



Special Interest Group:

# Precision Engineering for Sustainable Energy Systems

13th - 14th October 2021

Physikalisch-Technische  
Bundesanstalt (PTB),  
Braunschweig, Germany

Precision machines have long been at the forefront of one industrial revolution after another to enable the turning of ideas into the economical production of physical objects. In all likelihood the emerging Sustainable Revolution could be the start of a new golden age for the planet, humanity, and precision engineering.

Whilst there is no shortage of renewable energy systems available at ever-decreasing costs, a concern is they are not evolving fast enough to help us economically transition to a low carbon economy. The purpose of this workshop is thus to bring together people from academia, industry, and government to share experiences with using precision engineering principles to help develop new ideas and manufacturing systems to reduce production and ownership costs related to realizing a global carbon neutral (or ideally negative) economy.

Areas of interest include automated precision production of components and systems ranging from manufacture of solar cells and panels to their installation and maintenance; to ever larger wind turbines on and offshore including in-situ manufacturing of ever larger elements; to energy storage systems from batteries to hydro power systems.

We are seeking papers in **Precision Engineering for Sustainable Energy Systems** and their production in the following categories, however contributions are not exclusive to these:-

### 1. Hydro

- Automated aquaculture and mineral harvesting
- Offshore wind
- Tidal
- Wave

### 2. Solar

- Concentrating Solar Power (CSP)
- Photovoltaics (PV)

### 3. Storage

- Battery
- Flywheel
- Hydro
- Molecular chemical
- Thermal (including Molecular chemical geothermal)

### 4. Wind

- Actuators, gearing, and controls
- Blades and materials
- Towers

For each of these areas, how can production and quality be increased while lowering costs and increasing quality? Can precision production methods from other industries be of help for the topics above?

#### Key dates

16 <sup>th</sup> July 2021	Short Abstract Submission Deadline
19 <sup>th</sup> July 2021	Delegate Registration Opens
16 <sup>th</sup> Aug 2021	Notification of Presentation Award (Oral/Poster)

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