



## MEMORANDUM

TO: DG Rate Work Group

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SUBJECT: Definitions, Rate Principles and Comments on Prairie Gen Memo

### Definitions:

At our first DG Rate Work Group Meeting on August 7, 2002, the group decided that we need to clearly define supplemental service, standby service and maintenance service. Since this meeting, Otter Tail Power has provided definitions for supplemental service, maintenance service and backup service, all of which fall under the umbrella of standby service. Dakota Electric concurs with the definitions offered by Otter Tail and supports the concept of standby service as an umbrella term that encompasses supplementary, maintenance and backup services. This identification of services is outlined in a 1991 Edison Electric Institute (EEI) Report on Standby Rates. The relevant section of this report reads as follows:

It is important to distinguish among different types of standby service. Generally, what is referred to as “standby” is the “service that is not normally used but which is available through a permanent connection in lieu of, or as a supplement to, the usual source of supply.”

While this represents a general definition of the service, utilities also offer more specifically designed services under the umbrella of standby. These services are often available independently to customers, depending on need and circumstance. These are:

- Supplementary Service - Energy or energy and capacity supplied by the utility which is regularly used by a facility in addition to what the facility generates itself.
- Maintenance Service - Energy or energy and capacity supplied by the utility during scheduled outages of on-site generation equipment.

- Backup Service - Energy or capacity supplied by the utility during unscheduled outages of on-site generation equipment.

These EEI definitions are further supported by Minnesota Rules Chapter 7835. This Chapter defines supplementary power as “electric energy or capacity supplied by the utility which is regularly used by a qualifying facility in addition to that which the facility generates itself.” That is, supplemental service is provided by a utility where the output of the distributed generation is less than the customer’s total demand. These Minnesota Rules define maintenance power as “electric energy or capacity supplied by a utility during scheduled outages of the qualifying facility.” Finally, back-up power is defined as “electric energy or capacity supplied by the utility to replace energy ordinarily generated by a qualifying facility’s own generation equipment during an unscheduled outages of the facility.”

### **Principles for Setting Appropriate Rates**

Distributed generation rates should recognize the cost characteristics of the electric utility services being offered. Beyond a reflection of costs and cost savings, rates applicable to customers with distributed generation should at least satisfy the following goals:

1. At a minimum, the utility must ensure that the applicable rate structure satisfies a “hold harmless” test. That is, the utility must ensure that the rate or rates paid by customers with distributed generation provides at least sufficient revenue to cover the utility’s incremental cost of providing service to those customers. This will ensure that other customers are not harmed by the action of customers implementing distributed generation.
2. If encouraging the development of distributed generation is in the long-term interest of electric utility customers, the applicable rates should be designed to encourage customers to install distributed generation in a way that maximizes benefits and minimizes problems and costs. That is, rates and/or incentives should be used to facilitate customer installation of distributed generation in desired geographical areas that is operated in a way that lowers the utility’s existing or future cost of providing service.

Utilities will incur both direct and indirect costs associated with service to customers with distributed generation.

Direct costs are those costs that are directly attributable to one specific customer or a class of customers. In providing service to customers with distributed generation, certain incremental costs may be incurred, including:

- Interconnection of customer distributed generation facilities to the utility’s electric power system;
- Special metering equipment;

- Requiring upgrades to the electric power system or even to other customer's electrical equipment (e.g., changing short circuit current may require upgrade in the circuit protection of other customers);
- Requiring system interconnection studies, safety inspections, maintenance, etc.;
- Control equipment that allows the generation to be started remotely under the terms of an applicable service schedule;
- Utility testing and monitoring of customer-owned facilities to ensure compliance with applicable safety and operational standards;
- Power supply costs including capacity, capacity reservation and energy costs; and
- Delivery costs for transmission and distribution services.

Like other rates offered by a utility, rates applicable to distributed generation should also make an equitable contribution toward the following indirect allocated expenses:

- Operation and maintenance;
- Customer accounts;
- Customer service and information;
- Administrative and general;
- Depreciation;
- Interest; and
- Taxes.

Since these indirect costs cannot be directly assigned to individual customers or customer classes, they must be allocated throughout the utility's customer base. The challenge for utilities and their regulators is ensuring that rates charged for all types of service reflect a "just and reasonable" contribution toward all direct and indirect costs associated with such service.

Distributed generation also has the potential of reducing a utility's cost of operation by:

- Displacing the production or purchase of other energy; and
- Delaying, modifying or even, in some instances, eliminating the need for distribution system improvements.

The extent to which a utility can utilize the output of distributed generation to accomplish these objectives is often case specific, dependent upon the characteristics of the utility as well as the characteristics of the distributed generation. The avoided distribution cost associated with

distributed generation is even more case specific. Here the location of the generating unit, the capacity of the unit and the capacity requirements of the distribution circuit where the generation unit is located are of critical importance. In most instances, distributed generation will not enable the utility to avoid distribution costs; and, in some instances (e.g., when the distributed generation capacity is large with respect to the capacity of the load in the area and/or the capacity of the distribution system), installation of a distributed generating unit may actually increase the utility's cost.

### **Comments on Prairie Gen Memo**

John Jaffray submitted a memo to the DG Rate Work Group on August 14, 2002, regarding standby tariffs. The opening paragraph of this memo states, "As we review the cost to implement DG at the customer side, we think it is helpful to have some context and perspective. Our analysis shows that both as a percentage of market capacity rates and as a percentage of a given energy cost, the standby tariff is too high, a disincentive to a robust DG sector, and unreasonable."

In Dakota Electric's view, this memo highlights the importance of clearly identifying services required by customers and the corresponding costs of providing those services. The August 14 memo comparison to market rates ignores the broader perspective of other services provided by the utility and the costs associated with those services. Hopefully these issues will be discussed and resolved at our next meeting as we strive to establish principles for setting rates and further identifying direct and indirect costs associated with providing these various standby services.

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