Novel tools bridge the information gap between citizens and electricity grid operators

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It's generally agreed that a low-carbon economy is important if we're to combat climate change. One obvious way to do this is to modernize our current power transmission grids so that we can make electricity more

secure, affordable and sustainable. However, while this may seem straightforward in theory, in reality things aren't always so simple. New grid projects often face strong opposition by the organizations and communities they affect. When such opposition is added to the lengthy process of obtaining the necessary permits that can last up to 10 years, many of these projects are delayed or even canceled.

Why do people oppose these projects? One of the reasons is that stakeholders—local, regional and national governments, industry, environmental organizations and local residents—often feel their views and concerns aren't being considered. To address the problem, the EU-funded project INSPIRE-GRID created several tools that allow all voices to be heard in the grid expansion planning and approval process. The project's solution for increased stakeholder engagement has the potential to enable better conflict management and an expedited permit process.

Tools for information and collaboration

The project team's challenge was to help citizens provide informed opinions on complex matters by finding ways to bridge the information gap between power grid experts and the general public. Their solution to this challenge was to combine methods that facilitate decision-making with state-of-the-art tools that facilitate collaboration between all stakeholders.

One of these tools, the geographic information system (GIS) web interface, makes it possible for local residents to visualize a power line's possible routes and submit their views on them. A GIS was used in the planning of Swiss transmission line paths and of a power line transmitting wind-generated energy from the north to the south of Germany.

Other INSPIRE-GRID tools deal with the difficulty of communicating a project's expected benefits, which may not always be easily visible at local level. The project's life-cycle assessment tool helps stakeholders to see the environmental impacts of future power lines. It also explains the reasons why a grid extension may be needed, for example to link renewable energy to the system or to reduce power interruptions and blackouts. Since the project's end in 2017, such tools have already been used in a real-world environment.

An INSPIRE-GRID (Improved and eNhanced Stakeholders Participation In Reinforcement of Electricity Grid) poster published on the ResearchGate website provides some promising conclusions about stakeholder engagement in future grid expansion projects. They state that "[e]arly, fair and trustworthy involvement of stakeholders can increase acceptance" of new grid projects. They also mention "careful selection of stakeholder engagement methods" and the use of "participatory decision-making methods to generate more inclusive decisions" as important factors to be considered. One thing is for sure, using these methods can only be a positive stepping stone to a more energy-efficient and low-carbon economy.

More information: INSPIRE-GRID project website: www.inspire-grid.eu/

Stakeholder participation in the development of the electricity grid: the INSPIRE-Grid project: www.researchgate.net/publicati … INSPIRE-Grid_project

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