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## RES-e Regions / WP2 RES-e barriers in the Rhone-Alpes Region

### Analysis of grid connection and administrative procedures *November 2005*

Two years ago the programme OPET Res e looked at the non-technical barriers to decentralised electricity production in the Rhône Alpes region of France. Since then, the legal framework has evolved, actors have gained experience in completing the many diverse procedures, and the distribution grid manager has worked on resolving some of the difficulties that producers reproached them of creating. Despite positive advances, much work remains to be done if decentralised electricity generation from renewable sources is to become widespread and easy to implement in the region. The sticking points have changed very little from two years ago; clear and continued political support, a simplification and reduction in the number of procedures, fixed treatment times and a real transparency from the grid manager remain key points to work on.

Electricity from renewable energy sources has a long history in the Rhone Alpes Region, beginning with small hydroelectric power in the Alps. With strong demand from private individuals for grid connected photovoltaics, favourable conditions for wind projects in the southern parts of the region and local authorities actively investing in renewable energies, the many actors in the region are one step ahead of the rest of the country. Despite this, non-technical barriers still exist, notably in the length of the many procedures, the lack of transparency and access to information concerning the network as well as an uncertain political support for renewable energies.

#### **Situation regarding “guarantee of origin”**

- Legal frame

Until now the guarantee of origin does not exist in France.

The new Law on Energy from the 13<sup>th</sup> of July schedules to establish a system able to issue a guarantee of origin. The decree of the Law has not yet been announced, but the content of the Law is as follows: The guarantee of origin will be delivered by the grid manager (public

grid of electricity transport and public grid of electricity distribution) to the energy producer. The cost of this service has to be charged to the producer. Anybody which buys RES-e will have the right to obtain the related guarantees of origin. The grid manager sets up and updates a register of the guarantees of origin.

- The green certificates

What does exist currently: the system of green certificates exists already. This tool is a service managed by Observ'ER, the French representative of RECS (Renewable Energy Certificate System).

Observ'ER issues one green certificate to the producer which has produced 1 MWh. The producer has to do a declaration until 3 months once the electricity from renewables has been produced and delivered into the grid. To issue the certificate, the producer has to mention from which plant the electricity comes from, and the date of production (time is not mentioned).

The costs associated to the service are distributed as follows (cost for 1 certificate):

- 0.04 €: emission
- 0.08 €: transfer (from the producer to the utility)
- 0.04 €: destruction (when the MWh has been effectively consumed by the customer)

Once the certificate has been issued, it can be transferred and consumed several months after their declaration date or even later. Their lifetime (period of validity) is not limited (no lapsing date).

## **Administrative Procedures**

- Clear and continued political support

Political support must be available if renewable energy generation is to be developed. In France, the government has used legislation, investment incentives, tax credits and feed-in tariffs to create a legal context for private decentralised renewable electricity production. The legal framework has, over the past years, been completed whilst some inconsistencies and unwieldy or difficult to implement strategies have been adapted. The texts are now well known with an accepted "interpretation", meaning less ambiguity and less chance conflict.

The landmark July 2005 Energy Law has been passed, and contains strong statements of support for renewable energies. This support has been largely mediated due to the escalating cost of conventional fossil energies. It must, however, be noted that for every support measure for decentralised renewable electricity generation, a support measure is introduced for conventional electricity production (research for nuclear electricity etc).

Regional government, while not involved in the publication of laws or decrees, has been active in the establishment of a Regional Energy Plan, with strong financial support for private individual investors and multiple occupancy housing projects. This support has allowed many projects to go ahead despite the drop in nationally available financial incentives.

Continued political support is necessary to ensure that, beyond the media impact of rising energy prices, decentralised renewable electricity generation will continue to grow. As the number of systems increases, not only does the amount of publicity increase, but also the different administrations become practiced in the processing of the different procedures. However, whilst procedures may be completed more "smoothly" than in the past, the number of procedures and the pressure this puts on the administrative staff is undiminished. The number of procedures and the processing time for a 1kWc photovoltaic project is still the

same as that for a 200kWc project, and this inconsistency needs to be looked at, as the resources of the producer are very different in the two cases.

The stormy passage of the July 2005 Energy Law has shown how sensitive some technologies are to the legal context : all wind projects currently planned came very close to being made ineligible for the feed-in tariff after the presentation of the law to parliament, and it is partly thanks to a concerted lobbying effort from Renewables associations that this did not come to pass. As the legal context was in doubt, the administrative processing of wind parks was greatly slowed down during the period before the publication of the Law, creating further delays in a process that is already very long.

It is for this reason that political support needs to not only be visible but continuing; every change in legislation, financing schemes or political orientation can undo many years of work on a project that has not yet completed the full gamut of procedures.

- A reduced number of simplified procedures

As the legal framework for decentralised electricity generation solidifies, procedures tend to become simpler to complete, not because of any changes in the procedures, but more because the different actors know the procedures as they have remained stable for a period of time. This applies to both producers and their consultants, as well as administration employees and public servants. Additionally, guidelines for different technologies have been published (by non-profit organisations, by government agencies, by producers federations).

A set of guidelines and forms developed by a photovoltaics association has proved very popular and useful, with most professionals adapting the forms for their own use. It is interesting to note that the guideline, (that regroups all the forms for grid connected photovoltaics) has been updated 12 times since it's first publication in 2002, due to changes in legislation and administrative requirements. Given the frequency of the changes, it is not unexpected that actors have problems with the administrative procedures.

The volume of systems for other technologies is relatively low, this sort of mass-used form have not been developed; indeed given the frequency of changes, it is to be wondered whether the guidelines would prove useful for more than a few projects at a time.

What is more important today than clear guidelines, now that some do exist, is a simplification of the procedures.

. This simplification could be achieved through a reduction in the number of administrative bodies involved in the process, dedicated structures, streamlined forms and a single contact point for all procedures. The ability to electronically complete the procedures would also be a nice simplification, saving both costs and resources. The mobilisation of high level resources for the administrative authorisation of systems is not optimal, in the past 4 years over 3000 exploitation declarations have had to be published in the Official Law Journal, side by side with new laws and decrees!

A real simplification of the existing procedures in all technologies would have multiple benefits; reduced manpower in the public servants, reduced opportunities for friction between developers and public servants, reduced costs and better planning possibilities for developers.

- Specified, enforceable time frames.

For wind developers and small hydro projects, one of the most difficult to manage aspects of project development is the planning phase; with administrative procedures that can take

anywhere from 1 to 7 years (in exceptional cases even longer), it is difficult for the project developer to plan correctly. For small photovoltaic projects the delays can be just as difficult to manage for an installer. Between the cost outlays and the date of invoicing, capital intensive photovoltaics requires a solid financial footing.

The delays are different according to the technology; grid connected photovoltaics requires a minimum one month administrative process, whilst small hydro and wind project are rarely able to complete the administrative procedures in under two years. The durations may be different however the problems are proportionally the same.

The long delays are due to different factors; complex linear procedures, the low priority given by some administrations to decentralise renewable electricity dossiers and on the contrary over-zealous public servants; court cases....

Whilst many of the procedures take time to complete (it is normal that a public inquiry for a building permit require a relatively long public consultation period for large projects) the varying length creates financial hardships on project developers. Manage a known, fixed, 3 year delay is possible, it simply requires planning and adequate provisions; managing a delay that could be anywhere from 1 to 7 years without any means of knowing the approximate delay is much less so. With long delays the local environment can change to such a point that the project is no longer possible (urbanisation), the project developer can experience financial hardship (several years work must be completed with no incoming revenue), the procedures may have changed requiring a restart (changes in legislation).... A capped processing time would greatly enhance the development of decentralised renewable electricity.

- One way procedures

Depending on the technology used, (for example, small hydro), those in opposition to a particular project have the opportunity to undertake legal action against the project. The ability to oppose projects is essential in the democratic process, however projects may be attacked at several different stages of the administrative procedure. If all actions were brought against a project at the same stage, not only time but also resources would be saved. It could also be advantageous if the technical / scientific validity of complaints were examined prior to being accepted..

## **Grid Connection : Technical Conditions**

Grid connection procedures depend on the voltage and technologies used. For projects under 36kVA (photovoltaics) specific procedures have been developed due to the large number of dossiers to be treated (only steps 3 and 4). The procedures for grid connection were modified in June 2004, as well as the management of the grid connection capacity queue.

1. Information request by producer → feasibility study by the grid manager (optional, and only for projects < 2.5MW)
  - An estimation of the feasibility of the grid connection
2. Detailed study request by producer → Detailed study (optional)
  - An estimation of the cost of grid connection taking into account the grid capacity reserved by project in the reservation list
3. Request for Full technical and economic study → A costed grid connection offer
  - The project must have administrative authorisation (building permit, impact study completed etc)

- The treatment time target by the grid manager is 3 months
- 4. Quote accepted and advance paid → a detailed grid connection study completed and a contract is offered by the grid manager
- 5. Grid connection (works by the grid manager)

The modifications of June 2004 were accompanied by changes to entry and exit criteria for the grid capacity reservation list (capacity is granted on a first in - first served basis)

Entry to the grid capacity reservation list is subject to supply of the building permit for the project, i.e. only projects with a high probability of going ahead may reserve grid capacity. The modifications to the entry criteria have resulted in a drop in the number of unlikely projects in the reservation list; developers no longer need to reserve capacity “just in case” another developer had done the same.

This change in the capacity reservation list, and the scope of the different studies undertaken by the grid manager is the fruit of much concerted work between developers and the grid manager through dialogue work groups. However, many subjects are still disputed; amongst these, the most important is the lack of transparency (grid capacity, technical requirements....) and the inability of developers to choose the contractor for grid connection works despite paying for the works.

- Transparency

The grid has a limited capacity; it is necessary to ensure that a new project will not overload the grid at any time. However, a developer must request a grid connection without any detailed knowledge of the local capacity. The grid connection proposed by the grid manager may require an expensive capacity upgrade. The difficulty for the project developer is to know how to avoid this capacity upgrade; for example, it may be possible for the project to go ahead without a capacity upgrade (and significantly lower costs) simply by reducing the project power by 5%... or planning a full stop of production for 10 hours at a particular day of the year...

Currently project developers must submit and resubmit grid requests for projects until they find the best compromise grid capacity & connection costs vs project size. This practice is not only a financial burden on the project developer, but also time consuming for the grid manager. The accessibility of grid data, and the transparency of cost estimates for grid connection need to be improved to create a more healthy environment for decentralised electricity production from renewable sources.

- Fair and competitive connection costs

Several factors create tensions between developers and the grid manager today ; high connection costs for project developers and the lack of incentive for the grid manager to contract financially competitive companies for grid connection works and capacity upgrades. In the past two years the grid manager has worked on a harmonisation of the grid connection costs for small photovoltaic systems. A “canvas”, with the detail of the 30 or so different types of connection installations that exist, and a list of works required for each configuration has been published. This allows producers to verify that the works required (and hence the cost) are comparable to a similar installation . Whilst this canvas has meant a coherent reply to grid connection request from small photovoltaic producers, it has not addressed the relatively high costs; grid connection costs are frequently equal to 10% of the system costs for 1kWp systems.

No equivalent exists for larger projects. Actually, wind and micro hydro developers often succeed in negotiating a significant cost decrease for grid connection works. The ability to

significantly reduce the cost of a grid connection simply through negotiation does not inspire confidence or trust in the initial quotes given by the grid manager.

It should be noted that a project developer must pay the grid connection costs, however the developer may not choose the contractor, and has no control over the contractors costs, as the grid manager chooses the contractor. This is harmful to the developer, as they must pay for works without having the opportunity to negotiate directly with the contractor; obviously, the grid manager has no incentive to choose cost competitive contractors, as they do not pay the final bill.

This situation has not evolved for large projects in the past years, despite the positive work undertaken for small photovoltaic projects.

Whilst grid connection costs remain high without a clear indication of why; whilst capacity must be guessed by incremental chances to project power, grid connection will remain problematic for decentralised electricity generation from renewable sources in France.

### **Grid Connection : Legal Conditions**

The grid connection contracts offered to producers have several problems today; whilst they are subject to negotiation for large projects, smaller projects (micro-hydro, small wind and photovoltaics) must accept the standard contract. These standard contracts are still under discussion with Renewables sector representatives as there are several sticking points.

Whilst many difficulties have been resolved, amongst the most pressing problems are the insurance clauses required by the grid manager (most insurers refuse the clause through a lack of information and demand for an open indemnity amount). This has been, through the last 3 years, the subject of many meetings between the grid manager and producers representatives; whilst some progress has been made (identifying the problem, agreeing that it must be addresses) no concrete result are yet to be seen.

A better balance of power between the grid manager and the producer would certainly speed the resolution of problems detected in the standard contracts.

**Report written in collaboration with**

