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PRESS RELEASE

Horizon Fuel Cell Technologies builds on successful field trials of Methanol Reformer Fuel Cell systems to announce 5kW and 7.5kW systems designed for long duration backup power.

Better fuel efficiency and lower power consumption during standby, compared with established fuel cell systems – benefits you wouldn't want to live without.

Singapore, 30 May, 2016: Horizon Fuel Cell Technologies has made a move up the power curve for the company's methanol reformer technology, staking a claim by announcing both 5kW and 7.5kW versions of the company's Methanol Fuel Cell (MFC) system launched in 2015 at CommunicAsia right here in Singapore.

The key advantage of Horizon's state-of-art MFC systems stems from the optimization of the company's methanol reformer technology to achieve the dual benefits of lower fuel consumption during operation and lower power requirements to maintain quick startup "standby" state. Fuel efficiency can reach up to 0.9L/KWH, 10%-30% higher than competition, which means more back-up time and lower operational costs for telecom asset owners. In addition, Horizon's MFC 5KW system features a light weight cabinet design and a footprint of just 600mm*700mm, drastically less than established players.

Horizon MFC systems generally replace diesel generators for backup power requirements, a familiar sight when extended duration backup or secondary backup is required. The MFC systems use a lower cost and cleaner fuel source than diesel, operating on a blend of methanol and water. The environmental benefits of such systems are enormous, and what's even more incredible, industrial customers can enjoy operational cost savings even while enjoying the substantial environmental upside.

Trials indicate significant operational savings when operating MFC systems in comparison with diesel generators or diesel generator / battery hybrid systems, and this helps to achieve impressive payback periods of just a few years on this technology.

Asset owners gain the added benefit of being better neighbours, essentially eliminating the unpopular diesel generator traits of noise, smell, particulate emissions and vibration. Customers can expect lot less phone calls complaining about these obvious downsides of diesel generators.

Delivering up to 5kW or 7.5kW of continuous power, the two new MFC systems from Horizon can also be incorporated into solar-hybrid configurations, helping the asset owner to optimize system configurations to reduce their investment in both solar generation capacity and batteries for energy storage. And since the methanol reformer fuel cell systems operate across a broad range of outputs with the same fuel efficiency, there is no wastage of fuel when partial loads are maintained, as is often the case with solar / diesel hybrid systems.

These fully integrated fuel cell systems provide new levels of flexibility in designing critical equipment installations, knowing that cost-effective, reliable backup power is available in 5kW and 7.5kW configurations. You can rest easy knowing these systems are built on the same architecture as the Horizon MFC 3kW systems that are already supporting critical infrastructure in several countries around the Asia Pacific region.

Removing dependence on generators burning traditional fossil fuels could be particularly valuable in areas where fossil fuels aren't readily available, but where biomethanol could be produced from local biomass, making this alternative even more attractive, operating on a renewable fuel source.

Fuel cell systems have long been touted as a way forward for extended duration backup power, but the need to supply hydrogen has been a huge barrier to adoption. Hence the efforts of Horizon and other fuel cell companies to introduce systems that can work on cheaper, more available fuels. In this regard, especially popular has been a very safe, low-flammability blended methanol fuel (one third water by volume). Many owners of critical infrastructure have been evaluating different types of fuel cell technologies in different parts of the world; and the consensus appears to be that the most cost-effective and practical solution lies with these types of liquid-fueled systems that generate hydrogen on demand for the internal fuel cell, thereby alleviating the need for any storage of high pressure hydrogen gas.

About Horizon Fuel Cell Technologies:

Horizon enjoys a world-leading market share in low power PEM fuel cell systems according to a US Department of Energy 2012 Report, and in recent years has worked on coupling new methanol reformer technology to its PEM fuel cell products. The combination of these two technologies provides cost-effective power generation to augment battery systems and/or replace generator systems. The advantages of fuel cells are combined with the convenience and cost-effectiveness of a low-volatility blended methanol/water fuel mix.

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