



Colorado Springs Utilities

*It's how we're all connected*

September 14, 2005

Edward F. Hulls, Operations Manager  
Rocky Mountain Customer Service Region (RMR)  
Western Area Power Administration  
P.O. Box 3700  
Loveland, CO 80539-3003

Dear Mr Hulls:

Enclosed are Colorado Springs Utilities comments regarding the proposed rate adjustment for regulation and frequency response service.

Sincerely,

Michael McAvoy  
System Operations Superintendent

WESTERN AREA POWER ADMINISTRATION  
LOVELAND AREA PROJECTS AND  
PICK-SLOAN MISSOURI BASIN PROGRAM

COMMENTS OF  
COLORADO SPRINGS UTILITIES

REGARDING THE PROPOSED RATE ADJUSTMENT FOR REGULATION AND  
FREQUENCY RESPONSE SERVICE

SEPTEMBER 14, 2005

Colorado Springs Utilities (Springs Utilities) owns and operates thermal and hydro generating resources with a total rated output of approximately 630 MW. Springs Utilities: 1) has allocations of power from the Colorado River Storage Project – Integrated Projects (CRSP-IP) and the Loveland Area Project – Integrated Projects (LAP-IP), 2) has a Purchase Power Agreement with Front Range Power Corporation, and 3) imports power under long- and short-term contracts. The 2005 peak system load of the Springs Utilities system was 830 MW.

The loads and generation resources of Springs Utilities are fully contained within a metered sub-area of the Western Area Colorado Missouri (WACM) control area. Four military installations located in Springs Utilities' service area receive LAP allocations: 1) the United States Air Force Academy, 2) the Cheyenne Mountain Air Force Station, 3) the Peterson Air Force Base, and 4) the Fort Carson Military Installation. Springs Utilities wheels LAP allocations to and supplies all the additional power requirements of these military installations.

Under the current WACM rate for regulation and frequency response service, Springs Utilities self-provides regulation service and, accordingly, does not pay regulation charges to WACM. Springs Utilities self-provides regulation service by continually matching generation to load and net interchange schedules through automatic generation control (AGC). Springs Utilities operates its AGC system in frequency tie-line bias mode in order to provide frequency response and to support frequency control within the western interconnection. Springs Utilities' frequency bias is currently set at - 10 MW/.1 Hz.

Springs Utilities uses a combination of natural gas-fired, coal-fired and hydro units for regulation and it schedules 5 MW of total capacity for regulation. Springs Utilities measures its Control Performance Standard 1 (CPS1) and Control Performance Standard 2 (CPS2) compliance as if its service area was a control area within the western interconnection. CPS1 is approximately 180% and CPS2 is approximately 97.5% for Springs Utilities; as a result, 5 MW of regulating capacity is adequate for the Springs Utilities' system.

Springs Utilities commends WACM for its efforts to develop a rate for regulation and frequency response service (Proposed Rate) that recognizes the costs associated with providing regulation service and that attempts to allocate those costs to the transmission customers that are responsible for the incursion of those costs. Springs Utilities understands the intent of the proposed rate adjustment and it is supportive of the Western Area Power Administration's (Western's) efforts to distribute the financial burdens associated with regulation service fairly and equitably among customers in the WACM control area. However, the Proposed Rate adds unneeded complexity to the rate-setting process. WACM's revenue requirement for regulation and frequency response service can be recovered without such a complex process.

WACM's Proposed Rate fails to assess the actual physical regulation burden placed on the system by each separate customer, regardless of the category or 'type' into which that customer has been grouped. Rather, the Proposed Rate improperly recovers costs from each customer in proportion only to the regulation burden placed on the system by each customer group. This mismatch occurs because the methodology used to develop the Proposed Rate creates seven different categories or types of regulation customers (conforming loads, non-conforming loads, generators, load with intermittent resources less than 10% of load, load with intermittent resources greater than 10% of load, self provision with AGC, and self provision without AGC), and then uses a different method to determine the regulation burden and associated charges for each of the seven groups.

A regulation rate based on the customer's actual physical impact on the system would be best. Such a rate can be achieved using the regulation allocation method described in the January 2000 report *CUSTOMER-SPECIFIC METRICS FOR THE REGULATION AND LOAD FOLLOWING ANCILLARY SERVICES*, by Brendan Kirby and Eric Hirst of Oak Ridge National Labs; that method results in a uniform, nondiscriminatory, technology neutral, and service consumption-based regulation rate. Such a methodology is reasonable and appropriate for use by the WACM when developing a revised rate for regulation and frequency response service.

Under WACM's Proposed Rate, Springs Utilities will fall into the self-provision types of regulation customer. Under those provisions of the Proposed Rate, it appears that Springs Utilities could choose to become either: 1) a Sub-Balancing Authority with Automatic Control of Generation and assist WACM with the regulation of the Control Area ACE, or 2) a Sub-Balancing Authority without Automatic Control of Generation and continue to control the Springs Utilities sub-area ACE.

If Springs Utilities chooses to become a Sub-Balancing Authority with Automatic Control of Generation, then it must respond to an error signal from WACM "proportional to the Sub-Balancing Authority's load within the Balancing Authority," which would be between 15 and 20 MW of the total 75 MW regulation requirement for the control area. To do so, Springs Utilities would need to schedule 10 MW to 15 MW of regulating capacity in addition to the capacity that it currently sets aside for regulation. In Springs Utilities' view, such an allocation of regulating burden based on load is inequitable.

Charges for regulation are more properly based on the volatility of the load, not on the average demand.

If Springs Utilities chooses to become a Sub-Balancing Authority without Automatic Control of Generation, then it would be subject to charges described in Appendix H of the proposed rate. This is also inequitable for the following reasons:

1. All regulation customers are not subject to the same regulation charge assessment methodology.
2. The assessment is based on the first derivative of SBAE as opposed to SBAE. The use of the derivative of SBAE is unique in the industry, and has not undergone adequate peer review. Springs Utilities believes that the method is technically invalid.
3. The limits of 0.5% and 1.5% to determine whether there is a full, partial or no charge for a period are completely arbitrary.
4. The assessment does not credit the sub area for providing frequency response service through frequency bias on AGC and governor response on generating units. Including interchange deviation only in SBAE will incent sub areas to set their frequency bias to zero, which will result in governor response being withdrawn by the AGC system during a disturbance.

Springs Utilities recommends that WACM abandon the present proposal and develop a rate regulation and frequency control service rate that uses technically defensible metrics to measure the actual physical regulation burden placed upon the system by each customer and that recovers costs from customers in proportion to the regulation burden they place on the WACM system.