



## Headquarters Agriculture Energy Management Plan Project Summary

	Brief Farm Summary	Identified Projects	Estimated in AgEMP				Final Implemented Project					
			kWh Savings	Diesel Savings (gal)	Cost Savings	Project Cost	kWh Savings	Diesel Savings (gal)	Annual Cost Savings	Project Cost	NRCS Incentive	Utility Incentive
1	The farm operation consists of about 469 acres of irrigated farm ground with crop rotations of hay and small grains. There are four separate irrigation pump systems associated with this farm, the 75 hp Ditch Pump, the 40 hp Ditch Pump, the 50 hp Ditch Pump, and the Diesel Pump. There is also a farm shop located at the farm headquarters.	50 hp Ditch Pump Rebuild	6,788		\$609	\$3,000	6,316		\$590	\$650	None	\$325
		Replace the 75 hp Ditch Pump	28,053		\$2,496	\$15,000	29,857		\$2,757	\$20,000	\$19,580	\$4,033
		Replace the Diesel Pump with an Electric Pump	(58,659)	2,400	\$2,664	\$95,000	(58,659)	2,400	\$2,664	\$42,000	\$17,071	None
2	The farm operation consists of about 2,630 acres of irrigated farm ground with crop rotations of alfalfa, potatoes, and small grains. There are seventeen separate irrigation pump systems that supply water to different parts of the farm. There are also three potato storage units with fan ventilation systems.	Install VFDs on the Cellar #23 Fans	21,115		\$1,856	\$4,565	18,015		\$1,673	\$3,852	None	\$1,409
		Rebuild the #2 Pump	22,725		\$1,951	\$10,000	Not implemented yet.					
		Replace the #1 Pump	25,462		\$2,131	\$12,000	Not implemented yet.					
		Replace the #5 Pump	9,289		\$806	\$6,000	Not implemented yet.					
		Rebuild the B2&4 Pump	26,658		\$2,181	\$18,000	Not implemented yet.					
		Replace the #6 pumps with a new pump with a VFD	21,680		\$1,947	\$28,000	18,471		\$1,810	\$30,675	\$23,462	\$2,567
		Install a VFD on the L5 Pump	16,003		\$1,313	\$22,000	11,038		\$849	\$26,675	None	\$1,375
		Replace the B5 pumps with a new pump with a VFD	37,558		\$1,881	\$71,000	63,111		\$3,368	\$76,495	\$44,040	\$7,573
3	The farm operation consists of about 1,325 acres of irrigated farm ground with crop rotations of potatoes and small grains. The irrigation system consists of nine full circle center pivots with a design flow rate of 900 gpm, two part circle center pivots with a design flow rate of 550 gpm, and hand lines on some of the pivot corners. There are three irrigation pump stations that irrigate the entire farm, the Main Well and Booster, the West Well and Booster, and the Barn Well. There are also three potato storage units with fan ventilation systems, the A Frame Cellar, the Behlen Cellar, and the New Behlen Cellar.	Rebuild the Barn Pump	43,193		\$2,815	\$17,000	Not implemented yet.					
		Install a VFD on the Main Well & Booster Pumps	117,846		\$5,903	\$105,000	Final project inspection hasn't been completed. The utility incentive is an estimate based on expected savings.					
4	The farm operation consists of about 276 acres of irrigated farm ground with crop rotations of potatoes and small grains. Typically, 25% of the farm is planted in potatoes and 75% is planted in grain. There is one irrigation pump system on this farm.	Install a VFD on the Irrigation Pump	26,487		\$1,327	\$43,000	Project is currently being installed. The utility incentive is an estimate based on expected savings.					
5	The farm operation consists of about 1,017 acres of irrigated farm ground with crop rotations of potatoes and small grains. There are three separate irrigation pump systems associated with this farm, the 400 hp Well Pump, the 50 hp Ditch Pump, and the 500 hp Well Pump. There is also a potato storage unit with a fan ventilation system.	Install a VFD on the 50 hp Ditch Pump	9,581		\$630	\$9,800	Not implemented yet.					
		Install a VFD on the 400 hp Well Pump	32,883		\$1,647	\$50,000	Project is currently being installed. The utility incentive is an estimate based on expected savings.					

**Note:**

This table was prepared to summarize the impact of completing an Agriculture Energy Management Plan, Headquarters for five separate farms.

The table shows the energy saving opportunities that were identified and the estimated energy savings, cost savings, and project cost for the identified projects.

The table also shows the final project energy savings, cost savings, project cost, and USDA and/or utility incentives paid toward the project for those projects that were implemented.