

**INTERNATIONAL ENERGY AGENCY**  
**Committee on Energy Research and Technology**  
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**Round Table Statement of the Belgian Delegation**

At the Belgian Federal level, the National Climate Plan has been finalized. The Plan (see [http://www.deleuze.fgov.be/site/text/PLAN\\_NATIONAL\\_CLIMAT\\_060302.doc](http://www.deleuze.fgov.be/site/text/PLAN_NATIONAL_CLIMAT_060302.doc)) considers measures in the field of energy efficiency (in the different sectors), mobility and agriculture as well as the flexible mechanisms and fiscal tools such as a CO<sub>2</sub> tax and the taxation reform. It integrates the measures foreseen in the plans of the Regions, in particular the "Plan d'Action de la Région wallonne en matière de changements climatiques" and the corresponding "Plan pour la maîtrise durable de l'énergie" (draft available on <http://daras.wallonie.be/>).

The plan aims at achieving the Kyoto target for Belgium (-7.5% with respect to the 1990 basis of 139 400 kt CO<sub>2</sub> eq. including 107 700 kt for CO<sub>2</sub> only). With respect to the deployment of energy technologies, the plan presents new elements. For the energy sector (according to the decision of the Council of Ministers approved on 7 December), a project of decree foresees the introduction of a green certificate scheme (GCS) implying a quota (6% in 2010) for the suppliers connected to the transport grid (>70kV). Corresponding GCS will be operational in the regions for the distribution grid (<70 kV, the targets being 3% and 5% respectively in 2004 and 2010 in the Flemish Region, the corresponding figures for the Walloon Region being 5% and 12% in the Walloon Region, where the green electricity also somehow takes into account high quality CHP, which is also supported in the Flemish Region with a target of an additional 1200 MW from 1995 to 2005). The indicative plans for the equipment in the gas and electricity sectors will be integrated. The Brussels-Capital Region will support energy audits, and energy certification. The Walloon Region aims furthermore to introduce more transparent tariffs forms such as to promote energy efficiency and to set up a fund fed by the penalties of suppliers having not reach their GC quotas to support the sustainable energy use. The use of standards and energy voluntary agreements will also contribute together with a new fiscal exoneration for energy efficient equipment installed in households. The Regions develop energy performance standards for the buildings.

Without giving details, it is worth mentioning the reduction achieved in the different sectors, with and without a CO<sub>2</sub> tax. The measures considered up to now will indeed not be sufficient to reach the Kyoto target, and the Federal Plan Bureau has launched studies to assess the economic impact of such a tax, which should be considered within the frame of the fiscal reform (with expected win-win benefits of the measure). According to the modeling (see <http://www.plan.be>, working paper 09-01), the tax would be particularly efficient to promote heat savings (either through CHP, recuperation or isolation) as well to promote the replacement of equipment by new one with improved energy yield.

All these possible measures, as well as the use of the flexible mechanisms, will be assessed into more details in the forthcoming months.

**2010 WITH AND WITHOUT A TAX OF 11.5 EURO/t CO<sub>2</sub>**

Sector	Reduction energy Consumption (TJ)		Ratio with without	Reduction CO <sub>2</sub> emissions (kt CO <sub>2</sub> )		Investment (Meuro)		Energy Bill Gain (Meuro)		Total Cost (Meuro)	
	without	with tax		without	with tax	without	with tax	without	with tax	without	with tax
<b>Secteur énergétique (hors autopr.)</b>	<b>9541</b>	<b>11544</b>	<b>1.21</b>	<b>731</b>	<b>877</b>	<b>66.2</b>	<b>89.2</b>	<b>39.2</b>	<b>46.5</b>	<b>-15</b>	<b>-14.1</b>
□ <i>Energie</i>	<i>9541</i>	<i>11544</i>	<i>1.21</i>	<i>731</i>	<i>877</i>	<i>66.2</i>	<i>89.2</i>	<i>39.2</i>	<i>46.5</i>	<i>-15</i>	<i>-14.1</i>
Bonne gestion	8293	8985	1.08	620	665	49.2	54.9	28.9	30.8	-10.5	-10.3
Récupération de chaleur	396	1298	3.28	29	96	3.1	13	1.3	4.3	-0.2	0.3
Moteur à vitesse variable	242	341	1.41	27	38	8.1	12.5	3.5	4.9	-0.9	-0.9
Eclairage efficace	46	46	1.00	5	5	1	1	0.7	0.7	-0.3	-0.03
Equipements à meilleur rendement	247	247	1.00	28	28	2.3	2.3	3.6	3.6	-2.8	-2.8
Cogénération	310	582	1.88	22	41	2.5	5.4	1.3	2.4	-0.2	-0.1
Substitution énergétique	7	46	6.57	1	4	0	0	0	-0.1	0	0
<b>Industrie</b>	<b>73532</b>	<b>90618</b>	<b>1.23</b>	<b>5827</b>	<b>7515</b>	<b>727.8</b>	<b>965.9</b>	<b>514.2</b>	<b>589.2</b>	<b>-248.5</b>	<b>-239.4</b>

<i>□ Biens intermédiaires</i>	<b>48776</b>	<b>62929</b>	<b>1.29</b>	<b>3805</b>	<b>5250</b>	<b>424.5</b>	<b>604.9</b>	<b>294.8</b>	<b>350.4</b>	<b>-139</b>	<b>-130.9</b>
Bonne gestion	27574	31777	1.15	2106	2750	163.4	193.9	143.8	152.2	-82.1	-79.4
Récupération de chaleur	3312	6920	2.09	211	538	32.6	77.9	14.7	27.8	-3.3	-0.5
Récupération de combustible	4	11	2.75	0	1	0	0.1	0	0	0	0
Recyclage de matériaux	1651	1651	1.00	256	256	0	0	3.7	3.7	-3.7	-3.7
Moteur à vitesse variable	2172	2798	1.29	243	313	72.9	101	31.5	40.6	-7.9	-7.9
Intégration énergétique	1504	2837	1.89	94	177	16	34.4	6.7	12.4	-1.3	-0.6
Isolation thermique	1	3	3.00	0	0	0	0	0	0	0	0
Eclairage efficace	399	399	1.00	45	45	9	9	5.8	5.8	-2.6	-2.6
Changement de procédés	1147	2421	2.11	66	138	12.9	32.4	5.1	10.7	-1	-0.4
Equipements à meilleur rendement	4579	5779	1.26	362	441	36.8	51.3	39.9	44.6	-26.7	-26.2
Cogénération	6420	8251	1.29	421	584	80.8	105	43.6	52.7	-10.4	-9.6
Substitution énergétique	13	82	6.31	1	2	0	0	0	-0.1	0	0.1
<i>□ Biens d'équipement</i>	<b>4154</b>	<b>4392</b>	<b>1.06</b>	<b>420</b>	<b>444</b>	<b>68.4</b>	<b>75.1</b>	<b>53.5</b>	<b>55.7</b>	<b>-29.5</b>	<b>-29.4</b>
Bonne gestion	1877	1953	1.04	190	195	19.4	20.4	23.4	23.8	-16.3	-16.2
Récupération de chaleur	81	121	1.49	5	7	0.9	1.5	0.4	0.6	-0.1	-0.1
Moteur à vitesse variable	968	1072	1.11	108	120	26	30.7	14	15.5	-5.6	-5.6
Eclairage efficace	471	471	1.00	53	53	10.6	10.6	6.8	6.8	-3.1	-3.1
Equipements à meilleur rendement	356	356	1.00	40	40	4.9	4.9	5.2	5.2	-3.4	-3.4
Cogénération	401	421	1.05	24	30	6.5	6.9	3.7	3.8	-1	-1
Substitution énergétique	0	-3		0	0	0	0	0	0	0	0
<i>□ Verbruiksgoederen</i>	<b>20602</b>	<b>23297</b>	<b>1.13</b>	<b>1602</b>	<b>1821</b>	<b>234.9</b>	<b>285.9</b>	<b>165.9</b>	<b>183.1</b>	<b>-80</b>	<b>-79.1</b>
Bonne gestion	10690	10733	1.00	773	776	65.8	66.2	69.3	69.4	-44.4	-44.4
Récupération de chaleur	1795	2836	1.58	112	178	19.6	34.6	8.7	13.5	-1.7	-1.3
Moteur à vitesse variable	2056	2517	1.22	230	282	62.4	83.1	29.8	36.5	-9.6	-9.6
Eclairage efficace	673	673	1.00	75	75	15.1	15.1	9.8	9.8	-4.4	-4.4
Changement de procédés	106	244	2.30	7	15	1.1	3.2	0.5	1.2	-0.1	0
Equipements à meilleur rendement	1175	1175	1.00	132	132	15.2	15.2	17	17	-11.7	-11.7
Cogénération	4101	5077	1.24	273	359	55.6	68.4	30.8	35.7	-8	-7.7
Substitution énergétique	6	40	6.67	0	3	0	0	0	0	0	0
<b>Domestiques et équivalent</b>	<b>40999</b>	<b>43911</b>	<b>1.07</b>	<b>2978</b>	<b>3233</b>	<b>810.8</b>	<b>969.6</b>	<b>424.7</b>	<b>449.9</b>	<b>-196.4</b>	<b>-195.5</b>
<i>□ Ménages</i>	<b>25737</b>	<b>27026</b>	<b>1.05</b>	<b>1890</b>	<b>1989</b>	<b>447.8</b>	<b>552.8</b>	<b>263.3</b>	<b>277.2</b>	<b>-129.6</b>	<b>-129.1</b>
Modification de comportements	15572	17572	1.13	1154	1154	0	0	154.9	154.9	-89.5	-89.5
Isolation thermique	1560	2291	1.47	100	147	100.1	159.6	14.3	21.1	-2.6	-2.3
Eclairage efficace	259	259	1.00	29	29	26.6	26.6	11.1	11.1	-6.7	-6.7
Equipements à meilleur rendement	2652	2855	1.08	193	206	67.3	79.4	27.4	29.3	-16.5	-16.4
Energie renouvelable	11	15	1.36	1	2	1.7	2.3	0.3	0.4	0	0
Substitution énergétique	3684	4033	1.09	412	452	252	284.8	55.3	60.5	-14.3	-14.2
<i>□ Tertiaire</i>	<b>15004</b>	<b>16253</b>	<b>1.08</b>	<b>1069</b>	<b>1197</b>	<b>360</b>	<b>407.4</b>	<b>160.6</b>	<b>170.7</b>	<b>-66.6</b>	<b>-66.3</b>
Bonne gestion	19	35	1.84	1	2	0.5	1.1	0.1	0.2	0	0
Modification de comportements	5198	5198	1.00	359	359	0	0	44.6	44.6	-30.4	-30.4
Isolation thermique	491	630	1.28	31	40	16.6	22.8	3.4	4.3	-0.7	-0.7
Eclairage efficace	1785	1787	1.00	200	200	108.8	109	39.4	39.5	-17.8	-17.8
Equipements à meilleur rendement	133	230	1.73	8	15	3.8	7.3	0.9	1.6	-0.1	-0.1
Cogénération	7377	8372	1.13	469	581	230	267	72.1	80.4	-17.5	-17.3
Energie renouvelable	1	1	1.00	0	0	0.1	0.1	0	0	0	0
<i>□ Agriculture-horticulture</i>	<b>258</b>	<b>632</b>	<b>2.45</b>	<b>11</b>	<b>46</b>	<b>3</b>	<b>9.4</b>	<b>0.8</b>	<b>2</b>	<b>-0.2</b>	<b>0</b>
Cogénération	258	632	2.45	19	46	3	9.4	0.8	2	-0.2	0
<b>Prod. énergie renouvelable</b>	<b>4382</b>	<b>4791</b>	<b>1.09</b>	<b>491</b>	<b>536</b>	<b>465.7</b>	<b>530</b>	<b>127.1</b>	<b>138.9</b>	<b>-39.1</b>	<b>-38.8</b>
<i>□ Energie renouvelable</i>	<b>4382</b>	<b>4791</b>	<b>1.09</b>	<b>491</b>	<b>536</b>	<b>465.7</b>	<b>530</b>	<b>127.1</b>	<b>138.9</b>	<b>-39.1</b>	<b>-38.8</b>
Energie renouvelable	4382	4791	1.09	491	536	465.7	530	127.1	138.9	-39.1	-38.8
<b>Total</b>	<b>128454</b>	<b>150864</b>	<b>1.17</b>	<b>10027</b>	<b>12161</b>	<b>2070.5</b>	<b>2554.7</b>	<b>1105.2</b>	<b>1224.5</b>	<b>-499</b>	<b>-487.8</b>

