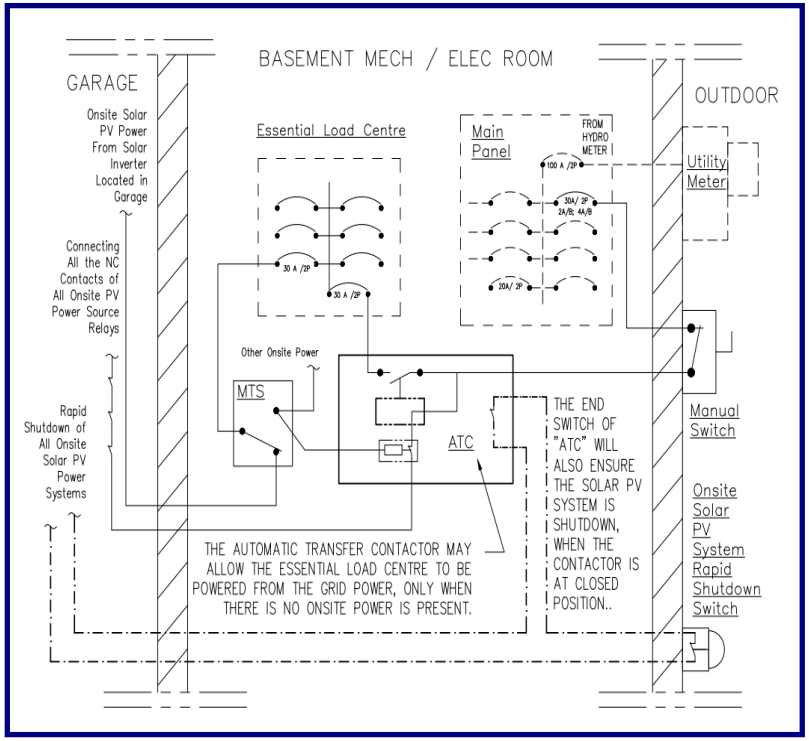
ENERPAK

Automatic Transfer Contactor _System Diagram



- Any onsite power generation must cause the ATC to open, so the interaction between onsite power and grid power will be prevented.
- The Automatic Transfer Contactor must also cause the onsite solar power to shut down (Rapid Shut Down), if the contactor is at close position for the essential load centre to be powered from the grid utility power.
- The NC auxiliary contact will also prevent any possible onsite power generation, even the contact of safe contactor could be welded-on due to the malfunction of the contactor.
- With the support of Rapid Shut Down and Manual Disconnect Switch installed next to the utility meter, the Automatic Transfer Contactor acts as a vital component to allow the off grid onsite power to power the es-

For Details, Please Visit, Https://www.enerpak.ca/contactus.html; Or Call: (416) - 335 - 0100

Automatic Transfer Contactor
_for Power Isolation Between Grid Power and Onsite Power

- The Automatic Transfer Contactor (ATC) is designed for residential application. It is installed to isolate the power supply between the house main electrical panel and house essential load centre.
- The house main panel is generally powered by the grid power from utility service company to power the heavy load serving a residential house. The heavy load may include any of the electrical dryer (s), kitchen stove (s), microwave (s), split air conditioning unit (s), heat pump (s), heavy duty tools ...etc. These heavy duty appliances are generally powered by the grid power from utility companies, because each of these appliances may need at least 30 amps (240 VAC) of electrical power.
- The essential load centre may supply a maximum total of 30 amps (240 VAC) power for light duty appliances, lighting fixtures, TV set (s), WiFi or basic communication equipment, personnel computers, gas stoves, gas driers, laundry machines, and ventilation fans ...etc. These light duty appliances may draw a maximum 30 amps (240 VAC) power in total. The essential load centre has sufficient capacity to support the essential needs of a household.
- The essential load centre can be powered from an onsite Solar Charge Maximizing Controller (SCMC) system with limited battery energy storage capacity. The onsite gasoline or gas generator power supply systems may also charge the battery when PV power is low.
- To support solar PV systems, the traditional automatic transfer switch (ATS) used for onsite gas generators is not sufficient or practical to protect line workers. An Automatic Transfer Contactor (ATC) is required to isolate onsite power and the grid power to protect line-workers of the utility companies, by eliminating any possibilities of power back feed into the grid power system during a power outage.

- In fact, the total power consumption of appliances powered by the essential load centre may make up 50% of total power consumption of a household. And the essential load centre can be powered by a SCMC system in good weather conditions.