



**MUNICIPAL LIGHT & POWER  
&  
CHUGACH ELECTRIC ASSOCIATION**

**ELECTRIC SERVICE REQUIREMENTS  
EXCERPT**

**2015**

**EMERGENCY/STANDBY SYSTEMS  
GENERATORS**

**2015 EDITION  
Effective August 3, 2015**

*This is an EXCERPT; the complete book is available on the utility websites:*

*[www.mlandp.com](http://www.mlandp.com) under the "New Construction" tab*

*[www.chugachelectric.com](http://www.chugachelectric.com) under the Customer Service tab  
"For Your Home" or "For Your Business"*

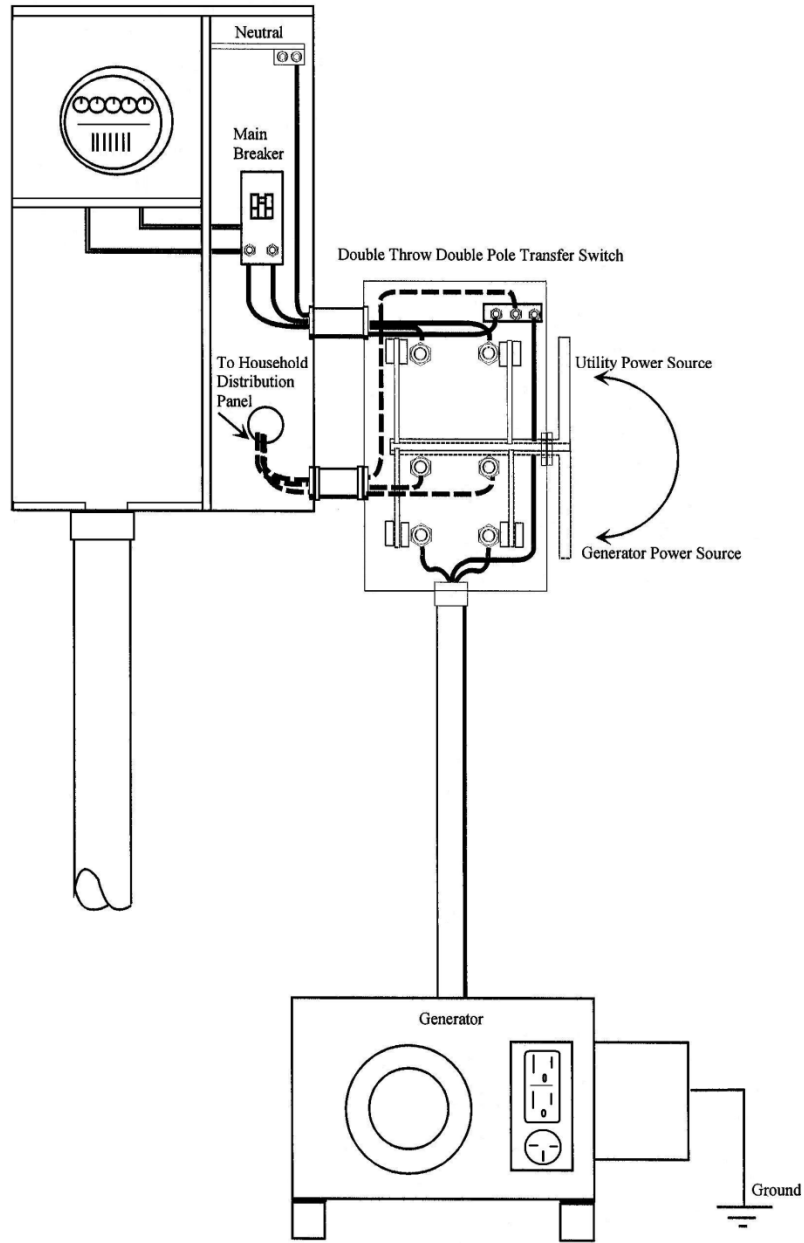
## 518 Emergency/Standby Systems (Generators)

- 518.1 When incorporating an emergency/standby electrical system (e.g. electrical generator) into the electrical system of a customer's building or structure, the installation shall comply with all applicable requirements of the NEC with any local amendments to the NEC, and with Section 212.
- 518.2 Consultation with an electrician or an electrical engineer will help determine the necessary equipment to be operated under standby or emergency conditions. This will be critical in determining the correct size of a stand-by electrical system (electrical generator) to be purchased.
- 518.3 The Utility recommends that transfer switches for single family residential service installations be installed by a licensed electrical contractor for safety reasons as well as proper application. Transfer switches for all other emergency/standby applications require installation by a licensed electrical contractor as per municipal code. All transfer switch installations require a permit and inspection by the Municipality of Anchorage or the State of Alaska for multi-residential triplex (and larger) and all non-residential applications outside of the MOA inspection area and within the Chugach service area.
- 518.4 The Utility will deny service to or disconnect service from any premises or facility that is connected to another electrical system other than the customer's emergency/standby electrical system connected through an the Utility approved transfer switch.
- 518.5 The Utility will require a one-line electrical diagram of the proposed installation showing the normal source (utility power), the alternate source (emergency/standby system), and an accurate depiction of the transfer switch employed. The Utility will also require the electrical generator manufacturer's specific ratings and capacities for the unit proposed, the transfer switch manufacturer's specific ratings and capacities for the transfer switch proposed, and a detailed description of transfer switch operation. If the transfer switch is intended for parallel operation (closed-transition type), the customer shall also provide specifications of all interconnecting equipment including, circuit protection (protective relays), instrumentation, measurement, and control equipment.
- 518.6 Transfer switches must be of a design that will ensure that back feed into the Utility's electrical system will be prevented. Transfer switches, both open-transition type and closed-transition type, shall be approved by the Utility prior to installation. The Utility shall make the sole determination as to whether or not an emergency/standby electrical system installation meets the Utility's requirements and provides an appropriate level of protection against back feed into its electrical system.
- 518.7 Manual transfer switches shall be of the double-throw, open-transition type.
- 518.8 Automatic transfer switches shall be the open-transition type except as provided in ML&P Tariff Rule 6.12.5. Within the Chugach service area automatic transfer switches shall be the open-transition type except where a written agreement with Chugach is made for a closed transition automatic transfer switch installation and operation. Automatic transfer switches must provide for manual transfer of customer load. Automatic transfer switches shall have both mechanical and electrical interlocks to prevent parallel operation of the customer's emergency/standby electrical system with the Utility's electrical system. Within the Chugach service area; submit manufacturer supplied documentation denoting (underlined/highlighted and page number references) where the auto-transfer switch manufacturer describes compliance with the manual transfer, mechanical and electrical interlock requirements, to the Chugach Engineering division.
- 518.9 Modifying or overriding transfer switches is not acceptable. The Utility will deny service to or disconnect service from any premises or facility with an emergency/standby electrical system that is found to have any modifications made to a transfer switch, unless such modifications are in compliance with the listing of the device by an approved testing laboratory and have been approved in writing by the Utility.
- 518.10 Emergency/standby electrical systems intended for parallel operation (closed-transition type) shall not be installed until the customer has entered into an agreement for operation of closed-transition transfer switches with the Utility. Subsequent to the written agreement with the Utility, and prior to the system being made operational, the customer shall schedule with the Utility a time for initial inspection and testing of the closed-transition transfer switch and emergency/standby electrical system.

## 518 Emergency/Standby Systems (Generators)

- 518.11 Key-type interlock systems employing key cylinders and locking bolts, and ratcheting or pivoting plates that attempt to externally connect two independent circuit breakers in a break-before-make scheme do not satisfy the requirements of ML&P Tariff Rules 6.12.1, 6.12.2, and 6.12.3 and **will not** be allowed.
- 518.12 Meter socket adapter transfer devices **are prohibited** from use on the Utility's system.
- 518.13 Transfer switches, when service rated and when used as the meter disconnect, shall be lockable. Locking provisions shall conform to the requirements of Section 305. Service rated transfer switches shall meet the requirements of Section 306.
- 518.14 This installation guideline and specification shows diagrams for two suggested methods for installation of a double-throw manual transfer switch for a typical single family residence or small commercial service installation.
- 518.15 "Alternative 1" requires the transfer switch be the same size as the main disconnect switch or breaker located adjacent to the meter. This transfer switch arrangement is capable of carrying all existing loads under normal conditions. This means that the only limiting factor on the amount of electrical equipment to run simultaneously under emergency conditions is the size of the generator installed. Under emergency conditions, the customer should turn off all circuit breakers in the distribution panel except for those circuits that feed the emergency load.
- 518.16 "Alternative 2" allows selected electrical loads to be separated from the main distribution panel in the building and wired into a sub-distribution panel. This reduces the size of the required transfer switch and may reduce total costs. The limitation with "Alternative 2" is that the building's entire electrical system cannot be incorporated into the standby generator circuit.

# 518 Emergency/Standby Systems (Generators), Alternative 1



# 518 Emergency/Standby Systems (Generators), Alternative 2

