



Power Capacity in the Gaza Strip

- Electrical capacity in the Gaza Strip remains insufficient and power cuts will ensue in the coming weeks coinciding with the summer peak demand.
- Most Gaza residents will suffer disruption to their lives as result of the cuts.
- Solutions to the problem are available however the Palestinian Energy Authority (PEA) does not have the necessary funds.
- The \$7 million required for a long term solution is less than the current monthly fuel costs from running generators by essential service providers.

Background

On 28 June 2006 Israeli Air Force jets targeted the main power plant in the Gaza Strip following the seizure of an IDF soldier by Palestinian militants three days earlier.

All six transformers at the power plant were destroyed and eliminated at a stroke 43% of Gaza's total power capacity. Most of Gaza's 1.4 million population were left without electricity for up to 18 hours per day and without water for more than 20 hours per day.

Between 1 and 15 November 2006 seven new transformers were installed under phase I of a recovery plan. The capacity of these new units along with the other existing power sources is insufficient to cope with peak periods. From mid-December and throughout most of January, Gazan families were experiencing cuts of around 3 hours per day due to winter demand.

As temperatures start to rise in Gaza more extended cuts can be expected from June. The Palestinian Energy Authority estimates power outages of approximately 8 hours per day on two days per week. While these cuts are not as extensive as those seen last summer, families will certainly face disruption to their lives; for example the water supply will be reduced and dairy products will quickly sour as Gaza summer temperatures exceed 35 degrees celsius.

Essential service providers such as the power station and the Gaza Coastal Municipalities Water Utility (CMWU) will further rely on generators and fuel to ensure continuity of supplies. Hospitals throughout the Gaza Strip will be similarly affected. Window II of the Temporary International Mechanism (TIM) provides over 7.85 million litres of fuel each month at a cost of nearly \$ 8 million.

The current power supply available to Gaza, originates from three sources:

Gaza Power Generating Company (GPGC)	50 MW
Israel Electrical Company (IEC)	120 MW
Egypt	17 MW
Total	187 MW

The Palestinian Energy Authority expects demand to rise to 230 MW to coincide with the summer peak, meaning there is a current deficit of 43 MW.



Solutions

i) An “emergency” transformer for the power station is scheduled to arrive from Egypt in June and will be facilitated through Kerem Shalom by Israel. This unit will provide an additional 15 MW ensuring a deficit of 28 MW remains.

ii) Phase II of the recovery plan for the Gaza power plant involves a further five transformers to add to the seven transformers that were installed last November. These five transformers would contribute an additional 60 MW. While funds have been pledged for phase II sourcing, procurement and installation of the units could take up to 12 months.

iii) Northern Gaza. Additional capacity is available via the Israeli network and work is ongoing. A 161 KV line is in the process of being extended from Israel with the costs of the line being recovered by the Israelis from withheld Palestinian Authority tax revenues. The line can be completed in two months.

On the Gaza side of the border however, renovation work needs to take place on the existing northern Gaza sub-station while five feeder lines will be required to link up with the Israel Electrical Company network. In addition, one of the two transformers at the substation was damaged by Israeli tank fire in 2006 and it along with another transformer will have to be sent to Tel Aviv for repair and maintenance. The PEA has confirmed that the Israeli DCL will facilitate the passage of the damaged transformers.

The PEA estimates that \$6 million are required for the five feeder lines and renovation of the sub station and transformers. Once linked to the IEC network 50 MW would be immediately available however up to 300 MW could be utilised in total. The PEA currently has no funds to proceed with the project.

iv) Southern Gaza. A mobile sub-station in the Sufa area of the south eastern Gaza Strip in conjunction with three 22 KV feeder lines linking up to the IEC network would provide an additional 20 MW capacity. The costs to Israel for such a connection would be \$2 million with \$1 million costs to the PEA. This project could be completed in three months however the PEA currently has no funds to proceed.