

<b>Weather profile</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>
<b>PV energy [MWh]</b>	26.75	26.32	25.72	26.70	26.55	26.79	25.21	26.52	26.67	26.66	26.23

Tab. 1

Load profile	Weather profile	Electrolyzed energy [MWh]	FC production [MWh]	H <sub>2</sub> quantity [Nm <sup>3</sup> ]	O <sub>2</sub> quantity [Nm <sup>3</sup> ]	H <sub>2</sub> O quantity [L]	Load cover rate by PV [%]	Load cover rate by FC [%]	Electrolyzer operating time [h]	FC operating time [h]
P1 8-12am	1998	3.87	2.26	319	160	27	83.0	17.0	754	515
	1999	3.95	2.38	370	185	32	82.1	17.9	778	530
	2000	4.00	2.64	<b>494</b>	<b>247</b>	32	80.0	20.0	793	552
	2001	4.36	2.39	297	149	37	81.9	18.1	834	528
	2002	3.85	2.50	450	225	31	81.2	18.8	728	565
	2003	<b>3.38</b>	2.23	414	207	<b>26</b>	83.1	16.9	<b>675</b>	480
	2004	<b>4.76</b>	<b>2.82</b>	430	215	<b>42</b>	<b>78.7</b>	<b>21.3</b>	<b>926</b>	<b>584</b>
	2005	3.84	2.30	350	175	34	82.7	17.3	738	514
	2006	4.33	2.24	<b>269</b>	<b>135</b>	34	83.1	16.9	842	538
	2007	4.16	2.39	335	168	34	82.0	18.0	808	519
	2008	3.46	<b>2.08</b>	318	159	31	<b>84.3</b>	<b>15.7</b>	719	<b>465</b>
	Mean	3.99	2.38	368	184	33	82.0	18.0	781	526
	Standard variation	0.38	0.20	67.23	33.45	4.20	1.50	1.50	66.68	32.86
Dispersion rate (%)	9.5	8.4	18.3	18.2	12.7	1.8	8.3	8.5	6.2	
P2 12am-4pm	1998	3.73	2.18	313	156	<b>26</b>	83.5	16.5	720	509
	1999	3.58	2.24	376	188	28	83.1	16.9	704	519
	2000	3.89	2.52	451	226	32	81.0	19.0	761	564
	2001	4.13	2.31	293	147	35	82.6	17.4	812	531
	2002	<b>3.53</b>	2.34	431	215	28	82.4	17.6	<b>691</b>	539
	2003	3.56	2.27	395	198	29	82.9	17.1	696	<b>495</b>
	2004	4.64	2.78	429	214	39	79.0	21.0	902	592
	2005	4.12	2.42	357	178	37	81.7	18.3	799	531
	2006	4.11	<b>2.12</b>	<b>253</b>	<b>126</b>	36	<b>84.0</b>	<b>16.0</b>	819	512
	2007	4.15	2.35	311	156	34	82.3	17.7	798	528
	2008	<b>5.30</b>	<b>3.30</b>	<b>566</b>	<b>283</b>	<b>44</b>	<b>75.1</b>	<b>24.9</b>	<b>957</b>	<b>676</b>
	Mean	4.07	2.44	380	190	33	81.6	18.4	787	545
	Standard variation	0.50	0.32	84.40	42.25	5.23	2.43	2.43	81.79	48.63
Dispersion rate (%)	12.3	13.1	22.2	22.2	15.8	3.0	13.2	10.4	8.9	

Tab.2

Load profile	Weather profile	Electrolyzed energy [MWh]	FC production [MWh]	H <sub>2</sub> quantity [Nm <sup>3</sup> ]	O <sub>2</sub> quantity [Nm <sup>3</sup> ]	H <sub>2</sub> O quantity [L]	Load cover rate by PV [%]	Load cover rate by FC [%]	Electrolyzer operating time [h]	FC operating time [h]
P3 10am- 2pm	1998	2.21	1.32	184	92	20	90.0	10.0	548	320
	1999	2.13	1.43	265	133	18	89.2	10.8	527	335
	2000	2.38	1.74	<b>361</b>	<b>181</b>	20	86.8	13.2	589	391
	2001	2.70	1.52	211	105	25	88.5	11.5	660	333
	2002	<b>2.02</b>	1.52	323	162	19	88.5	11.5	<b>496</b>	370
	2003	2.04	1.45	285	142	<b>17</b>	89.0	11.0	511	<b>313</b>
	2004	<b>3.19</b>	<b>2.00</b>	321	161	<b>30</b>	<b>84.9</b>	<b>15.1</b>	<b>761</b>	<b>427</b>
	2005	2.34	1.49	247	123	22	88.7	11.3	557	340
	2006	2.49	<b>1.28</b>	<b>182</b>	<b>91</b>	23	<b>90.4</b>	<b>9.6</b>	619	318
	2007	2.63	1.54	206	103	24	88.4	11.6	636	340
	2008	2.83	1.84	318	159	25	86.2	13.8	649	408
	Mean	2.45	1.56	264	132	22	88.2	11.8	596	354
	Standard variation	0.35	0.21	59.61	30.01	3.63	1.57	1.57	75.15	37.17
Dispersion rate (%)	14.3	13.5	22.6	22.7	16.5	1.8	13.3	12.6	10.5	
P4 10pm- 2am	1998	14.59	13.05	3791	1896	4	0	100	2446	1460
	1999	14.32	13.05	3839	1919	3	0	100	2444	1460
	2000	13.88	13.09	3946	1973	4	0	100	2375	1464
	2001	14.71	13.05	3775	1888	4	0	100	2426	1460
	2002	14.45	13.05	3829	1914	2	0	100	2372	1460
	2003	<b>14.72</b>	13.05	<b>3761</b>	<b>1880</b>	3	0	100	<b>2495</b>	1460
	2004	<b>13.42</b>	13.09	<b>4039</b>	<b>2020</b>	3	0	100	<b>2278</b>	1464
	2005	14.47	13.05	3817	1908	4	0	100	2422	1460
	2006	14.49	13.05	3806	1903	4	0	100	2466	1460
	2007	14.64	13.05	3788	1894	4	0	100	2407	1460
	2008	14.28	13.09	3877	1938	4	0	100	2372	1464
	Mean	14.36	13.06	3843	1921	4	0	100	2409	1461
	Standard variation	0.37	0.02	79.49	39.84	0.66	0	0	56.21	1.78
Dispersion rate (%)	2.6	0.2	2.1	2.1	16.5	0	0	2.3	0.1	

Tab.3