Proceedings document

IEW 2022: Energy scenario communication for strengthened inputs and trustworthy outputs

Freiburg, Germany — 25 May 2022, 12:40 – 14:00

IRENA's Long-Term Energy Scenarios Network (LTES Network) aims to facilitate knowledge-sharing between scenario practitioners in the government sectors through the exchange of good practices to plan for the clean energy transition. Network members and partners regularly contribute to identifying priority areas during calls and through surveys. This year, they established "participatory processes" and "communication of scenario results" as key focus topics.

In this context, IRENA organized a side event at the International Energy Workshop conference to gather experience on participatory processes and stakeholder consultation from the scientific community. The key findings from this event are meant to support government planners in improving their communication practices around energy transition scenarios and help frame the LTES' future activities with governments. A secondary objective of the side event was gauging the interest of the IEW community in further participation in discussion with the LTES Network community.

Summary of the event

Date and time: Wednesday, May 25, 12:40 – 14:00
Location: Freiburg, Germany
Participants: approx. 50 delegates, primarily from research institutions and non-governmental organizations, attended the event.

Contents:

Key messages from the discussion

Benefits of participatory process for the scientific community

- Benefits of stakeholder inputs for model outputs — The scientific community is finding participatory processes increasingly relevant to their work in model development. The participation of different stakeholders, including policymakers, academics, investors, and representatives of civil society, can **narrow down the scope of the model**, therefore limiting the number of conceivable scenarios and allowing for easier communication of scenario insights. This can be done through discussions around possible scenarios, adaptation pathways and particularly through concertation around acceptable and desirable futures**.**

- Engagement as a means of communication — Academia is embracing stakeholder engagement as a way of communicating with broader audiences. The scientific community is using participatory processes to engage with energy scenario users in government, energy sector actors, non-governmental organizations, local stakeholders in particular municipalities, regions and countries, and other diverse stakeholders. In recent, academics have engaged in consultations at the local, national and international levels, in cooperation with institutions from civil society and international organizations.

- Benefits of trust building for model acceptance — Continuous engagement at all levels, transparent communication and feedback are building blocks of the participatory process. An inclusive participatory process can **increase trust and ownership** of scenarios for different stakeholders. Trust-building can be done through increasing engagement at the appropriate levels, designing stakeholder consultation with a diverse and broad audience, and building a common language around scenario modeling. Good communication with stakeholders should stay **transparent** regarding the use of inputs and **enough time and resources** should be dedicated before and after scenario development to capture the needs and insights of the different stakeholders.

Institutional structure for systematic stakeholder engagement

Provide dedicated resources to support participatory processes — participatory processes can involve preliminary research, surveys, webinars, and web platforms which are time- and resource-intensive . Scenario developers and modelers are not necessarily experts in stakeholder engagement, nor do they have the time to manage such processes. Participants from the scientific community suggested that **providing dedicated support to organize consultations** can be helpful to identify relevant stakeholders, through establishing dedicated units or teams. Managing resource-intensive processes can involve due diligence research and organizing internal workshops, and designing surveys, webinars and platforms or other formats to collect feedback from modelers and stakeholders.

Steps to improve processes/ methodology

- Developing interactive stakeholder participation — Developing interactive approaches for stakeholder interaction increases stakeholder engagement. Interactive approaches can involve visualization and gamification. Visualization approaches can involve identifying scenarios with terms that stakeholders are familiar with like musical genres or animals. Mindset exercises help identify drivers behind stakeholder choices and help stakeholders fully inhabit the scenarios discussed. Gamification enables stakeholders to co-create packages of alternative policies and scenarios. These approaches can supplement and run in parallel with discussion-based workshops and desk research.

- Organizing at different geographical levels — Organizing multiple participatory processes at **local, regional, and global levels** can increase the chances that the consultation process will be representative and result in valuable insights. Engagement at different levels is also needed depending on the model (local, regional, global). Local consultation offers an opportunity to gain granular insight on different social and cultural contexts. Regional level consultation reveals interconnections between different infrastructure and socioeconomic systems. Global level consultation gives an overview of major themes and concerns common to diverse stakeholders.

- Comparing different participatory processes — **Comparing the results of different participatory processes** and their effects on models is a key part of developing more robust models for future use and encourages institutional learning. Reviewing colleagues' work is critical to understanding disparity in results, which may be due to differences in stakeholder inputs or linked to the models themselves.

Programme

12:40 – 12:45	Welcome remarks and moderation	**Bob van der Zwaan,** TNO Energy Transition
12:45 – 12:50	Introductory presentation	**Nadeem Goussous**, International Renewable Energy Agency
12:50 – 13:30	Panel presentations and moderated discussion	**Evangelos Panos**, Paul Scherrer Institute **Andrzej Ceglarz**, Renewables Grid Initiative **Elena Verdolini**, RFF-CMCC European Institute on Economics and the Environment
13:30 – 13:55	**Interventions from the audience**	
13:55 – 14:00	Closing remarks	**Asami Miketa,** International Renewable Energy Agency

Welcome and Introductory Remarks

IRENA's Long-Term Energy Scenarios for Clean Energy Transition (LTES) network provides a platform for scenario practitioners in the government sectors to exchange their practices for a clean energy transition. Currently, it has 26 member countries and 12 partner institutions. This year, the network decided to focus on "participatory process" and "communication of scenario results" as priority topics.

It is in this context that IRENA held a lunch session on Energy Scenario Communication for Strengthened Inputs and Trustworthy Outputs on the first day of the International Energy Workshop 2022. The event featured experts from the scientific community and NGOs who highlighted their key practices for successful communication and stakeholder engagement in the scenario development process, especially in the context of the clean energy transition.

The session moderator, Professor Bob van der Zwaan (TNO Energy Transition), opened the session by welcoming all participants and panelists and highlighted the interactive nature of this session, calling for insights and comments from the floor.

Scene setting presentation: **Nadeem Goussous (International Renewable Energy Agency)** — following Professor van der Zwaan's remarks, Nadeem Goussous (IRENA) delivered the scene-setting presentation, where he presented the background of the Long-term Energy Scenarios (LTES) Network. He noted that the programme of **the session was designed based on the priorities of the LTES members and partners**, which were collected through the Network's annual workplan survey. He then presented the LTES Network's mental model, which shows the process in which scenarios (often developed through energy modelling tools) inform long-term policymaking. Stakeholder consultations form an essential part of each step of this process.

LTES' mental model was adapted to fit the process of scenario communication as well as the scenario participatory process in response to feedback from stakeholders. The mental model includes perceived use cases and key requirements of each process. Scenario communication educates stakeholders, informs decision makers on important model results, and increases understanding of scenario drivers. Effective scenario communication relies on tailored messaging with adaptive language, different communication tools for different audiences, and transparency. Overall, the scenario participatory process promotes shared ownership of and trust in model results, but requires more time, internal capacities and financial resources for the modeling team.

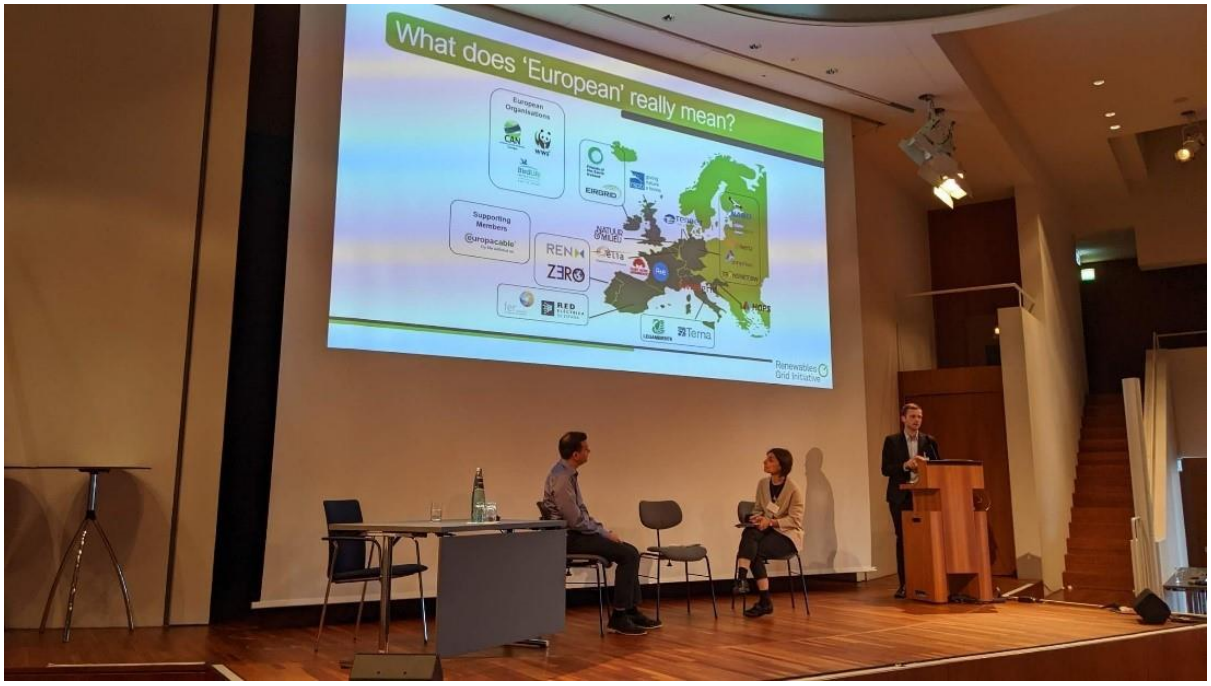
A fourth model was shown in which communication is presented as a key outcome of the participatory process, and where collaborative engagement with stakeholders throughout the process provides learning-through-experience and a more engaging dialogue with the diverse stakeholders involved in the clean energy transition. He then ended his presentation by stating that the objective of this session is to gather the experience of the scientific community to help shape the activities on the Network through their engagement with national governments.

Keynote Presentations

The three panelists were then invited on the stage to start their interventions.

Evangelos Panos (PSI) — discussed his experience co-designing scenarios with stakeholders and communicating results with a broad audience. His partnership with the World Energy Council (WEC) relied on categorizing scenarios based on different music styles to grab the public's attention. Regional workshops with the WEC followed several steps: setting the scene, preparing stakeholders for the future, identifying drivers and development narratives, presenting semi-quantitative estimates, and stressing specific topics with regional deep dives. Deep dives increase the relevance of global storylines to stakeholders from different regions. Dr Panos also presented insights from the SWEET SURE project, which involves the establishment of a stakeholder forum for long term scenario definition and the identification of pathway-altering disruptive events. The SWEET SURE project also developed a game to keep scenario end-users engaged.

Dr. Panos also presented insights from the POLIZERO project, in which participatory processes are employed to identify innovative and feasible post-2020 policies for Switzerland to meet Paris Agreement pledges. The POLIZERO project also includes the development of visually engaging elements to illustrate dynamic policy adaptation pathways for Switzerland for stakeholders to explore. Key takeaways from the WEC, SURE and POLIZERO projects are that: (a) participatory processes enhance perceived legitimacy, transparency and ownership of the results; (b) participatory processes improve information exchange between scenario developers and users but can come at a cost for scenario developers if not designed carefully; and (c) end-users of scenario results must build capacity in order to make the best use of modeling.



Andrzej Ceglarz (Renewables Grid Initiative) — presented RGI's work on stakeholder engagement with scenario building and modelling activities in Europe. RGI is a **collaborative platform** for cooperation between transmission system operators, non-governmental organizations and other diverse entities across Europe. RGI is coordinating the PAC project consortium which is developing decarbonization scenarios compatible with the Paris Agreement (the PAC Scenario). RGI is also involved in the SENTINEL project which incorporates stakeholders' perspectives into modelling in continental (Europe), regional (Northern Europe) and national (Greece) contexts. Key takeaways from the SENTINEL initiative include transparency (**access to data**), inclusivity (**diverse stakeholders**), and facilitation (**reliance on a common language** and a safe environment).

Elena Verdolini (RFF-CMCC EIEE) — presented her experience in the IPCC AR6 process. She noted that the range of assessed scenarios results in several different projected levels of global warming over the course of the 21st century. The complexity around endogenous and exogenous variables, underlying assumptions, **uncertainty in outcome** and the diversity in scenarios makes communication with a non-modelling audience very challenging. Stakeholder engagement can help narrow the range of models that modelers focus on by **identifying desirable and acceptable futures**. Continuous communication with stakeholders before, during and after scenario development also helps develop a common language and avoid misunderstandings around what models can and cannot achieve.

First topic of discussion: Participatory processes and the scientific community

Following the presentations, the moderator asked the panelists about the relevance of the participatory process and communication of scenarios to the scientific community. They replied as follows:

- Evangelos Panos: Energy systems are sociotechnical systems in which the various stakeholders interact with each other as they evolve. Engaging stakeholders in scenario development improves the **quality and relevance of scenarios** by incorporating diverse perspectives and knowledge. In Switzerland, citizens are not simply consumers but have ultimate say over policy decisions. Their involvement in scenario design and result dissemination enhances the perceived **legitimacy and transparency** of the results and promotes community ownership over scenarios.

- Andrzej Ceglarz: Participatory processes are important not only as inputs to models but as **context to model output**. Depending on cultural and social context, the same model output might be understood and interpreted differently by stakeholders in various contexts. This is equally true for national, regional, and global scenarios. Planners may consider that stakeholder consultation is a time-consuming and complex process which can occur both before and after scenario development.

- Elena Verdolini: The modelling community has played an increasingly important role within energy and climate scenario development in recent years. Consultation at the global level, which has been promoted through several projects and activities, can be strengthened. Consultation at the local level can be promoted with the aim of helping policymakers understand how to **downscale policies and scenarios**.

Second topic of discussion: How government practitioners can organize the participatory process

The moderator then asked the panelists about the ways in which government scenario practitioners can organize participatory process and communication of government scenarios. They replied as follows:

- Evangelos Panos: Government practitioners can **begin with due diligence research** then organize internal workshops before consulting with external stakeholders. Practitioners decide whether to communicate **qualitative or quantitative information,** with normative or explorative content, and ensure that all scenarios are plausible. Gaining stakeholder trust takes time and resources. **Communication is circular** and relies on platforms, webinars, and reports to collect feedback from stakeholders. The main challenges involved in designing participatory processes include (a) ensuring that the length of the participatory processes does not extend past the time period agreed with stakeholders; (b) ensuring that the scenarios developed are feasible and directly relevant to stakeholders (WEC scenarios); (c) balancing the expertise and opinions of different participants; and (d) accounting stakeholders' lack of familiarity with the complex features of scenario modelling analyses when communicating results.

- Andrzej Ceglarz: Some governments and agencies may be limited in their capacity to engage in time- and resource-intensive consultation processes. Governments deciding to go ahead can establish a **unit to follow the entire consultation process from start to finish** and report on big picture aspects. Practitioners can manage stakeholders' expectations of the consultation process as it is a complicated and long-term endeavor.

- Elena Verdolini: Modelers themselves are not the best candidates to guide stakeholder developments as their expertise is in developing models. Organizations should instead rely on dedicated staff for stakeholder engagement. Practitioners attempting to start consultation processes can first identify relevant stakeholders and evaluate **whether their inputs would be representative**. Practitioners can capitalize on previous

experience, existing guidelines and processes to avoid repeating past mistakes and wasting time.

Interventions from the floor

Following this discussion, audience members were invited to share their own insights on this topic.

- James Glynn (Columbia University) stated that communicating with stakeholders is an extremely **time-consuming process**. He stressed the importance of making sure that stakeholders clearly understand the data that is presented to them. Policymakers can adopt different modes of communication and tailor content to different stakeholders. Including infographics and bullet points facilitates communication.

- Machteld van den Broek (University of Groningen) said that modelers can **compare results from different modeling software** and review their colleagues' work to understand the reasons behind potential disparity in results.

- Vahid Aryanpur (University College Cork) pointed to a potential conflict of interest between stakeholders optimizing benefits and models designed to optimize costs. He stated that modelers can **examine stakeholders' goals before taking their input into account**.

Additional informal inputs were collected during the IEW.

- David Daniels (Chalmers University of Technology) shared his experience communicating with stakeholders at the EIA. He said that one-on-one meetings with stakeholders is the best way to get the most relevant information even though it is

time-consuming. Building trust is also critical. He also performed game-based communication and the results were mixed.

- Hyunkyo Yu (Chalmers University of Technology) said she is currently organizing a research project for district heating system in a Swedish municipality, and that she has ensured full participation of the municipality officials over the course of the project.

Concluding remarks

Following these interventions, Asami Miketa (IRENA) closed the session by inviting interested members of the scientific community to reach out to IRENA to engage with the LTES Network in future events and activities, and announced a third pillar of participation in the LTES Network being prepared for the scientific community.

Contact information:

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