# Building a Bankable Solar Radiation Dataset

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Abstract

A robust solar radiation dataset is essential for securing competitive financing for solar power projects. The majority of solar radiation datasets are derived from publically available data, though there are an increasing number of proprietary datasets being developed and marketed. Most of these new datasets represent models based on satellite images and validated with ground measured data. This paper focuses on the strengths and weaknesses of the existing publically available solar radiation databases, though the commentary is equally relevant to the newer commercial datasets. While the financing community generally views the solar resource as stable, it also views the material miscalculation of the solar resource as one of the biggest risks in a solar project. Therefore, lenders and rating agencies alike require verification of the solar resource dataset to be utilized at each project location as this translates directly into electric energy production forecasts and revenues. The variability of the solar resource as exhibited by the historical solar data and the accuracy of the dataset play significant roles in estimating the probability of future performance and influences the financial contract that the project is likely to receive.