Hydrogen & Fuel Cell Center

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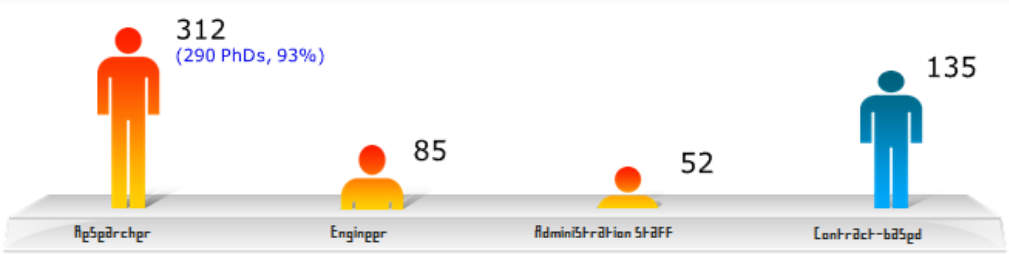
Introduction of Korea Institute of Energy Research (KIER)

KIER will continue to do its best in pursuit of improving national wealth and contributing to the improvement of quality of life for the people by supporting national energy policy in terms of technology development

KIER is headquartered in Daejeon with regional research sites in Jeju island, Buan, Ulsan and Gwangju with an aim to enhance global research capacity and foster open collaborative research.

Personnel

Persons :584 employees in total with 449 of regular staffs (as of June 2017); (290 PhDs in Researchers, 93%)



Budget

164M $ at 2017 yr
: Government grant: $88.2M (53.6%)

New & Renewable Energy Complex

South west coast of Korea

③ Industrial Park

Wind Power Center

H_2 & FC Center

② Research Park

① Theme Park

Korea Institute of Energy Research
Hydrogen & Fuel Cell Center

- 2008, USD 22M funding was invested
- 2009-2011 Construction
- 2011 Center established
- Location : South west coast of ROK
- Role : Supporting commercialization of PEFC system from enterprises through development, evaluation, and education

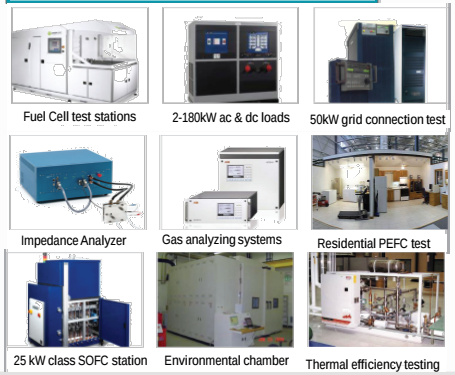
Vision : World top class organization providing one-stop service in hydrogen and fuel cells

One-stop service : Perform development, evaluation, field test and certification at one place

Infrastructure

- Large facility and equipments for development of fuel cell systems up to 200 kW class
- Large performance/environmental test equipments
- Enough space (27,308 ft2)

Equipments



- 1-100 kW class PEFC test station 7 units
- 25 kW class SOFC test station
- Environmental chamber 6 × 3.5 × 2.5 m
- 2-180 kW class ac & dc electronic loads 7 units
- 50 kW class grid connection test equipments
- Gas analyzing systems for reformer and fuel cells
- Performance Evaluation Center for 10kW Class Residential PEFC

Center Role

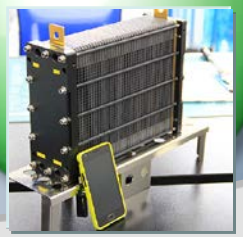
Omnidirectional Support for Enterprises

Enterprises

Equipments

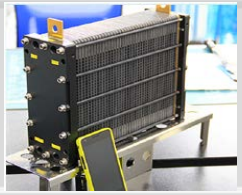
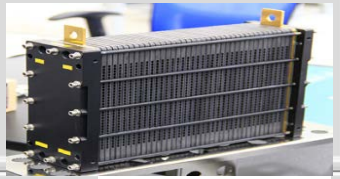
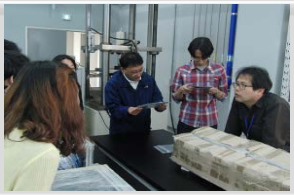
Infrastructure

Technologies



Human Resorces

Research

Title	Contents	
Stack Design & Manufacturing	◦ Air-cooled stack design & manufacturing ◦ 3kW Fuel cell UPS	
20kW Fuel Cell System Using Bio-methane	◦ Long-term test for fuel cell system ◦ Effect of impurities in bio gas on fuel cell system	
Stack Durability Evaluation	◦ Stack using metallic separator ◦ Long-term durability test	
Fuel Cell Power Pack for Forklift	◦ Stack design and manufacturing ◦ Development of power pack and components ◦ Long-tem test	
Graduate School	◦ 12 graduate students a year	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