



# COOK COUNTY **SUSTAINABILITY** REPORT **2017**

PREPARED BY THE COOK COUNTY GREEN LEADERSHIP TEAM

# 19%



decrease in GHG Emissions

# 15

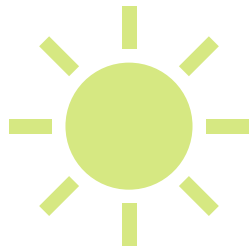
solar pilot  
projects  
assessed

# 200+

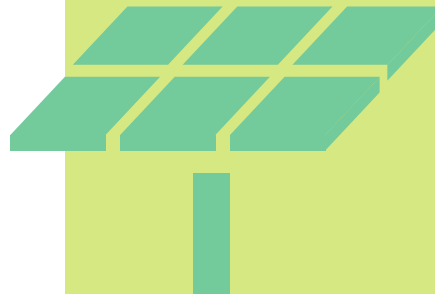
jobs projected  
on brownfield  
redevelopment  
sites



# 308 Kw



of solar panels installed  
on County property



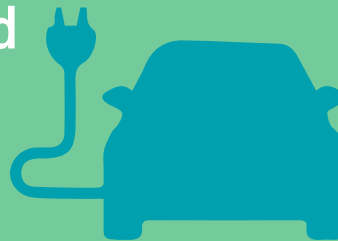
# 5%



decrease  
in gallons of  
fuel used

# 6

Electric Vehicle  
Charging stations  
installed

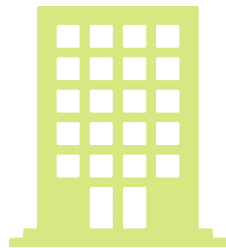


# 1

LEED  
Gold  
building



# 25%



decrease in GHG Emissions  
from Building Energy since 2010

# \$1,144,595

in grants and rebates  
for energy capital  
improvement projects



# COOK COUNTY SUSTAINABILITY REPORT 2017



Dear Cook County Resident,

Local action to improve the environment and reduce greenhouse gas emissions is more important now than ever before.

In Cook County, we have worked hard to significantly reduce our greenhouse gas emissions. In only a few short years, we are already exceeding our goals and have reduced energy use at our buildings by 25 percent and overall greenhouse gas emissions by 19 percent.

I believe every resident of Cook County should have the benefits of a clean environment, no matter their income or their community of residence. That's why we are taking action to make all of our communities more sustainable and healthy.

We recently released ground-breaking work showing how community solar can not only be viable in Cook County, but can help residents and businesses save money on their electric bills, and help capture up to 10,000 construction jobs.

We are also helping create new jobs by returning brownfield properties to productive use to encourage economic development, fostering cargo-oriented development, and educating residents and businesses on how to save money on energy bills while being better stewards of the environment.

Thank you to all the residents and employees of Cook County who make our part of the world cleaner, healthier, resilient and sustainable.

A handwritten signature in black ink that reads "Toni Preckwinkle". The signature is fluid and cursive.

Toni Preckwinkle,  
Cook County Board President

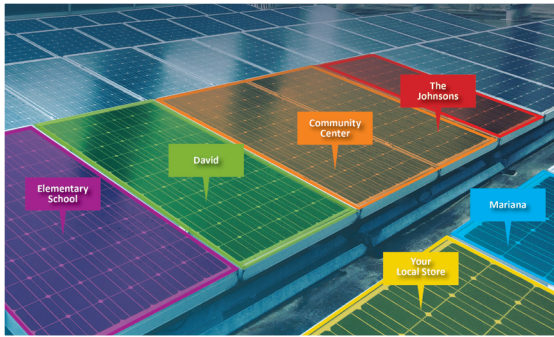


[www.cookcountyil.gov/sustainability](http://www.cookcountyil.gov/sustainability)

# Sustainability in the Community

## Community Solar

The Cook County Community Solar Project released its final report and a set of tools to help Cook County communities jumpstart the development of community solar. The project was launched in early 2015 with a grant from the U.S. Department of Energy's Solar Market Pathways Program. This two year project began on the premise that community solar was not only possible in our region, but has the potential to bring access and equity in renewables to the 80 percent of our population currently left out because of technical, structural or financial barriers.



Community solar is a solar-electric system that provides power and/or financial benefits to multiple community members, expanding access to solar power for renters, condominium owners, those with shaded roofs and those who choose not to install a residential system on their home for financial or other reasons. Community solar also has the potential to bring significant economic development to the region, with more than 10,000 construction jobs, nearly 200 permanent jobs and 600 megawatts of renewable energy produced in Illinois through 2030.

The team selected 15 sites to demonstrate economic viability and reflect a variety of building and property types, including a community college, affordable housing units, a landfill, industrial sites and places of worship. A diverse set of business models that include varying ownership structures and subscriber models provide realistic and practical project plans that can be replicated across the region.

*Illinois is projected to see construction of 600 MW of community solar capacity between 2018 and 2030. That level of solar deployment would result in:*

• **nearly 6,000 GigaWatts of electricity**

• **\$1.39 Billion in construction investment and**

• **10,070 construction-period jobs and 177 permanent jobs**

## Energy Efficiency

To help Cook County residents save money and improve the environment through smarter energy use, the Department of Environmental Control provides smart grid information to residents funded by the Illinois Science and Energy Innovation Foundation. Cook County residents with newly installed smart meters are able to



participate in new pricing programs that encourage smarter energy use and save residents money and the County helps to provide this information, including ways residents can save energy and make homes more comfortable with or without a smart meter. Blog posts and social media to make seasonal and holiday connections to energy use and to make energy efficiency relevant to residents' everyday lives. Townships, municipalities, and public libraries, in addition to our own County departments of Public Health, Animal and Rabies Control, Law Library, Planning and Development and Veterans Affairs are active partners in spreading the word about ways to save money and energy on utility bills.

## Rosemont Transit Center

Cook County redesigned and reconstructed the Rosemont Transit Center, a facility located on Cook County property and used primarily by Pace buses that also serves "kiss-and-ride" transit passengers, taxis, private



shuttles and rideshare service providers. The Rosemont Station is a major multi-modal transfer station with 6,000 weekday boardings and 2,000 reverse commuters served by Pace. The rehabilitated transit center provides for an increase in public transportation demands due to the inauguration of express Pace bus service on the reconstructed Jane Addams Memorial Tollway. The Rosemont project is an example of how the County's Department of Transportation and Highways is improving the region's transportation network to support economic growth – getting people to and from jobs and employment centers – in addition to maintenance and repair of roads and bridges.

## Stormwater Infrastructure

Cook County has invested \$18.4 million in seven stormwater infrastructure projects to address flooding issues in suburban communities, with the goal of increasing the County's investment in green infrastructure in the future. The Village of Riverdale is one example of this type of investment. After securing a grant from Cook County to address flooding in its northeast neighborhood with a storm-sewer separation project, plans are in the works to install green storm water infrastructure in Riverdale Marsh, a 75-acre site just northwest of 138th Street and Halsted Avenue. In addition to greatly reducing flooding in this business district, the plan aims to connect Riverdale Marsh to the Cal-Sag Trail bike trail and other commercial corridors, opening up a vast network of outdoor play and business opportunities.

## Invest in Cook

In order to build and maintain a comprehensive regional transportation network, Cook County launched an \$8.5 million program to help cover the cost of planning, engineering, right-of-way acquisition and construction associated with transportation improvements sponsored by local governments and private partners. This new program seeks projects that broaden the County's traditional focus on County roads to include pedestrian, bicycle, transit and freight-related improvements.



The call for projects, dubbed "Invest in Cook," is an initiative of Connecting Cook County, the County's first long-range transportation plan in 75 years. Connecting Cook County lays the groundwork for how the County invests in transportation to attract and retain businesses, people, capital and talent.

In addition to funding projects, Invest in Cook provides technical and grant-writing expertise to help communities tap into new funding sources and accelerate the completion of projects that may have languished.

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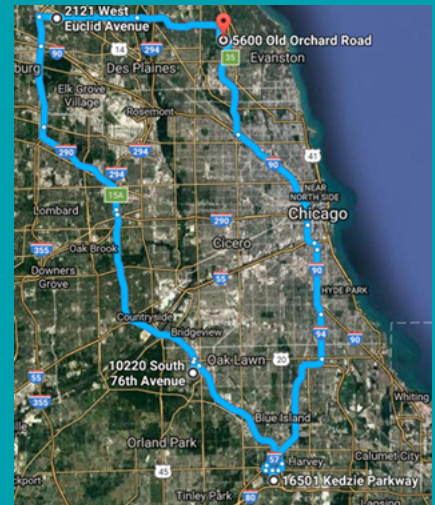
*"Invest in Cook ties transportation investments to greater economic growth and to more livable communities by making sure businesses and residents have safe and convenient transportation options."*

*– President Preckwinkle*

”

## Customer Efficiencies Create Environmental Benefits

*In order to improve customer service and efficiency for businesses and residents who reside in the unincorporated areas of Cook County, the Department of Building and Zoning, working jointly with the Department of Geographic Information Systems (GIS), launched a new online permitting system. The permit tracking application has automated the entire permitting process from beginning to end. In the first 12 months of the online permitting system, nearly 1,000 permits have been processed online; decreasing paper use, the need to store paper documents and the need for residents to drive downtown to submit application, all great environmental benefits.*





## We Are Still In

Cook County Board President Toni Preckwinkle partnered with leaders from Dane County, Wisconsin to join the “We Are Still In” alliance, a coalition of governmental and institutional leaders representing more than 120 million Americans and \$6.2 trillion of the U.S. economy, dedicated to keeping America’s promise of mitigating climate change by meeting the Paris Climate Agreement. Under the Paris Climate Accord, the United States agreed to reduce its 2005 carbon emission levels between 26 and 28 percent by 2025.



*I have committed to reduce greenhouse gas emissions 80 percent by 2050 as a meaningful way to fight climate change, to that end, Cook County has already invested in projects to reduce energy use in three-quarters of the County's buildings and I am proud to say we are ahead of target.*

– President Preckwinkle

## Brownfields

Cook County, in partnership with a coalition of seven west suburban municipalities, is returning brownfield properties to productive use to encourage economic development.



The Cook County Department of Environmental Control, on behalf of the coalition that includes Schiller Park, Franklin Park, Northlake, Melrose Park, Bellwood, Maywood and Forest Park, received in 2014 a \$600,000 grant from the U.S. Environmental Protection Agency to assess brownfield sites in those communities.

Through the program, 30 sites totaling approximately 127 acres were assessed and currently more than 5 sites totaling 117 acres are undergoing redevelopment with the potential to create or retain 200 jobs. The municipalities will continue to market the remaining sites for redevelopment.

*Brownfield sites typically sit underused for long periods of time. The redevelopment and reuse of brownfield sites is a great opportunity for economic development – redeveloped sites generate revenue and jobs while helping the environment.*

– President Preckwinkle

# Sustainability in Cook County Government

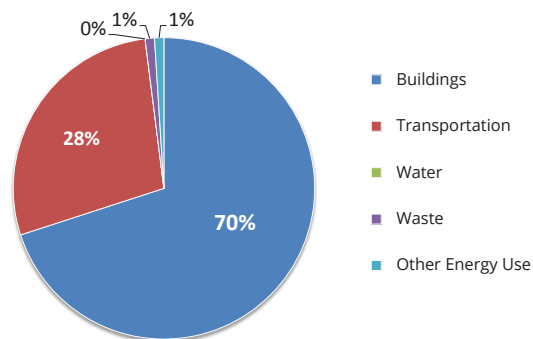
## Carbon Reduction Plan

In 2016, through a partnership with the Environmental Defense Fund Fellowship Program, the County developed a comprehensive carbon reduction plan. This plan takes into account all County operational impacts on greenhouse gas emissions (GHG); including energy, water and fuel use and the responsible management of material resources. The plan sets interim goals for each category, to help us stay on track to meet our ultimate goal of a reduction of GHG emissions by 80 percent by 2050.

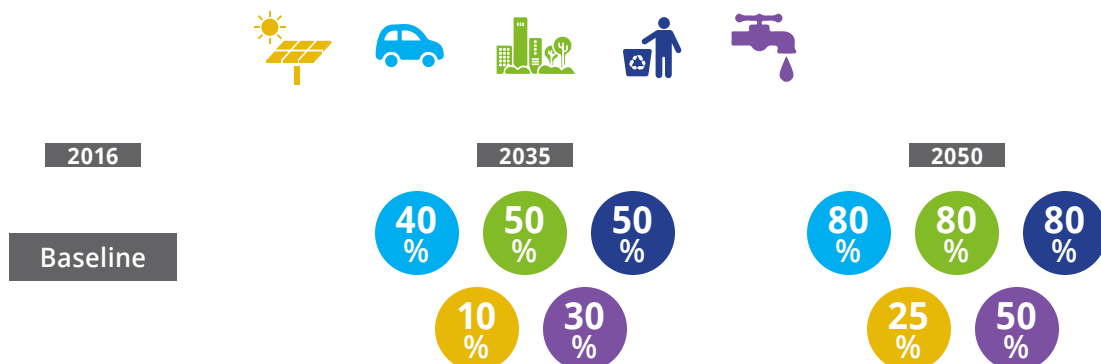


**2016 Total Metric tons of Carbon Dioxide Equivalent (CO2E)**  
**Emissions Estimated for County Government = 304,825.2**  
**19% decrease from Baseline Equivalent to 173,503,007 miles**  
**driven by an average passenger vehicle**

GHG Inventory Portfolio 2016



## Carbon Reduction Targets

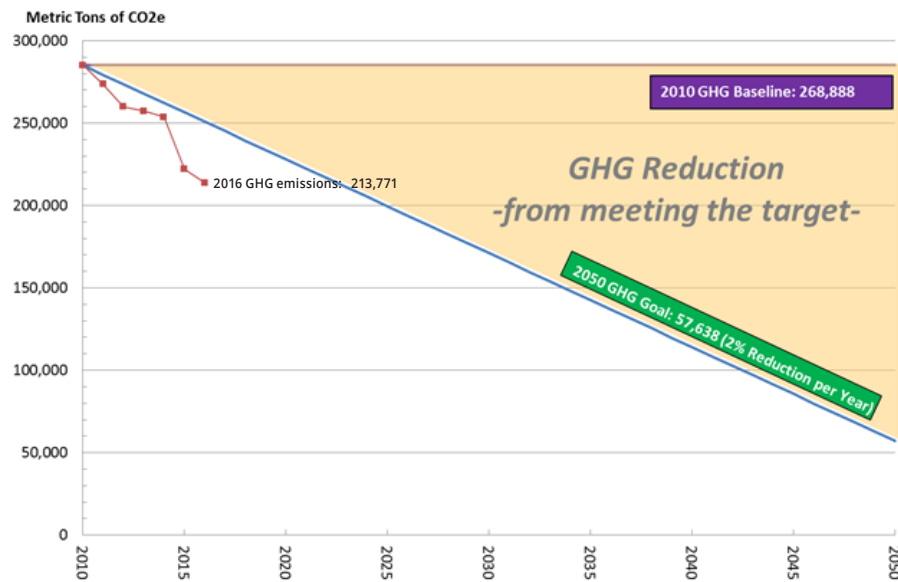




## Energy

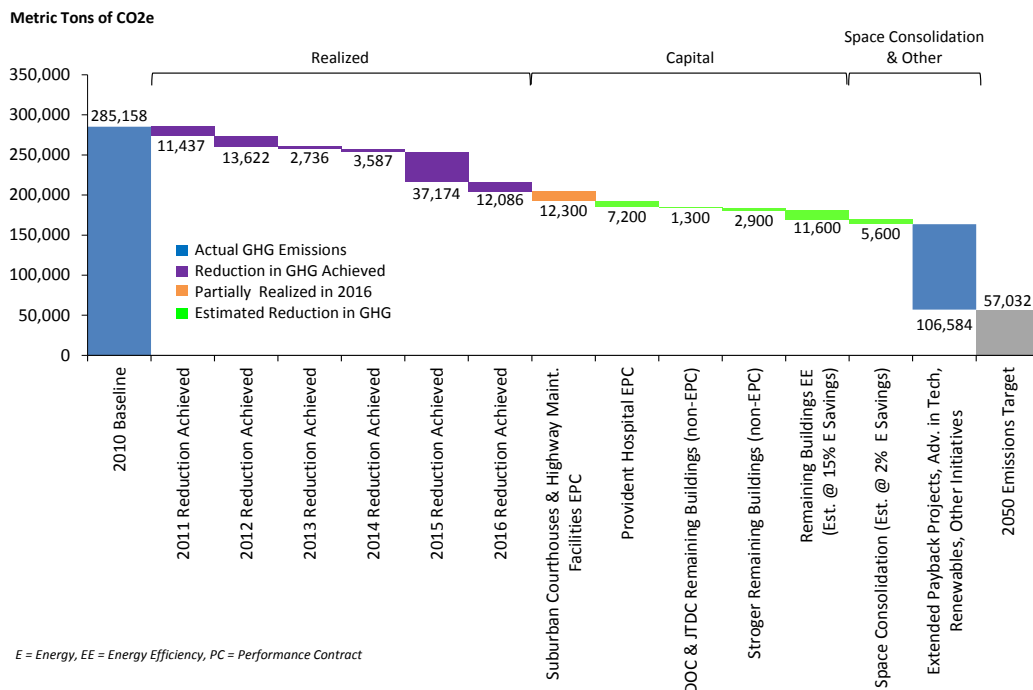
The County continues to exceed its target to reduced energy use at County government buildings and it has reduced the amount of energy used nearly 20 percent since it was first measured in 2010. In 2016 Cook County decreased total energy use 5 percent compared to the amount of energy used in 2015. Greenhouse gas emissions were reduced 4 percent over the previous year and 25 percent since 2010. Saving energy also means saving money. The reduction in energy use since 2010 has saved taxpayers over \$6 million in utility costs.

**County Building GHG Abatement Initiatives and the 2050 GHG Goal**



**Cook County Facilities 2050 GHG Reduction Strategy**

*- Estimated Reductions of Different Initiatives -*



## Renewable Energy and Space Reduction

As the chart above shows, to reach the greenhouse gas emissions reduction goal, reductions will need to occur areas beyond energy efficiency measures. In order to continue our progress towards the greenhouse gas



emissions reduction goal, there will need to be increased focus on space consolidation and renewable energy. The County has begun by increasing solar energy generation with the installation of solar panel canopies at the Bridgeview Courthouse; a total of 198 kW of panels were installed. These new panels are in addition to the 110kW of panels on the Domestic Violence Courthouse for a total renewable energy portfolio of 308 kW.

As part of our on-going effort to reduce our carbon footprint, Cook County is looking at a different type of efficiency – square footage reduction. As part of a multi-year process, the County will be

reducing its square footage by approximately 1,000,000 square feet by relocating departments and services to under-occupied facilities and closing the vacated buildings. Hawthorne Warehouse, 494,672 SF, will be closed by November of 2017 and Divisions 1 and 1A, 3, and 17 on the Department of Corrections campus, 540,176 SF are currently being demolished with a completion date of early 2019.

### Building Energy GHG Emission Reductions

#### Target:

**2% annual and 12% since 2010**

#### Actual:

**4% annual and 25% since 2010**

## Energy Efficiency Capital Improvement Program

Through the Energy Efficiency Capital Improvement Program, Cook County is completing over \$44 million in building improvement projects to make large-scale energy efficiency upgrades at 11 County facilities. Upgrades are paid for through the savings they generate. These energy efficiency projects will reduce greenhouse gas emissions, improve occupant comfort, and upgrade lighting infrastructure, aging mechanical systems, and temperature controls. Participating facilities include Bridgeview, Skokie, Markham and Rolling Meadows Courthouses, five highway maintenance facilities and the downtown County and Dunne Buildings. The courthouses are projected to reduce energy consumption by 53 percent, the corporate buildings by 30 percent, and highway facilities by more than 40 percent.

***In FY 2016, Cook County received \$1,144,595 in grants and rebates for energy efficiency capital projects.***



***Aging electric boilers and domestic hot water heaters at Rolling Meadows, Bridgeview, and Markham courthouses have been replaced with new high efficiency natural gas-fired condensing boilers. With the change in heating fuel from electricity to natural gas, there are significant reductions in source greenhouse gas emissions.***

*Sustainability efforts at skokie courthouse have increased the building's energy star score, from 49 in 2013 to 84 in 2015. The courthouse is now eligible for energy star certification due to more accurate metering and completed energy efficiency upgrades. More energy conservation measures are in process, including the installation of a ground source heat pump. Once complete, the measures will reduce electricity by 5,063,947 kwh per year and will produce a 65 percent decline in greenhouse gas emissions.*

## LEED Gold Certification for Cook County's Dunne Administration Building

Cook County's Dunne Administrative Building has achieved LEED Gold certification.

LEED stands for Leadership in Energy and Environmental Design, and denotes an improvement to a building's

lifecycle performance, based on a point system, that provides associated environmental, health and financial benefits.

LEED Gold is the second highest level of achievement. Cook County has an ordinance that all new construction in the County must be LEED certified by the U.S. Green Building Council (USGBC).



The Dunne building is the first LEED Gold building in the County's portfolio, joining the silver rated Provident Hospital pharmacy, the Domestic Violence Courthouse and the Residential Treatment Unit on the Department of Corrections campus.

## Demand Response Update

*In 2016, nine Cook County sites participated in the PJM (the regional energy transmission organization) demand response program to reduce load during peak grid usage. Cumulatively, the test event at the County outperformed total load shedding reduction goals during the one hour test event. Based on the results of the first year, some facilities that were strong performers increased the demand response commitments to achieve optimum results across the Cook County facilities. The load was reduced by approximately 7,416 kW during the test event. The County was paid \$119,830 in 2016 for its participation in this program.*

## Savings Through Efficient Products (STEP) Program

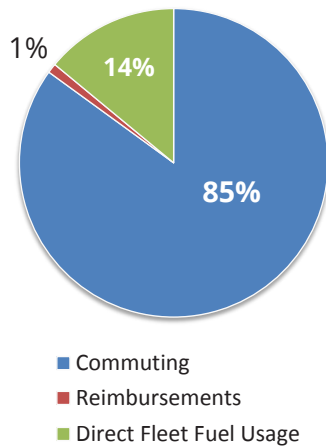
*Cook County took advantage of the STEP self-install program, a State program, in three facilities that had yet to receive energy audits: the Sheriff's central warrants building in Chicago, the Jefferson Building and Whitcomb Buildings in Maywood.*

*STEP allows public facilities to start saving money and energy right away without any upfront investment, while simultaneously learning about next steps in becoming more energy efficient. Qualified Illinois public facilities receive both a free facility audit and free energy efficient products such as LED exit signs, A-19 LED Lamps, occupancy sensors, VendingMisers, SnackMisers, and outdoor LED lights.*

## Transportation

Transportation emissions include three categories—direct fleet emissions from fuel consumption, employee reimbursement costs extrapolated out to determine annual gallons of fuel reimbursed, and commuting emissions from personal passenger vehicle travel, commuter train (Metra), CTA (light rail and bus), biking, and walking or other modes of travel.

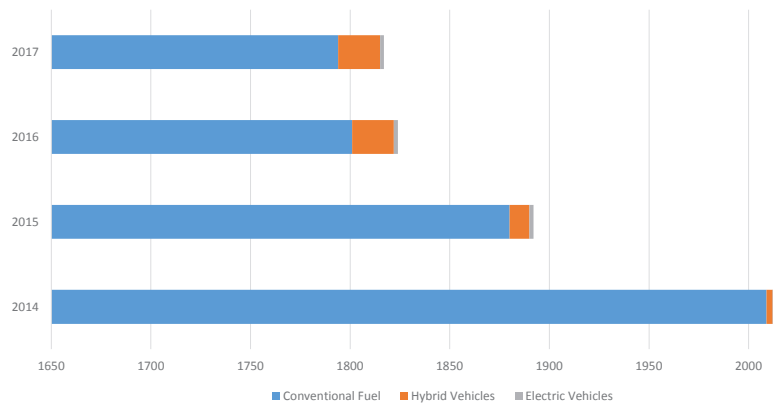
### GHG Inventory Portfolio 2016



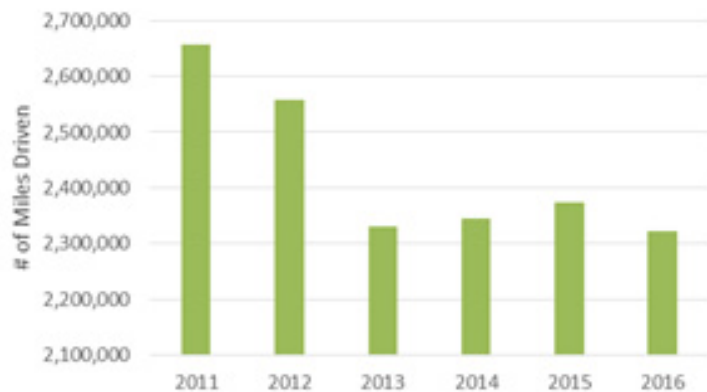
The County's fleet continues to decrease in size and become more fuel efficient. There are 197 fewer vehicles in the fleet now than there were in 2014, a nearly 11 percent decrease. In addition, County mileage reimbursement also decreased this year, for a total decrease of more than 12 percent since the baseline year of 2012.

Emissions from the fleet, reimbursement miles and estimates of employee commuting decreased by 557 metric tons of CO<sub>2</sub>e over the baseline year of 2012. Employee commuting makes up the majority of the emissions in this category and projects like the Rosemont Transportation Center help the County's own employees commute in a greener way as well.

### Fleet Vehicles by Fuel Type



### Estimated # of Reimbursement Miles Driven



## Electric Vehicles

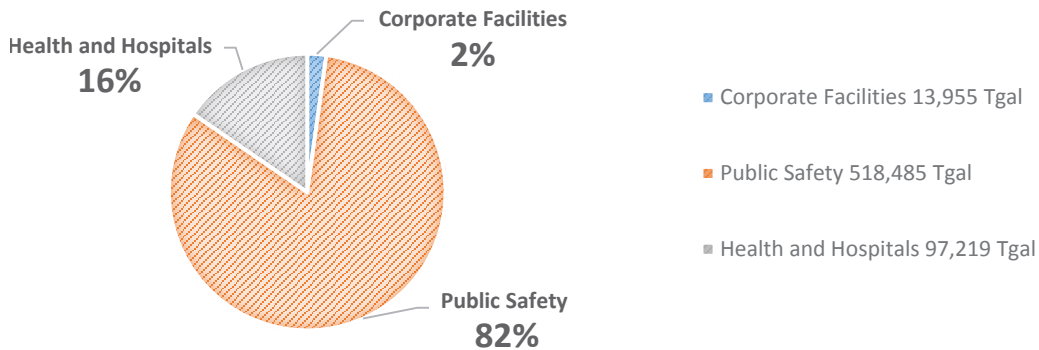
Cook County currently has two electric vehicles in the fleet. Six electric vehicle charging stations have been installed to improve accessibility to EV charging and to help reduce transportation related greenhouse gas emissions. The stations are at four courthouses and two Department of Transportation and Highways facilities. The four courthouse stations will be available for public use.



## Water

2016 marks the first year with a full 12 months of consecutive water data to report on and it will be our baseline year for water moving forward. Benchmarking water usage across the portfolio provides insight into which facilities could benefit most from water conservation projects and how to be most economical with this finite resource. As of 2016, the water baseline was 630,553,330 gallons.

Total Water Usage by Type



Total Water Usage Approximately 630,553 Thousand Gallons (TGal)

## Water Savings Projects

Restroom fixtures were switched to low flow at four courthouses (Skokie, Rolling Meadows, Markham, and Bridgeview), five Department of Highway and Transportation campuses, and the two downtown corporate facilities.

The following table details expected water savings, which total to about 11,511 Kilogallons (KGal) or a 2 percent decrease in total building portfolio water usage per year.

Facility	Estimated Water to be saved (KGal)
Cook County + Dunne Building	4,746
Skokie Courthouse	3,427
Rolling Meadows Courthouse	1,116
Bridgeview Courthouse	1,052
Markham Courthouse	1,053
Schaumburg Highways	29
Des Plaines Highways	12
La Grange Highways	46
Orland Park Highways	11
Riverdale Highways	19
<b>Totals</b>	<b>11,511</b>

## Waste and Recycling

### Cook County Recycling

More than 1 million pounds of materials were recycled from the County's two newly certified LEED buildings. The George Dunne Administration building and Daley Center recycled at rates of 52.3 percent and 36.8 percent, respectively. Offices under the President recycled an additional 188,000 pounds of paper, scrap metal and electronic waste. A 2017 consolidation and establishment of new recycling contracts will lead to more timely and accurate reporting of recycling for other county buildings.

### Electronic Waste Recycling

Starting in 2019, a new law creates a convenience standard for recycling electronics in Illinois, allowing counties to apply to a manufacturer clearing house to host a permanent recycling drop off site. The legislation allows 15 sites for suburban Cook County.

Previously, Illinois' electronic waste recycling program was set up with weight based goals for manufacturers based on the weight of electronics sold in Illinois in the previous year. In the last several years the weight of electronics sold has gone down significantly because of lighter products and declining sales; for example, think about the weight difference between an old tube TV and the newer flat screens. As a consequence, recycling goals were reduced. The new legislation helps solve this problem.



## COOK COUNTY GREEN LEADERSHIP TEAM

Appointed by Cook County Board President Toni Preckwinkle

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Chief of Staff, Chair

**Michael Jasso**

Chief, Bureau of Economic Development

**Ann Kalayil**

Chief, Bureau of Asset Management

**Martha Martinez**

Chief Administrative Officer

**Simona Rollinson**

Chief Information Officer

**Ammar Rizki**

Chief Financial Officer

**Deborah Stone**

Chief Sustainability Officer

**Sam Williams**

Executive Director, Facilities Cook County Health and Hospitals System

## SUBCOMMITTEE PRIMARY STAFF

**Jamie Meyers**

Energy Manager, Capital Planning: Energy and Water

**Christopher Lipman**

Solid Waste Coordinator, Department of Environmental Control: Waste and Recycling

**Radoslav Stoilov**

Fleet Manager, Bureau of Administration: Fleet

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