France

Sources of information

The information in this appendix is based on:

1. Troisième communication nationale à la Convention cadre des Nations unies sur les changements climatiques, Novembre 2001[1]
2. Second National Communication of France under the Framework Convention on Climate Change, November 1997
3. Rensbergen, J.v.; Michaelis L.; Ghai A.; Hadj-Sadok T.: In-depth review of the Second National Communication under the UN Convention on Climate Change, FCCC/IDR.1/FRAU, February 17, 1998 (www.unfccc.int)
4. Projections of greenhouse gas emissions established in the frame of the National Programme for Tackling Climate Change (Communication by M.. Mousel, Mission Interministérielle de l'Effet de Serre to DG Environment, March 13, 2000)
5. Mission Interministérielle de l'Effet de Serre (www.effet-de-serre.gouv.fr): Programme national de lutte contre le changement climatique (PNLCC, http://www.premier-ministre.gouv.fr/fr/p.cfm?ref=23020)
6. Laverne, R.: Perspectives énergétiques pour la France à l'horizon 2010–2020, Energies et matières premières n°6, 3ème trimestre 1998
7. Discours et bilans de la conférence nationale du programme national de lutte contre le changement climatique (http://www.effet-de-serre.gouv.fr/fr/actualites/actualite/index.cfm?fuseaction=Article&NumActualite=53&NumLangue=1&NumRubrik=1)

Quality and transparency of reporting

The French National Programme for Tackling Climate Change and the Third Communication provide a quite comprehensive view of many important aspects related to French Climate Change Policy. In particular, it details in a very structured manner the proposed additional measures according to the sector, the greenhouse gas and the estimated impact of the measure.

The current status of implementation of the policies and measures is not altogether clear and it was not always possible for the moment to separate proposed 'additional measures' without concrete steps and time schedule from additional measures which are already at a more concrete step of implementation. Also it could be clearer whether model assumptions or experience from really Implemented P&Ms have been used for the projections.

Costs of the measures to be undertaken are not given in detail. Only estimates for overall costs to the French economy of stabilisation of greenhouse gases is available from top-down general or partial equilibrium models.

[1] Including an 'erratum' dated March 2002 and a supplement dated February 2002.

Table 1: Information provided on policies and measures

Information provided	Level provided	Comments
Policy names	+++	Policies are distinguished by unique keys and short names.
Objectives of policies	+++	In most cases a good description of the objectives.
Which GHGs?	++	CO_2, CH_4, N_2O and 3 fluorinated gases. These are covered by inventories, projections and measures. No separate details about HFC, PFC and SF_6.
Status of iplementation	++	The Third National Communication distinguishes between P&Ms which are in force, ongoing, committed, adopted, applied, started or suspended. The implementation categories used are not consistent with the categories of the guidelines.
Implementation body specified	++	The ministries and other bodies in charge are mentioned.
Quantitative assessment of implementation	+	Details about existing measures in the Energy, Buildings and Transports Sector: No actual emission data by measure, but mostly estimations for 2000 until 2020 in 5 year steps. Additional measures: only 2010 estimations for some measures.
Interaction with other P&Ms discussed	+	Partly addressed.

+, ++, +++ level of information available increases as the number of + signs increases

Table 2: Information provided on Projections

Category of Information	Level of Information Provided	Comments
Scenarios considered	+++	Distinction is made between the following scenarios 1. Without measures (including only measures adopted before 31st December 1989) 2. With existing measures (measures that have been decided upon and started (at least partially) before 2000) 3. With additional measures (measures decided, but not Implemented before 2000; new measures of the PNLCCC; other measures decided since 2000)
Expressed relative to inventory for previous years	++	No percentage values, but absolute figures.
Starting year	+++	1999, following the definition that existing measures are those Implemented by 31st December 1999.
Split of projections	++	Projections according to the Scenarios 'Without measures', 'With existing measures' and 'With additional measures' are provided for the following sectors: - Energy - Industrial Processes - Agriculture - Waste - Others for the years 1990, 1999, 2010 and 2020. Distinction is made between the following groups of gases: CO_2, CH_4, N_2O and overall fluorinated gases.
Presentation of results	++	Presentation in tabular but not in graphical form.
Description of model (level of detail, approach and assumptions)	++	The use of the different models is described in principle. No clear description for the methodology used for non-CO_2 greenhouse gases.
Discussion of uncertainty		No discussion uncertainty.
Details of parameters and assumptions	++	The main assumptions are stated in the Third National Communication.

+, ++, +++ level of information available increases as the number of + signs increases

Assessment of policies and measures

Table 3 gives an overview of national policies. The figures given for the *with measures* projection are for the policies and measures introduced since Kyoto and before 2000. Other existing policies and measures have not been quantified separately.

Table 3: Summary of the Effect of Policies and Measures Included in the 2010 Projections (Mt CO_2)

Sector	With measures[2]	With additional measures[3]
Energy[4]	–38.7	–68.1
Industrial processes[5]	–43.7	–69.9
Waste	–28.3	–28.3
Agriculture	0.0	–2.7
Others[6]	0.0	0.0
Total[7]	**–110.7**	**–169.0**

Source: Third National Communication, p. 118

Policies Implemented or continued

The Third National Communication refers to P&Ms Implemented or continued during the nineties. Though they are described in detail, their quantitative impact is only specified as an overall effect: without the measures of the 'With measures' projection total GHG emissions would be 110.7 Mt CO_2 eq. higher ('Without measures' projection).

New measures

France categorises in its National Programme for Tackling Climate Change (PNLCC) the new measures into the following 3 categories contributing about 59 Mt CO_2eq. to close the gap, all of which can be classified as proposed measures, though the first category reinforces existing measures.

- New measures reinforcing and extending existing measures (category 1 measures) expected to contribute with 25.8 Mt CO_2eq. to close the gap.
- Taxation measures (category 2 measures) expected to contribute with 24.6 Mt CO_2eq. to close the gap.
- Long-term structural action on the supply side (including most actions with effects on transportation and on renewable energy sources, category 3 measures) expected to contribute with 9.2 Mt CO_2eq. to close the gap.

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2 Measures that have been decided upon and started (at least partially) before 2000.

3 Measures decided, but not implemented before 2000; new measures of the PNLCCC; other measures decided since 2000.

4 Including energy use in Industry etc.

5 Only GHG emissions from industrial processes and F-gas emission, without GHG emissions from fossil fuel combustion.

6 Including emissions from use of solvents.

7 Without biomass, land-use, land-use change and forestry.

Table 4: Detailed Information on Polices and Measures

Sector	Name	Objective	GHG affected	Type of instrument	Status	Implementing entity	Estimate of savings (Mt CO_2) 2010	2020	CCPM
Policies and measure in the with measures projection									
Energy (1.A.1.a.)	E-0.1 Nuclear investment	Energetic substitution	CO_2	Economic	Implemented	EDF	46.00	46,00	No
Energy (1.A.1.a.)	E-0.2.1 Development of cogeneration	Energetic substitution, with a target of 4 GW in 2010	CO_2	Regulation	Implemented	EDF	3.70	4,40	Yes
Energy (1.A.1.a.)	E-0.3 Cutting the peak load	Energetic substitution, demand side management, through the diffusion of the tariff ‚tempo' and an agreement Ademe/EDF	CO_2	Regulation, Economic	Implemented	Ademe, EDF	1.80 to 2.90		No
Energy (1.A.1.a.)	E-0.5, E-0.6 Reduction of counter productive effects by the adjustment of electricity rates	Energetic substitution, demand side management Corsica, the overseas departments and certain rural regions	CO_2	Economic	Implemented	EDF			Yes
Energy (1.A.1.a.)	E-1.1 Leakages in the natural gas net	Reduction of the fugitive methane emissions	CH_4	Economic	Implemented	GDF	0.64	0,64	No
Energy (1.A.1.a.)	E-0.2.2, E-4.1 Development of wind energy	Energetic substitution (wind energy programme 2005)	CO_2	Regulation	Implemented	Minefi	0.70		Yes
Energy (1.A.1.a.)	A-0.2.3, RT-4.1.1, RT-4.1.2, E-4.2.1 Wood energy	Energetic substitution (wood energy plan and local development)	CO_2	Economic	Implemented	Map-METL	0.20	0,20	Yes

Sector	Name	Objective	GHG affected	Type of instrument	Status	Implementing entity	Estimate of savings (Mt CO_2) 2010	2020	CCPM
Energy (1.A.1.a.)	A-1.4 partly Bio-fuels	Energetic substitution by the development of the production of agricultural biomass for energetic use	CO_2	Economic, fiscal	Implemented	Map			Yes
Energy (1.A.1.a.)	E-0.4 Growth of the incineration capacities	Energetic substitution	CO_2	Economic, regulation	Implemented	Mate			Yes
Energy (1.A.4.a. & b.)	RT-0.1 Thermal regulation	Improvement of the energy efficiency of buildings (applies for new service buildings as well)	CO_2	Regulation	Implemented	METL	1.50	2,40	Yes
Energy (1.A.4.a. & b.)	RT-0.10 Display of a buildings' energy consumption	Value the improvements of buildings' energy efficiency	CO_2	Regulation	Planned	METL			Yes
Energy (1.A.4.a. & b.)	RT-0.2, RT-0.5, RT-0.6, RT-0.7 Financial and fiscal incentives for improvements in existing buildings	Encourage works in energy management, tax reduction, allowances for improvement of housing conditions	CO_2	Economic	Adopted	METL, Minefi	3.70	6,60	Yes
Energy (1.A.4.a. & b.)	RT-0.9, RT-3.1 Actions concerning state buildings	Improvement of energy efficiency	CO_2	Regulation	Implemented		0.70	0,70	Yes

Sector	Name	Objective	GHG affected	Type of instrument	Status	Implementing entity	Estimate of savings (Mt CO_2) 2010	Estimate of savings (Mt CO_2) 2020	CCPM
Energy (1.A.4.a. & b.)	A-2.4 Development of wood use in construction	Carbon storage outside of forests, reduction of fossil CO_2 emissions	CO_2	Regulation, other	Implemented	Mate	2.60		Yes
Energy (1.A.4.a. & b.)	RT-0.3 VAT reductions for works on existing flats	Encourage works on existing flats, VAT reduction for flats aged more than two years	CO_2	Fiscal		Minefi			No
Energy (1.A.4.a. & b.)	RT-0.8 Classification of heat networks	Improvement of energy efficiency: all new buildings must be connected to the heat network	CO_2	Regulation	Planned	METL, Minefi			No
Energy (1.A.4.a. & b.)	RT 0.11 Renewal of the building stock	Improvement of the building stock	CO_2	Economic	Implemented	METL			No
Transport (1.A.3.)	T-0.2.1, T-3.2.2 Institutional actions concerning freight transport	Re-establish the best competition conditions in freight transport by regulation, driving time control and sanctions. 'Contrat de progrès de la profession'	CO_2	Regulation	Implemented	METL			No
Transport (1.A.3.)	T-0.1.1, T-3.2.3 Catch up the tax rates on gas-oil and raise the minimum tax on fuels	Reduce the tax gap between gas-oil and petrol to the average European level and evolution of the European fuel taxation	CO_2	Fiscal	Implemented	Minefi			Yes

Sector	Name	Objective	GHG affected	Type of instrument	Status	Implementing entity	Estimate of savings (Mt CO_2) 2010	2020	CCPM
Transport (1.A.3.)	Technical measures concerning lorries	Reduction of specific emissions by MOT and obligation for technical improvements	CO_2	Regulation	Implemented	METL	1.50	1,50	No
Transport (1.A.3.)	T-0.2.2, T-3.1.4, T-4.3 Development of 'intermodal' freight transport	Development of 'intermodal' transports different from road transport through public aid and technical actions (financed by the FITTVN)	CO_2	Economic, regulation	Implemented	METL	3.30	5,90	Yes
Transport (1.A.3.)	T-0.3.1, T-1.1.1, T-1.1.2 ACEA agreement	Emission reduction in private transport	CO_2	Voluntary	Implemented	European Commission, METL, Mate			Yes
Transport (1.A.3.)	T-0.3.2 MOT of light-duty vehicles	Reduction of polluting emissions by repairing obligation	CO_2	Regulation	Implemented	METL	3.10	2,90	No
Transport (1.A.3.)	Renewal of car park	Encourage the renewal of the car park by paying a prime for the withdrawal of cars older than ten years	CO_2	Economic	Implemented	METL			No
Transport (1.A.3.)	T-0.3.3, T-1.4 Alternative vehicles	Development of alternative vehicles	CO_2	Fiscal, other	Implemented	METL	1.10	1,80	Yes
Transport (1.A.3.)	T-0.1.6, T-3.1.1, T-3.1.2, T-4.2, T-4.4 Urban transport	Optimise the urban transport by PDUs (urban transport and mobility master plans) and local activities	CO_2	Regulation	Implemented	METL, local authorities	2.60	4,00	Yes

Sector	Name	Objective	GHG affected	Type of instrument	Status	Implementing entity	Estimate of savings (Mt CO_2) 2010	2020	CCPM
Transport (1.A.3.)	T-0.3.6 High-speed trains	Offer an alternative to road or air transport	CO_2	Economic	Implemented	METL, SNCF	0.60	0,80	Yes
Transport (1.A.3.)	T-0.3.5 Regional express transport	Improve the conditions for commuting travels	CO_2	Economic	Implemented	METL, SNCF			Yes
Transport (1.A.3.)	T-0.3.8 Speed control of light-duty-vehicles	Road security and energy consumption	CO_2	Regulation, other	Implemented	METL			Yes
Transport (1.A.3.)	T-0.3.7 Specific emission reduction of air transport	Improve the air navigation in Europe	CO_2	Regulation, economic	Implemented	METL, Eurocontrol			Yes
Industry (1.A.2. & 2.)	I-0.2 Voluntary engagements	Emission reductions	CO_2, fluorinated gases	Voluntary	Implemented	Mate	4.40	4,40	No
Industry (1.A.2.)	I-0.1, I-0.3, I-1, RT-0.4 Supporting measures	Energetic efficiency, Ademe-Frac aids, boiler regulations etc.	CO_2	Economic, fiscal, regulation	Implemented	Minefi, Ademe	0.40	0,70	No
Industry (2.)	I-0.3 Industrial N_2O emission regulation	Reduce the N_2O emissions of the industry	N_2O	Regulation	Implemented	Prefectures	22.90	22,90	No
Industry (2.)	I-0.4, I-4.2 Tax on Nitrous Oxide emissions	Pollution control	N_2O	Fiscal	Implemented				No

Sector	Name	Objective	GHG affected	Type of instrument	Status	Implementing entity	Estimate of savings (Mt CO_2) 2010	2020	CCPM
Agriculture (4.)	A-0.1, A-1.2 Management of nitrogenous fertilising	Indirect reduction of N_2O emissions	N_2O	Regulation, other	Implemented	Map			No
Forest (5.)	A-0.2.1 Afforestation of agricultural grounds	Increase the carbon sinks (afforestation policy: 30,000 hectares of agricultural ground per year)	CO_2	Economic		Map	2.50	3,66	No
Waste (6.)	E-0.4, DE-3 Energetic use of waste	Energetic substitution (double the incineration capacity of household waste)	CO_2	Regulation	Implemented	Mate	1.30	1,30	No
Waste (6.)	Suppression of dumping non recyclable rubbish	Reduction of CH_4 emissions	CH_4	Regulation	Implemented	Mate	12.20	15,55	Yes
Waste (6.)	DE-4 Salvage of methane in landfill sites	Reduction of CH_4 emissions	CH_4	Regulation	Implemented	Mate			No
Policies and measures in the with additional measures projection									
Industry (1.A.2., 2., 3.)	I-1.1 Help for Ademe (Frac) funding decisions	Re-launch of the incentive to limit emissions	all	Economic	Adopted	Ademe	0.45		No
Industry (1.A.2., 2., 3.)	I-1.2 Research & development, 20 million French francs per year	Support for research & development of emission limiting technologies and processes	all	Economic, other	Planned	Ademe, MENRT			No

Sector	Name	Objective	GHG affected	Type of instrument	Status	Implementing entity	Estimate of savings (Mt CO_2) 2010	Estimate of savings (Mt CO_2) 2020	CCPM
Industry (1.A.2., 2., 3.)	I-1.3 Technologic demonstration, 30 million French francs per year	Support for exemplary technologic demonstration projects	all	Economic, other	Planned	Ademe, MENRT			No
Industry (1.A.2., 2., 3.)	I-1.4 New financing methods	Favour the financing of emission limiting projects by banks	all	Economic	Adopted	Ademe, Mate, Minefi			No
Industry (1.A.2., 2., 3.)	I-1.5 Uniqueness of Ademe (Frac) procedures	Improve the efficiency of support measures	all	Other	Implemented	Ademe, industry			No
Industry (2.)	I-2.1 Reinforcement of the requirements of installations classified to protect the environment	Additional reduction of industrial N_2O emissions	N_2O	Regulation	Adopted	Mate	1.80		No
Industry (2.)	I-2.2 - I-2.7	Regulation for HFC, PFC, SF_6	HFC, PFC, SF_6	Regulation, voluntary	Implemented	Mate	1.80		Yes
Industry (1.A.2.)	I-3 Energy taxation		CO_2	Fiscal	Suspended	Mate, Minefi	7.30		Yes
Industry (2.)	I-4.2 N_2O (raising of the general tax on polluting activities)	Additional reduction of N_2O emissions	N_2O	Fscal	Aopted	Mate, Minefi	1.00		No

Sector	Name	Objective	GHG affected	Type of instrument	Status	Implementing entity	Estimate of savings (Mt CO_2) 2010	Estimate of savings (Mt CO_2) 2020	CCPM
Industry (1.A.2., 2., 3.)	I-5.1 Labels and standardisation	Evolution of standards and practices concerning the greenhouse effect	all	Other	Planned	Industry, Ademe			Yes
Industry (1.A.2., 2., 3.)	T-5.2 Information of enterprises	Evolution of standards and practices concerning the greenhouse effect	all	Other	Adopted	Ademe			No
Industry (1.A.2., 2., 3.)	T-5.3 Training and qualification	Development of energy audits for the industry	all	Education	Adopted	Ademe, industry			No
Industry (2.)	F-3.1 Reinforcement of controlling	Additional reduction of HFC emissions	HFC	Regulation	Planned	Mate	0.70		No
Industry (2.)	F-3.2 Control of the air-conditioning equipment in cars	Reduction of refrigerant gas emissions linked to car use	HFC	Education, regulation	Adopted	Mate, METL	0.70		No
Industry (2.)	F-3.3 Standardisation	Leakage limitation of refrigerant gases	HFC	Other	Implemented	Mate	1.10		No
Industry (2.)	F-3.4 Reprocessing of fluids	Development of a reprocessing routine of refrigerant gases used in cars	HFC	Economic	Adopted	Mate	0.70		No
Industry (2.)	F-3.5 Training and qualification of enterprises	Reinforcement of qualification	HFC	Education	Implemented	Mate	0.60		No
Industry (2.)	F-3.6 Study on fiscal measures	Encouragement to substitutions	HFC	Other	Implemented	Mate, Minefi	1.40		No

Sector	Name	Objective	GHG affected	Type of instrument	Status	Implementing entity	Estimate of savings (Mt CO_2) 2010	Estimate of savings (Mt CO_2) 2020	CCPM
Industry (2.)	F-3.7 Research & development	Improve the knowledge on emissions, equipments, possible evolutions towards other processes and methods of reprocessing	HFC	Other	Adopted	Mate, Ademe			No
Transport (1.A.3.)	T-1.1.1 follow-up of agreements and future reinforcements	Verify the application of the ACEA agreement in France	CO_2	Regulation	Planned	METL, Ademe			Yes
Transport (1.A.3.)	T-1.1.2 Extension of voluntary agreements to light commercial vehicles and to two-wheeled vehicles	Reduce the emissions of all concerned vehicles	CO_2	Voluntary	Adopted	METL, Mate			Yes
Transport (1.A.3.)	T-1.1.3 Incentive for the renewal of light vehicles	Incentive for the replacement by more efficient vehicles	CO_2	Economic	Planned	METL, Minefi, Mate			No
Transport (1.A.3.)	T-1.1.4 Other incentive measures for the evolution of the car park	Labelling of vehicles, tax credits for 'alternative' vehicles	CO_2	Economic	Planned	METL, Minefi, Mate			Yes

Sector	Name	Objective	GHG affected	Type of instrument	Status	Implementing entity	Estimate of savings (Mt CO_2) 2010	Estimate of savings (Mt CO_2) 2020	CCPM
Transport (1.A.3.)	T-1.2 alternatives to air-conditioning and new cycle	Limit the growth of motor CO_2 emissions and air-conditioning HFC emissions	CO_2, HFC	Other, regulation	Implemented	Mate, METL	0.20		No
Transport (1.A.3.)	T-1.4 Electric and alternative vehicles	Preparation of decisions of public authorities for the development of clean cars	CO_2	Other	Adopted	Mate, Minefi, METL, Ademe	0.40		Yes
Transport (1.A.3.)	T-1.5 Specific emissions of rail transport	Reinforcement of the share of electric traction, renewal of diesel engines	CO_2	Economic	Implemented	METL	0.40		No
Transport (1.A.3.)	T-1.6 N_2O emissions of catalytic converters	Improvement of the knowledge of these emissions and of ways to reduce them	N_2O	Other	Planned	Mate, METL			Yes
Transport (1.A.3.)	T-1.7 Speed limitation of light vehicles	Speed limitation by construction: avoid too big differences between possible and allowed driving speed	CO_2	Regulation	Implemented	METL, Mate			No
Transport (1.A.3.)	T-2.1.1 Speed control of heavy lorries	Reinforcement of speed controls and promotion of electric speed measuring devices	CO_2	Regulation	Adopted	METL, Ministries of the Interior and Defence	0.80		No
Transport (1.A.3.)	T-2.1.2 MOT at the roadside	Good technical adjustments	CO_2	Regulation	Adopted	METL, Ministries of the Interior and Defence			No

Sector	Name	Objective	GHG affected	Type of instrument	Status	Implementing entity	Estimate of savings (Mt CO_2) 2010	Estimate of savings (Mt CO_2) 2020	CCPM
Transport (1.A.3.)	T-2.1.3 Speed limitation of light commercial vehicles	Study on the feasibility and impact of a speed limitation for light commercial vehicles	CO_2	Other	Implemented	METL, Mate			No
Transport (1.A.3.)	T-2.2.1 Energy consumption of airport platforms	Reduction of rolling time by better signalling and an improvement of the energy distribution	CO_2	Other	Implemented	METL	0.20		No
Transport (1.A.3.)	T-2.2.2 Improvement of conditions to change from public to air transport	Improvement of coach service to airports by public transport	CO_2	Economic	Implemented	METL			No
Transport (1.A.3.)	T-2.2.3 Transport to and from the airport by express trains	Development of agreements between air and railway companies	CO_2	Voluntary	Planned	METL			No
Transport (1.A.3.)	T-2.3.1 Management of the great inter-urban main roads	Evaluation in terms of CO_2 of the experiences that are going to be made	CO_2	Other	Planned	METL	0.04		Yes
Transport (1.A.3.)	T-2.3.2 Regulation of traffic lights and moderating progressive signal systems	Penalisation of the highest speeds in order to achieve a 10 % average speed reduction	CO_2	Regulation, other	Planned	METL	0.30		No

Sector	Name	Objective	GHG affected	Type of instrument	Status	Implementing entity	Estimate of savings (Mt CO_2) 2010	Estimate of savings (Mt CO_2) 2020	CCPM
Transport (1.A.3.)	T-2.3.3 Right of way to public transport	Encourage the use of public transport by increasing their commercial speed and reducing their fuel consumption	CO_2	Economic	Planned	METL	0.07		No
Transport (1.A.3.)	T-2.3.4 Regulation of urban fast lanes	Speed optimisation on fast lanes	CO_2	Regulation	Planned		0.20		No
Transport (1.A.3.)	T-2.3.5 User information	Information systems and development of data-processing tools	CO_2	Other	Implemented	METL			No
Transport (1.A.3.)	T-2.4 Facilitation of maritime coastal traffic	Development of transport ways that consume less energy per transported ton and km	CO_2	Economic	Implemented	METL			No
Transport (1.A.3.)	T-3.1.1 Control the evolution of urban space	Improve methods to help territorial communities to organize their infrastructure projects into a hierarchy in accordance with the generated traffic	CO_2	Other, economic	Adopted	METL, Mate (D4E)	1.50		No
Transport (1.A.3.)	T-3.1.2 Documents of town planning and localization of activities	Take into account the impact on transports	CO_2	Other	Adopted	METL, Mate (D4E)			No
Transport (1.A.3.)	T-3.1.3 Impact of the waste management system	Optimisation of trajectories and less polluting transport ways	CO_2	Other	Adopted	METL, Mate (D4E)			No

Sector	Name	Objective	GHG affected	Type of instrument	Status	Implementing entity	Estimate of savings (Mt CO_2) 2010	Estimate of savings (Mt CO_2) 2020	CCPM
Transport (1.A.3.)	T-3.1.4 Combined transport and associate transporting firms	Structuring of the demand for combined transport	CO_2	Other	Adopted	METL, Ademe			No
Transport (1.A.3.)	T-3.2.1 Taxation of jet fuel	Installation of a European tax or fee system	CO_2, O_3	Fiscal	Planned	METL, Minefi, Mate	0.40		Yes
Transport (1.A.3.)	T-3.2.2 Respect of work regulation in the road professions (follow-up of T-0.2.1)	Respect of social standards and European harmonisation in this field	CO_2	Regulation	Adopted	METL	0.50		No
Transport (1.A.3.)	T-3.2.3 Catching up gas oil tax	progressively align tax on gas-oil with petrol tax	CO_2	Fiscal	Implemented	Minefi	2.70		Yes
Transport (1.A.3.)	T-3.2.4 Taxation of public transport fuel	Extend the partial payback of gas-oil taxes to public transport	CO_2	Fiscal	Implemented	Minefi, METL			Yes
Transport (1.A.3.)	T.3.3.1 Internalisation of carbon costs	Take into account carbon costs in fuel taxation	CO_2	Fiscal	Implemented	METL, Minefi, Mate	3.70		Yes
Transport (1.A.3.)	T-3.3.2 Control of urban transport (reinforcement of T-0.1.5)	Follow-up and widening of fees for the use of road infrastructure	CO_2	Fiscal	Suspended	METL			Yes
Transport (1.A.3.)	T-4.1 Organisation of community space	Take into account transport emissions	CO_2	Other	Implemented	METL, Mate	3.67		No

Sector	Name	Objective	GHG affected	Type of instrument	Status	Implementing entity	Estimate of savings (Mt CO_2) 2010	Estimate of savings (Mt CO_2) 2020	CCPM
Transport (1.A.3.)	T-4.2 Offer of interurban infrastructure - other aspects	Measures in the context of service outlines	CO_2	Other	Implemented	METL	3.70		No
Transport (1.A.3.)	T-4.3 Installations for means of transport change for combined transport	Organisation of combined transport	CO_2	Other	Adopted	METL, Ademe	0.70		No
Transport (1.A.3.)	T-4.4 Common transport and alternative urban transport	Speeding up the implementation of programmes in this context	CO_2	Other	Planned	METL, Ademe, Mate	0.55		Yes
Transport (1.A.3.)	T-5.1 Training of professional drivers	Reinforcement experiences of the initial and permanent training	CO_2	Education	Adopted	METL			No
Transport (1.A.3.)	T-5.2 Training for driving licence	Sensitise drivers for energy saving	CO_2	Education	Implemented	METL			No
Transport (1.A.3.)	T-5.3 Responsibilities of enterprises	Take into account the greenhouse effect in environmental planning and reviews	CO_2	Other	Adopted	Ademe, METL			No
Energy (1.A.4.a. & b.)	RT-1.1 Reinforcement of thermal regulation (new buildings)	Reinforcement of the thermal regulation adopted in 2000	CO_2	Regulation	Adopted	METL	1.10		Yes

Sector	Name	Objective	GHG affected	Type of instrument	Status	Implementing entity	Estimate of savings (Mt CO_2) 2010	Estimate of savings (Mt CO_2) 2020	CCPM
Energy (1.A.4.a. & b.)	RT-1.2 Standardisation and technical regulation of components	Emission reducing standards for glass	CO_2	Regulation	Adopted	Minefi, METL	0.85		Yes
Energy (1.A.4.a. & b.)	RT-1.3, RT-1.4 Reinforcement of controlling measures for existing buildings	Development and good implementation of standardising instruments to measure building's energy efficiency	CO_2	Regulation	Implemented	METL			Yes
Energy (1.A.4.a. & b.)	RT-2 Voluntary agreements	Agreements on materials to be used	CO_2	Voluntary	Adopted	METL			No
Energy (1.A.4.a. & b.)	RT-3.2 Action on pilot sector buildings	Partnership agreements	CO_2	Other	Implemented	METL, Ademe			No
Energy (1.A.4.a. & b.)	RT-4.2 Thermal solar energy	Encourage the use of solar heated water for individual and collective sanitary use and heating	CO_2	Economic	Implemented	Ademe, Minefi	0.04		Yes
Energy (1.A.4.a. & b.)	RT-4.3 Geothermal energy	Measures encouraging the use of geothermal energy	CO_2	Economic	Planned	Ademe, METL, Minefi	0.07		Yes
Energy (1.A.4.a. & b.)	RT-4.4 Heat networks	Optimisation of the extension of heat networks	CO_2	Economic	Implemented	Ademe, METL, Minefi			Yes
Energy (1.A.4.a. & b.)	RT-5.1, RT-5.2 Rented flat sector	Taking energy efficiency into account for the calculation of rents and heat charges	CO_2	Regulation	Planned	METL, Ademe			Yes

Sector	Name	Objective	GHG affected	Type of instrument	Status	Implementing entity	Estimate of savings (Mt CO_2) 2010	Estimate of savings (Mt CO_2) 2020	CCPM
Energy (1.A.4.a. & b.)	RT-6.1 Programmed operations for the thermal improvement of buildings	Operations of local initiative, the client being the commune or the competent public intercommunity institution	CO_2	Voluntary	Adopted	Ademe, METL			Yes
Energy (1.A.4.a. & b.)	RT-6.2 Conditions of granting of assistance	Development of labels conditioning grants	CO_2	Regulation	Implemented	METL			No
Energy (1.A.4.a. & b.)	RT-6.3 system of assistance for service buildings	Extensions of existing assistance for housing to the service sector	CO_2	Economic	Planned	Ademe, METL			No
Energy (1.A.4.a. & b.)	RT-6.4 Assistance for condensation boilers for collective use	Subvention for this type of boilers	CO_2	Economic	Adopted	Ademe, METL	0.14		No
Energy (1.A.4.a. & b.)	RT-6.5 Support for the policy of labels	Incentives of certain categories of clients	CO_2	Economic	Implemented	METL, Ademe			Yes
Energy (1.A.4.a. & b.)	RT-7.2 Reduced VAT rate for the sale of heat produced by renewable energy	Achieve a modification from the European Commission in the annex H of the 6th VAT directive. Reduce this VAT rate to 5.5 % in order to improve the competitiveness of wood energy		Fiscal	Panned	Minefi			Yes

Sector	Name	Objective	GHG affected	Type of instrument	Status	Implementing entity	Estimate of savings (Mt CO_2) 2010	Estimate of savings (Mt CO_2) 2020	CCPM
Energy (1.A.4.a. & b.)	RT-7.3 Reduced VAT rate for energy saving products and services	Extend the measure already existing with a strong orientation towards the saving of energy	CO_2	Fiscal	Panned	Minefi			Yes
Energy (1.A.4.a. & b.)	RT-8.1 Labels and information of the public	Concerning HPE labels for new construction and also product quality (e.g. wood heating devices) and certification of professionals	CO_2, HFC	Other	Implemented	Ademe, METL			Yes
Energy (1.A.4.a. & b.)	RT-8.2 Environmental quality of construction products	Training, information of professionals	CO_2, HFC	Education	Implemented	METL			Yes
Energy (1.A.4.a. & b.)	RT-9 'High environmental quality' action	Action to integrate environmental concerns in the building sector	CO_2, HFC	Other	Implemented	Ademe, METL, CSTB			No
Energy (1.A.4.a. & b.)	B.2.1 Effect of the anti-pollutant tax on the service sector		CO_2	Fiscal	Suspended	Minefi	1.40		Yes
Energy (1.A.4.a. & b.)	B.2.2 Effect of the anti-pollutant tax on housing		CO_2	Fiscal	Suspended	Minefi	2.20		Yes

Sector	Name	Objective	GHG affected	Type of instrument	Status	Implementing entity	Estimate of savings (Mt CO_2) 2010	Estimate of savings (Mt CO_2) 2020	CCPM
Agriculture (4.)	A-1.1 CH_4 emissions in cattle breeding (and N_2O emissions)	Map preparations for recommendations how to reduce the emissions	CH_4, N_2O	Other	Implemented	Map	0.90		No
Agriculture (4.)	A-1.2 N_2O emissions from land	Reduction of emissions from nitrous manure spreading	CO_2	Fiscal	Implemented	Map, Mate	1.30		No
Agriculture (4.)	A-1.3 Integration of the greenhouse effect in agricultural policy	Development of the national action plan to support cattle breeding	All	Economic	Implemented	Map			No
Agriculture (4.)	A-1.4 Actions to improve knowledge	Reinforcement of the effort in research & development as well as in the quality of statistical data	All	Other		Map, Mate, MENRT			No
Agriculture (4.)	A-2.1 Afforestation of agricultural land	Incentives for an afforestation of 30,000 hectare per year	CO_2	Economic	Adopted	Map	0.55		No
Agriculture (4.)	A-2.2 Studies, research and experimentation	Reinforcement in research & development in specific subjects	All	Other	Implemented	Map, MENRT			No
Waste (6.)	DE-1 Control of waste production	-	CO_2, CH_4	Regulation	Adopted		4.00		Yes
Waste (6.)	DE-2 Valorisation reinforcement of organic material	-	CO_2, CH_4	Regulation	Adopted				Yes

Sector	Name	Objective	GHG affected	Type of instrument	Status	Implementing entity	Estimate of savings (Mt CO_2) 2010	Estimate of savings (Mt CO_2) 2020	CCPM
Waste (6.)	DE-3 Spread the recuperation of heat in incinerators	-	CO_2	Regulation	Adopted				Yes
Waste (6.)	DE-4 Efficiency of gas collecting systems in landfill sites	-	CH_4	Regulation	Adopted				No
Waste (6.)	DE-5 Biological inhibitor pre-treatment for the period of exploitation	-	CH_4	Regulation	Implemented				No
Waste (6.)	DE-6 Analysis and control of biochemical reactions in landfill sites	—	CH_4	Regulation	Implemented				Yes
Waste (6.)	DE-7 Valorisation of organic waste	—	CO_2, CH_4	Regulation	Adopted				Yes
Energy (1.A.1.a.)	E-1.2.1 Consumption of the nuclear fuel cycle	Energetic efficiency	CO_2	Other	Adopted	Minefi, electricity service			No
Energy (1.A.1.a.)	E-1.2.2 Losses in the electrical network	Reduction of losses in the electrical network	CO_2	Other	Adopted	Minefi, electricity service			Yes

Sector	Name	Objective	GHG affected	Type of instrument	Status	Implementing entity	Estimate of savings (Mt CO_2) 2010	2020	CCPM
Energy (1.A.1.a.)	E.2.1 Promotion of an European regulation for the improvement of sold electric devices	Evaluation of the European regulation	CO_2	Regulation	Adopted	Minefi, Serure	1.30		Yes
Energy (1.A.1.a.)	E-2.2 Promotion of efficient devices	Save energy	CO_2	Other	Adopted	Ademe			Yes
Energy (1.A.1.a.)	E-2.3 Specific thermal and electricity regulation	Regulation in the domain of heat and pumps	CO_2	Regulation	Adopted	METL			No
Energy (1.A.1.a.)	E-2.6 VAT reduction on products and services	Encourage works to prevent the greenhouse effect in existing buildings	CO_2	Fiscal	Adopted	Minefi	0.90		No
Energy (1.A.1.a.)	E-3 Substitution of classic thermal energy production	Replace oil and coal fired power plants by gas fired plants	CO_2	Other	Adopted	Minefi, electricity service	5.00		No
Energy (1.A.1.a.)	E-4.1 Production of wind energy	Encourage the wind energy production by fixing a minimum purchase tariff to be paid by the electricity distributor (reinforcement of an existing measure)	CO_2	Regulation	Implemented	Minefi	2.60		Yes

Sector	Name	Objective	GHG affected	Type of instrument	Status	Implementing entity	Estimate of savings (Mt CO_2) 2010	Estimate of savings (Mt CO_2) 2020	CCPM
Energy (1.A.1.a.)	E-4.2.1 Heat production: wood, electric heating , tariff 'Tempo'	Encourage the development of wood heating instead of electric heating in rural regions with a small density of population	CO_2	Economic	Adopted	Minefi (and Ademe, METL)			Yes
Energy (1.A.1.a.)	RT-4.1.1 Wood energy in collective use and heat networks	Follow the wood energy plan, with a growth of 50,000 TOE in 2000	CO_2	Economic, fiscal	Implemented	Ademe, Minefi	1.10		Yes
Energy (1.A.1.a.)	RT-4.1.2 Wood energy in individual housing	Actions concerning heating devices and combustible	CO_2	Economic, other, fiscal	Adopted	Ademe, Minefi	0.30		Yes
Energy (1.A.1.a.)	E-4.2.2 Electricity production with wood	Invitation to tender by EDF for energy supply based on biomass for a capacity of 10 MW in order to realise one or two experimental plants	CO_2	Other	Adopted	Ademe, Minefi			Yes
Energy (1.A.1.a.)	E-6 'DOM-TOM' and Corsica programme	Replacement of diesel generators by renewable energies	CO_2	Economic	Implemented	Ademe	0.45		Yes

Source: Third National Communication, pp. 101–109

Evaluation of projections

The data in Tables 5–7 are based on information from the Third National Communication.

Table 5 shows the projections by greenhouse gas for 2010 and Table 6 summarises the projections by sector. Total greenhouse gas emissions are projected to increase by 49.3 Mt CO_2 eq. (+9.0 %) in the 'With measures' projection (table 6).

Table 5: Summary of projections by gas in 2010 (Mt CO_2)

	Base year	with measures	With additional measures
CO2	385.4	444.6	415.4
CH4	63.3	46.7	46.6
N_2O	88.7	77.0	62.9
HFC, PFC, SF6	7.6	26.0	11.1
Total	**545.0**	**594.3**	**536.0**
% change relative to base year		9.0 %	–1.7 %

Source: Third National Communication, p. 118

Table 6: Summary of projections by sector in 2010 (Mt CO_2)

	Base year	With measures[8]	% change relative to 1990	With additional measures[9]	% change relative 1990 (additional measures)
Energy[10]	374.1	439.2	17.4	409.8	9.5
Industrial processes[11]	56.7	57.4	1.2	31.2	–45.0
Waste	20.8	10.5	–49.5	10.5	–49.5
Agriculture	90.4	85.0	–6.0	82.3	–9.0
Others[12]	3.0	2.2	–26.7	2.2	–26.7
Total[13]	**545.0**	**594.3**	**9.0**	**536.0**	**–1.7**

Source: Third National Communication, p. 118

The 'With measures' projections shows that France is expected to exceed its commitment of greenhouse gas stabilisation under the EU burden sharing agreement by 9 % (Table 7).

Additional quantified P&Ms are identified which reduce the six gas basket by 10.6 % percentage points additionally. In case that all identified measures are going to be Implemented France might comply with it's commitment as total greenhouse emissions would be 1.7 % below it's base year emission.

8 Measures that have been decided upon and started (at least partially) before 2000.
9 Measures decided, but not implemented before 2000; new measures of the PNLCC; other measures decided since 2000.
10 Including energy use in Industry etc.
11 Only GHG emissions from industrial processes and F-gas emission, without GHG emissions from fossil fuel combustion.
12 Including emissions from use of solvents.
13 Without biomass, land-use, land-use change and forestry.

Table 7: Assessment of the target

	Mt CO_2 eq.	% of 1990 level (six gas basket)[14]
Base year (from projections)	545.0	100.0
Commitment	545.0	100.0
With existing P&Ms[15]	594.3	109.0
Gap (-ve means no gap)	49.3	9.0
Effect of additional P&Ms	58.3	10.6

Source: Third National Communication, p. 118

Description of modelling approach

The Third National Communication gives only some general explanations on the modelling approach applied. For a more detailed description of the model approach applied the Third National Communication refers to the National Programme for Tackling Climate Change (PNLCC).

The PNLCC provides little information on the projection methodology used; it only mentions the use of two top-down models to simulate the economic impact of the Kyoto agreement (p. 38), especially of the carbon tax mentioned in the National Programme which contributes a large fraction of the greenhouse gas savings:

1. GEMINI-E3, a general equilibrium model developed by METL and CEA.
2. POLES a partial equilibrium model developed by IEPE

However, the data of the National Programme are based with some modifications on the Second National Communication to the UNFCCC which provides the following details on the methodology for the forecasts, apparently mainly for CO_2 emissions (p. 90).

- France launches periodically, around every five years, a major prospective study on the energy sector. This study is conducted under the leadership of the CGP (Commissariat général au Plan) of the DGEMP (Direction générale de l' énergie et des matières premières) and its purpose is to confront all opinions expressed by the ministries, the major energy operators, NGOs and energy experts. The administrative departments rely to a large extent on the conclusions of these prospective groups to draft its own energy provisions, which are a prerequisite for generating forecasts of CO_2 emissions. The data reported in the Second National Communication and in the national PNLCC are based on the work of the prospective group 'Energy 2010–2020'

- The 'Energy 2010–2020' group is using a 'hybrid' strategy, based on French energy sector models as well as on precise sectoral information in combination with expert opinions. More specifically, the group's thinking is based on simulations carried out with the following models:

    - The 'DIVA' model which for a given growth rate of the French economy gives a coherent vision of the allocation of growth by activity sector at a rather precise level.

    - The projections of energy related CO_2 emissions are based on energy demand projections differentiated by several sectors which are derived from the model Médée-ME of the CGP and strategic studies on energy efficiency by Ademe. Médée-ME is a long term non deterministic techno-economic projection model.

[14] Without biomass, land-use, land-use change and forestry.
[15] The existing measures include ones introduced since Kyoto

- The 'MIDAS' model, based on the partial equilibrium of the energy sector.

- More specific models such as that of the IFP (Institut Français du Pétrole) describing the European refinery sector, or the 'EDF' model describing the French electricity sector.

The methodology for greenhouse gases other than CO_2 seems not to be specified explicitly, but are most likely based on bottom-up estimates from projections of activity levels and forecast of changes in technologies.

The results of the projections have been discussed in sectoral groups of independent experts from different organisations, including industry, NGOs and civil society. The parameters used in the projections are given in the Table below:

Table 8: Modelling parameters

Parameter	2000	2010	Unit
Population	59.4	61.7	Millions
GDP growth	3.2	2.3	%/yr
Oil (international price)[16]	28.3	17.0	USD (1999)/barrel
Gas price (import to France)	2.4	2.2	USD/Mbtu
Coal price (import to France)	34.2	30.0	USD/t
Average specific consumption of new light-duty vehicles	100	99	1997 = 100
Average specific consumption of truck park	100	100	1997 = 100
Transport freight growth	79	87	%
Growth of inland air traffic	5.0	4.1	%/yr
Construction of now housing units	240	240	1,000/yr

Source: Third National Communication, pp. 116, 210

Country conclusions

The reporting procedure of the French National Programme for Tackling Climate Change with respect to both projections and policy measures is very comprehensive (sectors and greenhouse gases covered, quantification of impacts) and presented in very clear manner, though some improvement is possible with respect to the presentation of the quantitative impact of existing measures, their uncertainties, the status of measure implementation and clarity in the methodology used for non-CO_2 gases.

The P&Ms summarised under the 'With additional measures' projection should ensure that France reaches its reduction target (stabilisation at the 1990 level) by 2010. Since the national programme (PNLCC) seems to imply that all measures will be realised within the national boundaries, France should be on the safe side to reach its target if it makes additional use of flexible mechanisms, in particular if the economy grows faster than the 2.3 % per annum assumed for the Third National Communication.

France is facing the fact that total GHG emissions in 1999 have returned to the 1990 level after having been lower in the previous years since 1990, although the emissions for 1999 were lower than the emissions of 1998 due to a mild winter. This is in spite of the fact that a considerable share of the measures belonging to the existing measures were already Implemented by the end of 1999 (N_2O reduction in industrial processes and putting into service of

[16] Exchange rate: 1 USD = 0.9 €.

the last nuclear power plants commissioned). Also the economic depression which, at the beginning of the decade, reduced emissions, has disappeared at the end of the decade which will increase the pressure on the greenhouse gas emissions. In comparison to the preceding year, CO_2 emissions have been decreasing by –1.2 % in 2000, after –3.0 % in 1999 and an increase of 5.3 % in 1998. While 1999 was characterised by a large contribution of hydropower, 2000 was a year of high oil prices which made even emissions from the transport sector to decrease. Another factor contributing was the last nuclear power plant of Chooz to be put into service. The level calculated for CO_2 emissions for 2000 exceeds therefore the stabilisation goal with respect to 1990 by 2.0 %.

Hence, France will certainly have to resort to measures included in the National Programme for Tackling Climate Change (PNLCC) in order to comply with its goal. This concerns in particular the economic measures (e.g. energy tax) which are expected to contribute close to 42 % to the closure of the gap. France had opted, as a first step to introduce economic measures for greenhouse gases, for the extension of the general tax on polluting activities in the industrial sector to fossil energy carriers and to electricity. However only industry and the tertiary sector should be taxed with many possibilities to be exempted or to have a tax rebate. So the impact of the energy tax was anyhow only one third as the total expected effect of the economic measures announced in the climate change Programme and even the success of this part was not at all assured given the many possibilities to escape. However, the fate of the economic measures is more than uncertain after the Decision No 2000-441 DC from December 28, 2000 of the Constitutional Council to declare article 37 of the 'Loi de finances rectificative pour 2000' for not conform with the French constitution. The main arguments of the Constitutional Council were

- that companies were not treated equally by the law: a less polluting company could in fact be taxed higher than a more polluting one,
- that electricity was taxed though its generation contributes quite little to the greenhouse effect (mainly due to nuclear energy) and
- that these differences are not in relation to the objective of the legislator of combating climate change.

The first argument appears understandable and can be considered the direct consequence of the many exemptions which lead to unequal treatment of companies. The second argument of the Council is more difficult to understand, given that other countries such as Germany have explicitly opted for an energy tax in order not to exempt electricity produced by nuclear energy from taxation. In any case it appears that the linkage of the economic measures to the existing tax on polluting activities which was at the origin of the failure. This was easier to realise but put additional constraints on the design of the measures. Currently, a new implementation scheme for economic measures is under study and might be part of a future law of finance.

Particular attention has to be given to the success of measures aiming at the transport sector. This sector is the main source for future emission increases, in particular as the energy sector is an unusually small emitter of CO_2 due to the large share of nuclear energy. The implementation and success of the measures proposed for this sector will therefore need a more particular attention than in the past and should be at the focus of further analysis.

It appears that in the future, taxation of energy products might play a more reduced though still important role in a mix of taxation, (normative or negotiated) reduction standards, and the larger use of Kyoto flexibility mechanisms not only in the case of higher economic growth than that which is at the basis of the National programme.

Nevertheless, the French government was also able to put into practice in 2000/2001 a variety of policies and measures aimed at reducing greenhouse gases, though their role is not important enough to compensate for the preliminary failure of the fiscal law (see first evaluation of the National Programme to Tackle Climate Change, 1er bilan annuel du Programme national de lutte contre le changement climatique).

These measures comprise:

Strategic considerations e.g. concerning

- renewables (Stratégie et moyens de développement de l'efficacité énergétique et des sources d'énergie renouvelables en France, rapport au Premier ministre de M. Cochet).
- energy efficiency (Programme national d'amélioration de l'efficacité énergétique PNAEE presented by the Prime Minister Lionel Jospin on December 6, 2000). The programme proposes to act on the transport sector by accelerating the introduction of urban planning, by encouraging the purchase of clean vehicles and by developing rail freight. The quality of the new stock is to be improved, and improvements in the existing stock are to be financed by subsidies. The programme foresees further to accelerate the introduction of renewables by increasing feedback tariffs. This corresponds to a European Directive, which fixes for France and objective to increase renewables from 15 to 21 %. For companies the programme envisages financial instruments (Fonds d'Investissement De l'Environnement et de la Maîtrise de l'Énergie — FIDEME).

Concrete actions e.g.

- Buildings:
  - Thermal building code 2000 published in November 2000, entering into force June 1, 2001: —15 % for new residential buildings, —40 % for the tertiary sector; integration of electricity consumption (pumps and ventilation, lighting for tertiary sector); integration of air conditioning starting from 2003; stricter control of compliance; 3 successive steps of building codes up to 2020.
  - Reduced VAT tax (5.5 % instead of 19.6 %) for all renovation work (including for energy efficiency) on buildings older than 2 years.
  - Tax credit of 15 % for heating appliances and for renewable energy systems.
  - Energy labels for buildings of the residential and tertiary sector.
- Industry:
  - The fund for the guarantee of investments into energy efficiency FOGIME (fonds de garantie d'investissement de maîtrise de l'énergie), existing since November 2000. Allows to guarantee loans which SMEs and small institutions contract at their banks for energy efficiency.
  - The intervention fund for the environment and energy efficiency FIDEME (Fonds d'intervention pour l'environnement et la maîtrise de l'énergie), contributes to the financing of economic projects to combat climate change with quasi own funds which would not have benefit from financing by banks otherwise.
  - Various mandatory standards in preparation: magnesium foundries, electric equipment, HFC in foams etc).
- Energy Sector:
  - Substitution of classical thermal power plants by co-generation and CCGT (4,000 MW installed, progression: 700 MW per year since 1997, — 5.5 Mt CO_2 eq./year in 2010 on a technical potential of 14.7 Mt CO_2 eq./year)
  - Objective of 3,000 MW installed wind capacity by 2010 reinforced to 5,000 MW (announcement of the Prime Minister in May 2001). This objective could be further enforced in light of the European Directive on renewables. The feedback tariffs for wind energy are fixed at 8.5 Euro cents/kWh to insure rapid development of this sector.
  - Measures to develop biomass for heating purposes in the residential and tertiary sector, as well as for electricity generation.