# Creating an innovative financial mechanism based on public-private partnership (PPP) in the Nord Pas-de-Calais Region (France)

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# Abstract

The Regional Government of Nord Pas de Calais (France) is developing innovative financial mechanisms based on public-private partnerships (PPP) which is likely to significantly increase the volume of investment in the fields of energy efficiency and renewable energy. Two types of mechanism are being developed.

The first is based on the granting of soft loans to households wishing to carry out loft or complete insulation work or to build their housing in accordance with high quality environment norms (HQE). Financing of the interest rate subsidy is shared between the Regional Government and the financial institution that proposes this product to its clients.

The second instrument is a Public-Private Regional Investment Fund in which the public capital commitments will have a relative majority. The Fund will invest exclusively in energy efficiency and renewable energy projects in the public and tertiary sectors that are located in the Nord Pas de Calais Region. The public participation ensures a mitigation of risks for private investors and makes the Fund more attractive. It is expected that the Fund will be able to provide various forms of financing: equity for the setting up of Special Purpose Vehicles (such as ESCOs), loans with preferential conditions, convertible debts, etc.

The article will present the setting-up, in process, of the two mechanisms and the institutional, market, cultural, technical and economic conditions needed to guarantee the success of such instruments. The authors wish to debate the conditions and opportunities of and the obstacles to the development of new marketbased instruments.

# Introduction

The economic, political and institutional context grants the regions more and more capacity and legitimacy in the field of energy policy. Traditionally decided at a central level, the energy policy tends towards a regionalisation of actions relative on one hand to the energy market evolution and on the other hand, to the revival in France of efforts in the field of energy efficiency. In parallel to this regionalisation of energy policy, climate change policies are also being regionalised.

The development of two innovative financial mechanisms in the Nord Pas de Calais Region comes within this scope. This North Region of France is well known for being one of the most active in the field of climate change and in particular of energy conservation. The level of the regional aid that has been allocated to promote environmentally friendly projects for two decades testifies the strong engagement of the Regional Government in this field. Yet, the new government in force since June 2004 wishes to reinforce the efficiency of the aid and to really generalise investments and operations in the field of energy efficiency and renewable energy. For this, it counts on the implementation of two new financial mechanisms that mobilise, in addition to public funds, private funds: zero-interest loans intended to support thermal insulation operations in the residential sector and a Regional Investment Fund for Climate which aims to support energy efficiency and renewable energy projects developed by local communities and/or SMEs.

The approach undertaken by the Regional Government is particularly innovative. The national references concerning the setting-up of financial dedicated products on the initiative of a local community are quasi-inexistent. Thus, the Nord Pas de Calais region finds itself as a leader in the field of energy management policy<sup>1</sup>.

The tools presented in this report are in an early age of development and we will present for each of them their characteristics, stage of elaboration and stakes. We will also formulate assumptions on the way these instruments should be developed and the conditions of their success. The reality of their implementation might contradict our remarks. Finally, we will complete this article with a short comparison between the traditional instruments used to promote energy efficiency and renewable energy and the "innovative" ones based on a PPP.

# Context

# THE REGIONALISATION OF CLIMATE CHANGE STRATEGIES

The 2004 French Climate Plan attributes to local communities an unprecedented role to participate in the fight against climate change at a local level. The Plan has been drawn up by the French Government to respond to the climate change challenge, firstly by 2010 (complying with the Kyoto Protocol target), and, secondly, beyond this date. Projections for France show that national emissions could be 10% higher than the Kyoto target in 2010 if no measure is taken. This is particularly due to increasing emissions in the sectors affecting daily life (residential-tertiary sectors, transport, etc.). For this reason, the Climate Plan contains measures affecting all sectors of the economy and the daily life of all French citizens with a view to saving the equivalent of 54 million tonnes of  $CO_2$  each year by the year 2010, which will help to reverse the trend significantly. One of its major pillars to achieve this goal is to rely on local Climate Plans.

In order to encourage local initiatives to combat climate change, local authorities are called upon to adopt local Climate Plans which have to define and implement targets and objectives at regional, departmental or city level. Tools required to define these plans will be worked out by early 2005 by the French Agency for Environment and Energy Management (ADEME), the Approved Air Quality Monitoring Networks (AASQA) and other regional bodies.

Currently in France, at the regional level, initiatives in the fields of energy management and the fight against climate change are implemented by ADEME generally in partnership with the regional administration. This partnership comes into being through the pooling of financial resources in the form of "regional funds to promote energy efficiency and renewable energies" within the framework of multiannual contractualisations between the State and the Region (called "Contrat de Plan Etat-Region"). Feasibility studies, energy audits, capacity building (training, communication, etc.), pilot projects or initiatives reflecting the regional priorities are types of actions financed by these funds. The Funds, essential for the experimentation and validation of innovative approaches are however not adapted to allow a generalisation of good practices on a regional market scale. Indeed, they come up against limits in budgetary resources, but also in necessary capacities in structuring and managing multiple projects.

It is within this framework that the Regional Government has sought to involve itself politically and financially in the development of dedicated financial tools which support the creation of a durable market for energy efficiency and renewable energy and whose mode of financing relies on the private sector.

# ENGAGEMENT IN THE CLIMATE CHANGE POLICY OF THE NORD-PAS-DE-CALAIS REGION

The Nord Pas-de-Calais Region, representing 6,8% of the national population, contributes 10% of national greenhouse gas emissions. This high proportion is explained by the industrial structure of the Region: industry accounts for 50% of the overall energy consumption, against 24% for France. This is due to the place of the iron and steel industry which consumes 23% of the final energy in the region compared with 3,5% in France.

Because or in spite of these unfavourable figures, the Regional Government of Nord Pas-de-Calais has been carrying out for two decades an active regional energy management policy. The region is significantly advanced, in comparison with other regions of France, in the definition of tools to promote climate change mitigation projects and can be seen as a leader in the implementation of local Climate Plans.

The partnership between the Nord Pas-de-Calais Region and the Regional delegation of the French National Energy Management Agency (ADEME) has been in place for more than twenty years. It developed as a result a regional Fund whose aim is to promote energy conservation and environment protection (the FRAMEE). The high level of incentive provided by this Fund testifies to the will of the Regional Government to strongly act in this sector, in spite of the vicissitudes of the national policy. Annually endowed with 4,5 Million Euro by each organisation, the FRAMEE is managed jointly and intervenes in the field of energy conservation, waste management, air quality, "HQE" (high environmental quality), environmental monitoring and management, site and ground pollution mitigation. The financial incentives of the FRAMEE are supplemented by those of the Regional European Development Fund (FED-ER) which gave 43,4 Million Euro for "Pollution prevention and flows control", over the period 2000-2006. The FRAMEE intervenes with subsidies mainly granted to audits, studies and demonstration projects.

# A NEW ORIENTATION IN REGIONAL CLIMATE CHANGE POLICY

The Regional Government has recently decided to give another boost to its orientation towards climate change mitiga-

<sup>1.</sup> The attribution of the term "innovative" to these tools might lead to a misunderstanding. The tools developed by the Region are innovative not because they are new but they are innovative in the sense that they are directed towards sectors whose investments in the fields of energy efficiency and renewable energy are financed in a traditional way, meaning through direct subsidies. PPPs have been in force for a long time but seldom to promote climate change mitigation actions in the residential, public and tertiary sectors.

tion: in December 2002 it launched a strategic study whose objective was to find new levers to encourage regional action relating to communication as well as the financing of actions and projects to achieve climate change mitigation goals. The diagnostic elements of the study "How to contribute on a regional scale to the fight against climatic change", realised by a consulting company specialising in energy efficiency policy analysis, highlighted that it was necessary:

- to change scale: to obtain significant quantitative results with equal or increased level of comfort and activity;
- to work in partnership with all the regional actors in order to involve them and ensure they carry out actions;
- 3. to promote energy management as an economic and social development opportunity;
- 4. to bear a triple responsibility: Regional Government as a Model, a Stimulator and a Promoter.

Both the breadth of the objectives to be reached and the need for changing speed require the introduction of new financial levers in complement to the existing tools. With this objective and without removing the traditional support tool which is the FRAMEE, the Region wishes to implement two new mechanisms enabling the mobilisation of private funds in addition to public funds:

- Zero-interest loans intended to support thermal insulation operations in the residential sector;
- A Regional Investment Fund for Climate which aims to support energy efficiency and renewable energy projects developed by local communities and/or SMEs.

These two mechanisms are in the PPP logic. They enable significant involvement of the private sector in the structuring and financing of projects and present a strong social, economic and environmental utility. Their elaboration requires a step which can be defined in 5 points:

- 1. Mobilisation of Regional Government aid through financial market instruments (credit line, investment fund).
- 2. Financial implications for other actors, public operators (local community, European Commission, etc.) and private operators (banks, companies operating in the energy sector) for the funding of these instruments (significant leverage).
- 3. Definition of the rules for the funding mobilisation taking account of legal and tax constraints and different expectations from each co-financer in terms of returns on investments.
- 4. Management of the instruments entrusted to experienced operators (financial institutions, fund managers) after having previously defined the priority targets of these instruments and the project eligibility grid.
- 5. Communication to be undertaken by the Regional Government before implementing the tools to mobilise the maximum commitment of potential co-financers and to ensure the realisation of projects afterwards.

The following text will present the characteristics of each instrument and the steps followed from their design to their implementation.

# Co-subsidised loans for thermal insulation in the residential sector

### CURRRENT SITUATION IN THE NORD PAS DE CALAIS

In 1999, the energy consumption in the residential sector of Nord Pas-de-Calais was established at 3 Mtoe, that is 20% of the total final energy consumption of the Region.

Three major characteristics of the residential sector stand out:

- the residential sector is mainly composed of individual dwellings (82% of the surface area),
- the dwellings built before the first French thermal regulation in 1975 are prevalent. Such properties accounted for 74% of the buildings in 1999,
- heating contributes to nearly 82% of the households' total energy consumption.

By taking into account the structure of household consumption per source of energy, the annual energy consumption of the sector can be evaluated at 1.9 Billion Euro, which represents on average 1 300 Euro per household per annum.

### MECHANISM CHARACTERISTICS

### Targets

Taking into account the three main characteristics of the residential sector in the Nord Pas de Calais, the Regional Government has decided first to target the dwellings which represent the worst performance in terms of heat consumption, that is to say the dwellings built before the first thermal regulation in France (before 1975). One can consider that approximately 35% of them have never or very partially been subject to rehabilitation work including thermal insulation works. This concerns around 310 000 dwellings in the Nord Pas-de-Calais region. These buildings represent a total surface area of 30,6 million square meters and an energy consumption of 0,77 Mtoe.

In order to ensure a strong rate of participation by the households, the Regional Government considers it preferable to prioritise the realisation of energy efficiency work that presents the best ratio in terms of energy saved/cost. The measure presenting the best ratio is roof thermal insulation since it has a maximum average cost of 15 Euro/m<sup>2</sup> and enables savings up to 25% of the heat consumed in the old residences. The thermal rehabilitation of the roofs of the whole targeted sector should allow an annual saving of at least 158 ktep per annum, that is to say 102 million Euro at a cost of 455 million Euro.

The eligible customers are the owner-occupiers, tenants or private lessors of dwellings built according to construction methods which do not include thermal performance standards. Moreover, this financial product is also aimed at low income households. These represent most of the occupants in the individual dwellings in the Nord Pas-de-Calais (in particular in the North of the Region). Specific means of access will be developed to facilitate the access to the loan for this social group.

### Mode of intervention

The financing from the Regional Government consists of a partial subsidy of the interest rate applied by the banks on loans taken out by households wishing to complete thermal insulation work in their properties. The subsidy must make the financing of work completely painless: the savings on the energy bill should cover the costs of paying back the loan. To cancel the negative effect of the interest rate, the Regional Government has invited tenders from financial organisations established in the Nord Pas-de-Calais urging them to participate financially in the reduction of the interest rate. The mechanism is open to any financial organisation wishing to participate as long as its offer has been approved by the Regional Government. In fact, the more financial organisations join the project, the better the level of incentive will be households and thus the attractiveness of the tool. To cover a great part of the sector and give good publicity to the project, the Regional Government wishes to propose a 0%-interest rate. In this case, the grant of the region is equal to the refunding of the interest rate minus the participation of the financial organisation.

The allowance must have a double effect:

- on the interest rate and,
- on the period of the loan refunding (long enough so that the amount of the periodic repayments is lower or equal to the savings on the energy bill).

In addition, this financial product can benefit from complementary grants in case other communities of the Nord Pasde-Calais region wish to participate. The supplement can be reversed in the form of a grant to allow minus-0% interestrate, in other words a subsidy on the real investment.

Two types of zero-interest loans are proposed to the households:

a loan called "Isolto" for roof insulation work (with a maximum loan amount of 15 Euro/m<sup>2</sup>)

### Subsidized line credit for the housing in the north

 a loan called "Isol+" which includes, in addition to roof insulation work, "secondary" insulation work: wall, floor insulation, double glazing and joinery (with a maximum loan amount of 50 Euro/m<sup>2</sup>)

The Region will bring 6 million Euro over a period of three years to finance this project.

### STAGE OF ELABORATION

### Analysis of the residential sector in the Nord Pas-de-Calais

The region has to know where the greatest energy saving potential is located. A thorough analysis presenting the distribution of dwellings according to their date of construction, their nature (collective, individual, apartment or house, etc.), the type of occupants (tenants or owners) and their average income has to be realised. It should lead to the choice of the tool most suited to the context.

### First design of the tool and simulation

A simple simulation on an Excel Table provides the Region with rough figures that determine the level of its expectations for the tool.

### Definition of an eligibility criteria list

Both to avoid free-riders, that would have carried out insulation work anyway, meaning without the incentive and to ensure a high quality of work in terms of energy performance and environment protection, the Region has established an eligibility criteria list of work that has to be complied with by the craftsmen. The list concerns the type of material being used to reinforce roof insulation (glass wool, wood wool, polystyrene, polyurethane, pearlite, etc.) and its thickness.

### Call for Proposals from financial institutions

In the call for proposals, the Candidates are requested to outline the instrument, to explain the way they will manage and advertise it according to the objectives laid down by the

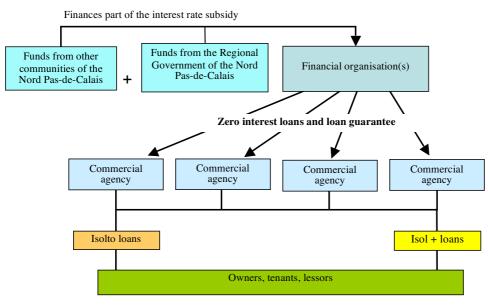


Figure 1.

Regional Government and to state the level of financial effort which they are ready to accept to reduce the interest rate. The candidates outline in their answers how their contributions will be financed (financing on their own resources, creation of a green savings account, other...).

A call for proposal has the advantage of leaving sufficient freedom to the financial organisations to design the instrument and of putting pressure on them to increase their financial effort in the face of competition.

### Communication and training concerning the tool

Five target groups, requiring slightly different communication approaches, have been identified:

- Households: the Regional Government has to prepare and send booklets and brochures concerning the tools which explain the general approach and provide information on how to access the loans.
- Actors traditionally promoting energy efficiency in the region (mainly regional and local agencies and associations): the aim is both to inform and to involve them in the project so that they become privileged interlocutors between the Region, the financial organisations and the households.
- Representatives of the craft industry sector: the Regional Government has to ask for their opinion on the eligibility criteria list and inform them on the requirements to fulfil.
- Local communities of the Nord Pas-de-Calais: they will be asked in particular to express their interest in participating in the interest rate subsidy.
- The commercial agents of the participating financial organisation(s): training sessions on the new products will be organised for the agents. The eligibility criteria list will also be given and explained to them. When in contact with loan applicants, they must ask them for a detailed estimate that fulfils the eligibility criteria.

The selected financial organisation(s) will be in partnership with the Region in the communication phase.

### THE STAKES

- A Euro from the Regional Government generates 5 Euro investment.
- To stimulate the economic activity in the craft industry sector and to support local employment
- To contribute to the reinforcement of economic and social cohesion, to reduce the energy bills of the most underprivileged households, to reduce outstanding payments
- To reinforce the visibility of regional actions by a simple, fair measure benefiting the greatest number of people
- In all, over three years, the Isolto loans and the Isol + loans should enable the thermal rehabilitation of almost 25 000 residences built before 1975, that is to say nearly 8% of the targeted sector. If the Regional Government had decided to grant direct 100%-subsidies with the same budget (6 millions Euro) it would have covered in comparison "only" 3 500 dwellings.

# **Regional Investment Fund for Climate**

# OBJECTIVES OF THE REGIONAL INVESTMENT FUND FOR CLIMATE

The objective of the Regional Government is to create a Regional Investment Fund that would support financially but also technically the investments in the fields of energy efficiency and renewable energy of the local communities and the enterprises of the tertiary sector.

Indeed, the SME and the local communities often lack technical and financial skills in structuring energy efficiency and renewable energy projects. The Fund aims at assisting them in the identification, structuring and financing of these projects.

Moreover, it is well recognised that energy efficiency and renewable energy projects can hardly, for the moment, due to the current situation in terms of energy tariff structure, yield the same level of returns as private investors are accustomed to receiving when investing in other sectors. This is why the Regional Government has decided to take part in the Fund financially in order to encourage private financial investors to participate. The financial participation of the Region will on the one hand limit the risks for the private investors and thus increase the attractive character of the Fund. On the other hand, it enables the Region to preserve some decisional capacity on the validation and/or the refusal of projects and on the strategic guidelines of the Fund.

### Targets

#### Type of projects

As mentioned above, the Fund will invest exclusively in energy efficiency and renewable energy projects that have a significant impact on the reduction of greenhouse gas emissions and that are located in the Nord Pas-de-Calais region. An eligibility criteria list will be established to further determine which kind of projects will be deemed acceptable and under which conditions and /or restrictions. Energy-efficient restoration of swimming pools or sports centres, thermal rehabilitation programmes of public buildings, biomass or gasfuelled cogeneration installation, trigeneration, waste energy recovery, or any development of a local energy resource, development of small district heating networks, etc. are illustrations of projects that could benefit from the Fund.

The relevant size for project eligibility (between 50 000 and 2 Million Euro) enables the fund to find its place on the market of SME and municipalities of average size on which strategic investors as well as development banks are not very present. Moreover, the investment range selected means the fund resources are spread over a larger number of projects, thus reducing the risk. Yet, the disadvantage is a higher global cost for project structuring

Projects having received preliminary aid from the FRAMEE to finance feasibility studies or/and energy audits will be favoured.

### Eligible beneficiaries

The eligible beneficiaries are any type of local community located in the Nord Pas de Calais region. France's territory is characterised by many different forms of community which go from "simple" municipalities to groups of municipalities called "intercommunalities" or recently new territories officialised by the Voynet Law in 1998, called respectively "agglomerations", "countries" and regional natural reserves. Any kind of community will be eligible for the Fund as well as public administrations and services (such as schools or hospitals).

The Regional Government wishes to give priority to investments in small municipalities – in particular rural ones – which often are the most destitute and the least capable of developing investments in energy efficiency. However, as 94% of the municipalities in the Nord-Pas-de-Calais belong to an intercommunality, the Funds will have to work in close relation with the Community Councils, which will have in particular the responsibility of passing on information on the Fund and its methods of intervention to the elected communal officials.

The Fund will also be opened up to small and mediumsized enterprises that operate in the service sector (such as hotels or commercial centres), small and medium-sized industries (e.g. food industry) or to private companies that work in partnership with the local communities on eligible projects.

### THE FUND STRUCTURE

### **Capital Commitment and Fund Size**

In order to make this Fund sufficiently attractive to private sector investors, it is intended to mitigate the risks for the private sector through a financial contribution of the Regional Government to the fund representing more than 30%. The financial participation of the Region is not yet officially determined. Yet it will average 10 million Euro. To supplement public participation, it will also explore the possibility of other local communities participating.

During the fund-raising phase, potential investors will be sought, from the financial sector (banks operating in the Nord Pas-de-Calais, European investors, traditional community sponsors, etc.) and from the industrial sector, particularly in the energy and utility area.

#### Mode of intervention

It is expected that the Fund will be able to provide various forms of financing: equity for the setting-up of project companies such as ESCOs, subordinated loans as well as other hybrid capital finance. The conditions and limitations under which these various instruments will have to be used will also be further defined during the course of the project.

### Fund return

Again the final scheme is to be further determined but will be based on the following ideas:

- If the global fund return is above a certain threshold, public and private investors will receive the same level of returns proportionally to their commitments;
- If the global fund return is below various predetermined thresholds, the public investor's returns will be reduced accordingly so that the part of the private sector can be increased.

The differentiated return allowed by the public intervention reduces the financial risk for investors and increase the attractiveness of investment in what is still seen as a new, relatively risky and pioneering field of investment.

### Fund management

The Fund has to be managed by an experienced fund manager that has the technical and financial capacities to manage energy efficiency and renewable energy projects.

The Fund manager will in particular have to:

- Assist the fund investors in the preparation of the legal documentation regarding the establishment of the Fund
- Identify the possible investments and prepare the projects for submission to the Fund's internal bodies (Investment Committee, Policy and Strategy Committee)
- · Implement and monitor these projects
- · Report to the Board of Directors of the Fund
- Manage financial participations in the Fund

The Fund manager will receive an annual remuneration to be negotiated. It might represent a certain percentage of the total funds managed plus a possible success fee depending on its capacity to meet the fund investors in terms of return on investment.

The Regional Government is presently in discussion with the FINORPA to check the possibility and adequacy of having it carry the Investment Fund for Climate. FINORPA is a Regional Fund created in 1984 by the State to facilitate the reconversion of the industrial sector (which was mainly dominated by the mining sector). Each year, FINORPA finances 150 to 200 projects ranging from 30 000 to 3 Million Euro. It intervenes in the form of equity participation, hybrid capital for a total amount of 25 Million Euro. While very interested in the idea of dealing with a climate change fund, this Fund manager has the disadvantage of having no experience in the field of energy efficiency and climate change issues. Therefore, if FINORPA is selected, the Region will have to provide an informative network of actors and experts in the field of energy efficiency and renewable energy and ensure that FINORPA develops an internal expertise on those subjects.

However, its strong point lies in its history: Finorpa has been participating in the restructuring and development of new industrial activities on the territory since its creation. For this reason, it has hired experts with a technical profile (engineers) who have been working closely with the financiers. Today it has both a technical and financial culture and this is what the Regional Government is seeking. Indeed, energy efficiency requires work in the field that is not generally in the experience of fund managers that have a purely financial approach. In addition, the capacity of Finorpa to manage projects of different sizes is also an asset for the management of a Climate Fund as it is precisely the diversity of sizes that characterizes energy efficiency projects. Traditional fund managers, on the other hand, tend to place most quickly the fund resources on large projects with strong outputs to reduce the size of management costs. Fi-

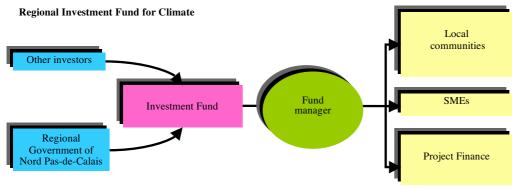


Figure 2.

norpa was, on the contrary, created to take into account the diversity of regional economic activities.

# STAGE OF ELABORATION

A first discussion with the potential financial partners of the Fund has proved that there was an interest in this approach and that a financial participation was possible on the condition that a formal frame of discussion was defined. All in all, certain financial institutions understand well the stakes related to the project and show an interest as it permits them to position themselves both on the market of energy efficiency and on that of carbon credits.

The main activity at present is giving information and explanations to the various Directorates and Departments of the Regional Government insofar as the political initiative of creating an Investment Fund based on a PPP goes beyond the Government's culture both in its objectives and methods/modes of implementation. In parallel to this work, the department in charge of the Fund setting up, is preparing the terms of reference for a complementary study that will specify the size of the Fund and propose a first outline of the Fund's method of management and intervention in terms of project portfolio diversification, minimum project profitability, external resources mobilisation. The study will give the Fund manager appropriate technical assistance guaranteeing the good functioning of the Fund, i.e. its capacity to identify, evaluate, structure and finance projects under the conditions determined by the Fund investors.

# THE STAKES

- One Euro from the Regional Government generates 8 Euro external investment
- To mobilise private capital for the achievement of collective objectives
- To introduce a project logic at the SME and local community level: to bring expertise to project structuring, to ensure project viability (guarantee of return on investment for the private sector)
- · To take latent projects into account
- To increase local expertise
- To support local employment (energy efficiency projects are in general less capital intensive than energy offer projects

- To give in the short term a concrete response to the constraints of public financing
- To involve sponsors in decision-taking: the submission of each project to the Fund's investors guarantees that the selected projects are economically and financially reliable.
- To investigate the possibility of integrating, in a second stage, the new carbon credit system into its mode of functioning: as a regional climate fund, the Funds should seek to use the carbon emission reductions resulting from the financed project to obtain carbon credits, thus increasing the projects' profitability as well as reducing the associated risks.

# Discussion about these instruments

### KEYS TO THE SUCCESS OF THESE INNOVATIVE TOOLS

It is yet early to evaluate the conditions of success without having experienced any return on these instruments. However, two very pragmatic recommendations resulting from experience abroad and common sense can be formulated.

# To rely on a broad network of actors whose principal mission consists of promoting energy efficiency and climate change actions

Giving the responsibility to private organisation to manage promotion tools in a field traditionally managed by public authorities does not mean that the traditional partners are replaced. On the contrary, the latter have to be identified as the privileged intermediaries to inform the potential beneficiaries about the existence and the procedure of such tools. For instance, as for the soft credit line, the 12 "Espaces Info Energie" of the Region, whose role is to advise and inform private individuals on energy efficiency, will distribute informative booklets and provide oral information to private individuals.

Moreover, a vast dialogue has been entered into with the craft industry sector which will have to meet the forecast increase in demand for insulation work. Solutions have been sought and proposals made to avoid the lack of compliance with the eligibility criteria list by the craftsmen. The possibility of developing a Charter binding the craftsmen and the Regional Government has been evoked. As for the Investment Fund, as mentioned before, the actor identified as the very probable future Fund Manager (FINORPA) has no experience in the field of climate change. It will of course have to develop an internal expertise in climate change issues to be granted the management of the Fund. Yet, this internal competence will most probably not be sufficient to really create dynamism on the energy efficient and renewable energy market. It is therefore important to built around it a strong network of experts specialising in climate change and energy issues that will work closely and in a formalised way with the Fund manager. These experts will have the particular mission of identifying relevant projects with the fund manager.

# To fully understand the market conditions in the region in which the instrument is elaborated and to fit into the systems already in force

The new tool design has to take into account the context in which the tools are implemented. For instance and in particular:

- The support measures of the National 2004 Climate Plan: the zero-interest credit line design has to take account of the tax credit for work improving the energy efficiency of buildings. The financial organisations answering the call for proposals must explain how these measures can fit in with that of the subsidised credit.
- The existing national programmes for the improvement of housing: the National Agency for the Improvement of Housing (ANAH) offers grants to private individuals or social owners wishing to restore their dwellings. These grants are not exclusively oriented towards energy efficiency measures as ANAH has larger objectives. Today, approximately half of the applications addressed to ANAH are not eligible (because of the nature of work considered, of the conditions of resources of the occupying owners, etc.). The instrument proposed by the Region will thus make it possible to take into account the thermal component of these cases.
- The local programmes developed by the communities within the region: for instance, while designing the subsidized credit line, the Regional Government has found out that a large local community of the Nord Pas-de-Calais ("la Communauté Urbaine de Dunkerque") was planning to develop the same type of instrument for the same purpose (insulation work): a common programme between the Regional Government and the Community of Dunkerque is of course more rational and efficient as it would avoid confusion for the potential beneficiaries. Thus, the Community of Dunkerque could give additional financing for the credit line which would make it possible to decrease the interest rate even to bring it under zero.

It is crucial that the modes of intervention of the financial organisations and the fund manager are each renegotiated with the Regional Government to take account of the evolution of regulations, support mechanisms and more and more generally of the political, institutional, socio-economic context and energy efficiency approach in the Nord Pas-de-Calais Area.

# WHAT ARE THE DIFFERENCES BETWEEN "TRADITIONAL" AND "ALTERNATIVE" MECHANISMS?

These new instruments, in comparison to "traditional" Funds based on direct assistance, are characterized in particular by:

- the use of tools traditionally devoted to private sector investments (such as loans);
- the search for the participation of private investors which can be financial and commercial institutions such as banks or private companies;

The short and long term objectives differ:

- the short term objective lies in obtaining a good return on investments for the Fund's private investors;
- the long-term objective is to develop a market for energy efficiency which would function without the need for public intervention.

The main difference between a traditional investment fund and an "innovative fund" is that the latter seeks a direct return on investment. The fund sponsors need the guarantee that they will be reimbursed the money they have put into the project in one way or another depending on the type of financial instrument used (loan, equity participation, convertible debt, energy performance contracting, etc.). The perspective is therefore completely different. Whereas the public funds spread money into the system without being sure of getting direct results in financial terms, the private or public-private funds seek direct profitability.

# WHY CAN'T SUBSIDIES ALONE ENSURE A GENERALISATION OF ENERGY EFFICIENCY INVESTMENTS?

Traditional public intervention methods (subsidies), if they are relevant to encourage innovation, are often unsuitable when one seeks to encourage a generalisation of investments in the field of rational use of energy and development of renewable energies.

Moreover, the current context of increased competition in and between the developed countries and the rationalisation of public budgets have oriented the design of investment assistance tools in the field of climate change towards a more systematic share between private and public financing.

In comparison to traditional tools, such as grants, innovative tools based on a PPP, such as the co-subsidized loan scheme, for example, can have several assets:

- They remain in the logic of investment contrary to direct subsidies which often intervene after the investment and are not always granted at final.
- In contrast to the provision of subsidies, the fund manager or the financial institution includes in its treatment aid such as an interest rebate which greatly simplifies and accelerates the bureaucratic process. For example, the delegation of the scheme management to banks for which loan attribution is the core business is administratively cost-effective.
- They introduce a project logic for the potential beneficiaries and increase local expertise.

- They give a concrete answer to the constraints of public financing.
- Loans are renewable (contrary to subsidies). Thus the money invested in a project could later be invested in other projects and the intervention is made on a commercial basis.

# WHY CAN'T THE MARKET ALONE ENSURE THE GENERALISATION OF ENERGY EFFICIENCY INVESTMENTS?

Project financing combines various resources in variable proportions, depending on the nature, the size, the profitability and risks associated with the project:

- self-financing,
- loans,
- equity financing (if the project requires reinforcement of the capital of the company which carries it and/or if the project requires the creation of an ad-hoc company).

The financial looping of the project can also mobilize certain aids (to the creation of companies, to innovation, etc.).

With the exception of aids whose object is often specialised (i.e. following the FRAMEE example, reserved for a certain type of project) and to certain equity participation (realised by venture companies specialised in the development of projects with significant profitability in sectors of innovation), the external sources of financing (loans and/or capital) are generally supplied by non-specialist financial institutions.

The ignorance of the non-specialist financial institutions concerning the energy efficiency market is an established fact. Moreover, it is reinforced by the weakness of expertise in technical and financial structuring of many project promoters (and in particular of SMEs and small to medium sized local communities): it results in an incapacity to present and explain the interests of energy management projects to potential sponsors.

The majority of the projects calling upon external financing are development projects (increase in production capacity, process' modernisation, launching of a new range of products and/or services). The realisation of these projects is generally accompanied by an increase in turnover and the financing of the investment (the refunding of loans and the return on the invested capital) comes from the profit generated from this turnover.

The economy of energy management projects is different since the return on investment is ensured essentially (in most cases) by the savings on the energy bill and not by an increase in turnover. For the financers, this difference is fundamental and mainly explains their reluctance to finance this type of project. In addition to this "cultural" barrier relative to the nature of the project, energy management projects present another hurdle for financers: the payoff period of the investment in energy efficiency, in a context of low energy prices, is on average longer than that of development projects. It induces a problem of adequacy between the cost (interest rate) of the external financing and the profitability (capacity of refunding the external financing) of the projects. Lastly, the energy management projects are seldom projects which concern investments in core business. For this reason they do not constitute a first priority for the project promoters. Consequently, the share of self-financing available for these projects is often tiny and seldom reaches a level which can give financial credibility to the project and thus attract external financing under acceptable cost conditions.

# RELATION BETWEEN "TRADITIONAL" TOOLS AND "INNOVATIVE" TOOLS

As indicated previously, PPP has existed for a long time. For instance, the national defense policy or part of the housing policy are based on this mode of intervention. Delegation of public services, franchises are forms of PPP. As said before, the innovative factor of these tools is to try to transpose these mechanisms in the field of energy efficiency and renewable energy.

Traditionally, the public sector seeks economic goals (territorial planning, competitiveness), social goals (employment, economic and social cohesion, fight against poverty) and to a smaller degree environmental goals (fight against local pollution or climate change). As for the private sector, it seeks objectives of profitability (maximum return on investment), investment safety (to invest while limiting the risks). They are two parallel logics. The PPP creates the financial and legal framework enabling the public sector to pursue its public policy goals while guaranteeing to the private sector satisfaction of its own objectives. At the same time there is a leverage effect on public finances since a significant part of the project financing is carried out by the private sector. Finally the PPP makes it possible to introduce market practices with regard to investments in the field of climate change since the return on investment becomes a significant factor of motivation in the financing decision.

The relation between "traditional tool" and "alternative tool' is complementary rather than opposed.

Innovative tools are not sufficient to ensure by themselves a great increase in the energy efficiency or renewable energy market as private sector finance ousts a wide range of projects whose financial situation is not solid enough or whose size is not attractive enough. Depending on the type of project, it is not always appropriate to require innovative financing. In fact, the best solution often appears to be a mix of innovative tools and traditional tools assuming that no solution excludes another. The existence of such tools is conditioned by public backing which allows private funding leverage. Indeed, the experience of existing funds suggests that private partners will only provide investment on an equity or loan basis if there are other parties involved (co-financing).

Traditional tools are not sufficient to ensure by themselves a great increase in the energy efficiency or renewable energy market as public sector finance is *per se* limited and therefore all the projects potentially eligible for direct grants cannot be treated.

Moreover, alternative funds promoting energy efficiency require legislative or public financial support and involve public funding. Finally, the increased use of and interest in these alternative funds can also be seen as the expression of a worldwide tendency to manage and to transfer to the market and private regulation public objectives, in other words to create a leverage effect on public finance. Public subsidies, fiscal incentives or other kinds of public support to renewable energy and energy efficiency projects highly increases the profitability of the projects, thus reducing risks: it brings more certainty to the Fund's revenue projections.

# Conclusion

The two instruments presented in this article take as a starting point experiments successful in France and abroad. Adapted to the regional context of Nord Pas-de-Calais, these mechanisms are likely to significantly boost the market for energy efficiency and thus to contribute to the objectives of the Regional Government and its partners as regards greenhouse gas emission reduction. The innovative character of the mechanisms proposed lies less in the "technicality" of the procedures than in the logic for mobilising financing. Indeed, without giving up the logic underlying subsidy mechanisms, the proposed mechanisms endeavour to limit the disadvantages of the latter by adding to direct government aid a financial market product (loans at a preferential rate, equity participation, loans entitling the financer to an interest in the company in particular). The extent of the financing associated with these mechanisms makes it possible to consider an increase of the regional public intervention in sectors where energy efficiency potentials were only very slightly exploited up to now, like in existing buildings.