**Social acceptance of future renewable energy technologies (RET) in Austrian tourism regions**

Themenbereich: Energieerzeugung/-infrastruktur und Netze

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Motivation

To combat climate change, the Austrian government specifically aims to expand photovoltaics (PV) and wind power installations [3][5]. However, in order to achieve this goal, large-scale PV and wind power will have to approach rural areas. Such rural areas, characterized by landscape, nature and cultural heritage are highly associated with tourism and valued for aesthetical reasons [1][4][6][7][10]. Overall, literature shows that social acceptance could have a notable influence on RET installations, particularly in the planning phase [2][9][12][13][14]. Thus, social acceptance is expected to play a significant role in the expansion of RET in Austrian tourism regions.

Methods

We used an online survey to collect data between April and June 2020 in three tourism regions in Austria. The selected regions were Kamptal (Lower Austria), the Nocky Mountains (Carinthia) and Joglland (Styria). As the main interest was in the acceptance of RET in the selected tourism regions, all respondents not knowing the particular regions were excluded. The final sample consisted of 962 respondents (Lower Austria = 316, Carinthia = 393, Styria = 253).

Thevariable *acceptance of RET projects in tourism regions* was measured on a scale ranging from 4 = *agree* to 1 = *disagree* for PV (M = 2.98; SD = 0.81) and for wind power (M = 2.75; SD = 0.86). Other (socio-psychological) variables, mostly using a Likert-type scale ranging from *I highly agree* (5) to *I disagree* (1), included *place attachment* (*α* = .85), *RET optimism* (*α* = .68), *negative RET impact* (*α* = .83), *positive RET impact* (*α* = .81)*, distributional justice* (*α* = .65) and *recognition justice* (*α* = .68). Multiple regression was used to examine the predictors of *acceptance of RET projects in tourism regions*.

Results and Conclusion

The results reveal an acceptance of 66.84% (of respondents indicating (high) acceptance) for wind power and 77.55% for large-scale PV. The acceptance of both RET was lowest in Carinthia. For wind power, Styria had a higher acceptance rate than Lower Austria, while it was equally high for PV.

The regression model for wind power could explain a total variance of 44% (F(12,949) = 65.76, p < 0.001), the one for PV 39% (F(12,949) = 53.61, p < 0.001). In both models, *negative RET-impact* (PV: *β* = -0.43, *p* < 0.001; wind power: *β* = -0.37, *p* < 0.001) yielded the highest regression weight followed by *positive RET-impact* (PV: *β* = 0.24, *p* < 0.001; wind power: *β* = 0.34, *p* < 0.001) and *place attachment* (PV: *β* = -0.16, *p* < 0.001; wind power: *β* = -0.12, *p* < 0.001) Further, *RET optimism* and *distributional justice* yielded (highly) significant results, while *recognition justice* was only significant for wind power.

The study confirmed the assumption derived from social acceptance literature [8][11] that in tourism regions wind power is seen as more controversial than large-scale PV. It was found that especially assumed impacts, either negative or positive, can be associated with acceptance.

Literature

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[3] Section 4 Subsection 4 Bundesgesetz, mit dem ein Bundesgesetz über den Ausbau von Energie aus erneuerbaren Quellen (Erneuerbaren-Ausbau-Gesetz – EAG) erlassen wird sowie das Ökostromgesetz 2012, das Elektrizitätswirtschafts- und –organisationsgesetz 2010, das Gaswirtschaftsgesetz 2011, das Energielenkungsgesetz 2012, das Energie-Control-Gesetz, das Bundesgesetz zur Festlegung einheitlicher Standards beim Infrastrukturaufbau für alternative Kraftstoffe, das Wärme- und Kälteleitungsausbaugesetz, das Starkstromwegegesetz 1968 und das Bundesgesetz vom 6. Feber 1968 über elektrische Leitungsanlagen, die sich nicht auf zwei oder mehrere Bundesländer erstrecken, geändert werden.

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