

**Contribution of CRES to**

# **Micro-CHeaP**

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*Micro-CHeaP kick-off meeting, Torquay, 11&12 October 2004*



# WHAT IS CRES

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The Centre for Renewable Energy Sources (CRES) is the Greek national co-ordination centre for :

- **Renewable Energy Sources**
- **Rational Use of Energy**
- **Energy Saving**

- CRES was founded in September 1987.
- It is a public entity, supervised by the Ministry of Development
- CRES has a staff of 160 people
- [www.cres.gr/kape/index.htm](http://www.cres.gr/kape/index.htm)

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# INFRASTRUCTURE OF CRES

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CRES is located on its wholly owned premises, at 19th Marathonos Ave, Pikermi Attiki, in addition to over 2000 m<sup>2</sup> of main work space there also:

- specialised laboratories (biomass, photovoltaics, passive solar systems, wind energy)
- experimental outdoor installations
- mechanical shop
- conference rooms
- Library
- a strong computing infrastructure

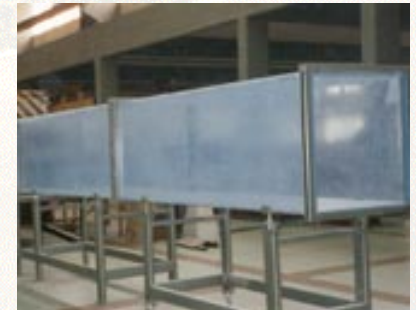


# STRUCTURE OF CRES

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CRES is composed of the following basic units:

- Division of Renewable Energy Sources
- Division for Energy Saving
- Division for Energy Policy
- Division for Energy Information Systems Dissemination & Market Development
- Division of Financial and Administrative Services



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# ACTIVITIES OF DIVISION OF RES

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- Applied research in RES
- Development of procedures for the evaluation of RES
- Development of certification systems
- Laboratory development of prototypes
- Development of computer codes
- Development of measuring instruments



## **The Division is composed of the following Departments :**

- Wind Energy
- Biomass
- Geothermal Energy
- Wave & Small Hydro
- Active Solar Systems
- Photovoltaics and Hybrid Systems
- RES&H<sub>2</sub> Integration

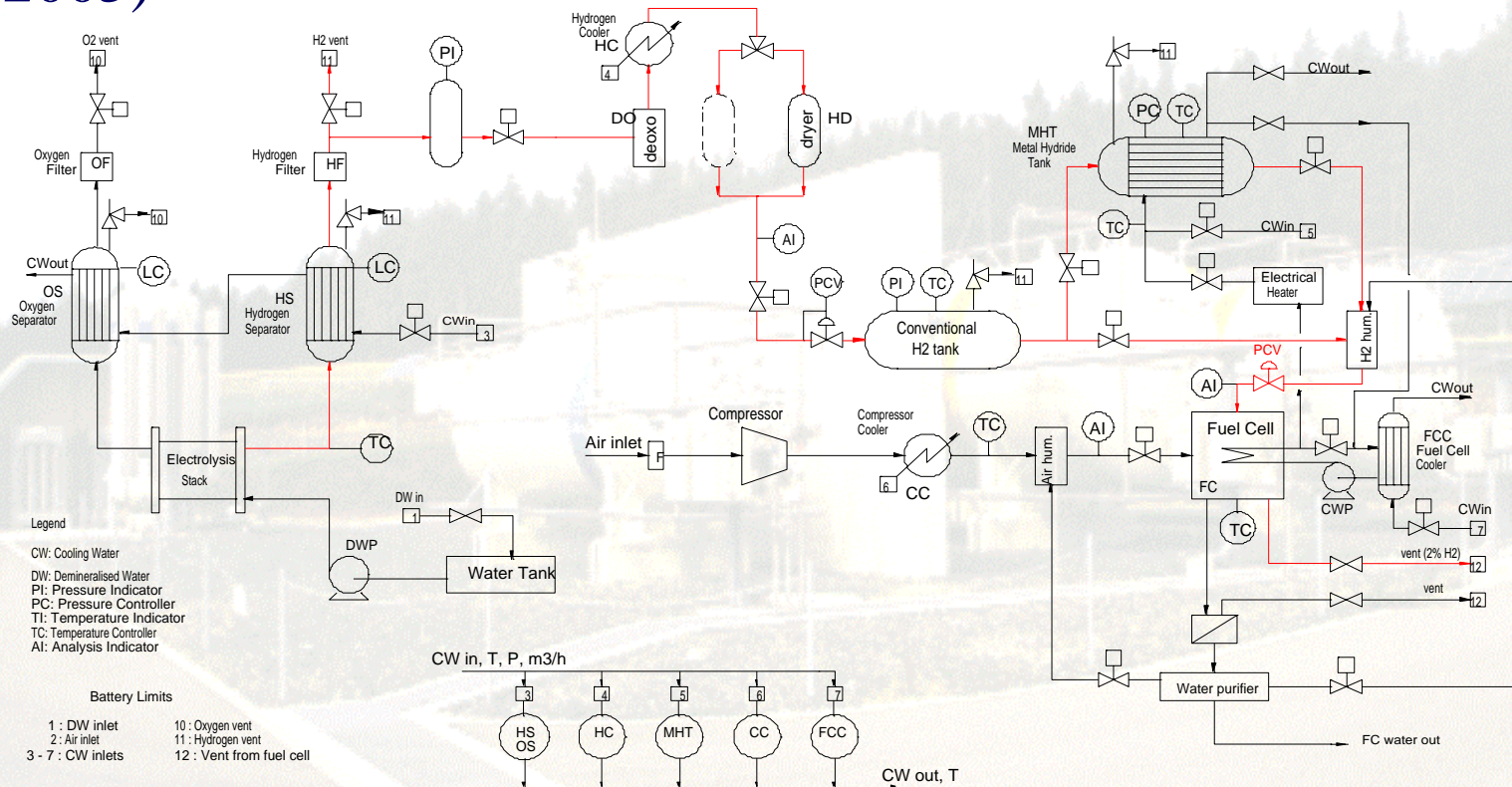
# RES & H<sub>2</sub> Technologies Integration Section

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- CRES has recently (year 2000) diversified into H<sub>2</sub> and its related technologies, as a way to increase the penetration of RES.
- The Section studies Hydrogen technologies at a system rather than at a component level.
- 4 related EC projects under way

# EC project No. 1

## “HELPS” – development of H<sub>2</sub>-based UPS for Telecom (2001-2005)



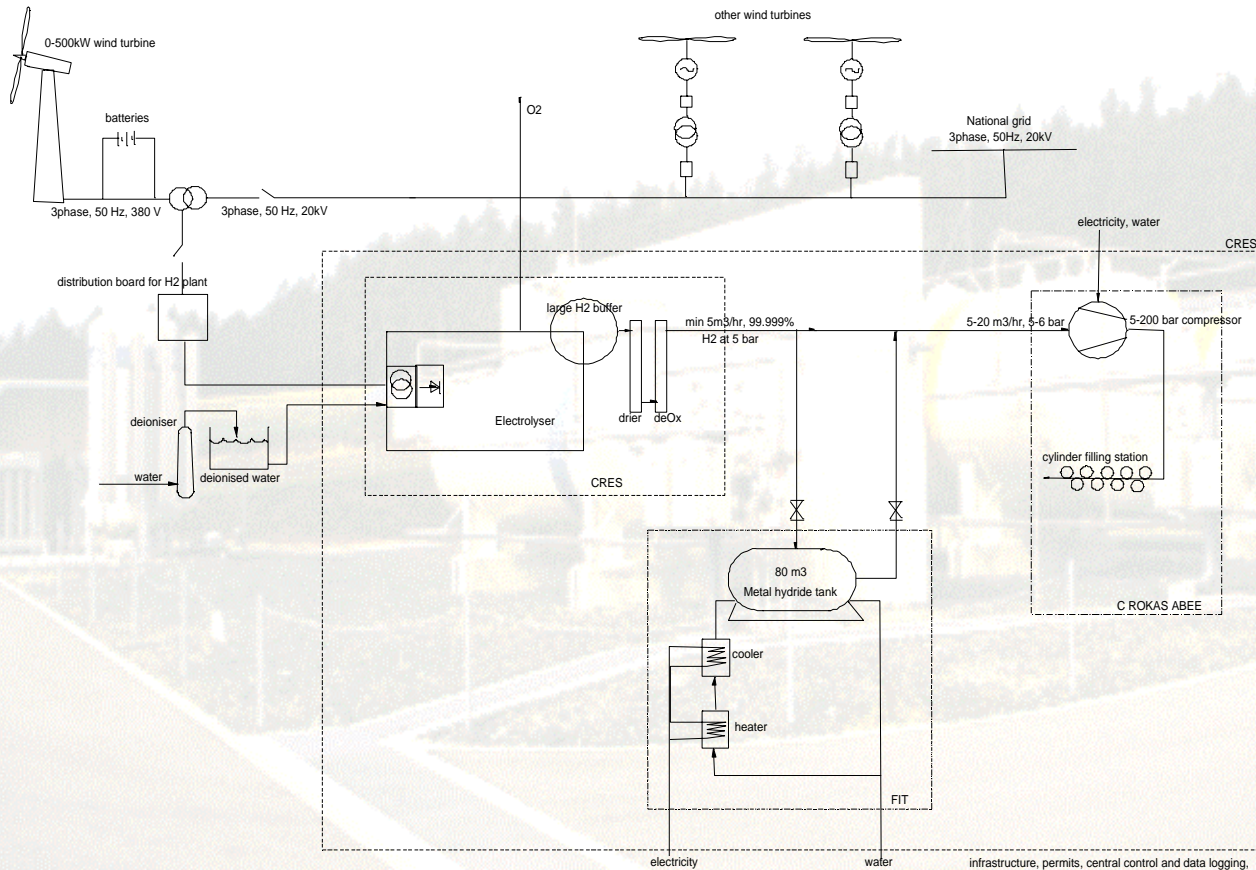
CRES responsible for electrolyser and H<sub>2</sub> storage

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# EC project No. 2

## “RES2H2” – H<sub>2</sub> production from wind energy (2002-2006)



Installation to be realised at wind park of CRES

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## EC project No. 2

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“RES2H2” – H<sub>2</sub> production from wind energy (2002-2006)



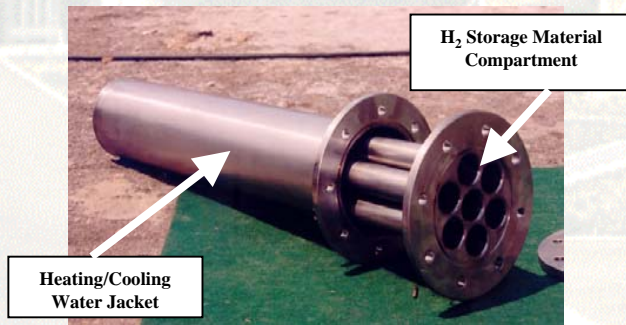
Installation to be realised at wind park of CRES

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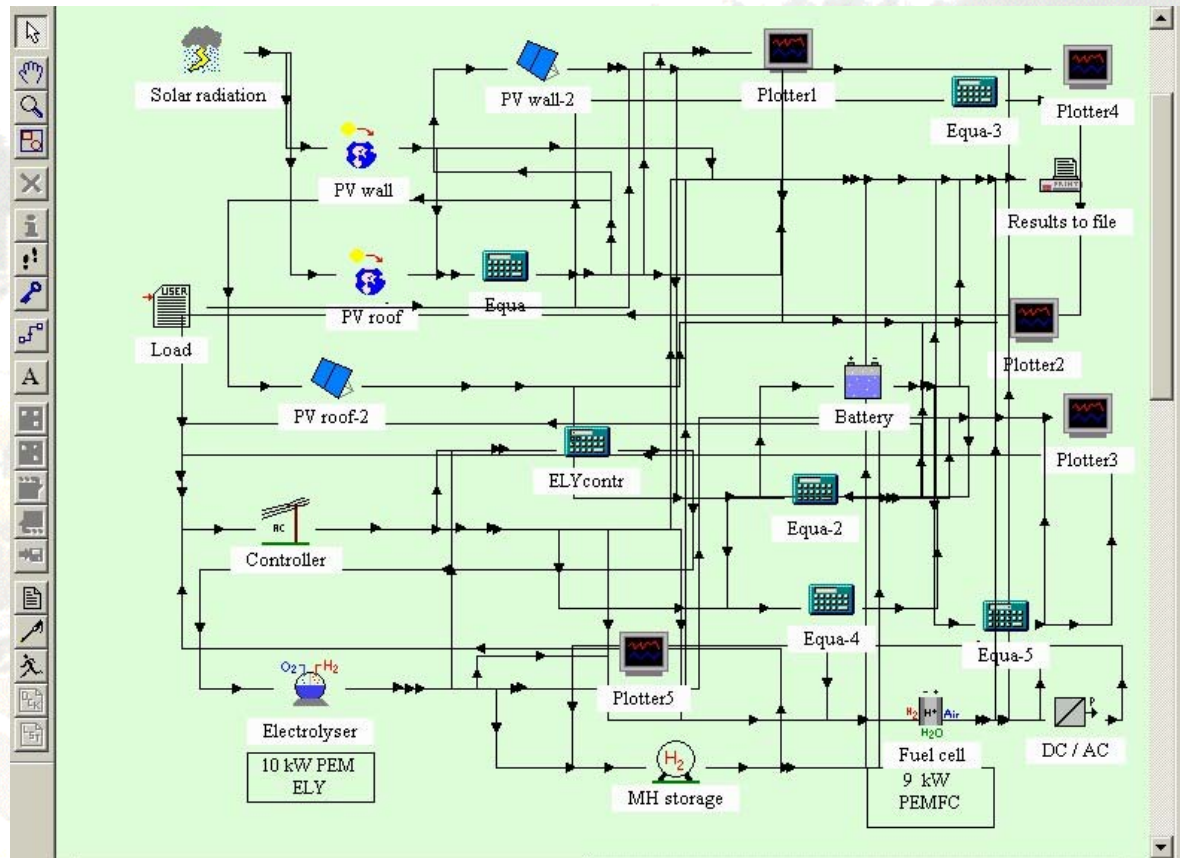
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# EC project No. 3

“H-SAPS” – Market potential analysis for Hydrogen energy technology in stand alone systems (Altener 2002-2004)

[www.hsaps.ife.no](http://www.hsaps.ife.no)

CRES  
contributing in  
the analysis of  
the market in  
Greece, using  
TRNSYS-  
Hydrogems tool

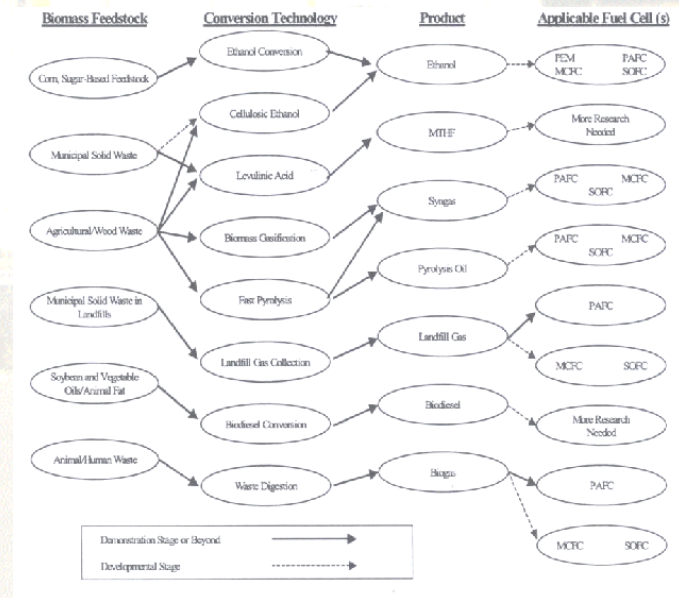


# EC project No. 4

“Project Technical Assistant” to Dr. Maniatis, DG TREN

Yearly studies:

1. MICROTURBINES AND THEIR APPLICATION IN BIO-ENERGY (final study available at [http://www.cres.gr/kape/publications/download\\_uk.htm](http://www.cres.gr/kape/publications/download_uk.htm))
2. FUEL CELLS AND THEIR APPLICATION IN BIO-ENERGY



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