



KING COUNTY METRO TRANSIT 2014 SUSTAINABILITY PLAN PROGRESS REPORT



Photo Courtesy of Transportation Choices

Metro Transit took a number of actions in 2014 to grow our Sustainability Program and reduce our environmental footprint. We released our first Sustainability Plan, establishing clear goals and priority actions to reduce energy use, greenhouse gas (GHG) emissions, water use and waste and to increase transit ridership. These efforts will help counter climate change and enrich the quality of life for King County residents.

We also produced our first annual Sustainability Plan Progress Report, formed an employee Green Team, rolled out new hybrid buses, signed contracts for new zero-emission fleet technologies, and completed several resource conservation projects at our facilities. Our bus, Vanpool and Access services delivered a record-high number of passenger trips—a total of 124 million boardings.

On the community front, Metro participated in the King County-Cities Climate Collaboration (K4C). This regional collaboration identified opportunities for joint actions to reduce GHG emissions and accelerate progress toward a clean and sustainable future, and made specific commitments for transportation and land use. We worked with K4C members on enhanced communications on the climate benefits of public transportation.

This 2014 Sustainability Plan Progress Report highlights continued progress toward our sustainability goals, along with equity and social justice accomplishments. We look forward to doing even more to enhance our environment and reduce climate pollution in 2015. We'll be putting new electric trolleys into service, expanding our employee Green Team, and growing our service substantially thanks to the availability of new funding.

2014 PROGRESS REPORT

SYMBOLS— intended to give a general indication of how well we're meeting our goals.

- + Meeting or approaching goal
- Opportunity to improve
- I Stable
- N/A, just one year of data, or trend not easily defined

MEASURES		TREND
GOAL 1: ENERGY EFFICIENCY AND CONSERVATION		
1	Reduce energy use from buildings and facilities	+
2	Reduce energy use from vehicle fleets	+
GOAL 2: CLIMATE POLLUTION REDUCTION		
1	Reduce total GHG emissions	+
2	Increase total GHG emission displacement	I
3	Reduce motorbus fleet criteria air pollutant emissions	+
GOAL 3: WATER CONSERVATION		
1	Reduce water use	+
GOAL 4: WASTE MANAGEMENT		
1	Reduce solid waste disposal	+
2	Increase diversion of solid waste from landfills through reuse and recycling	+
3	Increase the diversion rate for construction and demolition materials	+
4	Purchase 100% recycled content for all copy paper	-
GOAL 5: RIDERSHIP GROWTH		
1	Increase passenger boardings	+
2	Reduce vehicle miles traveled*	-
3	Reduce the drive-alone commuting rate*	-

*Commute Trip Reduction program employers only

All targets are compared to a 2009 baseline unless otherwise noted, and are normalized for passenger boardings, vehicle miles traveled, square footage of buildings, etc.

ENERGY EFFICIENCY AND CONSERVATION

GOAL: Reduce consumption of energy, including diesel fuel, gasoline, electricity and natural gas, and transition to cleaner and renewable energy sources.

	TARGET	2013 STATUS
FACILITY ENERGY USE	Reduce energy use from buildings and facilities by at least: <ul style="list-style-type: none"> • 10% by 2012 • 15% by 2015 • 20% by 2020 	-17% ¹
FLEET ENERGY USE	Reduce energy use from vehicle fleet ² by at least 10% by 2015	-6%

¹Facility energy use data normalized for weather and square footage

²Revenue fleet energy use only

2014 ACHIEVEMENTS

- ✓ Completed 28 lighting upgrade projects in the Downtown Seattle Transit Tunnel and at bases, park-and-ride lots and parking garages, saving approximately 3.3 million kWh and \$250,000 in utility costs each year.
- ✓ Continued building gas and electric submetering network across transit bases to help monitor and manage energy consumption. Installed the hardware for 21 gas meters at 15 different buildings and hardware for electric meters on buildings at the Atlantic/Central Campus.
- ✓ Began a pilot project to monitor HVAC systems in real time and make

necessary energy-saving adjustments as soon as a possible to better prioritize work based on calculated energy savings.

- ✓ Continued energy audits at several facilities to identify the best energy-saving efforts, and began a five-year Energy Conservation Program with the Bonneville Power Administration and Seattle City Light.
- ✓ Completed several energy conservation projects including the following:
 - › Installed 30-minute timers on all main steamers at the bases to minimize the time they are on when not in use.
 - › Aligned HVAC equipment operating schedules with staffing at the Component Supply Center and South Facilities.
 - › Installed HVAC controls to optimize heating systems at the Atlantic Base Fuel and Wash Building.
 - › Reprogrammed HVAC controls to optimize heating systems at Central, South, and East bases.
 - › Pilot-tested lower level of compressed air pressure at Component Supply Center, with demonstrated energy savings.
- ✓ Nine staff members from Power & Facilities attended the 7-month Building Operator Certification (BOC) course and obtained BOC certification. Building operating engineers also attended an advanced HVAC controls training.
- ✓ Engaged millwrights in energy conservation efforts, focusing mainly on steamers and air compressors.



LED lighting upgrades in the Downtown Seattle Transit Tunnel.

CLIMATE POLLUTION REDUCTION

GOAL: Significantly reduce greenhouse gas and criteria air pollutant emissions and displace increasing percentages of community-generated GHG emissions from transportation.

	TARGET	2014 STATUS
GHG EMISSIONS	Reduce total GHG emissions by at least: <ul style="list-style-type: none"> • 15% by 2015 • 25% by 2020 • 50% by 2030 	- 10%
GHG DISPLACEMENT	Increase total GHG emission displacement by at least 5% by 2015	+ 2%
CAP EMISSIONS ¹	Reduce motorbus fleet criteria air pollutant emissions by at least 10% by 2015	- 54%

¹CAP=Criteria air pollutant

2014 ACHIEVEMENTS

- ✓ Increased percentage of motorbus fleet that is hybrid or electric to 67% at the end of 2014 as part of effort to phase out all remaining diesel buses.
- ✓ Received two new 40-ft trolleys with zero tailpipe emissions, improved energy efficiency, regenerative braking and the ability to travel “off-wire” for limited distances. These are the first of 174 new trolleys that will begin service in 2015 and 2016.
- ✓ Signed a contract for the delivery of three 40-ft Proterra electric battery buses in 2015. These buses will be evaluated for potential widespread adoption of electric battery buses in the Metro fleet.
- ✓ Purchased new hybrid buses with all electric drive components and accessories, enhanced fuel efficiency and the ability to completely cut off the engine when there is no need for power.
- ✓ The metropool EV program logged a total of 217,782 all-electric miles, saving more than 30,000 gallons of gas and eliminating more than 300 metric tons of GHG emissions.

- ✓ Developed the Right-Size parking model for estimating parking demand for multi-family developments. The model indicates that in many cases developers are required to overbuild parking at apartments, providing a disincentive to residents to reduce car dependence. Initiated several pilot projects to modify parking requirements and implement different parking management strategies.
- ✓ Began testing Vanpool and VanShare vehicle emissions with a mobile testing unit at the Van Distribution Center. By replacing the former process of contracting out this service or shuttling vans to the testing station, eliminated associated fuel consumption and GHG emissions and reduced emissions testing costs by 66%.



Mobile emission testing unit at the Van Distribution Center reduces costs and drive time associated with completing vehicle emissions tests.

WATER CONSERVATION

GOAL: Reduce water consumption.

	TARGET	2014 STATUS
WATER USE	Reduce water use by 5% by 2015	- 37%

2014 ACHIEVEMENTS

- ✓ Received water conservation rebate from Seattle Public Utilities for the installation of low-flow toilets at North Base, saving over 2,000 gallons per day.
- ✓ Continued to reclaim, filter and reuse water to wash buses.
- ✓ Continued to generate savings from the installation of low-flow final rinse arch nozzles on the bus wash hoses, completed in 2004. Water use for bus washing decreased from an estimated 6.0 million gallons per year to 3.8 million gallons per year, a savings of roughly 2.2 million gallons of water per year.

WASTE MANAGEMENT

GOAL: Reduce and reuse material waste.

	TARGET	2014 STATUS
SOLID WASTE	Reduce solid waste disposal by at least 5% by 2015 ¹	-35%
MATERIAL REUSE AND RECYCLING	Increase diversion of solid waste from landfills through reuse and recycling by at least: <ul style="list-style-type: none"> • 7% by 2015 • 15% by 2020 • 30% by 2030¹ 	+13%
CONSTRUCTION AND DEMOLITION WASTE	Increase the diversion rate for construction and demolition materials to: <ul style="list-style-type: none"> • 80% diversion rate by 2016 • 85% diversion rate by 2025 	99% ²
ENVIRONMENTALLY PREFERABLE PURCHASING	Purchase 100% recycled content for all copy paper	51% of copy paper purchased met requirement

¹ Compared to a 2003 baseline

² Construction and demolition diversion rate for projects completed and reported on in 2014

2014 ACHIEVEMENTS

- ✓ Exceeded the 80% construction and demolition waste diversion rate for completed projects that submitted Green Building and Sustainable Development reporting forms.
- ✓ Recycled 1,700 pounds of seat cushion foam from buses. Over 24,000 pounds of foam have been diverted from the landfill for recycling since 2009.

- ✓ Converted thousands of paper records in Rideshare Operations to Laserfiche, an electronic document storage application. Upon completion of this digitization project in 2015, approximately 20 lateral files will be eliminated and processing time reduced by an estimated 100 labor hours annually.
- ✓ Reduced the number of print copies for the In Transit employee newsletter by 23%. With enhanced employee access to electronic communications, and continual review of print needs, we have reduced the number of print copies by 62% from 2008 to 2014.
- ✓ Staff participated in training sessions on construction and demolition waste, GHG emissions calculations and mitigation strategies, updates to the King County Green Building and Sustainable Development Ordinance, and resource life cycle cost assessments.

RIDERSHIP GROWTH

GOAL: Expand transit ridership and reduce vehicle miles traveled.

	TARGET	2014 STATUS
RIDERSHIP EXPANSION	Increase passenger boardings to: <ul style="list-style-type: none"> • 127 million by 2015 • 142 million by 2020 • 225 million by 2040¹ 	124 million boardings
VEHICLE MILES TRAVELED ¹	Reduce vehicle miles traveled by 10% below 2011 levels by 2015	+10%
DRIVE-ALONE RATE ¹	Reduce the drive-alone commuting rate by 10% below 2011 levels by 2015	+4%

¹ For King County Commute Trip Reduction (CTR) program employers only; 25% of employer responses are not yet included in 2013 data.

2014 ACHIEVEMENTS

- ✓ Increased Metro ridership by 3.3% over 2013.
- ✓ Partnered with Community Transit, Bellevue and Kirkland to engage 57,000 people in reducing their drive-alone trips, as part of the I-405 communities' In Motion program, with a reduction of 13.5 million vehicle miles traveled and approximately 8 million pounds of GHG emissions.
- ✓ Engaged more than 2,500 people in reducing their drive-alone trips as part of the In Motion programs in the RapidRide E and F line corridors. Participants reduced their drive-alone trips by 12.6 percentage points and increased transit use by nearly 12.6 percentage points.
- ✓ Completed a non-motorized access study that developed a tool for assessing locations where non-motorized improvements could potentially increase transit ridership by enhancing access to transit. The study also identified priority areas for increasing secure bicycle parking facilities around RapidRide lines. Some of these facilities will be developed in 2015.
- ✓ Continued to increase participation in the employer ORCA Passport and Choice programs, reaching 1,892 business accounts in 2014, a 6% increase from 2013.

Messaging on Metro buses highlights links between GHG emissions from transportation and local climate impacts.



EQUITY AND SOCIAL JUSTICE

Metro considers sustainability to have “three pillars”: environmental, social, and economic. While this report focuses on environmental performance, we took significant strides to advance equity and social justice for our employees and customers.

2014 Highlights

- ✓ Established framework and partnerships for the new low-income fare program, ORCA LIFT, which launched in early 2015. This new reduced-fare program—one of the first of its kind in the country—is making public transit service more affordable for thousands of qualified lower-income riders.
- ✓ Held three retreats for the Partnership to Achieve Comprehensive Equity (PACE) focusing on cultural competency, diversity and inclusion for Metro employees. Completed employee-driven work plan elements including:
 - › Mandatory anti-bias training for interview panelists
 - › Cultural competency training for all human resources practitioners to support cultural change efforts
- › New recruitment strategies to diversify the applicant pool and use nontraditional methods to engage applicants
- › Creation of a new Diversity and Inclusion Manager position, filled in early 2015
- ✓ Promoted equity and social justice trainings for employees at all levels of the organization. All 80+ employees from Service Development completed ESJ Overview training.
- ✓ Continued implementation of the mobile ORCA sales program to increase access to ORCA and ORCA LIFT cards for diverse populations and underserved areas of King County.
- ✓ Participated in first annual King County Equity and Social Justice Employee Fair.
- ✓ Met every request for an Access trip for people with disabilities who cannot use regular bus service.
- ✓ Increased the number of bus stops that are wheelchair accessible to 79%.

EMPLOYEE ENGAGEMENT

Employee engagement was a central theme in Metro’s sustainability program this year.

2014 Highlights

- ✓ Established first employee Green Team, focused on no- or low-cost actions to save energy, water and fuel, reduce waste and prevent pollution. Developed educational materials to promote things employees can do to conserve resources and prevent pollution.
- ✓ Developed a sustainability checklist for bus drivers and administrative staff at transit bases to highlight our anti-idling policy and simple energy-saving and waste-reduction opportunities.
- ✓ Hosted an Energy Awareness Fair at South Base with information on Metro’s Sustainability Plan, the Employee Transportation Program, and energy conservation incentives for work and home. ZipCar, Puget Sound Energy and Seattle City Light participated.
- ✓ Conducted 11 presentations for approximately 450 Metro employees regarding Sustainability Plan goals, employee conservation actions and annual performance metrics.
- ✓ Implemented the Ride More Challenge—via King County’s Employee Transportation Program—to inspire County employees to try new ways of getting around without a car. More than 1,000 employees participated and shared powerful testimonials and photos demonstrating how they tried new options for getting to work, running errands, going to community events and more.



MOVING FORWARD

2014 was a year of change for Metro. Early on, the agency faced a projected budget gap and planned a series of service reductions. However, as the year went on, the financial situation improved, and in November Seattle voters approved funding for additional transit service on routes serving the city. As a result, Metro made only one round of service reductions, in September, and is now able to add service to reduce crowding and improve reliability in Seattle and around the county.

As these developments unfolded, the sustainability program had its first full year of implementation and employee engagement, helping drive continued improvement in reducing fuel and energy use to counter climate pollution. The majority of our sustainability measures showed improved or stable performance in 2014. Some measures pointed to opportunities for improvement.

The 2013 Commute Trip Reduction (CTR) survey found an increase in both vehicle miles traveled and the drive-alone rate from the 2011 survey results. The reason behind this increase—which appears to be reflected across the state—is not clear. However, the 2013 results do reflect a decline from the statewide 2007 baseline. CTR has undergone recent changes at the state level designed to move the program toward community-based tailoring of plan types and goals, which should enhance innovation in program implementation. Metro will continue to aid local jurisdictions in meeting CTR goals by providing necessary capacity in fixed-route transit service, providing Vanpool and ridematching services for commuters and employment centers, and providing public education and promotion of these services in coordination with CTR partners.

Although Metro made improvements in the purchase of 100% recycled content office paper in 2014, we are still well below the requirement that all copy paper purchases meet that specification. Metro will continue to track and highlight paper purchase statistics with managers and procurement staff, and promote recycled content purchasing and paper-use reduction strategies in employee communications.

Metro's sustainability program should see significant reductions in energy use and GHG emissions from an array of fleet improvements planned in 2015, including:

- › continued deployment of new hybrid electric buses
- › initial deployment of new zero-emission trolleys with enhanced energy efficiency

- › acquisition of three zero-emission battery-electric buses that will be tested in 2016
- › initial conversion of Access vans from gasoline to propane gas.

Resource conservation efforts will also continue, such as the ongoing lighting improvement program at transit and park-and-ride facilities, and we will expand our employee Green Team to include representatives from all transit bases. Metro also participated in updates to the King County 2015 Strategic Climate Action Plan, submitted to the King County Council in June 2015. Revised goals and priority actions outlined in this plan will help guide updates to Metro's Sustainability Plan in 2016.



Metro will test the performance and efficiency of zero-emission, battery-electric buses.



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