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October 2, 2008

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CERTIFICATE OF SERVICE

RE: Case No. 2008-00161
East Kentucky Power Cooperative, Inc.

I, Stephanie Stumbo, Executive Director of the Public Service Commission, hereby certify that the enclosed attested copy of the Commission's Order in the above case was served upon the addressee by U.S. Mail on October 2, 2008.

Stephanie Stumbo

Executive Director

SS/rs
Enclosure

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COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

APPLICATION OF EAST KENTUCKY POWER COOPERATIVE, INC. FOR A PERMANENT DEMAND-SIDE MANAGEMENT DIRECT LOAD CONTROL PROGRAM	))))	CASE NO. 2008-00161

ORDER

East Kentucky Power Cooperative, Inc. ("EKPC") applied for authority to implement a Demand-Side Management permanent Direct Load Control ("DLC") program for its member systems. Finding that the proposed DLC program and its implementing rate schedule are reasonable and lawful, we approve them.

From the summer of 2006 through September 2007, EKPC conducted a pilot program for the direct load control of the water heaters and air conditioners of Blue Grass Energy customers and of the water heaters of Big Sandy Rural Electric Cooperative Corporation customers.[1] The purpose of this pilot program was to determine the effect of a DLC program on EKPC's system peak demand by curtailing customers' central air conditioner and water heater run times.

As part of the pilot program, EKPC's agent, GoodCents Solutions, installed DLC switches on each participant's central air conditioning or heat pump. These switches enabled EKPC to cycle these units for 15-minute periods. Through the

[1] *See* Case No. 2006-00048, The Request of East Kentucky Power Cooperative, Inc. for a Determination of Reasonableness of a New Demand-Side Management Program, Direct Load Control of Water Heaters and Air Conditioners (Ky. PSC April 18, 2006) (approving the pilot program).

Automatic Meter Reading systems that the two participating distribution cooperatives used, EKPC tracked the load and usage levels and communicated with the switching devices. EKPC also installed similar switching devices on participants' electric water heaters and communicated with those devices to cycle the water heaters off for a maximum of 4 hours. Only water heaters with a capacity of 40 gallons or greater were eligible for the program. A total of 473 switches were installed on air conditioning or heat pump units and 386 switches were installed on electric water heaters.[2] As an incentive to participate in the program, EKPC provided participating customers a $20 billing credit per participating air conditioning unit per summer and $10 billing credit per participating water heater per year. No fees were charged to participate in the pilot program.

In its report of the pilot program's results, filed with the Commission on December 20, 2007, EKPC found that direct load control produced significant demand reduction for air conditioning units and water heaters. For water heaters, the program produced a demand reduction of 0.59 kilowatt ("kW") per water heater in the winter months and 0.46 kW per water heater in the summer months.[3] During the summer of 2007, demand among participating air conditioning units fell by 1.1 kW per unit. EKPC reported customer satisfaction, as measured by the level of continued customer participation in the program, to be "very strong."[4]

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[2] Direct Testimony of James C. Lamb, Exhibit JCL-1 at 1.

[3] Direct Testimony of James C. Lamb, Exhibit JCL-1 at 2-3.

[4] *Id.* at 5.

EKPC also reported on the results of its application of a series of California DSM Tests using the pilot project's results as an estimate of the project's effect. Based upon the assumption of 50,000 participants, EKPC reported, "[t]he results of the California tests were all positive, with the Total Resource Cost test at a very robust 2.96 benefit-cost ratio."[5] Finding these results encouraging, EKPC advised the Commission of its intent to seek approval for a permanent DLC program.

On April 30, 2008, EKPC applied to the Commission for approval of a permanent DLC program and its proposed "Section DSM-3" Rate Schedule to implement that program. EKPC proposed to place the "Section DSM-3" Rate Schedule in effect on June 1, 2008. On May 16, 2008, the Commission suspended the proposed schedule for one day and allowed it to become effective, subject to change, on June 2, 2008. We further directed that all EKPC member cooperatives be made parties to this proceeding and that each file a rate schedule to offer the proposed DLC program.[6] We ordered that these rate schedules become effective on June 2, 2008, subject to change. All of EKPC's member cooperatives timely submitted such rate schedules.

On June 30, 2008, EKPC, in its response to an information request, submitted revisions to its originally proposed rate schedule to allow customers the choice of a billing credit or the installation of a digital thermostat as an incentive to participate in the DLC program. It also submitted a revised rate schedule for its member cooperatives' use that reflected this revision.

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[5] *Id.* at 7.

[6] The Attorney General is also a party to this proceeding. The Commission granted his motion for intervention on May 29, 2008.

EKPC's proposed DLC program varies little from its pilot project. Participating customers will receive a $20 billing credit per participating air conditioning unit per summer and $10 billing credit per participating water heater per year. In lieu of a credit for an air conditioning unit, a customer may choose the installation of a digital thermostat. Installation of a digital thermostat will allow EKPC to raise the thermostat set point during a control event and will permit EKPC to either cycle the participant's air conditioning unit or raise the thermostat. Based upon its review of similar programs that the Louisville Gas and Electric Company ("LG&E") and Kentucky Utilities Company ("KU") have offered, EKPC expects the choice of digital thermostat installations to increase customer participation. EKPC anticipates continuing to use air conditioning unit cycling as a major component of its DLC program.

GoodCents Solutions will administer the program. It previously administered EKPC's pilot program and has been the primary coordinator of LG&E's and KU's DLC programs. Its duties will include enrollment, installation, measurement, and verification functions. It will serve as the customer contact for all matters related to the DLC program.

EKPC has targeted 50,000 air conditioning units and 27,000 water heaters participating in the DLC program. It originally assumed that an equal number of appliances would be enrolled but subsequently determined that recruitment of air conditioning units is more cost-effective. It intends to enroll water heaters only in structures that have already enrolled for air conditioning cycling.

EKPC projects that, after full implementation, the DLC program will reduce peak load by 50 megawatts ("MW'). Based upon its targeted customer participation levels, cost estimates for required program equipment and devices, and participant incentive payments, it estimates that the DLC program will require an annual budget of between $4 million and $5 million for each of the next five years. EKPC intends to defer recovery of program costs and any lost revenues until its next general rate adjustment application.

EKPC has evaluated the proposed DLC program using the following recognized benefit-cost ratio tests: Ratepayer Impact Test, Participant Test, Total Resource Cost Test ("TRC"), and Power Supplier Utility Test. Each test produced results with benefits in excess of costs.[7] The TRC test produced a benefit-cost ratio of 2.33.

The evidence of record shows that the DLC program will produce significant reductions in demand. Based upon the results of the pilot project, including reported customer satisfaction, and EKPC's addition of a digital thermostat option, estimated level of customer participation appears reasonable. If these levels are met, EKPC may reduce peak demand by as much as 50 MW and thus be able to defer investment in additional capacity while still meeting its reserve requirements. The record further demonstrates that the expected benefits of the proposed program will exceed its expected costs.

We note that the addition of the digital thermostat option should be of significant benefit to EKPC and participating customers. This option will allow EKPC greater

[7] Direct Testimony of James C. Lamb, Exhibit JCL-1 at 3. *See also* Exhibit JCL-2.

flexibility in responding to cycling events and will make participating customers more aware of the benefits of raising their thermostats as a conservation measure.

Demand-Side Management ("DSM") programs, such as EKPC's proposed DLC program, can significantly benefit the Commonwealth's utilities and ratepayers by delaying the need for costly new generation. Other electric utilities within the Commonwealth have reported positive results with similar programs. We applaud EKPC's efforts to implement this program and encourage it to adopt other cost-effective DSM programs.

Having considered all of the evidence of record and being otherwise sufficiently advised, the Commission finds that:

1. EKPC's proposed DLC program and its Revised "Section DSM-3" Rate Schedule are reasonable and consistent with KRS 278.285.

2. The proposed distribution cooperative rate schedule to implement EKPC's proposed DLC program and its Revised "Section DSM-3" Rate Schedule, which EKPC submitted on June 30, 2008, are reasonable.

IT IS THEREFORE ORDERED that:

1. EKPC's proposed permanent Demand-Side Management DLC program is approved.

2. EKPC's Revised "Section DSM-3" Rate Schedule is approved for service rendered on and after the date of this Order.

3. The proposed distribution cooperative rate schedule to implement EKPC's proposed DLC program and its Revised "Section DSM-3" Rate Schedule, which EKPC submitted on June 30, 2008, is approved for service that EKPC's distribution cooperatives render on and after the date of this Order.

4. Within 20 days of the date of this Order, EKPC shall file with the Commission an executed copy of its Revised "Section DSM-3" Rate Schedule that conforms with the provisions of 807 KAR 5:011, Sections 3 and 6.

5. Within 20 days of the date of this Order, each EKPC distribution cooperative shall file with the Commission a rate schedule that conforms with the approved distribution cooperative rate schedule to implement EKPC's proposed DLC program and its Revised "Section DSM-3" Rate Schedule and the provisions of 807 KAR 5:011, Sections 3 and 6.

6. Subject to the filing of timely petition for rehearing pursuant to KRS 278.400, these proceedings are closed. The Executive Director shall place any future filings in the appropriate utility's general correspondence file or shall docket the filing as a new proceeding.

Done at Frankfort, Kentucky, this 2nd day of October, 2008.

By the Commission

ATTEST:

Stephanie Stumbo

Executive Director