



## Make Sure Your Equipment Is Protected

Remember, customers are responsible for properly protecting their electrical equipment because, as infrequent as they are, power interruptions do occur. So have a licensed electrical contractor inspect your three-phase equipment and install added protection if needed.

If you have questions or need additional information, please call OUC Commercial Services at:

**407.423.9018 in Orlando**  
**407.957.7373 in St. Cloud**

We're happy to help.



ORLANDO UTILITIES COMMISSION

100 West Anderson Street Orlando, Florida 32801  
Tel: 407.423.9100 [www.ouc.com](http://www.ouc.com)



## Is Your Electrical Equipment Properly Protected?

*Three-Phase Service with OUC*



## Reliability Means Responsibility

At OUC – The *Reliable* One, we take pride in the quality and reliability of our electric service. Nevertheless, events beyond our control may cause power interruptions and fluctuations.

That is why it is important to be aware that all customers are ultimately responsible for the protection of their valuable electrical equipment. Depending on your type of electric service and how the service is used, additional steps may be warranted to ensure that your equipment is properly protected.

## Three-Phase Service

OUC delivers “single-phase” or “three-phase” service to customers depending on their specific power requirements. The electrical needs of most homes and small businesses are normally met with single-phase service commonly recognized as 120/240 volt service.

Some customers, like you, have electrical equipment that requires three-phase rather than single-phase service. These customers can include large industry, shopping centers and even some homes. Air conditioners larger than five tons, commercial refrigeration, motors and pumps are all examples of equipment that may run on three-phase power.

*Three-phase equipment such as motors and air conditioners should be protected against single-phasing conditions.*



## With Three-Phase Service Comes Added Responsibility

Three-phase equipment requires three energized lines to run properly. With a loss of voltage on any one line, unprotected three-phase equipment may continue to run, possibly causing overheating. This could result in damage or equipment failure.

This type of interruption is referred to as “single phasing” and may be caused by acts of nature such as lightning, falling tree limbs, wind or electrical problems within your facility or home or even a cyber attack on the system.

## Equipment Protection: A Worthwhile Investment

Typical thermal protection such as fuses, breakers or overload devices may not be sufficient to protect your three-phase equipment when single-phasing conditions occur.

Fortunately, there are various types of sensors and supervisory relays available that will give you this added protection. These monitoring relays installed by a licensed electrician can protect against phase loss, phase imbalance and over-voltage conditions. Phase Loss Monitors with an automatic resetting feature may also be a key consideration when applying to critical systems such as refrigeration.

This type of protection is a worthwhile investment, considering the high cost of three-phase equipment and the potential inconvenience of being without this equipment should it be damaged.

In addition, the North American Electric Reliability Corporation (NERC), which is responsible for ensuring the reliability of North America’s bulk power system, recommends assessing the impact of rotating equipment being energized out-of-phase and ensuring sufficient protection is in place and in service.

