BEST GRID

Testing better practices

Renewables-grid and public acceptance

Modernising and expanding the European electricity grid is an imperative building block to enable the transition of Europe's energy system from fossil fuel dependence towards renewable energy. However, planning and realising grid development projects is often difficult and time consuming due to local opposition, complex permitting procedures and the challenges of minimising impacts on nature and host communities.

The **BESTGRID** project tackles these problems by approaching three current European grid development projects in innovative ways.

A fourth project will focus on the evaluation of activities that have already been implemented to derive insights for further improvement. BESTGRID works through close cooperation between environmental non-governmental organizations (NGOs) and transmission system operators (TSOs) from the UK, Belgium and Germany and runs from April 2013 until September 2015. Any activities undertaken will be documented and impacts will be evaluated by the International Institute for Applied Systems Analysis (IIASA). The results will be analysed by IIASA and presented in publications relevant for politics and scientific discourse.

Transmission system operator (TSO)

TSOs are responsible for operating, ensuring the maintenance of and, if necessary, developing the electricity transmission system in a given area. They are also in charge of interconnections with transmission systems in other areas, and ensuring the long-term stability of the system.

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Imprint

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Goal oriented co-operation – the relationship between NGOs and TSOs

Historically, many grid development projects have resulted in opposition between NGOs and TSOs that worked, respectively, towards environmental protection and energy security. These two objectives were often rather hard to align.

TSOs are obliged to strengthen the grid in time to maintain a high standard of security of supply, while also addressing societal concerns. Many NGOs, on the other hand, are involved with the protection of nature and the environment, and the fight against climate change.

However, by now, they increasingly recognise that the grid infrastructure needs to be adapted to an energy system based on renewables. This, in principle, increases NGO support for certain grid developments, albeit they still remain concerned about environmental impacts of grid lines and early public participation.

Many players from both sides realise that conflicts can be avoided, and that they can best achieve their goals through dialogue and cooperation. During the BESTGRID project, NGOs and TSOs will have the chance to work together to identify better solutions for grid development projects on the ground.

What does this cooperation look like?

In the BESTGRID project, NGOs and TSOs work closely together to develop new approaches that aim at not only improving the acceptability of new power lines, but also speeding up permitting procedures while maintaining high environmental protection standards.

This means that in three of the pilot projects NGOs will give advice to TSOs when drafting the action plans for the projects. In these plans, new and additional measures for earlier and more substantial information provision and involvement of organised stakeholders as well as the broader public will be outlined. In addition, these plans include measures to address social and environmental concerns. During their implementation, local NGOs will also give further advice.

The fourth pilot will be handled a bit differently and focus on the evaluation of a stakeholder engagement process which was recently developed and implemented at the respective pilot project. Insights generated will contribute to learning how to improve procedures even further.

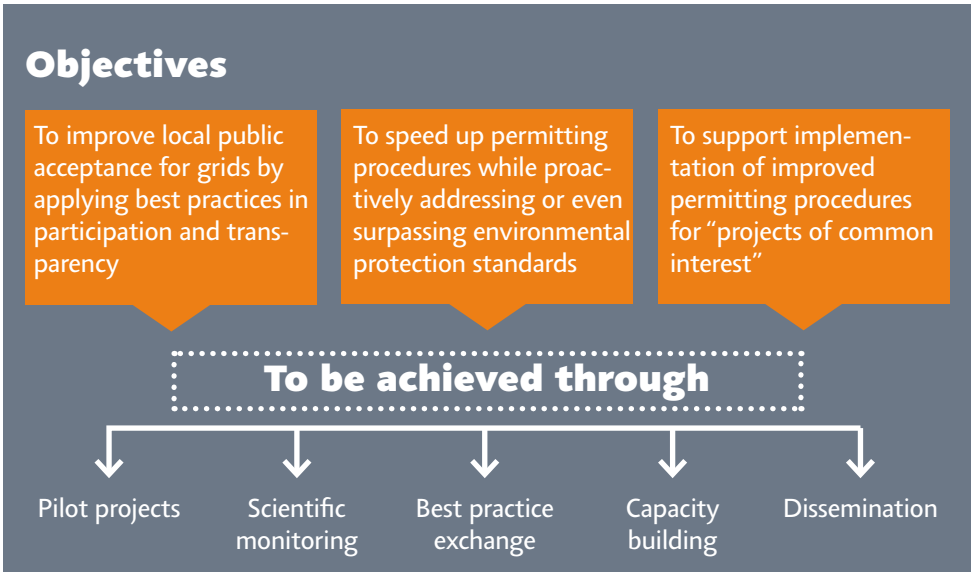
Towards the end of the BESTGRID project, in summer 2015, the NGOs will summarise practical recommendations, based on the experiences made, in two guidebooks – one on transparency and participation, and the other on environmental protection.

And what about other grid projects?

All partners involved in BESTGRID will take part in an exchange of best practices. They will inform each other about the experiences they have gained and the measures that have helped reach the objectives of the project. Moreover, they will share their insights via workshops and further dissemination measures with other stakeholders and TSOs not taking part in the BESTGRID project (more information on www.bestgrid.eu).

Throughout the project, the research organisation IIASA will accompany the pilot projects in order to evaluate the effectiveness of different actions applied and to develop recommendations for their replication.

The nature conservation organisation BirdLife Europe will organise training sessions for their Partners and other NGOs on constructive engagement with grid plans and projects. They will also work with their Partners in Central and Eastern Europe to support them in building local NGOs' capacity for engagement in upcoming grid projects in their country. This should help to reduce conflicts and enhance the overall quality of these projects.



Pilot projects: new approaches are developed with close cooperation between NGOs, TSOs and a research institute, and are tested in three pilot projects. Experiences will be evaluated. In the UK, lessons from an ongoing project will be used to improve National Grid's approach in designing stakeholder engagement processes.

Dissemination: All lessons learned are widely spread across Europe through communication measures, such as workshops, a website, bilateral meetings, or newsletters, and two handbooks on environmental impacts and public participation.

Best practice exchange: Terna will test a set of innovative best practice exchange tools. The transferability of selected best practices will be tested in three different workshops.

Capacity building & guidance: BirdLife is organising training events for NGOs on successful and constructive engagement in grid development procedures and projects, as well as roundtables between NGOs and authorities in Central and Eastern Europe. Towards the end of BESTGRID, BirdLife and Germanwatch will write guidebooks, one focusing on "Participation and Transparency", the other on "Protecting the Environment and Engaging Environmental Stakeholders".

Scientific monitoring: The research institute IIASA is evaluating the pilot projects from a scientific perspective. It will analyse the action implemented throughout the pilots by applying a framework of guiding principles and collecting data. In addition, it will identify the potential of different actions to achieve acceptability and the conditions that are necessary for their successful application.

Introducing BESTGRID's pilot projects

Each pilot project is a grid development project that is planned and realised by one of the TSOs participating in BESTGRID. The operators in charge of a pilot project that design and test new activities are 50Hertz (Germany), Elia (Belgium), and TenneT (Germany). They will receive advice from NGOs during the project planning phase and throughout the implementation. National Grid will develop recommendations for their existing approach on stakeholder engagement. All pilot projects are different from each other, and complementary at the same time. Thus, they enable BESTGRID to assess best practices pertaining to large electricity infrastructures and environmental, social, and regulatory conditions.

Projects of common interest (PCIs)

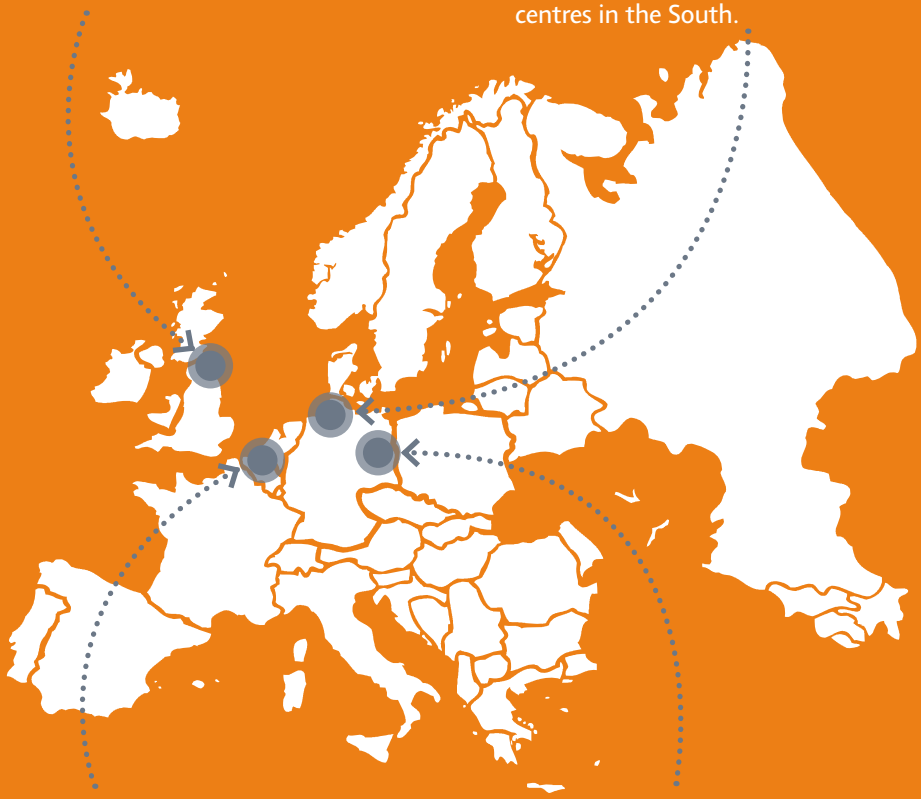
In May 2013, the EU regulation on guidelines for trans-European energy infrastructure came into effect. This legislation introduces a new procedure to identify "projects of common interest", which contribute to the following objectives on a European scale:

1. security of supply,
2. integration of renewable energy sources, and
3. social and economic welfare.

For PCIs, a new permitting procedure will apply at the national level. Furthermore, PCIs are eligible for funding from the European Union through the "Connecting Europe Facility".

Pilot project A: National Grid will use the interconnector from the UK to Norway to scrutinise their existing approach and derive recommendations especially for offshore interconnectors.

Pilot project B: TenneT's pilot project Sued.Link with ~800km length is one of the large HVDC lines that are intended to transport electricity from offshore and onshore wind generation from Northern Germany to the consumer centres in the South.



Pilot project C: Elia's pilot project concerns an onshore underground cable in an urban area, with an impact on the local economy (small and medium-sized enterprises). It runs over approximately 5 km in the Walloon Region.

Pilot project D: 50Hertz's 380kV overhead line between Bertikow and Pasewalk is to increase the power transmission capacity in the North-Eastern part of Germany, thus guaranteeing the security of supply for this region. Length: ~40km.

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Timeline

1. Project governance and progress tracking / support of best practice exchange and dissemination
2. Development of action plans
3. Development of project information material & implementation of action plans
4. Development of a BESTGRID background paper
5. Definition of a common framework to evaluate pilot project activities
6. Data collection
7. Compilation, write up and publication of results
8. Regional and local NGOs will support the development of action plans
9. Local NGOs will act as advisors to support the implementation of the pilot projects
10. Development of guidebooks
11. Training sessions in Brussels and in Central/Eastern Europe

Partners

50Hertz is a German TSO responsible for the operation, maintenance, planning, and expansion of the transmission grid in the North and East of Germany.

BirdLife Europe is a network of national conservation organisations that strive to conserve birds, their habitats and biodiversity for the benefit of nature and people.

Elia is the transmission system operator in Belgium, one of the most interconnected countries in Europe. It operates grids from 380 kV to 30 kV. It also has a 60% share in the German TSO 50Hertz.

Germanwatch is a Germany-based NGO working on issues concerning global equity and the preservation of livelihoods, such as the prevention of climate change.

IIASA is an independent institute that conducts research on critical issues of global environmental, economic, technological, and social change, applying an interdisciplinary and systemic approach.

National Grid is an international electricity and gas company and one of the largest investor-owned energy companies in the world. It is operating grids in the UK and the USA.

TSOs and NGOs join forces in the Renewables-Grid-Initiative (RGI) to support an environmentally sensitive, socially acceptable build-up of a sufficient grid infrastructure in Europe for both decentralised and large-scale renewable energy sources.

TenneT is Europe's first cross-border transmission system operator administering transmission grids in Germany and the Netherlands.

The Terna Group is the owner of the Italian national high and very high voltage electricity transmission grid, with over 63,500 km of HV lines throughout the Italian territory.