

The NY Times [has a long article](#) and a [Room for Debate piece](#) about cloud computing energy demand. Basic economics tells us that these data centers are likely to locate in places where electricity is cheap but the article doesn't tell us the geography of where these data centers locate.

Internet companies will ignore the environmental implications of where they choose to locate a data center. The environmental implications of such privately optimal choices depends on the emissions factors of the local power plants (both CO2 per megawatt of power generated and local pollutants generated per megawatt of power produced). The [US EPA's EGRID data set](#) allows one to quantify these effects. For every power plant in the nation during the 2000s, the EGRID reports the power plant's location, primary energy source and pollution production. Coal fired power plants and natural gas plants produce the pollution. I use these data [in this 2009 paper](#) on power plant emissions and population exposure to such emissions. Given that the coal fired power plants are mainly in the East and the population is moving West, the distance between people and power plant pollution is rising over time. [Lucas Davis' 2011 power plant paper](#) is also relevant here.

From a basic energy efficiency point of view, the key question is; "If electricity prices increase, how much more efficient would cloud computing become?" Are these cloud computer centers inefficient because the bosses have no incentive to build efficient centers?