

# World Smart Energy Week 2015, Tokyo - Impression from the world's largest exhibition on smart energy and renewables

By Niels Christiansen.

From February 25 to 27, the [World Smart Energy Week](#) in Tokyo served as an exhibition, conference and meeting place for professionals within fields of: fuel cells, hydrogen, PV, batteries, wind, eco house and eco buildings, processing technologies, smart grids and energy liberalization. The venue reached a record-breaking scale with 71.626 visitors and 1.580 exhibiting companies from 31 countries.



Japan has entered its marked introduction program for residential microCHP fuel cells based on either low temperature PEMFC or high temperature SOFC technology, shown at the exhibition by several organizations. The later technology based on natural gas or LPG offers a higher electrical system efficiency, which results in added value. Subsidies are decreasing, however supported by the [Enefarm project](#) more than 80.000 residential microCHP fuel cells has already been installed as of today. The Japanese government considers fuel cells and hydrogen as one of the important technologies for energy security and global warming countermeasures, and sets a target of 5.3 million micro CHP fuel cell units by 2030. Current efforts are focusing on cost reduction and expansion of application possibilities as

key parameters towards full-scale commercialization.

It is my impression that there is an equal competition between Japanese and European players developing cells and stacks for fuel cell systems. However, Japan is ahead of EU in system integration, deployment and success of operation in real applications. (For comparison, please see the EU microCHP fuel cell vision [enefield.eu](#)).



Toyota, Honda and Nissan presented their status and visions for the hydrogen society including introduction of hydrogen fuel cell vehicles. Marked introduction starts by March 2015. Major critical issues regarding marked penetration are economical competitive hydrogen infrastructure, society acceptance of hydrogen as fuel, hydrogen production based on renewables instead of reforming of hydrocarbons, as well as system simplification and material cost (reduction of the required amount of Platinum).



