

SERVICE IMPAIRING EQUIPMENT REGULATIONS

10.01 DEFINITION

"Service impairing" equipment is defined as:

- Customer electrical equipment (welders, arc furnaces, motors, driving compressors, X-ray, and other equipment) having highly fluctuating or large instantaneous demand, compared to their average demands.
- Loads which cause harmonic distortion (some large computers and variable speed controllers) or other electrical disturbances.

These unusual variations can impair quality of service to other customers and must be eliminated or controlled within performance limits determined by OPPD or nationally recognized standards (i.e. ANSI, IEEE, etc), as set forth in OPPD's Service Regulation D-9

10.02 STANDARDS OF PERFORMANCE

The effects of service impairing loads will vary depending on their location in relation to OPPD's electrical supply system and other customers. Each proposed installation must be carefully studied in advance of connection to OPPD's lines. OPPD will determine (from electrical and operating characteristics of the proposed load to be supplied by the Customer or equipment manufacturer, as well as the OPPD electrical supply system) what steps must be taken by the customer and OPPD to prevent impairment of service to other customers.

10.03 CUSTOMER RESPONSIBILITY

The customer should install equipment which minimizes service impairment or install corrective equipment at the load location.

Where OPPD's electrical supply facilities are reasonably adequate and have capacity to serve normal load additions, the cost of OPPD's additional facilities and/or alterations specifically required to prevent impairment of service to other customers will be billed to the customer installing service impairing equipment.

Where the service impairing load requires special nonstandard OPPD equipment, the excess cost of such equipment will be billed to the customer installing the load.

After the equipment is in normal operation, if tests show further additions or alterations of OPPD's electrical supply system are necessary to eliminate service impairment, the cost of such changes will be billed to the customer operating the equipment.

10.04 WELDERS AND FURNACES

The customer shall consult OPPD and obtain approval before installing transformer type arc welders or furnaces. Such equipment shall conform to the previous Paragraphs 10.01 to 10.03, and be provided with a nameplate showing:

- A. Manufacturer, type, and serial number.
- B. Frequency.
- C. Primary volts.
- D. Maximum input amperes at rated output.
- E. Output volts at rated output amperes.
- F. Rated output amperes.
- G. Rated duty cycle.
- H. Temperature rise in degrees Celsius.
- I. Open circuit voltage.

10.05 RECTIFICATION PROCESSES

Large installations of controls using rectifiers or other devices which cause waveform distortion (harmonics) may require filtering or isolation by the customer to prevent service impairment to other customers.