Union Française de l'Électricité

CONSULTATION OF THE EUROPEAN COMMISSION ON A FRAMEWORK FOR ENERGY AND CLIMATE POLICIES FOR 2030

ABSTRACT

The French union of Electricity very much welcomes the initiative of the European Commission, to launch a public consultation on a 2030 framework for climate and energy policies.
The UFE underlines the importance of such an approach, at a time when the energy sector is facing a very hard and challenging situation, threatening the competitiveness of its utilities, and on the long term, the security of electricity supply of the European Union.

Therefore, in the opinion of the UFE, a new framework for 2030 should be the opportunity to consolidate, and re-balance the European energy and climate policies, by putting at the core of the economy decarbonation scheme, two major issues: on one hand, ensure the security of electricity supply, and on the other hand, realize the necessary investments, within sustainable economic conditions, which cannot be achieved by the electricity sector today.
To meet those challenges, and design a consistent and effective 2030 framework for European energy and climate policies, **the UFE has set 22 Key priorities**:

Recommendation 1: *Reconcile the fight against climate change with security of electricity supply, and competitiveness of the economy, particularly for the electricity sector (mix and network)*

Recommendation 2: *Set a single, ambitious, realistic and binding CO2 objective for 2030, on tracks with the objectives set for 2050*

Recommendation 3: *Consolidate the ETS mechanism as the central tool for the transition to a low-carbon economy and strengthen it on the long term using structural measures (dynamic management of quota supply, based on criteria to be defined)*

Recommendation 4: *Immediately implement an ad hoc and quickly operational adjustment measure (backloading)*

Recommendation 5: *Ensure that the development of production assets is consistent with the long-term needs of the electricity system*

Recommendation 6: *Consider the implementation time of investments (generation, networks) in energy policies and instruments*

Recommendation 7: *Coordinate the adaptation of network infrastructure with the evolution pace of the energy mix*

Recommendation 8: *Rationalise the delays for the achievement of network infrastructures in particular through the simplification of administrative procedures*

Recommendation 9: *Anticipate and secure the financing of investments in the electricity system, in particular through prices and tariffs reflecting all costs (production, networks)*

Recommendation 10: *Implement transient support mechanisms for RES, based on industrial maturity of the technologies*

Recommendation 11: *Promote R&D for non-mature renewable energy technologies*

Recommendation 12: *Make RES producers responsible for the supply / demand balance of the electricity system in the short term (End of priority dispatch: generation forecast, nomination, imbalances management), and in the long term and prepare them gradually for full valuation of their production on the market*

Recommendation 13: *Ultimately, remove support for fully mature technologies, investments in which should be stimulated by the energy/carbon price signal*

Recommendation 14: *Exchange information on capacity and flexibility requirements (CCGT, pump hydro storage, storage, etc.) within each area of interconnection, so as to anticipate medium and long-term equilibria.*

Recommendation 15: *Ensure the construction of the necessary capacity, based on long term needs of the electricity system by implementing capacity mechanisms, as a complement to the energy market, transparently, and* taking into account for each Member State the resources provided by other areas of the European market.

Recommendation 16: *Support energy transition by developing smart networks and promoting thus, the participation of future consumers / producers in the electricity market*

Recommendation 17: *Ensure that the flexible supply is correctly valued by the market*

Recommendation 18: *Organise transparency and information sharing between Member States regarding changes in their energy mix, networks and associated policies*

Recommendation 19: *Provide stability and simplification of regulations, to minimise their cost, in a context of increasing investment requirements*

Recommendation 20: *Target the most profitable energy efficiency measures as a priority*

Recommendation 21: *Promote demand control tools acting during consumption peaks or intermittent production drops*

Recommendation 22: *Maintain unity in climate change and energy policies and mechanisms, while providing for the possibility of making adjustments for certain categories of consumers, when this is justified*

I. FEEDBACK ON THE 3x20 EXPERIENCE

The current situation of the European electricity market has highlighted a **strongly interdependent and initially under-estimated aspect of the objectives that were set for 2020,** for CO_2, renewable energy sources, and energy efficiency (3*20)
The consequences of this lack of coordination between the three objectives were furthermore emphasised by the **inconsistency between the different European energy policies**:

- 3x20:
  - 20% Energy Efficiency
  - 20% CO2 emission reduction
  - 20% Renewable Energy Sources
- EU Emissions Trading Scheme
- Achievement of the internal Energy market

This interdependence and the lack of coordination and consistency between those policies, sometimes led to a counterproductive effect of one policy on another.

1. Fall of the CO2 price, driver for investments in low carbon technologies

First, **the efficiency measures and the development of renewable energy sources (RES) have resulted in a fall in CO_2 emissions**, which had not been adequately considered in the initial objective of -20% CO_2. This phenomenon, emphasized by the economic crisis and the fall in electricity consumption, generated a surplus of quotas on the carbon market and a fall in the price of CO_2, even though it should be the driver to promote investments in low carbon technologies.
The lack of a binding objective for CO_2 emissions reduction after 2020 strengthened this trend, and contributed to the lack of visibility for the stakeholders, regarding the long-term CO_2 price signal.
In this context, the European carbon market couldn't adapt itself properly to the changes in the economic situation. In fact, the quota supply was fixed in advance, with no possibility of adjustment, while demand varies depending on exogenous factors (energy consumption, economic growth, changes in generation mix and RES development).

2. Development of generation overcapacity

In parallel, the development of new assets has been encouraged (e.g. through RES support mecanisms) in a way frequently unrelated to the long-term supply and demand adequacy of the electricity system.
Therefore, **the pace of development of RES, with consequences that were more significant than expected and unrelated to changes in demand, has created an annual energy overcapacity in certain Member States** (Germany, Spain). This overcapacity, among other factors, has had a significant effect in reducing wholesale electricity prices.
Generation assets subject to market forces (particularly flexible semi-base load power plants) have thus seen their business model deeply modified, with, all other things being equal, a fall in their operating hours and reduced profitability.

3. *Closure of CCGT's and maintain of generation asset less performant in terms of CO2 emissions reduction*

In this overcapacity and CO2 price falling context, among semi-base load power plants, the profitability of CCGT have been particularly affected. The fall in coal prices due to the shale gas revolution in the USA on one hand, and the fall in the price of CO_2 on the other hand, have increased the competitiveness of coal fired power stations, compared to the CCGT one. This loss of profitability has led several European operators to mothball, or decommission some natural gas-fired plants prematurely, still more efficient in terms of CO_2 emissions, than coal fired power plants. Thus, this leads to ensure the intermittent generation back-up with coal-fired power stations, less efficient in terms of CO_2 emissions than recent CCGT. **However, while RES are taking an increasingly important share in the energy mix of most States, these assets could prove to be essential to the security of electricity supply**, because they contribute among others to the back-up for intermittent production and constitute reserve capacities to respond to peaks in energy demand.

4. *Lack of predictability on the long term economic signals, necessary to ensure security of supply*

While Europe finds itself in a situation of overcapacity in electricity generation, it is exposed to the risk of a power deficit in the future, to respond to peaks demand situations, or intermittent production drops. The present situation has yet impacted the ability of the market to give the right signals in terms of long term supply and demand adequacy.
European TSOs, as part of ENTSO-E, draw up a ten-year development plan for the European network, to ensure security of supply, make the electricity market more flexible and integrate renewable energy sources. They also prepare an annual report 'System Outlook and Adequacy Forecast', meant to analyze the needs for the production-consumption balance within ten years. **But currently, these elements are not enough to assess the economic viability of existing power plants, or planned investments, and therefore the economic sustainability of the planned mix over this timescale**.

In addition, **this rapid growth in renewable energy sources, with no real development and integration path, is generating difficulties for network adaptation** (the most publicized example being Germany, but this is not the only one). On one hand, the consolidation of transmission networks, made necessary by the re-localisation of generation sources, is conducted too slowly, not so much for the building works themselves, than because of the delays of approval procedures, which are useful and necessary, but often redundant and suboptimal. Furthermore, the development of smart grids, in order to better integrate these production sources in the electric system at local and regional level, to mitigate the effects of this growth is not yet sufficiently advanced.

It is also worth noting that the fall in wholesale electricity prices is complicating even more the convergence between the cost of production for supported technologies and the average wholesale electricity price, and consequently the sale of the supported production, on the wholesale market.

Seen overall, the lack of predictability and coordination over the regulatory framework and market conditions in the medium and long term is harming investments across the entire sector (production assets, distribution and transport networks, energy efficiency measures). This situation affects the broader interests of the economy, because threatens the security of supply in many Member States, also increasing risks of power cuts and blackouts.

5. *An essential consistency for energy and climate policies*

The uncoordinated implementation of energy policies, and most particularly the three objectives of the energy-climate package has triggered a double depressive effect:

- **on the carbon market (quota surplus, carbon price too low to encourage investment in clean technologies),**
- **on the energy market (energy overcapacity compared to energy demand, leading to a fall in wholesale electricity prices and a loss of investment signals for the long-term supply/demand balancing).**

To this must be added the difficulties of network adaptation, due to the rapid growth of renewable energy sources and the inadequate regulatory framework to promote investment.

Overall, the European Energy and Climate policy is currently deadlocked. Expensive emissions reductions are favoured compared to economically more efficient actions, in such a way that decarbonisation of the economy is being performed at high and inefficient cost.
The existing market design is adapted for short-term optimisation, but cannot deliver as such, the signals for long-term investment, nonetheless essential for energy transition and change in the production mix.

The situations discussed above, as much for the CO_2 market as the energy market, have led certain Member States to take isolated initiatives, as a result of the ineffectiveness and/or inadequacy of certain European instruments. Such mechanisms turn out to be necessary in this context, particularly to enable Member States, responsible for their security of supply, to compensate the lack of signals for the long-term supply/demand adequacy. But the consistency between these mechanisms should be ensured at European level or at least at regional level, as much as the compatibility with the internal energy market.

Finally, **in terms of energy efficiency, no economic assessment was made of the different means to achieve the objectives set, resulting in the promotion of actions that were not necessarily the most effective**, nor the most profitable.
Furthermore, as the investments needed to achieve the objectives set for energy efficiency have not been calculated, the means of financing them have been neither planned nor anticipated. In the absence of financing instruments targeting the most effective measures in terms of energy efficiency and cost, we have an ineffective scheme, harming both the cost of the energy transition and the achievement of the objectives set.

Above the observed structural failures, the context of economy crisis makes it essential to improve the effectiveness and consistency of energy and climate policies, beyond 2020. Furthermore, while recent technological developments in other countries are deeply changing the worldwide energy framework(shale gas in the United States), and Europe keeps strengthening its environmental restrictions, and the price of electricity continues to increase , particularly pushed by the huge need for investment, a process of reflection should be initiated on how to maintain the economic competitiveness of European industries (including the electricity industry), and the household purchasing power.

II. GLOBAL FRAMEWORK OF ENERGY AND CLIMATE FOR 2030

To avoid overlapping objectives that would inevitably increase the cost of the necessary decarbonisation of the European economy, it is important, by 2030, to adopt a single, clear, binding and ambitious objective on CO_2 emissions, consistent with long-term objectives that the Commission set in 2011 in the 'Roadmap for moving to a low-carbon economy in 2050' and in the 'Energy roadmap for 2050'.
The predictability of this objective for long-term reduction is essential for the electricity sector, which needs a clear and steady signal to anticipate investments in the lowest-carbon technologies and in energy efficiency measures, because these are very capital intensive.

Furthermore, abandoning the 3*20 model after 2020, and setting a single and binding carbon objective for 2030 is an opportunity to reconsolidate and rebalance European energy and climate policies by replacing two major issues at the heart of the provisions for decarbonising the economy: on one hand, securing electricity supply and, on the other hand, achieve the necessary investments under sustainable economic conditions, which is not anymore the case for the electricity sector, in the current context. For the record, the European Commission estimates that the investments to be made in the energy sector between 2010 and 2020 amount to €1,100bn[1].
In the opinion of UFE, decarbonising the economy, based on a strategy with sustainable cost for the economy, depends on the best consideration of these two questions.

Recommendation 1: *Reconcile the fight against climate change with security of electricity supply, and competitiveness of the economy, particularly for the electricity sector (mix and network)*

[1] 'Energy priorities for Europe', Presentation by JM Barroso, President of the European Commission, to the European Council on 22 May 2013

III. DIRECTIONS FOR 2030

1. *Objective for 2030*

Ultimately and contrary to the current situation, the carbon price signal should be the real driver for investments enabling a transition to a low-carbon economy, including investments in renewable energy sources or energy efficiency. To this extent, **it is essential today to set a binding and ambitious objective for the reduction of CO_2 emissions by 2030,** and to coordinate different instruments or measures, according to this long-term target (e.g. by quantifying and accounting for reductions in CO_2 volumes resulting from these measures).

Recommendation 2: *Set a single, ambitious, realistic and binding CO2 objective for 2030, on tracks with the objectives set for 2050*

2. *ETS mechanism*

The ETS mechanism should be the key instrument for the transition to a low-carbon economy. This is an effective mechanism for supporting reductions in CO_2 emissions and facilitating the transition to a low-carbon economy, at the lowest cost. ETS also enables the formation of a single carbon price signal in Europe, which is essential.

However, to be effective, the ETS mechanism should provide an adequate level of incentive to invest in low or non-carbon assets; it should also provide this incentive in the long term, because investments in the electricity sector arise from a long-term choice.

With the current lack of relevance of the carbon signal, **it is essential to adjust and strengthen the system, using structural measures**. In this context, UFE supports the implementation of a dynamic management of the quota supply, which would consist in the adjustment of this supply, more or less automatically, based on criteria to be defined.

UFE also reaffirms its support for immediate implementation of an ad hoc and quickly operational adjustment measure (backloading), which is essential in the short term to restore credibility of the ETS system.

Recommendation 3: *Consolidate the ETS mechanism as the central tool for the transition to a low-carbon economy and strengthen it on the long term using structural measures (dynamic management of quota supply, based on criteria to be defined)*

Recommendation 4: *Immediately implement an ad hoc and quickly operational adjustment measure (backloading)*

3. *Path and cost of transition to a low-carbon economy*

The policy framework should allow investments in the most efficient and effective way. At the same time, existing assets must be fairly remunerated, consistently with their contribution to the electricity system.

It is therefore important that the development of production assets is consistent with the long-term needs of the electricity system.

As far as renewable energy sources are concerned,

- their integration into the electricity system has to be done at a known and controlled cost to the community;
- the development of these installations should consider and anticipate the completion time of these investments, essential to their integration in the electricity system, as well as for possible improvements (technological learning curves);
- we should avoid sudden and sometimes retroactive decisions by Governments on support schemes, because they have a strong and unforeseen impact on the pace of development of subsidized sectors.

Regarding non supported technologies, to restore the profitability of existing and useful assets for the electricity system, it is essential to control the development of subsidized energy sources. In fact, economic efficiency comes with the full use of existing resources for which the investment cost has already been absorbed, and for which mothballing or premature closure constitutes a considerable economic loss.

In general, the financing of new assets should be anticipated and secured, whether they are subsidized or not, through prices and tariffs reflecting costs.

Finally, **it is essential to assess and anticipate the investments** needed for distribution and transmission (which represent in itself 600 bn of euros on the 1100bn estimated by the European Commission), as well as the time constraints, inherent in the development of these networks.

Recommendation 5: *Ensure that the development of production assets is consistent with the long-term needs of the electricity system*

Recommendation 6: *Consider the implementation time of investments (generation, networks) in energy policies and instruments*

Recommendation 7: *Coordinate the adaptation of network infrastructure with the evolution pace of the energy mix*

Recommendation 8: *Rationalise the delays for the achievement of network infrastructures in particular through the simplification of administrative procedures*

Recommendation 9: *Anticipate and secure the financing of investments in the electricity system, in particular through prices and tariffs reflecting all costs (production, networks)*

4. *Mechanisms for supporting RES*

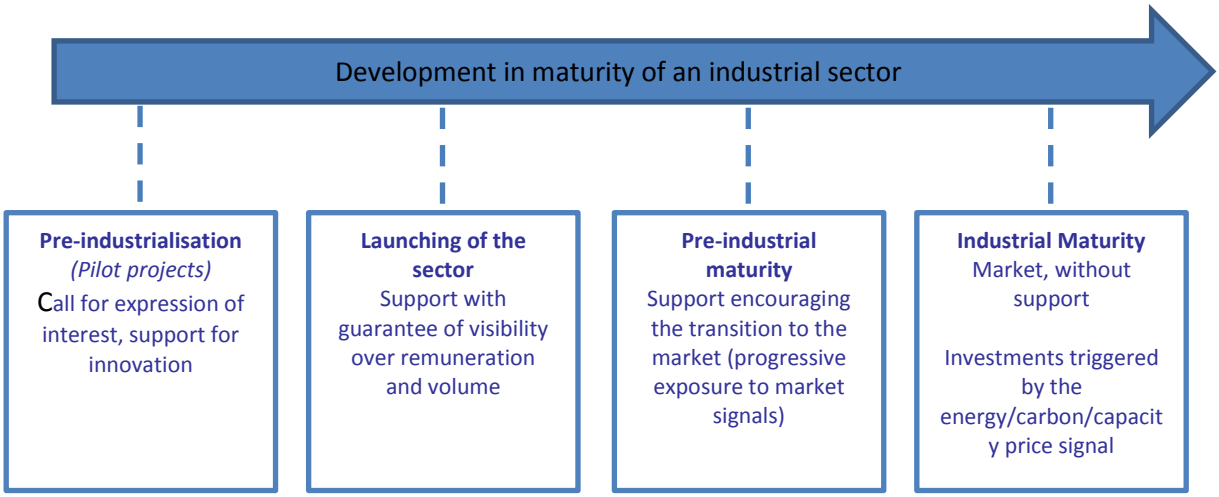
It is essential that the support schemes for certain sectors (e.g. renewable energy sources) allow their development to be driven, according to the long-term needs of the electricity system and ensuring at the same time the balance in the market.

For the UFE, the objective of a support mechanism is to encourage the development of technologies that have not reached yet industrial maturity, and whose development could not be achieved on the single criterion of competitiveness, under market conditions. Public support should thus facilitate the removal of different technical and economic barriers, with the prospect of reducing the costs of these technologies. However, a technology can achieve industrial maturity without being competitive.
Thus, ultimately, fully mature technological sectors should no longer benefit from support schemes. Investments in these technologies will therefore ultimately be triggered by the price signals on energy markets (incorporating the carbon signal and promoting thus the most efficient technologies in terms of CO_2 emissions).

However, it is necessary to provide support schemes for new installations, designed as to adapt themselves to the maturity of generation technologies and associated sectors.

For the sectors that reached a first stage of maturity, it is crucial to make producers responsible for the supply / demand balance on the short term (end of priority dispatch: generation forecast, nomination, imbalances management) and on the long term and to make them aware of market signals, thus **preparing progressively the transition towards a full valuation of their production on the market**.

Conversely, at earlier stages, the support schemes should be specifically focused on R&D and innovation programs.



Recommendation 10: *Implement transient support mechanisms for RES, based on industrial maturity of the technologies*

Recommendation 11: *Promote R&D for non-mature renewable energy technologies*

Recommendation 12: *Make RES producers responsible for the supply / demand balance of the electricity system in the short term (End of priority dispatch: generation forecast, nomination, imbalances management), and in the long term and prepare them gradually for full valuation of their production on the market*

Recommendation 13: *Ultimately, remove support for fully mature technologies, investments in which should be stimulated by the energy/carbon price signal*

5. Security of electricity supply and regulatory framework for investment

It is essential to allow market players to have visibility over the long term framework and the profitability of their investments, to ensure the construction and the maintain of production capacities, essential to secure energy supply at the European level. **The existence of a price signal that reveals the needs for optimization of the electricity system, in terms of supply and demand of capacity over the long term is essential**.

To this extent, it is necessary:

- to exchange information on the needs for capacity and flexibility requirements (CCGT, pump hydro storage, storage, etc.) for each European energy plate, so as to anticipate medium and long-term equilibria.
- to ensure the construction of the necessary capacity, based on long term needs of the electricity system by implementing capacity mechanisms, as a complement to the energy market, transparently and taking into account for each Member State the resources provided by other areas of the European market.

- to ensure that the flexible supply is correctly valued by the market.
- to maintain a framework promoting innovation and research (e.g. public finance of research and experimentation).
- to support energy transition by developing smart networks (smart grid, smart meters), and thus promoting the participation of future consumers / producers in the electricity market (active demand response).

Simultaneously, the **adaptation of network infrastructures must be well coordinated with the pace of change of the energy mix.** In this respect, peak demands are the main factor driving investments decisions in networks. The energy policy should therefore consider not only changes in energies produced/consumed, but also the impact of these policies on peak demands (sizing of capacity), in order to ensure that the security of supply and quality of supply, crucial for the economic development, can be maintained.

As Investment required in the electricity sector are to be increased, and incorporated in long term cycles, it is also important to seek a certain stability and simplicity in public policies. **In order to ensure a competitive energy cost, we must aim to simplify regulations and reduce their economic impact.**

Globally, considering the freedom of Member States to choose their energy mix, **it is essential to arrange a greater transparency and better information sharing, with the aim of limiting threats to the stability of the electricity system and cross-border impacts.** This is particularly desirable regarding changes in energy mixes, networks development, and RES support policies.

Recommendation 14: *Exchange information on capacity and flexibility requirements (CCGT, pump hydro storage, storage, etc.) within each area of interconnection, so as to anticipate medium and long-term equilibria.*

Recommendation 15: *Ensure the construction of the necessary capacity, based on long term needs of the electricity system by implementing capacity mechanisms, as a complement to the energy market, transparently, and* taking into account for each Member State the resources provided by other areas of the European market.

Recommendation 16: *Support energy transition by developing smart networks and promoting thus, the participation of future consumers / producers in the electricity market*

Recommendation 17: *Ensure that the flexible supply is correctly valued by the market*

Recommendation 18: *Organise transparency and information sharing between Member States regarding changes in their energy mix, networks and associated policies*

Recommendation 19: *Provide stability and simplification of regulations, to minimise their cost, in a context of increasing investment requirements*

6. *Energy efficiency*

It is **crucial first, to target the most efficient investments** (cost / energy saving ratio).

It is also advisable, under conditions of increased production from renewable sources, to **promote most particularly energy efficiency measures that also contribute to controlling power** during peak consumption or intermittent production drops. This objective should favour demand control tools (smart meters and curtailment measures).

Furthermore, the financing requirements of energy efficiency policies should be calculated in advance and procedures for financing these investments should be planned.

Recommendation 20: *Target the most profitable energy efficiency measures as a priority*

Recommendation 21: *Promote demand control tools acting during consumption peaks or intermittent production drops*

7. *Industrial competitiveness and household purchasing power:*

It is important to recall that **unity in energy and climate policies at the European level is essential**. Implementing different policies or instruments based on the different stakeholders involved, will lead systematically to a risk of windfall effects or edge effects.
The mechanisms considered (e.g. ETS) should therefore be or remain the same for everyone.

On the other hand, **it is legitimate to plan adjustments intended to correct or limit the impact of certain mechanisms on certain categories of consumers**, for example industrial companies exposed to carbon leaks or subject to international competition on energy prices, and likely to relocate its European implantations.
Those adjustments should however be financed otherwise than by transferring the correspondent charges on the other categories of energy consumers.

Recommendation 22: *Maintain unity in climate change and energy policies and mechanisms, while providing for the possibility of making adjustments for certain categories of consumers, when this is justified*