Panel 1: Distributed vs. Centralized Energy Supply

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Mr. Tian has over 10 years experience in market development and research on novel energy technologies. He is particularly interested in advanced fossil fuel technologies (incl. gas turbine, CCUS, and 700℃ A-USC). He is widely connected with the Chinese and global gas turbine communities through his industrial platform NexTurbine, which he initiated in 2010.

While China is the 2nd largest gas turbine market, it is still less active in global community. We believe that the best way to speed-up China’s energy transition is to leverage global solutions, resources and experience. And the future of gas turbine is closely connected with China. NexTurbine is a open platform to connect China’s gas turbine community with global solution and resources. Its annual NexTurbine summit is held in every May since 2012.
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Target and Reality

• ‘The 12th Five-Year Plan for Gas’ planned to build 1,000 gas-powered DE projects by 2015, only 288 (11.2GW) were observed with 127 (1.47GW) on operation, 69 (1.6GW) under construction, and 90 (1.8GW) in planning.
• ‘The 13th Five-Year Plan for Gas’ planned to have 40GW gas-powered DE projects by 2020, while only 17GW were installed by 2017 and the industry believe 27GW is more reasonable and achievable by 2020.

DE in the ‘New Normal’ Era

Cost:
• The average new-build cost of gas-powered DE in China is over $1,324/kWh. It is about 3.7 times higher that centralized plant with F class ($353/kWh). Considering the unfavorable gas price and electricity tariff, it is unlikely to be sustainable.
• While with more companies join the competition, e.g. SEC-Ansaldo Energia, the cost will definitely goes down quickly. Global manufactures need to be ready for the price competition, as it happened in heavy duty GT and associated service.
• China will accelerate its effort in upgrading development structure, more industrial zones will eventually upgrade their energy supply system. But it must come with competitive price during the economic down turn.

Innovation:
• Global manufactures need to come up with innovative solutions to hedge the lost of price competition in new order, such as low emission upgrade, operation and maintenance package, digital solution, energy storage and renewable hybrid platform & system.
• Global manufactures can work with local partners to develop innovative solutions, packages, financial plans. Whatever it is innovative is more competitive in the perspective of regional & central government. And the project is more likely to receive subsidies, funding, or loans.

The ‘Easy Sale’ model by ‘Guanxi’ won’t work that well in the New Normal Era. As officials’ KPI has transformed from GDP to Environment, Upgrade and Innovation. To win, you need to help them to fulfill their agenda.