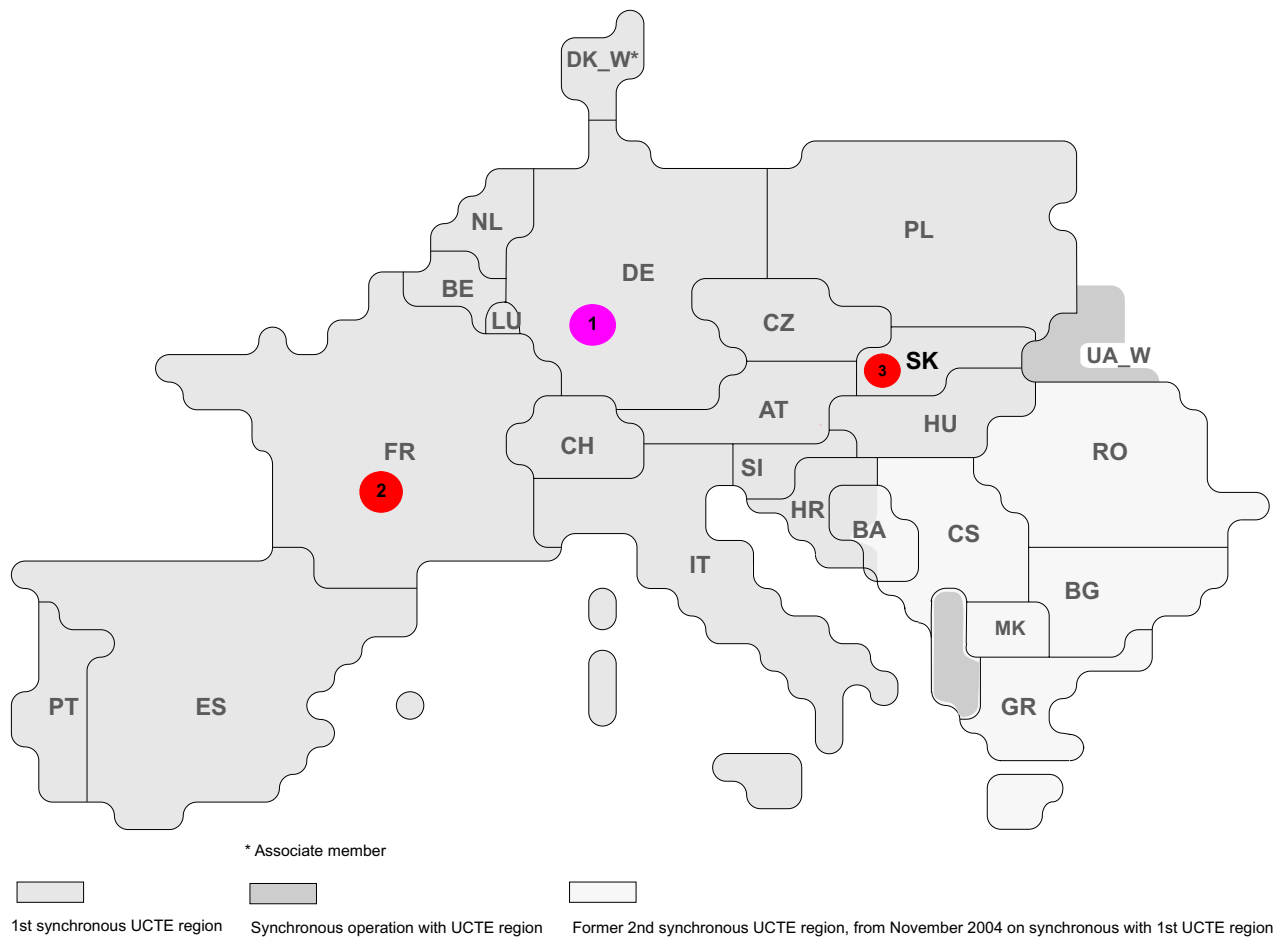


Reasons:

- R4    **Overload (also calculated brake)**
- R5    **False operation**
- R6    **Failure in protection device or other element**
- R7    **Outside impacts (animals, trees, fire, avalanches,...)**
- R8    **Very exceptional conditions (weather, natural disaster, ...)**
- R9    **Other reasons**
- R10    **Unknown reasons**

Nbr	Country	Substation	Reason	Energy not supplied [ MWh ]	Total loss of power [ MW ]	Restoration time [ min ]	Equivalent time of interruption <sup>1</sup>
1	FR	Malassis	R6	53	196	55	0,23

<sup>1</sup> ( year [in min] \* power loss) / consumption last 12 months



## Reasons:

R4    Overload (also calculated brake)

R5    False operation

R6    Failure in protection device or other element

R7    Outside impacts (animals, trees, fire, avalanches,...)

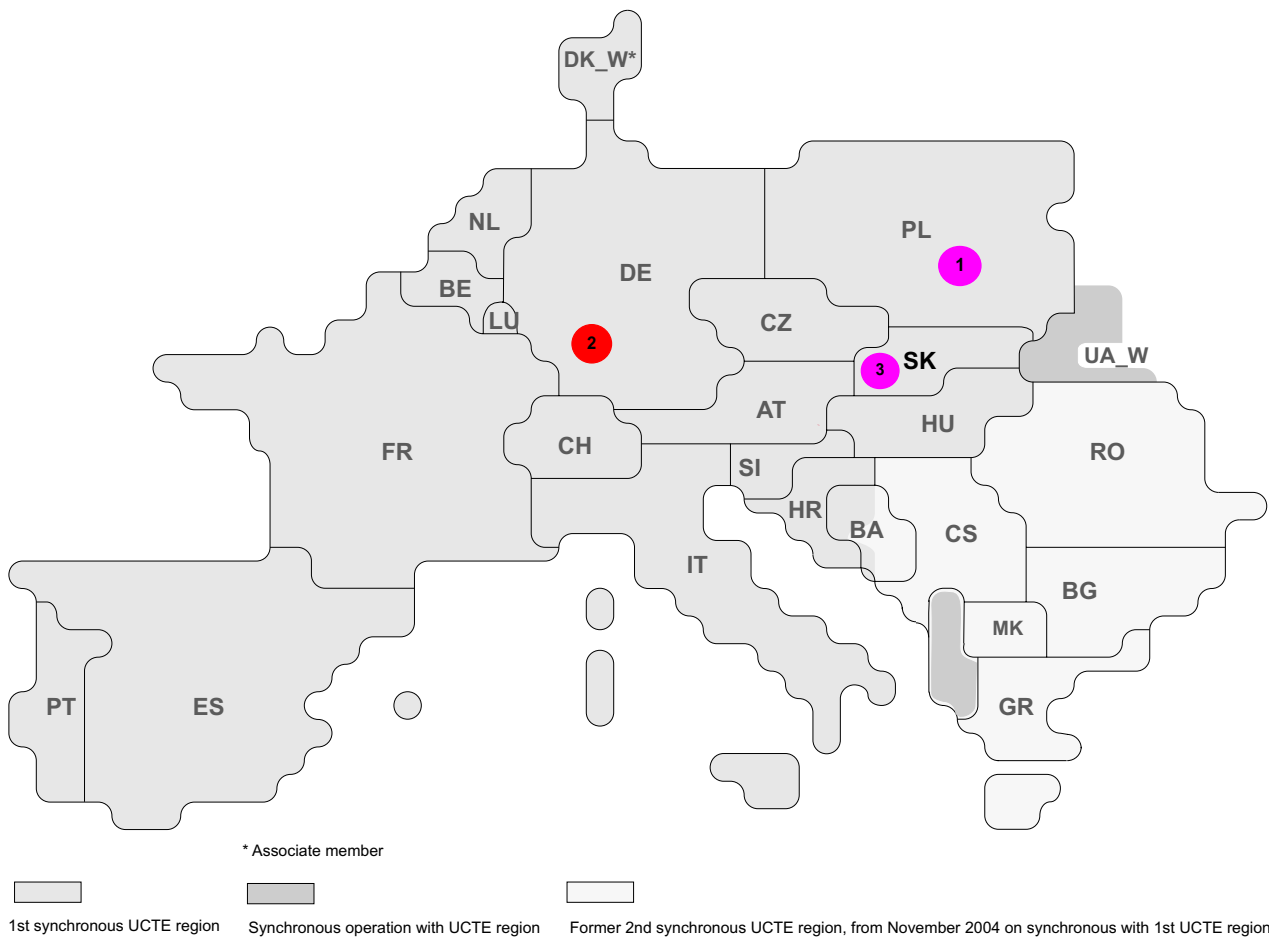
R8    Very exceptional conditions  
(weather, natural disaster, ...)

R9    Other reasons

R10    Unknown reasons

Nbr	Country	Substation	Reason	Energy not supplied [ MWh ]	Total loss of power [ MW ]	Restoration time [ min ]	Equivalent time of interruption <sup>1</sup>
1	DE	Biblis	R9	910	1300	42	1,36
2	FR	Louifert	R5	16	121	8	0,14
3	SK	Lemesany	R6	3	22	7	0,44

<sup>1</sup> ( year [in min] \* power loss ) / consumption last 12 months



## Reasons:

R4 Overload (also calculated brake)

R5 False operation

R6 Failure in protection device or other element

R7 Outside impacts (animals, trees, fire, avalanches,...)

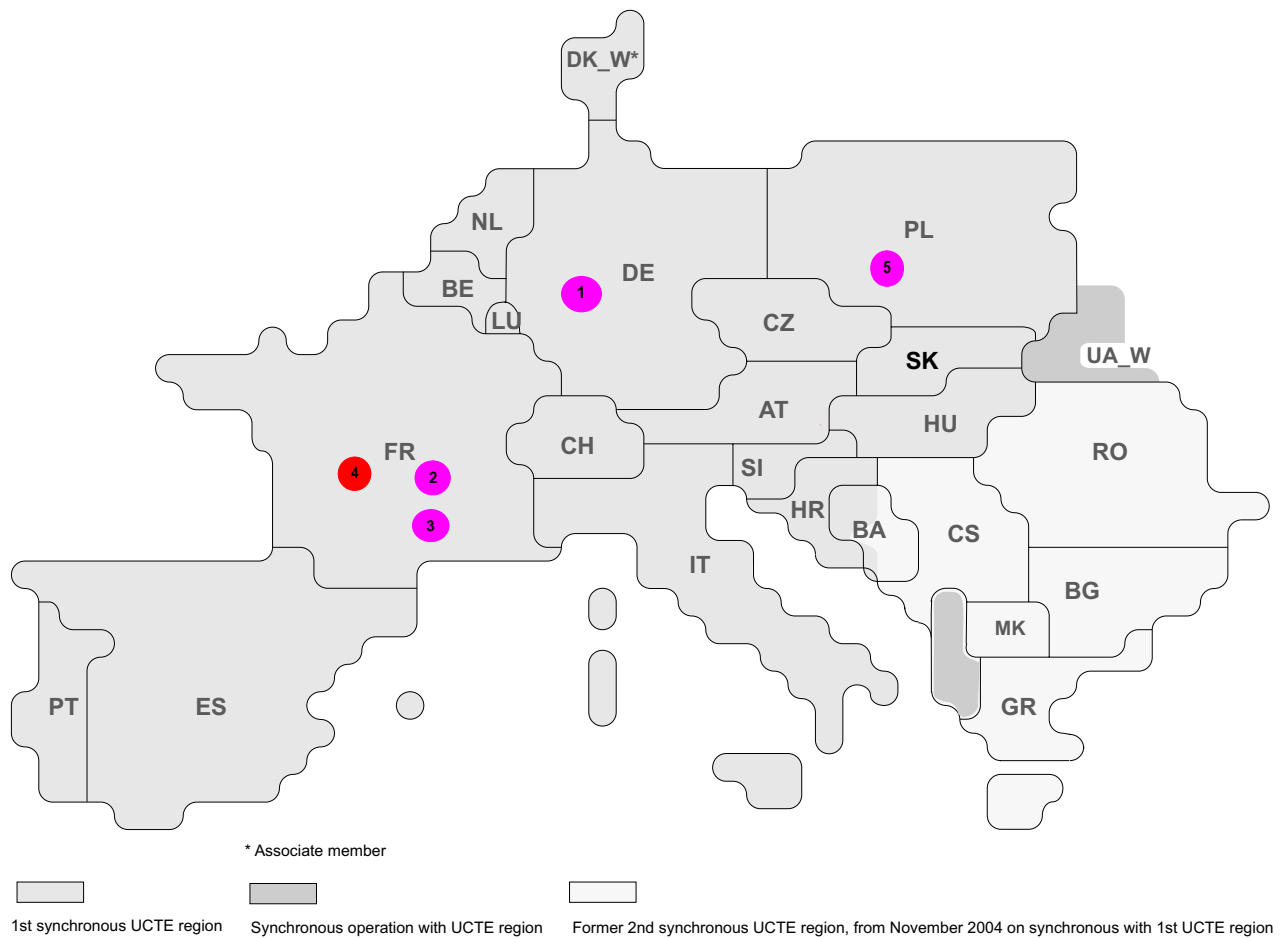
R8 Very exceptional conditions (weather, natural disaster, ...)

R9 Other reasons

R10 Unknown reasons

Nbr	Country	Substation	Reason	Energy not supplied [ MWh ]	Total loss of power [ MW ]	Restoration time [ min ]	Equivalent time of interruption <sup>1</sup>
1	PL	Polaniec	R9	382	285	154	1,10
2	DE	BASF W 210	R5	71	120	82	0,12
4	SK	Lemesany	R9	3	20	10	0,40

<sup>1</sup> ( year [in min] \* power loss) / consumption last 12 months

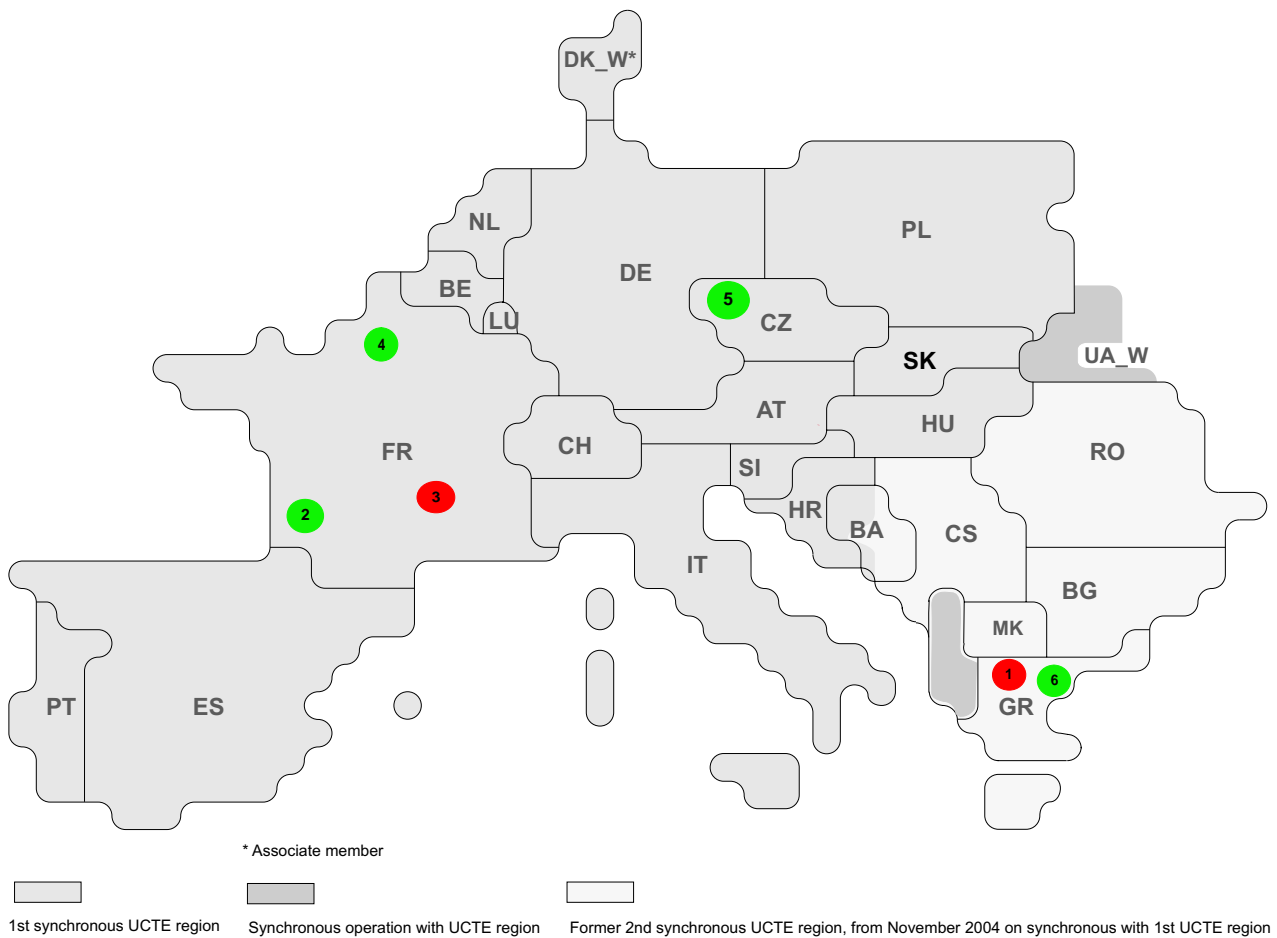


## Reasons:

R4    **Overload (also calculated brake)**R5    **False operation**R6    **Failure in protection device or other element**R7    **Outside impacts (animals, trees, fire, avalanches,...)**R8    **Very exceptional conditions  
(weather, natural disaster, ...)**R9    **Other reasons**R10    **Unknown reasons**

Nbr	Country	Substation	Reason	Energy not supplied [ MWh ]	Total loss of power [ MW ]	Restoration time [ min ]	Equivalent time of interruption <sup>1</sup>
1	DE	Herne	R9	871	260	201	0,27
2	FR	Hotel DIEU	R9	64	92	42	0,10
3	FR	Nanterre	R9	19	32	37	0,03
4	FR	Argenteuil	R5	9	40	33	0,04
5	PL	Lagisza	R9	0	80	93	0,31

<sup>1</sup> ( year [in min] \* power loss ) / consumption last 12 months



## Reasons:

**R4**    **Overload (also calculated brake)**

**R5**    **False operation**

**R6**    **Failure in protection device or other element**

**R7**    **Outside impacts (animals, trees, fire, avalanches,...)**

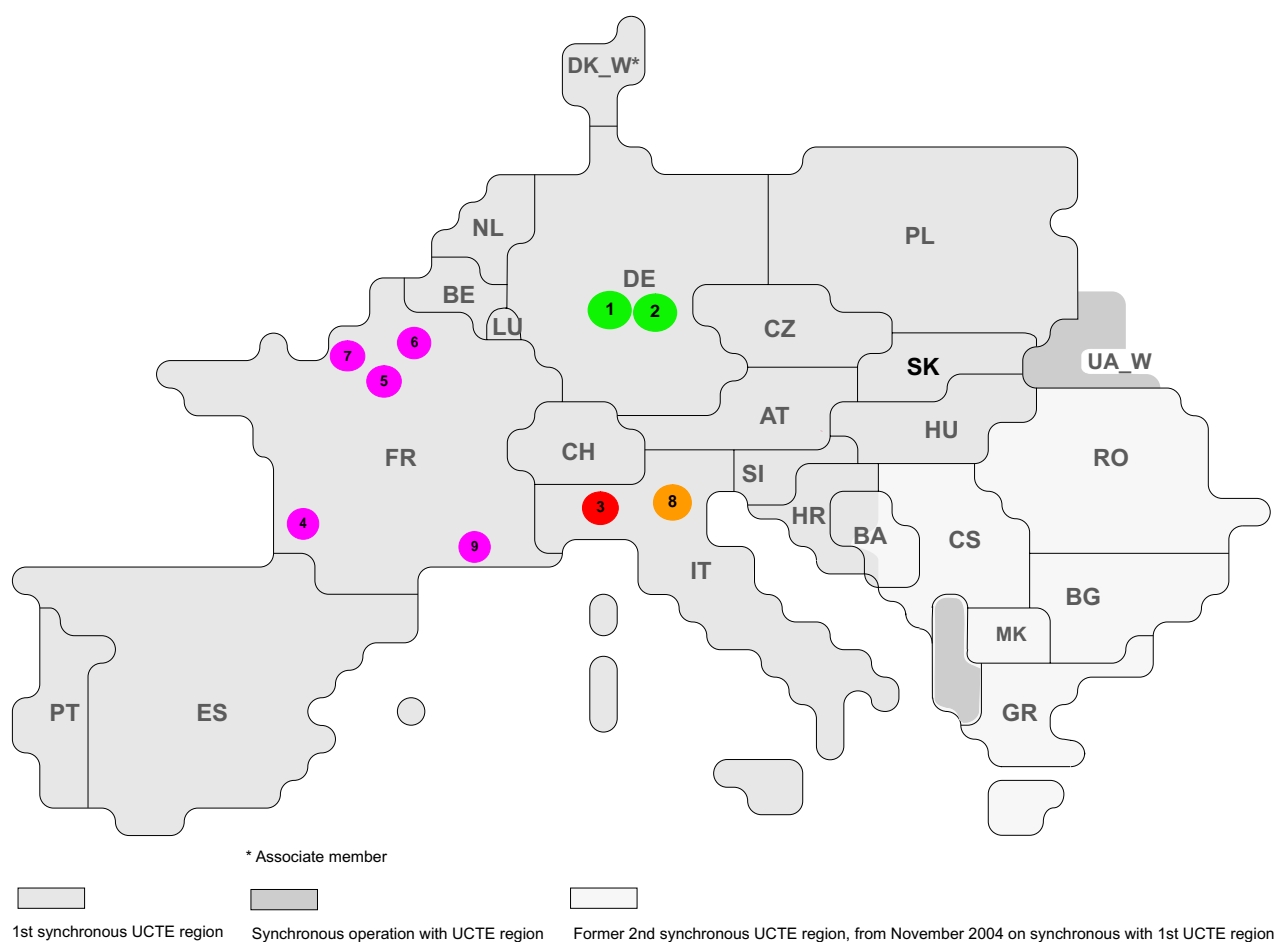
**R8**    **Very exceptional conditions  
(weather, natural disaster, ...)**

**R9**    **Other reasons**

**R10**    **Unknown reasons**

Nbr	Country	Substation	Reason	Energy not supplied [ MWh ]	Total loss of power [ MW ]	Restoration time [ min ]	Equivalent time of interruption <sup>1</sup>
1	GR	Kardia	R6	40	600	15	6,31
2	FR	Marsillon	R8	22	31	44	0,04
3	FR	Vaise	R6	5	25	12	0,03
4	FR	Cergy	R8	5	55	8	0,06
5	CZ	Hradec	R8	0	200	33	1,74
6	GR	Kardia	R8	0	900	5	9,47

<sup>1</sup> ( year [in min] \* power loss) / consumption last 12 months

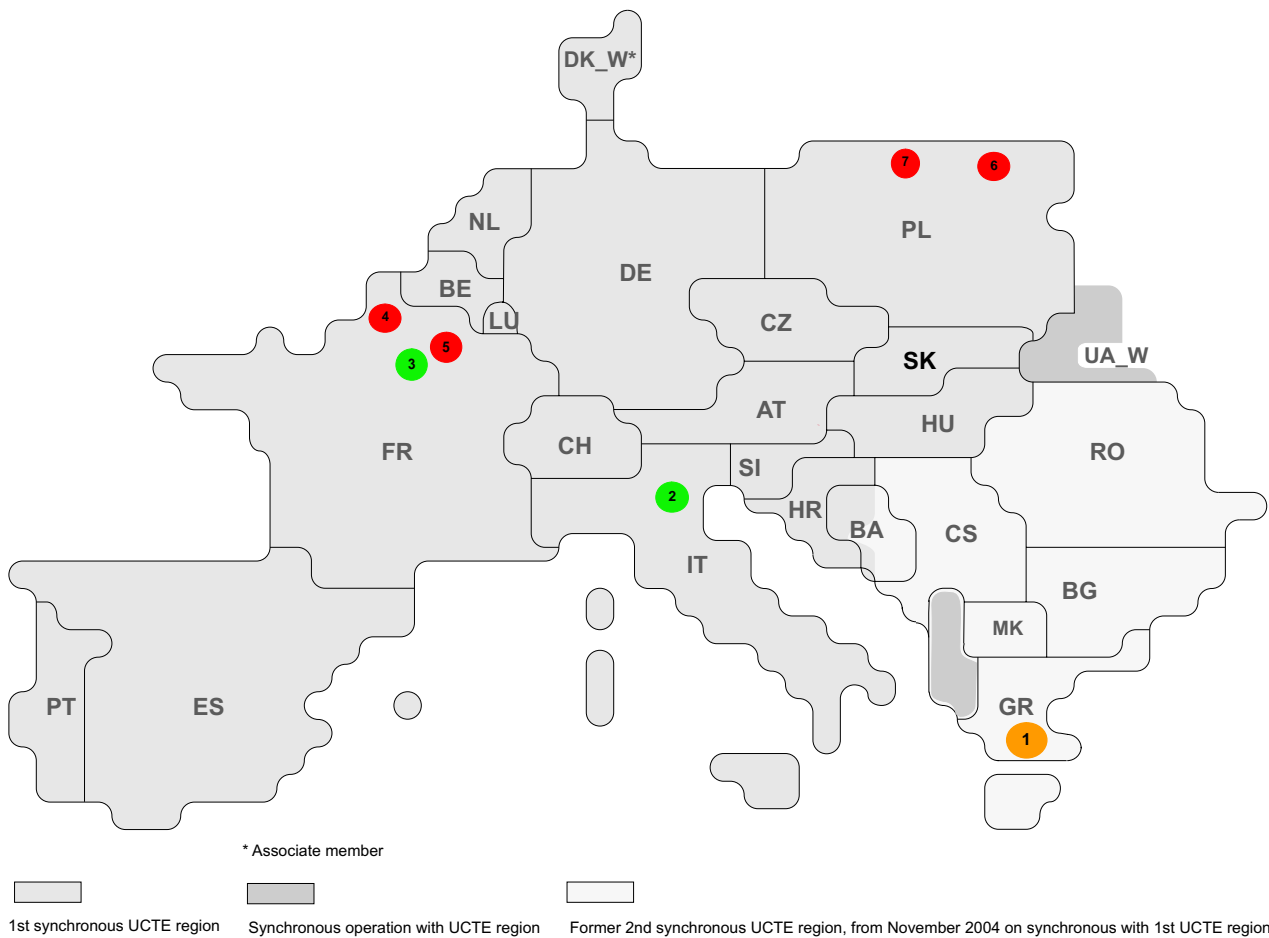


## Reasons:

R4    **Overload (also calculated brake)**R5    **False operation**R6    **Failure in protection device or other element**R7    **Outside impacts (animals, trees, fire, avalanches,...)**R8    **Very exceptional conditions (weather, natural disaster, ...)**R9    **Other reasons**R10    **Unknown reasons**

Nbr	Country	Substation	Reason	Energy not supplied [ MWh ]	Total loss of power [ MW ]	Restoration time [ min ]	Equivalent time of interruption <sup>1</sup>
1	DE	Altenfeld	R8	280	160	105	0,17
2	DE	Altenfeld	R8	212	795	16	0,82
3	IT	Nave	R6	146	108	81	0,18
4	FR	Mouguere	R9	124	20	371	0,02
5	FR	Bourget	R9	122	14	522	0,02
6	FR	Ampere	R9	86	97	103	0,11
7	FR	Ranville	R9	28	17	203	0,02
8	IT	Sanlux	R4	24	142	10	0,23
9	FR	Enco de Botle	R9	16	22	88	0,02

<sup>1</sup> ( year [in min] \* power loss ) / consumption last 12 months



## Reasons:

**R4**    **Overload (also calculated brake)**

**R5**    **False operation**

**R6**    **Failure in protection device or other element**

**R7**    **Outside impacts (animals, trees, fire, avalanches,...)**

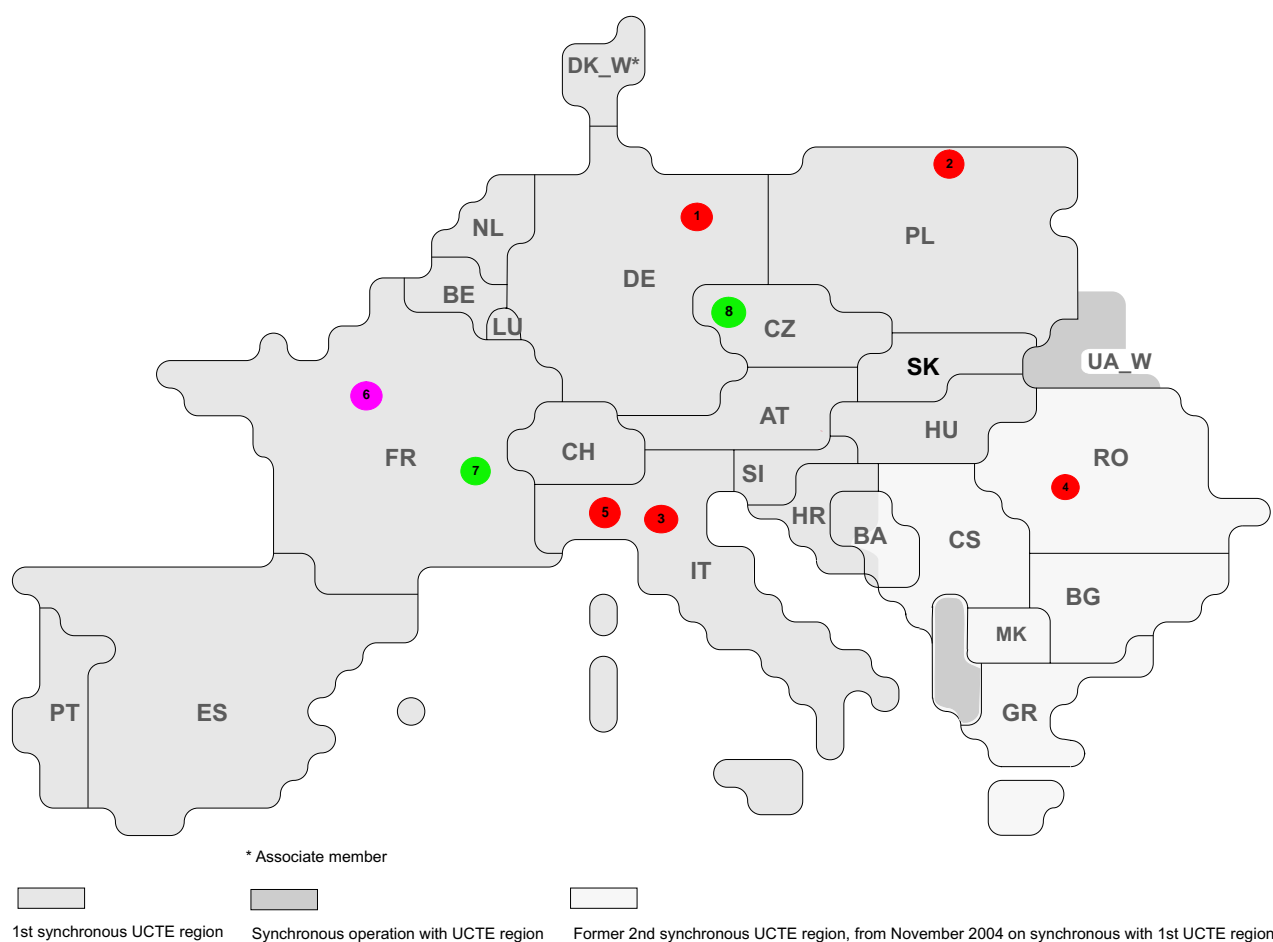
**R8**    **Very exceptional conditions  
(weather, natural disaster, ...)**

**R9**    **Other reasons**

**R10**    **Unknown reasons**

Nbr	Country	Substation	Reason	Energy not supplied [ MWh ]	Total loss of power [ MW ]	Restoration time [ min ]	Equivalent time of interruption <sup>1</sup>
1	GR	substations in the south of Greece	R4	13500	4500	180	47,31
2	IT	Fratta	R7	150	415	22	0,69
3	FR	Pusy	R8	34	11	188	0,01
4	FR	Brode	R6	22	2	676	0,00
5	FR	Champs-Regnaud	R5	2	12	9	0,01
6	PL	Pulawy	R6	0	70	558	0,28
7	PL	Kozienice	R5	0	611	207	2,40

<sup>1</sup> ( year [in min] \* power loss) / consumption last 12 months



## Reasons:

R4    Overload (also calculated brake)

R5    False operation

R6    Failure in protection device or other element

R7    Outside impacts (animals, trees, fire, avalanches,...)

R8    Very exceptional conditions  
(weather, natural disaster, ...)

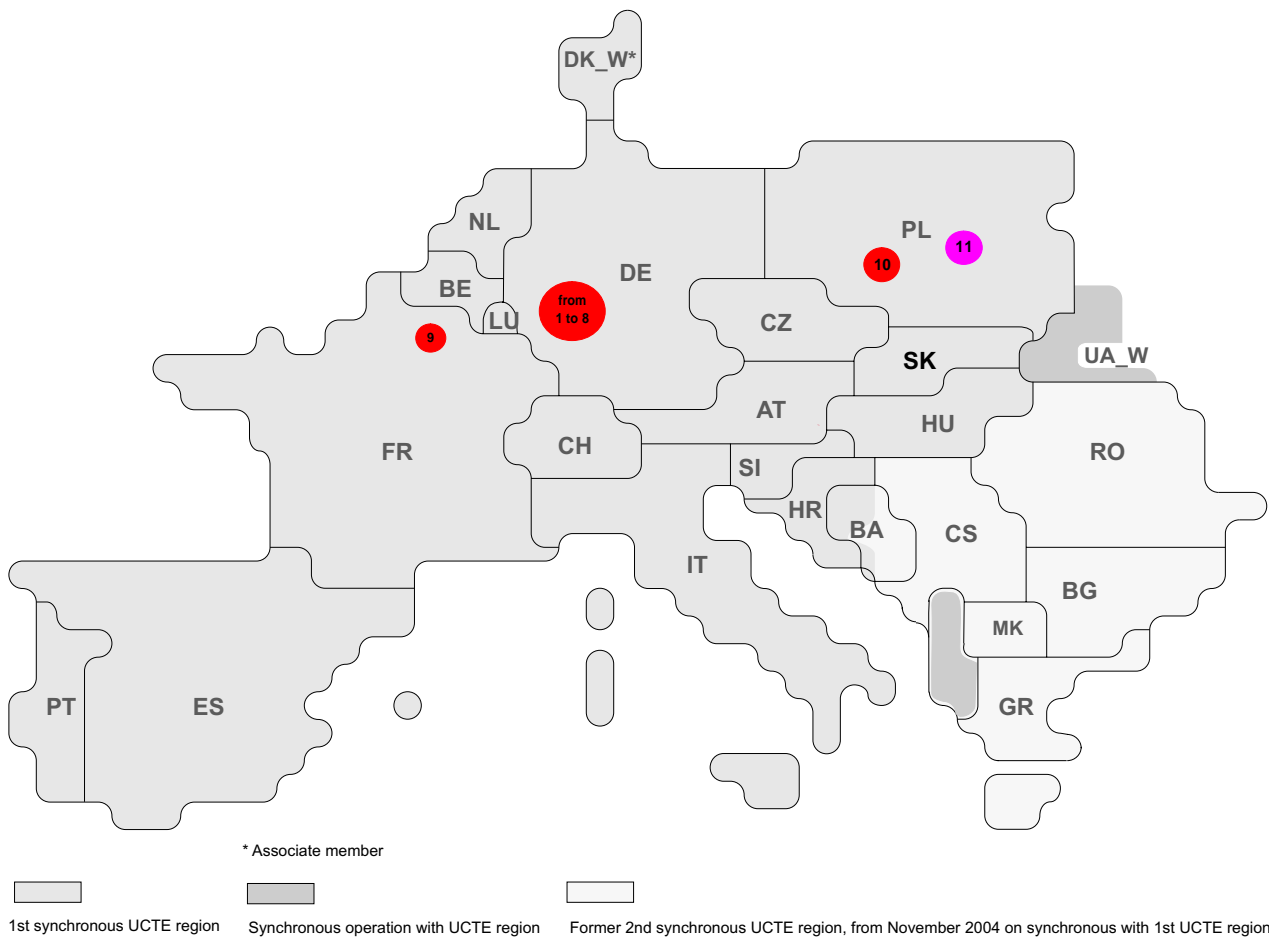
R9    Other reasons

R10    Unknown reasons

Nbr	Country	Substation	Reason	Energy not supplied [ MWh ]	Total loss of power [ MW ]	Restoration time [ min ]	Equivalent time of interruption <sup>1</sup>
1	DE	Reuter	R6	24824	187	7965	0,19
2	PL	Slupsk	R6	425	500	51	1,97
3	IT	Ponte Resia	R6	66	367	11	0,61
4	RO	Tulcea Vest	R5	16	188	5	1,98
5	IT	Roma Ovest	R5	11	135	5	0,22
6	FR	Gambetta	R9	3	50	5	0,06
7	FR	Cornier	R8	0	5	4	0,01
8	CZ	Vitkov	R7	0	280	165	2,42

<sup>1</sup> ( year [in min] \* power loss ) / consumption last 12 months





## Reasons:

R4    Overload (also calculated brake)

R5    False operation

R6    Failure in protection device or other element

R7    Outside impacts (animals, trees, fire, avalanches,...)

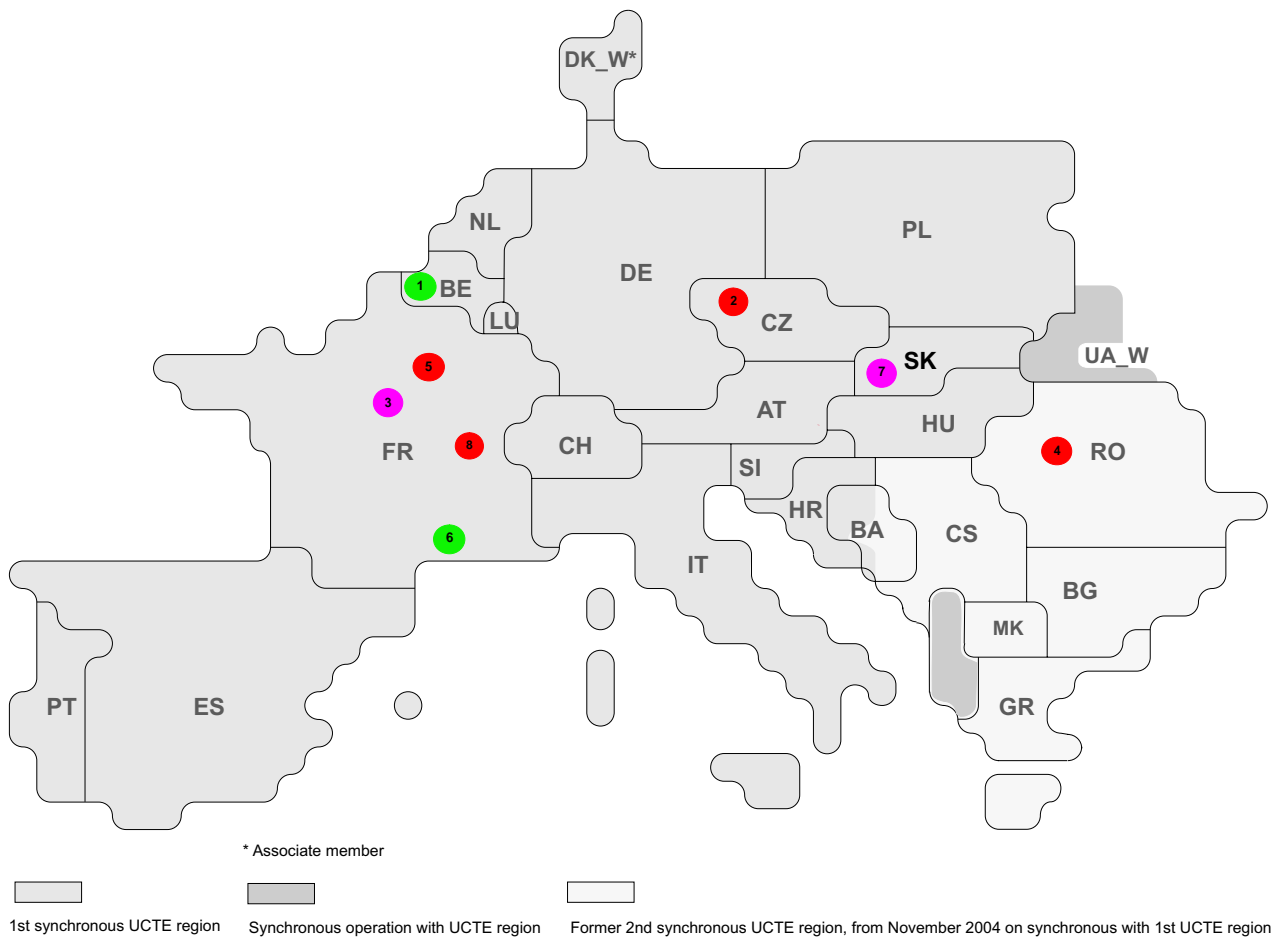
R8    Very exceptional conditions  
(weather, natural disaster, ...)

R9    Other reasons

R10    Unknown reasons

Nbr	Country	Substation	Reason	Energy not supplied [ MWh ]	Total loss of power [ MW ]	Restoration time [ min ]	Equivalent time of interruption <sup>1</sup>
1	DE	Trier	R6	386	80	290	0,08
2	DE	Quint	R6	176	80	132	0,08
3	DE	Niederstedem	R6	138	80	104	0,08
4	DE	Wengerohr	R6	129	80	97	0,08
5	DE	Trier	R6	105	80	79	0,08
6	DE	Quint	R6	73	140	31	0,14
7	DE	Bauler	R6	73	140	31	0,14
8	DE	Trier	R6	73	140	31	0,14
9	FR	Vendin	R6	1	22	4	0,02
10	PL	Wielopole	R5	0	216	211	0,85
11	PL	Mikulowa	R10	0	261	294	1,03

<sup>1</sup> ( year [in min] \* power loss) / consumption last 12 months



## Reasons:

R4    Overload (also calculated brake)

R5    False operation

R6    Failure in protection device or other element

R7    Outside impacts (animals, trees, fire, avalanches,...)

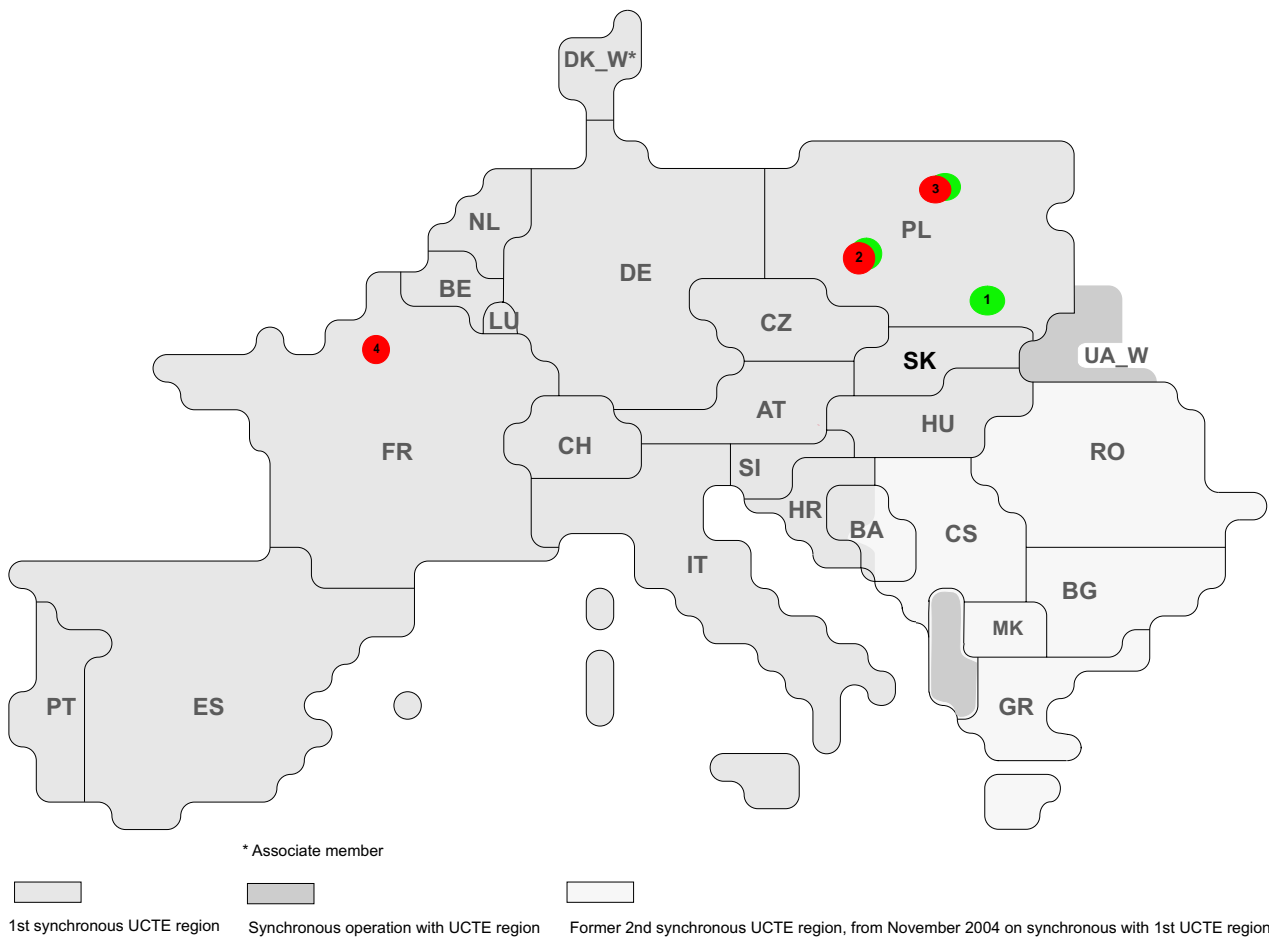
R8    Very exceptional conditions (weather, natural disaster, ...)

R9    Other reasons

R10    Unknown reasons

Nbr	Country	Substation	Reason	Energy not supplied [ MWh ]	Total loss of power [ MW ]	Restoration time [ min ]	Equivalent time of interruption <sup>1</sup>
1	BE	Aubange	R8	1091	15	4	0,09
2	CZ	Prosenice	R6	217	66	53	0,57
3	FR	Versailles	R10	66	121	144	0,14
4	RO	Gheorgheni	R6	26	40	39	0,42
5	FR	Les Crechets	R6	8	18	43	0,02
6	FR	Montpellier	R8	7	55	8	0,06
7	SK	Levice	R9	7	78	5	1,56
8	FR	Pariset	R6	6	52	8	0,06

<sup>1</sup> ( year [in min] \* power loss ) / consumption last 12 months



## Reasons:

R4 Overload (also calculated brake)

R5 False operation

R6 Failure in protection device or other element

R7 Outside impacts (animals, trees, fire, avalanches,...)

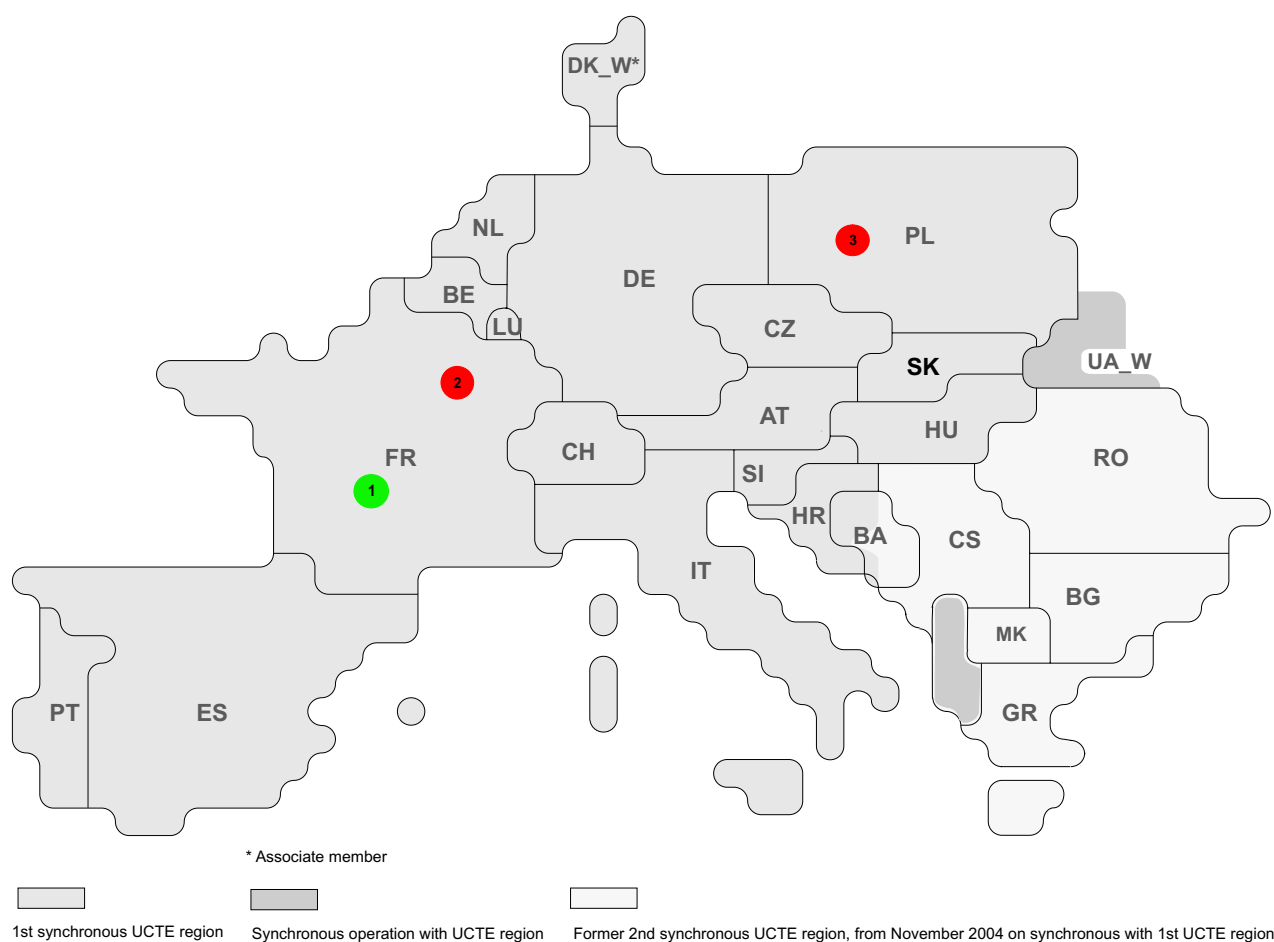
R8 Very exceptional conditions (weather, natural disaster, ...)

R9 Other reasons

R10 Unknown reasons

Nbr	Country	Substation	Reason	Energy not supplied [ MWh ]	Total loss of power [ MW ]	Restoration time [ min ]	Equivalent time of interruption <sup>1</sup>
1	PL	Albrechtice	R7	0	360	22050	1,45
2	PL	Kopanina	R6, R8	0	360	16206	1,45
3	PL	Wielopole	R6, R8	0	990	21965	3,98
4	FR	Haut Vinage	R6	2	19	7	0,02

<sup>1</sup> ( year [in min] \* power loss) / consumption last 12 months



## Reasons:

R4 Overload (also calculated brake)

R5 False operation

R6 Failure in protection device or other element

R7 Outside impacts (animals, trees, fire, avalanches,...)

R8 Very exceptional conditions (weather, natural disaster, ...)

R9 Other reasons

R10 Unknown reasons

Nbr	Country	Substation	Reason	Energy not supplied [ MWh ]	Total loss of power [ MW ]	Restoration time [ min ]	Equivalent time of interruption <sup>1</sup>
1	FR	Amargues	R8	76	45	204	0,05
2	FR	Ampère	R6	5	36	9	0,04
3	PL	Mikulowa	R6	0	190	287	0,77

<sup>1</sup> ( year [in min] \* power loss ) / consumption last 12 months

Inventory											
Conventional thermal units											
Country	10 MW ≤ x < 200 MW		200 MW ≤ x < 400 MW		≥ 400 MW		Total		Nuclear thermal units		
	Number	MW	Number	MW	Number	MW	Number	MW	Number	MW	
AT <sup>1</sup>	57	2941	9	2796	0	0	66	5737	0	0	
BA	9	512	6	1445	0	0	15	1957	0	0	
BE	71	3249	11	3171	3	1380	85	7800	7	5802	
BG	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
CH <sup>2</sup>	17	282	0	0	0	0	17	282	5	3220	
CS	14	1104	15	4056	2	1240	31	6400	0	0	
CZ	169	9661	0	0	1	460	170	10121	6	3537	
DE <sup>3</sup>	403	23572	66	20178	47	27749	516	71499	18	20491	
ES	508	14549	46	16387	14	7748	568	38684	9	7694	
FR	230	6604	31	7648	16	9640	277	23892	59	63363	
GR	22	2477	17	4735	0	0	39	7212	0	0	
HR	24	1137	2	508	0	0	26	1645	0	0	
HU	52	2531	14	2918	0	0	66	5449	4	1755	
IT	1730	18563	70	22601	29	18117	1829	59281	0	0	
LU	0	0	1	385	0	0	1	385	0	0	
MK	2	301	3	606	0	0	5	907	0	0	
NL	97	3998	19	5783	14	8177	130	17958	1	449	
PL	227	11793	78	19146	2	1095	307	32034	0	0	
PT	31	1545	15	4496	0	0	46	6041	0	0	
RO	88	6628	11	3039	0	0	99	9667	1	655	
SI	2	267	1	312	1	676	4	1255	1	670	
SK	24	2068	1	214	0	0	25	2282	6	2640	
<b>UCTE</b>	<b>3777</b>	<b>113782</b>	<b>416</b>	<b>120424</b>	<b>129</b>	<b>76282</b>	<b>4322</b>	<b>310488</b>	<b>117</b>	<b>110276</b>	
DK_W	28	957	8	2776	1	626	37	4359	0	0	
UA_W	16	2500	0	0	0	0	16	2500	0	0	

<sup>1</sup> Values conventional thermal units as of December 2003

<sup>2</sup> Values nuclear thermal units as of December 2003

<sup>3</sup> Values conventional thermal units as of December 2000

Country	Commissioning				Decommissioning			
	Tc		Tn		Tc		Tn	
	Number	MW	Number	MW	Number	MW	Number	MW
AT	0	0	0	0	0	0	0	0
BA	0	0	0	0	0	0	0	0
BE	0	0	0	0	0	0	0	0
BG	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
CH	1	10	0	0	1	22	0	0
CS	0	0	0	0	0	0	0	0
CZ	1	67	0	0	0	0	0	0
DE	0	0	0	0	1	500	0	0
ES	16	3909	0	0	0	0	0	0
FR	9	892	0	0	3	82	0	0
GR	1	147	0	0	0	0	0	0
HR	0	0	0	0	0	0	0	0
HU	6	213	0	0	3	363	0	0
IT	66	3587	0	0	105	816	0	0
LU	0	0	0	0	0	0	0	0
MK	0	0	0	0	0	0	0	0
NL	1	810	0	0	0	0	0	0
PL	2	254	0	0	8	541	0	0
PT	1	392	0	0	0	0	0	0
RO	5	306	0	0	0	0	0	0
SI	0	0	0	0	0	0	0	0
SK	0	0	0	0	0	0	0	0
<b>UCTE</b>	<b>109</b>	<b>10587</b>	<b>0</b>	<b>0</b>	<b>121</b>	<b>2324</b>	<b>0</b>	<b>0</b>
DK_W	1	10	0	0	0	0	0	0
UA_W	0	0	0	0	0	0	0	0

Inventory of hydro power units										
Country	1 MW ≤ x < 10 MW		10 MW ≤ x < 50 MW		50 MW ≤ x < 100 MW		≥ 100 MW		Total	
	Number	MW	Number	MW	Number	MW	Number	MW	Number	MW
AT 1	208	650	101	2526	20	1492	26	6698	355	11366
BA	2	10	16	335	12	774	7	945	37	2064
BE	28	101	0	0	0	0	3	1308	31	1409
BG	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
CH	178	619	102	2444	39	2597	37	7527	356	13187
CS	11	30	37	870	8	583	11	2014	67	3497
CZ	50	147	7	168	0	0	5	1711	62	2026
DE 2	234	898	78	1648	14	1026	15	4841	341	8413
ES	455	1513	130	2996	41	2826	38	10952	664	18287
FR	499	1587	179	4374	41	3025	58	16002	777	24988
GR	6	31	3	63	2	120	11	2845	22	3059
HR	22	69	21	576	6	453	8	978	57	2076
HU	10	46	0	0	0	0	0	0	10	46
IT	593	1952	232	5450	29	1957	40	11301	894	20660
LU	3	20	1	11	0	0	1	1096	5	1127
MK	22	36	3	73	2	265	1	150	28	524
NL	0	0	3	35	0	0	0	0	3	35
PL	62	179	4	78	3	195	5	1688	74	2140
PT	89	414	37	882	31	2008	8	1395	165	4699
RO	169	955	82	1771	17	1138	8	1416	276	5279
SI	1	8	11	288	5	319	2	230	19	845
SK	29	176	36	700	10	820	6	734	81	2430
<b>UCTE</b>	<b>2671</b>	<b>9441</b>	<b>1083</b>	<b>25288</b>	<b>280</b>	<b>19598</b>	<b>290</b>	<b>73831</b>	<b>4324</b>	<b>128157</b>
DK_W	3	8	0	0	0	0	0	0	3	8
UA_W	3	27	0	0	0	0	0	0	3	27

<sup>1</sup> Values as of December 2003

<sup>2</sup> Values as of December 2000

Country	Commissioning		Decommissioning	
	Number	MW	Number	MW
AT	0	0	0	0
BA	2	30	0	0
BE	0	0	0	0
BG	n.a.	n.a.	n.a.	n.a.
CH	1	1	0	0
CS	0	0	0	0
CZ	0	0	0	0
DE	2	530	0	0
ES	0	0	0	0
FR	6	12	2	3
GR	0	0	0	0
HR	0	0	0	0
HU	0	0	0	0
IT	36	45	13	15
LU	0	0	0	0
MK	0	0	0	0
NL	0	0	0	0
PL	2	4	0	0
PT	3	128	0	0
RO	3	37	0	0
SI	0	0	0	0
SK	0	0	0	0
<b>UCTE</b>	<b>55</b>	<b>787</b>	<b>15</b>	<b>18</b>
DK_W	0	0	0	0
UA_W	0	0	0	0