	605	615	619	440
Balance of physical exchanges ⁴	2 686	3 360	4 428	2 732	4 535	1 929
Consumption adjusted for climatic contingencies ⁵	50,8	43,7	43,2	37,0	34,2	33,7

Year 2009 – provisional balances	July	August	September	October	November	December	Total
NET GENERATION							
Nuclear	28 900	28 223	28 680	30 932	31 461	37 853	389 999
Fossil-fuel thermal generation	2 368	2 539	3 583	4 754	6 589	7 638	54 818
Hydro-electric	4 869	3 842	2 973	3 055	3 808	5 227	61 753
Wind	561	361	565	649	1 319	969	7 779
Other renewable sources ¹	400	391	342	350	412	411	4 451
Total net generation	37 098	35 356	36 143	39 740	43 589	52 098	518 800
GROSS NATIONAL CONSUMPTION							
End customers connected to the RTE network ²	7 283	6 530	7 165	7 395	5 983	5 392	77 562
Other customers and losses on all networks ³	27 983	26 393	27 364	32 232	35 917	45 311	408 837
Total gross national consumption	35 266	32 923	34 529	39 627	41 900	50 703	486 399
Energy extracted for pumping	515	405	364	571	577	620	6 707
Balance of physical exchanges ⁴	1 317	2 028	1 250	-458	1 112	775	25 694
Consumption adjusted for climatic contingencies ⁵	35,3	32,7	34,5	38,9	44,2	49,9	478,1

¹ mainly: urban waste, paper waste, biogas, solar

² extractions by these consumers on the RTE network

³ SMEs, professionals and private individuals served by the distribution networks, generation consumed by industrial players at their own sites, losses on the transmission and distribution networks

⁴ a positive value indicates a net export balance, whilst a negative value indicates a net import balance

⁵ adjustment for climatic contingencies in summer and winter