Milhouse Generation: Power in Nigeria

APRIL 7, 2017 BY CRYSTAL FENCKE

Milhouse Generation Services Ltd. (Generation) is on a fast track to produce power in Nigeria deploying a clean coal technology. Generation was recently granted a 30 MW license from the Nigerian Electricity Regulatory Commission (NERC) to produce power in Enugu, a state in Nigeria where significant coal deposits exist.

Generation is incorporated in Nigeria and owned by Milhouse International, LLC.  President/ CEO Wilbur C. Milhouse III, PE, leads Milhouse Engineering & Construction, Inc. and his international enterprises.  Mr. Milhouse is excited about the potential that Nigeria has, given its abundant natural resources.

While studying energy sources in Nigeria, Mr. Milhouse discovered there are currently no coal-to-power projects underway there, despite the country’s massive coal reserves.  Generation will be the first coal-to-power individual power producer in the southeast region.  “Clean coal technologies are the best bet for the region,” said Frank Martin, Vice President of Power Development for Generation.  Power systems require abundant fuel sources close to the location where power is generated, which is why available local coal is a boon.

Mr. Milhouse believes the area’s coal reserves can support up to 1,000 MW of electricity.  Generation is planning to realize the project’s full potential in phases.  The U.S. and other developed economies traditionally have grown because of significant coal reserves that were situated close to the surface.  Even today, the U.S. generates most of its power from coal, with natural gas a close second.  Although solar and wind have seen some implementation, they only comprise about 5% of the U.S. energy mix.

Mr. Milhouse is on a mission to give Nigeria the same chance as developed nations.

Nigeria had generated electricity from coal in the 1950s, but this was abandoned in the wake of the Biafra war (1967-1970) when the focus changed to petroleum. Nigeria now generates electricity mostly from gas thermal plants (roughly 80%) and hydropower (roughly 20%).

Nigeria has about 8,000 MW available electricity generation capacity but only 3,000-4,000 MW is operational. Government now wishes to aggressively grow its generation capacity and diversify the electricity generation mix by encouraging private sector participation.  The administration has expressed significant interest in generating electricity from coal.

Milhouse plans to build capacity as the grid strengthens over time.  “The instability of the national grid is still a key issue,” said Joseph Zurad, PE, Executive Vice President. Mr. Zurad is Milhouse’s most senior electrical engineer with over 40 years of experience.  He points out that smaller projects that can be expanded quickly are the best option for Nigeria.

The diesel generator is the most common form of power production in Nigeria.  Estimates show that the direct cost of self-generated electricity in Nigeria is up to four times the cost of public- supplied electricity from the national grid. In addition, the environmental risk is substantial.  Emissions and noise from the generator are a significant hazard.  
Today, clean coal technologies are highly efficient, dependable, long lasting, and have all but eliminated harmful emissions.  Developed economies have been implementing clean coal solutions for over 20 years. The typical solution eliminates over 95% of the sulfur content that in the past, had negatively impacted the environment.

Such technologies meet global emissions standards.  While they can be more expensive operationally than gas-fired, solar, and wind technologies, they are much more efficient and reliable than those sources.

The Generation project aims to offer significant job opportunities for the community.  The plant alone will employ over 100 local residents ranging from plant operations, security, maintenance and administrative personnel.

Milhouse is interested in supporting the current administration’s economic recovery and transformation initiative of expanding power sector infrastructure.  The administration’s goal is to produce 10 GW of power by 2020.  This will require a proper energy mix, to which Milhouse is excited to contribute.  As power supply and generation mix expands, it will create jobs and empower Nigeria’s bustling youth population.