



Paris Agreement Compatible
Scenarios for Energy Infrastructure

Planning the energy infrastructure of the future - compatible with the Paris Agreement



Preparing Europe's energy transition

The signing of the Paris Agreement in 2015 was a landmark event in the ambition to fight climate change. It is a driver for Europe to decarbonise its economy and to move towards an energy supply system based on renewables. Due to the time it takes to build and the lifetime of the investment, planning of the necessary energy infrastructure needs to happen now.

The European Networks of Transmission System Operators for Electricity and for Gas (ENTSO-E and ENTSOG respectively) play a central role in this. Every two years they run the Ten-Year Network Development Plans (TYNDP) – two grid planning exercises which describe infrastructure needs of different future energy scenarios.

In the past, TYNDP scenarios have been criticised for not being aligned with the 1.5°C Paris target and for not looking into a 100% renewable energy scenario. There is therefore a risk that, if not planned for and developed, the lack of correct energy infrastructure might restrict the growth of renewables, whilst the expansion of the wrong infrastructure may deepen Europe's dependency on fossil fuels.

Despite the importance of the TYNDP for decarbonisation, only relatively few civil society organisations take an active role in the process. Two key reasons for this low involvement are the highly technical content and long implementation periods.



The **PAC project – “Paris Agreement Compatible Scenarios for Energy Infrastructure”**– has been established to give a wider stakeholder group the opportunity to provide feedback to TYNDP scenario development and develop its own “Paris Compatible” scenario. The PAC project is also a capacity building opportunity for stakeholders who understand the importance but who are not knowledgeable of the technicalities of developing and modelling scenarios. PAC will facilitate discussions on pathways to reach the Paris targets amongst groups who usually do not associate with each other.

Both ENTSO-E and ENTSOG support the PAC project.

The project has three core tasks:

- ▶ **Review the TYNDP scenarios and assumptions**
The PAC project makes a difference by opening a communication channel for civil society to provide feedback to the TYNDP scenarios. The NGO networks Climate Action Network (CAN) Europe and the European Environmental Bureau (EEB) coordinate this.
- ▶ **Develop a Paris Agreement Compatible (PAC) energy scenario for Europe**
The PAC project will create its own Paris compatible energy scenario. The scenario will act as a basis for others to build upon and model. Further stakeholders will be invited to comment, to find consensus and identify potential limitations of the scenario. This will increase the transparency and inspire debate and discussion.
- ▶ **Work with energy modellers to share knowledge and improve capacity**
Scenarios have to be modelled to inform about infrastructure needs. Existing energy system planning models have their limitations and currently do not appropriately describe the low carbon, renewables-based energy system that is needed. The PAC project provides a stage for energy modellers and others to discuss existing and new modelling approaches to better represent the complex interrelations of the future energy system.



How can you get involved?

Scenario workshops

Scenario workshops allow participants to discuss assumptions on the energy generation mix, consumption patterns, prices, technology development (among others) to develop a robust PAC scenario. The workshops are primarily aimed at civil society representatives with expert inputs from industries, academia and the policy sphere.

The PAC scenario presentation

In 2020, the PAC consortium aims to publish a draft PAC scenario. It will be presented at a dedicated event. The PAC project welcomes comments on the draft scenario from all interested stakeholders.

Modellers' exchange workshops

Modellers' exchange workshops bring together experts from the modelling community and stakeholders with a strong interest in modelling. Each workshop focuses on a distinct challenge in modelling a future energy system and discusses how different modellers deal with new complexities in their work.

PAC at third party events

The PAC project is a collaborative effort which has not been seen before in this field. The consortium aims to inspire and help the establishment of similar processes by sharing our experiences with European and global audiences. The consortium is happy to present the project at relevant events.

Any questions?

If you want to learn more or want to get involved, visit our website at www.pac-scenarios.eu.



The PAC consortium

The PAC Consortium consists of the organisations **Climate Action Network Europe** (+160 NGO Members across Europe), **European Environmental Bureau** (150 NGO Members across Europe), **Renewables Grid Initiative** (13 NGO and 10 Transmission System Operator Members) and **REN21** (80 Members with an international focus from civil society, academia and research, governments, industry or intergovernmental associations).

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