

## Results

# Air Quality and Health Impacts of Gas-Fired Power Generation in the EU and the UK



**Table 1. Health impacts - results**

Effect	Unit	Number	Number low	Number high
Bronchitic symptoms in asthmatic children, NO <sub>2</sub>	number of children affected	365	177	1,024
Respiratory hospital admissions, NO <sub>2</sub>	cases	750	481	1,017
Asthma symptoms in asthmatic children, PM <sub>10</sub>	days	64,399	13,950	115,999
Bronchitis in children, PM <sub>10</sub>	number of children affected	5,315	1,395	12,014
Incidence of chronic bronchitis in adults, PM <sub>10</sub>	new cases	1,454	515	2,275
Postneonatal mortality, PM <sub>10</sub>	cases	3	1	5
Cardiovascular hospital admissions, PM <sub>2.5</sub>	cases	774	145	1,407
Long-term mortality, all causes, PM <sub>2.5</sub>	cases	2,128	1,388	2,821
Low birth weight, PM <sub>2.5</sub>	cases	270	84	470
Preterm births, PM <sub>2.5</sub>	cases	434	210	461
Respiratory hospital admissions, PM <sub>2.5</sub>	cases	752	72	1,575
Restricted activity days, PM <sub>2.5</sub>	days	3,385,358	3,032,516	3,806,551
Work days lost, PM <sub>2.5</sub>	days	791,128	673,010	908,457
Cardiovascular hospital admissions, SOMO35	cases	102	57	145
Minor RADs, SOMO35	days	184,720	72,305	297,279
Respiratory hospital admissions, SOMO35	cases	22	4	42
Short-term mortality, all causes, SOMO35	cases	26	13	38

**Table 2. Economic costs of health impacts - results**

Effect	Unit	Cost, in million EUR	Cost, in million EUR low	Cost, in million EUR high
Bronchitic symptoms in asthmatic children, NO <sub>2</sub>	number of children affected	0	0	1
Respiratory hospital admissions, NO <sub>2</sub>	cases	2	2	3
Asthma symptoms in asthmatic children, PM <sub>10</sub>	days	4	1	7
Bronchitis in children, PM <sub>10</sub>	number of children affected	5	1	11
Incidence of chronic bronchitis in adults, PM <sub>10</sub>	new cases	99	35	155
Postneonatal mortality, PM <sub>10</sub>	cases	10	5	17
Cardiovascular hospital admissions, PM <sub>2.5</sub>	cases	3	0	5
Long-term mortality, all causes, PM <sub>2.5</sub>	cases	6,050	3,944	8,019
Low birth weight, PM <sub>2.5</sub>	cases	-	-	-
Preterm births, PM <sub>2.5</sub>	cases	78	38	83
Respiratory hospital admissions, PM <sub>2.5</sub>	cases	2	0	5
Restricted activity days, PM <sub>2.5</sub>	days	184	165	207
Work days lost, PM <sub>2.5</sub>	days	137	116	157
Cardiovascular hospital admissions, SOMO35	cases	0	0	1
Minor RADs, SOMO35	days	8	3	13
Respiratory hospital admissions, SOMO35	cases	0	0	0
Short-term mortality, all causes, SOMO35	cases	54	26	81
<b>Total Health costs</b>		<b>6,638</b>	<b>4,335</b>	<b>8,765</b>

**Table 3. Economic cost by affected country EU27 and UK**

Affected country	Cost, in million EUR	Cost, in million EUR low	Cost, in million EUR high
Austria	79.36	51.84	104.76
Belgium	223.96	146.58	295.07
Bulgaria	53.41	34.53	70.94
Croatia	47.28	30.73	62.68
Cyprus	0.28	0.17	0.39
Czech Republic	102.14	66.88	134.69
Denmark	54.17	35.40	71.48
Estonia	4.22	2.74	5.60
Finland	7.54	4.90	9.98
France	651.45	425.20	859.33
Germany	1,326.80	870.88	1,747.63
Greece	17.40	11.11	23.21
Hungary	123.99	80.61	164.15
Ireland	33.59	22.07	44.12
Italy	1,643.40	1,072.83	2,172.15
Latvia	9.30	6.06	12.32
Lithuania	13.98	9.09	18.52
Luxembourg	6.76	4.42	8.89
Malta	2.22	1.43	2.96
Netherlands	333.08	218.97	438.36
Poland	213.57	139.30	282.24
Portugal	30.64	19.70	40.79
Romania	146.20	94.51	194.11
Slovakia	38.34	24.87	50.75
Slovenia	29.68	19.38	39.19
Spain	311.87	202.44	413.34
Sweden	28.93	18.83	38.28
United Kingdom	866.75	567.30	1,142.92
<b>Total costs per affected country of the EU27+UK*</b>	<b>6,400.32</b>	<b>4,182.79</b>	<b>8,448.86</b>

\*Gas power from EU27+UK affects other countries globally. Here we extracted the costs to EU27 countries and UK. Thus, total costs numbers are somewhat lower than total costs gas power generation has. The impacts to all the rest of the global countries amount to additional: 237.68 million Eur ( low-high: 152.21 -316.14 million Eur)

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