



SL Green / Reckson
Environmental Assessment:
MOU Annual Report
August 11, 2014



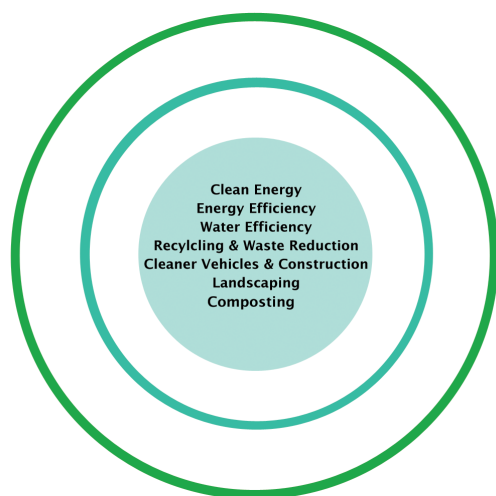
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Accomplishments

Reductions of 121,650 MTCO₂e



Memorandum of Understanding

On April 23, 2012, SL Green signed a Memorandum of Understanding (MOU) pledging to become an environmental steward by implementing a number of green initiatives that would reduce its carbon footprint and further improve our planet's environment. SL Green is the parent company of Reckson, which became a Green MOU Partner a year earlier, on April 21, 2011. This report includes the green and sustainable activities performed by Reckson as well as SL Green. This partnership with the United States Environmental Protection Agency (EPA) and SL Green / Reckson has resulted in reducing energy, water and solid waste production across their entire operations.

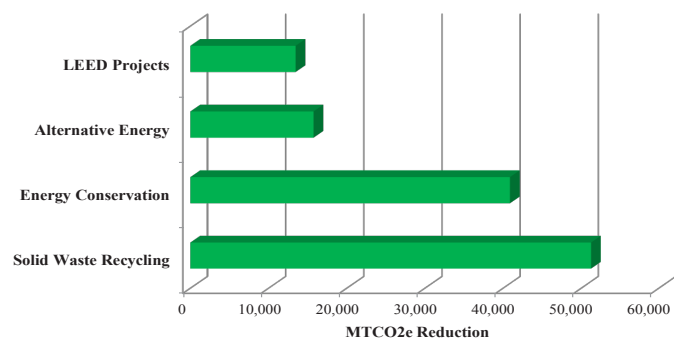
Reduction in Environmental Footprint

This is the third update SL Green / Reckson has provided documenting its green initiatives. The EPA has analyzed the submitted information and generated an environmental footprint. Due to the progressive green efforts of the organization, SL Green / Reckson has managed to reduce its carbon footprint by 121,650 MTCO₂e* and saved an estimated \$12 million in operating expenses.

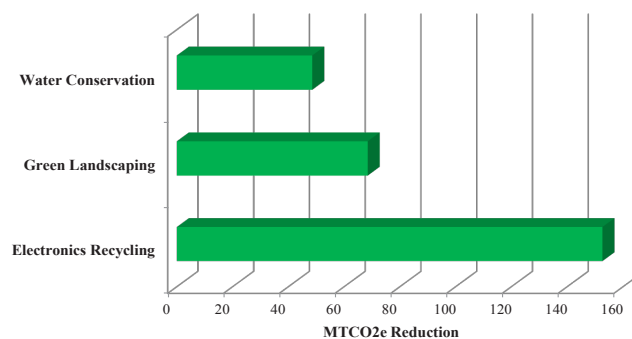
*Metric Ton Carbon Dioxide Equivalent

Environmental Metrics	Total Sector (MTCO ₂ e)
Energy Conservation	40,884.4
Alternative Energy	15,760.5
Water Conservation	48.6
Solid Waste Recycling	51,270.6
Green Landscaping	68.5
Electronics Recycling	152.6
LEED Projects	13,465.7
Total (MTCO ₂ e)	121,650.9

Primary Initiatives



Secondary Initiatives



Measurement and Continuous Improvements

EPA uses these environmental conversion models to calculate metric tons of carbon dioxide equivalents:

Greenhouse Gas Equivalencies (GHG) Calculator converts GHG reductions into scenarios that can be easily communicated to the public.

eGRID Version 1.1 (2007) and the EPA Pollution Prevention (P2) GHG Conversion Tool which convert standard metrics for electricity, green energy, fuel use, chemical use, water use, and sustainable materials management into MTCO₂e.

The EPA WARM Model which helps calculate GHG emission reductions from several different waste management practices, including source reduction, recycling, combustion, composting and landfilling.

The EPA Pollution Prevention (P2) Cost Calculator that estimates cost savings associated with GHG reductions.

Certain environmental data points cannot be converted to MTCO₂e because scientific models do not currently exist.

As methodologies improve, environmental assessments will be updated to include any new GHG reduction estimates.

Accomplishments

Reductions of 121,650 MTCO₂e



Greenhouse Gas Equivalencies

What does the reduction of 121,650 MTCO₂e represent ?

The organization's effort is equivalent to any one of the following:

- Annual greenhouse gas emissions from 25,611 passenger vehicles



- Carbon dioxide emissions from 13,688,635 gallons of gasoline



- Carbon dioxide emissions from 282,909 barrels of oil consumed



- Carbon dioxide emissions from the energy use of 11,100 homes for one year



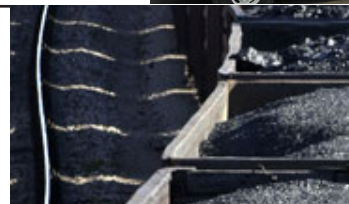
- Carbon dioxide emissions from 5,068,788 propane tanks used for home barbeques



- Carbon dioxide emissions from gasoline carried by 1,610 tanker trucks



- Carbon dioxide emissions from burning 652 railcars' worth of coal (nearly 10 miles long)



Environmental Metrics	Apr 2011 MOU	Apr 2012 Update	Jul 2013 Update	Jul 2014 Update	Total Conversion (MTCO2e)	Cost Savings (est.)
Energy Conservation/Energy Star						
Total Savings (MTCO2e)		11,337.6	12,237.8	17,309.0	40,884.4	\$6,806,369
Miscellaneous Energy Conservation						
Real-Time Energy Management		10,393,701 kwh	10,393,701 kwh	6,907,454 kwh	14,231.6	\$4,001,907
Mechanical Retrofit (3 locations)		1,339,816 kwh	1,355,332 kwh	2,545,551 kwh	2,693.0	\$757,281
Mechanical Retrofit (gas savings)		52,744 therms	44,724 therms	35,552 therms	705.8	\$86,895
Lighting Project Fixtures (bulbs and ballast)						
High Temp Hot Water Pipe Replacement						
HVAC, Chiller & Electrical						
Boiler Upgrade		29,730 therms	29,730 therms	29,730 therms	473.2	\$58,263
Bulb Replacement (CFLs)						
Bulb Replacement (LEDs)		1,192,811 kwh	3,011,824 kwh	4,120,587 kwh	4,278.1	\$1,202,995
Gas Savings						
Fuel Oil Savings						
Steam Savings		23,676,000 lbs	23,676,000 lbs	55,540,000 lbs	18,502.6	\$699,028
Alternative Energy						
Total Savings (MTCO2e)		9,901.4	3,232.8	2,626.3	15,760.5	\$584,328
On-Site Solar			133,340 kwh	102,000 kwh	120.9	\$34,007
On-Site Wind						
On-Site Geothermal						
On-Site Combined Heat and Power (720KW)			3,467,482 kwh	3,097,094 kwh	3,456.0	\$554,707
Purchase of Green Energy/Green Power		19,268,260 kwh	2,795,102 kwh	1,646,000 kwh	12,183.5	(\$4,386)
Water Conservation/WaterSense						
Total Savings (MTCO2e)		2.8	22.9	22.9	48.6	\$72,024
Miscellaneous Water Conservation (360 Hamilton)		500,000 gal	500,000 gal	500,000 gal	2.5	\$3,770
Low Flow/Hands Free Faucets		750,000 gal	12,500,000 gal	12,500,000 gal	43.7	\$64,724
Low Flow Toilets						
Low Flow Shower Heads			50,000 gal	50,000 gal	0.2	\$252
Low Flow Urinals (140 Grand, Summit Lake Drive)		404,000 gal	450,000 gal	450,000 gal	2.2	\$3,278
Waterless Urinals						
Solid Waste Recycling						
Total Savings (MTCO2e)		1130.6	27025.2	23114.8	51,270.6	\$733,976
Mixed Recyclables (includes Wastewise)			9651.84 tons	8025.61 tons	49,496.9	\$707,098
Pallets Waste Avoided / Wood Recycled						
Steel Recycled Offsite during Deconstruction						
Concrete / Asphalt Recycled during Deconstruction						
Recycled C&D Waste (construction waste)						
Cardboard (construction/non-construction/sharp containers)		66.4 tons			206.5	\$2,656
Mixed Metal (construction/non-construction)						
Paper, Mixed		227.7 tons			801.5	\$9,108
Plastic, Mixed (bottles,construction/non-construction,sharp containers)		8.1 tons			7.9	\$324
Can / Bottle Recycling						
Mixed Organics						
Food Donation (Waste diversion)						



Environmental Metrics	Apr 2011 MOU	Apr 2012 Update	Jul 2013 Update	Jul 2014 Update	Total Conversion (MTCO2e)	Cost Savings (est.)
Biosolids and Food Waste Recycling / Composting						
Fluorescent Bulbs						
Ceiling Tiles Recycled				105.855 tons	48.3	\$4,234
Carpet Recycled				250.9855 tons	594.8	\$10,040
Waste Oil Recycled						
Magazines / Third Class Mail						
Newspapers						
Office Paper						
Phonebooks						
Textbooks						
Dimensional Lumber						
Fly Ash						
Aluminum Cans		12.9 tons			114.7	\$516
Glass						
HDPE						
LDPE						
PET						
Appliances						
Non-Ferrous Metals						
Fats, Oils, Grease						
Instrument Recycling						
Green Procurement						
Total Savings (MTCO2e)					0.0	\$0
Purchase of Materials with Recycled Content						
Purchase / Use of Compost Socks						
Purchase of EPEAT Products						
Use of Recycled Steel during Construction						
Use of Recycled Iron during Construction						
Use of Recycled Plastic during Construction						
Use of Recycled Aluminum during Construction						
Use of Recycled Concrete / Asphalt during Construction						
Use of Coal Combustion Products						
Green Landscaping						
Total Savings (MTCO2e)			34.2	34.2	68.5	\$0
Green Roofs						
Porous Pavement						
Grass						
Low / No Mow Area						
Green Space						
Re-use of Collected Stormwater						
On-Site Use of Compost / Mulch						
Moisture Sensing Sprinklers						
Number / Acres of Trees			2 acres	2 acres	68.5	
Reflective Roof						
Synthetic Turf						

Environmental Metrics	Apr 2011 MOU	Apr 2012 Update	Jul 2013 Update	Jul 2014 Update	Total Conversion (MTCO2e)	Cost Savings (est.)
Native Plants						
Leaves Composted						
Electronics/EPEAT						
Total Savings (MTCO2e)			71.7	80.9	152.6	\$3,816
Recycling of Electronics			44.09 tons	50 tons	150.5	\$3,764
Re-Use/Donation of Used Computers						
Toner/Ink Recycling and Use of Recycled Ink						
Battery Recycling			1,530 lbs	1,100 lbs	2.1	\$52
Mass Transit						
Total Savings (MTCO2e)						
Miles Avoided						
Transportation						
Total Savings (MTCO2e)					0.0	\$0
Hybrid Vehicles						
Electric Vehicles						
Biodiesel Vehicles						
Clean Construction Vehicles						
LNG Vehicles						
Alternate Fuel Vehicles (Zipcar)						
Smartway Transporters						
Bike Racks			12	12		
LEED Projects						
Total Savings (MTCO2e)			6,494.6	6,971.1	13,465.7	\$3,786,555
Silver - 30% 100 Park Ave (834,000 sq ft)			7,420,631 kwh	7,420,631 kwh	7,626.5	\$2,144,562
Gold - 40% 360 Hamilton (384,000 sqft), 500 WP (134,000 sqft)			5,217,971 kwh	6,145,303 kwh	5,839.3	\$1,641,993
Platinum - 45%						
Misc. - Further Clarification						
Total Savings (MTCO2e)						
NOX (equipment only)						
NOX (includes vehicles)						
MTCO2e Savings						
Total (MTCO2e)	0.0	22,372.4	49,119.2	50,159.2	121,650.9	\$11,987,068
Energy	0.0	11,337.6	12,237.8	17,309.0	40,884.4	\$6,806,369
Alternative Energy	0.0	9,901.4	3,232.8	2,626.3	15,760.5	\$584,328
Water	0.0	2.8	22.9	22.9	48.6	\$72,024
Solid Waste	0.0	1,130.6	27,025.2	23,114.8	51,270.6	\$733,976
Green Landscaping	0.0	0.0	34.2	34.2	68.5	\$0
Electronics	0.0	0.0	71.7	80.9	152.6	\$3,816
LEED Projects	0.0	0.0	6,494.6	6,971.1	13,465.7	\$3,786,555



2014

SL Green / Reckson Additional Green MOU Accomplishments

Sustainable Building Information

SL Green / Reckson has developed a broad platform of market leading initiatives throughout its portfolio pertaining to the conservation of energy and water, recycling and more. SL Green / Reckson shares these successes with its tenants and the community to develop awareness about the benefits of sustainability.

Recycling Program

Recycling is a key component of the sustainability program, providing tenants a means to ensure that waste is diverted from landfills, including cardboard, paper, plastic, glass, aluminum. Working together, tenants separate all recyclables within their office space; which is then removed and appropriately separated by building staff before being taken to the recycling transfer station. Tenants are encouraged to get involved, and constantly develop new ways to promote and improve separation through the program. SL Green / Reckson also participates in other critical recycling programs including fluorescent lamp recycling, and construction waste diversion.

Energy Star Program

Focused on energy efficiency, since 2009, SL Green / Reckson has reduced energy consumption throughout its portfolio core common building areas by more than 10%. Through a dedicated effort, addressing lighting and mechanical systems to improve efficiency, its success is seen through the Energy Star Label program, developed by the U.S. Environmental Protection Agency.

Tenant LEED Commercial Interior Program

The LEED for Commercial Interiors (LEED-CI) program provides a set of criteria for certifying tenant and interior projects. The program was developed by the U.S. Green Building Council (USGBC) to place emphasis on green office and retail environments. Focused on providing healthy and productive spaces for employees and occupants alike, LEED-CI recognizes the power that tenants and designers have in making sustainable choices to distinguish their commitment toward sustainability. It is important that SL Green / Reckson helps provide its tenants with the critical information to facilitate a LEED-CI Certification. This information assists its tenants in the creation of high performance, energy efficient, healthful, durable, affordable, and environmentally sound interior environments, reducing operation and maintenance costs.

Reckson, the suburban division of SL Green Realty Corp., is committed to providing innovative sustainable solutions through socially responsible best practices, including conservation, recycling and energy efficiency, benefiting its employees, tenants, and partners.

Some of Reckson's market-leading construction initiatives include:

Recycling of various construction and scrap materials, including partition studs, door frames, ceiling grid, hardware, ductwork, carpet and ceiling tile. To date, the program has diverted over 500 tons of debris from landfills.

Donation or reuse of doors, glass and cabinetry when possible.

Recycling all fluorescent light bulbs from discarded light fixtures.

Maintaining recycling bins for collection of plastic, glass and aluminum.

Installation of energy-efficient light fixtures, occupancy sensor devices, and LED exit signs.

Maintaining a comprehensive Indoor Air Quality Management Plan throughout construction.

Utilizing low-VOC paint and adhesives as well as non-urea formaldehyde millwork substrates.

Selecting carpet, rubber base, and ceiling tiles with high levels of recycled post-consumer-based content.

Engaging vendors who conduct environmentally responsible business practices, including a carpet manufacturer that produces building standard carpet through purchase of 100% wind energy.

Utilizing low-flow water devices and fixtures in tenant pantry areas for additional conservation.

Incorporating natural day-lighting within project design.

Some of Reckson's notable sustainability accomplishments and milestones:

Installation of an on-site renewable solar energy system consisting of 100kw photovoltaic solar panels at 500 West Putnam Avenue.

Installation of new water saving devices throughout the suburban portfolio, including faucet aerators, low flow shower heads and flush sensor devices, to save over 900,000 gallons of water annually.

A portfolio wide energy efficiency program, including both lighting and mechanical systems, to save over \$1.25 million annually.

Established a new sustainable partnership with the U.S. EPA to continue to develop their environmental initiatives.

Recipient of U.S. EPA Energy Star Label award at six different properties.