

1. More than 70 Aero-derivative combustion turbines have been installed in the US for power generation between 2011-2016, wherein most are for peaking or intermediate applications. Aero-derivative gas turbines are all capable of quick start and frequent start and stop. Most combined cycle power plants also have quick start capability since 2011.
2. The general consensus by industry experts (i.e. IHS) and our own internal pipeline show a shifting towards combustion turbines from combined cycle in the future. Close to 50% of all new installations from 2020 onwards will be simple cycle application. The trend has already been observed in the past few years and are becoming more obvious in the bidding projects.
3. Aero-derivative CTs are installed close to the load center to provide grid stability support for regions with high renewable penetration, most of which are located far from load pockets. One example is California, where 3 GW of new combustion turbines have been installed in the past 5 years (among those are 30 aero-derivative CTs). Repowering of existing sites close to the main load pockets has been a main trend.
4. The power generation industry is experiencing tremendous changes to cope with high renewables and provide reliable electricity. New RFPs often have requirements on quick start capability and higher number of start.
5. EPC costs are mainly dependent on scope & location. Based on external publications, the average cost for an aero-derivative combustion turbines is indicated to be approximately \$850/kW in 2016 by IHS.
6. In the regions with high renewables, we have seen a clear trend of installing quick start combustion turbines to support grid stability. The same trend is observed for Europe (Germany, UK etc.) and US.

