

Air Force Achieves Resilient Infrastructure Upgrades Through Energy Savings

“This is a big milestone for Tinker Air Force Base and the Air Force. In addition to increasing productivity, the improvements will also make us more competitive in the private sector for aircraft maintenance work through decreasing our energy costs.”

— Major General Mark K. Johnson, OC-Air Logistics Complex (ALC) Commander

Case Study





The Oklahoma City Air Logistics Complex (OC-ALC) Performance Contract with Honeywell provides support for Tinker OC-ALC to become the first organization in the federal government to achieve ISO 50001 certification. This rigorous international energy management standard certifies that the site follows sustainable energy management practices, establishes a trackable baseline of its energy use and is dedicated to continuous energy improvement.

The Challenge

Tinker Air Force Base OC-ALC, Air Force Materiel Command's largest air logistics complex, required significant industrial infrastructure modernization to meet current manufacturing standards, improve energy and production efficiency, and improve worker safety. Traditional on-budget financing for large scale capital improvements was not available. The complex performs programmed depot maintenance, repair and overhaul of aircraft and accessory components for the Air Force, Air Force Reserve, Air National Guard, Navy and foreign military sales (31 weapon systems, 10 commands, 93 Air Force bases and 46 foreign nations).

The Solution

OC-ALC developed an industrial infrastructure modernization project that uses an innovative funding approach, energy savings performance contracting (ESPC). The ESPC process enabled Honeywell to identify, engineer, finance and construct infrastructure improvements that save energy and related costs. The infrastructure savings are guaranteed by Honeywell. Because energy savings are used to repay the capital investment, OC-ALC will receive the benefits of modern production infrastructure, without the requirement for any up front capital, and without increasing annual operating costs or production labor rates.

The Benefits

- \$626M energy and operational savings over the life of the contract.
- Expected 23% reduction in Tinker-wide energy consumption.
- Net operational cost savings improve OC-ALC's rate structure and competitive position.
- Enhanced production reliability in critical steam-fired processes, compressed air systems and painting facilities.
- High efficiency infrastructure including lighting, heating, ventilation and air conditioning.
- Improved work environment.

Key Technologies

- The OC-ALC facility upgraded both infrastructure and industrial processes to increase the efficiency of its operations and energy use.
- Decentralized the heating plant with a distributed heat system to reduce energy consumption and improve reliability of essential heat systems.
- Smart meters monitor energy use to support more effective decision making.
- Over 60,000 efficient LED lights with wireless controls improve working conditions.
- Updated wastewater treatment to integrate system controls and alarms.
- Infrared heating reduces energy use and increases personnel comfort.

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