



## RESOURCE

# Open access database on freshwater demand for electricity in Africa

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### Description / Abstract

## Database on freshwater demand for electricity in Africa

The database was developed as part of a research endeavor funded by the CGIAR Initiative on Foresight. This resulted in a paper analyzing freshwater demand for electricity in the year 2020. The paper is available from here: <https://doi.org/10.1039/D4EW00246F>.

The article provides a detailed analysis of freshwater demand for electricity production in Africa, using **freely accessible data**. The study includes 2,534 power plants, categorizing them by fuel type, operation cycle, infrastructure, cooling system, and local climate. Total water withdrawal and consumption were 33,108 million m<sup>3</sup> and 23,822 million m<sup>3</sup> per year, respectively, for 2020. The **study's open-access database** offers valuable statistics for water management and energy stakeholders, with results available at national, subnational, and river basin levels. This comprehensive compilation allowed for an accurate assessment of freshwater demand for electricity production at various geographic scales.

### Data availability

The data is currently available through the paper's supporting information in EXCEL format. The database includes all power plants, installed capacities, electricity generated in 2020, location coordinates and information on water type for cooling per fuel type per African country. We validated total electricity production per country per energy source with data from the IEA for 2020. For small countries for which the IEA did not give data, we validated using data from IRENA<sup>37</sup> for 2021.

### Publication year

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**Country**

[Algeria](#) [Egypt](#) [Libya](#) [Mauritania](#) [Morocco](#) [South Sudan](#) [Sudan \(the\)](#) [Tunisia](#) [Western Sahara](#)

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