



National plan for smart, sustainable and inclusive growth

Luxembourg 2020

Courtesy translation
The official French version can be downloaded from www.odc.lu

National Reform Program for the Grand Duchy of Luxembourg
as part of the European semester 2012



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ACRONYMS

ABBL	Association of Banks and Bankers in Luxembourg
ADEM	Labor Administration
AIP	Professional Insertion Activities
ALJ	Local Youth Action
CAE	Work-Support Contract
CASNA	Welcome center for newly arrived students
CCPUE	Coordination Unit for Urban and Environmental Projects
CCSS	Joint Social Security Centre
CEPS	Centre for Population, Poverty and Socio-Economic Policy Studies
CES	Economic and Social Council
CFE	Financial Contributions by the State
CIE	Initial Employment Contract
CIE-EP	Initial Employment Contract-Practice
CIPU	Urban Policy Information Cell
CNS	National Health Fund
CPTE	Permanent Committee for Labour and Employment
CRP	Public Research Center
CSL	Employees' Chamber
CTIE	Centre for Information Technologies of the State
DIRD	Gross domestic expenditure on R & D
DSGE	Dynamic Stochastic General Equilibrium
E2C	Second chance school
EFT	Labor Force Survey
EPC	Economic Policy Committee
ESF	European Social Fund
ETS	Emission Trading Scheme
EU	European Union
FNR	National Research Fund
GDP	Gross Domestic Product
GES	Greenhouse Gas Emissions
IFBL	Luxembourg Institute of Banking Education
IGSS	Inspectorate General for Social Security Administration
ILR	Luxembourg Regulatory Institution
IVL	<i>Integratives Verkehrs-und Landesentwicklungskonzept</i>
NEET	Not in Education, Employment or Training
NGO	Non Governmental Organization
NREAP	National Renewable Energies Action Plan
NRP	National Reform Program
PAEE	National CO2 Emissions Quota Allocations Plan
PRO-SUD	Syndicate of Communities for the Promotion and Development of the South Region
R&D	Research and Development
RDI	Research-Development-Innovation
RMG	Guaranteed Minimum Income
SGP	Stability and convergence Program
SNAS	National Social Action Service
SNJ	National Youth Service
SRAS	Regional Social Action Service
SSM	Minimum wage
STATEC	Luxembourg Central Statistics and Economic Analysis Office
SVO	Voluntary Guidance Service
SYVICOL	Syndicate of Cities and Towns in Luxembourg
UEL	Union des entreprises luxembourgeoises (Employer's Organization)

TABLE OF CONTENTS

1. Introduction	6
2. The macro-economic scenario for 2012-2015	8
3. Macroeconomic surveillance	9
4. Implementing the commitments	11
4.1 Country specific recommendations 2011: Luxembourg	11
4.1.1 Strengthen the fiscal effort	11
4.1.2 Propose and implement a broad pension reform	12
4.1.3 Take steps to reform the system of wage bargaining and wage indexation	14
4.1.4 Reduce youth unemployment	15
4.2 National Europe 2020 objectives and strategic measures	16
4.3 Commitments under the Euro Plus Pact	17
4.3.1 Postponement of the application of the wage indexation mechanism	18
4.3.2 Counteracting the impact of the increase in Minimum Wage (SSM)	18
4.3.3 Stability of social contributions	18
4.3.4 Administrative simplification and infrastructure	18
4.3.5 Reform of the Labor Administration (ADEM)	20
4.3.6 Increase in the State's share of co-financing in adult continuing education	20
4.3.7 Pension reform	20
4.3.8 Increasing resilience in the financial sector	20
5. Thematic coordination	22
5.1 The Employment objective and the key measures for achieving it	22
5.1.1 National Target	22
5.1.2 Key measures	23
5.2 The R&D objective and the key measures for achieving it	29
5.2.1 National Target	29
5.2.2 Key measures	30
5.3 The climate change and energy objective and the key measures for achieving it	35
5.3.1 Greenhouse gas emissions objective	35
5.3.1.1 National target	35
5.3.1.2 Key measures	37
5.3.2 The renewable energies target	39
5.3.2.1 National target	39
5.3.2.2 Key measures	39
5.3.3 The energy efficiency objective	41
5.3.3.1 National target	41
5.3.3.2 Key measures	43
5.4 The Education objective and key measures for achieving it	44
5.4.1 The early school leavers objective	44
5.4.1.1 National target	44
5.4.1.2 Key measures	45
5.4.2 The tertiary education objective	47
5.4.2.1 National target	47
5.4.2.2 Key measures	48
5.4.3 Strengthening the human capital base through adult education and training	48
5.4.4 Extension and development of electronic services of the national library network (bibnet.lu)	49
5.5 The social inclusion objective and key measures for achieving it	49

5.5.1 National Target.....	49
5.5.2 Key measures.....	50
5.5.3 National strategies for integrating Romani as part of the EU	54
6. Methodological and horizontal Issues	55
6.1 Coordination of the distribution of spatial resources	55
6.2 Assimilation on the national level.....	55
6.3 Communication	56
6.4 Evaluation, monitoring and follow-up	56
6.5 Coordination with structural funds.....	56

1. Introduction

Governments within the European Union (EU) concentrated major efforts on correcting budgetary imbalances and ensuring financial stability in 2011 and early 2012. Although these actions were understandable and even necessary, too much time and energy was devoted to addressing emergencies and not enough to implementing political changes that will spur economies and increase the growth potential. Yet it is now more appropriate than ever to simultaneously focus on measures with short-term growth benefits and on developing a true growth model for the medium and long term. This is because public debt evolves ultimately according to long-term growth perspectives, specifically, the ability to make major decisions in the area of structural reforms.

The latest estimates made in early 2012 seem to indicate that at present economic recovery has again stalled. Consequently, the economies of EU Member States must be modernized and levels of competitiveness bolstered. This is an imperative pre-condition for creating jobs and preserving social models. However, growth and employment cannot take off again without a consistent and overall approach that combines intelligent action for budgetary improvement that maintains an investment in growth, vigorous macro-economic policies and an active strategy to promote employment that preserves social cohesion.

In the first European Semester 2011, Luxembourg, along with the other Member States, submitted its National Reform Program (NRP), Luxembourg 2020¹ for implementing the Community strategy Europe 2020². Extensive consultations were undertaken in producing this NRP, both prior to and after it was submitted. Following this first European Semester, the government, after multiple meetings with the social partners, made a number of decisions to address the recommendations made to Luxembourg under the 2011 European Semester and to face the principal challenges now confronting the country. This report thus constitutes an update of the NRP submitted in 2011 as part of the first European semester. This 2012 NRP takes into account the country-specific recommendations made to Luxembourg in 2011 by the Council³, commitments accepted by Luxembourg under the Euro Plus Pact⁴, national objectives established during the first European Semester in 2011⁵, the Annual growth survey (AGS) and the conclusions of the European Council⁶:

- On the macroeconomic level, Luxembourg was not among those Member States subject to an in-depth analysis by the Commission after the February 2012 publication of the Alert mechanism report (AMR) relating to the new MIP procedure for preventing and correcting internal and external macroeconomic imbalances⁷. The government nevertheless continues to closely monitor national macroeconomic developments⁸.

¹ For more details see: http://www.odc.public.lu/actualites/2011/04/PNR_Luxembourg_2020/index.html

² For more details see: http://ec.europa.eu/eu2020/index_fr.htm

³ COUNCIL RECOMMENDATION on the national reform programme 2011 of Luxembourg and delivering a Council opinion on the updated stability programme of Luxembourg, 2011-2014, Brussels, 1 July, 2011.

⁴ THE EURO PLUS PACT – STRONGER ECONOMIC POLICY COORDINATION FOR COMPETITIVENESS AND CONVERGENCE. European Council, Conclusions, EUCO 10/11, 24 and 25 March 2011

⁵ Government of the Grand-Duchy of Luxembourg, Luxembourg 2020, Luxembourg, April 2011

⁶ European Council, Conclusions, Brussels, 2 March 2012

⁷ European Commission, Alert Mechanism Report - Report prepared in accordance with Articles 3 and 4 of the Regulation on the prevention and correction of macro-economic imbalances, COM(2012) 68 final, Brussels, 14 February 2012

⁸ See Chapter 3. Macroeconomic Surveillance

- On the microeconomic and employment levels, the digital economy, innovation and productivity, reform of competition law and policies, effective use of resources—especially by means of a transversal and integrative territorial process as with IVL and sector plans, administrative simplification and developing SMEs, using the internal market to its fullest potential, inclusion and social cohesion⁹, equality between men and women as a transversal objective through gender mainstreaming, continue to make up the structural pillars of the NRP in the long term. The government is currently consecrating all of its attention to implementing the national objectives concerning intelligent growth.
- On the budgetary level, the NRP goes hand in hand with healthy and viable public finances in the medium and long terms, as formulated in the Stability and Growth Pact (SGP)¹⁰.

Over the years, major effort has also been extended in Luxembourg in the area of assessing the reforms. An econometric model that can be used to simulate the macro and micro-economic impact of structural reforms is currently being finalized. This model should help to optimize the assessment of the impact of approved and implemented reforms.

In conclusion, growth and employment cannot ultimately take off again if there is no overall and consistent approach in the area of reforms. In Luxembourg, action is implemented in close cooperation with the social partners with regard to reforms that involve budgetary consolidation, competitiveness policies and policies that actively promote employment while preserving social cohesion. This governance should bring the country out of the crisis period in better health and provide for smart, sustainable and inclusive growth.

⁹ On the social level plan, this NRP is also consistent with the National Social Report.

¹⁰ For more details see: <http://www.mf.public.lu/publications/index.html>

2. The macro-economic scenario for 2012-2015

It is essential that NRP measures take into account the constraints of the macroeconomic environment and the medium-term budget strategy that results from them.

Implementing the NRP as a whole thus falls under the same economic hypotheses involving macroeconomic projections as those of the stability and convergence program. The medium-term macroeconomic scenario assumes the following:

- GDP growth in volume of 1.0% in 2012, 2.1% in 2013, 3.3% in 2014 and 4.1% in 2015
- Nominal GDP growth of 3.2% in 2012, 3.7% in 2013, 5.5% in 2014 and 6.5% in 2015
- Potential growth of 1.8% in 2012, 1.7% in 2013, 1.7% in 2014 and 1.6% in 2015.

As such, Luxembourg is confronted with a slowing of its economic situation in 2012 with real GDP growth of 1.0 % compared to 1.6% in 2011. A progressive improvement of the economy is expected beginning in 2013 (2.1% in 2013, 3.3% in 2014 and 4.1% in 2015). Average growth of the economy between 2013-2015 is expected to amount to 3.2%, a figure well below Luxembourg's long-term average for the period 1985-2011, which was 4.6%.

It should be noted that potential growth for Luxembourg's economy is forecasted at 1.6-1.8% over this period, meaning that the period 2013-2015 should be deemed a high point of the cycle.

For the long term, the government has aligned its main economic hypotheses with those in the macroeconomic scenario used for Luxembourg as part the Working Group on Ageing Populations and Sustainability of the EU Economic Policy Committee¹¹ and its recent report¹² on ageing referring to the period 2010-2060.

¹¹ For more details see: http://europa.eu/epc/working_groups/ageing_en.htm

¹² European Commission, *The 2012 Ageing Report: Underlying Assumptions and Projection Methodologies*, 4/2011. For more details see: http://europa.eu/epc/pdf/2012_ageing_report_en.pdf

3. Macroeconomic surveillance

A new procedure for the prevention and correction of macroeconomic imbalances went into effect on the European level at the end of 2011¹³. This procedure is comprised of two sections: a preventive section and a corrective section, which can ultimately result in a penalties. Under the preventive section, the European Commission annually drafts an Alert Mechanism Report during the European Semester, in which it identifies the Member States that are susceptible to risk of economic imbalances, by means of a qualitative economic analysis of indicators on a scoreboard.

The Commission may decide, on the basis of discussions with the Council or in the Eurogroup, or where significant economic developments occur, to undertake an in-depth analysis of those Member States for which it has concluded that there is risk of macroeconomic imbalances. Through its in-depth analysis, the Commission may determine that either there is no risk of imbalance or that there is a risk of imbalance but that it is not excessive and subsequently make a recommendation to the Council, which may adopt it in accordance with the rules set in article 121 (2) of the preventive arm of the Treaty on the Functioning of the European Union. A third possibility is that the Commission determines that there exists an excessive risk of macroeconomic imbalance, which will result in it recommending to the Council that the Excessive Imbalance Procedure be opened under the corrective arm of the treaty.

On 14 February, 2012, the Commission published its first AMR¹⁴ report under this new governance system. The report observed the following with regard to Luxembourg:

"the value of the scoreboard indicator for the current account balance is above the threshold, caused by trade surpluses reflecting the country's strong specialisation in financial services. This, however, is not related to subdued domestic demand, but concentration of economic activities and jobs in the country. Luxembourg has lost price competitiveness as a result of high wage increases and low productivity growth, but it should be noted that at the same time Luxembourg is gaining export market shares in services. Private sector indebtedness is above the indicative threshold, coupled with large and volatile credit flows. This is mainly explained by lending and borrowing operations inside international non-financial corporations, rather than an excessive indebtedness of the private sector. The household debt level is relatively contained. Real house prices witnessed large cumulated growth during the last decade and the correction is limited so far."

Ultimately, the Commission did not place Luxembourg among the countries likely to be exposed to risks of macroeconomic imbalance at this time. The government approved this report and is in agreement with the conclusions drawn by the Commission with regard to Luxembourg. The Commission views the exceeding of two of the three threshold indicators of macroeconomic imbalances from the perspective that exceeding these thresholds does not reveal the possible existence of an imbalance, but is explained rather by the national specificities of Luxembourg, which the scoreboard cannot fully account for, such as:

¹³ For more details see:

http://ec.europa.eu/economy_finance/economic_governance/macroeconomic_imbalance_procedure/index_en.htm

¹⁴ European Commission, Alert Mechanism Report - Report prepared in accordance with Articles 3 and 4 of the Regulation on the prevention and correction of macro-economic imbalances, COM(2012) 68 final, Brussels, 14 February 2012

- Current account balance: in Luxembourg, it should be noted above all that the current account balance features a surplus due to the strong financial services sector. According to STATEC, the surplus with regard to transactions with the rest of the world - exclusively through international exchange of services - more than offsets the external deficit generated by the factor payments of work and capital, with the result that the current account balance continues to exhibit a surplus. The Commission has concluded that this surplus is not a result of excessively weak domestic demand, but is rather a consequence of the exceptional concentration of economic activities and jobs in the country.
- The private sector debt as a % of GNP: the lion's share of this debt was contracted by non-financial companies with a significant weighting of loans. In Luxembourg, circumstances are such that many companies - in view of the liquidity of some financial markets, experience in international transactions or national specificities - opt to take on debt to make intra group loans available to foreign-based associated companies, not for their own immediate requirements. The result is that total debt is divided by Luxembourg's added value without taking into account added value produced elsewhere in the world by means of this intra-group lending.

The fact that the third threshold for the nominal unit labor cost has been exceeded shows that Luxembourg has lost in terms of cost-competitiveness over the last few years. In this context, it is appropriate to state that the government took major decisions in the beginning of 2012 with regard to the functioning of the automatic wage indexing mechanism for the period 2012-2014¹⁵. The resulting reform should make it so that changes in wages better reflects changes in productivity in upcoming years. The *Observatoire de la compétitivité* closely monitors cost competitiveness in Luxembourg by means of real effective exchange rate indicators and nominal unit labor costs¹⁶, as well as productivity,¹⁷ in order to help the government and the social partners to determine guidelines and content of policies that will be favorable and compatible with long-term competitiveness.

¹⁵ See. Chapter 4.1.3 Implement measures to reform the systems for negotiation and wage indexation.

¹⁶ Ministry of the Economy and Foreign Trade, Competitiveness Report 2011, Luxembourg, October 2011

For more details see: http://www.odc.public.lu/publications/bilan_compete/index.html

¹⁷ Ministry of the Economy and Foreign Trade, Productivity and competitiveness in Luxembourg: Productivity & the crisis. The evolution of Total Factor Productivity in Luxembourg from 1995-2010 (LuxKlems Project), Luxembourg, January 2012

For more details see: <http://www.odc.public.lu/publications/perspectives/index.html>

4. Implementing the commitments ¹⁸

The Annual Growth Survey 2012 of the European Commission emphasized the need to implement the measures agreed upon, notably those emerging from the European Semester of 2011. An absolute priority should be to apply that which has already been agreed upon, the recommendations and commitments of 2011 to include the Euro Plus Pact commitments, while maintaining clear emphasis on measures that favor growth

4.1 Country specific recommendations 2011: Luxembourg

On 12 July, 2011, the Council adopted four recommendations for the SGP and NRP of Luxembourg for the period 2011-2012. This chapter describes the measures implemented in Luxembourg to address these recommendations.

4.1.1 Strengthen the fiscal effort

"Take advantage of the improving cyclical conditions, strengthen the fiscal effort and use unexpected additional revenue in order to further reduce the headline deficit and reach the medium-term objective in 2012."

The year 2011 did not bring on improvement in the economy as expected. While the growth and stability program (GSP) for April 2011 had counted on a growth rate in volume of 3.2% and of 5.0% in value, actual rates of growth for 2011 was in the area of 1.6% in volume and 6.3% in value. Revenues came in higher than predicted at € 420 million, or 1% of GDP compared with the April 2011 estimates, largely due to extraordinary income. This supplemental revenue generated in 2011 was used to improve the nominal deficit. So, despite an economic environment less favorable than expected, the government's nominal deficit was 0.6% of GDP for 2011, whereas in the 12th SGP update it was estimated at 1% of GDP. This improvement will have a basic positive impact on public finances in 2012.

The situation for public finances in 2012 will depend largely on changes in macroeconomic conditions, which at present are best described as volatile and exhibiting major uncertainty. A recession is battering the euro zone in 2012, characterized by an estimated -0.3% growth in volume of GDP, and Luxembourg's economic growth is at risk of slowing further in 2012, with a forecasted 1% increase in real terms, which will weigh heavily on revenue. Consequently, in 2012, the nominal deficit may worsen to 1.5% of GDP.

As regards the structural balance calculated using STATEC methods, it went from - 0.5% in 2010 to 0.6% in 2011, signifying that Luxembourg achieved its medium term budget objectives in 2011, which amounted to a surplus of 0.5% of GDP. Against a backdrop of worsened macroeconomic conditions in 2012 reflected by an increase in the output gap, the structural balance may drop to 0% of GDP under the weight of a higher nominal deficit.

¹⁸ This chapter summarizes measures by Luxembourg implemented to fulfill its commitments under the European Semester 2011. For more information, see Chapter 5.

4.1.2 Propose and implement a broad pension reform

"Propose and implement a broad pension reform to ensure the long-term sustainability of the pension system, starting with measures that will increase the participation rate of older workers, in particular by discouraging early retirement. With a view to raising the effective retirement age, measures such as a link between the statutory retirement age and life expectancy, could be considered."

The result of successive reforms to the pension insurance system, based on allocating costs and on the contract between the generations, has been to create a generally sound retirement system. By unifying profession-based pension schemes into a unique pension scheme and by bringing the general and special pension schemes closer together, an already stable situation has been even more strongly underpinned. The pension system at this time may be qualified as healthy. However, the good current health of the pension insurance funds is primarily due to exceedingly positive economic changes and unparalleled growth in employment over the last 25 years. With strong increases in the number of contributors to the system and positive changes in income, the significantly slower change in the number of pensions awarded not only resulted in a substantial increase in the scheme's financial reserves, but it also favorably influenced both the load factor and the pure contribution rate for contributors to the scheme. The vigorous increase in fund revenues resulting from greater employment and income figures, coupled with the decision to keep pension contribution rates at 24%, with contributions equally split at 8% for insured parties, employers and the State, resulted in the amassing of a reserve of nearly 11 billion Euros, which is the equivalent of 3.8 times the scheme's annual payout. It should also be noted that certain reforms currently mooted in other countries have already been long implemented in Luxembourg, such as calculating pension payments on the basis of professional revenue over a person's entire career or coordination between different pension schemes.

In contrast to this favorable short and medium-term situation, incomparable to the situation in certain neighboring countries, it must be recognized that in the long term the pension system faces considerable risks. Advantages for the system like the large base of contributors simultaneously represent risks for the future, since these numerous persons contributing to the system now will become a large group collecting pensions in the future. Changes like that will inevitably lead to a worsening of such parameters as the load factor and the pure contribution rate, which will rapidly erode this reserve. According to the logic of a pure pay as you go system, it would be necessary that either progressively more persons contribute to the fund, that substantially higher contributions or reduced payouts be implemented, or a combination of solutions combine to ensure that a situation in which all partners are irresponsibly overtaxed cannot occur.

In order to prepare for facing this worrisome trend, the Tripartite Coordination Committee included the following text in its final statement of 28 April, 2006: *"The government and the social partners will set up a reflection group whose task will be to draw up proposals for ensuring the long-term viability of pension schemes and to analyze the various measures that may be considered to guarantee this long-term viability and to adapt the pension system to changes occurring in professional careers as well as to ageing of the population and its impact on durations of persons' careers."* Following this joint statement, the government set up a working group comprised of representatives of the social partners, competent administrations and the government. The Social Security Inspectorate General (IGSS) relied on the work and analyses produced by this study group for its report of 29 April, 2009 on the measures under consideration for guaranteeing the long-term viability of the pension system.

The government, in its statement of 29 July, 2009, committed to drawing up a draft law reforming the pension insurance system to ensure the long-term viability of the schemes.

Prior to drafting the reform project, the government set out the broad lines of the reform in a policy paper presented to the parliamentary commission for Health and Social Security of Parliament, and to the social partners. Consultation subsequently took place with union representatives and the employers organization *Union des Entreprises luxembourgoises* (UEL), which elicited additional proposals from the social partners.

As part of the preparatory work for the pension reform, Parliament opened a policy debate on 2 June, 2010. A wide consensus emerged from this debate regarding the need for a reform to prepare for the worsening of the financial situation of the pension schemes in the long term. From the beginning, it was decided that it is necessary that all public and private pension schemes undergo the reform process. The reform project is based on preparatory work and benefits from the fact that the present financial and demographic situation makes it possible to consolidate pension rights by proposing a balanced approach.

The Government Council conclusively approved the draft law on the reform of the pension insurance system on 20 January, 2012. The government seeks to promote the following:

- Ensuring an equitable sharing out of national income
- Maintain balance between available income of the working population and retired persons
- Provide guarantees to both current retirees and working persons now and in the future with regard to their pensions
- Form a mix of measures concerning both expenditures and income

The reform project confirms the current principles of the pension scheme, to include:

- The pure pay as you go system based on sharing the load between generations
- Three-way and joint financing, with equal contributions by employee, employer and State
- The legal age of retirement remains unchanged at 65
- Early retirement pensions at age 57 with 40 years of effective contributions
- Early retirement pensions at age 60 with 40 years of effective contributions and complementary periods
- Maintaining early retirement schemes
- Improving modest annuities through more flat-rate pension supplements (called *Grundrente*)
- Retaining educational, training and medical treatment periods
- Retaining the pension adjustment and indexation system with improved recognition of financial changes to the scheme with regard to adjustments
- Retaining and improving the possibility of reconciling a full or partial retirement with a part-time professional occupation

In order to ensure equilibrium in the short and medium term of the pension system - long-term financial viability of public finances¹⁹ - and to save future generations having to assume

¹⁹ See update of the SGP for Luxembourg (2012).

heavy costs with substantially reduced pensions, i.e. ensuring adequate and viable pensions²⁰, the reform project is assuming the following circumstances are true:

- Economic growth of 3% over the reference period, and growth of 1.5% in employment, but with a security margin by remaining above substantial development rates of the last thirty years.
- A sustainability mechanism that triggers corrections with regard to income from contributions and expenses through the pension readjustment contributions in the event of a worsening of the financial situation of the scheme
- Working life and longevity remains the same, so that a lasting balance exists between length of professional careers and length of retirement
- The progressive impact of people choosing to stay on the job longer with the reward of an increased pension or, inversely to retire as early as possible and be subject to a parallel decrease in pension benefits
- Increases in contributions that are tolerable to contributors.

The reform leaves the clauses relating to the vesting of rights to pension benefits and to additional time periods necessary for completing requirements for early retirement benefits, the minimum pension and acquiring fixed pension increases nearly unchanged. Any changes at this level would have the consequence of worsening the terms for awarding minimum pensions. The reform project is half way between the positions and proposals of the representatives of salaried personnel and employers. The UEL recommends purely and simply abolishing the entire adjustment mechanism and refuses to accept any increase in contribution, while the Employees' Chamber CSL emphasizes increased income, notably larger contributions by insured parties and pensioners based on the principle of long-term care insurance, and it has doubts about the relationship between working life and longevity.

In addition to the reforms in the area of social security, the reform project also addresses the situation of older workers by implementing an "Age Pact" that develops continuing education, thus preserving employability of older workers as long as possible. Likewise, the reform of the occupational reclassification system strives to keep people with partial handicaps on the labor force, rather than putting them on unemployment, condemning them to inactivity.

4.1.3 Take steps to reform the system of wage bargaining and wage indexation

"Take steps to reform, in consultation with social partners and in accordance with national practices, the system of wage bargaining and wage indexation, to ensure that wage growth better reflects developments in labour productivity and competitiveness"

The government made various decisions about changes to labor costs and social contributions at the end of 2010. In order that changes in labor costs and wage setting mechanisms to be favorable to employment, and keeping in mind the risk of changes in energy costs, at the end of September, 2010 the government negotiated an agreement with union representatives to refrain from applying the next indexation of salaries as part of the automatic wage indexation system before 1 October, 2011. Should more than one automatic indexation apply between 2011 and 2012, the agreement further provides that the government and social partners meet again to evaluate the situation and decide what to do about it.

²⁰ See the National Social Report (2012).

In December, 2011 the government decided again to modulate the automatic wage indexing mechanism. There will be only one automatic wage indexation payment per year in 2012, 2013 and 2014. In addition, an interval of 12 months must elapse between each index. The index which was to be paid in early 2012, has been put back to October, 2012. Therefore, upcoming groups will be paid in October, 2012, October, 2013 and October, 2014, assuming that the wage indexing payment mechanism is triggered. As from 2015, the standard system will go back into effect. The law concerning this modulation was approved at the end of January, 2012²¹. Based on the central scenario for inflation, reduction of the cost of labor amounts to €443 million to all employers, of which € 79 million to the public sector, with a presumed delay of seven months with no modulation in 2012 and the modulations to occur in 2013 and 2014, and excluding any indirect macroeconomic impacts.

4.1.4 Reduce youth unemployment

"Take steps to reduce youth unemployment by reinforcing training and education measures aimed at better matching young people's qualifications to labour demand"

Since young people who leave school without a diploma are the most vulnerable on the labor market, obtaining qualifications for all young people has major importance.

Luxembourg has been committed to a program of fundamental reform in professional training since 2008. The objective of getting qualifications to conform to demand on the labor market is the central theme of this reform. The principal features of this reform are the following:

- Training focused on what is learned in apprenticeships
- Determining jointly what skills to attain by persons working in the educational and professional arenas.
- Promoting work/study programs, either in the form of apprenticeships or long-term internships in all walks of professional training.

Guidance also plays a major role in the integration of young people into professional life. For this reason, the government created a Counseling Center with the idea of assembling all the people who are key to youth guidance programs in one place and to create synergies there. Since early 2012, the first departments have set up shop in the Labor Administration's (ADEM) professional guidance unit, with the rest to follow over the course of the year.

In a crisis environment, the young are especially exposed to unemployment risk. Even persons with university educations can have trouble finding a job when the offer is low. Existing measures for promoting jobs among the young have been modified, such as the Work-Support Contract (CAE) and the Initial Employment Contract (CIE), or established, like the new Initial Employment Contract - Practical Experience (CIE-EP). The objective of these measures is to help these young people in acquiring practical experience, thus augmenting their chances of rapidly finding a job within a stable and legal framework. Assessment of these measures, which was done by an independent analysis center, shows that these measures have had a positive effect on youth unemployment. In fact, 75% of the youths

²¹ The law dated 31 January 2012 adapting certain methods for applying the sliding wage scale and amending article 11 of the amended law dated 22 June 1963 that sets salary schemes for civil servants.

In addition to this indexing modulation, the government decided on a bundle of social measures that will benefit the most needy persons: graduated water prices on a social scale, increasing the number of reimbursed medical consultations, certificated good toward the purchase of schoolbooks and more social housing units.

with CIE contracts found work six months after the program ended, compared to only 50% who did it without CIE contracts. Even eighteen months after the program ended, 85% of those who were in the program were employed, as opposed to 73% who did not have CIE contracts. The difference is less regarding CAE contracts, but is nonetheless positive: 38% compared to 32% after six months, and 62% compared to 56% after eighteen months. The difference with CIE results is due to the fact that CAE contracts are for public or para-public actors and these cannot hire persons as easily as private sector companies can, with some even restricted in hiring staff. The assessment will serve as a basis for analyzing measures over the year and a decision will be made to either extend the current programs or modify or replace them. The measures under review have a budget of €16 million for 2012.

The monitoring of young job seekers with few or no qualifications is being reviewed and qualitatively intensified. Several projects have been implemented or developed by ADEM to deal with this in collaboration with other institutional players that are bolstering support for youths without diplomas. These include the following:

- The "Nudge in the right direction" project directed at young job seekers between 16 and 20, without diplomas who have not been able to get into the job market since registering with ADEM. ADEM is providing a specialized follow-up for young people in order to integrate them into a measure promoting youth employment or in training that can serve as a trampoline toward the labor market.
- The "Training for young people with a work-support contract" is directed at young job seekers aged 16-30 that are working under a CAE contract. This project provides training adapted to current requirements of young people, such as preparing for job interviews, IT training, etc.
- Awareness workshops are being set up by ADEM for youths aged 16-24 who have not obtained apprenticeship positions prior to 1 November, 2011 to explain and offer various "transition" measures, possibilities and perspectives for their professional insertion.

For young early school leavers registered with ADEM, the organization's professional guidance department offers a motivational interview aimed at either returning to finish their studies through a "Second chance school" or getting an apprenticeship.

4.2 National Europe 2020 objectives and strategic measures

In April, 2011, Luxembourg decided on its national objectives²² for the period 2015-2020 under the 2011 NRP and a series of measures to implement it.

Table 1: National objectives determined by Luxembourg (Update: 12 April, 2012)

		European Objective: 2020	Luxembourg 2020 Objective	Luxembourg's situation (Eurostat)²³
Priority 1 <i>"Intelligent growth"</i>	<i>Objective 1</i>	<i>"(...) raising combined public and private investment levels in this sector to 3% of GDP"</i>	Interval of 2.3 to 2.6% (2.0% by 2015)	1.63 % (p, 2010)
	<i>Objective 2</i>	<i>"(...) reduce school drop-out rates to less than 10% "</i>	Sustainably under 10%^a	7.1% (u, 2010) [according to a national survey (2009/2010):

²² For more details see: http://www.odc.public.lu/actualites/2011/04/PNR_Luxembourg_2020/index.html

²³ Eurostat data, unless otherwise indicated.

For more details see: http://epp.eurostat.ec.europa.eu/portal/page/portal/europe_2020_indicators/headline_indicators

				Rate of early school leavers 9% ^{f24}
		"(...) increasing the share of 30-34 years old having completed tertiary or equivalent education to at least 40% "	66% ^b	46.1% (p, 2010) [This rates is higher for foreign residents than for Luxembourg nationals, with a rate just above 40% (2010)] ²⁵
Priority 2 "Sustainable growth"	Objective 3	"(...) reduce greenhouse gas emissions by 20% (...)"	- 20% ^c	Index 91 (2009) 1990 base year = 100
		"(...) increase the share of renewables in final energy consumption to 20% "	11% ^c (average for 2015/2016 5.45%)	2.7% (2009)
		"(...) move towards a 20% increase in energy efficiency"	14.06% (Objective for 2016) ^d	156.69 (2010) Proxy indicator "Gross inland consumption of energy divided by GDP (kilogram of oil equivalent per 1,000€)"
Priority 3 "Inclusive growth"	Objective 4	"(...) raise to 75% the employment rate for women and men aged 20-64"	73% (71.5% for 2015)	69.8% (2011) ²⁶
	Objective 5	"(...) aiming to lift at least 20 million people out of the risk of poverty and exclusion "	Reduce the number of people threatened with poverty or social exclusion to 6,000 by 2020.	17.1% or the equivalent of 83,000 people (2010)

Sources:

European Council, STATEC, Eurostat

Remarks:

p=provisional, u=unreliable

^a National data will also be used as measuring instruments for this objective, as the indicator calculated by Eurostat that stems from the Labor Force Survey is not fully representative for Luxembourg. Care must be taken to produce statistics that better distinguish between persons having attended Luxembourg schools, so as to be able to evaluate the quality of the national educational system for the national resident population and to provide information concerning the capacity of the Luxembourg school system to educate young people.

^b Luxembourg intends that this indicator provide data on the capacity of the national education system to train young people who can earn post-secondary school diplomas rather than it being a reflection of post-secondary qualifications requirements of the labor markets. In Luxembourg, 30% of people between the ages of 25 and 64 have university degrees. In Luxembourg, there is a large disparity depending on birth country. Among people born in Luxembourg, only 22% have university degrees, while this proportion is 40% among those persons born in other countries. Differences between these two populations are much less marked in bordering countries. Furthermore, in these countries, the proportion of university degrees is higher among natives than among foreign born persons.

^c Restrictive national objectives in the area of greenhouse gas emissions and renewable energy already existed prior to launching the Europe 2020 initiative.

^d In its first energy action plan (PAEE), Luxembourg set an indicative national objective under directive 2006/32/CE for energy efficiency in final energy use of 10.38 % by 2016. Following an in-depth analysis and evaluation in 2011 undertaken to establish a second PAEE, the national indicative objective for energy efficiency in 2016 was increased to its current level of 14.06%. With regard to objectives for 2020, negotiations are not yet completed for the new energy efficiency directive on the European level. Should negotiations be unsuccessful, it has been decided to implement an energy efficiency objective of 1.5% per year on the national level.

4.3 Commitments under the Euro Plus Pact

Under the Euro Plus Pact²⁷, participating Member states, including Luxembourg, have agreed to take supplementary measures in the areas of competitiveness, employment, viability of

²⁴ For more details see : http://www.men.public.lu/actualites/2012/01/120106_chiffres_clefs_10_11/index.html

²⁵ Source : STATEC. For more details see : Ministry of the Economy and Foreign Trade [The European Semester and the Europe 2020 Strategy](#), in the Competitiveness Report 2011, Luxembourg, October 2011

²⁶ For more details see : <http://www.statistiques.public.lu/fr/actualites/population/travail/2012/03/20120320/index.html>

²⁷ For more details see: http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/fr/ec/120305.pdf

public finances and financial stability. Luxembourg announced its commitment to the Pact in April, 2011 and its national commitments were integrated in the NRP and the SGP for 2011.

4.3.1 Postponement of the application of the wage indexation mechanism

For more on this measure, see Chapter 4.1, Country-specific recommendations for 2011: Luxembourg.

4.3.2 Counteracting the impact of the increase in Minimum Wage (SSM)

The government is committed to offsetting the impact of an increased minimum wage in January, 2011 by allocating an amount equivalent to its overall cost to the Employers insurance fund. This measure will be applied as from 2011 for a period of five years. Subsequently the measure will be assessed from the perspective of its impact on competitiveness in the economy, job creation and combating unemployment for unqualified persons²⁸.

4.3.3 Stability of social contributions

The government had announced a reduction of the one-time accident insurance premium of 0.1 percentage points in order to keep employer social contributions stable following an increase of these contributions to the National Health Fund (CNS) amounting to 0.1 percentage points. An amount equivalent to the forgone earnings of the Accident Insurance Association would be paid by an extraordinary transfer of funds by the State for 2011 and 2012²⁹. These two measures are to be understood as one-off occurrences, in as much as they in no way imply that equivalent or similar measures will be taken should future increases in the minimum wage occur or for any future social contributions increases. The government has also agreed to refrain from recommending additional increases in social contributions for the legislative session ending in 2014.

4.3.4 Administrative simplification and infrastructure

The applicable legal and regulatory texts in the area of procedures for ranked companies and communal planning were reformed in 2011. Furthermore, in April, 2011 the government set up a Coordination unit, CCPUE, for coordinating all its urban and environmental projects.

- Reforms concerning ranked companies³⁰

The reform concerning ranked companies contains measures that are intended to simplify and accelerate authorization procedures for setting up companies in ranked categories. The procedure for obtaining authorization to establish ranked companies and the procedure for adopting a specific communal development plan were synchronized under this reform. Moreover, an admissibility procedure was introduced for applications for establishing ranked companies. With regard to this procedure, the law introduces the principle "*Silence implies acquiescence*". If the administration takes no decision regarding the admissibility of a case within two weeks, the case is automatically considered admissible. The reform also ends the dual check on a ranked company's accounts with relation to existing urbanism requirements, in which a check was done upstream of an application and then again when ministerial decisions were handed down. The downstream check has been abolished, as it was deemed

²⁸ Law on the State Budget 2012: Art. 35. Employers' insurance fund.

²⁹ Law on the State Budget 2012: Art. 36. Accident insurance measure.

³⁰ Law dated 13 September 2011 amending amended law dated 10 June 1999 concerning ranked companies (*Mémorial* A n°205 of 2011)

superfluous in view of the verification of accounts' adequacy with urbanism requirements already done upstream. With regard to authorization to set up operations, a certificate issued locally by a commune will from now on be considered adequate proof that a company is located in an area appropriate to the business object of the firm. A ranked company may only do business if it is located in such a zone, except for cases of vested rights. In addition, for incomplete applications, the administration concerned now informs the applicant when a file is incomplete and states what information to submit in one go.

Other simplification and acceleration of procedure measures include the following:

- Simplification of the scheme for composite companies that may be ranked simultaneously in several categories
 - Modifications to the lapsed authorizations scheme
 - Modification of schemes pertaining to companies that will be in operation for a limited period
 - Introduction of some deadlines for review of applications
 - Reduction of some review deadlines of application files, applying not only to administrations but also applicants and communes
 - Increasing staff in the Environment Ministry and the Inspectorate of Labor and Mines
- Reform in the area of communal planning

The reform in the area of communal planning will result in considerable administrative simplification regarding the procedure for adopting a general or specific development plan. The time it takes to adopt procedures for the two aforementioned plans has been cut in half by introducing parallel consultations with the various competent entities and the public. In the same vein, with regard to specific development plans, protests against Communal Council decisions may no longer be presented to the Ministry, meaning that ministerial approval for plans can now be granted directly. The final design and agreements prior to implementation of a specific development plan appear on a single document that is submitted to a Communal Council vote and for approval by the Minister charged with approving communal development projects.

- Setting up the CCPUE

The government approved the establishment of a CCPUE³¹ in order to improve coordination of authorization applications and cooperation between the administrations concerned by urban and environment related projects. The CCPUE will provide general information to project applicants regarding procedures and authorities in the area of urbanism and environment, by means of an interactive electronic questionnaire that will act as an individual road map to persons submitting urban and environmental projects in preparing their case file. This questionnaire will be available to the public on the one-stop locations for companies³². Later, with regard to larger scale projects, CCPUE will implement an inter-ministry platform to bring together all of the various administrations concerned by a project, including those communes involved, to ensure that information is exchanged among the departments and that the various procedures are coordinated. The ministries and administrations concerned will nonetheless retain their current evaluation powers in reviewing case files. Acting under a

³¹ For more details see: <http://www.simplification.public.lu/>

³² For more details see: <http://www.guichet.public.lu/fr/entreprises/index.html>

mandate for project applicants, the CCPUE may be called upon to speak for them, with the unit submitting applications, monitoring procedures with the competent ministries and administrations and communicating decisions and authorizations to applicants at the end of the process.

4.3.5 Reform of the Labor Administration (ADEM)³³

The Labor Administration underwent a reform, with the law for this going in effect as from the beginning of 2012. This reform seeks to increase effectiveness and quality of services extended to job seekers and employers. This is done essentially by means of individualized monitoring of job seekers and by developing closer relations with companies. The IT system is now being modernized in order to provide a higher performance and more effective management tool for administering the supply and demand for jobs. In addition, new regional outlets were opened and more professional counselors recruited.

4.3.6 Increase in the State's share of co-financing in adult continuing education

Following an agreement between the government and the UEL, adult continuing education will be promoted through an increase in the State's share in co-financing. The measures approved in this area are especially intended to motivate small companies to take advantage more of continuing education programs, and to get companies in general to extend continuing education programs to workers with low levels of initial training. These measures should also contribute to increasing the employment rate among older workers. Complementary financing awarded for this measure will be allocated to the overage generated by a general increase in the co-financing rate from 14.5% to 20% and to 35% of wage costs for the following two target populations: staff without diplomas that are recognized by the authorities and who have been on the job less than ten years, and people over 45, representing an estimated cost of € 20 million per year. The law was approved on 6 March, 2012, retroactive to 1 January, 2011³⁴.

4.3.7 Pension reform

For more on this measure, see Chapter 4.1, Country-specific recommendations for 2011: Luxembourg.

4.3.8 Increasing resilience in the financial sector

The nation's small land mass and the nature of its economy have resulted in Luxembourg developing a strong specialization in the services sector, particularly in financial services. This type of specialization exposes the country's economy to specific sector impacts. In view of this type of risk, it is important to increase the capacity of the financial sector to ward off such blows and to continue to diversify the country's economic structure. In view of the European and international dimension of the financial sector, and of the often contagious and cross-border nature of financial crises, improving the sector's ability to resist such impacts can be achieved primarily by strengthening regulatory and supervisory systems at the European and international levels. Under these circumstances, Luxembourg actively supports all European initiatives in the area.

Moreover, as a part of the restructuring of the banking group Dexia and in view of the systemic character of the Luxembourg subsidiary Dexia-BIL, the government intervened

³³ Also see Chapter 5.1 The Employment objective and key measures to achieve it

³⁴ At present, it is still too early to make a definitive statement regarding the impacts made on training and participation.

alongside a private investor to take over BIL in order to ensure stability on the market and of the Luxembourg financial system as a whole. In the same framework, the government issued a € 2.7 billion guarantee along with France and Belgium to shore up the Dexia group.

Lastly, representatives of the government, the Luxembourg Central Bank (BCL) the Supervisory Committee for the Financial Sector and the Insurances Commissariat have been meeting regularly since 2011 to evaluate potential risks to the financial sector and to carry out regular and continuous macroprudential monitoring of the sector.

5. Thematic coordination

The European Council decided on the new Europe 2020 strategy at their June, 2010 session, confirming the five major EU objectives that will make up the common goals steering EU Member State action in the areas of promoting employment, improving conditions for innovation and R&D, achieving objectives in the area of climate change and energy, improving education levels and promoting social inclusion, essentially by reducing poverty. Each Member state was to determine national objectives that reflect the European objectives during the first European semester in 2011.

5.1 The Employment objective and the key measures for achieving it

European Objective: “aiming to raise to 75% the employment rate for women and men aged 20-64, including through the greater participation of young people, older workers and low-skilled workers and the better integration of legal migrants.”

5.1.1 National Target

Luxembourg's objective for **2020 is to achieve an employment rate of 73%**. The objective for 2015 is around 71.5%.

Table 2: Statistics on the labor and employment markets in Luxembourg

	1995	2000	2005	2010	2011
Total salaried employment	195,500	244,949	290,420	341,441	349,462
Percentage of cross border workers	28.1 %	35.7 %	40.7 %	43.9 %	43.9 %*
Total employment rate (aged 20-64)	62.6 %	67.4 %	69.0 %	70.7 %	69.8 %
Total employment: Men	79.5 %	80.8 %	79.4 %	79.2 %	77.8 %
Total employment: Women	44.8 %	53.8 %	58.4 %	62.0 %	61.7 %
Youth employment rate [ages 20-29]	n/a	68.2%	63.8%	61.9%	59.0%
Employment rate for older persons [ages 55-59]	36.1 %	38.9 %	46.8 %	55.7 %	54.6 %
Employment rate for older persons [ages 60-64]	11.3 %	14.5 %	12.7 %	20.1 %	20.9 %
National unemployment rate	n/a	2.5 %	4.2 %	6.0 %	5.9 %

Sources: STATEC; Eurostat; ADEM *last available consolidated data, September 2011

In this context, it is first appropriate to emphasize the specific nature of Luxembourg's labor and job market.

- In the first place, the labor pool is not limited to national borders, but includes a large part of the Greater Region³⁵. The supply of available labor in neighboring countries, the cross-border workers, will have a significant impact on Luxembourg's ability to

³⁵ The Greater Region includes the Grand Duchy of Luxembourg, the Walloon region in Belgium, the Saar and the Rhineland-Palatinate region of Germany and the Lorraine region of France.

meet the objectives the country will be setting, in view of the variables present when preparing statistical results. According to the latest consolidated data from September, 2011, the percentage of cross-border persons employed in Luxembourg is 43.9%. Of these, cross-border French residents account for 49.4% and 21.7% of the total labor force. Belgian and German residents each account for 25.3% of total cross-border workers. The change in the number of cross-border persons with a job in Luxembourg is even more explicit. They have increased by 75.6% between 2000 and 2011, while during the same period overall employment increased by 42.7%. This explains in large part why the significant increase in employment in Luxembourg was not accompanied by a drop in unemployment, in fact, the opposite is true. While domestic employment grew by 5.2% between 2008 and 2011, the number of job seekers surged by 46% over the same period.

- Secondly, immigration is very prevalent in Luxembourg and therefore has major impact on demographic changes. Between 2001 and 2011, the foreign resident population grew by 36.4%, while the native Luxembourg population grew by only 4.8%. In only one year between 2010 and 2011, the working population increased by 2.4%.

5.1.2 Key measures

National employment policy is designed to fight precariousness and poverty, thus seeking to obtain improved living conditions and a sustainable social model. It contains organic measures and measures to promote employment among young people, women, older people and people with specific needs. Where these measures overlap into the domains of other institutions, they have been prepared in coordination with the institutions concerned.

a. Organic measures

Objective: Modernize and adapt institutional structures and improve comprehension of the complex functioning of the labor and job market in order to increase effectiveness of active employment policies.

- A modern and high performance public employment service is necessary to meet the requirements and necessities of the job market in Luxembourg today. The Employment Office was transformed into the Labor Administration (ADEM), with the law establishing this new entity going into effect in early 2012. The reform of this entity aims at improving efficiency and quality of services ADEM offers to its users, i.e. job seekers and employers. This is done essentially by means of individualized monitoring of job seekers and by developing closer relations with companies. The IT system is now being modernized in order to make available a higher performance and more effective management tool for administering the supply and demand of jobs³⁶. In addition, new regional offices were opened and more professional counselors recruited with an eye to improving quality of services.
- As part of its Employment policy, the government is in the process of creating a job market Observatory to better understand the functioning of the job market and to

³⁶ The CTIE will support ADEM in putting into production two new IT systems in 2012 that will contribute to optimizing (re)integration of job seekers into professional life with a single electronic job seekers file that will be accessible through an intranet portal to all professional counselors. This entails a new system for matching offers and persons based on fifteen weighted criteria in the ROME listing of professions.

evaluate measures promoting employment. The objectives of the Observatory include analyzing the job market to better assimilate its functioning, developing forecasts, longitudinal studies and studies on the impact of immigration, and establishing valid indicators. Indicators play a very important role in monitoring measures promoting employment as well as in developing more targeted and efficient measures. A working group within the Observatory is establishing an employment scoreboard to incorporate these indicators. An initial conference was held by the Observatory in November, 2011 where it reviewed the status of current work. The next conference is scheduled for May, 2012 and will focus on evaluating policies promoting employment. A third conference will take place in November on active ageing. The Observatory, a project co-financed by the European Social Fund (ESF), has a budget of € 1.8 million, spread out over three years from 2011 to 2013.

- Life-long learning is a key factor in the government's policy. Indeed, a good level of initial education, supplemented with continuing education, considerably improves one's chances of keeping employed, or returning to a job rapidly. In the same manner, companies benefit from having trained employees in a situation of heightened competition. For this reason, the employment policy attaches particular importance to increasing qualifications and to lifelong learning programs. Consequently, in the law currently being drafted, employee access to continuing education is a major issue and it will feature a bundle of measures promoting an ages policy in companies.
- Close inter-governmental collaboration will be implemented to coordinate employment and reduction of poverty policies. The risk of poverty drops dramatically where persons have jobs, particularly when an indefinite term contract is involved. According to STATEC, in 2010 the at-risk of poverty rate was 14.5% for the entire population. However, it should be noted that only direct financial transfers, and not all transfers, are taken into account in calculating this risk.
- The current and future challenges of the labor market will require solutions arrived at through social dialogue. This includes three-party dialogue within different decision-making bodies such as the Permanent Committee for Labor and Employment, the Economic and Social Committee and the Tripartite Coordination Committee, as well as for social dialogue on the national, sector and corporate levels. A conference for co-management in companies has been set up for the beginning of the year. This meeting included experts who outlined the German model and its day-to-day function within companies.
- The "*fit4job*" concept is an element of the government's proactive employment policy. A pilot project for the program was launched in the financial sector in February, 2010. The "*fit4financial markets*" program was developed in a partnership with the Luxembourg Banks and Bankers Association (ABBL) and the Luxembourg Institute of Banking Education (IFBL) with the unions' support, and is part of a sector approach to meet the requirements of the labor market. The objective of this program consists of the following:
 - proactively and closely supervise persons who have lost financial sector jobs
 - increase employability levels of this target group through a diagnostic session, followed by training specifically developed for the specific sector concerned
 - close collaboration with professionals in order to best meet the requirements of the sector and the persons concerned

Currently four "*fit4job*" projects, all co-financed by the ESF, are being set up: "*fit4financial markets*", "*fit4engineering*", "*fit4seniors*" and "*fit4commerce*". These projects have a global budget of around four million euros and will be carried out mostly between 2012 and 2013.

b. Youth measures³⁷

Guidance of young people plays a major role in their integration into professional life. For this reason, the government created a Counseling Center with the idea of assembling all the people who are key to youth guidance programs in one place and to create synergies there. Since early 2012, the first departments have been working out of their offices in ADEM's professional guidance unit, with the rest to follow suit over the course of the year.

In a crisis environment, the young are especially exposed to unemployment risk. Even persons with university educations can have trouble finding work in a weak job market. Existing measures for promoting jobs among the young have been modified, such as the work-support contract (CAE) and the initial employment contract (CIE), or established, like the new initial employment contract - practical experience (CIE-EP). The objective of these measures is to help these young people in acquiring practical experience, thus augmenting their chances of rapidly finding a job within a stable and legal framework. Assessment of these measures, done by an independent analysis center, shows that they have had a positive effect on youth unemployment. In fact, 75% of the youths with CIE contracts found work six months after the program ended, compared to only 50% who did it without CIE contracts. Even eighteen months after the program ended, 85% of those who were in the program were employed, as opposed to 73% who did not have CIE contracts. The difference is less regarding CAE contracts, but is nonetheless positive: 38% compared to 32% after six months, and 62% compared to 56% after eighteen months. The difference with CIE results is due to the fact that CAE contracts are for public or para-public actors and these cannot hire persons as easily as private sector companies can, with some even restricted with regard to hiring employees. The assessment will serve as a basis for analyzing measures over the year and a decision will be made either to extend the current programs or modify or replace them. The measures under review have a budget of 16 million euros for 2012.

The monitoring of young job seekers with few or no qualifications was reviewed and intensified qualitatively. Several projects have been implemented or developed by ADEM to deal with this in collaboration with other institutional players that are bolstering support for youths without diplomas. These include the following:

- The "Nudge in the right direction" project directed at young job seekers between 16 and 20, without diplomas who have not been able to get into the job market since registering with ADEM. ADEM is providing a specialized follow-up for young people in order to integrate them into a measure promoting youth employment or in training that can serve as a trampoline toward the labor market.
- The "Training for young people working under a work-support contract" is directed at young job seekers aged 16-30 that are working under a CAE contract. This project provides training adapted to current requirements of young people, such as preparing for job interviews, IT training, etc.

³⁷ Chapter 4. Implementing the commitments

- Awareness workshops are being set up by ADEM for youths aged 16-24 who were unable to obtain apprenticeship positions prior to 1 November, 2011 to explain and offer various "transition" measures, possibilities and perspectives for their professional insertion.

For young early school leavers registered with ADEM, the organization's professional guidance department offers a motivational interview aimed at either returning to finish their studies through a "Second chance school" or getting an apprenticeship.

Future measures

Objective: Strengthen the employability of young people by means of training and guidance

- To provide the best support for young people beginning their professional lives, a "Youth Guarantee" program will be put in place. This is based on the guarantee model recommended on the European level and already working in Austria. ADEM must ensure that young job seekers obtain within four months of registering in the program either a job, an employment promotion measure, an appropriate training program or a paid internship to facilitate their entry into professional life.
- Initial training and guidance for young people plays a crucial role in increasing compatibility between the requirements of the labor market and knowledge and capabilities of the young . Youth employment policy is prepared in close cooperation with the various competent ministries and generally with all persons involved in promoting youth. This cooperation will be reinforced and improved by setting up a "Youth Counseling Center" that will host various services for youth, including those available through ADEM.
- Young people with minimum training are particularly affected by unemployment. For this reason, a pilot project offering training specifically targeting these young people will be launched this year. The project provides for integrating young people into training centers for two months. After the initial phase, they begin a more practical aspect of training, including experience in work environments.
- As part of the measures promoting young job seekers, the CAE uses a training plan of eight hours per week. Where young people cannot access the training they want in their centers, the range of training programs offered will be broadened so as to include more possibilities for youths.
- The CIE, CAE and CIE-EP measures will be analyzed over the course of this year using the evaluations as a basis. A decision will subsequently be made to either extend the current programs, modify them or replace them.

c. Measures targeting women

Objective: Increase women's participation in employment

In 2011, the employment rate was 69.8% for persons aged between 20 and 64. The proportion of persons with a job was higher among men, at 77.8% than among women, at 61.7%.

Nonetheless, the gap is receding because the employment rate of women is changing more than that of men.

- It is essential to emphasize compromise between professional and family responsibilities, for example by providing child care services, day nurseries, full-time schooling and other programs to facilitate inserting women into the labor force. Coordination of policies at the inter-ministerial level is essential. Discussions are currently ongoing between the social partners regarding parental leave. These discussions could result in a relaxation of current regulations that would provide more diversified models that better accommodate the specific requirements of working men and women who wish to care for their children and that would make parental leave more attractive to men. In the mean time, the government is finalizing a draft law to ensure a minimal transposition of EU directive 2010/18/EU within the deadline.
- A group of additional actions and measures are being implemented by the government to increase the rate of women at work, including: The fight to reduce the wage gap – implementing a positive action program in the public and private sectors on the themes of equal treatment, equal weight in decision making and reconciling family and professional life – diversification of career possibilities – promoting women entrepreneurs – implementing innovative and flexible work organization models – the fight against stereotyping – equal share in family responsibilities – information, awareness and training campaigns. These measures are not only for those concerned, but for the general public as well.

d. Measures benefiting older workers³⁸

- The draft law on the reform of the retirement system was submitted by the government to Parliament at the beginning of this year. As the reform of the early retirement system largely depends on this draft law, the process cannot be initiated until the definitive legislation is adopted. Nonetheless, talks with the social partners regarding modifications to make progressive early retirement more attractive have already begun. Note that changes in demography, notably the fact that in general people are beginning their professional careers progressively later, will result in the number of applications for early retirement dropping over the long term.

Future measures

Objective: Increase the percentage of seniors on the job, while ensuring the well-being, safety and health of older workers at work.

- In 2011, the Permanent Committee for Labour and Employment (CPTE) undertook discussions about the distinctive situation of older persons with relation to the labor market as part of the development of a national policy to promote employment among seniors. Against this backdrop, the government set up a conference in November, 2011 on managing the age pyramid in companies. The discussions contributed significantly to drawing up a draft project introducing a bundle of measures promoting an ages policy in companies. This draft law should include an obligation for employers with over 150 staff to draw up an ages management plan that focuses on recruiting older workers, anticipating career changes, improving working conditions,

³⁸ Chapter 4. Implementing the commitments

providing access to continuing education and passing on knowledge and skills to lesser experienced workers. Financial initiatives are being included for the companies in this group, as well as for those companies not required to draw up plans but who voluntarily apply an ages management plan. Companies with more than 150 employees that are already covered by such a plan through a collective bargaining agreement or an inter-professional accord are not necessarily constrained by this obligation.

Apart from this measure, a Center for analyzing and promoting improved working conditions is being planned. The objective of this center will be to improve working conditions in order to reduce occupational illnesses and to lower the number of reclassifications. In order to arrive at this, working conditions experts would be available to companies who desire to implement a preventive plan in this area.

e. Measures favoring persons with specific needs

Objective: Improve means of support for these persons and promote their reclassification in the labor market

- The government shall continue to consider accessing employment and integration into the primary labor market, as well as providing protected structures offering jobs to handicapped persons as a priority, since employment is a key factor for integrating such persons. This integration will promote autonomy and economic independence of these persons. A conference dealing with handicaps and employment brought together the persons concerned last year - handicapped workers, managers of protected structures, employers and unions - to draw up a list of priorities in the domain and to share good practices in recruiting. Other awareness campaigns will follow aimed at the public and private sectors. These measures include the support of job coaching projects, initiatives aimed at integrating handicapped people into the labor market and providing follow-up.
- A special effort will be extended to the category of job seekers designated as reclassified externally³⁹. They will receive improved follow-up for re-insertion appropriate to their situations. In a more global sense, the government is currently finalizing discussions regarding a modification to the reclassification system. The concept is based on supporting companies in their efforts to improve working conditions, by making experts in the field available, to promoting internal reclassification within companies rather than external reclassification, but above all on improving success rates in finding new jobs for reclassified persons.

In addition, reclassified persons will be better protected.

f) Management of the age pyramid in Luxembourg's civil service

A comparative study analyzing programs implemented in foreign civil services and making recommendations is in the final phases of preparation.

³⁹ Persons who are reclassified externally are person with a reduced capacity for work who cannot work at the last position they occupied and cannot be reclassified into a job that fits their capacities within the same company. They are consequently reclassified to another company wherever possible.

The agreement of the government and of the *Confédération de la Fonction Publique* (CGFP) under the civil servants reform calls for a certain number of measures that correspond particularly to the recommendations made for active management of the age pyramid, including:

- Measures for maintaining and developing professional and personal skills including:
 - Introduction of management by objectives in the administrations and departments and setting up annual interviews between civil servants and their hierarchical superiors:
 - Introduction of a system for evaluating professional and personal skills at key intervals in a person's career
 - Introduction of a procedure for improving professional services and a professional incompetence procedure
- Incorporating the life-long learning principle and the possibility of attaining a university degree with partial exemption from service and authentication of acquired professional experience (regardless of the scope of the task), and, in parallel, a system providing open access to different careers within the service
- Prolongation of the procedure for changing administrations in the public and municipal sectors, following a detailed review of basic methods, and following consultations with the persons concerned
- Introduction of the possibility of obtaining therapeutics leave on a part-time basis
- Possibility of progressive withdrawal from working life by combining part-time work with a partial pension.

The government will shortly be referred the transposition texts for these measures, the legislative texts of which will be subsequently submitted to Parliament. In the same vein, regulatory provisions introducing new flexible work hour methods in government administrations and provisions for leave schemes for civil servants have already gone into effect. The Grand Duchy regulation on flexible working hours adapted the terms of presence and absence of civil servants at the workplace to the objective of reconciling professional life with family life even more, while safeguarding the interest of public service. Regulations concerning leave were modified to set leave on social grounds at four hours per month, including for part-time staff working on at least a half-time basis. Lastly, a draft law setting the terms and conditions for a time savings account in the civil service was submitted on 22 December, 2010 with the objective of granting better flexibility in managing working time, particularly with regard to the legal retirement age and reconciling family and work life.

5.2 The R&D objective and the key measures for achieving it

European Objective: *"improving the conditions for research and development, in particular with the aim of raising combined public and private investment levels in this sector to 3% of GDP; the Commission will elaborate an indicator reflecting R&D and innovation intensity."*

5.2.1 National Target

The government has set an **interval of 2.3 to 2.6% of GDP as a national goal for R&D intensity**, under the Europe 2020 strategy, while seeking to maximize effectiveness of expenditures and the efficiency of the action to be undertaken, in a change process that will take into account the absorption capacity of the nation's system. As a sub-objective for 2020, the government has set an interval of between 1.5% and 1.9% for the private sector and 0.7%

to 0.8% in the public sector. The government's intermediate objective is an overall rate of 2% by 2015.

5.2.2 Key measures

a. Measures for achieving the nation's target in public research

Changes to the nation's budget benefiting research-development-innovation (RDI) in both the public and private sectors have continued to grow, moving from €28 million in 2000, which then represented 0.13% of GDP, to € 280 million in 2012, or 0.66% of the budget. The change in budget allocations alone demonstrates the government's resolve in developing RDI investments and in making continued investment a long-term policy for the country's development and diversification. Public budget allocations for 2013 and 2014 benefiting RDI are expected to increase annually around 5%.

Table 3: Changes in budget allocations for RDI from 2000 to 2014

	2006	2007	2008	2009	2010	2011	2012	2013*	2014*
Mn €	113.8	142.6	183.1	200.2	247.7	253.4	280.0	296.0	310.0
% GDP	0.35	0.41	0.46	0.54	0.62	0.60	0.66	0.67	0.66

* estimated

Source: Ministry of Higher Education and Research

The table indicates that research in the private sector is playing and will continue to play a predominant role. In contrast with other EU and OECD countries, research performed in the private sector represents over 70% of all research expenditures on the national level. It is important to note that the proportion of publicly financed research has continued to grow over the course of the past decade, rising from 7.5% of total research expenditures in 2000 to 28.8% of total research expenditures made in the nation in 2010. This progression is a consequence of the political actions by the government since 1999, such as setting research intensity development objectives enumerated by expenditure objectives, establishing the University of Luxembourg, acquiring membership in international organizations such as the European Space Agency or the European Molecular Biology Laboratory, and the introduction of performance contracts, to name a few.

Table 4: Changes in gross domestic expenditures and in intensity of research by sector

	Public research € Mn.	Intensity (€ / GDP)	Private research € Mn.	Intensity (€ / GDP)	Total € Mn.	Total (€/GDP)
2000	27.5	0.13	337.0	1.53	364.5	1.66
2005	64.0	0.21	408.0	1.35	472.0	1.56
2006	78.5	0.23	485.0	1.42	563.5	1.65
2007	96.6	0.26	495.0	1.32	591.6	1.58
2008	118.0	0.30	482.0	1.22	600.0	1.52
2009	149.6	0.40	470.7	1.26	620,3	1.66
2010*	191.6	0.48	466.0	1.16	657.6	1.64
2011*	215.0	0.50				
2012*	240.0	0.56				
2013*	255.0	0.58				
2014*	270.0	0.57				

* estimated

Source: Ministry of Higher Education and Research

The table below shows financial contributions by the Government and Third Party financing for the period 2008-2013 (actual figures for 2008-2010 and approved figures for 2011-2013)

Table 5: Financial contributions by the Government and Third Party financing for the period 2008-2013 (actual* figures for 2008-2013 and approved figures for 2011-2013)**

University € Mn.	2008*	2009*	2010*	Σ 2008-10	2011**	2012**	2013**	Σ 2011-13
CFE***	80.0	92.9	91.1	264.0	106.0	120.2	131.7	357.9
Third party financing	8.8	12.7	16.3	37.8	18.0	20.0	23.0	61.0
Total	88.8	105.6	107.4	301.8	124.0	140.2	154.7	418.9

CRP/CEPS € Mn.	2008*	2009*	2010*	Σ 2008-10	2011**	2012**	2013**	Σ 2011-13
CFE	51.4	55.1	61.6	168.3	66.3	69.4	72.5	208.2
Third party financing	26.2	32.7	32.6	91.5	42.6	47.1	52.2	141.9
Total	77.6	87.8	94.2	259.8	108.9	116.5	124.7	350.2

FNR (€ mn)	2008*	2009*	2010*	Σ 2008-10	2011**	2012**	2013**	Σ 2011-13
CFE	27.4	28.2	40.3	95.9	35.2	45.0	52.0	132.2
Third party financing	2.6	3.8	2.5	9.9	2.1	1.6	0.7	4.4
Total	30.0	32.0	42.8	104.8	37.3	46.6	52.7	136.6
Expenditures	13.3	29.5	40.6	83.4	53.2	60.8	61.0	175.0

Notes: *** CFE includes the Government's contribution from the *Luxembourg Center for Systems Biomedicine (LCSB)*

Source: Ministry of Higher Education and Research

With regard to the national public research objective, government action in 2011 focused on:

- The second founding contract for 2010-2013 with the University of Luxembourg
- The 2011-2013 performance contracts with the public research centers for Health/ Gabriel Lippmann/Henri Tudor, the CEPS, the National Research Fund (FNR) and Luxinnovation
- Concentrating the nation's R&D effort on a limited number of priority domains, especially the CORE program for 2008-2013 of the FNR. In 2011 the program supported 28 projects, representing a volume of € 16.2 million
- The 2008-2013 aid program for research-training (AFR) of the FNR, which is the primary national instrument for supporting the training of young researchers at the doctoral and post-doctoral level. In 2011, a total of 101 of the 200 doctorate proposals, and 40 of the 92 post-doctorate proposals were chosen for financing, representing commitments of € 17 million. At the end of 2011, FNR had supported a total of 442 doctorate and 106 post-doctorate candidates, for a total of 548 projects under the AFR program. It should be noted that the post-doctorate section is co-financed by the European Commission through its FP7-COFUND in the amount of € 3.1 million for 2009 and 2012 and again for 2012-2015, contributing €4.2 million.
- The 2008-2013 ATTRACT and PEARL programs of the FNR, which seek to encourage young researchers and top researchers to come to Luxembourg to work. In 2011, the FNR chose one ATTRACT project with financial support of €1.45 million and two PEARL candidacies in the amount of € 8.9 million over 5 years

- The implementation of a strategic partnership initiative with three U.S. research institutes of world renown in the area of molecular diagnostics, with the objective of establishing a technological skills center in personalized medicine. In 2011, the three entities involved in the action plan, the Integrated Biobank of Luxembourg (IBBL), the CRP-Santé and the University of Luxembourg developed a joint strategy for future development of their activities by setting up the *Personalized Medicine Consortium* (PMC) to coordinate insurance interests with research priorities in the selected areas of cancer, diabetes, Parkinson's disease and cohort studies under a personalized medicine framework, to organize joint seminars and to use available resources and infrastructure efficiently.

In order to encourage the promotion of research results, the FNR has examined the opportunity to establish a program for which the primary objective will be to perform *proof-of-concept* studies. Based on an international *Best Practices* study, the FNR analyzed a duo of preliminary pilot projects. The evaluation of the final recommendations will occur in 2012.

The government action is a steadfast component of the knowledge triangle concept that aims to bolster the link between research, higher education and innovation. The implementation of this concept will be reinforced in the Cité des Sciences at Esch-Belval, which will host two faculties of the University of Luxembourg, the public research centers Gabriel Lippmann et Henri Tudor, the CEPS and the incubator for companies on a single site as from 2015. From this perspective, the government will support the establishment of *start-ups* and *spin-offs* within host structures for young innovative companies by providing adequate supervision in the Esch-Belval and Foetz incubators.

As part of this, as from 2013, a five-year program will be implemented to mass digitize the collections of the National Library (BnL) and the nation's archives so as to substantially augment the mass of digitized documents in order to guarantee competitiveness of researchers that consecrate their work to Luxembourg and to "Luxemburgistik" studies. With regard to the BnL, the goal is to digitize and publish on line the entire Luxembourg collection of copyright-free printed matter to include books, magazines, maps, plans and engravings during this period.

Initiatives aimed at exploiting the innovation potential of small and medium sized companies (SME) multiplied in 2011 with a series of territorial seminars on managing innovation, organized by Luxinnovation in collaboration with the Chamber of Trade, with a specific focus on traditional SMEs.

The *Cluster* program is set up around five thematic *Clusters*: the *Luxembourg Materials Cluster* for materials and technology for production, the *Luxembourg ICT Cluster* for ICT, *Luxembourg Space Cluster* concerning aeronautics and space, *Luxembourg BioHealth Cluster* for health sciences and technologies and *Luxembourg EcoInnovation Cluster* focusing on ecotechnologies and sustainable development. Luxinnovation provides a lead role in these *clusters*, coordinating and organizing monitoring of the work. In 2010, a new governance policy went into effect to implement a common methodology. In 2011, structuring efforts were pursued with a specific work program breakdown for each cluster. The 4th edition of the Luxinnovation Forum, "*Business Meets Research*" was held in May, 2011 with over 350 participants coming from Luxembourg and the Greater Region. Subjects dealt with in the conferences and *workshops* were based on the five cluster themes. This annual event is a showcase for skills and know-how of public research in Luxembourg and is intended

primarily for companies who seek to consult with external experts. The new aspect of the 2011 edition of the event was the Innovation Matchmaking concept, aimed at generating direct and effective contacts among participants. Over 120 pre-programmed interviews were held, complemented by the meeting and exchange of information possibilities in the seven thematic *workshops* and informal *networking* opportunities during the day.

Luxinnovation and the FNR published a joint brochure in 2011, entitled "Boost your competitiveness with public knowledge: finding opportunities for public-private partnerships". The new generation of the Luxembourg gateway for innovation and research was officially launched in 2011 as part of the Luxinnovation forum "*Business Meets Research*". This ambitious project for reshaping the portal is the fruit of a close collaboration between Luxinnovation and the Centre for Information Technologies of the State (CTIE). This tool provides centralized and unique access to key information concerning RDI in Luxembourg. It is broken down into seven thematic headings and produces a weekly newsletter that can be customized according to the interests of persons browsing through them.

b. Measures for achieving the nation's target in private research

With regard to the national private research objective, government action in 2011 focused on:

- Promoting RDI efforts throughout the innovation chain – Following a rise in new RDI aid applications in 2010 - quite spectacular in light of the crisis - of 83.3% with relation to 2009, new applications followed a more normal increase, up 4.5% compared to 2010. The trend continues to move along the right path, with an average of 80 cases per year incorporated into performance contracts with Luxinnovation⁴⁰. An increase of 65% in applications was registered over 2010 figures for the new aid schemes under the RDI law, whose objective is essentially to motivate an innovation process among companies with no experience in the area, primarily SMEs. This includes aid for feasibility studies, for protecting technical intellectual property rights, for young innovative companies, for innovation consulting services and support of innovation and for innovation of process and organization in departments. In addition, 85.7% of these applications come from SMEs.
- A significantly greater participation in international programs and initiatives and financial return on these stakeholdings – this involves investing in the 7th Framework program on research and development (PCRD), in the *Competitiveness and Innovation Framework Programme* (CIP), in the initiatives under Article 185/187 of the treaty and European Space Agency (ESA) programs. The figures regarding the stakeholding have not yet been definitively determined for these programs and initiatives, and those that are known concerning the ESA programs relate only the first half of 2011. As such, the balance sheet and notably the financial return must still be deemed incomplete and temporary. With those constraints in mind, Luxembourg at present has registered a financial return of €14.5 million for 2011, which represents a rate of return of 22% of the € 65 million that was set as an objective for the three-year period of 2011 to 2013. Luxembourg's overall stake in the 7th PCRD (2007-2013) is moving along an upward trend. This increase follows in

⁴⁰ It should be emphasized that the 240 new aid applications motivated by Luxinnovation between 2011-2013 refers to not only those under the law dated 5 June 2009 for promoting RDI, but also covers those submitted based on the law dated 18 February 2010 on the protection of the environment and the rational use of natural resources.

some manner the change in budget allocations to 7th PCRD calls for proposals, which have nearly doubled between 2007 and 2012. As on 16 February, 2012, when the latest e-Corda database update, which lists all stakeholdings in the 7th PCRD, was done, it was found that there were 699 Luxembourg stakeholding proposals, of which 136 were approved. The total of investments made by Luxembourg entities to date amounts to € 50.1 million euros, with Community co-financing of € 30.5 million. In 2011, 56 investment projects from 34 different Luxembourg companies in response to calls for proposals in the 7th PCRD received a partial reimbursement of applications costs through the *de minimis* Fit4Europe-FP7 measure. Their progress with relation to the 33 applications of 2010 is also a demonstration of the general growth trend of Luxembourg participation in international and community programs and initiatives.

- Adaptation of the Luxinnovation 2011-2013 performance contract to government priorities in the area of RDI – in a preliminary version, with counts on several indicators still valid, the return rate for the three-year objectives using a reference period of 2011-2013 are between 20 and 53%, excepting the number of *spin-offs* of public research organizations supported by Luxinnovation, for which the 2011-2013 objective was 9, and the number achieved in 2011 was 0.
- c. Extend efforts to promote productivity and innovation in public administration operations
- Reforms in the area of statutes and salaries for all civil servants was one of the principal elements of the 2009 government program in the civil service domain. The primary goal was to modernize the government, with an eye to quality, efficiency and transparency. The expected reform will put in place a new career structure in the public sector, where the traditional principles of initial classification according to education level and promotion by seniority will be complemented by better recognition of experience, life-long education and commitment and assumption of responsibility. In stressing improved efficiency and quality in the administration, the government is requiring its ministries to systematically incorporate the management by objectives concept as a steering tool in the area of personnel management and organization. The 15 July, 2011 agreement between the government and the CGFP union organization addresses several subjects including:
 - New career structuring
 - Reform of internships
 - Management by objectives
 - An evaluation system of personal and professional skills
 - A procedure for improving professional services and for addressing cases of professional incompetence

The government will shortly be presented with the transposition texts of these measures, the legislative texts of which will be subsequently submitted to Parliament.

- Efforts to implement electronic administration processes are continuing. The promotion of this platform is being done to make both citizens and companies aware of the advantages of systematic use of these new methods of communication with the various administrations. A centralized help desk was set up to address all administrative questions that citizens and companies may have. Questions that cannot be dealt with immediately by this support unit are redirected to correspondents on a second level within the administrations concerned. All recurring question/response cases are entered into a

database that will eventually be accessible by the general public through the one stop system. As from 2011, it has been possible to set up a new company electronically. At this stage, the process includes an application for establishing the company, registering with the social security administration and opening a VAT account. Registering companies in the Register of Companies (RCS) can also be done on line by solicitors. The objective is to extend the catalogue of on line services to the 150 most widely used administrative process by the end of 2012.

A new version of the one stop concept infrastructure will be used to manage interoperability between administrations contributing data as part of the same process. The *eCommodo* process, which was adapted to the new legislation relating to ranked companies, will be the first application of this.

5.3 The climate change and energy objective and the key measures for achieving it

European Objective: *"reducing greenhouse gas emissions by 20% compared to 1990 levels; increasing the share of renewables in final energy consumption to 20%; and moving towards a 20% increase in energy efficiency; the EU is committed to taking a decision to move to a 30% reduction by 2020 compared to 1990 levels as its conditional offer with a view to a global and comprehensive agreement for the period beyond 2012, provided that other developed countries commit themselves to comparable emission reductions and that developing countries contribute adequately according to their responsibilities and respective capabilities"*.

This climate change and energy objective is based on European Council decisions within the context of the Energy/Climate package of March, 2007, which put greenhouse gas reductions for Luxembourg at 20% by 2020 with relation to the year 2005 in the sectors not covered by the greenhouse gas emission (GHG) allowance trading system⁴¹. In the area of energy, Luxembourg's objectives for 2020 are a share of 11% of renewable energy resources in our final energy consumption and 10% of renewable source fuels in final energy consumption in the transportation sector⁴². An improvement in energy efficiency is included in this program.

5.3.1 Greenhouse gas emissions objective

5.3.1.1 National target

The most recent inventory of GHG in Luxembourg covers the period of 1990-2010⁴³. It indicates that total emissions amounted to 12.08 million tons of CO₂-equivalent for the year 2010, excluding international air transportation and the land use, land use change and forestry (LULUCF) factor⁴⁴. This amount is very near the 2008 figure of 12.05 million tons of CO₂e,

⁴¹ Appendix II of Decision 406/2009/EC of the European Parliament and the Council dated 23 April 2009 concerning Member State greenhouse gas emissions reductions to adhere to the commitments of the Community in the area of reducing greenhouse gases by 2020.

⁴² Objectives stated for Luxembourg in Directive 2009/28/EC dated 23 April 2009 on promoting the use of energy produced from renewable sources.

⁴³ In accordance with Decision No 280/2004/EC of the European Parliament and the Council dated 11 February 2004 on a mechanism for monitoring greenhouse gas emissions in the Community and implementing the Kyoto protocol, estimates of GHG emissions for a year X should be submitted to the Commission by 15 January of the year X+2.

⁴⁴ An initial estimate of emissions for 2011 will soon be prepared by the Department of the Environment for the Ministry of Sustainable Development and Infrastructure. It will be submitted to the Commission via the European Environment Agency in the summer of 2012.

but represents a 4.9% increase over 2009 with 11.52 million tons of CO₂e, the year of the financial crisis and subsequent economic repercussions. Nonetheless, 2010 GHG emissions in Luxembourg are quite largely reduced with respect to the record years of 2005 and 2006, which produced 12.95 and 12.80 million tons of CO₂, a drop of 6.8% and 6.46% respectively; still, they remain well above the 9.5 million tons of CO₂-equivalent goal that Luxembourg committed to under the Kyoto Protocol⁴⁵. Since then, Luxembourg can and will be able to use the flexible mechanisms provided for under the Protocol.

Changes in GHG emissions are nonetheless very particular in the case of Luxembourg, as shown below:

- Relative stability from 1990, the base year of the Kyoto Protocol, to 1993
- A strong drop between 1994 and 1998, arriving at a low threshold in 1998 with a drop of 33% with relation to 1990
- Steady increase from 1999 to 2005
- A stable period between 2005 and 2006
- Reduction in 2007 and 2008, accentuated by the impact of the economic and financial crisis in 2009
- A stable period between 2008 and 2010, excluding 2009.

These different phases can be explained by the impact of certain technological changes, which is intensified when considering a small country. One of the primary causes of the strong drop in emissions from 1994-1998 was the transition from traditional blast furnaces to electric arc furnaces in the steel industry. However, the coming on stream of a cogeneration combined gas-vapor facility in 2002 forced emissions upward by 0.8 to 1.0 million tons of CO₂e per year, which does not offset emissions of energy production from higher polluting sources, since Luxembourg imports almost the entire volume of energy it consumes. Still, the regular increase in emissions since 1998 -as well as their stabilization, then reduction in recent years- is the consequence of regular increases of fuel sales, three quarters of which are transacted with non-residents. This increase is due to the lower cost of fuel in Luxembourg than in neighboring countries, a phenomenon exacerbated by:

- Cross-border workers, who have increased in number by over 7.25% annually since 1990 and now represent nearly 30% of the resident population of the country
- Through traffic, since Luxembourg is located on one of the principal routes for merchandise and tourism in Europe
- Gas station tourism

These changes explain how, at present, the primary greenhouse gas produced by Luxembourg is carbon dioxide, CO₂, representing 92% of the total in 2010, and why the combustion of energy sources reaches nearly 88% of this total. Emissions related to vehicle fuels alone represent around 52% of total emissions, with 14.54% linked to residents and 37.5% to non-residents. With the transportation sector not covered by the system of GHG⁴⁶ emission

⁴⁵ In 2010, GHG emissions were 8.3 % lower than the base year of 1990. Luxembourg set an objective of reducing its emissions by 28 % of the base year between now and the period covered by the Protocol, i.e. end of 2012.

⁴⁶ As well as emissions linked to agricultural activities, to processing waste and waste water from buildings including commercial and residential structures. In 2010, sectors not covered by the greenhouse gas emission (GHG) allowance trading system represent 81.3% of total emissions, 52% of which resulted from vehicle fuel sales.

allowance trading, Luxembourg is facing a huge challenge in upcoming years. An initial estimate of this objective indicates an amount of 8 million tons of CO₂e to be achieved by 2020 in these sectors through a linear trajectory of 9.4 to 8.0 million tons of CO₂e from 2013 to 2020.

Table 6: Changes in GHG emissions, excluding LULUCF for certain selected years (in million tons of CO₂e)

Source	1990	1995	1998	2000	2005	2006	2007	2008	2009	2010	2010/1990	2010/2009
Heat and electricity production	0.04	0.09	0.15	0.12	1.29	1.36	1.23	1.05	1.25	1.27	3075.0%	1.6%
Industrial production	7.93	4.36	2.11	2.13	2.26	2.39	2.28	2.10	1.92	2.06	-74.0%	7.3%
Road transport: domestic fleet	0.89	1.22	1.29	1.47	1.51	1.62	1.65	1.70	1.73	1.76	97.8%	1.7%
Road transport: exports of vehicle fuels	1.73	2.13	2.52	3.27	5.38	4.95	4.64	4.73	4.17	4.52	161.3%	8.4%
Households, businesses and services	1.30	1.38	1.56	1.67	1.65	1.62	1.54	1.59	1.56	1.57	20.8%	0.6%
Agriculture	0.76	0.75	0.75	0.77	0.72	0.71	0.72	0.73	0.75	0.76	0.0%	1.3%
Other sources	0.19	0.16	0.19	0.16	0.15	0.15	0.15	0.14	0.14	0.14	-26.3%	0.0%
Total GHG emissions, excluding LULUCF	12.84	10.09	8.57	9.59	12.95	12.80	12.21	12.05	11.52	12.08	-5.9%	4.9%
Amount under the Kyoto Protocol	13.17										-8.3%	

Source: Ministry of Sustainable Development and Infrastructures (2012, version 1.2)

Table 7: Indicative trajectory for GHG emissions, excluding LULUCF & ETS under EC decision 406/2009/EC (in million tons of CO₂e)

	2005	2008	2009	2010	2013	2014	2015	2016	2017	2018	2019	2020
Total GHG emissions, excluding LULUCF	12.95	12.05	11.52	12.08								
Commercial air emissions (domestic flights)	0.00	0.00	0.00	0.00								
ETS emissions verified in the CITL	2.60	2.10	2.18	2.25								
Annual emissions allocations					9.70	9.50	9.29	9.09	8.89	8.68	8.48	8.28
Contribution to adapting to ETS (Art. 10)					0.28	0.27	0.27	0.26	0.25	0.25	0.24	0.24
Annual adjusted emissions (Art. 10)					9.43	9.23	9.03	8.83	8.63	8.43	8.24	8.04

Source: Ministry of Sustainable Development and Infrastructures (2012, version 1.2) based on a calculation sheet recommended by DG CLIMA

5.3.1.2 Key measures

This issue and the challenge it presents are at the heart of the work of the "Partnership for the Environment and the Climate", launched in February, 2010, which brings together representatives of the government, the unions, employers, the Syvicol town and village union and non-government organizations (NGO). The purpose of this process is to draw up the 2nd national action plan for reducing CO₂ emissions, accompanied by a national plan for adjusting to climate change.

In May, 2011 the government approved several documents bundled under the heading "Climate Package"⁴⁷. This climate package is comprised of a summary document

⁴⁷ The Climate Package report may be downloaded at the following address:

synthesizing work by the partnership, a catalog of 35 priority measures for the government, the national strategy for adapting to climate change with sections relating to biodiversity, forests, water and agriculture, an interim report summarizing progress of the talks and a presentation of the draft of a Climate Pact with the communes. The "Climate Package" includes a large number of measures aimed at reducing CO₂ emissions that are listed in the "Government Catalogue of Priority Measures". This catalogue has a section on mobility that brings together measures belonging to this domain, including:

- The promotion of integrated and coordinated territorial development and mobility planning
- Priority development of the Southern region and of the *Nordstad* as economic centers complementary to the City of Luxembourg to facilitate a closer living and working relationship
- The development of an optimal network of public transport combined with measures promoting use of public transportation systems
- Improvements in public transportation infrastructure
- Rapid implementation of a automobile parking tool
- Pursuing efforts to promote soft mobility
- Promoting eco-mobility
- Implementing and promoting car sharing programs
- Possible organization of a ride sharing scheme
- Pursuing aid for fuel efficient automobiles

The *MoDu* strategy for sustainable mobility presented in April, 2012 seeks to achieve four major objectives to reduce CO₂ emissions:

- Objective 1: Land use planning - Implement the short distances for cities principle; Achieve a better mix between the housing, work and leisure functions; Ensure compact and dense urbanism processes; As a result, reduce traffic generated at the source.
- Objective 2: Soft mobility - Reduce motorized traffic by increasing the percentage of daily trips done using soft mobility, especially regarding short trips; Bring soft mobility to a modal split of 25% by 2020.
- Objective 3 Public Transportation - Provide an attractive public transportation offer that motivates users to choose it for carrying out a large number of their trips; Achieve a figure of 25% of motorized transport trips made using public transportation by 2020.
- Objective 4: Promote alternative use of automobiles - By promoting concepts like parking management, Park&Ride, ride sharing and car sharing, using a private automobile will no longer necessarily be synonymous to a unimodal and one-person trip from origin to destination; Together with an attractive public transportation offer, these elements allow for a large number of drivers changing to public transportation whenever possible and at the point nearest to their departure location.

The 2nd national action plan for CO₂ emissions reductions is in drafting and will be finalized during the first half of 2012. The same schedule will apply for the Climate Pact with communes⁴⁸. The strategy for adapting to climate change will be rounded out with supplemental chapters dealing with health, soils, industry, the financial sector, development in

http://www.developpement-durable-infrastructures.public.lu/fr/developpement-durable-infrastructures/partenariat/Paquet_Climat_integral.pdf.

⁴⁸ The Climate pact with communes is presented in pages 143 to 156 of the Climate Package report.

Luxembourg, population safety and tourism as part of an initial revision to occur within the next two years.

5.3.2 The renewable energies target

5.3.2.1 National target

Directive 2009/28/EC dated 23 April 2009 for promoting the use of energy produced from renewable resources calls for Luxembourg achieving an 11% share of energy from renewable sources in its gross final consumption for 2020 as well as an objective of 10% share of fuel energy from renewable resources in the transport sector for 2020. The indicative trajectory for Luxembourg between 2010 and 2020 as described by this directive regarding energy produced by renewable sources as a percentage of final consumption is summarized in the table below.

Table 8: Indicative trajectory for the share of energies produced from renewable sources as a percentage of final energy consumption

Year	Percentage
Average 2011/2012	2.92%
Average 2013/2014	3.93%
Average 2015/2016	5.45%
Average 2017/2018	7.47%

Source: Ministry of the Economy and Foreign Trade

5.3.2.2 Key measures

Member States were to submit their national renewable energy action plans (NREAP) to the Commission by 30 June, 2010. The NREAP calls for achieving the renewable energies objective through the following measures:

- Developing renewable energy within the country by means of producing electricity and heat/cooling from renewable sources as well as using heat pumps
- Adding biofuels into fuels for use domestically as well as developing public and private electric mobility
- Use of cooperation mechanisms, primarily through statistical transfers and joint projects with other Member States and possible with third countries

The development of energy efficiency⁴⁹ between 2010 and 2020 will result in a reduction in absolute terms of the nation's objective in the area of renewable energies. The energy efficiency measures in the plan are taken from the first national action plan in the area of energy efficiency (PAEE).

The national Action Plan for renewable energy takes up thirty-seven measures to achieve the national objective set by the directive. These measures will take specific shape over upcoming years depending on progress achieved for meeting intermediary objectives. A detailed description of the 37 measures, as well as the schedule for implementing them will be described in the national renewable energy action plan. The principal recent actions as part of these measures that have an impact on the development of renewable energies are mentioned hereafter.

⁴⁹ See 5.3.3 The energy efficiency objective

a. Developing renewable energies

The government has put in place a mechanism for supporting biogas production installations for injecting biogas in the natural gas networks in Luxembourg. The Grand Duchy regulation dated 15 December, 2011 concerning the production, income and marketing of biogas was published on 23 December, 2011.

Furthermore, a draft regulation amending the amended Grand Duchy regulation dated 30 November, 2007 concerning energy performance in residential buildings is in the regulation pipeline and outlines a clear schedule for shoring up requirements in the area of energy performance for new residential buildings and additions to existing buildings. The new requirements are an implicit incentive to implement renewable energies. As such, all new construction beginning after 1 July, 2012 must in principle use renewable energies.

Inter-ministerial discussions were also held in order to adapt aid systems for entities implementing renewable energies sources. Inter-ministry talks, as well as discussions with owners of private forests, have been held to find ways to put the potential renewable energy sources of private forests to good use.

During 2011, the government analyzed the amount and structure of feed-in tariffs regarding electrical production on renewable energy sources. A reform in the form of a draft Grand Ducal regulation will be presented in 2012.

b. Mix of biofuels in fuel available for consumption nationally

Directive 2009/28/EC calls for implementing sustainability criteria for biofuels and bioliquids nationally. This aspect of directive 2009/28/EC was transposed by the Grand Duchy regulation dated 27 February, 2011 setting sustainability criteria for biofuels and bioliquids.

With regard to developing electric mobility, the government and the Luxembourg Regulatory Institution (ILR) carried out a technical-economic study in 2011 to implement electric mobility on the national level in Luxembourg. The objective of this study was to determine a joint national concept for implementing electric mobility in Luxembourg. The main issues included:

- Determining what role electric mobility should play in Luxembourg and the specific requirements of the country in this area
- Drawing up a report on the status of Luxembourg players in the electric mobility industry in terms of experience and initiatives
- Summarizing basic trends in terms of technical, economic and standardization issues relating to recharging infrastructure for electric and hybrid vehicles
- Thoroughly examining the broad alternatives for recharging infrastructure available for Luxembourg
- Determining the best recharging infrastructure solution for Luxembourg on the basis of an analysis of requirements, cost and current or future technologies
- Outlining the features of an overall IT platform for communications between users, vehicles and recharging stations and electricity providers, as well as active involvement of grid managers
- Recommending an implementation and financing strategy of this model that will be optimal for Luxembourg

The following conclusions were adopted on the basis of this study:

- The implementation of a specific public infrastructure that will provide assurance of recharging facilities, primarily targeting intermodal points such as satellite parking, rail station parking lots and other public parking facilities
- Use of a national management system for identifying, paying and selecting an electricity provider with an identical payment system throughout the country that gives users the option of getting recharges for their vehicles from the electricity provider of their choice.
- Management and operation of the charging infrastructure, to include terminals and a communications system, under the responsibility of electrical grid operators
- Primary financing for setting up and using this infrastructure through use tariffs of the grid; the financing should be painless, or neutral for electricity consumers to be offset by revenues from additional consumption on the grid arising from electric mobility.

A working group is being planned for the first half of 2012 that will bring together the government, the communes, companies and other key players in coordinating the electric mobility project. Companies in the sectors concerned and the ILEA automobile parts manufacturers have become involved to participate in developing economic perspectives.

c. Mechanisms for cooperation

An analysis of action plans within the EU has revealed that a number of Member States are likely to exceed their intermediary and/or final objectives for 2020. The government has made contact with a number of these Member States in order to discuss possibilities for cooperation.

5.3.3 The energy efficiency objective

5.3.3.1 National target

The UE adopted a framework for energy efficiency in the final use of energy services that includes an indicative energy savings objective applicable to Member States, obligations for national public authorities in the area of energy savings and purchase of efficient energy fuels and measures for promoting energy efficiency and energy services. The directive applies to the distribution and retail sale of energy, to measures to improve energy efficiency, to end users except for activities subject to the greenhouse gas emission allowance trading system and to a certain extent, to the armed forces. It targets the retail sale, supply and distribution of the major energy vectors that use a network, such as electricity and natural gas, as well as other types of energy, such as district heating, oil-fired heating, coal and lignite, energy products produced from forestry and agriculture and fuels.

The Member States were to adopt and achieve an indicative objective in the area of energy savings of 9% by 2015 and set an intermediary national objective to be achieved in 2009. According to the directive, Member States were to draw up a national energy efficiency action plan (PAEE) in 2007, another one in 2011 and third one in 2014 relating to the administration and implementation of Directive 2006/32/EC.

The first PAEE for Luxembourg, which was sent to the European Commission in March, 2008, includes the following elements:

- Calculations of average annual consumption on the basis of final internal energy consumption during the 2001-2005 period. This annual average consumption is reduced by exports of petroleum products and the consumption of companies participating in the Emission Trading Scheme (ETS). It amounts to 17,576 GWh.
- Calculating the indicative national objective in the area of energy savings. This objective is expressed in absolute value and is applied throughout the entire period of the present directive. The indicative national objective in the area of energy savings corresponds to 9% of the above-mentioned average annual consumption and for Luxembourg amounts to 1,582 GWh. The accumulated measures in the PAEE exceeds the target value of 9% by 1.4%, representing 10.4%.
- The description of the measures drawn up by the energy services and the other measures targeting improved energy efficiency that help meet the overall indicative national objective in energy savings.

In September, 2011 Luxembourg submitted its second PAEE to the European Commission, as provided for under directive 2006/32/EC. In accordance with directive 2006/32/EC, the second PAEE includes the following principal elements:

- An in-depth analysis and evaluation of PAEE I, and the final results regarding achievement of the energy savings objective, as well as complementary measures for achieving the objectives set for 2016.
- Revised calculations for average annual consumption for final yearly domestic energy consumption during the period 2001-2005, on the basis of updated statistical data. This annual average consumption is reduced by exports of petroleum products and the consumption of companies participating in the Emission Trading Scheme (ETS). It amounts to 19,654 GWh per year, compared to 17,576 GWh per year for PAEE I.
- Recalculating the indicative national objective in the area of energy savings. This objective is expressed as an absolute value and is applied throughout the entire period of the present directive. The indicative national objective in the area of energy savings corresponds to 9% of the above-mentioned average annual consumption and for Luxembourg amounts to 1,769 GWh per year, compared to 1,582 GWh per year for PAEE I. The accumulated measures in the PAEE exceeds the target value of 9% by 5.06%, representing 14.06%.
- A description of the measures drawn up by the energy services and the other measures targeting improved energy efficiency that help meet the overall indicative national objective in energy savings. The measures may be broken down in PAEE II into the following three categories:
 - *Early Action Measures (A)*: Measures that were implemented during the period of 1995-2007 and are continuing to produce the desired effects for 2016. The A measures represent around 5.9% of the total effort of around 14.1%, in contrast to PAEE I, with 4.0% of the total effort of 10.4%.
 - *New Measures (B)*: These measures are in the process of implementation, with impacts beginning to appear as from early 2008. The measures account for some 6.0% of the total effort of 14.1%, in contrast to PAEE I, with 4.1% of the total effort of 10.4%.
 - *Projected/Possible Measures (C)*: Additional measures for achieving the indicative national objective in energy savings. The C measures represent around 2.2% of the total effort of around 14.1%, in contrast to PAEE I, with 2.3% of the total effort of 10.4%.

- The measures undertaken by the public sector aim to improve energy efficiency and illustrate that the public sector is playing an exemplary role under the provisions of the 2006/32/CE directive to include energy efficiency measures taken during the construction of new public buildings and during upgrading of existing public buildings, drawing up of ecological criteria for tenders for the public fleet of automobiles belonging to the State and the communes, etc.
- Measures undertaken by the State to disseminate information to market players relating to mechanisms for promoting energy efficiency and the financial and legal frameworks adopted in view of achieving the indicative national objective in the area of energy savings, as well as measures taken to guarantee that these entities implement the conditions and motivation appropriate to strengthening information and advice on energy efficiency in final uses.
- A list of existing and new measures and instruments to promote the objectives of directive 2010/31/EC of 19 May, 2010 on energy performance in buildings (recast). This involves 25 measures in all sectors and a detailed description of these measures with the sectors concerned, with the action plan detailing their energy and financial impacts.

An analysis of the second plan concludes that Luxembourg clearly exceeded its intermediate objective of 3% for 2010 and that the country's domestic measures will result in it exceeding the 9% objective set for 2016.

Table 9: 2010 and 2016 objectives in the area of energy efficiency

	Objective 2010	Objective 2016
PAEE II objective	7.59%	14.06%
Directive objective	3.00%	9.00%

Source: Ministry of the Economy and Foreign Trade

In its first energy action plan, Luxembourg set an indicative national objective under directive 2006/32/CE for energy efficiency in final energy use of 10.38 % by 2016. Following an in-depth analysis and evaluation in 2011 undertaken to establish a second PAEE, the **national indicative objective for energy efficiency in 2016 was increased to its current level of 14.06%. With regard to objectives for 2020, negotiations are not yet completed for the new energy efficiency directive on the European level. Should negotiations be unsuccessful, it has been decided to implement an energy efficiency objective of 1.5% per year on the national level.**

5.3.3.2 Key measures

The principal measures and actions undertaken recently to improve energy efficiency are briefly described below.

A draft regulation amending the Grand Duchy regulation of 30 November, 2007 concerning energy performance in residential buildings is in the regulatory process. This project sets a outlines a clear schedule for shoring up requirements in the area of energy performance for new residential buildings and for some additions to existing buildings, and it prescribes mandatory publication of information regarding energy performance when leasing or selling buildings.

In this same vein of improving energy efficiency, the draft regulation on the production of electricity based on cogeneration is aligning national regulations in the area of cogeneration with the provisions of directive 2004/8/EC, establishing the general rules for connecting cogeneration installations to Luxembourg's electricity grid, rules for the production of electricity produced using cogeneration installations in Luxembourg's electricity grid and a system for guaranteeing the origin of electricity produced through high yield cogeneration facilities. In the future, the government intends to support the development of cogeneration based on renewable energies more than that based on fossil fuel sources.

As part of its rational use policy for energy, the government signed a new voluntary agreement covering the period 2011-2016. The purpose of this agreement is to further solicit the commitment of signatory companies to improving energy efficiency and to implement new and renewable energy sources. Companies signing the agreement further commit to implementing an energy management system that identifies potential improvements in energy efficiency and establishes an action program to produce a package of measures to achieve this potential. The economic interest grouping *myenergy*⁵⁰ will take over the coordination and follow up roles of data provided by companies, as well as information dissemination, consulting and awareness responsibilities.

The government carried out a study on the introduction of intelligent measurement systems that was finalized in early 2011 in close coordination with the Luxembourg Regulatory Institution (ILR) and grid distribution managers. The government will use this study to set a schedule for implementing intelligent meters for both the electrical grid and gas distribution networks, and to guarantee that intelligent meters will be installed in a coordinated manner and in accordance with a set schedule.

5.4 The Education objective and key measures for achieving it

European Objective: *"improving education levels, in particular by aiming to reduce school drop-out rates to less than 10% and by increasing the share of 30-34 years old having completed tertiary or equivalent education to at least 40%."*

5.4.1 The early school leavers objective

5.4.1.1 National target

Luxembourg is aiming at the European benchmark as adopted at the education Council in May, 2009 and at the European Council meeting in June, 2010 for a **national objective of sustainably maintaining the dropout rate below 10%**. If the dropout rate stabilizes at under 10%, the objective will be modified in 2015.

In Luxembourg, the figures resulting from the Labor Forces Survey (LFS), upon which is based the indicator used on the Community level under the Europe 2020 strategy, are subject to strong annual variation due to the limited size of the sampling. Thus, the LFS does not help in identifying which students are affected nor why they drop out. In order to pinpoint the extent and the reasons that students drop out of school in Luxembourg and to remediate this, the government, in collaboration with the Local Youth Action (ALJ) group, has had in place a procedure for identifying and contacting young people who left the national school system without diplomas since 2005. A report with the names of dropouts drawn up from month to month using the centralized IT system for students in post-primary education is transmitted to

⁵⁰ For more details see : <http://www.myenergy.lu/>

the regional centers of the ALJ. ALJ workers then contact the students in order to determine why they decided to leave school and above all to help them find training or to get them into the job market. This national survey helps identify what groups of students run the greatest risk of dropping out.

- Boys more so than girls, 60% as opposed to 40%
- students of foreign nationalities more so than Luxembourg students, with foreign nationalities representing 34.5 % of the base population, yet 49% of dropouts
- trade school students, especially those in a CATP program, which represent 35% of dropouts while representing 10% of the base population
- students who are behind in school, with the base population having 49% of students behind in their studies, while 98% of dropouts are students who have a history of being held back.

The reasons the most frequently cited by students for leaving school are the following: failure to perform academically or anticipation of such failure, dissatisfaction with the program chosen or poor guidance, not being able to find an apprenticeship or the cancellation of an apprenticeship contract.

Table 10: National statistics on the rate of school dropouts ⁵¹

Study	School year	Rate of students who re-registered (Temporary halt in studies)	Theoretical permanent rate of school leavers
1	2003/2004	9.9%	17.2%
2	2005/2006	9.2%	14.9%
3	2006/2007	6.4%	9.4%
4	2007/2008	10.7 %	11.2 %
5	2008/2009	10.0%	9.0%
6	2009/2010	10.7%	9.0%

Source:

Ministry of Education and Professional Training

Definitions:

The concept of 'school dropouts' applies to young people who leave school definitively without receiving a diploma and who have entered the job market through a professional insertion program or who have no specific occupation. It also includes young people who, after initially dropping out, re-register in a school, then drop out again during the same observation period and for whom no additional information is available regarding their current situation.

By 're-registered students' we mean young people who dropped out of school for a certain period, but who subsequently re-register in a Luxembourg or foreign school. These young people are included in the following analysis because their academic path involves leaving the Luxembourg school system, even on a temporary basis.

5.4.1.2 Key measures

The reduction of the dropout rate beginning in 2003 was due to improvements in guidance, a systematic monitoring of dropouts by the ALJ and setting up new academic programs for

⁵¹ Ministry of Education and Professional Training, *Le décrochage scolaire au Luxembourg : Parcours et caractéristiques des jeunes en rupture scolaire - Causes du décrochage année scolaire 2009/2010*, Luxembourg, 2012

For more details see :

http://www.men.public.lu/publications/etudes_statistiques/etudes_nationales/120229_decrochage09_10/120209_decrocheurs.pdf

students in difficulty. Analyzing the risks and reasons behind leaving school early helps determine measures for reducing this rate even more. The three avenues of approach for action established in 2010 will be continued. These include promoting academic success, reinforcing guidance activities and introducing programs allowing students to return to school and training courses. A new measure giving access to a professional qualification through a basic professional training course for young people with low academic scores has been added as well.

a. Promoting academic success

Three laws were enacted in 2009 for the reform of primary education. They provide for a successive reorganization of the first nine years of academics including early childhood education on the pedagogic and organizational levels. The reform of primary education introduced new teaching and evaluation methods covering apprenticeship cycles, skills levels and evaluations without graded scores. New guidance procedures for transition from basic education to lower forms and secondary education were established and will be implemented in the 2012-2013 school year. The new procedure reinforces active involvement on the part of parents and improves transparency in decision-making.

The lower forms and secondary education and secondary technical studies are pivotal classes between primary school and the upper forms. The upper forms qualify students for entering professional life or for university studies. At the lower forms level, the priority is consolidating and expanding basic education acquired in early schooling. The common thread of these reforms of secondary education and professional training is motivating young people to exert the effort that will get them into the training of their choice and onto a lifelong learning path.

b. Bolstering guidance activities

In its conclusions, the national counseling forum recommended creating a guidance program concept that brings together all the players in this domain. The concept of a Counseling Center is based on the following definition: "*The term counseling refers to a series of activities that helps persons at all times in their lives to identify their capabilities, skills and interests, make informed decisions regarding choices of studies, training, and professional activities, with the joint purpose of developing personal traits and improving society*". The Counseling Center will open its doors at the beginning of the academic year 2012-2013. All the administrations and guidance services will be represented including the ADEM professional counseling department, the Psychological and Academic Counseling Center (CPOS), the Center for Documentation and Information on University Studies (CEDIES), the ALJ and the National Youth Service (SNJ). The Counseling Center focuses primarily on young people, but also on any persons who seek counseling about the various sectors in which they can learn, study or work.

c. Programs allowing students to return to school and training courses

In addition to being able to return to secondary school and trade school or professional training courses, there are two programs specifically directed to young people that leave school early.

In 2009 April, a law on the future creation of a school for second chances (E2C) was approved. The E2C started functioning in March, 2011 with three pilot classes. This school accepts students between the ages of 16 and 24 who having interrupted their academic studies, want to return to school, enroll in a professional training course or find a job. The program's philosophy is based on individualized training and reinforced tutoring and mentoring actions. The skill levels to acquire are those required for admission to a specific training program of secondary education or secondary technical education. The duration varies according to the person involved, and can extend for one to four semesters. Furthermore, beginning in September 2011, an evening review class has been available to prepare students for admission into the 3rd class of secondary education. Over time, the school should be able to accommodate 150 students on the Luxembourg-Hollerich site.

Another program intended specifically for young people under 18 that do not meet the criteria for a professional trade school course, who lack the skills necessary to access the labor market, or who have left school early are the professional guidance and initiation courses. These courses include general and social instruction as well as professional pre-training. This program will be continued and extended if required, depending on the number of young people who, having finished mandatory schooling, cannot get into an apprenticeship or onto the job market.

d. Basic professional training

Basic professional training was introduced with the professional training reform of 2008. It leads to a Professional Competence Certificate (CCP) and replaces the former Technical and Professional Initiation Certificate (CITP) and the Manual Competence Certificate (CCM). This training is essentially practical and indicates acquisition of basic professional and social skills that are central to an initial foray into the job market. The training is intended for students with academic difficulties that cannot obtain Professional Aptitude Diplomas (DAP) or Technician Diplomas. The training was inserted at the beginning of the school year 2001-2012 as one of the new training programs set up by the curricula administrators. A total of 370 CCP apprenticeship contracts were signed at the outset of the 2011-2012 academic year. As a number of students qualifying for this training did not find a host company for training, 50 additional apprenticeship contracts were added. These young people participate in the same training program, but they do their first year practice training at the Training Center and receive an indemnity from the State.

5.4.2 The tertiary education objective

5.4.2.1 National target

Luxembourg is aiming at the European benchmark as adopted at the education Council in May, 2009 and at the European Council meeting in June, 2010. However, the national objective of 40% for the proportion of persons aged 30-34 that have obtained a university or equivalent education level, as stated in the NRP for 2011, **has been increased to 66%**.

Luxembourg intends that this indicator provide data on the capacity of the national education system to train young people who can earn post-secondary school diplomas rather than it being a reflection of post-secondary qualifications requirements of the labor market. In Luxembourg, 30% of persons between the ages of 25 and 64 have university educations. This proportion is 31% in Belgium and 26% in France. However, in Luxembourg, there is a large disparity depending on birth country. Among people born in Luxembourg, only 22% have

university degrees, while this proportion is 40% among those persons born in other countries. Differences between these two populations are much less marked in bordering countries. Furthermore, in these countries, the proportion of university degrees is higher among natives than among foreign-born persons.

5.4.2.2 Key measures

New bridges to higher education have been created through the reform of professional training. This involves offering preparatory modules to access higher technical studies that may be taken either as part of the normal studies path or following receipt of a diploma.

With regard to adult training, there are also the evening courses, the e-bac distance training and the E2C program for preparing adults for examinations for entry into higher education degree programs.

Measures dealing with broadening the number of programs by offering short BTS associates degrees, the establishing of higher education programs and the creating of subsidiaries or private/public establishments in Luxembourg, as well as measures concerning the system of financial aid for university study have all been confirmed.

5.4.3 Strengthening the human capital base through adult education and training

In addition to actions aimed at achieve Europe objectives for education and initial training, Luxembourg is pursuing measures intended to strengthen human capital resources through adult education and training.

- Continuing education in companies: The government is increasing co-financing rates for continuing education that companies provide for their staff and is introducing a higher co-financing rate for non-qualified persons and those older than 45. This involves a measure that both seeks to attenuate the impacts of the crisis on in-company training programs and to increase participation of older and/or less qualified persons in lifelong educational and training programs.
- Increase the level of the adult population's qualifications: At present, the job market reflects only partially the increase in qualification levels held by young people leaving the educational system. This is partly due to the presence of immigrants, who attain only low levels of qualification in their home countries. As a consequence, it is necessary to continue actions aimed at the part of the adult population with few qualifications. The measures that have been implemented or are scheduled include: Strengthening the second path to qualification, introducing authentication of acquired professional experience, developing professional training for adults, increasing measures for job seeker qualification and promoting basic skills.
- Promotion of language training: In Luxembourg, multilingualism permeates the professional, educational and training spheres, as well as the social and cultural domains. For this reason, language training holds a particularly important place in the framework of policies intended to strengthen human capital resources through education and training. Language training is by far the largest domain of adult education. Different measures have been taken to broaden the offering and promote access to programs so as to encourage adults to actively pursue language studies, including: Creation of the National Language Institute (INL), bolstering support of communes and associations that offer language courses, a language training leave to allow staff to learn Luxembourgish during work

hours, and the welcoming and integration contract offering training in the three official languages of the country, Luxembourgish, French and German.

5.4.4 Extension and development of electronic services of the national library network (bibnet.lu)

The national library network of Luxembourg includes not only scientific and research libraries but also academic, municipal and association libraries. Their IT management and development of electronic services systems are handled by the BnL, which also coordinates the 37-library network. Another 16 public, academic or specialized libraries will be added throughout the country through the end of 2013. In addition, the *Bicherbus*, or Mobile Library, incorporated into the BnL by the law dated 24 June, 2010 concerning public libraries, will benefit from the same electronic services as the other libraries in the network⁵².

5.5 The social inclusion objective and key measures for achieving it

European Objective: "promoting social inclusion, in particular through the reduction of poverty, by aiming to lift at least 20 million people out of the risk of poverty and exclusion. The population is defined as the number of persons who are at risk-of-poverty and exclusion according to three indicators (at-risk-of poverty; material deprivation; jobless household), leaving Member States free to set their national targets on the basis of the most appropriate indicators, taking into account their national circumstances and priorities."

5.5.1 National Target

In the area of horizontal and transversal approaches, all the efforts detailed under the national employment and education objective headings are, together with the measures outlined below, also measures for contributing to promoting social inclusion, particularly by reducing poverty.

Table 11: Changes in the "At risk of poverty and exclusion" indicator between 2008 and 2010 in Luxembourg

	At risk of poverty and social exclusion			At risk of poverty after social transfers			Severe material deprivation			Persons living in a low work intensity household		
	2008	2009	2010	2008	2009	2010	2008	2009	2010	2008	2009	2010
Number	72.000	85.000	83.000	62.000	71.000	71.000	3.000	5.000	3.000	18.000	24.000	22.000
%	15.5	17.8	17.1	13.4	14.9	14.5	0.7	1.1	0.5	4.7	6.3	5.5

Source: Eurostat

The government upholds the European Council conclusions with the objective of promoting social inclusion through reduction of poverty with measures contributing to increase the employment rate of women and of single parent families in order to achieve an employment rate of 73% in 2020. In 2011, the employment rate of women was at 61.7, while that of men was 77.8%. Access to employment creates conditions favorable to social inclusion and provides a rampart against poverty and social exclusion, both for individuals and society as a whole.

The publication "A look at single parent families" of the National Institute for Statistics and Economic Studies (STATEC) illustrates that single parent families are especially exposed to the risk of poverty. In 2010, 46.4% of these households, compared to 52% the previous year,

⁵² This expanding of the network and development of electronic services is a horizontal measure that contributes to achieving the various educational objectives and contributes to social inclusion as well.

had revenues below the poverty level, while for all households with dependent children, the risk of poverty affected "only" 19.1%, compared to 19.8% in 2009. The reference person for 86.4% of these single parent households is a woman, compared to 89.4% in 2009. Full-time employment is the most widespread type of activity in general, accounting for 60.9% of households with two adults and dependent children, in contrast with 58.8% in 2009, while the percentage of full-time employment among single parent households was only 51.7%, compared to 43.2% in 2009. Part time occupations represent 28.7% of single family households, against 23.7% in 2009, while only 18.5% (17.4% in 2009) of two adult households with dependent children worked part time, and 5%, or 4.4% in 2009, of people living alone had part time jobs. Of the single family households, the proportion of persons living in low work intensity households reached 14.5%, compared to 25% in 2009, whereas for all households with children, this figure amounted to only 3.3%, and 5% in 2009.

Three of four of the following measures hold particular importance for women and single parent families. Achieving the national objective is supported by the four measures described below⁵³, and by measures outlined in the national employment objective. The law on social aid that took effect in 2011 has helped maintain a good performance level for Luxembourg's material deprivation indicator.

Through consistency among policies of all NRP measures, Luxembourg aims to **reduce the number of persons under the threat of poverty or social exclusion by 6,000 people by 2020.**

5.5.2 Key measures

a. Continue the policy of providing socio-educational welcoming structures for children

On 1 January, 2012, STATEC estimated the population of the 0-12 age group at 77,697 children. On 31 December, 2011 the total number of places for children aged 0-12 in socio-educational welcoming structures on the national level was 37,833, which represents an offering to total 0-12 population ratio of 48.69%. The number of authorized places in socio-educational welcoming structures grew by 17% from 2010 to 2011.

The national indicator for monitoring the implementation of this measure is the change in number of places in socio-educational welcoming structures for children and the measure has a yearly budget allocation of approximately €196 million.

⁵³ Continuing the policy of providing socio – educational welcoming structures for children; Making beneficiary parents aware of the Guaranteed Minimum Income (GMI) mechanism for using welcome center checks; Increasing the activation rate under the guaranteed minimum income (GMI) program; Promoting measures favoring the transition of young people from academic to professional life and those motivating them to return to school.

Table 12: Changes in different types of welcoming structures (31 December, 2011)

Situation as of 31 December, 2011	Places in 2010	Places in 2011	Difference 2010-2011	Increase between 2010-2011
“Maisons relais” children reception centers	23.718	27.401	3.683	15,53 %
Day care centers, nurseries, registered child care centers	2.059	2.069	10	0,49 %
Day care centers, nurseries, private child care centers	4.425	5.793	1.368	30,92 %
Nanny services	2.138	2.570	432	20,21 %
Total	32.340	37.833	5.493	16,99 %

Source: Ministry of the Family and Integration / Professional – Family Life Reconciliation Department

b. Making beneficiary parents aware of the Guaranteed Minimum Income (GMI) mechanism for using welcome center checks

According to data provided by the National Social Action Service (SNAS), the number of households receiving services under the guaranteed minimum income (GMI) law that include one or several children under the age of 13, amounted to 2,399 on 31 December, 2011. With regard to these people, SNAS contributed to an awareness campaign using the welcome center checks through information meetings and a total of 305 persons received the information letter regarding use of the checks in 2011.

As part of their mission, the regional Social Action Services also participate in the awareness effort, and in 2011 a total of 194 persons were explicitly invited to use the services provided. As part of their mission, the Social Offices also participated in the awareness effort.

In January, 2012, 2,431 children were able to receive special benefits under the welcome center checks program, with 77% of these children from households with a guaranteed minimum income and 23% being identified as children living under the menace of poverty.

As this is a measure whose implementation is carried out continuously under the aegis of the organizations involved, no specific budget was allocated for the measure.

Increasing activation rates as part of the GMI mechanism.

c. Increasing the activation rate under the guaranteed minimum income (GMI) program

Activation as a part of the GMI mechanism is one of the pillars of the active inclusion policy on the national scale. Administrative statistics assembled by the SNAS have shown that since 2007, the number of GMI beneficiaries that are not excluded from professional insertion activities (PIA) has increased considerably, by over 69% between 2007 and 2011.

This increase was equal or greater than that observed for the total number of persons in GMI beneficiary households and the rate of persons not excluded from work also increased during this period (2007: 9.1% ; 2008: 9.8% ; 2009: 11.0%, 2010: 11.0% and 2011: 11.2%).

While the number of PIA showed a marked increase of over 65% between 2007 and 2011, this bolstered activation level was not enough to maintain the activation rate of 64.8% recorded in 2007. Since there was considerable growth in the number of persons not excluded from PIA during this period of economic crisis, activation efforts nonetheless resulted in sustained increases in the activation rate since 2009: 2009: 61.5% ; 2010: 62.3% ; 2011: 63.3%. With the objective being to increase the activation rate by two percentage points with relation to the rate set for 2010, through to 31 December, 2014, the trend for this first year indicates that a true impact has been made. The objective for 2020 will be determined based on the results of the mid-term review of the NRP.

As this is a measure whose implementation is carried out continuously under the aegis of the organizations involved, no specific budget was allocated for the measure. Nonetheless, resources for supporting this objective were increased in 2011, with the focus on human resources of the regional Social Action Services. This level of resources will remain in place beyond 2011.

- d. Promote measures favoring the transition of young people from academic to professional life and those motivating them to return to school

The government will delve in the problematic of disadvantaged young people through the National Youth Service (SNJ), particularly young people with the NEET profile (*Not in Education, Employment or Training*) and act along three lines of approach.

- Line 1: Develop an information platform

Resources for supporting this objective were bolstered in 2011 in the human resources area to develop the portal⁵⁴ implemented in 2010. This portal was subsequently extended⁵⁵. The objective for 2012 and 2013 is to adapt the existing portal to the requirements of disadvantaged youths. In this framework, a full restructuring project was developed with the many institutions working with young people in difficulty. The total cost of the project is estimated at €700,000, of which 50% is co-financed by the European Social Fund (ESF). The co-financing period was set between 1 January, 2012 and 31 December, 2013 and consists of the following elements: Adapting the portal to disadvantaged youth by changing the slogan and simplifying use of the site and by integrating existing sites, then providing a link with a theme in the portal; Implementation of an information module on professions in the form of an interactive game and working primarily with images; a "Job interview" module; a "Self-evaluation of skills" module. In 2011, this portal had more than 300,000 visitors and 3,298,322 page views. The Counseling Center concept was developed and methods of cooperation are being finalized among the different institutions, ADEM-OP, CPOS and parts of the ALJ and the SNJ. No budget has been set for this in 2012, as current expenditures are covered by budgetary lines of the respective partners. Together with its partners ADEM-OP, ALJ and the Social Services, the SNJ set up 20 regional information sessions intended for inactive youths, with 300 participants joining in. This offering will be increased to the target parents and more efforts will be made in the areas of communication and advertising in order to reach marginalized young people.

⁵⁴ For more details see: www.anelo.lu

⁵⁵ The *beruffer.anelo.lu* module was added and developed (addition of video clips, articles, etc).

- Line 2: Increase capacities of the Voluntary Guidance Service (SVO)

Resources for supporting this objective were bolstered in 2011 through the hire of seven persons to increase the unit's capacity. A new regional office was opened in the country's southern region. The cost of expanding these SNJ programs and projects amounted to €1,358,400 in 2011 and the same budget will apply in 2012. In 2011, the SNJ increased registration of youths by 23% over 2010 and 124% of the number of youths entered a voluntary guidance program in 2011 compared with 2010, with 64% more young people participating in the program in 2011 compared to 2010. The number of young people in the program will again be exceeded in volume for 2012.

- Line 3: Carry out a qualitative study among young people who have participated in the SVO program

Contacts were made at the inter-ministerial level and with the University of Luxembourg to discuss collaboration. The qualitative study project has been put back to 2012.

e. The Social Aid law

The law dated 18 December, 2009 entered into effect on 1 January, 2011. By creating 30 Social Offices, which are public entities monitored by the communes, social aid was inserted as a prevention dynamic to eliminate the cycle of social exclusion. In addition to providing persons in need and their families with access to the goods and services appropriate to their specific situations, the law helps them to acquire or maintain their autonomy. During 2011, the 30 Social Offices gave out a total of €2,221,000 in financial aid. An analysis of the financial aid provided revealed that the largest category of aid amounted to 23.90% of the total and went to subsidize housing costs. These figures confirm the high percentage of household budget allocations for housing among households exposed to the risk of poverty. Aid for daily necessities represented 18.24% of the aid dispensed, while 13.62% went for health costs. Aid allocated for utilities costs represented 11.45% of the total and these costs, coming in on top of housing costs, also make up a major part of household budget expenditures.

The measure will be allocated an annual budget of approximately €17 million, 50% of which is furnished by the State and 50% by the communes.

f. National strategy to counter homelessness and exclusion linked to housing

In 2011, the government launched a collaboration platform made up of representatives of the ministries concerned, the Syndicate of Cities and Towns in Luxembourg (SYVICOL), communes and non-governmental organizations to draw up a national strategy to combat homelessness. The working group stressed the importance of adopting a holistic approach to homeless persons, recognizing the social, psychological and economic aspects and avoiding cutting off populations and their problems. This approach presupposes a coordinated and concerted policy on the inter-ministerial level that simultaneously encourages synergies between specific social structures of homelessness and the ex-hospital domain. The platform recommends creating decentralized regional centers for homeless persons, making decentralized, supervised housing units available for persons who are often alcoholics or multiple substance users with non-rehabilitative psychiatric disorders and who need a stable home with a minimum of professional supervision for their daily life as well as the creation of a specialized institution of a care/rest center type for chronified or terminal homeless people.

g. The minimum pension mechanism

Under the pension system reform, the minimum pension mechanism, which guarantees a decent pension to contributors who earned wages close to minimum wage during their careers, even for early retirement at 57 with 40 years of service, will be fully maintained. The system continues to ensure that unqualified workers whose essentially physical careers have worn them down will have an adequate pension at a reasonable age. Likewise, persons with reduced work capacity whose health prevents them from getting a job fall under the professional re-training legislation that provides an adequate replacement income. The presence of children in a household influences decisions to interrupt professional careers and gives rise to incomplete social contributions over a career. The reform project promotes the individualization of contributors' rights according to the principle of equal treatment of men and women. In the event of an interrupted professional career, a contributor may opt for continued contributions on an optional basis and based on a contribution rate of one third of minimum wage earner contributions. The current provisions determine the minimum wage threshold.

5.5.3 National strategies for integrating Romani as part of the EU

With relation to the conclusions of the European Council in May and June, 2011 on the integration of the Romani, reference should be made to the document the government submitted in January, 2012 to the European Commission that supports conclusions of the EU Council pursuant to the constitutional principle of equality that states that all persons in the same situation shall be treated equally in Luxembourg.

6. Methodological and horizontal Issues

6.1 Coordination of the distribution of spatial resources

In order to promote better use of resources and to reduce greenhouse gas emissions, it is appropriate to coordinate the distribution of spatial resources and their functions with impacts on primary resources such as water, energy, biodiversity, etc., as well as to optimize the relationships between the various spatial functions. The instruments for this are the sector plans being drawn up: these include sector plans for transportation, housing, commercial zones, large rural spaces, reconversion projects in Belval-Ouest and Mersch, as well as the States-Communes cooperatives process that target an equitable and simultaneous assimilation of essential requirements to development of cities and urban areas, through cooperation between the State, local actors, inhabitants and economic players through a multi-sector approach.

The draft law amending the law dated 21 May, 1999 concerning the development of national territory is currently on the Parliamentary Commission's agenda for sustainable development. The instrument of the State-Communes agreements was introduced in an amended draft law by the parliamentary commission.

6.2 Assimilation on the national level

The government is ensuring that reforms enacted in the framework of the NRP are drafted following extensive consultations, as presented in the following non-limitative list:

- Presentation of the NRP/SGP on 29 April, 2011 at a joint meeting in Parliament of the Economy Commission, Foreign Trade and Solidarity Economy, the Finances and Budget Commission and the Commission of Budgetary Execution Control
- A seminar on the European Semester held on 7 June, 2011 at the Economic and Social Council (ESC)⁵⁶
- Consultation debate on 14 July, 2011 in Parliament on the conclusions of the Council regarding the NRP/SGP of Luxembourg⁵⁷
- In the autumn of 2010, many meetings were held between the government and the social partners to discuss the crisis and available tools for remedying economic decline, while preparing Luxembourg for emerging from the crisis⁵⁸
- Consultation debate on 29 March, 2012 in Parliament on the NRP, as well as on the guidelines for budgetary policy in light of the European Semester⁵⁹
- Projects carried out to involve local players under the European cooperation project "EU 2020 going local"⁶⁰, in which the government is a partner in collaboration with the Pro-Sud union, an exchange of good practices occurred in 2011 with the 12 European partner regions on energy and sustainable transportation. The objective is to make a link to the Europe 2020 strategy. A working group called *Smart Steering* was set up by the government. The use of indicators, both on the European and local levels, as well as the creation of links with local budgets, will be explored on the basis of the experience of the

⁵⁶ For more details see : <http://www.ces.public.lu/fr/actualites/2011/06/semestre-europeen/index.html>

⁵⁷ For more details see : http://www.odc.public.lu/actualites/2011/07/debat_csr_2011/index.html

⁵⁸ For more details see : http://www.gouvernement.lu/salle_presse/actualite/2011/09-septembre/29-tripartite/index.html

⁵⁹ For more details see : http://www.odc.public.lu/actualites/2012/03/debat_PNR_2012/index.html

⁶⁰ For more details see : www.eu2020goinglocal.eu

Swedish partners. The Urban Policy Information Cell (CIPU)⁶¹, apart from its role of making cities and local players aware of European policies, has supported this project⁶².

In summary, determining guidelines and measures is done jointly in Luxembourg, after wide consultation.

6.3 Communication

Diverse studies have shown that the resistance that forms to structural reforms is linked to the fact that uncertainty regarding expected future benefits of reforms is often greater than the uncertainty regarding costs incurred. The government attaches particular interest to this challenge and intends to pursue its efforts. Several communication tools are to be used, including public events with wide visibility in the media. One example of this is the "On the road to Lisbon/Luxembourg 2020" colloquium⁶³.

6.4 Evaluation, monitoring and follow-up

Progress achieved as part of the implementation of the Luxembourg 2020 strategy should have effective follow-up, reporting and evaluation processes.

In order to optimize coordination of the NRP, the Europe 2020 inter-ministerial network is consulted periodically concerning the implementation of reforms. The *Observatoire de la compétitivité* is coordinating this work.

Diverse structural indicators used as part of the Lisbon strategy had a tendency of not taking adequate account of the specific circumstances surrounding Luxembourg⁶⁴. Different key indicators of the Europe 2020 strategy also pose a problem. It proved to be opportune to broaden the statistical follow-up on the national level. A "Competitiveness scoreboard" was put into place in 2004 by the *Observatoire de la compétitivité*. The latest version of this publication has been published in October, 2011, and the composite indicator⁶⁵ ranked Luxembourg in 10th place in the EU-27.

Applying evaluation methods of economic policies is important. Over recent years, major investments were made in implementing a *Dynamic Stochastic General Equilibrium* (DSGE)⁶⁶ model that recognizes Luxembourg's specific circumstances and can be used to carry out estimates and simulations on the macro- and microeconomic impacts of structural reforms. This model will soon be finalized, but it should be clearly stated that there is no ideal structure for an institutional macro-econometric model⁶⁷.

6.5 Coordination with structural funds

Coordination between the NRP and the structural funds is required because the Europe 2020 strategy also has a Community action program. Projects developed and supported by

⁶¹ For more details see : www.cipu.lu

⁶² As well as an OECD pilot study on green growth indicators at the local level.

⁶³ For more details see : http://www.odc.public.lu/actualites/2010/12/colloque_Luxembourg_2020/index.html

⁶⁴ For example, the "employment rate" indicator is a purely national concept. Yet domestic employment in Luxembourg includes around 40% cross-border workers.

⁶⁵ Ministry of the Economy and Foreign Trade, *Competitiveness Report 2011*, Luxembourg, October 2011

For more details see : http://www.odc.public.lu/publications/perspectives/PPE_017.pdf

⁶⁶ For more details see : <http://www.odc.public.lu/activites/LSM/index.html>

⁶⁷ Ministry of the Economy and Foreign Trade, *Evaluation of the Luxembourg 2020 reform plan with the LSM model*, in the Competitiveness Report 2011, Luxembourg, October 2011

Community financing under structural funds heading are required to contribute to meeting the objectives of the Europe 2020 strategy.

With regard to the FEDER 2007-2013 Regional Competitiveness and Employment program (RCE), efforts to support European objectives and national objectives determined by Luxembourg have been made, particularly from the Priority 1-Objective 1 and Priority 2-Objective 3 standpoint. The RCE FEDER program represents total public eligible commitments and investments of €70,000,000, of which €21 million in Community funds amassed during the programming period of 2007-2011 concerning the above priorities of the Luxembourg NRP and the Europe 2020 Strategy. These investments, in line with NRP objectives, correspond to 84% of the FEDER CRE envelope for Luxembourg. Thus, 47 projects in the area of research and innovation were co-financed through FEDER in the amount of €15,000,000 for Priority 1-Objective 1 and 8 projects in the area of renewable energies in the amount of €7,000,000 for Priority 2-Objective 3. A new call for candidacies was put out in March, 2012 and the FEDER management authority is confident that other projects conforming to the Luxembourg NRP will be identified.

The themes and programs for European Territorial Cooperation were hammered out on the basis of the Europe 2020 strategy. An analysis of projects approved by the NRP guidelines is under consideration for the 2012 report, when most of the budgets are used up.



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