The PCS100 UPS-I is an off line device which corrects complete outages of short duration. It consists of an inverter and electrical storage (e.g. batteries, or ultra capacitors) which can carry the full load for a predetermined amount of time. Based on analysis of site data, battery storage for 10 seconds was chosen as the storage medium.

Performance
During the fall of 2007 the PCS100 AVC device corrected a number of voltage sags and when a power outage or very deep sag is detected the PCS100 UPS-I comes into play. This unit disconnects the load from the utility supply via a static switch (Utility Disconnect), and at the same time supplies the load with energy from the battery storage via the inverter. The inverter converts the battery DC voltage to 3 phase AC. The change over occurs within a fraction of one cycle (<1/4 cycle) and allows the sensitive load to continue to operate without disruption.

When the utility voltage is restored to normal, the PCS100 UPS-I will synchronize the load with the utility supply, open the static switch and restore the load to normal operation, again within a fraction of a cycle.

The dairy operation reports that several storms have caused electrical problems in Spring 2008 and that in one case they experienced a power loss of some six seconds. The creamer high speed line continued working without incident during this event but other equipment in the operation, not protected by the PCS100 UPS-I, suffered a power interruption and stopped working.
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To find out more about ABB's PCS100 UPS-I solutions:
Web: www.abb.com/ups
Video: The features of the PCS 100 UPS-I
Email: powerconditioning@abb.com