In an effort to alleviate a logistical challenge of supplying diesel fuel for military forces in the field, the U.S. Department of Defense (DOD) embarked on Earl Energy's FlexGen “hybrid generator” which, according to the company, can reduce the amount of fuel used by generators at outposts by more than 50%. Regular diesel generators that the U.S. military uses to power its operating bases run non-stop without adjusting to the fluctuations of power demand of air conditioners, electronics and other gear. Consequently, the fuel efficiency is compromised when the demand for power is lower than the generator’s full capacity. As the IEEE Spectrum article describes, in contrast, the hybrid generator “is wired to a diesel generator running at full capacity, which is how it’s most efficient. When there is excess power, the diesel generator charges the batteries. If the batteries have enough stored energy to meet the demand for electricity, then the generator shuts off.” According to Doug Moorehead, the CEO of Earl Energy, the Earl Energy system tested in Afghanistan allowed the generators to run three to six hours a day, compared with around the clock before it was installed. Read more from IEEE Spectrum.