

The Energy Transition: What Does It Mean For Africa?

While businesses across much of Africa struggle with lack of reliable electricity, the world is witnessing the dawn of a new age in the energy industry. Driven by large-scale adoption of renewable energy sources (RES) and new energy storage possibilities, the “Energy Transition” could well be the key to solving the continent’s significant electricity deficit.

The scale of this quiet revolution is put into perspective by the influential global think-tank, Bloomberg New Energy Finance, which foresees a massive surge in investment in solar and wind energy, to almost “50 by 50” – 50% of world generation by 2050. Bloomberg points out that this is driven not only by tremendous cost reductions in renewables, but also the advent of much cheaper batteries that will allow electricity to be stored and discharged to meet shifts in supply and demand.

Clearly there are huge implications for electricity in Africa, and it is encouraging to see that elements of this global shift are becoming visible on the continent – from widespread adoption of micro solar kits in east Africa to utility scale solar in South Africa. But, as Bloomberg correctly notes, most of benefits are yet to come through the combination of renewables and energy storage technology.

METKA – part of the MYTILINEOS industrial group headquartered in Athens, Greece – is one of the world’s leading players focused on providing solutions for this growing market. With a presence in about twenty countries to date – and four in Africa – METKA is a power sector specialist with expertise encompassing the development, construction and operation of power plants and electricity infrastructure. Having built up over five decades of experience building conventional power



Hector Scouris, Business Development Manager at METKA's EPC Business Unit, KTZ

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plants, especially high-efficiency gas turbine combined cycle or “CCGT” power plants, the company is a leading proponent both of solar power and so-called “hybrid” power plants, which are customized to meet specific client needs through integration of renewables and/or thermal energy sources with battery storage.

Emphasizing the extent of the company’s activity in this new field, Hector Scouris, METKA’s Business Development Manager at METKA’s EPC Business Unit,

explained, “We are continuously looking for innovative new ways to combine these new technologies with established ones, and bring these solutions to market.”

On Africa in particular, Scouris explains that METKA has built up extensive experience in the region since it was identified as a major growth opportunity for the company several years ago. The first contracts were in Algeria for a series of fast track power plants totalling over 1000 MW. In the Sub-Saharan region, the first step was in Ghana where the company completed a 250MW gas fired power plant in 2016, followed by the award of two more projects totalling 400MW. The next step was Nigeria, with another 250MW gas fired power plant, and – of particular interest here – a major hybrid power plant project to electrify four Universities. The most recent addition to the portfolio is Uganda, where METKA is installing a 10MW solar power plant.

Reliable power for Nigerian Universities

Part of the Nigerian government’s Energizing Education programme, this landmark project involves installing hybrid power plants at four Nigerian universities, enabling them to work independently from the power grid and maximize utilization of clean solar power. A total of 9.3 MW of solar PV capacity will be installed, together with batteries to store energy for later use. METKA is also providing the overall plant control systems which are critical for proper management of the facility, as well as new diesel generators for ultimate backup power.

solar power installations, through to full scope hybrid power plants incorporating engines with solar and energy storage, enabling effective control of start-up and other dynamic requirements of the plant, as well as uninterrupted supply to plant items which are critical for plant operation.

For mine owners who look to outsourcing, METKA is willing to invest in and finance projects on long-term build – own – operate (BOO) or build – own – operate – transfer (BOOT) business models. Scouris points out that this aspect of the company’s business builds very much on the complementary capabilities

of the Energy Transition story. Growth in this market in Africa so far is patchy, varying considerably from country to country. However, with many African countries now basing their electrification programs on solar home and micro-grids, projections are that this sector will also grow tremendously over the next five years.

Turning to METKA’s solution portfolio, Scouris notes that numerous applications of its hybrid/off grid systems can already be found – ranging from high end safari lodges, oil and gas pipelines, and the telecoms sector. Recognizing the importance of innovative technology to driving its growth in this field, METKA has a strategic collaboration with International Power Supply, manufacturer of the state-of-the-art Exeron off grid/hybrid energy management system, and as in other fields, emphasizes its ability to provide complete turn-key solutions.

Just a Beginning...

With the Energy Transition building momentum globally, there is clearly a great opportunity for Africa to take advantage of new energy technologies to and boost economic growth across the continent – starting today.

A parting comment from Scouris perhaps sums this up best “We look forward to working with like-minded partners and clients who are willing to look beyond traditional approaches and deliver long-term benefits – first come, first served.”



Nikolaos Energy Complex, Greece, 778 MW total

Focus on Mining Applications

Since MYTILINEOS is itself a major operator of bauxite mines in Greece, it is perhaps no coincidence that METKA has also turned its attention to the energy needs of mines in Africa. Large mines of course demand high reliability of supply, often on a 24/7 basis, and typically rely on diesel engines to provide the reliability which is often lacking from the grid.

Scouris points out that solar and battery technologies are now sufficiently well proven to be applied in even the most remote mines. METKA provides solutions which range from relatively straightforward

and financial strength of MYTILINEOS – which, apart from its mining & metallurgy business, is also the largest independent power producer (IPP) in its home market of Greece. Ultimately this means that mines can benefit not only from lower costs but also secure long-term sustainability of the business.

The Off-Grid Sector

Mini-grids, micro-grids and solar home system applications are another important aspect



Isabela Solar PV Power Plant, Puerto Rico, 57.65 MWp.