



## Net Metering for Farm Waste Electric Generating Systems in New York State

### Introduction

Net metering provides a better price for electricity sold to the grid by producers with generators fueled by biogas from the anaerobic digestion of livestock waste. The increased revenue improves the return on anaerobic digestion systems, which are costly to install.

### What is Net Metering?

“Net energy metering” or “net metering” is a billing practice used by utilities for certain customers who generate electricity. “Net” refers to the difference between the electricity sold to the customer-generator by the utility and the electricity purchased by the utility from that customer-generator. In New York State the net metering law effectively requires utilities to purchase electricity from customer-generators at the same retail price sold by the utility, up to the amount of electricity purchased by the customer-generator. Every twelve months, if the customer-generator has produced electricity in excess of the electricity purchased, then the utility is required to purchase the excess at wholesale rates.

### History of the Net Metering Law

In New York State the first net metering law was passed in 1997, for residential photovoltaic systems of 10 kW or less. In September 2002 the law was expanded to include qualified farms that generate electricity from biogas produced by the anaerobic digestion of agricultural waste (“livestock manure, farming wastes and food processing wastes”). In December 2002 each utility in the state filed new net metering “tariffs” with the Public Service Commission (PSC).

Tariffs are the rates, terms and conditions of service which govern the business relationships between utilities and their customers. Tariffs must be reviewed and approved by the PSC, which has the responsibility of ensuring that utility customers receive safe and adequate services at just and reasonable rates. In April 2003 the new tariffs for net metering went into effect.

### Eligibility

To be eligible for net metering, farm waste electric generating systems must meet the following requirements:

- The generating equipment must have a rated capacity of no more than 400 kW.
- Biogas must make up a minimum of 90% of the fuel, on an annual basis.
- Livestock manure must make up a minimum of 75% by weight of the feedstock used in the digester, on an annual basis.
- The equipment must be manufactured, installed and operated in accordance with applicable government and industry standards.
- The equipment must be connected to the electric system and operated in conjunction with the utility’s transmission and distribution facilities.

### Interconnection Requirements

While there may be minor variations in the way each utility calculates its net metered bills, the requirements for connecting customer electric generating equipment to the grid are the same. The PSC has written Standardized Interconnection Requirements and ordered the utilities to use its language verbatim in their tariffs.

### Interconnection Costs

If a utility determines it is necessary to install one or more dedicated transformers to protect the safety and adequacy of electric service provided to other customers, the customer-generator must pay the utility’s

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November 2004



actual purchase and installation costs, up to a maximum of \$3,000 per farm operation. On the other hand, the utility can not require the customer-generator to purchase additional liability insurance.

### Standby and Demand Charge Exemptions

“Standby charges” are the electric rates which a utility bills to independent generators to cover the capacity the utility must maintain in the event the independent generator shuts down. The utility is “standing by” with backup delivery capacity which can be called upon in an emergency. Farm waste electric generating systems are exempt from standby charges.

“Demand charges” are the electric rates which a utility charges to customers in certain service classes, and are related to the cost to the utility of maintaining delivery capacity to cover periods of peak demand. Farm waste electric generating systems are exempt from new demand charges related to their generation, but not from demand charges a utility imposes on other customers who are in the same service class but do not generate electricity on-site.

### Types of Meters

Net metering customer-generators can choose either a single meter capable of running in reverse, or two meters to measure electricity purchased from and supplied to the grid separately. Two separate meters may be required for Time-of-Use metering and demand charge customers. Time of Use refers to the price of electricity changing if it is purchased during periods of peak vs. off-peak demand.

### How a Bill is Actually Calculated

If a farm waste electric generating system produces more electricity than is consumed by the farm during a billing period, the accounting for the credit is managed as follows:

1. The surplus kilowatt hours are converted to a dollar value at the retail rate.
2. This credit is applied to any applicable customer and demand charges.
3. If there is a residual credit left, it is converted back to kilowatt hours and carried over to the next billing period.
4. At the end of the year, if there is a surplus of kilowatt hours, it is converted to a dollar value using the utility’s “avoided cost”.

Avoided cost is the cost of generating a given amount of power that a utility avoids by purchasing that power instead from another source. The avoided cost is essentially the wholesale price of electricity, and will vary somewhat with each utility. The utility must issue a check for the credit to the customer-generator. (Vouchers or other types of credit are not allowed.)

### Further Information

This fact sheet is a general introduction to net metering. For further information you need to contact your utility to learn about the details of net metering for your service class. Successful interconnection requires a close working relationship between the customer-generator, the utility, and their electricians.

### References

The net metering law is found in Article 4 of the New York State Public Service Law, §66-j, which can be accessed from

<http://public.leginfo.state.ny.us/menugetf.cgi?commoquery=laws>. The Standardized Interconnection Requirements are found on the website of the New York State Dept. of Public Service at [www.dps.state.ny.us/distgen.htm](http://www.dps.state.ny.us/distgen.htm). For more information on the Public Service Commission, go to [www.dps.state.ny.us](http://www.dps.state.ny.us).

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### Acknowledgements

The research for this fact sheet was supported in part by funds provided by the New York State Energy Research and Development Authority, under agreement 7536, “Transferring Technology from NYSERDA Agricultural Innovation Manure Projects”. Any opinions, findings, conclusions or recommendations expressed in this publication are those of the authors and do not necessarily reflect the views of NYSERDA or the State of New York, and reflect the best professional judgment of the authors based on information available as of the publication date.

