

## **Algae and biological processes for CO<sub>2</sub> conversion and CO<sub>2</sub> usage**

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### **Abstract**

On coal based power generation increasing efficiency and the development of carbon capture and storage are the main strategies to achieve efficient climate protection, affordable power prices and security of supply. A promising additional pathway of reducing the carbon footprint is CO<sub>2</sub>-utilisation as a feedstock. Various ideas how to convert CO<sub>2</sub> into products exists and different technology approaches are currently being developed. Biological processes using algae or other micro-organisms may be a future alternative to geological storage and the chemical ways of conversion. RWE explores the potential and bottlenecks of these developments and has already gained hands-on experience in a pilot-plant operated in an existing power plant environment.

Besides some major success in applying bio-technologies to carbon processing, the demand for further significant R&D efforts is obvious. RWE is complementing the technical development of future power plants by different R&D programs focussing on biological measures.