

## **Feedback from the participants of the 1<sup>st</sup> EMP-E meeting. Brussels, 17<sup>th</sup>-18<sup>th</sup> May, 2017.**

### **What was most useful to you during the EMP-E2017 meeting?**

- Contacts and exchange of information
- The attendance of many energy modelers and the discussions which were held during those days. The presentations were useful to identify research areas and what are they key points/weaknesses of the energy modeling. Also, that the energy modeling community strives for open source - transparent energy modeling tools.
- meeting people from the modeler community - learn about other models
- Exchange during the more open sessions and overview on the general model-landscape
- networking and focus groups, OEP
- Getting a better overview of the European energy modelling community
- Seeing what other state-of-the-art energy market / systems modeling groups are working on, and exchanging with them.
- The interactive parts, i.e. poster session and workshops on the second day, though some of these were much less interactive than I had anticipated (basically presentations all over again for 80% of the time). However, one workshop had a breakout session which was very much appreciated and insightful in terms of the discussions.
- Discussions during presentations and networking spaces
- Talk with colleagues and overview of models in the talks.
- Insights to the new models (e.g. to Potencia) and the breakout sessions.
- Networking with people working on LCA of energy systems in other EU projects
- meet other modelers + learn about different approaches
- Listening to and learning about ongoing projects in this field in EU, their methods and models, and their goals. And meeting people in my research area was very useful.
- Interact with several experts on energy modelling; hear the expectations from the EC; I was pleased to hear the interest on the Nexus and energy modelling
- Confirmation of two main omissions in current energy transition modelling: 1) bottom up investment decision making under uncertainty / imperfect foresight; 2) linked to #1, simulate how private capital is being mobilised in an uncertain investment climate.
- Getting a very good overview of energy modelling work being done across Europe
- To meet the commission representatives and learn about the usage of open models and data at the level of the commission. To meet modellers and EU projects representatives and discuss open modelling and data issues.
- Presentations about energy modelling. Especially those which touch real modelling problems
- Great exposure to the broad array of models and modelling (!)
- The poster session.

### **What was least useful during the EMP-E2017 meeting?**

- To some extent it was the n-th or n-th+1 model presentation. it should be possible to condense this a bit and focus on the exchange on separated topics like in the friday sessions (here also some people started again with showing their model overview)
- presentation of models without details. a deeper understanding of modeling assumptions is needed, as well as uncertainty/sensitivity analyses

- Difficult to say
- The program was too packed. Not enough time for exchange. People not sticking to their allocated time slot. Some plenary presentations overlapped a lot with sub group presentations.
- Some of the plenary sessions (there were too many and quality was not always good). Moreover, the overall objective of the plenary sessions was not always clear.
- Many presentations were too long, lacked clear communication of research question and failed to convey how they advanced state of the art in modelling
- Focus group on implementing external and environmental impacts
- I am not expert in energy system modelling, which was the main focus of the meeting. Hence few parts were not so relevant to me.
- repeated presentation of posters in the focus groups + a lack in transparency in model presentations
- No idea.
- Too little focus on how policy-makers interact with researchers. And: too little focus on how to create synergy between the multitude of models being developed: is this fragmentation what we really need?
- Everything was useful
- To get presentations on all models, but not deep enough to know the differences.
- Presentations which are away from energy modelling, "promotional" presentations (e.g., about PRIMES model) and poster mingle session
- Too short. A bit too much on 'projects' rather than 'models'
- The break out sessions - there were far too many presentations and little to no discussion in the sessions I attended.

### **What did you think of the poster session?**

- Interesting and diverse
- Pretty interesting topics were presented.
- good idea to have the 1min presentation!
- a bit hard to walk around plus stand at your own poster the same time
- The layout and usage of space worked really well. The brief 1-minute introductions were great.
- Good mingling and opportunity for exchange. People seemed not so interested in the general project posters. More in case study / scenario and methodology topics. Some posters were a bit isolated / separated considering the floor layout
- Generally good. Don't shorten the time for this next time. It was really good to be able to speak to quite a few people.
- excellent, one of the best I have seen. well organised
- Liked the 1min presentations in the beginning
- The 1 min intro is quite short
- Went well. Good organisation and setting.
- good way to get more details of different approaches; really like it
- It was efficient and interesting.
- Very informative. High quality posters in a nice setting.
- Interesting
- very effective
- Nice to walk around and have an opportunity to talk about the different projects

- The session was very interesting and provided a discussion space to ask questions and enquire about projects and ideas
- great idea
- Very useful.
- Very helpful.
- Discussion time was short

### ***Constructive suggestions***

- a little bit more of space to move
- maybe not all at the same time, but spread over the two days
- make 2 slots and break up discussion in e.g. left poster and right posters of a 2-poster wall
- Considering the relatively small group of people one big circle / rectangle of poster boards around the lunch table might have worked better. Less overlap between some posters and sessions.
- Maybe make two poster sessions next time? This would allow poster presenters to explore and discuss other posters than just the neighbouring ones.
- None
- a similar box with model facts on each poster
- Introduce poster by focusing on why it is new and different from the state-of-the-art.
- have a pre-registration of interested people to speak with the authors
- Too much posters
- maybe make the poster session longer and at the first day to allow for more interactions with the poster presenters
- next time limit posters could be displayed from first day of the conference; 1 minute presentations about posters are not necessary, but maybe short summaries could be included into conference materials
- More poster sessions.
- Have it on day one rather than day two.
- Setup already at first day
- test

### **What did you think of the plenary session?**

- Well organized and with interesting contributions
- It was good. New areas were presented and a range of different topics were covered.
- sometimes the topics of the different presentations were not really related to each other
- much content which was not so easy to digest
- They worked very well. The presentations were short enough, and there was appropriate time set for questions and discussions.
- Generally interesting and high-level contributions. Some people overestimate the value of their quasi-philosophical perspectives. If they are considered necessary, would rather have them completely at the start. Some others could have taken a higher knowledge level as a starting point for their own presentations. Having the laptop at the side table rather than on the stand seemed to put some presenters in a challenging situation.
- See above, partly good. Partly low quality and lacking a clear objective.
- good, however presentation could be shorter and more discussion and Q&A
- None

- different generation of modelers seem to have differing opinions on openness or transparency issues
- It was good that the panelists had different viewpoints.
- I liked obtaining an overview of current activities
- lots of insights
- Too much presentations that were too superficial so in the end you did not k
- very useful to learn about recent developments and projects
- as mentioned, "promotional" presentations should be avoided
- Surprisingly (and refreshingly) robust discussion
- Good mix of speakers.
- Lot of information and good overview of energy system modelling

### ***Constructive suggestions***

- allow for more discussion among the panel participants about a controversial question instead of "just" having the presentations
- more room for suggestions
- a deeper understanding of modeling assumptions is needed, as well as uncertainty/sensitivity analyses
- Some presenters could use a warning about using small font sizes.
- Less plenary sessions next time and much more focusses with crystal clear objectives.
- 10 minute presentation, 10 minute questions
- It's not necessary to have a panel discussion if there is not discussion between those sitting in front and they are just answering questions from the audience.
- None
- focus more on specific audience (=modelers) and add how certain aspects were modelled (avoid only lists of aspects modelled)
- It could be more useful if you would put more time at the end of the presentation for panel discussion and going through some specific topics in more detail.
- Presentations could be even more focused on asking questions rather than giving answers
- perhaps you could have had some common general questions for each speaker to address
- More interaction, for example with workshops for example to walk through 1 model in detail
- there were too many talks and it was hard to absorb all the information provided, maybe the workshop should be longer in order to spread the talks on more than 1 day and a half
- Make sure that 'closed', 'commercial' and 'open source' projects are all presented together. It helps us understand the advantages / disadvantages of each. It also helps the 'Open Source'ers know how - and where - to up their game!
- Perhaps reduce the speaking time of each speaker and focus more on roundtable discussion.
- Less model/project introduction

### **What did you think of the focus groups?**

- Very interesting
- The sessions were useful. The discussion that followed the presentations among the participants was constructive. The issues that someone faced on his energy modelling work and how he deals with them as well as suggestions on this will be helpful on future work.
- Good idea to have room for discussion.

- it is easier to discuss in smaller groups. even the current number of participants of each fg was somehow limiting
- Did not participate.
- "Open data" was very clarifying for me concerning (licensing and other) issues. "Linking" some presentations too broad, not focusing on issues but presenting a case with a lot of unnecessary detail. Not enough time for discussion.
- See above. Great idea, partly low performance. I.e. they were not as interactive as they should have been.
- great, no presentation in the ones I attended and this worked well and allowed discussion
- Too crowded with presentations
- Focus groups were great, they give me very nice insights to some modelling issues
- I was organising one, and the match with audience's expectations could have been better (first time we did it)
- expectations seem to vary
- Very good idea
- Very good
- some were very effective, some other were too open
- Good way to hear more vision behind why models are on earth
- very interesting to exchange information
- I liked them
- Too much information, and not enough structured discussion
- Difficult to tell from the titles what they would be about.
- good topics, but outcome was not as expected

### ***Constructive suggestions***

- some of them organized like plenary sessions, I would suggest to follow the ones that are very interactive
- Can be more explicit about what is desired from the introducing presentations, and what the objectives are from the sessions.
- I guess this is obvious from the above.
- ..no powerpoint...maybe talking points
- Need to be smaller, needless presentations and more room for constructive work to be done.
- Feedback from audience to have more dialogue on role of LCA for energy system modelling
- clarify scope and aim of specific focus groups further; maybe form a small group (also beyond REEEM or LCE21) to prepare one focus group ahead of the workshop
- Maybe less time for presentations and more time for discussions. Sometimes it felt discussions don't have any aim or direction, and everyone just shares their experiences, which can be good in its own way. But it was difficult to follow the direction and conclude something.
- Next time, end each focus group discussion with concrete action points + naming of volunteers to work out specific details.
- suggest in advance which concrete outputs would be desirable from each focus group
- More!
- more detailed description of the groups would be useful and also some kind of agenda for the focus groups
- The sessions are essential. They need to be more focused.

- No presentations. At that point in the event we had spent a day and a half listening to presentations about models and had had an hour and a half to talk one-on-one with people about their models with their posters. There was no need for yet more presentations of models. The focus should have been discussion and debate.
- Better structure for goal-oriented discussions

### **Was the EMP-E2017 a good space to set-up new partnerships?**

- Yes
- Yes, representatives of many universities/institutions participated.
- yes
- it was good to see many different activities and getting to know the faces behind some of the models - it was good to initiate some activities, let's see what the future brings
- yes
- Yes. I got a couple of good new contacts.
- Yes. Good mix of people and organizations. The group size was just about right. I would prefer to stay below 100/125 tops. The restaurant was not ideal, because of the table setting. The buffet itself was good to encourage mingling. The amount was food was a bit modest.
- Yes, though we will see in the long term.
- yes, fantastic. Great and unusual to see the big modelling teams and academic researchers in the same room. Networking time and space were good
- ok
- Yes, definitely, also I met colleagues I haven't met for 5-8 years
- So far, nothing concrete on my side.
- definitively
- Yes.
- Yes
- Certainly. But how to identify opportunities, set priorities etc. could be improved. Perhaps stimulate some volunteers to form a kind of high-level think-tank to propose some lines of thought?
- Not really
- There could be more time for interaction
- yes
- yes
- Very much so.
- Yes.

### **What topics would you like to see covered in future EMP meetings?**

- energy vs. climate, energy-water-food nexus
- Presentations of the different modeling tools and their weaknesses and strengths.
- development of different standard-problems to generate a result-based clustering of model categories
- uncertainty/sensitivity/multiscale analyses
- Practical application of the energy models.
- Any topic relevant for our modeling endeavours and relevant case study and scenario development in the context of the transition to a sustainable energy system. Reduced form /

sensitivity curves as boundary conditions for partial (systems / equilibrium) models.

Sensitivity analysis. Distilling the critical parameters. Back testing / comparative testing / retrospective analysis. Almost all topics of last time can be taken again.

- More thinking outside the box. Start from the challenges and discuss what models would be needed. - Interaction of the energy modelling community with social sciences? Challenges and opportunities and discuss openness and transparency and future requirements in this context for their research.
- More on the decisions process of policy makers. how do they think and use our results how to deal with uncertainty
- Exchange on best practice concerning: \* Model validation \* Model creation (software, quality, versioning system etc) \* Model dissemination (Open source, yes or no?)
- Modelling technological learnings, modelling energy sector with over 60 % intermittent RES
- Sustainability was not addressed during the 2 days, except in the focus group on environmental impacts and externalities. To my opinion, there is a need to make this aspect much more visible, for example addressing how current energy system models address sustainability requirements and fit into the UN Sustainable Development Goals (SDG nr. 7 is entirely dedicated to energy!), and what tools/methods/approaches exist to address these global challenges. We can spend much time developing and discussing energy models, even those encompassing a lot of renewables, but if we do not link them to their sustainability performances, this is a lost cause. So, again, I recommend to emphasise this aspect much better in future EMP meetings.
- quality standards for open data, how to improve cooperative capacity building in energy systems modelling (e.g. joint summer schools, exchange of lectures, book projects, ...)
- POTEnCIA should become more prominent as in-house European Commission energy (and climate) modelling
  - Role of non-technical aspects in modelling (social and behavioral, e.g.) - Examples of policies derived from or informed by specific models, and comparing the outcome with model insights
- Align-up to other modelling platforms. There are some in agriculture.
- See above: 1) simulate bottom-up multi-actor investment decision-making under imperfect foresight; 2) simulate in detail how private capital is being mobilised in an uncertain political context with more or less credible longer term perspectives on business models and government finance. 3) discuss how to create more synergy between the plethora of models being developed: can't we develop a fully open-source model that is designed to allow all pertinent societal processes to be included? 4) how to work jointly towards answering the fundamental question "given a well-articulated policy question, what minimum model functionality is required to adequately address that question?". This should become a long-term generic knowledge development programme.
- level of accuracy representing smaller Member States versus the quite large ones
- More thoughts about why models are on earth and which purpose they have
- -good practices and guidelines for energy system modelling -standardization of data (metadata, guidelines) -open source data and models in general
- world and national models and their
- Strength and weakness of models, scenarios. Understanding the link between 'policy' and model 'inputs and outputs'. Dealing with uncertainty and 'scenario'
- Modelling consumer behaviour and acceptance.

**What links and information would you like the EMP-E to point you to?**

- Link to LCA model (how to, modelling framework, input data, exogeneous vs. endogeneous)
- solved or still existing challenges in modelling and how others solved them
- Workshops and seminars on modelling
- What is model generator?
- A mapping of models and applications.

### **What resources (and links) can you provide to the EMP-E?**

- model, data and documents
- The Global CLEWS model provides useful insights about the relationships among water, energy, climate, and land and material use at the global scale. It was developed to inform Rio+20 discussions and will soon be upgraded to provide useful insights about the interlinkages among climate, land, materials, energy and water underlying the relationships among many of the Sustainable Development Goals (SDGs). The challenge of progressing towards the SDGs is best approached taking into account synergies and trade-offs among them.
- I've asked our post docs and PhD candidates to document our models via the link you have distributed before.
- So far, mainly Irish data; but in the mid-term future we will be able to contribute an integrated energy systems model including a water-energy nexus component (in collaboration with VTT)
- Our model and data is available and happy to share more
- Model descriptions
- LCA model (as applied in REEEM)
- Enerallt: A market-based multi-area energy system model
- An Agent-Based Model where actors invest under imperfect foresight
- Model description, databases on request
- The link to the SciGRID power network model and data
- osemosys.org
- <https://unite.un.org/sites/unite.un.org/files/app-globalclews-v-1-0/landingpage.html>
- <http://www.sciencedirect.com/science/article/pii/S030626191730171X>
- None
- <http://www.sciencedirect.com/science/article/pii/S0360544216310088>
- No URL as yet
- [sites.fct.unl.pt/times-pt](http://sites.fct.unl.pt/times-pt)
- [www.scigrid.de](http://www.scigrid.de)
- [www.osemosys.org](http://www.osemosys.org)
- The original model was developed by researchers from the Royal Institute of Technology (KTH) in Sweden in cooperation with the United Nations Division for Sustainable Development.
- We are in the process of better showing our model and project portfolio on our website. This make take a little time.
- we use PLEXOS which is not available to all but we also make data available in other formats
- I'm not sure what do you want to know here. But if you aim at which type of contribution we can provide it would be e.g. model factsheets, share modelling experiences, maybe data (if we're able to solve the licences issues).
- This model incorporates a modular agent simulation model into the routine of an optimization model. As such, it lets us to see how the imperfections (lack of knowledge about

demand, hydro inflow, and the behavior of other actors) can change the results of a fully central-planner-controlled optimization model

- This is a prototype research model of a regional gas-power-heat distribution system linked to the national energy system.
- open source model and data of the European power transmission network

### **Any other feedback, questions, comments?**

- The event was pretty well organized.
- very good initiative - livestreaming the event on the website would allow more people to join in
- None
- This is an excellent initiative. NTNU is happy to help with future conferences. Don't try to do everything. Rather do some things very well than many things halfway. Limit the scope and ambition level to something that is manageable. Choose based on (own) interests and opportunities. One or two conferences per year, discussion platforms on the topics mentioned under 8. and maybe a quarterly newsletter? Can be accompanied by more "ad-hoc" initiatives. E.g., the ESR special issue with aim to have as input for the COP is an excellent initiative which does not need any long-term resources to make it happen.
- See above.
- I enjoyed the event. I enjoyed the discussions and I enjoyed the focus groups. I came away with useful information and found the 2 days to be very helpful
- It would be helpful, if the food would be labeled as vegan/vegetarian/non vegetarian.
- My major comment is in field 7.
- The EMP should allow "newbies" in the field of energy systems modelling to participate. Other former platforms tended to become quite exclusive which limited their potential in the long-run. Therefore I would really appreciate if EMP could become an open learning and exchange platform for energy modellers around the world.
- Thank you for organizing this event.
- Recommend to launch a European initiative for model comparison and improvement. Essentially to strengthen the European capacity.
- I am preparing a commentary paper on the EMP-E gathering, to be submitted in July to the editors of Energy Strategy Reviews.
- Great meeting (!)

### **Which subjects and what kind of actions would you like to be part of the EMP-E (in general and as content for a further meeting)?**

- contributor with available models and databases
- Practical application of the energy models, case studies of such usage in the past, and the role of energy models as learning tools and tools that support decision processes.
- See above in relation to suggested topics for future EMP meetings
- My interest is in EU modelling. I am interested in how our communities outputs translate into Policy (the how, the why and the why not). How do we balance complexity with uncertainty in a future energy system
- Please see above Point 7 (sustainability topic to emphasise).
- exchange of modelling issues (data, code, challenges): - Maybe a model experiment could be a good idea (same framework/ research question, but different models). - How to get the

communication to policy makers right? Exchange on best practices and experiences - maybe offer tutorials for "newbies"

- Regular meeting, subjective workshops, and inviting from policy makers who deal with the results of models
- Modelling the Nexus of water-energy-food-climate-land
- Subjects: see above comments. Kind of actions: participate in working group to recommend / suggest modelling priorities and synergy opportunities.
- More thought about why models are on earth and which purpose they serve. Now there was a lot of emphasis on finished projects but I have the feeling now there are a lot of similar models that all do the same.
- -open data and open models -open source in general -models of the power system -data issues (availability, quality) -validation and verification methods and standards
- More input from the EC on coming trends and issues, that we might use models to address. Also some understanding of where things break down. Where do modelers provide bad / inappropriate answers? What does the EC 'need' in terms of support (outside of regularly contracted work) etc. What would you like our PhD students to work on?
- Validation/Comparison of different scenarios and pathways of available models