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**D3.6 – Proceedings of the 1st series of
national stakeholder workshops**

WP3 – Continuous stakeholder engagement

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EC Summary Requirements

1. Changes with respect to the DoA

No changes with respect to the work described in the DoA. The deliverable was submitted on time (March 2021) but was updated in February 2022 to record the proceedings of all national workshops in the 1st series, which were delayed due to COVID-related challenges to stakeholder interactions, and in line with the project's extension to November 2022.

2. Dissemination and uptake

This deliverable serves as documentation of the proceedings of the first series of PARIS REINFORCE national stakeholder workshops. It reports particularly on the concept design, summary, and lessons learnt. Links to all material (including summaries, photos, presentations) are provided for each event. The report is targeted internally within the consortium to aid the ongoing dialogue towards ensuring ownership and relevance of the modelling exercises; and publicly to all relevant stakeholders to provide a better understanding of the practicalities behind the nature of PARIS REINFORCE stakeholder engagement and the current proceedings of this process.

3. Short summary of results (<250 words)

The PARIS REINFORCE project has held a series of workshops in European and non-European countries to ensure relevance, as well as improve the quality and resilience, of the modelling process. The workshops have consisted of discussions with stakeholders holding expert knowledge on decarbonisation policies and politics in the particular region of interest.

COVID-19 has significantly disrupted the workshop process. Workshops have shifted to online format, and have been delayed. This report has been updated after initial submission to reflect the completion of workshops which had previously been anticipated to be already included in the submission of this report on March 31. A description and link to longer agenda for each workshop is now included in the report.

In a final section, some tentative lessons are drawn from the project's experience so far. With the benefit of additional workshops and discussions, more concrete lessons learned will be produced for deliverable D3.8 toward the end of the PARIS REINFORCE project.









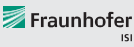









4. Evidence of accomplishment

Online records of events and the documentation in this report.



Preface

PARIS REINFORCE will develop a novel, demand-driven, IAM-oriented assessment framework for effectively supporting the design and assessment of climate policies in the European Union as well as in other major emitters and selected less emitting countries, in respect to the Paris Agreement. By engaging policymakers and scientists/modellers, PARIS REINFORCE will create the open-access and transparent data exchange platform I²AM PARIS, in order to support the effective implementation of Nationally Determined Contributions, the preparation of future action pledges, the development of 2050 decarbonisation strategies, and the reinforcement of the 2023 Global Stocktake. Finally, PARIS REINFORCE will introduce innovative integrative processes, in which IAMs are further coupled with well-established methodological frameworks, in order to improve the robustness of modelling outcomes against different types of uncertainties.

| | | |
|--|----|---|
| NTUA - National Technical University of Athens | GR |  |
| BC3 - Basque Centre for Climate Change | ES |  |
| Bruegel - Bruegel AISBL | BE |  |
| Cambridge - University of Cambridge | UK |  |
| CICERO - Cicero Senter Klimaforskning Stiftelse | NO |  |
| CMCC - Fondazione Centro Euro-Mediterraneo sui Cambiamenti Climatici | IT |  |
| E4SMA - Energy Engineering Economic Environment Systems Modeling and Analysis | IT |  |
| EPFL - École polytechnique fédérale de Lausanne | CH |  |
| Fraunhofer ISI - Fraunhofer Institute for Systems and Innovation Research | DE |  |
| Grantham - Imperial College of Science Technology and Medicine - Grantham Institute | UK |  |
| HOLISTIC - Holistic P.C. | GR |  |
| IEECP - Institute for European Energy and Climate Policy Stichting | NL |  |
| SEURECO - Société Européenne d'Economie SARL | FR |  |
| CDS/UnB - Centre for Sustainable Development of the University of Brasilia | BR |  |
| CUP - China University of Petroleum-Beijing | CN |  |
| IEF-RAS - Institute of Economic Forecasting - Russian Academy of Sciences | RU |  |
| IGES - Institute for Global Environmental Strategies | JP |  |
| TERI - The Energy and Resources Institute | IN |  |



1 Overview

A fundamental objective of the PARIS REINFORCE project is to enhance the legitimacy of the scientific processes in support of climate policymaking, by introducing an innovative stakeholder inclusion framework (co-design) and improving the transparency of the respective models. To this end, the project has held a series of national workshops in European countries, as well as major and minor emitting countries outside of Europe. The general purpose of these workshops has been working with key stakeholders:

- To develop a better understanding as to the national-level prioritisation of key public policies and technological options necessary for decarbonisation.
- To develop a better understanding of country-specific decarbonisation contextual factors.
- To provide sensible and robust inputs into modelling work.

As an additional goal, certain workshops have placed particular emphasis on conveying the use and understanding of energy-climate models to national stakeholders. The hope has been that efforts to this end will result in long-run capacity building and more effective modelling collaboration in the future.

At the European level, workshops have been held in: Greece, France, Switzerland, the Netherlands, Spain, and Ukraine.

At the non-European level, workshops have been held in: Japan, Kenya, India, the Central Asian Caspian region, Russia, the USA, and China.

1.1 COVID-19 and shift to digital platforms

The project co-organised its first physical workshop in Tokyo, Japan, and then held its first project physical workshop in Greece. A next physical workshop was planned for Kenya in March 2020. The COVID-19 pandemic put an end to international travel and as a result the project has been forced to move all events online.

The shift online forced a rethink of workshops. The absence of physical presence creates difficulties in holding open and thorough discussions with stakeholders. Additionally, the COVID-19 pandemic led to a delay in workshop schedules as workshops were initially postponed with the hope that they could be run physically once legal restrictions were removed. On the other hand, it presented benefits of being able to hold events with participants from all corners of the globe, where access to a digital platform is available.

As a result of the shift to digital platforms, most workshops have been established with a target of approximately 30-40 expert stakeholders. Such a number is seen as a reasonable upper limit for holding constructive discussions online. This decision was informed by the experience of the Bruegel team in organising private and public events. Additionally, within online calls, breakout rooms have been used in an attempt to recreate more personal environments where stakeholders may be more willing to discuss openly. For the same reason, all workshops have been held under Chatham House rules.

1.2 Eliciting valuable stakeholder input

It is a challenge to move from interesting discussions with stakeholders to quantifiable modelling inputs. While, on the one hand, open discussion can be the most stimulating and interesting, it can often result in long discussions that do not necessarily produce useful stakeholder input. For this reason, the project has designed a dual approach to workshops. This comprises both open discussions and quantitative analysis/inputs.



For quantitative inputs, the online voting tool sli.do and google surveys have been used. These tools allow modelling teams to gauge the opinions of workshop participants after discussions have been held, and provide a tangible input to modelling discussions. For example, 92% of participants in the Russian stakeholder workshop felt that nuclear would increase as a share of electricity generation in Russia by 2050. Meanwhile, 69% of Indian participants felt that an electric vehicle share of 30% by 2030 was the most reasonable estimate, which is in line with government announcements. The goal has been to achieve a combination of discussions that provide an overview of the national context with clear and tangible insights as to how the selection of stakeholders feel on key modelling issues.

1.3 Stakeholder Identification and Snowball Sampling

Suitable stakeholders have been identified primarily on the basis of the PARIS REINFORCE stakeholder database as well as established contacts that project partners have in the regions of interest. For certain regions, particularly outside of the EU, the stakeholder database has limited coverage¹ and hence desk research has been an important complementary tool.

An important component for enhancing the reach of stakeholder identification has been snowball sampling. Snowball sampling consists of allowing suitable stakeholders to identify colleagues or acquaintances, who they view as suitable for participation in the workshop. In this way, stakeholder networks are leveraged, and the project is able to increase its reach. While snowball sampling has benefits of increasing stakeholder participation, the consortium is aware that this can lead to representation biases—e.g., lots of stakeholders from the same organisation/sector. For this reason, desk research was an important complementary tool. Additionally, care was taken to restrict attendance when considering multiple stakeholders from the same organisation and, less stringently, from the same stakeholder type.

¹ Deliverable D3.4 provides detailed coverage of the stakeholder database by geographic region, correct as of publication of the document on 31st May 2020.



2 Workshop Design Concept

The consortium drafted a concept note, which outlines the general ideas underpinning each workshop design. This note has been followed as a guide for each workshop but has been flexibly adjusted/tailored to the specific needs of each workshop and particularly the modelling partner most interested in the outcomes of the workshop. For example, while some workshops focussed more on discussing more complex modelling features with stakeholders holding some understanding of models, others took a more general approach, discussing at a more abstract level the key policies in each country.

The design concept is provided below:

2.1 Design concept for PARIS REINFORCE national/regional stakeholder workshops

2.1.1 Context

PARIS REINFORCE will use stakeholder engagement to co-design feasible and preferred mitigation pathways in major economies both in (WP5) and outside of Europe (WP6). To capture and codify stakeholders' opinions and preferences in the models used to undertake national/regional mitigation analysis, they should be elicited in such a way that they can be directly or indirectly related/mapped to key model input parameters and scenario design protocols. This concept note sets out how a range of national/regional stakeholder workshops should be undertaken to achieve this aim.

2.1.2 Attendees

We should aim for a minimum of 20 stakeholders, drawn from a mixture of government, business, academia, and civil society. Ideally, this should consist of:

- Representatives at the civil service level from Environment, Energy, Industry, and Finance Ministries.
- Business representatives from the energy sector (both fossil and non-fossil) and/or industry groups and associations.
- Academics assessing energy, climate change and mitigation analysis, ranging from social scientists to physical and engineering disciplines.
- Civil society representatives such as NGOs or lay citizens.

2.1.3 Stakeholder identification resources:

- Regional modelling teams
- PARIS REINFORCE Stakeholder Council database, which has been enhanced through Deliverable D3.4
- Snowball sampling whereby suitable participants provide recommendations.
- Random sampling was used in the case of Spain, in order to create a representative citizen sample of the population (as this was a citizen deliberation workshop).

2.1.4 Workshop structure

To secure focused engagement from senior representatives of the organisations outlined above, the workshops will only take a half day. The approximate timing will be as follows:



1. Introduction to the project and its aims (15 mins)
2. Introduction to modelling and what insights existing mitigation scenarios have shown for the region (30 mins)
3. Facilitated breakout sessions (45 mins), including an introduction (10 mins) summarising key themes that we think it is useful to tackle in our modelling, and then discuss (over 35 minutes):
 - a. Key socioeconomic and behavioural factors to capture in models.
 - b. Key technological developments.
 - c. Political and other barriers and opportunities to reflect in modelling.
4. Break (15 mins).
5. Breakout session feedbacks, each lasting 10 minutes, during which key opportunities and challenges are listed (40 mins).
6. Voting session to ask participants which are their 3 top issues to consider in making mitigation pathways more feasible/real-world relevant (with live results display) (20 mins).
7. Wrap-up and next steps (15 mins).

2.1.5 Workshop Outputs

- Summary of key themes across socioeconomic, behavioural, technological, political, and/or other factors to capture in modelling if possible.
- Specific factors that could impact mitigation pathways modelling.
- Summary of uncertainties in key drivers of mitigation action.



3 Project Specifics

In this section, a brief overview is provided for each of the 6 European and the 7 non-European workshops so far carried out by the project. Additionally, links are included to online versions of longer agendas. The brief overviews are provided in chronological order.

Japan – 6th December 2019 (held physically)

(Attendees: circa. 80²)

Researchers from the PARIS REINFORCE consortium participated physically to the "EU-Japan Climate Change Policy Symposium: Use of scenario analysis to form the long-term strategy under the Paris Agreement", at the Delegation of the EU to Japan in Tokyo. In particular, Assoc. Prof. Haris Doukas (NTUA) actively participated in the discussions for the session on "The process for the EU vision for decarbonisation and the role of scenario and model analysis", presenting the PARIS REINFORCE project and highlighting details of the I²AM PARIS platform, and the co-creative element of the project.

A full event summary can be found [here](#).

Greece – 28th January 2020 (held physically)

(Attendees: 399)

PARIS REINFORCE co-organised a national stakeholder workshop on climate change and energy together with the Hellenic Society for the Environment and Culture and the Convergences Greece Forum. The public forum provided the opportunity for stakeholders from industry, government and the civil society to share understanding of the transition pathways available to Greece.

The workshop included three sessions on "Business, Energy & Environment", "Sustainable Energy Planning - Technologies and Policies" and "Geothermal Energy", as well as a roundtable discussion on "Sustainable Energy Sources: Economy, Society, Environment and the case of Wind Turbines". After the latter, an online voting took place in order to gather the stakeholders' perceptions on which topics they consider the most important to be further explored by PARIS REINFORCE and which factors they believe are the most impactful (either positively or negatively) towards a wide-scale deployment of renewable energy sources and the implementation of the Greek National Energy and Climate Plan.

A full event summary can be found [here](#).

Kenya – 28th October 2020 (held online)

(Attendees: 45)

In collaboration with the Technical University of Mombasa and the National Environment Trust Fund (NETFUND) project, PARIS REINFORCE held an online workshop for stakeholders from Kenya. The goal was to mobilise knowledge embedded in individuals coming from governments, business, NGOs, academia, and the civil society;

² In all cases, attendees are non-consortium members.



and to design well-informed and meaningful scientific activities in support of climate policymaking at the national and regional level.

Presentations explained the concept of the PARIS REINFORCE project and the modelling ensemble available to it. A focus of discussions in Kenya was the incorporation of SDGs into climate modelling, noting that global climate modelling exercises often ignore regional and local realities. In the case of Eastern Africa, climate efforts will be inseparable from other major development challenges, such as reducing poverty and hunger, achieving universal access to clean energy, water and sanitation, reducing exposure to household pollutants, and so on. On-ground knowledge is therefore of high value for calibrating integrated assessment models, in order to allow the design of realistic energy and climate policies that are beneficial on multiple scales. A presentation by Dr. Dirk-Jan Van de Ven (Basque Centre for Climate Change) showed the results of a recent study focusing on the effectiveness of residential energy policies for multiple SDGs and showcased modelling possibilities within the PARIS REINFORCE project. In similar vein, Dr. Alexandros Nikas (*NTUA*) then facilitated a deliberative session in which stakeholders were asked to contribute to co-defining and communicating their preferences on the modelling approach over the importance of key economic sectors and most relevant SDGs.

Online polling was then used to elicit direct preferences. The focus was on prioritising sectors for decarbonisation and sustainable development goals in relation to climate change, based on specific criteria. Overall, stakeholders (mostly from academia, business, and national government) considered the residential and transport sectors as critical for human development and combatting inequalities, while electricity and industry as paramount to sustainable resource use and earth system conservation, which was also the leading priority. Furthermore, attendees found limited progress and ambition in Kenya regarding protection and conservation of water resources and terrestrial ecosystems, while singling out access to sustainable and modern energy for all as the most significant goal for the country.

A full event summary can be found [here](#).

India – 3rd November 2020 (held online)

(Attendees: circa. 20)

This online event held structured discussions on the Indian energy transition with experts from NGOs, academia, the private sector, and government. The nature of the conversation was a technical one, and for this reason the format was closed-door. The consortium reached out to established contacts in India, but also broadened the reach through desk research and snowball sampling.

The content part of the workshop was split into three breakout discussions. These were on the power sector, on urbanisation, and on the transport sector. In the power sector, a key focus was the political feasibility of early retirement of coal plants as well as India's target for 450 GW renewable electricity capacity by 2030. In the urbanisation session, a key focus was on the impact of increased urbanisation and particularly cooling demand. Finally, in the transport sector a key focus was the government's target of 30% electric vehicle share by 2030. Quantitative feedback was attained from stakeholders using the online voting tool [sli.do](#).

A full event summary can be found [here](#) and the online event agenda [here](#).

Central Asian Caspian region workshop series – 9th December 2020 / 2nd March 2021 / 18th May 2021 (held online)



(Attendees: 9,8,6 respectively by workshop)

For the Central Asian Caspian region, the consortium held a series of three workshops. The purpose for this was to create a shared journey with stakeholders from the region, which provided ample time for informing stakeholders about the modelling capacities available and learning from stakeholders about the specific challenges facing the region. The workshops sessions also involved the presentation of an interactive dashboard, which members from E4SMA used to better convey modelling capabilities and functioning. Throughout the series, the changes to modelling runs were included in this dashboard and then shown again to stakeholders.

Key themes emerging from the discussion centred around “Watergy” – the correlation between power production and water consumption, and commodity tariffs phase-outs in combination with GHG reduction targets. “Watergy” was analysed by activating part of the ‘water module’ for the TIMES-CAC model and the possibility to control water consumption improved the analysis by providing new elements for scenario definitions. Tariffs were further investigated by cross-checking 2017-2020 end-use tariffs per country per sector, based on data collected in documents from international organisations (e.g., IRENA, IEA, etc.) and Ministry publications from national and international websites, and by making assumptions about their evolutions and phase-out.

Event summaries for the [first](#), [second](#), and [third](#) workshops can be found at the corresponding hyperlinks.

Russia – 16th March 2021 (held online)

(Attendees: circa. 100)

The goal for the workshop was to receive insights from local stakeholders into the public policy context as well as a better understanding of some of the key assumptions modelling groups must make to build relevant mitigation pathways for the country. To this end, a range of stakeholders were invited from NGOs, academia, business, and government. On the day, more than 100 stakeholders actively participated, providing feedback on the development of effective and realistic measures in the Russian national context to mitigate climate change.

Participants were split into three breakout groups for more focussed content discussion. The three themes of discussion were (a) perspectives on the structure of electricity generation in Russia, (b) decarbonisation of the manufacturing sector (with a focus on exports to the EU), and (c) the carbon sequestration of forests. The electricity mix discussion had a focus on the role of nuclear energy, natural gas-based generation and renewables, investigating the cost-effectiveness of each. Meanwhile, in the manufacturing discussion main topics discussed included activities Russian businesses have implemented in the past to reduce emissions and the threats facing this sector today including from a possible EU carbon border adjustment mechanism. The forest session focussed on how to maximise the sequestration potential such as by improving control for forest disturbances, forest management techniques, and by promoting forest conservation projects.

A full event summary can be found [here](#).

Switzerland – 18th May 2021 (held online)

(Attendees: circa. 30)

This workshop discussed EU current policy and mitigation pathways with a focus on and specific insight from Swiss stakeholders. Stakeholders were from the government, academia, industries, and NGOs in Switzerland. During this event, Dr. Baptiste Boitier (*SEURECO*) presented the project’s modelling work carried out for mitigation runs in the EU. The feedback gained during the follow-up discussions substantiated the importance of the EU carbon budget



for its long-term strategy, and the territorial concept to determine the future implementation of the Carbon Border Adjustment Mechanism (CBAM). Behavioural changes were discussed as equally critical to ensure EU climate neutrality as citizens' actions are driven by perception.

A second content session focussed on understanding the range of technologies and lifestyle changes, which can contribute towards net-zero GHG emissions. Discussion with stakeholders underlined the critical roles for synthetic and green fuels, the development of energy storage, and smart grids. The workshop was concluded with an online sli.do poll to elicit quantifiable stakeholder insights into the ambition of climate action and game-changing innovations for climate targets in the EU. Most stakeholders prioritised carbon capture and storage, e-mobility, expansion of renewables, and citizen behaviour, in achieving the ambitious net-zero target. The poll also showed the significance of expanding the EU ETS, implementing EU-wide carbon tax on the ESR with revenue return, and considering the implementation of a CBAM.

A full event summary can be found [here](#).

United States – 24th and 25th May 2021 (held online)

(Attendees: 65)

This two-day workshop was convened by the PARIS REINFORCE consortium jointly with key US partners: ClimateWorks, University of Maryland's (UMD) Center for Global Sustainability, Rocky Mountain Institute (RMI), World Resources Institute (WRI), and the University of Michigan's School for Environment and Sustainability. Invited stakeholders were US and international experts from a broad range of communities concerned with the US low-carbon transition. The purpose of the workshop was to discuss strategic, analytical, and implementation needs to achieve a successful US long-term strategy (LTS) to Net Zero.

The three key themes of the workshop were (1) strategic and analytical needs towards a successful LTS; (2) challenges and opportunities to decarbonise while ensuring an equitable transition; and (3) implications of the transition on the economy, including jobs and opportunities. The workshop made use of a lightning round of presentations, which allowed multiple different groups to present their own analysis of long-term strategies both in the USA and other countries. On the second day, two breakout sessions discussed jobs and equity respectively. The equity discussion highlighted that there is a need for better data to build appropriate metrics to highlight equity implications of the transition and that, without equity concerns at the core of a long-term strategy, it would not succeed. The jobs discussion highlighted how there needs to be better analysis that goes beyond jobs numbers, including on jobs quality, wages, contract length, and inclusivity.

A full event summary can be found [here](#).

France – 26th May 2021 (held online)

(Attendees: 26)

After a presentation of the project and its first modelling results, key technologies for deep decarbonisation of the French economy were discussed with national stakeholders, including electricity (renewables, smart grids, and uses), hydrogen, and carbon capture, utilisation and storage (CCUS), which three French experts were invited to introduce. Dr. Baptiste Boitier (*SEURECO*) presented the mitigation runs of the project using the interactive I2AM PARIS platform.

Three key stakeholders were then invited to present their thoughts on different topics. These were 'the challenges



of electricity: renewables, smart grids, and uses', 'hydrogen, between myth and reality' and 'CO₂ capture and storage: more than a false good idea from fossil energy companies'. An open discussion followed each of the three presentations.

A full event summary can be found [here](#).

Spain – 26th May 2021 (held online)

(Attendees: 40)

This event aimed particularly to strengthen the co-creation process by including lay citizens in mitigation discussions. A deliberative dialogue was held with 40 citizens representing all ages and regions of Spain. During a three-week period of interaction (including dialogue and deliberation with each other and a facilitator), citizens increased their knowledge on climate matters and discussed their perceptions and feelings on different behavioural changes and policies that could be implemented in Spain and Europe regarding mobility, consumption, food, and waste. Following an introductory session held on May 26, a series of eight focus groups containing ten citizens each took place (each citizen participated in two sessions).

The gained insights are not only valuable for the modelling process but also for the Citizen's Assembly taking place in Spain.

A full event summary can be found [here](#).

China – 8th June 2021 (held online)

(Attendees: 19)

The workshop discussed China's net zero emissions after its carbon neutrality goal, how to achieve it from policy to practice, and topics related to the energy system in the context of the Belt and Road Initiative (BRI). Stakeholders from the Chinese government, academia, and Chinese companies participated in the event.

A first open discussion session centred around China's net-zero target. Starting from Shanxi Province—China's largest coal power production base—Dr. XL. Yao introduced how Shanxi should transform in the process of carbon emissions reduction, focusing on the energy-intensive industries of the province. Next, Dr. XZ. Feng from the Policy Research Center for Environment and Economy, Ministry of Ecology and Environment of China, explained the synergistic effects of pollution reduction and carbon reduction and the adjustment of industrial structure from the perspective of the coordinated control of pollutants and GHGs. Dr. CL. Zhang from the National Grid Energy Strategy Research Institute discussed the challenges of reducing carbon emissions in the power system, including integrating renewable energy power, operation control technology, market mechanisms, and policy incentives. Finally, Prof. J. Pang discussed how China's carbon market has a relatively significant development effect, but there are still many problems, such as high regulatory costs, quota allocation, and other issues.

A second open discussion session on the BRI, again coordinated by Dr. Xi Yang, included opinions and comments from industries and enterprises in China. Ms. WQ. Lin from Guangdong Energy Group introduced the company's renewable energy power generation transformation and the company's BRI actions. Ms. S. Guo from Datang Group introduced the group's clean energy goals and ways to achieve it. Mr. W. Han from China Power Finance argued that financial resource allocation is indispensable in the green development and low-carbon transition. Ms. S. Zhao from Climate Change and Sustainability Division EY LLP discussed how companies can participate in the green construction of the BRI through using green bonds or green credits as financial support.



A full event summary can be found [here](#).

The Netherlands – 9th June 2021 (held online)

(Attendees: Public event)

The Dutch discussion focussed on four topics: (1) Implications of the EU's 2030 55% GHG reduction target, (2) the effects of the COVID-19 pandemic and its corresponding recovery measures (NextGenerationEU / Recovery and Resilience Facility), as well as (3) 'game-changing' technologies, such as hydrogen – as envisaged in the national hydrogen strategy - and (4) the role of the finance sector in decarbonisation and achieving climate neutrality by 2050. Two open stakeholder discussion sessions were held, which focussed particularly on green finance and hydrogen. The event was attended largely by Dutch stakeholders, with a broad range from public policymaking, NGOs, financial institutions, and industry.

A full event summary can be found [here](#).

Ukraine – 29th June 2021

(Attendees: 60)

On June 29th and 30th, 60 Ukrainian participants from academia, the government, private companies and public energy agencies joined Low Carbon Ukraine and the Kyiv School of Energy Policy for a workshop on energy and electricity system modelling. The event was co-organised with the PARIS REINFORCE consortium. The target of the two-day workshop was for the participants to be able to look behind the curtains of modelling, in order to better understand and assess the validity of models' results. This is especially important, as Ukraine is currently laying out the path for the future of its energy system, with several competing plans and scenarios. Understanding what these scenarios imply and what their projections in terms of costs, energy consumption and emission levels actually mean is thus crucial for researchers and decision-makers.

Full event details can be found [here](#).



4 Lessons Learned

This section offers some brief thoughts on key lessons learned by the consortium from the series of national stakeholder workshops implemented so far. Under the project's scope, D3.8 will provide a thorough explanation of lessons learned and hence this list is only a first indication.

Workshop Content

- Inviting stakeholders to present their own work is a sensible tool to create buy-in, as they are more likely to actively participate and contribute feedback. However, this may be at the cost of diluting the ability to get explicit feedback in desired areas.
- Where possible, it is a useful strategy to consult with stakeholders prior to a workshop to get their thoughts on optimal areas for discussion. This allows the consortium to better tailor discussion to areas that are of interest to local stakeholders leading to more engaged participants, and more relevant outputs.

Workshop Administrative

- Optimal workshop agenda design (in online world) should involve regular back-and-forward between presenter and attendees. It is challenging to do this. While it is tempting to present all of the work at the beginning and only then give stakeholders the floor, this appears to discourage active participation.
- Regarding optimal time schedule for organisation. The scientific/modelling part of project all coincides in its runs, meaning they are ready to hold workshops at one point in time. However, this puts strain on organising events. Also, such an implementation strategy creates a lot of publicity about the project around a certain time period but then the project remains quiet (from a workshop standpoint) in the months around this. It is therefore attractive from a resource allocation and public attention maximisation view to spread events out over the course of a project.

Online Tools

- Using sli.do (online voting tool) to elicit information from stakeholders was a positive experience. It has been a useful tool for modelling teams to translate discussion into quantitative output. Brainstorming on a set of questions for stakeholders is also a useful process for helping workshop organisers to think through desired outputs of the workshop. Presenting the results back to stakeholders immediately following the vote was popular.
- Breakout sessions are a very useful tool for facilitating greater stakeholder interaction online. Certain stakeholders appear to feel more open to discuss when present in smaller groups, meaning there is less domination of discussion by one or two individuals (even though this can still be a challenge). Sensible and supportive moderation of discussion is an important tool to partially alleviate this issue.

