APR sees LPG-to-power growth following new US Virgin Islands contract

US VIRGIN ISLANDS

FLORIDA-BASED power turbine developer APR Energy has won a new contract to supply an LPG-fired 25 MW power turbine in the US Virgin Islands(USVI). APR will supply a retro-fitted TM2500 mobile gas turbine, which is the first ever to be commercially operated on LPG, to the USVI Water and Power Authority (WAPA). The contract is the sixth won by the company to supply gas turbines during 2016, and brings the extent of awards, extensions and expansions during the year to above the 1 GW installed generation mark.

The use of LPG as an alternative power source to the traditional energy sources in the Caribbean region – namely fuel oil, diesel and coal – is gaining more credibility, according to APR's regional sales director for the Americas, Carlos Mousadi. He attributed this to a range of economic reasons and environmental objectives.

APR has "seen a great deal of interest for LPG solutions throughout the region, and opportunities in the Caribbean continue to grow," Mousadi told *NewsBase*. "This is due to the fact that LPG is available and affordable. Also, its price stability enables utilities to manage generation costs better over a longer period, which is beneficial since prices for fuels like diesel and HFO [heavy fuel oil] are quite volatile. LPG pricing tracks natural gas, which is expected to remain flat over the next few years. By contrast, diesel and other fuels are forecast in some quarters to increase by around 15% during the next two years, partly in the wake of the recent OPEC production agreement," he added. "Switching to lower-priced LPG could save Caribbean utilities and their customers millions of dollars a year".

Mousadi talked up the merits of using LPG from the perspective of compliance with more restrictive environmental legislation. "LPG generates lower emissions than other fuels commonly used for power generation in the Caribbean, such as diesel, heavy fuel oil and coal. Environmental advantages of LPG through aeroderivative turbines also support interest," he said. "LPG is cleaner-burning than diesel, producing 38-94% less nitrogen oxide, depending upon use of water injection, and 20% less noise than diesel power modules. This is effective for customers with stringent regulatory controls. The USVI is leading the way due to US Environmental Protection Agency [EPA] emissions regulations".

Mousadi also claimed that the less land-intensive nature of LPG-fired power plants delivers advantages to the region's small, island-based economies. "The higher power density of mobile turbines means that they can generate the same amount of power on less land than reciprocating engines or renewables like solar or wind," he said. "This makes LPG-fired turbines ideal for Caribbean islands where space is limited and tourism-based economies require power generation to be unobtrusive".

Mousadi stated that these merits are generating interest in the concept in the Caribbean region. "Many of our customers in the region have strategies in place to include LPG in their fuel mix. APR Energy's gas turbines give customers the ability to leverage LPG in a matter of 60-90 days. This aeroderivative turbine has a dual-fuel capability that provides utilities with the flexibility to switch seamlessly between LPG and natural gas on the one hand, and diesel on the other, as fuel costs and availability change".

Looking ahead, Mousadi sees the scope of LPG-fired power projects extending above the 25-50 MW scale, owing in part to the competitive costs of storage and other infrastructure elements.

"While the USVI project will generate 25 MW, LPG could be used for large-scale generation as well. In fact, several large projects are under consideration using LPG as primary fuel rather than imported natural gas, due to the lower CAPEX investment for storage and regasification facilities compared with liquefied natural gas," he said. LPG has a well-established foundation in the Caribbean, observed Mousadi, as it is "widely-used as a cooking fuel. Its worldwide availability has expanded, and LPG is expected to remain plentiful in the long term. We expect that other Caribbean utilities will consider shifting to LPG once they see the successful implementation in USVI". ❖