



"The Under2MoU" Memorandum of Understanding

1. THE RHÔNE-ALPES REGION

1.1. Context

Covering an area of 43,698 km² and with a population of 6,341,160 inhabitants as of 1 January 2012, the Rhône-Alpes Region is the second largest in mainland France and the 6th most important European region in economic terms.

With its tightly knit industrial fabric, major road infrastructure, and dynamic agricultural sector, the Rhône-Alpes Region is responsible for 9.9% of France's final energy consumption. In 2013, fossil fuels represented 61% of energy consumed (69% in 1990), while greenhouse gas emissions were 6% lower than in 1990.

The Rhône-Alpes region is also a major energy producer, primarily electric energy. The region has 4 nuclear power plants, which is one of the highest concentrations of nuclear energy production in Europe. It also has extensive hydroelectric capacity, producing close to 30% of France's hydroelectric power, and with a great deal more potential on the Rhône River and in the Alpine valleys. Though more recent renewable energy sectors such as photovoltaic solar energy, biogas, and solar thermal energy are still just a small part of total energy production, they are witnessing steady growth. While the use of wood for heating is a long-standing local tradition, there has been a gradual shift from logs to wood pellets and forest chips.

1.2. An exemplary climate policy that drives mobilisation

Since 2004, the Rhône-Alpes Region has been committed to fighting climate change, particularly through its comprehensive approach to sustainable development that follows two guiding principles:

1. Serve as an example by implementing policies that are consistent with the principles the region encourages Rhône-Alpes residents to adopt.
2. Promote environmental responsibility by encouraging widespread integration of climate issues among all the Region's partners, stakeholders, and intended audiences.

In 2013, the region adopted a Climate Plan that reformulated its greenhouse gas reduction objectives and made its climate actions more visible, all while mobilising the region's elected officials, employees, and partners.

Furthermore, in April 2014 the Region adopted the Regional Climate-Air-Energy Scheme (SRCAE), developed in collaboration with the National government as part of a participatory approach. It strengthens the coherence of territorial initiatives and adapts France's national and international air, energy, and climate objectives to the regional level.

2. THE OBJECTIVES OF THE CLIMATE POLICY

The Regional Council set its first quantifiable climate objectives in October 2010: a 40% reduction in greenhouse gas emissions between 1990 and 2020, and an 80% reduction between 1990 and 2050.

These are the Region's objectives for actions within its areas of competence, such as the Region's Climate Plan, where it has already exceeded certain objectives for 2020 (internal operations, passenger transport), or is well on track to achieving them (public high schools).

Where there are shared competences, particularly with the national government, the Region works to promote its own objectives. This was the case with the Regional Climate-Air-Energy Scheme in particular. This Scheme, though not legally binding, applies to all Rhône-Alpes stakeholders, whether public or private, individual or collective.

It has set the following objectives for 2020:

- ⇒ Reduce greenhouse gas emissions by 29.5% as compared to 1990
- ⇒ Have 29.6% of final energy consumption come from renewable energy

3. ACTION AREAS

3.1. Overarching priorities

Mitigating the effects of or adapting to climate change is everyone's responsibility. It is therefore necessary to establish a form of climate governance to ensure that these issues are addressed. Energy insecurity is set to become a major challenge in the coming years, which is why the SRCAE recommends better identification of vulnerable populations and offers suggestions for reducing energy vulnerability mainly due to heating and transport.

Additionally, the shift to greater energy efficiency and lower greenhouse gas emissions will require:

- **Encouraging behavioural changes** among socio-economic players and citizens
- **Adapting existing employment and training policies** by developing new occupations, primarily in renewable energy, green building, and energy-efficient building renovation

In terms of research and innovation, the Regional Innovation Strategy is preparing for climate action by mobilising economic players and researchers (particularly those based in competitiveness clusters) in the fields of clean energy, sustainable building, smart transport, and so on.

3.2. Energy efficiency

In terms of energy efficiency, the following action levers have been identified in several sectors:

Climate action must be integrated into urban planning approaches, with a particular focus on both collective and individual transport. The transport sector must also address freight transport and prioritise low-emission technologies.

The building sector is also particularly important, both in terms of energy retrofits of existing buildings, which can be quite complex, and new constructions. As for public tertiary buildings, the Region has created a local public company to accelerate energy renovation of properties owned by local authorities.

For the industrial sector, the challenge is to improve the energy performance of companies in the Rhône-Alpes Region, as well as promote the concept of industrial ecology and the growth of eco-innovation.

As for the agricultural sector, it is the largest source of non-energy related greenhouse gas emissions. Farming must therefore become more energy efficient by integrating distribution channels, and cultural practices must change so that inputs (crop protection products) are reduced. Changes in livestock farming and the choice of crops that are planted are also necessary.

Energy production

To reach its renewable energy objectives, a territorial approach is necessary to ensure that each territory creates a specific plan to develop renewable energy. However, levers have also been identified for each sector to encourage actions that are adapted to the characteristics of each: wind energy, hydroelectricity, fuel wood, waste recovery, solar thermal and photovoltaic energy, heating networks, and geothermal energy.

Smart energy grids and the storage of electrical energy in particular are two areas where a great deal of progress is being made. On that topic, the Rhône-Alpes Region has launched an investment fund to facilitate the development of renewable energy.

Adaptation to climate change

The Region specifically addresses adaptation to climate change in its climate policies. Water availability is of critical importance, but adaptation is also examined in relation to specific industries such as agriculture, forestry, and health.

Lastly, an observatory on the effects of climate change was established to help develop solutions to these different problems.