

CLEAN POWER LAW RECOGNIZES ELECTRIC COOPERATIVE LOAD MANAGEMENT EFFORTS

Because Pennsylvania's electric cooperatives have promoted the benefits of energy conservation and "clean power" for years, they became natural partners in helping shape Pennsylvania's renewable portfolio standard (RPS) law. Under RPS, private power companies and competitive electric generation suppliers across the state must include increasing amounts of green energy in their generation mix — up to 18 percent by 2020. Electric cooperatives, on the other hand, meet RPS requirements through the Coordinated Load Management System (CLMS), which launched operations in December 1986.

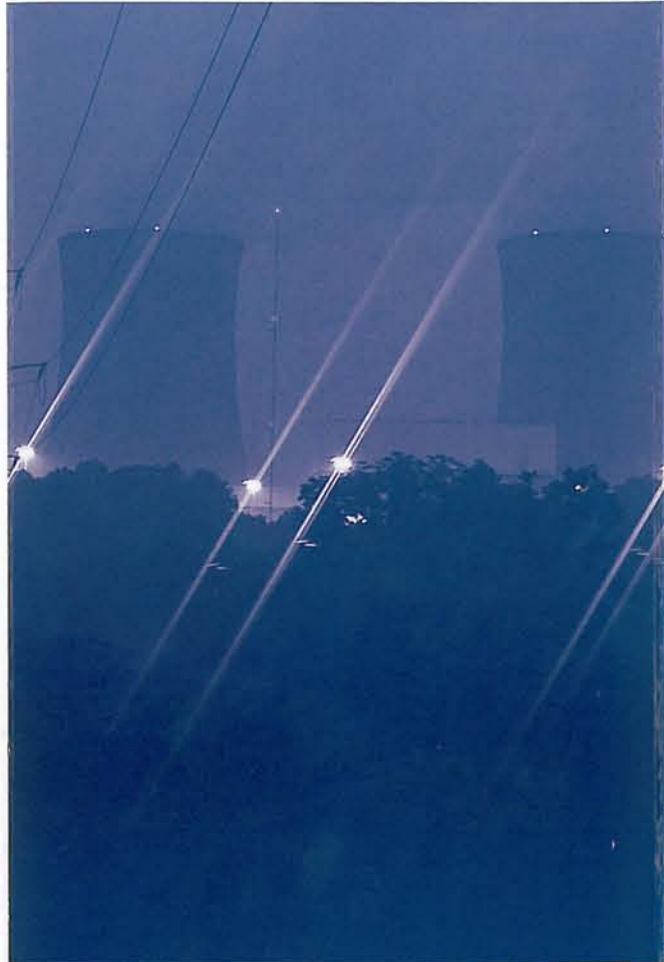
The Pennsylvania General Assembly realized that imposing RPS on electric cooperatives would go against the historic legislative intent of cooperative self-regulation and unnecessarily raise costs for rural residents. As not-for-profit, consumer-owned and governed utilities, electric cooperatives base decisions on economic, operational, and community impact, with the goal of providing a reliable supply of power at the lowest possible cost.

Electric cooperatives successfully demonstrated to legislators that they have always had an interest in renewable generation and energy efficiency, as reflected by their ownership of the 21-megawatt Raystown Hydroelectric Project in Huntingdon County. But more importantly, cooperatives also advanced the argument that the cleanest megawatt is the one not produced at all. Members of the legislature were impressed that CLMS — which essentially works like a power plant in reverse — can lower electric cooperative power requirements systemwide by roughly 50 megawatts, or about 8 percent of the cooperatives' peak load.

Through CLMS, electric cooperatives shift the electricity use of residential water heaters, electric thermal storage units, dual fuel home heating systems, and other special equipment to off-peak hours. By doing so, CLMS improves system

efficiency, cuts costly demand charges cooperatives must pay for purchased power, and reduces the need for new generating capacity.

To date, nearly 200 cooperative substations are being utilized for load control with nearly 50,000 load control receivers installed on appliances, mostly electric water heaters, in the homes of volunteer cooperative consumers. Overall, about one in five electric cooperative consumers take part in load management — actively helping to control their power costs.



Adams EC, Inc.
1338 Biglerville Rd.
P.O. Box 1055
Gettysburg, PA 17325
717-334-9211 or
888-232-6732
717-334-3980 FAX

Bedford REC, Inc.
P.O. Box 335
8846 Lincoln Highway
Bedford, PA 15522
814-623-5101
814-623-7983 FAX

Central EC, Inc.
P.O. Box 329
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Parker, PA 16049
724-399-2931 or
800-521-0570
724-399-2300 FAX

Claverack REC, Inc.
U.S. Route 6
RR 2, Box 17
Wysox, PA 18854
570-265-2167 or
800-326-9799
570-265-8604 FAX

New Enterprise REC, Inc.
3596 Brumbaugh Rd.
P.O. Box 75
New Enterprise, PA 16664
814-766-3221 or
800-270-3177
814-766-3319 FAX

Northwestern REC, Inc.
22534 State Hwy. 86
P.O. Box 207
Cambridge Springs, PA 16403
800-472-7910
814-398-8064 FAX

REA Energy Cooperative, Inc.
75 Airport Rd.
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Indiana, PA 15701
724-349-4800
724-349-7151 FAX

Somerset REC, Inc.
P.O. Box 270
223 Industrial Park Rd.
Somerset, PA 15501
814-445-4106
814-445-5526 FAX

Sullivan County REC, Inc.
Route 87
P.O. Box 65
Forksville, PA 18616
570-924-3381 or
800-570-5081
570-924-3383 FAX

Sussex REC, Inc.
64 County Route 639
P.O. Box 346
Sussex, NJ 07461
973-875-5101
973-875-4114 FAX

Tri-County REC, Inc.
22 North Main St.
P.O. Box 526
Mansfield, PA 16933
570-662-2175 or
800-343-2559
570-662-2142 FAX

United EC, Inc.
29 United Rd.
P.O. Box 688
DuBois, PA 15801
814-371-8570 or
888-581-8969
814-371-2594 FAX

Valley REC, Inc.
Route 26 North
P.O. Box 477
Huntingdon, PA 16652
814-643-2650
814-643-1678 FAX

Warren EC, Inc.
320 East Main St.
P.O. Box 208
Youngsville, PA 16371
814-563-7548 or
800-364-8640
814-563-7012 FAX



ALLEGHENY
ELECTRIC COOPERATIVE, INC.



A Touchstone Energy® Cooperative

Pennsylvania Rural Electric Association
212 Locust Street, P.O. Box 1266
Harrisburg, PA 17108-1266
717-233-5704 www.prea.com

COORDINATED LOAD MANAGEMENT SYSTEM

QUESTIONS AND ANSWERS



WHAT IS LOAD MANAGEMENT?

The Coordinated Load Management System (CLMS), developed by the 14 electric distribution cooperatives in Pennsylvania and New Jersey in conjunction with their wholesale power supplier, Allegheny Electric Cooperative, Inc. (Allegheny), lets cooperative consumer-members become partners in the effort to control electric rates. CLMS works by shifting electricity use of residential electric water heaters, electric thermal storage (ETS) units, dual fuel home heating systems, and other special equipment in the homes of volunteer consumers from times of peak demand to off-peak hours.

WHAT IS PEAK DEMAND AND WHY IS REDUCING IT IMPORTANT?

Electricity is produced for immediate use; it cannot be stored economically. Because of this, power plants must meet electricity requirements at all times. Peak demand refers to those periods when electric consumers collectively use the most electricity. Generally, electricity prices are higher during demand peaks.

As a result of electric competition in Pennsylvania, the price you, as an electric cooperative consumer, must pay for electricity is partially based on how much power your local electric cooperative requires between 1 p.m. and 6 p.m. on the five hottest, most humid days each summer. Reducing the amount of power your cooperative uses on those days, as well as during other times throughout the year, can stabilize electric costs.

WHAT IS THE DIFFERENCE BETWEEN ENERGY AND DEMAND?

Energy is the capacity to do work, and refers to electricity consumed by your appliances, tools, motors, and other equipment. It is measured in kilowatt-hours (kWh). **Demand** is the amount of electricity called for or "demanded" from an electrical system. It is measured in kilowatts (kW). Both energy and demand affect electric rates.

HOW DOES CLMS WORK?

First, an electric cooperative consumer-member volunteers to have a load control receiver installed on his/her electric water heater or other special appliance. Meanwhile, local electric cooperative computers monitor electricity demand and weather data.

When demand reaches an extremely high level, a load management operator sends a signal over electric lines to various load control receivers. The receivers then temporarily switch off power to the water heaters or special appliances they are connected to. By controlling use of electricity in this fashion, your electric cooperative reduces demand across its entire service area.

IS THERE ANYTHING I NEED TO DO AT MY HOME?

You don't have to lift a finger! Monitoring systems and the load control receiver do all the work.

WHO CAN PARTICIPATE?

Any full-time residential electric cooperative member with an electric water heater can participate in load management, as well as in any off-peak rate, ETS, or dual fuel heating programs being offered.



WILL HAVING A LOAD CONTROL RECEIVER ON MY WATER HEATER REDUCE THE AMOUNT OF ELECTRICITY I USE?

Load management does not necessarily lower the amount of power you use. Instead, it shifts when you use it from times of heavy electricity demand to periods of lower consumption.

HOW MUCH WILL THE SYSTEM COST ME?

CLMS costs*you nothing. If you volunteer, your local electric cooperative will pay for the load control receiver and its installation, and perhaps even provide a small monthly "participation" rebate on your bill. Power cost savings resulting from the program offset any expense incurred by your cooperative.

DOES LOAD MANAGEMENT CONSERVE ENERGY?

No. However, your cooperative can advise you on ways to make your home more energy efficient.

WILL I HAVE HOT WATER WHEN MY WATER HEATER IS SWITCHED OFF?

Water heaters are the focus of load management efforts because they provide efficient heat storage. Studies show that electric water heaters can remain without power for as long as eight hours and not inconvenience consumers. Under CLMS, your water heater should not be shut off any longer than that.

WHAT PRECAUTIONS HAVE BEEN TAKEN TO ENSURE THAT I WILL HAVE HOT WATER?

Several precautions are built into CLMS to ensure that you will not be inconvenienced. First, water heaters are grouped according to their storage capacities and household size. No group is turned off longer than the storage capacity and needs of the family allow. Second, the system has been designed so that if any section fails, the load control receiver on your water heater will keep electricity flowing.

WHEN WILL THE SYSTEM OPERATE?

CLMS monitors electricity demand and weather conditions 24 hours a day. However, electricity to water heaters will be switched off only on days when demand is expected to be extremely high.

WHO WILL INSTALL THE LOAD CONTROL SWITCH?

An employee from your local electric cooperative or a firm contracted by your local cooperative will install the load control receiver. These individuals, whether from the cooperative or a contracted firm, understand how CLMS works and will always carry proper identification.

WHAT IF I DON'T LIKE LOAD CONTROL?

If for any reason you are dissatisfied with CLMS, your electric cooperative will promptly remove you from the program at no charge.

WHY AM I BEING OFFERED LOAD MANAGEMENT?

Allegheny and your local electric cooperative created the Coordinated Load Management System as a way to help keep electric rates from rising.

HOW DO I SIGN UP?

Contact your local electric cooperative.

System Overview

