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EPATEE

National Peer-Learning Workshop

France

Agenda

Workshop agenda - "National Peer Learning Workshop"

Date: 18/03/2019

Location: Paris

Subject: Evaluation of Energy Efficiency Policies, fact or fiction?

13:30-14:00	Welcome of the participants with coffee and refreshments
14:00-14:15	**Introduction** by Pascal Dupuis, Head of the Economy, Evaluation & Sustainable Development Integration Department, General Commission for Sustainable Development (CGDD) – Ministry of the Ecological & Solidarity-Based Transition (MTES)
14:15-15:15	**Presentation of a study on the prospective evaluation of energy demand reduction policy for space heating in the residential sector**, by Louis-Gaëtan Giraudet, Researcher at the International Research Centre for the Environment & Development (CIRED)
15:15-16:15	**Presentation of the results and tools developed by the H2020 EPATEE project – Feedback on evaluation practices in EU Member States**, by Jean-Sébastien Broc from the Institute for a European Energy & Climate Policy (IEECP)
16:15-16:35	**Presentation of the on-going evaluation of the French White Certificates Scheme**, by Grégory Chédin from the Climate Service of the French Environment & Energy Management Agency (ADEME)
16:35-16:55	**Presentation of the H2020 ODYSSEE-MURE project: monitoring policies related to energy poverty and sufficiency in Europe**, by Didier Bosseboeuf, International Expert on energy efficiency policies at the French Environment & Energy Management Agency (ADEME)
16:55-17:25	**Presentation of the first CIRED works on the endogenization of the French White Certificates price**, by Louis-Gaëtan Giraudet, Researcher at the International Research Centre for the Environment & Development (CIRED)
17:25-17:35	**Presentation of the H2020 ENSMOV project: sharing good practices on the implementation of the Article 7 of the Energy Efficiency Directive with a focus on the improvement of the policies and measure processes, reporting and verification**, by Christian Deconninck, Head of the French Technical Association for Energy and Environment (ATEE)
17:35-18:30	Further discussions

Proceedings

14:00-14:15 | Welcome of the participants and speakers - Introduction to the conference

Christian Deconninck, Head of the Technical Association for Energy and Environment (ATEE), greeted the speakers and welcomed all participants to the French EPATEE National Peer Learning Workshop. He gave a brief history of the EPATEE project and summed up its aims, contents and objectives. Then, he introduced Pascal Dupuis by recalling that he was part of the project's first steps, four years ago.

Pascal Dupuis, Head of the Economy, Evaluation & Sustainable Development Integration Department of the General Commission for Sustainable Development (CGDD), introduced the conference by giving a scope of the historic and current state of the evaluation of policies in France and explained that, since 2009, the evaluation of potential impacts (impact assessment) is an obligation in the preparatory process of any new public policy in France. However, he reminded the audience of the importance of the preparatory work of an evaluation process which aims at setting up its objectives by establishing and precisely defining the evaluation criteria, conditions and hypothesis of the study.

To illustrate the growing role of evaluation in the management of public policies in France, Mr Dupuis also mentioned the evaluation missions of the Court of Auditors and Parliament that have been reinforced in recent years. This can for example be seen in the annual event organised in the past two years by the Parliament ("the spring of evaluation") and in which the CGDD is increasingly involved.

Then, Mr Dupuis cited the example of the implementation of an evaluation commission for the Law on the Energy Transition and Green Growth. This commission is dedicated to the evaluation of the Green Treasury Bonds (about how these funds have been used and for what). This is a special case as the corresponding evaluations are not only done to inform the policy making process or report to the citizen or their representatives. They are also done to provide financial institutions buying Green Bonds with transparency about the use of these bonds, and thereby about the public policies funded with these bonds[1]. In this context, it is important for the State to keep its sovereignty in the management and decisions on public policies. Therefore, most evaluations are supervised by public bodies. For example, the CGDD did within this framework in 2018 an evaluation of the tax credit scheme for energy renovation of dwellings[2].

From the various examples mentioned, Mr Dupuis highlighted the fact that the context for energy efficiency policies and their evaluation is increasingly favourable in France. He particularly noted two practical conditions that should help the development of evaluation studies, as well as the development of research in this field:

[1] See: http://www.ecologique-solidaire.gouv.fr/sites/default/files/Pour%20une%20strat%C3%A9gie%20fran%C3%A7aise%20de%20la%20finance%20verte_rapport.pdf and http://www.ecologique-solidaire.gouv.fr/sites/default/files/Th%C3%A9ma%20-%20Les%20obligations%20vertes%20au%20service%20de%20la%20transition%20%C3%A9nerg%C3%A9tique%20et%20%C3%A9cologique.pdf

[2] See: https://www.aft.gouv.fr/files/medias-aft/3_Dette/2017_fr_rapport_allocation_oat_verte.pdf (French)

- Information and Communication Technologies facilitate data collection and processing (more data available) and new ways of analysing data also offer new opportunities for evaluation.
- The successive governments have supported a move towards open data in the public administration and bodies. This should also improve data availability for evaluation. However, this might take time in some cases, as this induces changes in the business models of some public agencies.

Mr Dupuis insisted on the importance of stepping back and looking at the overall picture of the impacts of a policy, meaning that, even if the quantitative evaluation is positive (or the reverse) in terms of direct impacts, externalities and general interest also have to be considered to conclude on the relevance of a policy. Evaluation should indeed be multidimensional (involving several fields of expertise) and multi-criterial. He illustrated this for the case of energy and climate policies for which the official shadow price of carbon (in euros per tCO_2) is an important evaluation criterion, but should not be the single one. The need to consider several criteria comes especially from the fact that public policies have often a main objective, but serve in practice multiple objectives.

Mr Dupuis raised another key issue for the development of evaluation practices: the difficulties of communication and mutual understanding between practitioners of public policies and evaluators. For example, evaluators should take into account the constraints faced by practitioners. And reciprocally, practitioners should be open to hear the findings from evaluations. This was illustrated by saying that practitioners should open to hear that a kWh saved is not necessarily the cheapest kWh.

Finally, Mr Dupuis lamented the lack of visibility at international level of the work done about the evaluation of public policies in France, as for example pointed in a recent report issued by France Strategy (public body in charge of advising the Prime Minister through studies, prospective and evaluation of public policies). Indeed, few French evaluation studies are published in scientific journals or other research publications. International reviews of evaluation practices often focused on the number of publications as main indicator, which creates a bias. It also shows the importance to think about a way to mobilise research institutes on this matter.

14:15-15:15 | Evaluation of energy demand reduction policies for space heating in the residential sector

Louis-Gaëtan Giraudet, researcher at the International Research Centre for the Environment and Development (CIRED), presented the findings of a CIRED study dedicated to the implementation of a model for the prospective evaluation of energy demand reduction policies for space heating in the residential sector. This study, conducted from 2016 to 2018 and co-financed by ADEME, ATEE and CGDD, analyses and compares the efficiency of several French energy efficiency policies among which the White Certificates Scheme, the Tax Credit for the Energy Transition (CITE), the Zero-interest rate Loan (Eco-PTZ) and the Carbon Tax.

Mr Giraudet first exposed the RES-IRF model which has been developed by CIRED to simulate the household behaviour regarding their heating-related energy consumption in the case of a renovation allowing an upgrade of the housing energy label. This model is framed by input variables such as population, household income and price of energies (electricity, natural gas, wood, etc.), with data from national statistics (e.g. population) and other sources, particularly the national PHEBUS survey that provides matched data of household income and energy performance of dwellings (based on Energy Performance Certificates) for a sample representative of the French dwelling stock.

By considering various scenarios, this modelling aims at determining whether or not the existing housing energy efficiency policies are sufficient to achieve the goals in terms of energy consumption reduction, renovation rate and overall efficiency of the dwelling stock that have been adopted by the French government for the coming decades. Mr Giraudet insisted on the fact that it is essential to take extra precautions in concluding with the simulation results, as this model has been developed to get orders of magnitude and main trends. It will by no means give precise forecast data. Indeed, the model uses simplifying assumptions and there are several behavioural externalities that cannot be easily modelled. Particular efforts were made to calibrate the model on observed data (including a retrospective modelling over 1980's up to now).

Mr Giraudet also emphasised that this study was followed by a steering committee including representatives from the ministry in charge of energy, CGDD, ADEME and ATEE, as well as private stakeholders (e.g. energy companies, construction sector). The regular meetings with the steering committee offered the opportunity to have rich exchanges along the study, which was very useful to improve the model and related assumptions (e.g. renovation costs). This also strengthens the credibility of the study.

Regarding the listed objectives - reduction of energy consumption (-20% by 2030 and -50% by 2050), fight against fuel poverty, renovation of all least energy efficient buildings (i.e. G and F energy classes) by 2025, etc. - CIRED concludes that most of them are achievable – although some of them later than expected – assuming an ambitious and complete application of the policies. Finally, Mr Giraudet reminded that certain terms such as "energy poverty" and "building renovation" still have to be officially and precisely defined to allow an efficient evaluation process of the public policies.

One key added value of the study is that the used data and the model enable to simulate the distributional effects of the policies (i.e. the differences of impacts according to income classes for households and energy classes for dwellings). A key conclusion from the comparison of variants of policy designs is that targeting the financial aids on low income households is a win-win approach: it improves the achievements simultaneously on two main objectives, the reduction of energy poverty and the renovation of the dwellings in G or F energy classes.

This presentation was followed by a discussion on the lack of public popularity of some measures such as the Zero-interest rate Loan due, among other things, to the poor communication from the banks and to the households' difficulties in obtaining them. There was also a discussion about the fact that the scenarios did not include possible reinforcements of building regulations for existing buildings that could have a major impact (e.g. if minimum energy requirements for existing dwellings were enforced).

For more details about this study, see the following draft paper (in English):

Giraudet, L.-G., Bourgeois, C., Quirion, P., 2018. Long-term efficiency and distributional impacts of energy saving policies in the French residential sector. CIRED Working Papers. https://hal.archives-ouvertes.fr/hal-01890642

15:15-16:15 | EPATEE tools and feedback on evaluation practices in the EU Member States

Jean-Sébastien Broc from the Institute for a European Energy & Climate Policy (IEECP) gave a brief history of the H2020 EPATEE project, including its objectives and its research & data collection approach. He showed the access procedures to the tools developed by the project (i.e. the Knowledge Base, the Case Studies and the Toolbox).

To demonstrate the EPATEE Toolbox experience sharing potential, Mr Broc presented three case studies about the evaluation of Energy Efficiency Obligation schemes (Italy, Denmark and the UK) as

well as two case studies about the evaluation of energy efficiency policies to alleviate fuel poverty in the UK and in the USA. These cases were selected due to their relevance for the French context (similar types of policies, or similar issues tackled). He then briefly introduced one of the French case studies, about the evaluation of the "Investments for the future" policy launched in 2010 to encourage green development and job creation. This case is interesting for experience sharing at European level, because this evaluation had to follow guidelines defined by the European Commission due to the European regulation on State aids.

After presenting those different cases, Mr Broc concluded on analysing the different lessons that can be learnt from existing evaluation processes:

- The cost of evaluation is low compared to the overall policy budget.
- An evaluation gets more useful and efficient if it is upstream and long-term thought.
- It is key to distinguish the evaluation of the actions' impacts (gross results, final client's point of view) and the evaluation of the policies' impacts (net or additional results, state or society's point of view).
- Need to prioritize the evaluation objectives to select the relevant evaluation methods.
- Collecting data about energy consumption is not sufficient, complementary data and qualitative analyses are essential to understand the how and why of the impacts.

The following question-and-answer discussion focused on the influence of the ownership of housing in the implementation of White Certificate schemes and on the origin of the funding dedicated to evaluation in France. There was also a discussion about the debates that occurred in the US about the evaluation of the Weatherization Assistance Program. It was mentioned that the references and a summary about this debate is included in the corresponding EPATEE case study: https://epatee.eu/system/tdf/epatee_case_study_us_weatherization_assistance_program_ok_0.pdf?file=1&type=node&id=85

16:15-16:35 | On-going evaluation of the French White Certificates scheme

Grégory Chédin from the Climate Service of the French Environment & Energy Management Agency (ADEME) presented the on-going evaluation of the White Certificate scheme. This one-year evaluation, led by ADEME and conducted by a consortium of several consulting firms, aims at establishing a general overview of the outcomes of this policy and at providing operational recommendations for the next scheme period.

Mr Chédin presented the evaluation methodology. The core element of the methodology is a large survey of the policy beneficiaries via a mailing and an online questionnaire - 6 different questionnaires have been sent depending on the sector (housing, public tertiary, private tertiary, industry, landlords & co-owners associations) – and via 500 site visits.

The results of the study are expected in November 2019 and should lead to recommendations to improve and update the current White Certificate scheme. Until then, Mr Chédin gave an insight about the first stage of the evaluation process that has been conducted. This process highlighted some difficulties to get accurate data and sufficient answer rates for some of the surveyed sectors. The evaluation budget is significant (450.000 €), but still not enough to investigate all the aspects of the scheme. The definition of the evaluation scope was therefore key. ADEME had to elaborate a preliminary screening of the data available and evaluation challenges, in particular regarding the selection of the types of actions and sectors to be investigated more in details with the site visits.

Another challenge, commonly encountered when doing evaluation, is to find the right timing: it takes time before the impacts of actions can be observed, but findings from the evaluation are needed early enough so that they can be taken into account in the consultation process for the next period of the scheme.

Then, the selection process of the surveyed sample has been discussed with the audience, the chosen sample being representative of the White Certificate schemes' distribution in terms of "lifetime-cumulated and discounted kWh" (cf. accounting unit "kWh cumac" for the white certificates in the scheme). Other discussed issues were the difference between evaluation (know the impacts) and controls (fight frauds and non-compliance), how the last period (more recent years) can be looked at, the fact that some sectors are more responsive and open to provide data than others, and the integration of a focus on energy poverty in this study, which has already been planned.

16:35-16:55 | ODYSSEE-MURE: monitoring the energy insecurity and sobriety in Europe

Didier Bosseboeuf, International Expert on Energy Management at the French Environment & Energy Management Agency (ADEME), presented the outcomes of the ODYSSEE-MURE H2020 project (http://www.odyssee-mure.eu/). This project is co-ordinated by ADEME with the technical support of Enerdata (France), Fraunhofer (Germany), ISINNOVA (Italy) and ECN (Netherlands). It relies on two databases:

- ODYSSEE: contains detailed energy efficiency and CO_2 indicators with data on energy consumption, their drivers (activity indicators) and their related CO_2 emissions
- MURE: contains a description of main energy efficiency measures implemented at EU or national level, with their impact evaluation whenever available.

The general objective of the project is to provide a comprehensive monitoring of energy consumption and efficiency trends as well as an evaluation of energy efficiency policy measures by sector in the EU member states.

Mr Bosseboeuf gave the example of the Austrian transport sector to illustrate how the ODYSSEE-MURE databases can be a key decision-making tool for public authorities by providing them with an easy access to all the measures implemented by sector and by specific area (MURE database) and to reliable and updated information regarding energy efficiency indicators trends (ODYSSEE database).

Mr Bosseboeuf concluded by introducing the new outcoming challenges for the ODYSSEE-MURE project that now gathers 33 partners across the entire European continent. Among other things, the database shall soon integrate new topical issues such as energy efficiency first fuel, fuel poverty, sufficiency, etc.

16:55-17:25 | First works on the endogenization of the French White Certificate scheme price

Louis-Gaëtan Giraudet, researcher at the International Research Centre for the Environment & Development (CIRED), presented the method and first outcomes of the on-going works of CIRED regarding the endogenization of the French White Certificate price. The study models the White Certificates market for the residential sector and the exploitability of its potential sources and considers several scenarios (with or without additional tax, integrating other policies, maximal price, etc.)

Mr Giraudet insisted on the fact that this study uses simplifying assumptions and that the goal here is to simulate a mechanism and understand how it reacts to changes, not to calculate precise forecast data. It should be noted in particular that the model covers only the residential sector, whereas the White Certificates scheme covers all end-use sectors.

The developed model gives a qualitative overview of the future of the French White Certificate market: the first outcomes of the CIRED works confirm the low price-related sensitivity of the market evolution and the great importance of complementary policies for the White Certificate price.

17:25-17:35 | The ENSMOV project: Article 7 of the French Energy Efficiency Directive

Christian Deconninck, Head of the Technical Association for Energy and Environment (ATEE), quickly presented the ENSMOV European project which will start in May/June 2019 and will aim at sharing good practices on the implementation of the Article 7 of the Energy Efficiency Directive with a focus on the improvement of the policies and measure implementation processes, reporting and verification. This project gathers a 15 EU members consortium and has been launched to help national authorities improving the MRV (Monitoring Reporting & Verification) and Design processes of their Energy Efficiency policies.

17:35 | Conclusions and further discussions

Christian Deconninck concluded the conference by thanking all the participants and speakers, who were then offered coffee and refreshments to continue the discussions.

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