

EGU21-5648

<https://doi.org/10.5194/egusphere-egu21-5648>

EGU General Assembly 2021

© Author(s) 2022. This work is distributed under the Creative Commons Attribution 4.0 License.



## Photovoltaics in Austria - open space and rooftop potential analysis on a high spatial resolution

**Christian Mikovits**<sup>1</sup>, Thomas Schauppenlehner<sup>1</sup>, Patrick Scherhauser<sup>1</sup>, Johannes Schmidt<sup>1</sup>, Lilia Schmalzl<sup>2</sup>, Nina Hampf<sup>2</sup>, and Robert Sposato<sup>2</sup>

<sup>1</sup>Institute for Sustainable Economic Development, University of Natural Resources and Life Sciences, Vienna, Austria

<sup>2</sup>Institute for Sustainable Energy Management, Alpen-Adria-Universität, Klagenfurt, Austria

Austria aims to meet 100% of its electricity demand from domestic renewable sources by 2030 which means, that an additional 30 TWh per year are required. Solar energy will play a significant role to reach this goal, meaning the need for a substantial increase in photo-voltaic capacity. While some federal states and municipalities released a solar roof-top cadastre, there is lacking knowledge on the estimation of the potential of both, open space installations and roof-top modules, on a national level with a high spatial resolution. Results show significant differences between urban and rural areas, as well as between the Alpine regions and the Prealpine- and Easter Plain areas.

The work includes a framework to automatically process solar PV data and land-use data was developed and openly available for usage. The framework is able to fetch solar data automatically from a defined source, and join, manipulate and alter it with geodata applying various spatial methods.