

Gauging public opinion on small wind turbines

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Credit: Youris.com

There are currently more than 900,000 small wind turbines in use

worldwide and [estimates](#) suggest that could increase by 20 percent by 2020. But, there has been a lack of research on public opinion on these independent energy systems

Recent studies suggest that around 70 to 80 percent of people in Europe support wind farms, although there are still concerns regarding noise and aesthetics. Little is known, however, about [public attitudes](#) towards small [wind turbines](#), which are generally defined as those with capacities below 100kW.

Cerian Tatchley, a researcher at the University of Stirling in Scotland, recently published the results of a [survey](#) that she believes is the first peer-reviewed research in the world investigating attitudes towards SWTs.

Just over half of the respondents – predominantly older, white males – felt that SWTs were acceptable across a range of settings. However, 40 percent said they would not be willing to install an SWT, mainly due to concerns about economics, visual impact and doubts about efficiency.

"Environmental attitudes influenced opinions," says Tatchley. Those most concerned about climate change were more accepting of SWTs. Age also affected attitudes, "with older respondents generally being less accepting of SWTs," she adds.

Another key finding was that attitudes toward SWTs were dependent on their setting. Turbines associated with road signs were the most acceptable, while those in hedgerows and gardens were least acceptable.

"Concerns about wildlife impacts were most frequently raised in relation to SWTs installed in hedgerows—which are used by some bat species as commuting routes between roosts and foraging areas—and concerns about noise for SWTs installed on buildings or in gardens," explains

Tatchley.

The European [SWIP](#) project is also exploring attitudes towards SWTs, and recently presented the preliminary results from an EU-wide questionnaire.

Although a significant number of respondents suggested they would be interested in an SWT for their own home, other decentralised energy solutions—solar photovoltaics (PV), [solar thermal collectors](#), and combined heat and power—were looked upon more favourably, explains Simon Hunkin, EU Policies & Communication Manager at Greenovate! Europe, who are running the survey.

When asked what would increase their interest in SWTs, the most popular options were "improved performance" and "reduced costs," with more than 90 percent of respondents selecting each of these developments.

To improve the performance of small wind turbines, SWIP is developing new technologies, such as blades and gear boxes, and is focusing on urban wind modelling to optimise placement of turbines.

In fact, Hunkin says, a large problem in cities is wind resource assessment. In urban areas, below 30m, the effect of surrounding obstacles produces inconsistent wind patterns that are difficult to predict. "Wind conditions in cities are difficult to measure, so when SWTs are installed, they do not always work, and this can be seen very clearly by passers-by," he explains.

Europe is aiming for a [wind energy penetration level of 20 percent by 2020](#). Decentralisation, with a move from large wind farms to smaller systems, is expected to play an important role in this, as recently underlined by Stefan Gsänger, Secretary General of the [World Wind](#)

[Energy Association](#): "Small wind has already found its niche in the global electricity market and provides power to millions of people living in around one million households, many of which would not have access to power without their small wind turbines." But research on these independent energy systems needs to make great strides in the coming years.

Provided by Youris.com

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