

# Helping Myanmar stay bright

In Myanmar, when the weather gets hot, people sometimes have to experience “embarrassments” in life. In the hot days, due to sharp increases in the electricity demand, many merchants encounter frequent power outages. For example, some stores can only keep beverages cool by storing them in the cold water as freezers cannot work normally. Many stores have purchased generators, but the constant noises bring annoyance.

In fact, for Myanmar, power outages don't only happen in hot days. In the past 50 years, the country was in constant shortage of electricity. The problem of frequent power failures is one of the major obstacles to the development of Myanmar<sup>1</sup>. By April 2018, over 60% of the cities and regions in Myanmar were still lack of reliable electricity supply<sup>2</sup>.

To help solve this problem in Myanmar, especially in its largest city, Yangon, Siemens cooperated with Zhejiang Industrial Equipment Installation Group Co., Ltd. (ZIEI Group), as well as the EPCs (Engineering, Procurement and Construction) including CITIC Construction Co., Ltd. and China Energy Engineering Group Zhejiang Electric Power Design Institute Co., Ltd., to support Myanmar Electric Power Company to expand the 230 kV Bayint Naung substation in Yangon, effectively alleviating the power shortage in the city.

## Making power transmission efficient

Chen Hao, High-Voltage Line Manager of Region East at Energy Management Division of Siemens China, said, “The power undersupply has been a serious headache in Myanmar. In addition, the power transmission network is not robust enough either. These have made it very difficult to maintain reliability in the power transmission.” Electricity is like vehicular traffic while grids are like roads. If the roads are congested, the vehicles cannot reach their destinations smoothly. Substations, as the infrastructure for voltage conversion, electricity distribution and controlling of the electricity flow in the power system, connect grids at various voltage levels through transformers. They are just like policemen directing traffic. Therefore, if there is a lack of substations, the existing ones will be overburdened when the electricity demand surges, causing power outages.

The 230 kV Bayint Naung substation is tasked with distributing electricity for Yangon. However, the rapid increase in the electricity demand of local residents and businesses had caused serious grid “congestion”. The

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<sup>1</sup> Ambassador Hong Liang attends the operation ceremony of Bayint Naung 230 kV substation expansion project in Yangon:

<http://www.fmprc.gov.cn/ce/cemm/chn/gdxw/t1499287.htm>

<sup>2</sup> Chinese enterprises help solve the power shortage problem in Myanmar where over 60% of the areas suffer from power undersupply: <https://www.yidaiyilu.gov.cn/xwzx/hwxw/53025.htm>

“policeman” was overwhelmed. To enhance the power distribution capability of the substation, an expansion was imperative.

In the project, Siemens provided seven categories of products including 230 kV main transformers, 110 kV gas-insulated switchgears, circuit breakers, disconnectors, mutual inductors, lightning arresters and comprehensive protection systems. These form the core of the entire substation. The excellent quality of Siemens products guarantees the stable and safe operation of the substation.

“Siemens’ products have long been acknowledged around the world and the service quality of the company is high as well. To better serve the owner and explore overseas markets, we chose Siemens with great trust,” said Yuan

Zhongyi, Project Field Executive Manager of Zhejiang Industrial Equipment Installation Group Co., Ltd.



Operation ceremony of 230 kV Bayint Naung substation expansion project in Myanmar

At the end of September 2017, the expanded substation was successfully put into operation. As of mid-2018, it has been operating reliably. Thanks to the expansion, the substation can enable the supply of an additional 300 MVA of stable and high-quality electricity to meet the demands of 20% of the

areas in Yangon. “The project will greatly alleviate the power shortage of Yangon and decrease the frequency of the power outages,” said Chen.

### **Working together to face challenges**

The successful operation of the project was enabled by the joint efforts of all parties involved.

Yuan highly recognized Siemens' support throughout the project. He recalled that during the construction, the project team encountered some unexpected problems. In response, ZIEI Group and Siemens worked closely together to deliver the required components to the site as quickly as possible, thus enabling the project to come into operation two days ahead of schedule. “When the problem occurred, the owner even considered reducing the scope of equipment operation so that the operation ceremony could be held on time. However, we successfully solved the problem and completed the project without compromise,” said Yuan.

The successful completion of the substation expansion project is of great significance for ZIEI Group. Zhang Feng, General Manager of Zhejiang Industrial Equipment Installation Group Co., Ltd., said that the project marked an important step of the company going global under the Belt and Road Initiative. “The connectivity of facilities is one of the priorities in the Belt and

Road Initiative, which perfectly matches the main business of the construction and installation companies like us. The Belt and Road Initiative enables Chinese construction and installation companies to get fully involved in projects even at the stage of project planning. This advantage has created excellent opportunities for us to explore markets," said Zhang. "The 230 kV Bayint Naung substation expansion project demonstrated our technical and managerial abilities to the owner. At the same time, we have got high-quality partners like Siemens and accumulated experience in developing overseas power markets."