For Immediate Release
October 18 2007
U.S. Army Corps of Engineers

Army Engineers Work to Improve Maysan's Electrical System

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Arabic Version

MAYSAN, Iraq —The U.S. Army Corps of Engineers is hard at work on $20 million worth of projects to improve the electrical system throughout Iraq's Maysan Province.

Maj. Steven Herda, resident engineer at the Corps' Basrah Area Office, said the construction of seven "33/11" electric substations in Maysan will provide a more reliable and up-to-date electric transmission infrastructure.

Herda said the existing electric substations are aging and suffer from a lack of maintenance and spare parts, causing them to break down or not operate at full capacity. He said the new substations will enhance the ability to supply power across southern Iraqi Maysan Province encompassing the area north of Basrah and east to the Iran-Iraq border.

"These projects are important because in all areas of Maysan there are problems with the transmission lines and substations that the people rely on for power," said Herda, whose office is part of the Gulf Region South district of the Corps of Engineers. "The new substations will provide increased transmission capacity and the up-to-date equipment should provide reliable service for many years to come."

The projects improve distribution capacity rather than provide additional power, Herda explained. "The purpose of a substation is to step down electric current from high voltage transmission lines to lower voltage lines, and then send the lower voltage electric power out to users in the neighborhoods," he said.

The control room at Maysan Plastic 33/11 kV substation project will ensure stable electrical supply within the Maysan province and supply more electricity to the people of Maysan. [USACE Photo]

"These projects will provide more reliable power to homes and business in the region, benefiting more than 785,000 residents," said an Iraqi deputy resident engineer in the Basrah Office.

Herda said the biggest challenge the Corps of Engineers faces in Maysan Province is access to project sites. "Since Maysan went PIC (Provincial Iraqi Control) in late 2006, USACE has not been able to perform quality assurance inspections of the project sites," he said. "However, USACE has a very strong group of Iraqi Associates that perform quality assurance site visits to ensure that the contractors are performing the work according to the

The two 31 megavolt Amps transformers will upgrade the area's electrical distribution benefiting more than 785,000 residents. [USACE Photo]

specifications in the contract."

He said the Corps wouldn't be able to do its projects in Maysan without the support of these Iraqi Associates.

For Herda, the significance of the $20 million worth of projects to the Iraqi people is that they will have a newly-installed electric transmission capacity that will enable additional electric power generation to reach more people than the current system can. Future projects to build electric generation capacity will then be able to tie directly into the existing power grid and supply the people with additional hours of electricity, he said.

"These projects will ensure stable electrical supply within the Maysan province and supply more electricity to the people of Maysan, who suffered greatly during the Iraq–Iran War during which it was the battlefield, and subsequently post the 1991 Shia uprising," said the Iraqi deputy engineer.

Herda said the construction of each substation requires several items. There is a control and switch building which is used to house the electric switches; and controls and fusing which control the operations of the substation. There also are at least two electric 31 Megavolt transformers. The purpose of the transformer is to change the voltage of the electric current. Depending upon the feeder, the voltage is stepped down from 132 kilovolts to 33 kilovolts and then to 11 kilovolts, which is the normal voltage supplied to neighborhoods. An additional part is the earthing grid, which is used to ensure that lightning strikes will not damage the substation but will discharge to the ground.

"These are not the only projects of this magnitude that the GRS is working on in Maysan Province," said the Iraqi deputy engineer. "There is one other similar project which is 400kV substation. Once completed, these projects will increase distribution capacity of electric power for Maysan and the rural areas within the province."

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