

State of Efficiency

Efficiency: The productive use of resources; the degree to which something is done well or without wasted energy.

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“We, the public servants of the state of Oklahoma, are hereby committed to the conservation of resources and the protection of future generations through the promotion and implementation of sustainable business practices.”

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Electronic Filing System Produces Results

In early 2008, Randy Ross, now Deputy Director of DCS, was Director of the Finance Division. Randy was troubled by the amount of paper the Finance Division was using, as well as the amount of space required to store their records. The problem was not going away and the Division recognized the need for a shift toward a more sustainable way of doing business.

Call it a premonition, foresight, or simply frugality, but Randy was pushing for sustainability before sustainability was cool. DCS began seeking ways to conserve resources by operating more efficiently before “sustainability plans” became a requirement of all state agencies in November of 2009. On July 1, 2008, after some research and a short trial period, the DCS Finance Division implemented an improved document management system using personal desk scanners and the electronic filing software.

Randy got the program off the ground, and then handed things off to Jason Doss, who is currently an Accountant III in the Finance Division. Jason was an integral part of the smooth transition to the new process. Finance employees can now transmit and store documents electronically that previously would require at least two printed copies. The electronic filing system is also capable of linking directly to the Office of State Finance’s existing system which drastically reduces the volume of paper going back and forth from DCS to OSF.

Since the procedure was implemented, DCS Finance has decreased their storage space in the DCS warehouse by a whopping 88%! Prior to the change, Finance used every bit of 90 cubic feet of storage space, but now need only 10 cubic feet for documents required to be stored by statute.

The accounts payable and receivable processes have not become completely paperless, but the amount of paper required to process transactions has decreased significantly. The new scanning and document storage procedure also allowed for five file cabinets to be eliminated from the Finance area.

“Improving efficiencies, conservation of resources, and saving taxpayer dollars are all things we strive for at DCS, and the document scanning and storage procedure is one of the many ways we are doing that”, said Randy Ross. “This procedure allows for savings on office supplies, and also helps make the most of our employees’ time.”

Energy Star Update

DCS-OFM Energy Star Portfolio

Current Average Rating: 80; Facilities Included: 12; Energy Star Certified Buildings: 4

- Kerr-Edmondson Building -Tulsa, OK; Current Rating: 89 (Energy Star Certified)
- Attorney General Building - Oklahoma City, OK; Current Rating: 75 (Energy Star Certified)
- Jim Thorpe Building - Oklahoma City, OK; Current Rating: 81 (Energy Star Certified)
- State Capitol Building - Oklahoma City, OK; Current Rating: 89 (Energy Star Certified)
- Connors and Hodge Buildings - Oklahoma City, OK; Current Rating: 73
- Sequoyah and Will Rogers Buildings - Oklahoma City, OK; Current Rating: 84
- DHS-CAP Building - Oklahoma City, OK; Current Rating: N/A
- Department of Libraries Building - Oklahoma City, OK; Current Rating: 90
- Agriculture Building - Oklahoma City, OK; Current Rating: 87
- Department of Transportation Building - Oklahoma City, OK; Current Rating 69
- Banking Building - Oklahoma City, OK; Current Rating: 49
- Denver Davison Courts Building - Oklahoma City, OK; Current Rating: 36

FTC Mandates Lumen Labeling

Confused by all the rigmarole surrounding the marketing of the light bulb industry? Sure, most light bulb packages detail how many watts the bulb uses and the expected life, but the industry lacks standardization.

The Federal Trade Commission announced last year that beginning in mid-2011 packaging for light bulbs **must** contain a *Lighting Facts Label*.

The Lighting Facts label, designed to resemble food nutrition labels, will provide basic information about the bulb and subsequent energy required to light the bulb for a year.

It lists the bulb's lumens, or brightness; its estimated yearly energy cost; how long the bulb is expected to last; its appearance, from warm to cool; how much energy, or watts, it uses; and whether the bulb contains mercury.

The label must be on packages starting in mid-2011, but it could start appearing sooner.

The FTC hopes the new labels "will enable consumers to save money by selecting the most efficient bulbs that best fit their lighting needs."

Energy Savings & Renewable Energy Update

Energy Generated

(Numbers updated 1/7/2011)

Total Wind = 30,974 kWh, CO2 Equivalent = 53,275 lbs.

Total Solar = 76,129 kWh, CO2 Equivalent = 129,521 lbs

Energy Savings/Increase

(Dec. FY08 through Dec. FY11)

Total Energy (kBtu) reduction of 18,377,221 kilo British thermal units.

Electricity (kWh) reduction of 3,871,819 kilo Watt-hours.

Natural Gas (Dth) increase of 4,206 Dekatherms.

Water (Gallons) reduction of 12,530,000 Gallons.

For a complete listing of energy savings please visit:

[OFM Energy Management Page.](#)

For information on renewable energy projects in the Capitol Complex, visit: [Renewable Energy Projects.](#)

How to Refuel a Compressed Natural Gas Vehicle

1. Make sure pump handle on dispenser is in the "off" position.
2. Open fuel cover and remove plastic cap from fueling adapter.
3. Connect fuel hose nozzle to fuel adapter on the vehicle. When using a quick-connect-fitting adapter, you have to pull back on the blue hose handle adapter when connecting the hose nozzle to the quick-connect-fitting on the vehicle.
4. Turn valve lever "ON." The black, pointed end of the valve should point toward the dispenser end of hose nozzle.
5. Go to dispenser and insert black fueling key into Fuel Master control panel. Follow directions that appear on the screen:
 - Insert key into control panel.
 - Enter driver ID number press enter.
 - Enter odometer mileage reading, press enter.
 - Remove key
 - Press '1' which indicates pump, press enter
 - Re-insert key into Fuel Master control panel
 - Remove key
6. Turn pump handle on dispenser to the "ON" position and fueling will begin. When the vehicle tanks is full, pump will stop. Turn the pump handle on dispenser to the "OFF" position.
7. Turn lever on valve "OFF." The black, pointed end should now point toward the vehicle-end of hose nozzle. This will also vent the hose.
8. Disconnect the fuel hose nozzle from the vehicle. Once again, since this is a quick-connect fitting adapter, you have to pull back on the hose handle adapter when disconnecting hose nozzle.
9. Replace fuel hose nozzle at dispenser.
10. *(Not pictured)* Replace black plastic cap from fueling adapter and close fuel cover.

LED Technology: The Wes Welker of Lighting

By Thomas Bowman

Maybe it's withdrawals.

Maybe it's the looming failure of the Collective Bargaining Agreement between NFL players and owners.

Maybe it's the fact that without the NFL, I will not have a clue what to do on Sundays this fall.

Whatever the true inspiration, this article is intended to examine the correlation between the evolution of lighting technology and the careers of a handful of high-profile NFL athletes. Residential and commercial lighting manufacturers are riding the wave of popular opinion (and federally-mandated phase outs) to improve the efficiency of many, if not all, styles of lighting products. Leading the charge into the future thanks to a whirlwind of media exposure is the light source on the tip of everyone's tongues – the LED.

Light Emitting Diodes (LEDs)

LEDs work a little differently than traditional incandescent or fluorescent lights. Instead of heating a filament or exciting mercury atoms, the LED is a semi-conductor diode that releases energy in the form of a photon (light). Visit the [Solid-State Lighting section](#) on the U.S. Department of Energy's website for the complete detail of how these lights work.

Despite the fact that LEDs have been back-lighting our alarm clocks and vehicle gauges for years, the true 'hey-day' of LED technology, according to many experts, is imminent, if not already present. Research and development teams worldwide have sparked innovative designs and applications for LEDs. From light-pollution reducing street lamps to aesthetic spotlights to fluorescent tube replacements, the evolution of the lighting industry has made LEDs available for most every general lighting purpose.

Despite an uninspiring early history ("ooh, look a blinky light"), the LED has emerged as a major player in the development of super-efficient lighting.

Wesley "Wes" Carter Welker

Wes Welker is a professional football player born in Oklahoma City. He went undrafted in 2004 after playing four years of college football with Texas Tech. Through his first 47 career games, Welker started only three games for the San Diego Chargers (one game in 2004) and Miami Dolphins (2004-06).

In his first three seasons, playing mostly on the Dolphins special teams unit** Welker accumulated more all-purpose yards than anyone not named Gayle Sayers in NFL history.

*** (For those not familiar with the term: When the Special Teams unit takes the field, a player resembling the quarterback's kid-brother and wearing a uniform and set of equipment that looks like a well-funded Halloween costume spryly jogs onto the field and kicks the ball.)*

The 5'9" wide receiver's explosive speed and elusiveness caught the eye of the New England Patriots and after the 2006 season, he was traded for two draft picks. He went on to make the Pro Bowl in 2008, 2009, and 2010, tying the record for receptions in a Super Bowl (11 catches in Super Bowl XLII) and breaking various other personal and league records for receptions, return yardage, and consecutive seasons with at least 1,000 receiving yards.

Welker's distinctive set of talents along with his 'seize the moment' style of play landed him in the professional ranks despite critics' claims that an undersized, workmanlike wide receiver who went undrafted has no lasting place in a league of 350-lb behemoths.

Despite an uninspiring early career, Wes Welker has emerged as one of the top-performing receiving options in the league.

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[Click Here](#)

LED Technology: The Wes Welker of Lighting, cont.

Now, take the following four categories of performance and examine the correlation of benefits:

Efficiency of Work:

Neither LEDs nor Welker are considered 'greedy' when it comes to resources.

LEDs typically use less than 20% of the resources needed to operate their incandescent counterparts.

Welker is an exceptional value to owners. According to the [USA Today Salaries Database](#):

2008: Ranked 2nd in total receptions; 77th in WR salaries

2009: Ranked 2nd in total receptions; 48th in WR salaries

Longevity:

LEDs last between 50,000-100,000 hours, not only saving money from the reduction in energy use, but also by minimizing replacement costs.

In his professional career, Welker has missed only 3 regular season games due to injury.

Durability:

Both function properly in extreme cold environments.

LEDs minimum operating temperature dips as low as -40° C and most will perform as designed in harsh weather.

For one, Welker's statistically best seasons came while playing in Foxboro, Massachusetts during the fall and winter.

Secondly, think back to a December 12, 2010 game in which Welker's Patriots traveled to Soldier Field to face the Chicago Bears with wind-chills as low as -15°. A few days prior, Welker joked to reporters that he sometimes locks himself in a freezer before really cold games. OK, so maybe he didn't actually nap with TV dinners and fish sticks, but he did have 8 grabs for 115 yards in that particular game.

Cost Dependent on the Market:

As both LEDs and Wes Welker establish themselves as upper-tier options in their respective industries, demand will increase.

However, the cost of benefiting from either of these commodities will decrease over time.

Currently, the initial cost of replacement LED lamps is higher than most other lighting technologies because the mainstream LED market is still developing.

Other notable NFL stars with a ulterior light bulb persona:

Brett Favre: the old-school [incandescent](#) watt-slinger who just won't give up, even if he's one of the least efficient options available.

Mark Sanchez: the [Compact Fluorescent Light \(CFL\)](#) quarterback for the New York Jets. The CFL and Sanchez have long careers ahead of them, are a more efficient long-term option to Brett Favre (incandescent lamps), plus there's always the chance they could break and cause a huge overreaction.

Aaron Rodgers: the [fluorescent lighting system](#)/the original Brett Favre replacement. Up to four times more efficient than Mr. Favre (incandescent) and now featuring the same number of Super Bowl rings.

Any heavily-paid, 'diva' wide receiver: the [High-Intensity Discharge \(HID\) lamp](#). They do in fact produce more light and have longer careers than your typical household bulbs; however, they also have a high turn-over rate, require an exorbitant amount of resources (Bulbs range from 50 to 2,000 watts; top wide receiver salaries range from \$12-\$17 million per year), and produce a lot of unwanted heat for owners (metal halide fixtures can burn as hot as 900°F; Selfish wide receivers can quickly 'tweet' their teams into the media dog house).

Get to Know Your Facilities Professionals!

The Facts. Name: Robert McCullough. Occupation: Construction Maintenance Technician II. Years with DCS: 5.5. Specialized Skills: Plumbing, Electrical, HVAC. Hometown: Oklahoma City, OK

Robert McCullough has been with DCS for over five years. Prior to coming to DCS, Robert spent 22 years working in the maintenance departments of the Oklahoma County Courthouse and Oklahoma County Jail. Robert now serves as a Construction Maintenance Technician II for Facilities Services. Equipment maintenance and repairs for buildings in the Capitol Complex is Roberts's primary job responsibility. He enjoys the challenge of solving problems that arise daily, and working with other DCS employees to find the most efficient solutions. Robert practices the martial art of Tai Chi, which he has been studying for over 20 years. He enjoys sharing his knowledge and skill by teaching Tai Chi to his fellow DCS employees during fitness breaks. Robert is also studying Spanish.

[Click Here to Email Robert McCullough](#)

DCS Recycling Update

Last year, DCS began the "Re-Invent Your Print!" Recycling Program in DCS-managed facilities. In July 2010, State Surplus began weighing and reporting recyclables collected. The numbers below are through January 28, 2011.

135,515 lbs of Paper

27,329 lbs of Cardboard

1,141 lbs of Aluminum & Plastic

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