

# Situated energy transition : Facing the local past. The Prats-de-Mollo case study

ORAL PRESENTATION

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## Introduction

**How are energy transition dynamics intertwined with situated energy pasts ?** The communication I am giving you today aims to inform this issue with a **case study**. This is the case of an ongoing research-action program that is taking place in a village which is engaged in a process of **transforming its energy infrastructures**. Whether as stakeholders or observers of this process and of the research-action program, we noticed the importance of the local pasts on the ongoing dynamics in Prats-de-Mollo. **I am going to detail to you the hows of this observation and the different ways energy pasts broke into the experimentation and affected it.**

I am the speaker today, but this communication is the result of a collective work. Thus, I take one minute to mention the co-authors of this text and clarify our situations. Nicolas Loubet, Mikhaël Pommier and Rieul Techer are part of the co-initiators and co-producers of the citizen research-action program I just mentioned. They are part of the research cooperative Oxamyne. They interact with this field of experimentation both as researchers and stakeholders. For my part, I am PhD candidate in Science and Technology Studies at the French National Art & Craft Conservatory under the supervision of Bertrand Bocquet. I am carrying out socio-ethnographic studies of collective energy transition projects. Prats-de-Mollo is one of my case studies.

Today's presentation is the result of the first step of a collective discussion about how the case of Prats-de-Mollo affects our respective reflections on situated energy transition. This communication grew on our experiences, our readings and our interactions with the Pratean dynamics and the actors it is made of. The observations we report are the results of a systematic documentation, observations and interviews we conducted. In future steps we would like to open this discussion to these actors who carry the local knowledge and legacy of energy pasts.

# Some elements of context

## The transformation of the local energy infrastructures

Prats-de-Mollo is an **isolated village** in the French Pyrenees. For six years, the village is engaged in the **transformation of its electrical infrastructures** in order to find relevant answers to more and more stringent economical and technical issues that regularly led to supply shortages and threaten several local skilled jobs.

Part of the answer to tackle these issues was to **reduce the share of electricity imports by implementing local renewable energy production systems** and **add a digital infrastructure to the existing electrical ones** in order to improve the network management and infrastructures' investments.

To complement the production of the local hydroelectric power plant owned by the municipality and managed by the local DSO, an old local hydroelectric plant was planned to be put into operation again and various new production infrastructures were planned to be developed. To date, among all these projects only photovoltaic rooftops came to life on agricultural sheds.

## The digitising experimentation

In 2017, a Prats-de-Mollo representative and the DAISEE community gathered around a common experimental project aiming at exploring the feasibility of enhancing local citizen energy governance both through the implementation of digital tools and social appropriation workshops.

This experimental project has been the door through which we - co-authors of this communication - were allowed and able to enter the Pratean milieu.

# How energy pasts broke in along ?

## Thinking energy in the milieu allows energy pasts to come in

We assume that local energy pasts could express themselves because **researchers were deliberately sensitive to them.**

**A core-assumption of the citizen-based energy governance experimentation in Prats-de-Mollo was to consider energy systems as socio-technical.** Thus the interactions between energy infrastructures and their milieu are full constituents of these systems. The design of this exploration both led to and necessitated a fabric of power relations, imaginaries, lifestyles, governance, etc. all coming with a - potentially multiple - past.

**New infrastructures do not build on virgin ground in terms of energy, and more so when we are talking about transforming an existing system.** Both the materiality of energy issues and the representation of energy, and so their numerous relations with all the daily life components give pasts the ability to affect how the futures of energy are being built.

## Different forms of expression of energy pasts

Energy pasts came forward through different forms :

1. Firstly **through environment, territory and landscapes** that are carrying the scars of this pasts
  - Exploring the pratean territory you may find traces of previous energy systems :
    - i. Such as this watermill installed in the valley to produce flour, converted to produce electricity and then destroyed in a massive flood that occurred in 1940.
    - ii. Or this old hydroelectric plant that has been used to power a textile factory before being destroyed by the same flood.
  - This local History is well documented and is in the memory of many inhabitants mainly because the flood had significant effects on the local economy which transformed the landscape.
2. More recent pasts intervenes through existing **infrastructures and their maintenance** :
  - A recurrent issue in the village is the failure of an hydroelectric plant owned by the municipality. While modernisation projects are going on, this plant that should produce 40% of the electricity consumed by the village fails regularly.
3. **Practices and lifestyles** are also carrying marks of energy pasts:
  - Local knife makers continue to use coal-making methods that are related to the mining past of the territory.
  - A significative part of the inhabitants are using local wood for heating. The development of electric or fuel heating had an heterogeneous impacts on lifestyles
  - We also noticed heterogeneous quality of knowledge about energy whether people are living in centre-village or off-centre further in mountains. To understand this heterogeneity of knowledge about energy one should question the geographic

organisation of the village which is related to the historical farming activity of the village.

4. Last but not least the local energy grid is maintained and managed by a **local DSO** while 95% of the French distribution grids are managed by a national one. This is the legacy of both decisions that occurred in 1946, and the pride of the village of being able to live by its own while being isolated.

# How do energy pasts affected the local dynamics ?

First thing I have to mention is that pasts affect dynamics through the actors - human or non-human - that take part in these dynamics : they're a force that convenes the past. It's because inhabitants have a memory of the pasts, because infrastructures are characterised by their history or because researchers pay attention to pasts, that we have been able to notice their effects. Reciprocally pasts affect the actors. And thus it affected us, researchers.

## Paces of sustainable transitions

Being attentive to energy pasts has allowed researchers to progressively better understand the different temporalities that are at work in localities like Prats-de-Mollo. It allowed them to "better understand in which temporalities [they] could afford to work".

Quoting Mikhaël Pommier "*Pasts teach us how things move or remain still in Prats*". In other words it tells us about the power relationship, the hierarchy between the matters of interests and so on.

Being attentive to energy pasts put also into perspective a **diversity of rhythms that coexist in the same energy system** :

- *Political rhythms* of municipal elections.
- *Rhythm of materiality*, lifetime of infrastructures that set the maintenance organisation and influence both the viability, the efficiency and the rentability of the system. This rhythm concerns both existing infrastructures such as the hydropower plant of Prats-de-Mollo and new infrastructures such as the photovoltaic systems that have been installed in Prats. How long will these systems last ? How long will the Prats village manage to make them produce electricity ? How long will they fit the needs and the lifestyles of inhabitants ? This is the heart of the issue of sustainability.
- *Social rhythms* of construction of the different influence networks of actors.
- *Rhythm of external regulation* and interest of funders for the developed project.
- *Climatic rhythm* that sets the efficiency of technical solutions.
- *Rhythm of our own practice*. Investigation, participation takes time.

It forces us to think of temporalities as plural. **Transitions are not only about how the present affects the future, but about transforming the past's legacy as a continuum, accounting for the complexity of the present and uncertainty of the future.**

Infrastructures, wastes, practices etc. This legacy is involved in different mechanisms, which evolve at different pace. Aiming for sustainability implies to act on all these mechanisms, and thus to consider the variety of pace in the making of transition. This is another reminder that sustainability issues can not be tackled by solutions which are designed only regarding technical concerns, which may not respect social, political or practical rhythms.

## Merging memories, concerns, generations and temporalities

Investigating local pasts **has resulted in encounters that would not have happened otherwise**. While the transformation of the electrical infrastructures generates controversies and conflicts, meetings about alternative energy systems or energy pasts of the village gathered inhabitants behind common concerns or hobbies.

These encounters resulted in another dynamic based on a project carried by the local school. This dynamic aimed at organising an energy-themed funfair with the schoolchildren. It happened a few days ago.

Every actors from the local children, craftspersons and the parents **to the county and State representatives** gathered and exchange on energy matters. Behind its appearance of a school fair, **this energies' festival turned out to re-establish energy as a community pride and a public and shared-concern** in the village.

**It did not focus on how to transform energy infrastructures but questioned social dimensions of energy issues, memories and practices through different workshops**. Finally it created transgenerational links and it allowed *matters of concern* and knowledge to circulate. **This points out the potential role of history in grounding energy futures in territories and practices**.

# Conclusion

Considering energy as a sociotechnical matters allowed to identify several forms of intervention of energy pasts within the making of energy present and futures in Prats-de-Mollo.

The heterogeneity of knowledge about energy reminds us of the warning that raised Anaël Marrec on the numbing of temporal, political and ecological singularities. (Marrec, 2020)

However the transition project in Prats de Mollo is build on a rich energy history known by few inhabitants and on infrastructures that the municipality has to maintain maintenance. Furthermore the village is rich of people that carry a strong knowledge of energy. All this keeps the energetic pasts present.

**This case shows how intricate the temporalities are while engaged in an energy transition project;** which makes questionable the use of “transition” in such a process that has more in common with a continuum inheriting past inertia than with a more or less radical shift in the way we deal with energy (Fressoz, 2022)

The recent energy fair allows to merge concerns of energy futures of schoolchildren with the memory of energy pasts of the elders. This put forward an intergenerational frame and raises the issue of **transmission** between the layers of the temporal yarrow we described. **After Olivier Labussière and Alain Nadaï we emphasize the importance of considering a temporal continuum in order to build energy futures that are embedded in their milieu,** and we question how transmission mechanisms can take part in this building process.

This case study is in line with the analysis of Labussière, Nadaï, Fressoz, Marrec and other researchers that put forward that dealing with situated and local transition process reveal the complexity of relationships between technologies and their milieus.

This is why we will continue exploring digging this issue through situated and hopefully participatory research-action.

On what time scale and at what pace(s) can we transform energy systems ? How can the plurality of temporalities be incorporated into the process ? How can we use transmission mechanisms ? ... these are the questions

Thank you for listening.