



## Electrolysis activities at FCH Test Center

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# Electrolysis activities at FCH Test Center

Eva Ravn Nielsen and Frederik Berg Nygaard



FCH Test Center for fuel cell and hydrogen technologies was established in 2010 at Risø DTU in Denmark. Today, the test center is part of DTU Energy Conversion. The center gives industry access to advanced testing and demonstration of components and systems. A number of national projects and EU projects regarding water electrolysis involve FCH Test Center as a partner. This presentation gives an overview of the activities.

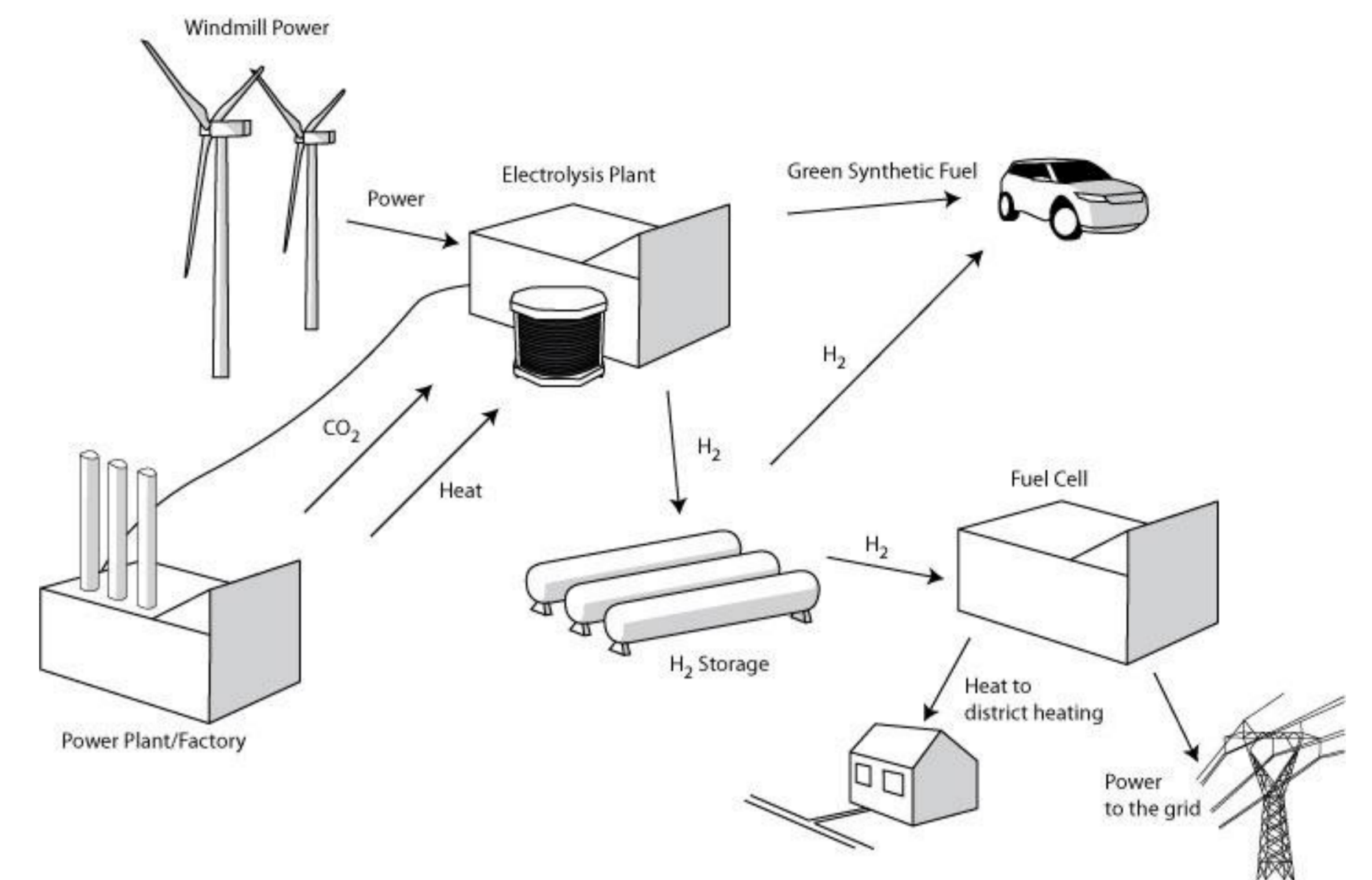
## Smart Copenhagen

### DEMONSTRATION OF ELECTROLYSIS IN SMART CITIES

The dynamic interaction between wind power, electrolysis, hydrogen storage, town gas, refuelling stations, cogeneration of heat and power by use of fuel cells and district heating will be explored.

Partners are: City of Copenhagen, Københavns Energi, Haldor Topsøe A/S, IRD, Green Hydrogen, Dantherm Power, DONG Energy, By&Havn, H2Logic, and Danish Partnership for Hydrogen and Fuel Cells.

FCH Test Center will be test partner in the project, which is expected to start in 2013.



## HyProvide coordination (EUDP)

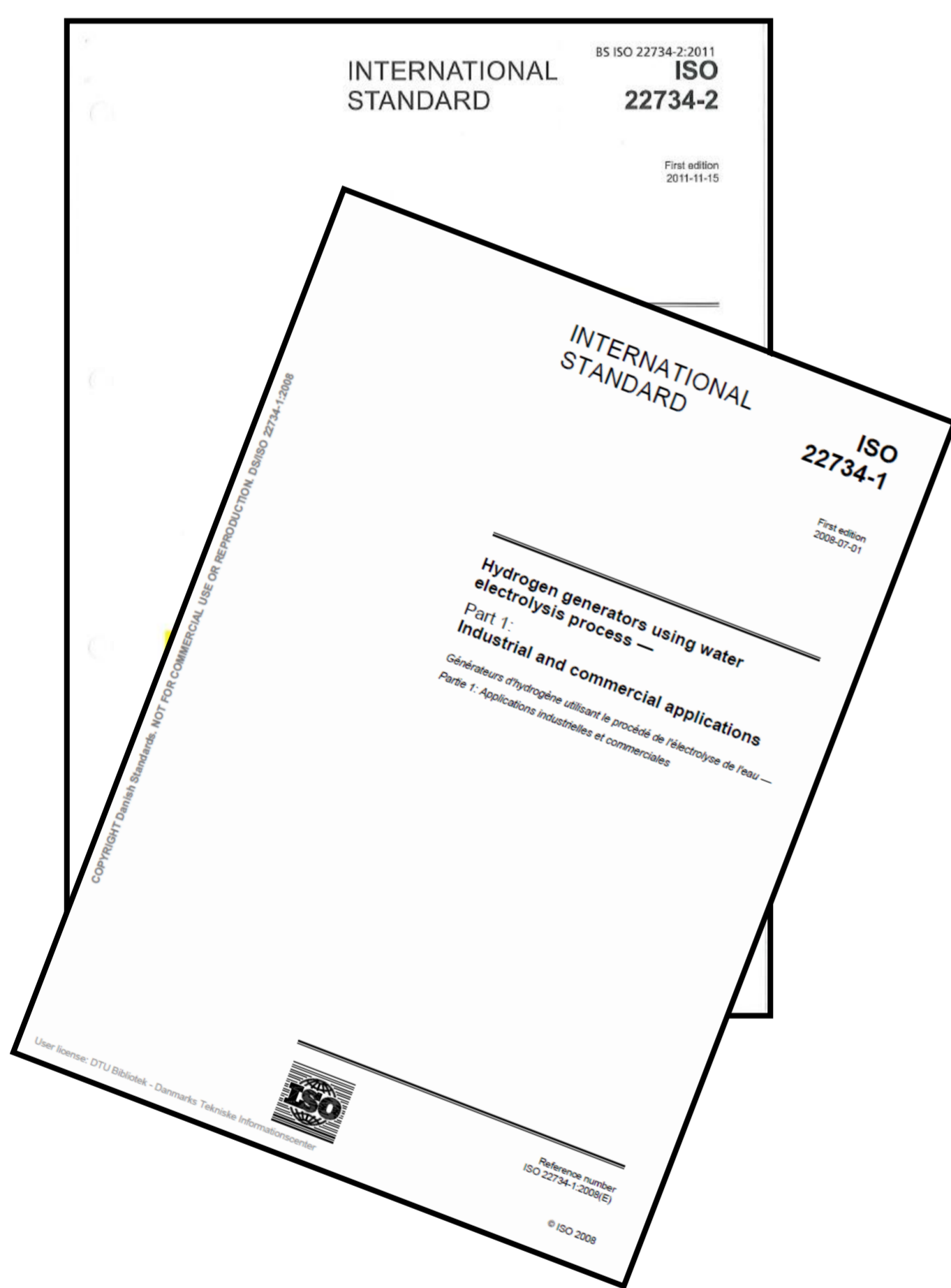
### BENCHMARKING TEST, STANDARDIZATION AND COORDINATION OF ELECTROLYSIS PROJECTS

The project coordinates a number of Danish electrolysis projects. The project will establish an overview of standards and provide a basis for benchmarking of electrolysis technologies – nationally and subsequently internationally.

ISO22734 is the standard in the field: “Hydrogen generators using water electrolysis process – Part 1: Industrial and commercial applications and Part 2: Residential applications”

A guideline will be made on how to present performance data and what to include when calculating the efficiency of a system. This will make it possible to benchmark two systems against each other.

FCH Test Center is the technical project manager. The involved partners are IRD A/S, GreenHydrogen.dk, H2Logic A/S, Haldor Topsøe A/S, and Danish Partnership for Hydrogen and Fuel Cells.



## H2Ocean (FP-7)

### DEVELOPMENT OF A WIND-WAVE POWER OPEN-SEA PLATFORM EQUIPPED FOR HYDROGEN GENERATION WITH SUPPORT FOR MULTIPLE USERS OF ENERGY

Different electrolysis technologies are experimentally evaluated for use on ocean platforms. Especially, the sensitivity to inlet water quality is examined. AEC, PEM-EC, SOEC, HT-PEM EC and HT-AEC is considered.

