PSI Energy Answers to IURC Power Quality Data Request
January 12, 2004

At the last Electric Service Quality Workshop in September, Staff stated it would issue a short follow-up data request regarding power quality. The Commission recognizes that not everyone who receives this data request will have the experience or information to respond. However, we have circulated the data request to everyone so that everyone is aware of the on-going process related the electric service quality.

Over the course of the workshops we have discussed three broad categories of electric reliability problems: Sustained outages have been defined as interruptions in service lasting more than five minutes and requiring utility intervention to restore service; Momentary outages, for our purposes, have been identified as service interruptions of less than five minutes in which service is restored without utility intervention; Power Quality problems are deviations in the nature or character of the electricity which may affect the performance of customers' electric equipment.

PSI Energy answers are provided in italics below.

1. From a customer's perspective, how are power quality problems usually described/identified, i.e. what does the customer complain about?

Customers often describe power quality problems as power surges, a blink or flicker in lights. Customers sometimes refer to power quality problems as outages.

2. Are the complaints and/or problems different for residential or small commercial customers versus large commercial or industrial customers? If so, please explain how the complaints are different.

Yes.

Residential customers seem more concerned about light flicker and voltage "surges." Seeing the lights flicker may indicate to them there is a problem with their service. A voltage "surge" could cause damage to electronic equipment in their house such as computers or VCR's.

Commercial customers with networked computer equipment might be concerned with voltage sags or grounding issues that might cause their computer systems to shut down.

Industrial customers with Adjustable Speed Drives and microprocessors controlling their process might be concerned with voltage sags or transients that could cause their process to shut down. Customers often mistakenly call these outages.

3. What steps does your utility take to address power quality complaints?

PSI addresses power quality issues with trained field personnel supported by a dedicated staff. The field personnel have the skills to resolve the more common and less complex power quality complaints. Issues that cannot be solved by field personnel are forwarded to the dedicated Power Quality staff. This group is familiar with the utility system, customer equipment and solutions to specific power quality issues. The Power Quality team assists the field personnel and/or works directly with the customer to resolve the complaint.

4. Does your customer call center categorize power quality complaints separately?

No. The call center does not categorize power quality complaints separately. Trouble calls of all types including outages and power quality are tracked in PSI Trouble Call / Outage Management System.

- If so, how many power quality complaints have there been in the last 12 months? How were these complaints resolved?
- If not, please estimate how many power quality complaints there has been over the last 12 months and how they were resolved.

PSI's Power Quality team estimates they have resolved about 500 power quality complaints and inquiries during the past twelve months. Each has been resolved through a team effort between the customer and the Power Quality team.

5. Are there actions customers can take to insulate their equipment from power quality problems? If so, please explain what actions could be taken.

Most power quality issues need to be resolved on the customer side of the meter. The most common thing customers can do to avoid power quality problems is make sure that their wiring and grounding are correct. The Power Quality group offers assistance in assessing how a given customer's wiring and grounding is affecting their equipment operation. Additionally PSI encourages customers to use equipment that is less sensitive to disturbances and/or protect sensitive equipment with a variety of mitigation equipment available in the market.