



# Earth Day Report

**April 22, 2013**

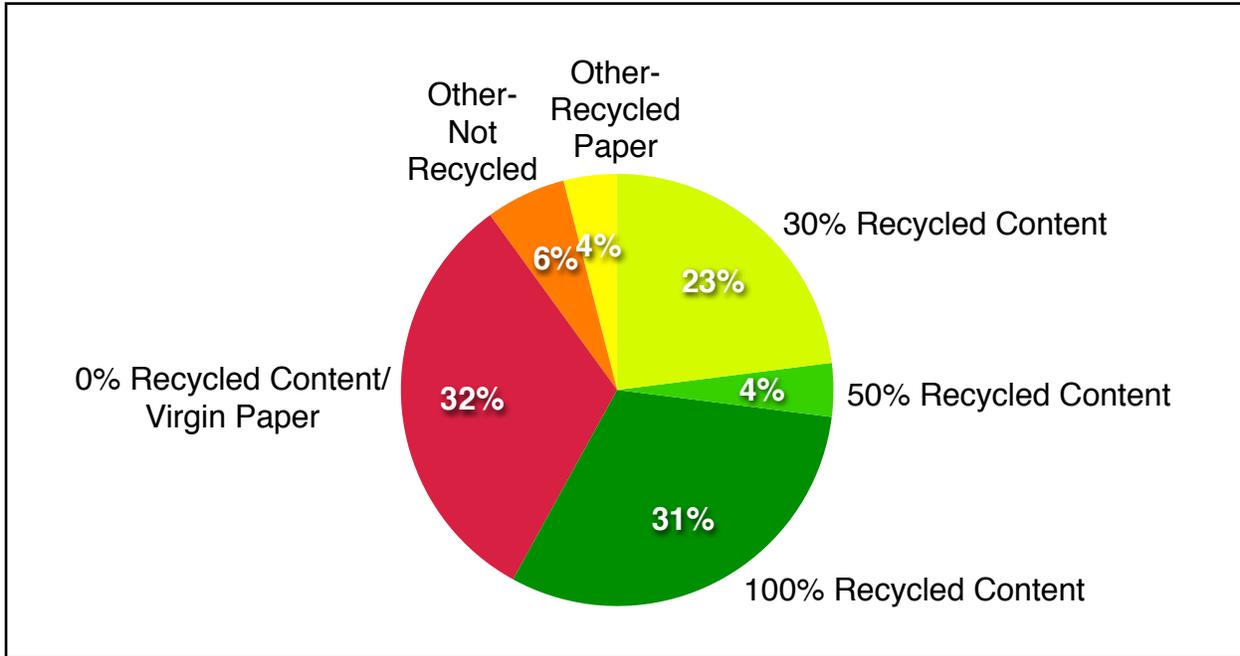
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TACOMA, WASHINGTON



# The Paper Report

## City of Tacoma Copier Paper Usage



The City of Tacoma's average recycled content for copier paper is **only 41.5%**.

Year	Employees	Total Yearly Sheet Volume (GG)	Sheets Per Employee Per Month	Total Paper Cost
2009 Baseline	2,500	20,000,000	667	\$543,088
2011	2,400	5,035,800	175	\$116,806
2012	2,300	2,473,000	90	\$47,349

Copier paper volume  
**REDUCED**  
**50%**  
from 2011.

Savings From 2010 through 2012		
15,787		BTU's of Energy Saved
2,697,599		Pounds of CO <sub>2</sub>
10,239		Trees Saved
245		Cars Off the Road



Data from Environmental Paper Network and industry averages:  
<http://calculator.environmentalpaper.org/home>

# The Paper Report

**72.5  
TONS**  
of copier paper

Even though City employees have made significant strides in paper conservation, they still used 72.5 tons of copier paper in 2012 and there remains significant opportunities for print reduction without compromising the ability of people to do their work. According to a study by Xerox, 40% of pages printed in an office are discarded the same day.

Recycled Content	Volume of Usage (sheets)	Paper Costs	100% Recycled Conversion Costs	5% Paper Reduction Savings	10% Paper Reduction Savings	15% Paper Reduction Savings
Virgin Paper 0% Recycled Content	939,740	\$5,362	\$6,862	\$418	\$2,337	\$4,255
30% Recycled Content	568,790	\$3,386	\$4,161	\$388	\$1,552	\$2,715
100% Recycled Content	766,630	\$5,585	\$5,585	\$1,561	\$3,123	\$4,684
<b>Totals</b>	2,275,160	\$14,333	\$16,608	\$2,367	\$7,012	\$11,654
<b>net change</b>	--	--	<b>-\$2,276</b>	<b>+\$2,367</b>	<b>+\$7,012</b>	<b>+\$11,654</b>

The City of Tacoma would only need to reduce paper use by 2.5% to offset the cost of purchasing 100% recycled copier paper.

### 3 Simple Ways to Save Paper:

- 1. Use second chance paper.** Paper previously printed on only one side can be used again for many draft quality utilizations.
- 2. Send meeting materials electronically.** Forward meeting materials electronically to meeting participants, so they can print them if they need a hardcopy.
- 3. Scan and send electronically.** Change from the habit of printing materials you want to share and instead scan and share electronically. The same is true of items you want to save... scan and save electronically.

Reduce paper use by

**2.5%**

and offset the cost of purchasing

**100%**

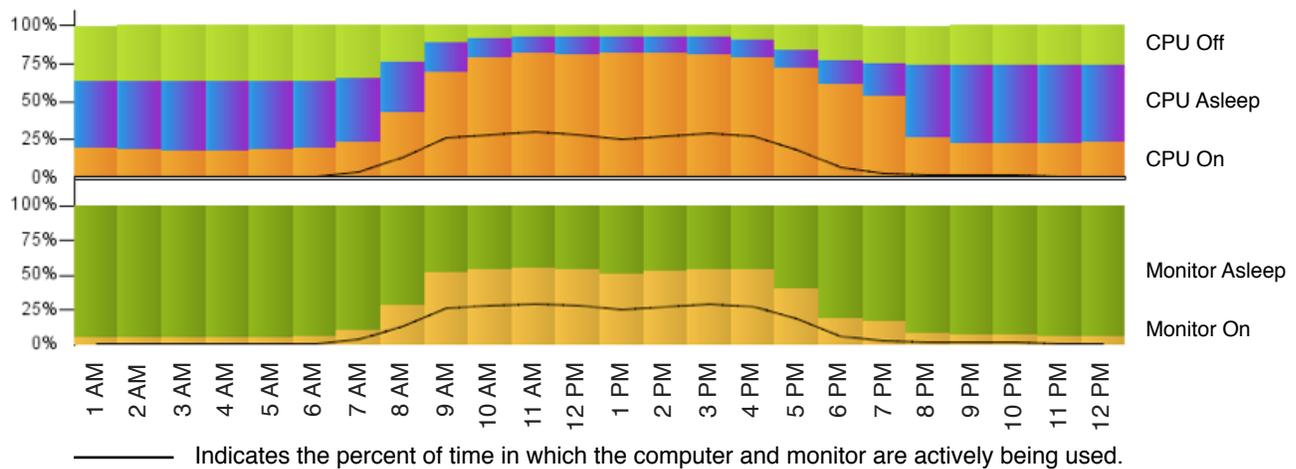
**Recycled  
Content**  
copier paper

# The Energy Report

Controlling the power use of computers to reduce energy consumption is known as PC Power Management. This is typically accomplished through the use of software that puts computers and monitors into the lowest state of power demand. A typical office PC uses approximately 90 watts when active (50 watts for the CPU base unit and 40 watts for the monitor) and three to four watts when asleep. Power management policies were implemented by the City of Tacoma in April of 2012, with a total savings to date of \$25,762 and 429,371 kWh of electricity.

## City of Tacoma Computer & Monitor Power States

Average Percent of Time in Each Power State Measured on March 18, 2013



Data shows that during normal office hours, the power state is ‘on’ 75% of the time, while computers are in an active state only 25% of the time. In an effort to reduce wasted electricity even more, a revised energy management policy will put managed PCs in sleep mode after one hour of inactivity between 8:00 am and 5:00 pm, and reduce the power ‘on’ state by an additional hour.

One Year of Computer Setting Savings		
\$25,762		Cost
429,371		kWh of Energy Saved
757,281		Pounds of CO <sub>2</sub>
488,110		Gallons of Fuel
8,902		Trees Saved
67		Cars Off the Road

Data from Environmental Paper Network and industry averages:  
<http://calculator.environmentalpaper.org/home>

## 3 Simple Ways to Save Electricity:

1. **Turn off the lights** when you leave a room for more than 5 minutes, including the restroom.
2. **Use “smart” powerstrips.** Many electronic devices continue to draw power even when off, so cutting the power at the powerstrip when not needed, maximizes savings.
3. **Unplug chargers when not in use** as they draw power even when they have nothing to charge.

# The Energy Report



Tacoma, Washington has been awarded Bronze recognition from the State Electronics Challenge—a national environmental stewardship program—for its achievements in decreasing the environmental footprint of its computer equipment.

Tacoma achieved these results by purchasing only computer equipment qualified by the Electronic Product Environmental Assessment Tool (EPEAT®) standard, extending the life of its computer equipment, by reusing computer equipment, through PC Power Management, and responsible recycling of equipment at end-of-life. The environmental benefits of these actions are highlighted in the following table.

Green Electronics Management produced a Reduction In:	Environmental Benefits From			Total Benefits	Benefits Equivalent To
	EPEAT® Purchasing	Power Managed Use	Reuse & Recycling		
Energy Used in kilowatt hours (kWh)	66,949 kWh	4.47 million kWh	1.01 million kWh	5.55 million kWh	Electricity to power 434 homes/year
Greenhouse Gas Emissions in metric tons (t) of carbon equivalents	11 t	850 t	194 t	1,055 t	Removing 758 cars from the road/year
Toxic Materials in pounds (#), including lead and mercury	14 #	215 #	28 #	257 #	
Municipal Solid Waste in pounds (#)	2,168 #	54,071 #	7,539 #	63,778 #	Waste generated by 15 homes/year
Hazardous Waste in pounds (#)	396 #	5,905 #	879 #	7,180 #	

**Duplex Copying:** The City of Tacoma has **73% of printers** and **100% of copiers** set at default double-sided printing.

# The Fuel Report

In order for General Government to reach our Climate Action Plan greenhouse gas reduction goals and 'lead by example,' we must reduce our petroleum fuel use. This means in our commuting as well as work trips and functions.

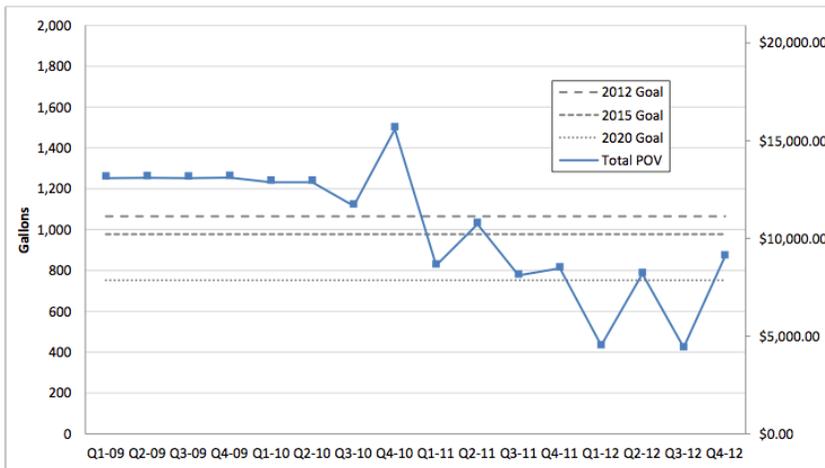
Fuel Reduction Goals		2012	2015	2020
Reduce Petroleum Fuel Use By		-15%	22%	40%
Increase Alternative Fuel Use By (as a % of overall consumption)		+10%	15%	25%
Reduce Commute Drive Alone Rate By (from 2009)		-7%	15%	22%
Actual Fuel Use	2009 (Baseline)	2012	Change (2009-2012)	CO <sub>2</sub> Reduction*
Petroleum Fuel Use	1,148,537 gal.	1,057,359 gal.	-8%	6,204,680 lbs.
Alternative Fuel Use (B100)	94,244 gal. <i>8% of total fuel use</i>	93,754 gal. <i>7.5% of total fuel use</i>	0%	n/a
Commute Drive Alone Rate (from 2009)	68%	73%	+5%	

\* Cumulative fuel savings from 2010 to 2012 at 20 lbs. per gallon of fuel burned.

**Cost avoidance:** In the three years from 2009 to 2012, due to reductions and escalating fuel costs, the City has avoided spending \$1,151,100 on fuel. This cost avoidance includes a reduction in personal owned vehicle reimbursements, as well as the increase in use of our video-conference capability between TMB and TPU.

## Personal Owned Vehicle (POV)

Gallons of Fuel Used and Associated Costs



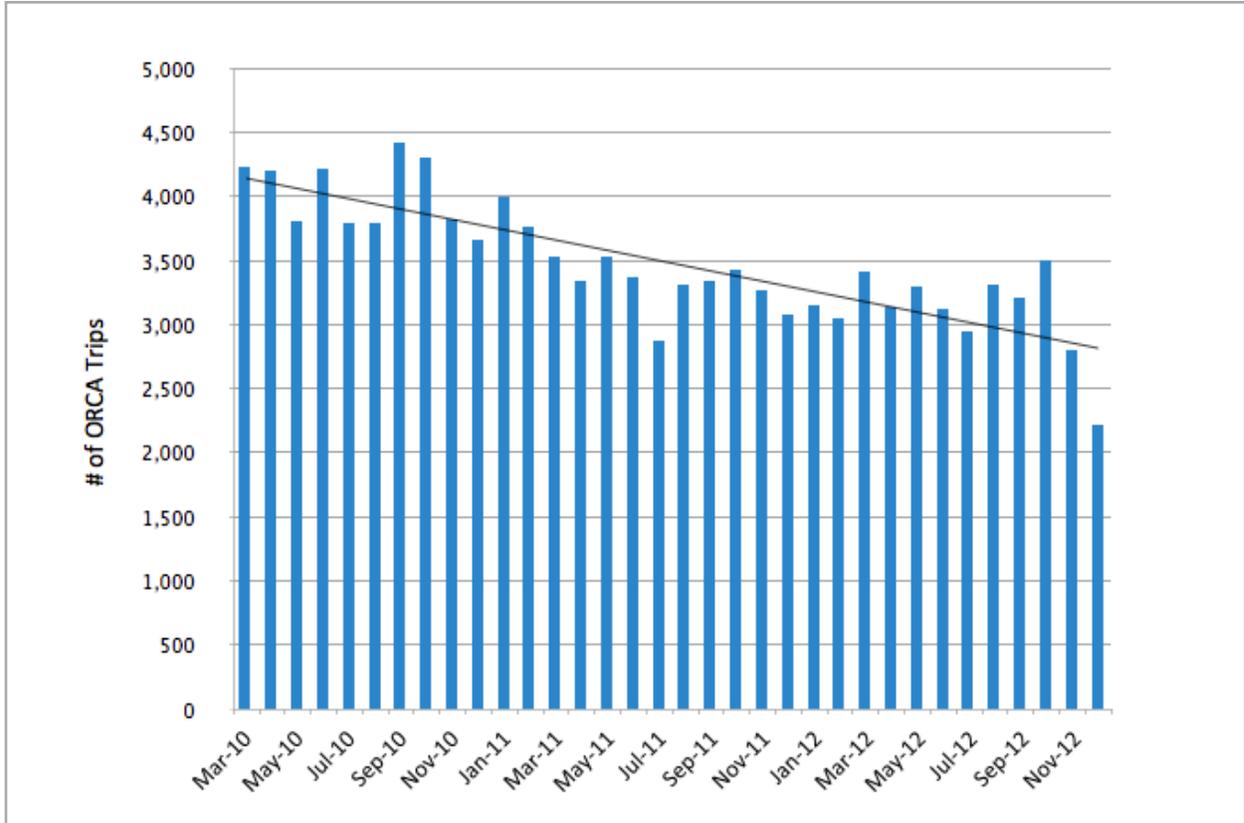
Cost is calculated at 51 cents/mile, using EPA's economy average of 22.4 mpg.

**\$1,151,100**  
saved in  
**avoided**  
**fuel costs**  
since 2010.

**Motor Pool Vehicle Utilization:** The all-electric LEAF vehicles were only utilized 51% of the time in 2012. The 35,240 miles traveled in 2012 used zero gallons of fuel.

# The Fuel Report

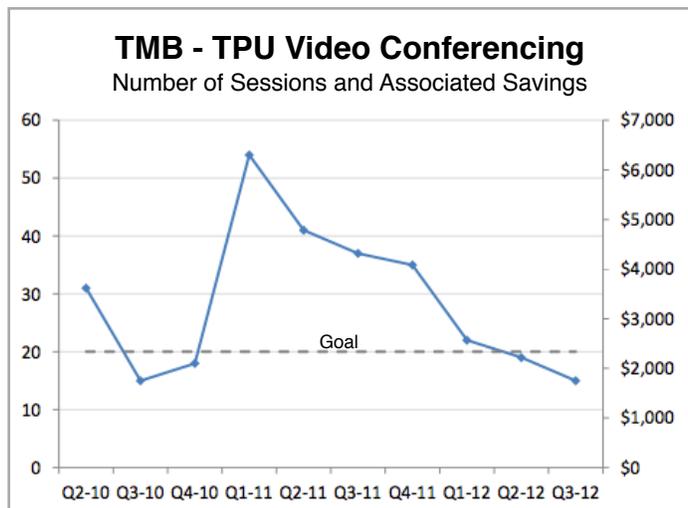
## Orca Pass Utilization



Since April 2010, the City of Tacoma has provided free ORCA passes to all General Government and TPU employees. This graph represents trip counts for commuting and work trips on all regional transit services. It does not cost GG to distribute the cards, costs are based on ridership through a yearly contract.

### 3 Simple Ways to Save Fuel:

- 1. Discretionary idling.** If you are going to stop for more than 30 seconds, except in traffic, turn off the engine.
- 2. Drive more efficiently.** Keeping tires fully inflated, using cruise control, and avoiding rapid acceleration and aggressive driving saves fuel.
- 3. Use mass transit or carpool.** Or, if time allows, walk or bicycle.



The estimated savings per session is \$200, based on the time savings of 4 staff members, plus fuel and other costs utilizing *The True Cost of Driving Calculator* at [commutesolutions.org](http://commutesolutions.org).