

Climate Recon 2050: Dialogues on Pathways and Policy

Italy
Maria Rosa Viridis, ENEA

Interaction with the European Commission on modelling with PRIMES

Until 2016 the preparation of the Reference Scenarios for the EU by a team of contractors led by the E3M Lab of the U. of Athens on behalf of DG ENERGY has been an interactive process between the Commission services, the contractors and Member States. The process included:

- a first stage of official data collection performed by the contractors.
- the organization of dedicated meetings in Brussels with Reference Scenario Experts from Member States
- the collection of up to date information on recent policies and measures introduced through national legislation by MS. This was done by asking national administrations/experts to fill a detailed questionnaire on policies and measures, new infrastructure, capacity expansion, etc. concerning energy (primary production, transformation into secondary energy, end use in the industrial, transport and buildings sectors), agriculture, and climate, introduced by a given cutoff date.
- a round of scenario simulation by the contractors
- A process of review by MS experts of the country scenarios thus produced: the possibility was granted to comment in writing or in bilateral meetings with the Commission and the contractors to clarify specific issues.
- This resulted in a new scenario run that could take into account the MS feedback. After the Commission's approval the final reference scenarios were published.

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- Over time and in successive Reference Scenario exercises the process has become more interactive, even improving the quality and realism of resulting scenarios.
- One source of constant friction however, has been the fact that the modelling suite (and particularly the PRIMES model) used in the scenario elaboration is a proprietary and not available for external scrutiny except in limited aspects. As a result most of the models were seen as “black boxes” by member countries experts, and their results regarded with a certain degree of mistrust by national administrations.
- In the Italian experience the possibility to ask specific questions to the EC modellers on how certain aspects were treated in the model, in a few cases has allowed an improved understanding of the models’ working but this has not dispelled some concerns on the overall opacity of the model.
- In other cases the possibility to have bilateral meetings or to exchange documents has allowed clarifications on sensitive aspects like technological potentials in relation to institutional constraints (for instance, PV capacity potentials) improving the quality of the scenarios.

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Interaction with the JRC on modelling with the Potencia Model

- To address some of issues highlighted in the previous slides regarding modelling with PRIMES, the JRC, based on input from the Commission, is attempting a new approach based on the construction of a new model, called Potencia (**Policy Oriented Tool for Energy and Climate change Impact Assessment**), which in perspective is going to be freely available to Member States to perform impact assessment of their policies.
- The model
 - covers the EU Member States,
 - has a projection horizon up to 2050 in annual steps,
 - is validated through technical peer review (documentation available in the Potencia website)
 - is based on an open source database (JRC-IDEES) of the EU energy system based on Eurostat data starting year 2000 up to 2016
 - is updated through continuous interactions with Member States experts who provide information on recent policies and validate country specific technological or economic/demographic assumptions.
- The exchange with national experts started in late 2017 and is ongoing
- A first step, just like for the PRIMES Reference scenarios, has been the submission by Member Country experts of responses to a detailed questionnaire on national policies, investments, capacities, trends and visions on the future evolution of the national energy systems.
- At present the exchange is progressing with validation of the exogenous model assumptions needed for the elaboration of a Potencia Central scenario.

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Summing up the experience with the PRIMES and the JRC Potencia Models

- In both cases there seems to be the need of a strong effort from Member Countries to provide input and/or feedback on relevant parameters of the models used by the Commission.
- Due to the length of the process to define inputs and elaborate outputs it seems uncertain whether the overall (EU) consistency of the Integrated National Plans on Energy and Climate will be checked using the Potencia model: in fact it is more likely that the PRIMES model will be used for this purpose.
- Furthermore, for now, the Potencia model is not really alternative to modelling suite based on the PRIMES model, because it is still not linked to the other non-energy models (Globiom, Capri, etc.) that complement PRIMES.
- The interaction built so far between the Commission and Member States is useful and fruitful. The E3M lab modelers have even started sharing with national experts the database on technological parameters.
- Although improvements in this direction can be appreciated, the Commission efforts have not yet delivered on the promise to make the models more transparent and accessible to the broader modelling community.

Thank you for your attention

Mariarosa.virdis@enea.it