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**ECONOMIC COMMISSION FOR EUROPE**

**EXECUTIVE BODY FOR THE CONVENTION ON  
LONG-RANGE TRANSBOUNDARY AIR POLLUTION**

Twenty-seventh session  
Geneva, 14–18 December 2009  
Item 11 of the provisional agenda

**STRATEGIES AND POLICIES OF PARTIES AND SIGNATORIES TO THE CONVENTION  
FOR THE ABATEMENT OF AIR POLLUTION**

**2010 DRAFT GENERAL POLICY QUESTIONS**

**Answers Luxembourg**

**I. INSTITUTIONAL, REGULATORY AND STRATEGIC FRAMEWORK**

**Question 1:** Please describe the division of responsibility within your country for measures to combat air pollution (i.e. the roles of national, provincial, and State authorities).

Measures to combat air pollution are mainly developed at national level. The Ministry of Environment (*Ministère de l'environnement*) is responsible for developing policy and programs and introducing the environmental legislation.

Since 2009, the Ministry of Environment has been integrated in the Ministry of Sustainable development and Infrastructures (*Ministère du Développement durable et des Infrastructures*). Since then, the Department of Environment resumes the missions of the former Ministry of Environment. The ministry regroups the department of environment, transport, main construction work and land use planning.

The Ministry of Sustainable development and Infrastructures is supported by the

Environment Agency (*Administration de l'environnement*). This Agency is responsible to implement and execute under the supervision of the Minister the environmental legislation that is applicable in Luxembourg.

**Question 2:** Please provide details of your country's ambient air quality and deposition standards, programmes and policies by completing the table below.

The ambient air quality regulation in Luxembourg is primarily based on European legislation transposed into national law. The standards are mainly laid down by two directives: The directive **2008/50/EC** [1] of the European Parliament and of the Council of 21 May 2008 on ambient air quality and cleaner air for Europe and the directive **2004/107/EC** [2] of the European Parliament and of the Council relating to arsenic, cadmium, mercury, nickel and polycyclic aromatic hydrocarbons in ambient air. As a consequence the limit or target values are identical those defined at the European level.

**Table 1: Question 2**

	Standard (unit) /conditions <sup>1</sup>	Status <sup>2</sup> /objectives <sup>3</sup>	Policy and programme/legislation (ref)
<b>1. Ambient air quality standards</b>			
Sulphur dioxide	Hourly mean not to be exceeded more than 24 times per calendar year	350 µg/m <sup>3</sup> Health protection	[3]
	Daily mean not to be exceeded more than 3 times per calendar year	125 µg/m <sup>3</sup> Health protection	
	Concentration measured over 3 consecutive hours	500 µg/m <sup>3</sup> Alert threshold, human health	
	Annual mean and from 1st October to 31st March	20 µg/m <sup>3</sup> Ecosystem protection	
Nitrogen dioxide-nitrogen oxides	Hourly mean not to be exceeded more than 18 times per calendar year	200 µg/m <sup>3</sup> Health protection	
	Annual mean	40 µg/m <sup>3</sup> Health protection	
	Concentrations measured over 3 consecutive hours	400 µg/m <sup>3</sup> Alert threshold, health protection	
	Annual mean	30 µg/m <sup>3</sup> Ecosystem protection	
Ozone	Daily 8-hr mean not to be exceeded on more than 25 days averaged over 3 years	120 µg/m <sup>3</sup> Health protection	
	Mai to June AOT 40 from 1h values averaged over 3 years	18.000 µg/m <sup>3</sup> h Ecosystem protection	
	Hourly average	240 µg/m <sup>3</sup> Alert threshold, health protection	
Particulate matter <sub>10</sub>	Daily mean not to be exceeded more than 35 times per calendar year	50 µg/m <sup>3</sup> Health protection	

	Annual mean	40 µg/m <sup>3</sup> Health protection	
Particulate matter <sub>2,5</sub>	Annual mean	25 µg/m <sup>3</sup> Health protection	
	Annual mean	20 µg/m <sup>3</sup> Health protection (to be met by 2015)	
Total suspended particulates	-		
Carbon monoxide	Daily 8h mean	10 µg/m <sup>3</sup> Health protection	
Lead	Annual mean	0,5 µg/m <sup>3</sup> Health protection	
Cadmium	Annual mean of the total content in PM <sub>10</sub> fraction	5 ng/m <sup>3</sup> Target value, health protection	[4]
Mercury	-		
Arsenic	Annual mean of the total content in PM <sub>10</sub> fraction	6 ng/m <sup>3</sup> Target value, health protection	
Nickel	Annual mean of the total content in PM <sub>10</sub> fraction	20 ng/m <sup>3</sup> Target value, health protection	
Benzene	Annual mean	5 µg/m <sup>3</sup> Health protection	[3]
Benzo(a)pyrene	Annual mean of the total content in PM <sub>10</sub> fraction	1 ng/m <sup>3</sup> Target value, health protection	[4]
Dioxins/furans	-		
Other			
<b>2. Deposition standards</b>			
Acidification	-		
Eutrophication	-		
Heavy metals	-		
Persistent organic pollutants (POPs)	-		
Other	-		

<sup>1</sup>What are the conditions for these standards (e.g. yearly values, 8-hour averages, etc.)?

<sup>2</sup> What is the status of the quality standards: limit values, target values, etc.?

<sup>3</sup>What is their aim (e.g. health, vegetation, etc.)?

### Question 3:

(a) Does your country apply a multi-pollutant management approach? If so, please describe this;

Luxembourg transposed a series of European directives such as the National Emission Ceilings directive (NEC, 2001/81/EC) [5] which addresses a number of pollutants at the same time by setting ceilings for SO<sub>2</sub>, NO<sub>x</sub>, VOC and NH<sub>3</sub> or the Air quality directives mentioned in question 2. In order to be compliant to the requirement of those directives the Luxembourg developed plans and programs aiming to achieve the respect of the ceilings and limit values. As a sector based legislation should be mentioned the IPPC directive that mainly focuses large combustion plants and other industrial installations by introducing the notion of best available technology.

(b) Are climate change and air pollution policies integrated in your country? Please give specific examples of programmes or technologies that address the co-benefits of reducing air pollution and greenhouse gases;

The measures affecting the transport sector, are expected to improve the situation in regard to the climate change and the air pollution emissions at the same time.

In 2006, Luxembourg developed a first national action plan aiming to achieve the objectives in regard to the climate change policy [6]. This plan outlines how Luxembourg intends to meet its emission reduction commitments under the Kyoto Protocol and identifies two major goals: (i) limiting dependence on fossil fuels, especially by accelerating their replacement through renewable energy sources (in particular, for thermal energy generation), and (ii) seeking energy savings by enhancing the energy efficiency of transportation, industry and buildings.

As an example for a measure that considers the GHG emissions and the air pollution from the transport sector could be cited the so called "Kyoto Cent". Since road transportation, and more precisely "road fuel exports", is the main contributor to GHG emissions and air pollution in Luxembourg, Luxembourg will aim at progressively reducing road transport related emissions, though a complete phasing-out of "road fuel exports" is not foreseen. To do so, the Government intends to progressively increase the excise duties on road fuels via the so-called "Kyoto-cent" climatic contribution taking into account the market prices of crude and refined petroleum products. By the 1st of January 2007, the excise rate on gasoline was increased by 2 ct€/litre. For diesel, the excise rate was increased in two stages: 1.25 ct€/litre on the 1st of January 2007 and another 1.25 ct€/litre on the 1st of January 2008."

In the scope of the NEC directive [7], Air quality directive [8] or Stockholm Convention [9], Luxembourg has developed different national plans and programs aiming the reduction, the ceiling and/or prevention of some pollutants.

#### **Question 4:**

(a) To what extent does your country's air pollution policy address other (environmental) policies and other environmental media (e.g. fresh water, sea water, soil, waste, indoor air)? Please provide details;

In relation to the protection of human environment, Luxembourg continues to put into practice a preventive policy with the objective of the preservation and improvement of the quality of life and the health of the population. That policy is mainly characterised through the European framework. Especially under the NEC and Air Quality Directives a direct link is made to the protection of the natural ecosystem by defining long term objectives.

(b) To what extent do other policies take air pollution into account (e.g. industrial development, nature policy, spatial planning, financial policy, toxic substances policy)?

As the national legal framework in relation to the environment, is mainly defined by the European directives and regulations these kind of considerations are already made in advance. In addition there are also various public action plans, programmes or

schemes which could have positive effects on air pollution emission, a non-exhaustive list can be found below:

the “National Energy Efficiency Action Plan” (NEEAP) [Ministry of Economic Affairs and External Trade (2008)]

([http://www.eco.public.lu/documentation/rapports/Erster\\_Nationaler\\_Energieeffizienzaktionsplan\\_Luxemburg\\_-\\_Final.pdf](http://www.eco.public.lu/documentation/rapports/Erster_Nationaler_Energieeffizienzaktionsplan_Luxemburg_-_Final.pdf));

the 2nd “National Sustainable Development Plan”

([http://www.developpement-durable-infrastructures.public.lu/fr/developpement-durable-infrastructures/version\\_integrale/](http://www.developpement-durable-infrastructures.public.lu/fr/developpement-durable-infrastructures/version_integrale/));

the “Strategy MODU ” – “Stratégie globale pour une mobilité durable ” – which aims to improve the modal split by promoting the public transport or the non-motorized transport – ([http://www.mt.public.lu/planification/plan\\_sectoriel/index.html](http://www.mt.public.lu/planification/plan_sectoriel/index.html)) (<http://www.ivl.public.lu/de/index.html>)

the “Waste Prevention and Management Act” – “Plan Général de Gestion des Déchets” – which should lead to emission reductions from waste management activities by reducing waste generation, increasing waste recovery and reducing the negative impacts of waste disposal (<http://www.environnement.public.lu/dechets/dossiers/pggd/index.html>)

## II. INDUSTRIAL SECTOR

**Question 5:** Please provide information on non-technical measures in your country for addressing the control of emissions from the industrial sector:

(a) Please describe the programmes and measures (whether mandatory or voluntary) that are in place in your country to address emissions from the industrial sector, including their potential impacts and positive or negative effects. These could include programmes to promote energy efficiency, renewable energy and energy conservation, programmes for reducing emissions from existing sources, financial assistance schemes, labelling schemes, classification of environmental preferability, product substitution, etc.;

(b) Does your country have in place any economic instruments for this sector? If so, please describe your country’s most important economic instruments (e.g. tax incentives, fees, charges, subsidies, credit guarantees and low interest loans) and market-based programmes (e.g. emission trading programmes);

(c) What innovative and alternative approaches, if any, are you using to control emissions from this sector?

As Luxembourg is a Member of the European Union, it applies the measures foreseen by :

the IPPC directive (2008/1/EC) the European legislation offers a sector specific legislation. As a consequence large combustions plants and other industrial installations need an operating permit which determines limit values for pollutants and

which requires the use of the best available techniques.

- the Directive 2003/87/EC that has been complemented by Commission Decision 2006/780/EC establishing the European Union Emission Trading Scheme (EU-ETS)
- the regulation No 66/2010 on the EU Ecolabel
- the directive 2010/31/EU on the energy performance of buildings, which covers different building sectors.

In addition, Luxembourg does efforts in order to promote the sustainable use of natural resources, the energy efficiency and the use of renewable energy. For that reason several financial incentives, mainly in form of subsidies, aiming to support companies who are willing to invest in favour of the protection of the environment and/or a sustainable use of the natural resources, were created. The incentives are regulated by the law « Loi relative au régime d'aides à la protection de l'environnement et à l'utilisation rationnelle des ressources naturelles du 18 février 2010 ».

### III. TRANSPORT SECTOR

**Question 6:** Please provide information on non-technical measures in your country for addressing the control of emissions from the transport sector.

(a) Please describe the programmes and measures (whether mandatory or voluntary) that are in place in your country to address emissions from the transport sector including their potential impacts and positive or negative effects. These could include financial assistance schemes to promote public transport, labelling schemes, traffic management schemes, use of electrical vehicles, cleaner fuels, etc.;

(b) Does your country have in place any economic instruments for this sector? If so, please describe your country's primary economic instruments (e.g. tax incentives, fees, charges, subsidies, credit guarantees and low interest loans) and market-based programmes (e.g. road pricing programmes);

(c) What innovative and alternative approaches, if any, are you using to control emissions from the transport sector?

The transport sector represents one of the main GHG emission sources in Luxembourg, notably due to the disproportioned influence on our emissions caused by fuels sold in Luxembourg, but not consumed by the Luxembourgish car fleet.

In order to promote low-emissions cars, Luxembourg offers subsidies for the acquisition of low- and zero-emission cars (*Car-e* program [10]). In addition to this, the car taxes are fixed according to the amount of CO<sub>2</sub> emitted by the car.

Luxembourg continues to work in favour of an expansion of the public transport and non-motorized mobility. The "Strategy MODU" – "Stratégie globale pour une mobilité durable" dresses the concept for the organisation of the transport sector in the next years. In addition projects like the bicycle location system (vel'oh) offered by the municipality of Luxembourg or improvements to grant a better access to the public transport shall encourage the population to avoid an excessive car-use.

#### IV. ENERGY SECTOR

**Question 7:** Please provide information on non-technical measures in your country for addressing the control of emissions from the energy sector.

(a) Please describe the programmes and measures (whether mandatory or voluntary) that are in place in your country to address emissions from the energy sector including their potential impacts and positive or negative effects. These could include programmes to promote energy efficiency, renewable energy and energy conservation, financial assistance schemes, labelling schemes, energy performance coefficients for buildings and housing, etc.;

(b) Does your country have in place any economic instruments for this sector? If so, please describe your country's primary economic instruments (e.g. tax incentives, fees, charges, subsidies, credit guarantees and low interest loans) and market-based programmes (e.g. emission trading programmes)?

(c) What innovative and alternative approaches, if any, are you using to control emissions from the energy sector?

The measures that are addressing the energy sector mainly aim to improve the energy efficiency or to increase the share of renewable energy in the national mix. The measures taken or planned measures are analysed in the first and second National Energy Efficiency Action Plan<sup>11</sup> and in the Action Plan for Renewable energies<sup>12</sup>. These plans were presented in the framework of the directive 2006/32/UE respectively the directive 2009/28/UE. In regard to the electricity production the biomass and the wind energy will be considered in a first place. When it comes to the heat production the share of the biomass will be increased in the future. In the residential sector the use of the solar thermal energy and heat pumps (geothermal energy) will be promoted.

Concerning the residential sector is a subsidies scheme to promote of the renewable energy or to increase the energy efficiency in the private homes. This scheme allows for example to subsidize the thermal insulation of the homes or the acquisition of domestic heating systems, such as boilers using renewable energy and/or the best available techniques or heat pumps. In addition the public sectors (municipalities,...) may require specific aids, in order to serve as example for other sectors.

In addition, the creation of national organisations like "myenergy" help to provide useful

information to the public but also to the industry or SME's.

In addition Luxembourg applies the European requirements in regard to the energy performance for new and existing buildings and ensures the certification (*Energiepass*) of their energy performance. Furthermore, a regular inspection of boilers and air conditioning systems in buildings is required to avoid a waste of energy and unnecessary emissions.

## V. AGRICULTURAL SECTOR

**Question 8:** Please provide information on non-technical measures in your country for addressing the control of emissions from the agricultural sector.

(a) Please describe the programmes and measures (whether mandatory or voluntary) that are in place in your country to address emissions from the agriculture sector including their potential impacts and positive or negative effects. These could include good agricultural practices, programmes to promote energy efficiency (greenhouses), renewable energy and energy conservation, programmes for reducing emissions from stables, financial assistance schemes, labelling schemes, etc.;

(b) Does your country have in place any economic instruments for this sector? If so, please describe your country's primary economic instruments (e.g. tax incentives, fees, charges, subsidies, credit guarantees and low interest loans) and market-based programmes (e.g. emission trading programmes);

(c) Are there any programmes in your country that promote organic farming or consuming products from organic farming?

(d) What innovative and alternative approaches, if any, are you using to control emissions from the agriculture sector?

## VI. RESEARCH, DEVELOPMENT AND MONITORING

**Question 9:** Please provide information related to air pollution in your country on research, development and monitoring; on the exchange of technology; and on information to the general public. Provide websites where relevant documentation is available.

(a) Please provide information on activities undertaken with a view to encouraging research, development and monitoring;

Luxembourg has several research institutions in place such as the *University of Luxembourg* and the public research centres (*centres de recherche public, CRP*) *CRP Henri Tudor* and *CRP Gabriel Lippmann*. Some of these institutions also act in the field of air quality, or in the field of climate change.

(b) To what extent is your research, development and monitoring activities linked to international activities?



Since 1999, the National Research Fund (FNR) has developed various thematic and structural funding instruments that helped to construct Luxembourg's reputation as a research site.

The FNR serves all branches of science and the humanities with an emphasis on strategically aligned research domains. The FNR actively encourages research collaboration between researchers in Luxembourg and abroad. In order to optimise the visibility of Luxembourg as an attractive site for research activities within Europe, the FNR plans to reinforce collaborations with selected countries as well as its own international cooperation instruments.

(c) In what language is the information on research, development and monitoring available?

The information is available in French, German or English.

## VII. EXCHANGE OF TECHNOLOGY

**Question 10:** Please provide information on exchange of technology in your country:

(a) Please provide information on measures taken to create favourable conditions to facilitate the exchange of information on technologies and techniques;

(b) How does your country actively promote the exchange of technology internationally?

(c) In what language is the information on exchange of information on technologies and techniques available?

On the international level Luxembourg is taking part in the elaboration process of the best available reference documents or the BREFs as foreseen by the IPPC directive. In addition Luxembourg is a member in the IMPEL network. Furthermore the division CRTE ("Centre de recherche pour les technologies de l'environnement"), affected to the Public Research Center Henri Tudor has a mission to inform the industrial sector regarding the best available technology.

## VIII. INFORMATION TO THE GENERAL PUBLIC

**Question 11:**

(a) Please provide information on the process for public participation in developing legislation and strategies related to air pollution in your country;

Projects of legislative acts (laws or grand-ducal ordinances) are made available on the governmental website [legilux.lu](http://legilux.lu) and/or the website of the Luxembourgish parliament [chamber.lu](http://chamber.lu) and/or the State Council. In addition, a consultation of the professional

chambers is required.

Strategies and plans related to air pollution are usually worked out in collaboration with the municipalities and interested parties. Before their adoption, they must be made available to the public for at least two months. During this public inquiry process, the general public can comment on the proposed plan, these comments have to be addressed by the public authority [13]

(b) Please indicate whether your country has a programme that alerts citizens to days when poor air quality is predicted. If so, please describe it;

Luxembourg has established a network of several measuring stations. Some results, notably for O<sub>3</sub>, NO<sub>2</sub>, SO<sub>2</sub>, CO, PM<sub>10</sub> are displayed directly on the website of the Environment Agency.

In the case of poor air quality, the public will be informed immediately on this website. Additional to this, in the case of summer smog the public will also be informed by press and the *CITA*-system of the motorway network. (Contrôle et information du traffic sur les autoroutes)

(c) Please provide information about the way in which the general public is informed about air pollution policy in your country;

All legal acts are published on the governmental website legilux.lu. (Mémorial A, Recueil de Législation).

(d) In what languages is the information to the general public available?

The administrative language in Luxembourg is French, therefore legal acts can only be found in French.

## IX. PARTICIPATION IN THE WORK OF THE CONVENTION AND STATUS OF RATIFICATION OF THE PROTOCOLS

**Question 12:** Please provide information on your country's current participation in the technical and scientific work under the Convention and the status of ratification of the Protocols, by completing the tables below.

**Table 2: Question 12**

### (a) Participation in the technical and scientific work under the Convention

1. International Cooperative Programmes (ICPs) under Working Group on Effects <sup>1/</sup>	Participation
(a) ICP Waters (b) ICP Vegetation (c) ICP Forests (d) ICP Materials (e) ICP Integrated Monitoring (f) ICP Mapping and Modelling	
<b>2. Technical and scientific groups<sup>2/</sup></b> (a) Task Force on Emission Inventories and Projections (b) Task Force on Measurements and Modelling	

(c) Task Force on Integrated Assessment Modelling (d) Expert Group on Techno-economic Issues (e) Network of Experts on Benefits and Economic Instruments (f) Task Force on Hemispheric Transport of Air Pollution	
<b>3. Other task forces and expert groups<sup>2/</sup></b> (a) Task Force on Health (b) Task Force on Reactive Nitrogen (c) Task Force on Heavy Metals (d) Task Force on POPs	

<sup>1/</sup> Please indicate with A = active, meaning taking part with one or more monitoring sites, or P=passive, meaning taking part without sites, N = not taking part

<sup>2/</sup> Please indicate with R = regularly, O = occasionally or N =never

### (b) Ratification of protocols

Protocol	Ratification <sup>1/</sup>	Potential obstacles to ratification and needs for assistance <sup>2/</sup>	Timescale for ratification <sup>3/</sup>
1. EMEP Protocol <sup>4/</sup>	Y 24.06.1987		
2. 1985 Sulphur Protocol	Y 17.06.1987		
3. Nitrogen Oxides Protocol	Y 31.07.1990		
4. Protocol on Volatile Organic Compounds	Y 29.07.1993		
5. 1994 Sulphur Protocol	Y 26.04.1996		
6. Protocol on Heavy Metals	Y 24.12.1999		
7. Protocol on POPs	Y 24.12.1999		
8. Gothenburg Protocol <sup>5/</sup>	Y 14.06.2001		

<sup>1/</sup> Indicate with Y if you have ratified this Protocol or N if you have not yet ratified.

<sup>2/</sup> If not yet ratified

<sup>3/</sup> If not yet ratified, please provide details of the timescale within which your country intends to ratify the Protocol

<sup>4/</sup> 1984 Geneva Protocol on Long-term Financing of the Cooperative Programme for Monitoring and Evaluation of the Long-range Transmission of Air Pollutants in Europe

<sup>5/</sup> 1999 Gothenburg Protocol to Abate Acidification, Eutrophication and Ground-level Ozone

## X. APPLICATION OF BEST AVAILABLE TECHNIQUES TO MOBILE AND STATIONNARY SOURCES

**Question 13:** Please describe how your country applies best available techniques (BAT) to mobile sources and to each new or existing stationary source with regard to the Gothenburg Protocol obligations and taking into account guidance documents I to V adopted by the Executive Body at its seventeenth session (decision 1999/1).

Please see Q. 45bis of the 2010 Questionnaire for priority compliance review.

**Comment by the secretariat:** The Executive Body decided at its twenty-seventh session that the above question 13 be better placed in the first part of the questionnaire (ECE/EB.AIR/2009/12) between questions 45 and 46. Therefore, in the on-line questionnaire, the question 13 has been moved and renumbered as question 45 bis.

## XI. FEEDBACK ON THE QUESTIONNAIRE

1. Question 14: Have you encountered difficulties in answering this questionnaire, whether technical or interpretative? Please use the table below to provide further details.

**Table 3: Question 14**

Question no.	Problem	Suggestion for improvement


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<sup>1</sup> L152, 11.06.2008, p 1.

<sup>2</sup> L23, 26.01.2005, p 3.

<sup>3</sup> Règlement grand-ducal du 29 avril 2011 portant application de la directive 2008/50/CE du Parlement européen et du Conseil du 21 mai 2008 concernant la qualité de l'air ambiant et un air pur pour l'Europe, Mémorial A - N° 88 du 10 mai 2011, p. 1387.

<sup>4</sup> Règlement grand-ducal du 30 mai 2005 portant application de la directive 2004/107/CE du Parlement européen et du Conseil du 15 décembre 2004 concernant l'arsenic, le cadmium, le mercure, le nickel et les hydrocarbures aromatiques polycycliques dans l'air ambiante, Mémorial A - N° 80 du 20 juin 2005, p. 1492.

<sup>5</sup> Règlement grand-ducal du 8 novembre 2002 portant application de la directive 2001/81/CE du Parlement Européen et du Conseil du 23 octobre 2001 fixant des plafonds d'émission nationaux pour certains polluants atmosphériques, Mémorial A - 129 du 2 décembre 2002, page 3032.

<sup>6</sup> [http://www.environnement.public.lu/air\\_bruit/dossiers/CC-plan\\_action\\_CO2/index.html](http://www.environnement.public.lu/air_bruit/dossiers/CC-plan_action_CO2/index.html)

<sup>7</sup> [http://www.environnement.public.lu/air\\_bruit/dossiers/PA-PN\\_reduction\\_polluants\\_atmospheriques/index.html](http://www.environnement.public.lu/air_bruit/dossiers/PA-PN_reduction_polluants_atmospheriques/index.html)

<sup>8</sup> [http://www.environnement.public.lu/air\\_bruit/dossiers/plan\\_qual\\_air\\_ville\\_lux/index.html](http://www.environnement.public.lu/air_bruit/dossiers/plan_qual_air_ville_lux/index.html)

<sup>9</sup> [http://www.environnement.public.lu/air\\_bruit/dossiers/PA-Convention\\_Stockholm\\_POP/index.html](http://www.environnement.public.lu/air_bruit/dossiers/PA-Convention_Stockholm_POP/index.html)

<sup>10</sup> [www.car-e.lu](http://www.car-e.lu)

<sup>11</sup> [http://www.eco.public.lu/documentation/rapports/Zweiter\\_nationaler\\_Energieeffizienzaktionsplan\\_Luxemburg\\_im\\_Rahmen\\_der\\_EU-Richtlinie\\_ber\\_Endenergieeffizienz\\_und\\_Energiedienstleistungen\\_2006-32-EG.pdf](http://www.eco.public.lu/documentation/rapports/Zweiter_nationaler_Energieeffizienzaktionsplan_Luxemburg_im_Rahmen_der_EU-Richtlinie_ber_Endenergieeffizienz_und_Energiedienstleistungen_2006-32-EG.pdf)

<sup>12</sup> [http://www.eco.public.lu/documentation/rapports/Luxemburger\\_Aktionsplan\\_f\\_r\\_erneuerbare\\_Energie.pdf](http://www.eco.public.lu/documentation/rapports/Luxemburger_Aktionsplan_f_r_erneuerbare_Energie.pdf)

<sup>13</sup> Règlement grand-ducal modifié du 29 avril 2011 portant application de la directive 2008/50/CE du Parlement européen et du Conseil du 21 mai 2008 concernant la qualité de l'air ambiant et un air pur pour l'Europe, Mémorial A - N° 88 du 10.05.2011, p. 1387.