

# Science for Environment Policy

## What drives general acceptance of offshore wind farms?

**General acceptance** of offshore wind farms is most positively influenced by reductions in fossil fuel imports and contributions to global warming mitigation, and most negatively by concerns about increases in electricity price and impacts on scenic views, US research suggests. Other factors, such as reductions in air pollution, were not closely related to general acceptance even though on average the public rated them as important.

**Public opposition to**, or support for, wind [energy](#) can be on a general or specific level. For instance, local people might be worried about the impacts of a particular wind farm, but people will also have views on the general pros and cons of wind energy. It is important for policymakers to understand, not just what might influence views about specific sites but also what drives acceptance of wind energy in general.

In this study, from Maine, US, researchers investigated how the public rated the costs and benefits of offshore wind energy, and how this influenced levels of general acceptance. In 2010 a total of 3 000 individuals were sent surveys. This sample consisted of 600 individuals who live near land-based wind farms, 600 who live on the coast near offshore wind farms and 1 800 selected at random.

The survey asked individuals to rate benefits (such as may decrease the price of electricity or reduce air pollution) and concerns (such as may increase the risks to marine wildlife or reduce commercial fishing) giving those with the highest importance the highest score. The researchers also combined the scores from three questions to form a 'general acceptance' index. These included "How do you feel about wind energy?" "In your opinion, is wind power a good solution for Maine's energy problems?" and "Would you encourage wind power development in Maine?".

The results show that on average the potential benefits of offshore wind energy were more important to the respondents than the concerns. In other words, the combined scores of the benefits were higher than those of the concerns.

The benefits rated as the most important were decreases in electricity prices, reduction in air pollution and increases in local employment. The top concerns were increases in electricity prices, risks to marine life and impacts on the local fishing industry.

Notably, the researchers found that the importance ratings did not always match with what had the most influence over general acceptance. For instance, although air pollution reduction was rated as one of the most important benefits, the scores were not closely correlated with the general acceptance index. Furthermore, some factors which were scored as relatively unimportant, such as impacts on scenic views, had a significant influence on general acceptance of offshore wind farms.

The benefits that influence general acceptance the most were reductions in fossil fuel imports, reductions in global warming and possibilities for wind power export. The most influential concerns were increases in electricity price, impacts on scenic views and reductions in coastal property values.

The researchers also found that there were no significant differences among groups of individuals who lived near land-based wind farms, on the coast near offshore wind farms or the general sample. This indicates that general acceptance is not altered by personal experience of wind farms, say the researchers.



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**Contact:** [teisl@maine.edu](mailto:teisl@maine.edu)

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