SIEMENS

Press

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Intersolar trade show Munich, June 20-22, 2018

Siemens and Solarkiosk join forces to power Africa with microgrid solutions

- MoU signed at Intersolar trade show
- First joint project as a basis for further development is located in Rwanda
- Partnership focus on Solarkiosk's projects in East Africa which provide solar energy for local entrepreneurs/SMEs in rural off-grid areas
- Siemens microgrid solution helps to collect, monitor and analyze data as well as to provide simple remote control
- Collected data to create additional value for local entrepreneurs, operators, service providers and communities

Siemens and SOLARKIOSK have signed a Memorandum of Understanding (MoU) on June 20 at the Intersolar trade show. Both companies agree to join forces to enhance local businesses powered by SOLARKIOSK's clean energy in non-electrified parts of rural Africa. SOLARKIOSK has deployed more than 250 projects in twelve countries serving roundabout 5 million people. The SOLARKIOSK solar powered E-HUBB is the business centerpiece for a rural "off-grid" village providing retail and energy related services such as charging (mobile phones, batteries, lights), internet connectivity, cooling of products and medication, water purification, copy, print or scan, financial inclusion services as well as news and entertainment to local communities.

In the first joint project, Siemens will implement a microgrid gateway collecting data from both SOLARKIOSK's existing energy systems and retail businesses and enabling remote control of the E-HUBB, thus improving service, energy usage and operation such as supply chain management. The gateway will be connected to applications running on Siemens' highly scalable EnergyIP smart grid application platform powered by MindSphere - the Siemens cloud-based open operating system

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for the Internet of Things (IoT). In a next step the companies will tailor the microgrid cloud based applications and related solution to the needs of the different stakeholders. In addition, further industrialization of electrical equipment as well as enhancement of the solution with Siemens equipment such as local microgrid control or small batteries/ inverter kits will be evaluated by SOLARKIOSK.

"With Siemens' microgrid applications powered by MindSphere, SOLARKIOSK will be able to improve serviceability of the electrical equipment and make sure the energy is used in the most efficient way. Furthermore the analyzed data supports SOLARKIOSK in making the most economic decisions by evaluating productivity of different service offerings", said Ralf Christian, CEO of Siemens' Energy Management Division. "If the B2B microgrid grows further you can do even more with the collected data and local control capability. That's our motivation for a cocreation agreement to define the next system generation maximizing value for all partners."

"SOLARKIOSK is thrilled to develop together with Siemens software applications and algorithm which correlates our unique ability to collect valuable energy <u>and</u> commercial data and therefore analyses the energy impact on the various businesses we empower and vice versa. The joint collaboration will refine our retail operations and service offering to B2B customers throughout our African and global network. The insight gained from this disrupting approach will enable SOLARKIOSK to take its impact and business goals to the next level," said Andreas Spieß, CEO of SOLARKIOSK.

For the project, Siemens will deliver and install a suitable and robust data gateway for aggregating the necessary data and remotely control loads and generation using its proven EnergyIP. Numerous EnergyIP applications have been successfully used around the world for years. They include applications for meter data management and distributed energy management, energy efficiency applications for the energy sector and for industry, and various applications for data analysis, such as load prediction in the grid and tracing system losses.

In 2016 the Siemens Stiftung and SOLARKIOSK partnered to bring a mobile health clinic to a host community for refugees in Jordan. The clinic consists of a self-sufficient E-HUBB developed by SOLARKIOSK outfitted with Siemens medical

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equipment, including an ultrasound and hematology lab. It is powered by 8 kWp of solar panels on the roof, making it off-grid and fully mobile. The clinic is a small, flexible and modular unit, adaptable for many further locations and functions.

This press release and a press picture is available at

www.siemens.com/press/PR2018060229EMEN

The press kit for Intersolar is available at

www.siemens.com/press/intersolar18

For further information on Division Energy Management, please see

www.siemens.com/energy-management

For further information on microgrids, please see

www.siemens.com/microgrids

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Siemens AG (Berlin and Munich) is a global technology powerhouse that has stood for engineering excellence, innovation, quality, reliability and internationality for 170 years. The company is active around the globe, focusing on the areas of electrification, automation and digitalization. One of the world's largest producers of energy-efficient, resource-saving technologies, Siemens is a leading supplier of efficient power generation and power transmission solutions and a pioneer in infrastructure solutions as well as automation, drive and software solutions for industry. With its publicly listed subsidiary Siemens Healthineers AG, the company is also a leading provider of medical imaging equipment – such as computed tomography and magnetic resonance imaging systems – and a leader in laboratory diagnostics as well as clinical IT. In fiscal 2017, which ended on September 30, 2017, Siemens generated revenue of €83.0 billion and net income of €6.2 billion. At the end of September 2017, the company had around 377,000 employees worldwide. Further information is available on the Internet at www.siemens.com.