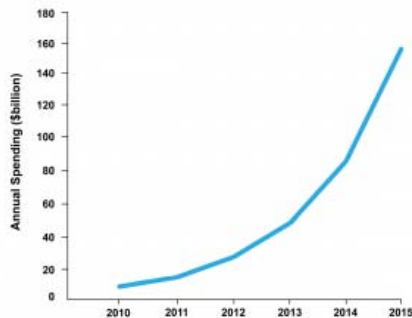




# The Great New American Outsourcing, Clouds to China?



Growth in China's Cloud Spending (Source: Netscribes)

Fast forward to Olympics 2016. Senator Reid is still the majority leader. (It *could* happen.) This time he's not calling for the burning of our Olympic team's Chinese-made uniforms as he recently did, but instead that we boycott watching the games on streaming video. Why? Because, *quelle horreur*, in 2016 the gazillion gigabytes of Olympic video featuring our athletes are all stored in the Chinese Cloud. It's a future, just four years from now, when we could discover we've outsourced not just what remains of our 200-year-old textile industry, but the infrastructure of the 21<sup>st</sup> century's information superhighway.

The Cloud is the fastest growing infrastructure on the planet. Every sector of the world's economy is migrating to it, from entertainment to medicine. Accordingly to Cisco's on-going forecasts, data traffic is growing at a torrid pace. The numbers and prefixes are beyond easy comprehension: enter the zetabyte era?

Soon hourly traffic on the Internet will exceed annual traffic of a few years back. Data traffic is already bigger and growing far faster inside these warehouse-scale computers, where information is stored and first processed, than the data flow on the network. Quite rationally, China has targeted outsourcing the West's soaring appetite for Cloud services.

For the non-cognoscenti, data centers are stadium-scale buildings filled with tens of thousands of power-hungry computer chips and vast digital storage arrays. Inside, a data center resembles the set of a Ridley Scott science fiction movie, or perhaps the Borg ship from Star Trek. But this is the real world.

China's Cloud capabilities are being built out at four times the rate of growth of China's own domestic Internet services. In fact, China's Cloud is being built out faster than data demand in the entire Asia-

Pacific region. Unlike many other products and services, the big market for data services is outside of Asia-Pacific. Ripe pickings for outsourcing.

Analysts at India-based [Netscribes](#) forecast China's Cloud spending will rise from under \$20 billion today to \$150 billion a year before the next Olympics. With that kind of capability, the Cloud epicenter will move from where the Internet was born, just outside the [Washington](#) beltway, to Inner Mongolia. Everyone that matters in the Cloud industry, including industry leaders [IBM](#)[\[NYSE:IBM\]](#) and HP [\[NYSE:HPO\]](#), are doing big business building Cloud infrastructure projects across China.

Here's one telegraphic bellwether. The world's biggest single data center, the size of 20 football fields, is under construction in Chongqing and, coincidentally, will be completed in 2016, in time for the next summer Olympics. The \$1.6 billion [Chongqing Data Center](#) is triple the size of [Apple's](#) newest monster center in North Carolina. The Chongqing facility and thousands more nearly as large, form the heart of the expanding Cloud infrastructure.

And the Chongqing center by itself will need 200 megawatts of electric power – consuming the entire output of a city-class generating station. Therein lies the clue to China's advantage. It's not cheap labor. The core advantage resides with another infrastructure build-out: China's electric grid.

A data center's electric demand can rival a steel mill. In this case the demand for bits, unlike steel, is accelerating. Just like steel-mills, data centers crave cheap power. And more than steel mills, they especially crave reliable, predictable power.

Unknown outside of the cloistered specialists in the data-center world, we've quietly entered an era where the cost to *power*computing rivals will soon exceed the cost to buy the computing hardware itself. (For more on these power trends see [Price Matters](#).) It's no surprise then that a recent global survey by [Datacenter Dynamics](#) found that "[Energy](#) cost and availability is the #1 worry of data center operators."

That's why Apple and Facebook built their massive new data centers in North Carolina where the grid is 85 percent coal and nuclear — the anchors to predictable, long-run reliable and cheap power. That's why China's government, having built a spanking new electric grid as big as America's has designated Cloud computing as a "[Strategic Emerging Industry](#)." Note too that China's grid is [80 percent coal-fired](#).