

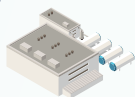
# IPCEI Hy2Tech ES15

## Technological Development and Industrial Deployment of Electrolysers



### Challenges

Improve the integration of technology in large-scale plants and establish efficient operational strategies



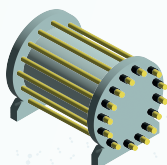
Scale up the technology to enable the development of an affordable hydrogen market

Improve the flexibility of operations to connect with renewable energy sources



Reduce execution costs and enhance plant efficiency

### Research lines



Advancement of alkaline technology to adapt it to current market needs

Development of new AEM technology aimed at reducing costs and size, increasing efficiency, and improving flexibility



### Impact



Contributing to the energy mix for the decarbonisation of industry and society

Scalable technology



Lower cost

Greater flexibility



Technology optimisation with a holistic project perspective

## Development Lines



### Research to improve the electrochemistry of alkaline and anionic electrolyzers

**Impact:** Enhanced baseline efficiency and improved operation management based on degradation behaviour



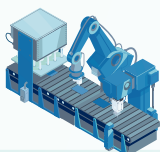
### Design of a new-generation scalable AEM electrolyser

**Impact:** Acceleration of next-generation electrolyser design for original equipment manufacturers (OEMs)



### Design of a disruptive separation solution for alkaline electrolysis

**Impact:** Reduction of CAPEX through compact design and reduction of OPEX through better adaptation to renewables by lowering thermal inertia



### Research for the design of automated and efficient component manufacturing and equipment assembly lines

**Impact:** Transferable know-how for OEMs and on-site equipment assembly



### Digitalisation of electrolyser plant design, optimisation, and operation

**Impact:** Reduced technical and financial risk across all project phases