A note to clarify and correct calculations of energy and cost savings presented in

Eunsung Oh, Bhaskar Krishnamachari, Xin Liu, Zhisheng Niu, "Towards Dynamic Energy-Efficient Operation of Cellular Network Infrastructure," *IEEE communications magazine*, vol. 49, no. 6, pp. 56-61, June 2011.

On page 59, it is written:

"Putting together the temporal and spatial analysis above, we estimate that individual operators can save between about 8 percent to 22 percent of energy in such an urban deployment. Sharing base station resources together, we get a total reduction of about 29 percent for the energy expended on base station operation. Thus an important collateral finding of our analysis is that greater cooperation among operators is essential for substantial savings. We shall discuss this issue further next.

This percentage of energy saving corresponds to between **32 and 60 kWh** of absolute energy savings for the roughly 12 sqkm area of Manchester we have considered (assuming the single base station power is between 800 and 1500 W). This in turn translates to about **$42,000 to $78,000** annually for the electricity bill for this set of base stations, or about 200 to 375 metric tons of annual CO_2 emissions. This is a substantial reduction in greenhouse gas emission as well as cost of operation."

The numbers in the second paragraph of the above excerpt are meant to reflect what 29% energy savings looks over the 139 base stations in the area, assuming single base station power ranging from 800 to 1500 W. Regrettably, there appear to have been errors in either calculation or transcription of these numbers:

The corresponding absolute amounts of energy savings would actually be:
.29*.8kW/BS*139BS*24*365 hours per year = 282492 kWh per year,   to
.29*1.5kW/BS*139BS*24*365 hours per year = 529673 kWh per year

According to http://www.eia.gov/emeu/international/elecprii.html, the cost in $ per KWh for electricity for industry is about 0.067, so these translate to between $18,296 to $35,488 annual savings on electricity for this set of base stations.

According to http://www.epa.gov/cleanenergy/energy-resources/calculator.html, as of July 2013, these translate to between 199 metric tons to 374 metric tons of CO_2 equivalent emissions.

Thus, the numbers in the bolded text should be corrected to **280 and 530 kWh**, and **$18,000 to $35,000** respectively. Note that the number indicated for CO_2 equivalent emissions savings of about 200 to 375 metric tons was correct.