Report shows data centers not using as much power as projected

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A new report commissioned by the *New York Times*, shows that electricity consumption used by data centers in the United States and around the world grew at a much slower pace then was predicted by a U.S. Environmental Protection Agency (EPA) report released in 2007. The slower pace is attributed to both a downturn in the economy and improved efficiency in data servers.

The report, written by Jonathan G. Koomey consulting professor to Stanford University, shows that instead of doubling, as the EPA predicted, energy consumption by data centers (over the period 2005 to 2010) in the United States grew at just 35%, while consumption worldwide grew at the much higher rate of 56%. Koomey attributes the lower than expected results to a downturn in the global economy and to advances in server technology, the result of which was fewer new servers going online during the study period than was predicted by the EPA.

Called "Growth in Data Center Power Use 2005 to 2010" the study that led to the report was designed to figure out as much about power use by data servers as is possible using publicly available records. In addition to ascertaining how many servers have been brought online in the past five years, Koomey also learned that data centers now account for approximately 1.7 to 2.2 percent of all electricity consumed in the United States and 1.1 to 1.5 for the world. In an interesting side note, Koomey also discovered that Google, the online search giant apparently accounts for just 1% of the total amount of electricity used by data centers in the United States, a figure that indicates its servers are far more efficient than the standards used by most others in the industry.

Koomey notes that increased use of server virtualization (a technique whereby fewer computers are used to run the same number of programs) by many companies implementing cloud computing platforms resulted in fewer servers being installed, and thus less energy use than would have been needed had standard technology been installed. Also, increased attention to cooling methods likely played a part, as cooling typically accounts for up to half of a data centers energy use. The result of these measures, when combined with the lower demand for computing resources due to the slowdown of the economy, resulted in the lower numbers seen in the report; though Koomey points out, it's still a lot of electricity and data server power requirements are only likely to continue growing as cloud based computing appears to be the wave of the future. One company with its eye on the problem is Microsoft who in a recent paper, proposed installing "Data Furnaces" in the basements of homes across the country.

More information:
www.analyticspress.com/datacenters.html