AIRXCHANGE

Energy Recovery Wheel Technology Supports Federal Facility Energy Reduction Goals

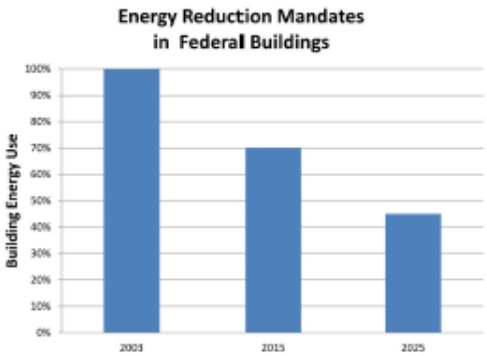
CASE STUDY

Invest in Energy Efficiency

Beginning with the Federal Energy Policy Act of 2005, and later with the passage of the Energy Independence and Security Act of 2007, federal facilities were required to achieve a 30% reduction in energy use over the 2003 baseline building by the year 2015. In their Fiscal Year 2010-2015 Strategic Sustainability Performance Plan the General Services Administration (GSA) announced an even stricter requirement, stating that all new federal buildings must be designed to achieve Leadership in Energy and Environmental Design (LEED) Gold certification.

With a recent Executive Order (EO 13693) targeting an additional 25% reduction by 2025, the Federal government continues to place a high priority on energy conservation and environmental stewardship through investments in cost-effective energy efficient technologies.

*"To improve environmental performance and federal sustainability, priority should first be placed on reducing energy use and cost, then finding renewable or alternative energy solutions." -Executive Order 13693**

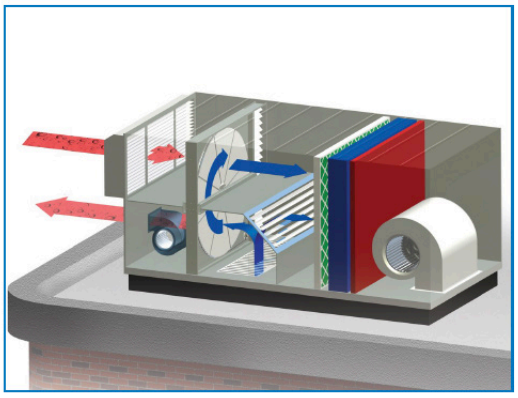


* https://www.fedcenter.gov/programs/eo13693/

Energy Recovery Wheels Conserve Energy

Energy recovery wheel technology manufactured by Airxchange helps federal facility managers meet their energy efficiency goals by reducing overall energy use up to 15%. When applied to new or existing ventilation systems, Airxchange wheels recover up to 80% of the energy in building exhaust air to provide "free" preconditioning of the incoming fresh air. Recovering energy lowers the total energy demand, improving the environmental performance of federal facilities.

When designing for LEED, energy recovery wheels can be used to earn points in both the Energy and Atmosphere and Indoor Environmental Quality categories.



Energy recovery wheel shown cooling replacement air (summer).

Sustain Your Energy Gains

Underperforming or failed energy recovery wheels that prevent your HVAC system from recovering

energy should be restored or replaced. For many facilities, the idea of replacing the entire system is both challenging and expensive. Fortunately, Airxchange Aftermarket Energy Recovery Solutions has the answer. Airxchange makes it easy to restore or replace the energy recovery component, ensuring that your system will continue to maximize energy savings while providing a healthy and comfortable indoor environment. Airxchange can replace any manufacturer's wheel in applications ranging from 150 to 60,000 CFM.

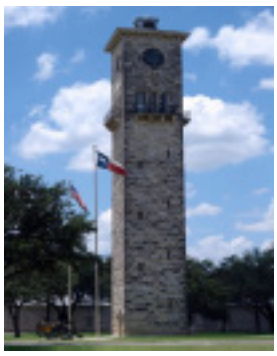
Once in place, Airxchange's removable energy transfer segments, washable media, and stainless steel wheels enable optimal energy recovery performance for the life of the system.

Replacement Wheels Revitalize Savings

Two recent applications at federal facilities show how Airxchange can help maintain energy reduction goals by restoring the performance of older energy recovery systems:

Kennedy Space Center – A failed aluminum energy recovery wheel was replaced with an Airxchange field assembled energy recovery cassette, restoring an estimated $11,000 per year in annual energy savings. The new polymer energy transfer media provides unlimited protection against the salty coastal air and can be easily cleaned to maintain optimal performance. Due to the modular design (see image to the right), installation of the 9-foot diameter wheel was accomplished without the need for special building access or expensive lifts.

Fort Sam Houston – Two energy recovery wheels were replaced after reaching end-of-life; one at a medical facility and one at a barracks. Before learning about Airxchange field-assembly kits, a special opening in the side of the medical building was required to hoist the replacement wheel into place. Later, after learning of the field assembly wheel design, the second wheel was walked into the barracks' equipment room through standard doorways, then assembled on-site.



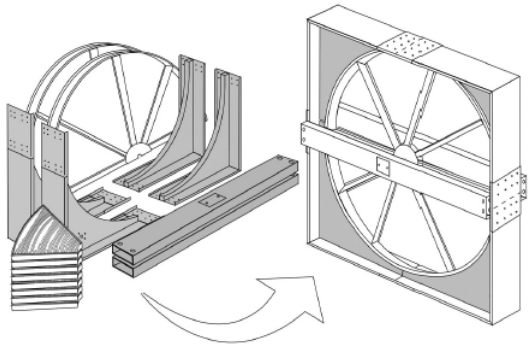
Cost Effective Replacement Wheels

Federal facilities are required to consider life-cycle costs when evaluating energy efficient technologies. Life-cycle cost for the Fort Sam Houston barracks replacement energy recovery wheel is estimated in the table below:

Replacement Wheel Life-Cycle Cost at Fort Sam Houston Barracks

Project Date	2012
Project Scope	Wheel Replacement
Installed Cost	$12,000
Estimated 20 Year Maintenance Costs (total)	$5,000
Estimated 20 Year Energy Savings (compared to inoperable wheel)	$262,000**
Total Life-Cycle Savings	$245,000
Estimated Simple Payback	Less than 1 year

***To study the impact of energy recovery wheels in any space, visit airxchange.com for a variety of simulation and design software tools.*



No special building openings or lifts are required for installation.

Airxchange is Ready to Assist

The evolving federal energy reduction goals are a formidable challenge for facility managers and building designers. As we did at NASA and Fort Sam Houston, Airxchange is ready to assist with custom solutions for your next retrofit or replacement wheel project. Please give us a call or visit our Aftermarket Services website for more information.

About Airxchange

Airxchange has 35 years of extensive experience in the energy recovery industry. Our mission is to design and manufacture high quality products that perform reliably and effectively for the life of the HVAC system, reduce energy consumption, and improve indoor air quality. The addition of high-tech materials and innovative designs to a technology based on fundamental scientific principles has earned us the trust of our valued OEM customers. We will continue to innovate and support our customers to meet evolving market demands for energy recovery ventilation technology. Visit airxchange.com for more info.