CAFETT

Citizens **A**ttitudes and **F**eedback regarding **E**nergy **T**ransition **T**echnologies

A PROJECT PRESENTED AS PART OF THE PROGRAM

THE FUTURE OF ENERGY: LEADING THE CHANGE

Project description, executive summary and recommendations

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PROJECT DESCRIPTION

Widespread deployment of energy transition technologies, ETTs will largely depend on the attitudes of consumers and citizens. As soon as we turn to citizens, questions arise:

- Will the citizens be enthusiastic or reluctant towards ETT? Whether their attitude is positive or negative, it is necessary to understand for what reasons and under which circumstances they will accept or reject the ETT projects.
- What are their worries and their hopes regarding the energy of the future?
- What roles should play local, regional and national policies and politics?
- Are there community-typical attitudes? Do families and friends groups have particular roles?
- How is common good valued against individual comfort?

Many social, cultural, technical questions must be answered so as to anticipate how controversies are building-up and sometimes crystallize around ETT projects.

The objectives of **CAFETT** program are twofold:

1. Research and develop a method for incremental acquisition of a robust social science-based understanding of the nature and occurrence of controversies around different types of ETT projects through an incremental learning process.

2. Provide salient observations and toolkit for decision makers to early characterize potential ETT controversies and support co-construction and dialog between projects stakeholders and permanently evaluate the ETT social acceptability risk.

CAFETT program brought together an interdisciplinary team of professionals and academic investigators from three long-experienced partners in the fields of Social Sciences (ePlanet), Information Intelligence (MétaMètis) and Energy Transition Technologies (K2B Petroleum).

CAFETT responds directly to this ambition of "general conclusions and recommendations"**.** It demonstrates the potential of interfacing multi-disciplinary expertise about participatory evaluation process, exploiting state-of-the-art evaluation concepts and contemporary social networking tools, as a robust framework for analysis and negotiation of the social acceptability of ETTs.

CAFETT exploits several state-of-the-art knowledge mediation technologies. In particular, it exploits existing functional features of the MétaMètis information mining platform on key societal challenges, and of the collaborative deliberation support tools offered by the 'ePLANETe' on-line knowledge portal. These generic knowledge mediation and deliberation support tools will be deployed in a customised application for multi-stakeholder multi-criteria ETT appraisal.

In this way, we seek to:

- Provide robust social science understanding and mapping into the nature and occurrence of controversies around different types of energy transition technologies.

- Demonstrate robust state-of-the-art collaborative learning and deliberation support methods for building stakeholder dialogues around ETT controversies and, more broadly, exploring conditions for (and against) societal transitions towards sustainability.
- Provide salient recommendations and tools to decision makers in order to early characterize ETT controversies building process and support stakeholder dialogues.

For this study, we have selected four ETT projects, representing different issues and controversies:

- The offshore wind farm in the bay of Saint-Brieuc (France),
- The biomass power plant in Gardanne (France),
- The deployment of the Linky smart meter (France)
- The high voltage direct current overhead line of Rock Island (Iowa - USA)

The objective of the state-of-the-art analysis was to provide a robust understanding of controversies around the ETT. The first step was a deep analysis of the arguments raised by opponents and the second one was the identification and classifications of the opponents.

For each selected project the arguments collected were qualified and classified according to the four axis of the MétaMètis matrix (Target, Object, Sphere and Reach). The main opponents were identified and classified according to their social profile and motivations.

The objectives of the second and third phases of this study were to establish, in relation to the state-of-the-art, both empirical and theoretical, a methodological framework for interfacing inter-disciplinary ETT expertise with the views of consumers and citizens, in a multi-criteria multi-stakeholder dialogue around the potentials and conditions for societal acceptability of ETTs. 'ePlanete' has developed a collaborative on-line deliberation support tool, that provides knowledge on the different aspects and steps of a project, populates a lot of elements and indictors to support stakeholders' discussions and decisions, allows comparisons between alternative solutions and facilitates sharing of experience and engagement on ETT social acceptability topics.

The need of collaborative learning and deliberation support methods and the usefulness of a deliberation tool to answer the touchy question of ETT social acceptability have been fully demonstrated through the arguments analysis and the experiments carried out for the for selected ETT projects.

TEAM

The **CAFETT** consortium gathers the robust competence and extensive experience of three units, these being:

- **MétaMètis,** in competitive intelligence
- **ePLANETe** in Collaborative Learning, Technology Evaluation Tools and Social Sciences
- **K2bPetroleum** in Energy Technologies and Strategic Consultancy

Joining forces in the CAFETT initiative, the three partners were keen to demonstrate the potential of Internet-based participatory evaluation process, exploiting advanced document monitoring and text analysis tools (MétaMètis), stakeholder deliberation concepts and contemporary social networking tools

(ePLANETe Blue), as a robust framework for analysis and negotiation of the social acceptability of energy transition technologies .

This interdisciplinary project has engaged a spectrum of social sciences action-research, data analysis and communication skills, that relies on a robust background competence in energy, economics and environmental domains (K2bPetroleum).

The technical and scientific competences have been closely woven together and, this indeed is one of the specific features that the consortium led by K2bPetroleum has brought to this work.

- **MétaMètis** is a competitive intelligence company created in 2014 by Olivier Guy and Christine Euvrard, which supports organizations in making information a key performance asset for their operations and strategic decisions. MétaMètis helps its clients to better understand their economic and geopolitical environment, in particular by using visual mapping representations. The two founders have an extended professional experience in information monitoring and analysis as well as in market intelligence. Christine and Olivier are both graduates from ESSEC business school (Paris, France) and have specialized in competitive intelligence respectively at IMPGT (Institute of Public Management and Territorial Governance) and INHESJ (National Institute of Higher Studies in Security and Justice). Olivier Guy is also a post graduate in energy economics from the French Petroleum Institute (IFPEN). In 2016, MétaMètis launched the *Gullivern* platform to monitor and analyze the production of hundreds of think tanks around the world.
- **ePLANETe Blue** (a non-profit NGO) was constituted in France in 2015 (under the law of 1901) "to promote reciprocity relations at all levels and anywhere, between persons and organisations active in the domains of environmental education and knowledge partnerships for sustainability." . The organization has as a specific mission to assure the development, maintenance and good uses of the multimedia platform 'ePLANETe' for collaborative learning and deliberation by its main members as below and their partners:

  Professor Martin O'CONNOR is a Professor of Economics (Université Paris-Saclay) who specialises in interdisciplinary social sciences analysis at the "interface" between society and nature. He has published more than 150 articles and chapters in such fields as ecological economics, multi-criteria evaluation and scenario assessment, indicators for sustainable development, deliberative methods, social acceptability of risk, and environmental knowledge mediation, and since 2002 has led the KerBabel programme (now within L'Association ePLANETe Blue) for exploration of the potential of ICT for sustainability research, decision support and teaching.

  Dr. Jean-Marc DOUGUET is a senior lecturer in ecological economics (Université Paris-Saclay), and a specialist in fields of multi-criteria evaluation, risk analysis, local territorial development and sustainable agriculture. He has a long experience in applied social science research and with the use of KerBabel's deliberation support tools, notably the Deliberation Matrix that provides a framework for multi-actor dialogues around situations of risk and controversy.

  Mr. Philippe LANCELEUR is an education information technology specialist. The Kerbabel technical universe arose from his collaboration since 2002 with Martin O'Connor in coordinating multimedia projects at the C3ED research laboratory at the UVSQ. He contributes to the development of the

KerBabel/ePLANETe tools, to their "tuning" for particular applications and to the support and documentation of stakeholder dialogues.

ePLANETe in the Cloud is the association's worldwide network of International Scientific & Professional Associates. It includes Professor Sylvie FAUCHEUX (France), Prof. Isabelle NICOLAÏ (France), Dr. Aurélie CHAMARET (France), and Dr. Joachim SPANGENBERG (Germany). The scientific network also includes doctoral students (e.g., Borislav ANTONOV, Mariana BITTENCOURT) and others who have recently finished their doctoral theses (e.g., Clément MORLAT), who have exploited in various ways the KerBabel deliberation support tools for stakeholder-based appraisal of technologies and local development projects.

- **K2bPetroleum** (Knowledge to Beyond Petroleum) is a technology oriented consultancy firm which specializes in Energy and Climate Transition Technologies. Founded in 2004 by Thierry Poupeau, the practice networks for many years multidisciplinary teams of experts to support strategy, technology development and projects of its customers in the fast moving energy sector environment. K2bPetroleum also created **neutroclimat** which specializes in the design and diffusion of advanced low carbon practices to speed up changes in consumption and citizen attitudes in the energy transition. Thierry Poupeau has a 30 years career throughout all the mains areas of the energy sector (renewable, nuclear, fossil, efficiency), he his an engineer, post graduate in energy economics from the French Petroleum Institute (IFPEN).

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EXECUTIVE SUMMARY AND RECOMMENDATIONS

Controversy about ETT Projects will remain a permanent feature of the political and territorial landscape. So, engaging the stakeholders is not a guarantee of success, but is a necessary condition.
The state-of-the-art analysis coupled with the real deliberation exercises experimentation tends to demonstrate the risk of launching a new ETT project without first taking into account the views of all relevant stakeholders. Openness to civil society is essential; understanding and integration of citizens' needs and fears are essential.

The state-of-the art controversies analysis made it clear that all the projects face many counter-arguments, matching numerous axis value combinations in the MétaMètis classification scheme. The most prominent arguments were concerning the personal and local spheres. It seems consistent to consider that an opponent's claim is triggered by one or two perceived drawbacks of a project, but that he will use other arguments to reinforce his point against the project. We noticed that the most committed opponents often resort to deceptive rhetorical figures or argumentation fallacies to gain support from the general public such as « Appeal to fear », « Hasty generalization », « Well poisoning », « False analogy » or « Guilt by association » … An opposition to a project can also be triggered or amplified by an already existing social discontent or resentment.

We conclude our arguments analysis by providing a set of "generic arguments". A generic argument is the synthesis of several normalized arguments found in different projects and does not refer to a specific project. Some examples of generic arguments are : landscape deterioration ; the project serves vested interests, not for public good ; damage to local wildlife and environment ; information and/or consultation of citizens about the project is poor or deceitful ; the project is not economically viable but waste of public money ; useless or inefficient technology…

It seems relevant and useful to gather all those generic arguments in a database in order to follow the evolution of controversies for the ETT projects and to share them with future ETT project owners.

Regarding the opponents analysis, we found that the "concerned citizen" category was present in every project. These concerned citizens expressed their opposition either directly in their own name or via collectives or grassroots organizations. National and international organizations have also a key role as visibility enhancers, expertise providers, legal advisers and backers and connectivity enablers between different projects.
As for the arguments, the opponents categories could be stored in the database, related with the arguments and the projects.

The arguments analysis, qualification and classification and opponents identification methodology developped by MétaMètis was then used to feed the deliberation support tool with pertinent arguments and indicators. Nevertheless such an analysis could be done by itself independently. Particularly, during the pre-feasibility phase for identifying the future organizations and persons who may reject the project. Or even later, when the development stage of an ETT has already started, but the communication between the stakeholders is broken or the opponents are carrying out blocking actions that hinder normal execution of

project implementation. Detailed and precise understanding of each other positions and opinions could bring the conflicting parties at the negotiating table.

The availability of the existing arguments could also be a resource used to build and deliver training or role-playing game sessions for the new ETT projects owners. Simulations of the real life deliberation would make them aware of forthcoming difficulties.

Based on the lessons learned from the positive experience of the real-time deliberation exercises conducted with students, we propose to go even further and to build an “Observatoire des controverses” around ETT. This observatory would be a permanent platform accessible to all stakeholders on which the users could find on-line documentation and provide contributions.

With such a tool, the users would consult the ongoing debates and contribute or update them and would also be allowed to create new debates by adding topics. As different projects would be managed at the same time on the platform, the users could provide contribution or resources to as many projects as they wish.

More specifically, any user would be able to submit arguments for or against a project and suggest appropriate indicators to evaluate it. Further, the user would be able to mobilise his or any others existing arguments and indicators when participating in a debate or simply make a comment on an ongoing open debate.

As long as the project is going on, using the deliberation support tool will keep the communication open between all the parties involved and support stakeholders dialogues. A dedicated consultant team will be in charge of running and managing the deliberation tool. One of its specific mission could be to detect « fire outbreaks » between the stakeholders and to alert the project owners to get them intervene before any catastrophic scenario or definitive blocking occurs.

After a project completion, all the arguments (pro or con), discussions, delibrations and decisions issued during the project life cycle would be saved in the delibaration tool. The “Observatoire des controverses”, based on the ‘ePLANETe’ platform, would then become a knowledge base, accessible and searchable by anyone interested in ETT projects. For new ETT projects owners, the availability of all archived elements of a previous or similar controversial ETT project would be of major interest. Being aware of the potential opponents’ arguments would help them significantly and enable them to deliver appropriate communication and pertinent actions to anticipate or avoid difficulties and roadblocks. It would save tremendous amounts of time in the ETT project implementation and maybe contribute to improve the general perception of ETT projects management and citizens acceptability.
The ‘ePLANETe’ platform could be a design base for further and full development and implementation.

Priorities for the coming years should be given to public and private sectors capacity building for efficient and meaningful stakeholder engagement. That means developing or improving their capabilities in collaborative learning, concertation and negotiation.

In any project, consultation and co-construction process must advance in visible ways; stepwise approaches should be preferred to overly top-down approaches based on hidden decisions. Tangible outcomes should be shown and shared with all key stakeholders.
Anywhere, the role of the State is crucial. It should not « delegate » political judgements onto agencies providing knowledge and procedural expertise. Indeed, the role of governance by setting clear goals and solving potential conflicts is irreducible for building trust.
The State, at all levels, must guarantee the rules, and must commit at appropriate levels to timely stepwise decisions and outcomes.

Recommendations

1. Identify all the stakehoders and the potential oppenents prior to the ETT project start.
2. Understand the potential opponents' arguments and reactions by analysing, qualifying opponents speechs and expression to avoid potential blocking situation, loss of time, money and credibility.
3. Develop ETT projects stakeholders in collaborative leraning, concertation and negotiation through training and role-playing game sessions.
4. Improve transparency and build robust communication in response to all stakholders requests and needs in order to build trust.
5. Extend the use of deliberation tool to increase stakeholders participation and engagement.
6. Capitalize on previous experiences via a permanent on-line knowledge platform, the « Observatoire des controverses », gathering all the discussions, delibrations and decisions made on ETT projects by all stakeholders.