



**Apple has remained among the most aggressive in the sector in its efforts to power its online platform with renewable energy. Apple continues to play an important role in opening access to renewable energy new markets where it has located its data centers, such as the company's most recent data center in Arizona. Apple has also played a catalytic role within its IT supply chain, pushing other IT data center and cloud operators who help deliver pieces of Apple's corner of the internet to follow their lead in powering their operations with renewable energy, though with slower success than its own data centers thus far.**

**A Transparency:** Apple provides the clearest and most detailed reporting of the major data center operators on the energy performance of its own data centers, including detailed consumption and details on how its renewable contracts or investments have changed the grid mix for each data centers. While Apple's reporting on its collective colocation footprint has improved this year, Apple should take the next step forward by making public those companies who are working to help Apple achieve its goal to have a 100% renewably powered corner of the internet.

**A Renewable Energy Commitment & Siting Policy:** Since adopting its 100% renewable commitment in 2012, Apple has maintained a strong siting policy, requiring any new data center location to have the ability to secure 100% renewable energy. Also to its credit, Apple has also maintained strong principles guiding its pursuit of its renewable electricity supply, with the requirement that any new load Apple is creating is also met with the equivalent new renewable supply, regardless of underlying grid mix. Apple's most recent data center expansion in Ireland, Denmark, and Arizona all have been developed from the beginning with plans for a renewable electricity supply.

**A Energy Efficiency & GHG Mitigation:** In addition to its efforts to increase its supply of renewable energy, Apple reports its efforts to reduce energy consumption and greenhouse gas footprint associated with its data centers through a variety of measures, and like a number of other companies, has deployed data center designs in northern latitudes to take advantage of open air cooling opportunities. For its new data center in Denmark, it will be designed to directly inject waste heat into the local heating district, reducing fossil fuel demand elsewhere.

**A RE Procurement:** Apple continues to match the expansion of its own data centers with an equivalent local supply of renewable energy to match this growth. Although details on the renewable energy supply for its most recent data centers in Denmark and Ireland have not yet been announced, Apple recently confirmed a significant new solar project that will provide renewable energy to its new data center "Control Center" in Mesa, Arizona, with the local utility agreeing to a long-term PPA for the output of the 50MW project owned by Apple. Apple has also been busy keeping up with its rapidly growing data center in North Carolina, bringing its third solar project online, and become the second customer to publicly announce a deal under Duke Energy's Green Rider renewable tariff program.

**B Advocacy:** Apple has continued to evolve as an even stronger corporate advocate for climate and clean energy policies. Along with Google, Microsoft, and Amazon, Apple filed a brief in support of the US EPA's Clean Power Plan. (see page 41) Apple has also been very active at the state level in the U.S. In North Carolina, where it operates its largest data center, Apple joined Facebook and Google to defend existing renewable policies from attack(see page 41). While Apple had some success in getting its colocation suppliers to provide a renewable hosting service, its recent decision to significantly expand its reliance on Dupont Fabros Technology infrastructure in both Chicago and Virginia seem to be a step in the wrong direction.



**Baidu is the most used internet search provider in China. Approximately 92% of Chinese internet users used Baidu as their internet search engine. Baidu uses colocation and owns self-built data centers. Baidu did not respond to our request for company's energy data.**

**F Transparency:** Baidu has no publicly available information on energy or greenhouse gas.

**F Renewable Energy Commitment & Siting Policy:** Baidu has no publicly available evidence.

**D Energy Efficiency & GHG Mitigation:** Baidu's Yangquan Data Center and the M1 Data Center have applied innovative technology to increase energy efficiency and reduce greenhouse gas.

**F RE Procurement:** A very small solar power facility has been installed in the Yangquan Data Center. The total capacity of renewable energy generated by Baidu is 66.79 kW. No further information has ever been provided by Baidu.

**F Advocacy:** No publicly available evidence.