



SUCCESS STORY

Al-Thuraiya Reduces Water and Energy Use Through Operational Improvements

Pollution prevention yields 630,000 JOD in annual savings for poultry facility.



Dr. Wisam tests treated water at the facility.

Dr. Wisam (R&D Manager) of Al-Thuraiya commented, “The changes made with USAID’s assistance have helped us to reduce our environmental impact and costs, while providing excellent products that can be sold at an affordable price.”

By making operational improvements suggested in a USAID assessment, the Al-Thuraiya Poultry facility in Mafraq, Jordan, expects to save 630,000 JOD annually.

The plant employs 244 workers and produces whole chickens, cut-up parts, and other poultry products. The products are sold locally and exported to regional markets.

Al-Thuraiya has significantly reduced its water consumption by optimizing operational and maintenance processes. These improvements to the reverse osmosis (RO) system will cut fresh water use by 198,000 m³/year, which will reduce wastewater processing by nearly one-third. Expected savings from these water improvements total 405,000 JOD/year.

Energy-saving measures were also implemented at the facility, reducing electricity use by nearly one-third (i.e., 2,770,000 kWh/year) and diesel consumption by 6,700 liters/year:

- Increased production speed to reduce the average kWh needed to process each bird
- Increased Power Factor (added new panels)
- Installed harmonics filters for inverters
- Trained operators on refrigeration plant efficiencies
- Improved insulation on cooling system doors/pipes
- Installed controls for internal and external lighting

Expected savings from these energy improvements total 225,000 JOD/year.

Research and Development Manager Dr. Wisam expects these environmentally friendly changes to increase the facility’s competitive edge in the local and regional markets. “We can increase the money we make,” he said, “and provide a greater benefit to customers.”

The Al-Thuraiya Poultry facility is one of 30 industrial partners working with USAID to reduce industrial pollution and conserve scarce water and energy resources – in ways that benefit the bottom line. The Water Reuse and Environmental Conservation Project examined water and energy use, material and waste flow, production processes, quality control, and other aspects of each facility’s operations. The assessments suggested options for minimizing pollution and saving water, energy, and money. Costs and payback periods for options were also analyzed.