

## Press Release

### Alternative Energy International announces AEI CHR™ ready for Hydrogen Fuel Cell at Hanover Fair

17<sup>th</sup> April, 2009

AEI Technology Team Group Leader Professor Neville Stephenson PhD., D.Sc, Medal of the Order of Australia announced that AEI using its proprietary AEI CHR™ process can now commercially produce hydrogen. The capability of the AEI CHR™ process to use locally available and mostly renewable feedstock's to produce clean hydrogen that is suitable for hydrogen fuel cells now offers new opportunities for the hydrogen fuel cell industry. Previously hydrogen fuel cell suppliers were limited by the supply of expensive clean hydrogen and the substantial expense of storing and shipping hydrogen.

Unlike methane reforming AEI CHR™ uses different chemical processes and can use a range of optional feedstock's including methane, coal seam gas, mixed hydrocarbons, biogas (from landfill, rendering plant, etc) and biomass gasification. Although AEI CHR™ is not currently available in large scale installation or is as economical as methane reforming it can be cost competitive in situations where the storage and transportation expense of hydrogen and local availability of economical renewable feedstock are optimal.

AEIML (HK) commercialisation teams in Mackay, QLD Australia led by Dr James Joyce of JJA Process Engineers and Associate Professor Paisel Nakpitat of AEI license manufacturer AEI Thailand are independently completing projects that will deliver 200kg per day commercial systems in 2009 and a 1200kg by 2010. Larger systems are planned. On the 2<sup>nd</sup> March, 2009 Dr James Joyce announced that he expects the Mackay AEI CHR™ system to consume 3.7kg of methane/kg of hydrogen produced or consume 16 kg of biomass per kg of hydrogen produced. Professor Nakpitat who was recently awarded the Knight Grand Cross (First Class) of the most Exalted Order of the White Elephant has announced similar yields in Thailand.

**AEI CHR™  
prototype at  
JJA Process  
Engineers,  
Mackay, QLD  
Australia**



**AEI CHR™  
prototype at  
AEI Thailand**

Several pilot plants have been planned for Germany and agreements are expected to be negotiated by Gunter Nolte of AEI EU GbmH during the Hanover Fair. In one German city the sewerage biogas will be captured and converted to hydrogen using the AEI CHR™ process. The hydrogen produced will be converted to electricity using a hydrogen fuel cell that has more than twice the conversion efficiency of using a conventional biogas engine.

CHR™ is an abbreviation for "continuous hydrogen regeneration".

AEIML (HK) also is developing small 12,000 litre (1kg) per day mini-batch feed hydrogen production systems and mechanical gas injection technologies that operate with most gases, including hydrogen, on existing engines using either vacuum and turbo boost to improve efficiency and lower operating costs and emissions.

**Contact: Bob Green**  
**AEIML (HK)**  
**Business Development**  
bob@aei-hydrogen.com

**Contact: Don Amos**  
**AEI Thailand**  
don@aei-thailand.com

**Contact: AEI Europe Office**  
AEI EU GbmH  
Im Kreise 18  
29221 Celle/Germany  
info@aei-europe.eu  
+49 5141 709 59 04