

Wind Farm Repowering in Abruzzo, Italy

In the Region of Abruzzo in Italy, authorities and wind energy farm operators opted to repower their local wind farms towards increased energy production. This process of renewal was seized as an opportunity to reduce visual and environmental impact, and thus to increase social acceptance.

Motivation:

Repowering is the process of replacing existing, older and less productive wind turbines with new ones and updating existing farm infrastructure. While the primary goal in Abruzzo was to produce more energy, they also aimed to lower the environmental and visual impact from the old wind turbines.

Challenge

Due to low involvement in previous processes, the community felt disengaged and levels of trust were low from the onset. Local citizens were concerned that the increased generation of energy would have negative consequences on biodiversity and the local landscape.

Impacts and results:

Focusing on the renewal of existing wind farms and their infrastructure (roads, cableways, substations) enabled developers to maintain and even reduce land use while increasing energy production. Visual and environmental impacts were thus kept at a minimum, and noise pollution was reduced.

The entire community was engaged in the process from the beginning through public meetings. Providing a platform and answering the concerns of citizens led to an increase of trust between the developers and the local community. Specific solutions to concerns were taken into account and initial plans adapted to territory needs.

At the same time economic benefits for the community resulted from new local jobs as well as the restoration of the road network and grid connection.



Lessons learned:

Social acceptance: This measure has been very successful in achieving social acceptance. In the long-term, it depends on continuous information about the sites' energy production, as well as the direct and indirect environmental and economic benefits to the community.

Transferability: This process has a high transferability to areas where turbines are roughly 12-20 years old. It is important, however, to consider other factors such as regulations, local decision makers, developers, and the amount of resources available.

