

Pakistan should deploy micro-grids for affordable electricity – Waseem Qureshi

Interview of Chief Executive Officer, WRL Technologies

■ By M. Naeem Qureshi

In Pakistan I would recommend implementing a policy that encourages the deployment of micro-grids, through which we can significantly increase the availability of affordable electricity based primarily on renewable energy”, says the CEO of WRL Technologies Waseem Qureshi, in an interview with the Energy Update, he continues to say.....

EU: Would you like to share your education, experience and major areas of operation of your company?

Waseem Qureshi: My interest in science and innovation started when I was very young in primary school. I was a hobbyist inventor, but when I received the National Science Award at the age of 15 (the youngest recipient to receive this award), I decided to pursue a career in innovation. I focused on electronics and soon after receiving the Science Award I built the first locally developed UPS in Pakistan in 1986, which was adopted by the Pakistan Army. I graduated from UET Lahore with a degree in electronics and set up my first company soon after. Due to limited resources, I became adept at using existing parts and materials (usually ‘off-the-shelf’) and bringing efficiencies through innovative and creative software design because I always believed that there is a better and cheaper way of doing things.

I have invented, designed, and launched the first car tracking



system in Pakistan as well as several telecom applications and in 2006, I began to see growing signs of power shortages, breakdowns and failures caused by an aging electricity infrastructure, so I focused my research efforts on finding solutions using renewable energy, which was abundantly available everywhere. I established that the two most critical components of using renewable energy generated from PV solar panels and wind turbines would be effective energy storage and power control electronics. I developed two products around my vision – the Centauri Energy Server which is the first power electronics hardware and software platform for micro grids and Sirius Supercap Storage which is the first non-chemical storage in the world. My foresight has proven to be correct and I am proud to say that my innovations, the Sirius super cap storage and the patented Centauri energy server are playing an increasingly important role in growing the renewable energy, EV and non-chemical storage sectors globally. Our systems and solutions are being used in over 20 countries in North America, Europe, Africa, Middle East, Asia and Oceania and in multiple sectors such as micro-grids, solar + storage, telecom, UPS, data centers, material handling, industrial machinery, marine, EV and more.

Early in 2020, the US Patent Office granted me the patent for the Centauri Energy Server and I am hopeful that shortly I will be granted the patent for the Sirius super cap storage technology.

EU: What's your decision making process to run your business?

WQ: Inventions and innovations that

have been transformative have been achieved through teamwork. True, global and impactful change can only be brought about by bringing together bright, energetic, aspiring, motivated and passionate people, inspiring them with vision, providing them with the right tools, infrastructure and resources and harnessing their collective output. I am a firm believer in establishing robust processes, with the right mix of flexibility and discipline, to execute on our plans and my decision making process is always aggressive and forward looking. I believe in delegating and am not a micro-manager, allowing my team leaders to take responsibility and deliver on their plans.

EU: Would like to share with our readers regarding current and future projects? and what is the future of the industry?

WQ: We are working on projects in many sectors – meeting electricity demand with our Centauri + Sirius micro grids that supply affordable electricity where there is either a shortage or non-availability of the grid, electric vehicles, electric bikes and electric rickshaws in the EV space using our fast charging Sirius storage, telecom infrastructure with Sirius storage to provide resiliency and increased uptime, MV Sirius storage for commercial and industrial UPS applications in critical deployments like hospitals, data centers, airports, ports etc., Sirius marine models for boats and ships, and cranking models for cars, vans, trucks.

EU: What is your suggestion to improve energy sector of Pakistan? How we can convert all conventional means to clean energy?

WQ: The generation mix of the energy sector in Pakistan has adopted the technology prevalent at present therefore, as renewable generation becomes a major contributor; it is also doing so in Pakistan. The challenges, in my opinion, are in the transmission and distribution infrastructure, which has tended to lag growing demand from our healthy population growth and economic activity. However, now with the improvement in micro grid solutions, such as our Centauri + Sirius systems, it is possible to rapidly roll out location sited systems at significantly reduced capital outlay, thus meeting the growth in demand. The age of megawatts seems to be changing to the age of “t-hundreds of kilowatts” as countries like Australia, Malaysia, Philippines, and even parts of the US, are adopting micro-grids serving small, medium and large communities. At less investment, lowered operational cost and improved reliability of power. In Pakistan I would recommend implementing a policy that encourages the deployment of micro-grids, through which we can significantly increase the availability of affordable electricity based primarily on renewable energy. ■

