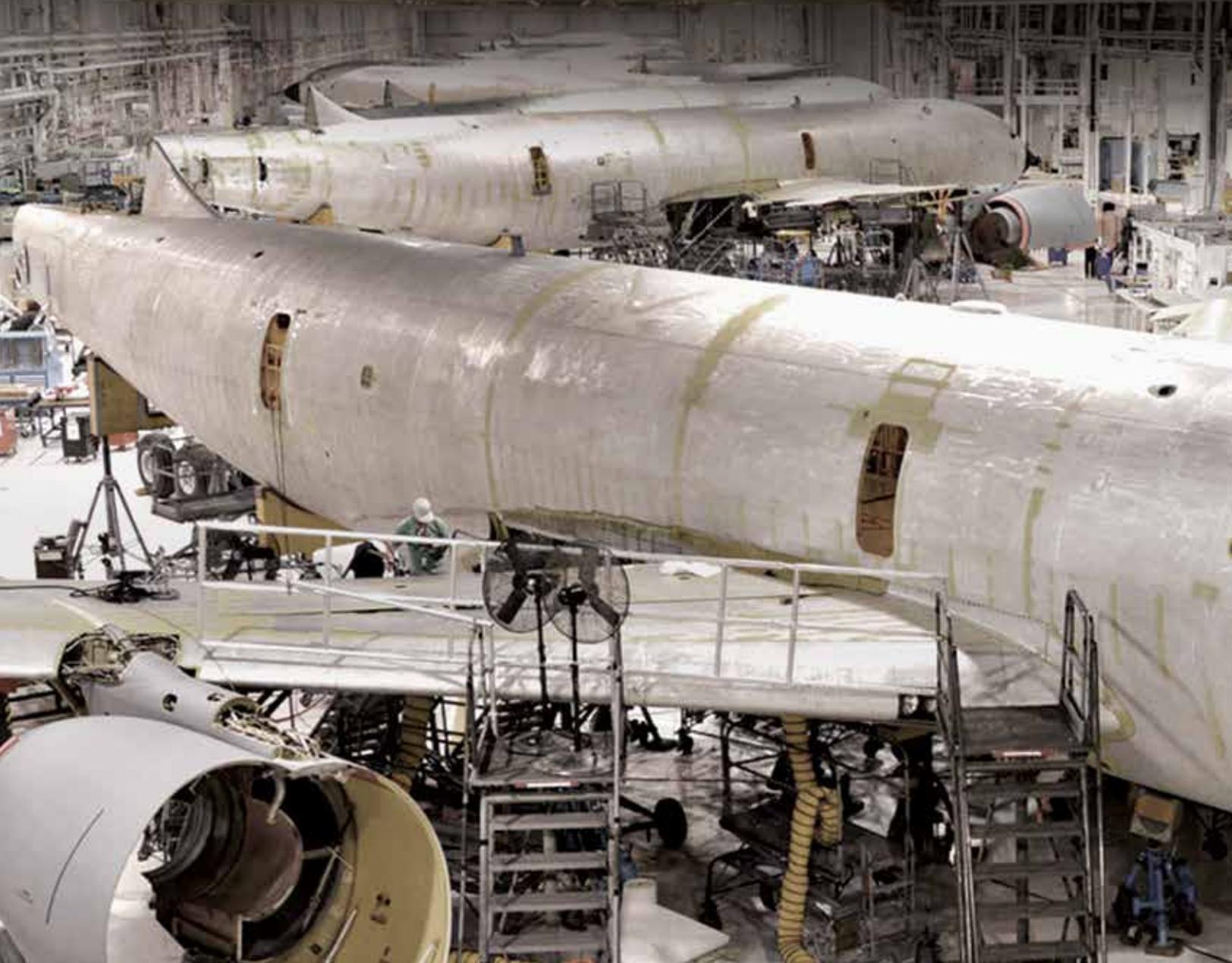


# ENERGY EFFICIENCY TAKES OFF FOR TINKER AIR FORCE BASE

“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-ALC Commander

Case Study





**Since 2006, Tinker AFB's OC-ALC production facilities have implemented a series of performance contracts with Honeywell that have developed and provided sustainable energy management and established a trackable baseline of energy use. This dedication and commitment to continuous energy improvement by the team at Tinker has enabled them to become the first federal organization to achieve the rigorous ISO 50001 international standard.**

### The Challenge

Established in 1941, Tinker Air Force Base (AFB) is home to the Oklahoma City Air Logistics Complex (OC-ALC), the largest of three aircraft maintenance and repair complexes operated by Air Force Materiel Command. The complex includes operations spread across 60 facilities to service and repair aircraft from the U.S. Air Force, Navy, Air National Guard, and Air Force Reserve.

Tinker AFB was once the largest single-site energy consumer in the Air Force, with OC-ALC accounting for nearly 70% of that, due to energy-intensive processes. The 75-year-old installation's aging infrastructure created further operational and efficiency challenges, requiring significant infrastructure modernization to meet current standards, improve energy and production efficiency, and improve worker safety. Resource constraints made addressing these issues difficult.

### The Solution

Since 2006, Tinker has partnered with Honeywell to implement a series of Energy Savings Performance Contracts (ESPCs) to upgrade infrastructure and equipment. ESPCs help fund upgrades, using annual energy and operational savings generated by more efficient systems and processes. Honeywell guarantees the savings, eliminating the need for taxpayer dollars or upfront capital investment by the Air Force.

In 2016, the Air Force and Honeywell began a 25-year, \$649 million facility-modernization project to upgrade OC-ALC infrastructure and industrial processes.

### The Benefits

The project aims to improve the overall base operating efficiency, enhance mission assurance, and reduce energy consumption by at least 23%. This will save Tinker AFB approximately \$20.5M in annual energy and operational costs.

Other key benefits include:

- 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.
- Upgraded building controls provide a more holistic view of facility-wide operations.
- Improved work environment.

### The Technologies

The OC-ALC facility upgraded both infrastructure and industrial processes to increase the efficiency of its operations and energy use. Key technologies included:

- Modernizing manufacturing lines to eliminate wasted ventilation energy and increase worker safety.
- 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 enhance equipment control and alarm monitoring.
- Honeywell's Enterprise Buildings Integrator (EBI) integrates building systems and functions, including HVAC, industrial plant equipment, and mechanical systems.

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SL-53-2559 | 06/19  
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