



Biorefining Updates from Austria

IEA Bioenergy Task 42 Biorefining
Task Meeting Dublin 18th&19th April 2016

tbw research GesmbH office@tbwresearch.org

Michael Mandl 10.02.2016

Country update from Austria

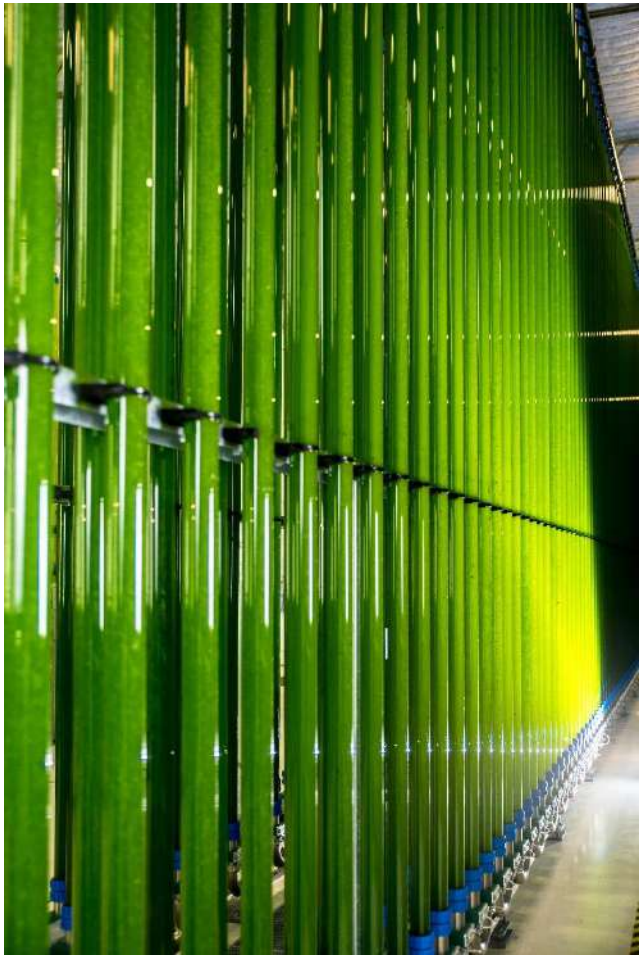
- ecoduna microalgae production
- Existing pilot- plant
- ecoduna is ramping up for the implementation of for a full scale industrial site in 2017
- Planned capacity 200 t/a dm algae biomass in 2018
- Key products: algae biomass and Omega 3 fatty acids
- ecoduna is currently outreaching for additional investors

ecoduna©

ecoduna has built and runs the world's largest continuous algae production plant in Austria, using funding from the EU Entrepreneurship and Innovation Programme

ECO-INNOVATION

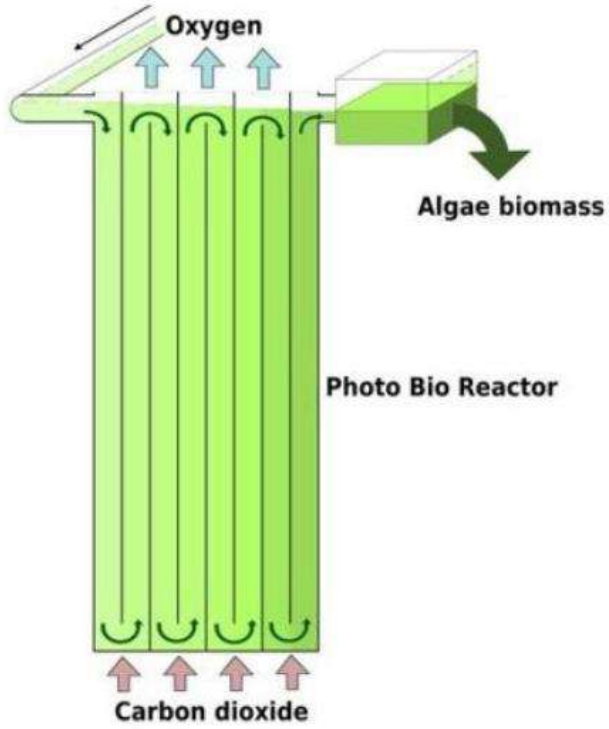
Ecoduna‘s pilot photobioreactor



- photobioreactors are designed for optimizing the sun
- “dilution of light” due geometry
- overheating can be avoided
- algae biomass has the same maturity level in each module
- specific nutrition and stress factors can be applied and fully controlled
- VERY advanced system!

tbw research GesmbH office@tbwresearch.org

Ecoduna‘s photobioreactor



- Algae is bred in a vertical meandering channel of 100% photoactive volume
- CO_2 bubbles generate flow through;
  → enables continuous operation without pumping
- Algae biomass is always at the same maturity stage along the cultivation process in the reactor. This enables specific nutrition supply or initiation stress according to maturity level
  → harvest at optimal conditions

tbw research GesmbH office@tbwresearch.org

Michael Mandl