



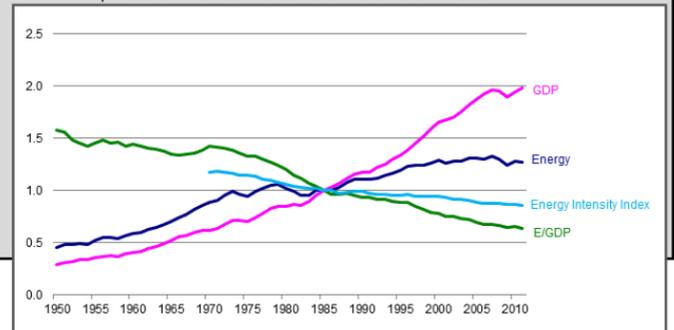
# The Mulvaney Pipeline

## Taking Energy Efficiency To A Higher Level

Energy intensity is a measure of the energy efficiency of a nation's economy. It's calculated as units of energy per unit of the nation's GDP. High energy intensities indicate a high price or cost of converting energy into GDP. Low energy intensity indicates a lower price or cost of converting energy into GDP. Energy efficiency is a vital part of the nation's energy strategy and has been since the first oil crisis in 1973. As part of a national priority for improving energy efficiency, the Department of Energy's (DOE) has established a national system of indicators to track changes in the energy intensity of our economy and economic sectors over time. Efforts to reduce the amount of energy used in the U.S. have worked by reducing energy intensity and saving customers around \$800 billion in 2014, according to a new report from the American Council for an Energy Efficient Economy (ACEEE). The study notes that while U.S. energy use has increased 26% and the GDP has risen 149% since 1980, energy intensity has dropped from 12,100 BTUs/dollar to 6,100 BTUs/dollar due to improvements in energy efficiency and structural changes to the economy.



The graph below illustrates the nature of the energy intensity indicators. It compares the economy wide energy intensity index, derived in the "bottom up" fashion from more detailed data from 1950 to 2010.



## WEIRD FACT ABOUT NASA NASA Pays People to do Nothing!

The National Aeronautics and Space Administration will pay select applicants approx. \$9,000 per month to lay in bed, and not get out. For up to 70 days, participants will spend every moment laying down. Now, NASA could just look at hospital-bound patients for much of this data, but the point is to use healthy people who voluntarily avoid exercise, either by staying in bed or going to space. Keeping these participants healthy is priority number one — and as they learn how to do that more effectively, they also learn how to get healthy astronauts to the Red Planet and beyond.



## Ultraviolet In Action

Ultraviolet (UV) disinfection has become an increasingly accepted method of handling water disinfection in the brewing, dairy and beverage industries. The UV process causes destruction of DNA and permanent inactivation of microbiological organisms, resulting in a lower demand for disinfection chemicals for process, makeup or wash water in plant operations. UV light can kill all know pathogens and microbiological organisms, including bacteria, viruses, yeasts, cysts, molds and mold spores. It is a low maintenance, environmentally friendly solution that can significantly reduce or eliminate the need for chemical treatment while ensuring a higher level of disinfection. UV disinfection has several advantages. UV light does not introduce toxins or residues into process water and does not alter the chemical composition, pH, odor, or taste of the disinfected fluid. This aspect is especially significant in the brewing and beverage industries, where dosing of chemicals can cause taste profile changes or potentially alter the fermentation process in liquor and beer production.

UV disinfection treatment can either be used as primary water disinfection or as an additional disinfection method in association with carbon filtration, pasteurization and reverse osmosis. UV radiation has no residual effect; therefore, the optimal position for this system is immediately prior to the point of use. This assures that microorganisms are destroyed and significantly reduces the chance of post-treatment re-contamination.

## Little Known Facts and Trivia

- In Japan, letting a sumo wrestler make your baby cry is considered good luck.
- Between 1900 and 1920, Tug of War was an Olympic event.
- In 1999, the U.S. government paid the Zapruder family \$16 million for the film of JFK's assassination.
- The Pledge of Allegiance was written as part of a plan to sell flags to schools.
- Alaska is so big it would take 75 New Jerseys to fill it.
- Bubble wrap was originally intended to be used as 3D wall paper.
- Movie popcorn costs more per ounce than filet mignon.

## Email Pipeline to You?

Please send your request to  
[Janette@mulvaneyinc.com](mailto:Janette@mulvaneyinc.com)

## Batten Down the Hatches, The El Niño Winter is Here!!!



### What is an El Niño?

El Niño is characterized by unusually warm ocean temperatures in the Equatorial Pacific, as opposed to La Niña, which is characterized by unusually cold ocean temperatures in the Equatorial Pacific. These warmer waters are normally confined to the western Pacific by winds that blow from east to west, pushing the warmer water toward Indonesia and Australia. But during an El Niño, the winds slow down and can even reverse direction, allowing the warmer water to spread eastward all the way to South America. El Niño is an oscillation of the ocean-atmosphere system in the tropical Pacific having important consequences for weather around the globe. El Niños occur every two to seven years in varying intensity, and the waters of the eastern Pacific can be up to 4 degrees Celsius (7 degrees Fahrenheit) warmer than usual. There have been only two "super" El Niños until now and are defined by record warm temperatures documented to date. The last two were in 1982-83 and 1997-98. We are now experiencing a third.

## WHAT THE HECK IS IT?

If you can name the item pictured, you may

## WIN A MULVANEY MECHANICAL LEATHER JACKET



When e-mailing your entry, please write "Newsletter Contest" in the subject line to avoid our SPAM filter.

Send to: [Janette@mulvaneyinc.com](mailto:Janette@mulvaneyinc.com)

If multiple correct answers are received, one winner will be selected at random.

JUST LIKE THIS ONE



## Last Quarter's Puzzle: Increment Hammer WE RECEIVED NO CORRECT ANSWERS

If you need to take some quick tree core samples to determine the rate of growth last year, one tool you could use is this Swedish-made increment hammer from Haglof. To take the sample, all you do is strike the tree perpendicular to the trunk and pull the hammer out. You then eject the core with the steel plunger.

## WHAT'S GOIN' ON?

|            |                            |                    |
|------------|----------------------------|--------------------|
| Mar 9-11   | 97th Annual AGC Convention | San Antonio, TX    |
| Apr 11-13  | CxEnergy                   | Dallas, TX         |
| May 19-21  | AIA Convention 2016        | Philadelphia, PA   |
| June 25-29 | ASHRAE Annual Conference   | ST. Louis, MI      |
| Sept 12-14 | ASHRAE IAQ Conference      | Salt Lake City, UT |
| Oct. 5-7   | IFMA World Workplace       | San Diego, CA      |

"Political correctness is tyranny with manners."

- Charlton Heston