Landfill Methane Power Plant

Just imagine sending your garbage off to the landfill each week and getting a positive return on your deposit. If you are a Murray City Power customer, that's exactly what happens. At the Transjordan Landfill, of which Murray City is part owner, we are using your trash to give us gas—methane gas that is.

Methane is an ozone depleting gas that is a natural byproduct of rotting garbage. It is a combustible gas that is usually flared or burned by most landfills. The gas is 32 times more potent than CO2 and if not captured is harmful to the environment. So, when given the opportunity to clean up the environment, as well as receive an electrical byproduct, Murray jumped at the opportunity. Since 2005, Murray City Power has been using methane produced electricity and plans are to continue to use this energy for at least another decade.

So, this is how it works. The garbage you discard is delivered to the landfill and piled in huge heaps that are hundreds of yards long and tens of yards deep. The deepening garbage is eventually buried. Through the years of decomposition, the resultant methane gas is captured through pipes that criss-cross the garbage mounds. The collected gas is cleaned and used as fuel in several on-site Caterpillar engines. The generators then transmit their power to the City via power lines and it is then used in homes and businesses in your neighborhood.

Without the power production, the landfills have to flare or burn the methane. Burning it to make electricity just makes more sense. Using methane for power reduces the methane emissions at a landfill close to 75 percent. Once the landfill is capped and is no longer accepting refuse, the landfill will continue to produce methane for years and years. Landfill methane power plants are considered green and renewable. The story is a win-win situation.

Approximately 7% of the energy that Murray City Power uses comes from this landfill methane technology. This energy source is a nice fit to the already diverse portfolio of resources that is utilized to provide electricity. Murray City Power uses large and small scale hydro, natural gas, coal, large scale solar and market energy to provide power to the City.

It is estimated that it takes about 1.2 million tons of trash to produce 1 mw of energy. A landfill methane plant, like the Salt Lake County Landfill Facility, can annually offset 15 million gallons of gasoline, provide power to 1,900 homes and reduce the equivalent emissions of 2,900 vehicles. Nationally, there are close to 560 methane capturing/electrical producing projects that provide 15 billion kwh annually and provide energy to close to 870,000 homes.

So, the next time you turn on your light switch, remember from where that energy may have come. It might be from yesterday's Happy Meal wrapper.