ALJ/MSW/vdl

Decision 90 06 030 JUN 06 1990

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

In the Matter of the Application of GRAEAGLE WATER COMPANY to meter its existing flat rate customers, eliminate all flat rate water service, and revise its metered rate schedule (U-53W).

ORIGINAL

Application 88-09-033
(Filed September 15, 1988)

L. Thomas Hehir, Jr., Attorney at Law, for Graeagle Water Company, applicant.
Arthur Andreas, Attorney at Law, for Feather River Park Homeowners Association, and Lewis H. Robinson and Paiute Trail, for themselves; protestants.
Clinton Eli Tripp, for Graeagle Property Owners Association, and G. I. Patterson, for himself; interested parties.
Lawrence Q. Garcia, Attorney at Law, and Donald McCrea, for the Commission Advisory and Compliance Division.

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O P I N I O N

I. Summary of Decision

The request of Graeagle Water Company (GWC) for authority to convert from a flat rate to a metered rate system is denied. Metering has not been shown to be cost-effective, nor has it been shown that metering would result in significant reductions in water consumption in Graeagle. The proposed metered rate schedule would unnecessarily impose unreasonable financial burdens on some customers.

II. Background

A. System Description

Graeagle is a recreation and resort-oriented mountain community with a number of part-time and seasonal residents. It is located next to the Middle Fork of the Feather River in Plumas County. GWC provides public utility water service in and near this unincorporated community within a service area of 3.5 square miles. GWC is owned by Harvey E. West, Jr. and other members of the West family, which has other holdings in Graeagle, including the Graeagle Land and Water Company.[1]

At the time the application was filed, there were more than 650 customers, including 608 residential, 41 commercial, and 7 irrigation customers. Of these, one was on a metered rate schedule

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1 By Decision (D.) 89-07-012 in Application (A.) 88-12-057, we authorized the transfer of the water system from Harvey West, on behalf of all the partners of Graeagle Water Company, to Graeagle Water Company, Inc. In authorizing the transfer, we found that it would be merely a change in the form of ownership, and that there would be continuity in the management of the utility. By the terms of D.89-07-012, GWC has until July 31, 1990 to exercise the authority.

and the remainder were flat-rate customers. GWC has installed meters on 31 services.

The source of the system's water is a direct diversion from the flow of Gray Eagle Creek. In summer months the natural creek flow is enhanced by release of water from Long Lake, located approximately four miles upstream. The water is pre-chlorinated and processed at a filter plant which runs on a gravity feed basis in the winter months and with the assistance of 20 hp. pumps in the summer months. Polymer is added to the water to remove microorganisms. From the filter plant the water goes into a 210,000-gallon steel storage tank, and from there it enters the distribution system.

In 1987 the total system water production was 247.2 million gallons. During that year the Graeagle Meadows Golf Course obtained its own water source for irrigation and ceased to be a customer of GWC. If that customer had been off the system for the entire year, total usage would have been an estimated 227.6 million gallons, or an average of 340,000 gallons per customer for all customers. Recorded system production in 1988 was 213.27 million gallons.

B. Previous Commission Actions

In 1978 the utility filed an advice letter seeking approval of metered rate schedules. The request was granted by Resolution No. W-2429 dated September 19, 1978. In 1979 a complaint (Case 10762) was filed by O. B. Olsen, Jr. and more than 50 other customers who, among other things, opposed metering.

In O. B. Olsen, Jr. et al. v. Graeagle Water Co. (1980) 3 CPUC 2cd 633 (not printed), D.91741, the Commission stated that although it generally supports metering of utility services to promote conservation and fairly recover revenue based on usage, there were unique factors present in Graeagle. The Commission found that water was abundant, that service was good, and that meters were not necessary at that time. It vacated GWC's authority

to charge metered rates pending further order, but also noted that growth and the prospect of treatment facilities might support metering in the future. (Construction of the filter plant began the following year.)

The Commission also found that the authorized metered rates would produce grossly excessive revenue, and stated two particular concerns in this regard. First, it is necessary for customers in Graeagle to allow their water to run to waste in the winter to prevent pipes from freezing. Second, the rates would have imposed inordinate costs for golf course irrigation. The Commission indicated that GWC should address these concerns in any subsequent proceeding where the reasonableness of metering is an issue.

GWC's currently authorized revenue requirement and its authorized rate schedules were established by D.88-10-056 dated October 26, 1988 in A.87-11-001, its last general rate case. That decision also authorized GWC to establish metered rate service for one additional customer, the Smith Creek Mutual Water Company (Smith Creek). As of May 9, 1989 Smith Creek had not requested service.

C. Summary of Application

GWC requests authority to install meters on its existing and future customers, file a proposed metered rate schedule to replace the existing schedule, eliminate flat-rate water service and seasonal water service, bill only the service charge under the metered rate schedule during the "winter" months of November through February, and establish a balancing account to track future metered revenues and return any excess revenues to its customers.

GWC proposes to proceed to meter commercial and irrigation customers as soon as possible after it receives authorization to do so. Metering of residential customers would be done under a plan yet to be developed.

The proposed schedule of metered rates provides service charges ranging from $10.60 per month for a 5/8- x 3/4-inch meter to $87.40 per month for a 4-inch meter. Monthly quantity charges, applicable from March through October, would be based on the following rates:

First 1,500 cu. ft., per 100 cu. ft.....	$ .82
Next 18,500 cu. ft., per 100 cu. ft.....	.64
Over 20,000 cu. ft., per 100 cu. ft.....	.45

Stating that it is "exceedingly difficult" to estimate future consumption under metered rates, and that it will take time for a consistent revenue level to develop, GWC proposes to limit its revenue under metered rates to the level found reasonable in D.88-10-056. This would be accomplished by a "balancing account" which would be used to return excess revenues to customers. The utility would assume the risk of any revenue deficiency which might result from metering until it obtained rate relief in a future proceeding. Thus, the account would not be used for any revenue shortfall.

D. Hearings

Four days of public participation and evidentiary hearings held in the community of Graeagle were well-attended by customers. Testimony and evidence was presented on behalf of GWC, the Feather River Park Homeowners Association (FRPHA), the Graeagle Property Owners Association (GPOA), and the Water Utilities Branch of the Commission Advisory and Compliance Division (Branch). A total of 12 witnesses testified, including five professional engineers and utility consultants appearing as expert witnesses.

III. Positions of the Parties and Public Participants

A. Parties

GWC states in the application that the major purpose of metering is to change its customers' use patterns. It alleges that

due to possible drought, "it is prudent to prepare and to conserve water," and that metering will provide an incentive to conserve water and eliminate wasteful usage. Further, the application alleges that flat-rate service encourages discrimination since all residential customers pay the same amount regardless of usage, and it is "almost impossible" to develop flat rates that reflect the individual demands of commercial and irrigation customers. Finally, it alleges that by decreasing water consumption, metering will extend the useful life of its filter plant, thereby avoiding the need for a "prohibitively expensive" additional plant or expansion of the current plant, and will help to defer other major capital expenditures.

One of the concerns raised by opponents of metered rates in the 1979-80 metering case was the effect such rates could have on bills in the winter months, when it is necessary for some customers to run water continuously to prevent pipes from freezing. To address this concern, GWC now proposes to forego reading meters for service from November through February, alleging that water usage is not a problem during the winter months.

FRPHA operates a nine-hole golf course, swimming pools, tennis courts, and other recreational facilities as a resort. It rents out approximately 35 individually owned cabins. The golf course is on a flat-rate schedule for irrigation, and FRPHA faces large increases in its water bills if the metering proposal is adopted. Estimates of the amount of increase ranged from 150% to 1,200%. FRPHA opposes the application.

Branch is neutral on the question of whether the utility should be converted to a metered system. If metering is authorized, Branch recommends that it be accomplished in a way which minimizes the impact on existing customers. In particular, Branch recommends allowing FRPHA to remain on the flat-rate schedule if the rest of the system is metered. In the alternative

Branch recommends a declining block metered rate schedule and a limit on any rate increase for the FRPHA golf course.

GPOA is a group of approximately 490 homeowners. A poll of its members was taken in early 1989 in which 446 people voted. The members opposed metering by a ratio of three to one. After the hearings GPOA refined its position to recommend retention of flat rates for homeowners and metering for commercial and "agricultural" (i.e. irrigation) customers. GPOA believes the Branch proposal to exempt the FRPHA golf course from metering if the rest of the system is metered is both inequitable and inconsistent with conservation goals.

G. I. Patterson did not offer testimony but was allowed to participate as an interested party. He opposes metering, arguing, among other things, that water is abundant in Graeagle and that metering would not be cost-effective.

B. Public Participants

Branch reports that it received 19 letters from customers who oppose the proposal to meter the system, and 3 letters in support of the proposal. After the Branch report was issued, the Commission received letters from four customers in opposition to metering and from four in support of metering.

In the public participation phase of the hearings, 13 customers offered statements addressing issues raised in the application. Of these, three stated they supported metering as a means of promoting conservation by customers and more equitably apportioning costs to users. They cited examples of water waste, such as the practice of some water users who sprinkle their roofs in the summer for cooling. Two speakers opposed the proposal of Branch to exempt the FRPHA golf course if metering is authorized. They believe metering to achieve conservation does not make sense if a large user is excluded.

The other speakers either explicitly opposed the company's proposal or pointed to problems with the proposal and/or the rationale for it. Among their concerns and allegations were the following:

1. The utility has not previously taken measures to promote conservation and eliminate waste. In fact, the company suggests running water in the winter to avoid freezing pipes.

2. Strong conservation measures are not needed in Graeagle since water supply is adequate or plentiful. High water use for landscape maintenance merely results in percolation or surface runoff where the water is returned to the natural runoff; thus the water is not really wasted. Moreover, landscape maintenance benefits the community in general and the owners of GWC and related companies in particular.

3. If excess water usage and waste is a problem the company should first attempt direct conservation efforts before going to the expense of metering. Also, if metering is required for conservation, it should be on a year-round basis.

4. Metering involves significant costs and may not be effective on a long-term basis in reducing consumption.

IV. Motion to Terminate

After the hearings began, FRPHA moved to terminate the proceeding and deny the application based on the contention that the notice of the application mailed by GWC to its customers is defective in failing to comply with Rule 24 of the Commission's Rules of Practice and Procedure. The rule states in relevant part that after filing an application "to increase any rate of charge," the applicant utility shall furnish affected customers, by mail, with notice of the application. The notice must "state the amount

of the proposed increase expressed in both dollar and percentage terms.[2]

FRPHA argues that although the notice mailed by GWC specified the proposed metered rates, it did not indicate the effect, in dollar terms, of the increases above the metered rates in effect when the application was filed or those in effect a little more than a month later when rate adjustments were authorized by D.88-10-056 (GWC's last general rate case). The administrative law judge (ALJ) denied the motion to the extent it requested immediate termination of the hearings and took the remaining question under advisement.

The motion is in effect a motion to dismiss the application due a procedural defect in the filing and notice process. Such motions are governed by Rule 56 of our Rules of Practice and Procedure, which provides that motions based on the pleadings or on any matter occurring before the first day of hearing shall be filed on five days' written notice and served on the parties. The notice was mailed to all customers on September 29, 1988. Clearly FRPHA could have and should have raised the issue long before the commencement of hearings in June 1989. The notice was incomplete, but the objection was not timely raised. Moreover, even if the objection had been timely made, the defect in the notice was not unfair or prejudicial. The present metered rates are in essence paper rates, and increases in them will have no practical effect on any customer. The record indicates that the one current metered customer, the U. S. Forest

2 The subject language in Rule 24 is based on the requirements of Public Utilities (PU) Code § 454(a) as it read when the application was filed. A recent amendment to § 454 (Statutes of 1988, Ch. 108) made the notice requirement applicable to rate changes and not just increases. It retained the requirement to state the change in dollar and percentage terms.

Service, is a large user which would enjoy a reduction in its bills if the proposal were adopted.

We conclude that while the notice was deficient in failing to express the proposed metered rate increases in dollar terms, such deficiency is not fatal in view of the unique circumstances of this case. The motion will be denied.

V. Section 781

FRPHA and Branch contend that this proceeding is governed by PU Code § 781, which establishes conditions that the Commission must find in existence before it requires a water corporation to install water meters on unmetered service connections. GWC believes that § 781 (all code references are to the PU Code unless otherwise indicated) is inapplicable since this is a proceeding in which the utility has applied for authority to meter its system and not one in which the Commission is attempting to order metering. The company also believes that the statute may, by its own terms, apply only to residential metering. GWC also contends, however, that it has fully met the burden of proof for the specified findings. GPOA refers to the required findings as if they are applicable but does not argue for or against the statute's applicability.

§ 781 provides in full:

> "781. The commission shall not require any water corporation which furnishes water for residential use through five or more service connections or which serves an average of 25 or more persons per day for at least 60 days per year, nor any residential customer of such corporation to install any water meter at any water service connection between the water system of the corporation and the customer if on January 1, 1979, such service connection was unmetered except after a public hearing held within the service area of the corporation at which hearing all of the following findings have been made:

"(a) Metering will be cost effective within the service area of the corporation.

"(b) Metering will result in a significant reduction in water consumption within the service area of the corporation.

"(c) The costs of metering will not impose an unreasonable financial burden on customers within the service area of the corporation unless it is found to be necessary to assure continuation of an adequate water supply within the service area of the corporation."

This issue was squarely before us in Application of PG&E Co. (1980) 4 CPUC 2cd 693 (not printed), D.92489. In that case, PG&E (operator of the Jackson Water System) had contended that before it could install meters in areas where flat rates were applicable, it was necessary for the Commission to make appropriate findings pursuant to § 781. The affected customers were strongly opposed to metering. PG&E had taken the position that the Legislature wanted the § 781 findings made not only if the Commission was going to mandate metering but also if the utility as a discretionary matter decided on its own volition to meter. In that proceeding the Commission's staff contended that unless the Commission mandates metering, the findings required by § 781 need not be made.[3] We found no merit in PG&E's contention, stating:

"To interpret Section 781 in the manner advocated by PG&E, it would be necessary to interpret the word 'require' to mean 'allow' or 'permit'. This would be contrary to the basic rules of statutory construction.

3 D.92489 preceded the separation of advocacy and advisory functions of the staff into separate operating divisions. Thus it was common at that time for the Commission to simply refer to "staff."

'We begin with the fundamental rule that a court "should ascertain the intent of the Legislature so as to effectuate the purpose of the law." (Select Base Materials v. Board of Equal. (1959) 51 Cal. 2d 640, 645 [335 P. 2d 672].) (4) In determining such intent "[t]he court turns first to the words themselves for the answer." (People v. Knowles (1950) 35 Cal. 2d 175, 182, [217 P. 2d 1], cert. den. 340 U.S. 879 [95 L ed 639,71 S.Ct. 117.] (5) We are required to give effect to statutes "according to the usual, ordinary import of the language employed in framing them." [Citations omitted,] (Moger v Workmen's Comp. Appeals Bd. (1973) 10 C 3d 222, 230.)'

"The word 'require' means 'to demand of (any one) to do something'. (The Shorter Oxford English Dictionary (1973) p. 1803.) It is not in conflict with any other word in Section 781 and needs no construing or harmonizing. The Commission concludes that the findings provided for in Section 781 need be made only when it mandates metering." (D.92489, mimeo. p. 14.)

* * *

"Conclusions of Law

"1. The findings provided for in Section 781 of the Public Utilities Code need be made only when the Commission requires the installation of meters." (D.92489, mimeo. p. 55.)

We conclude that § 781 is not applicable in this case, but we also note that GWC has agreed to proceed as if it does apply. Further, we agree with Branch that the standards in § 781 are "prudent, reasonable and make sense," and that no party has argued that we should ignore the standards. In view of this, and our belief that the standards are consistent with sound regulation of utility rates and practices, we will apply them as guidelines in considering GWC's request.

We need not reach a determination on the question raised by GWC of whether the statute affects only residential metering. Because we believe the criteria represent reasonable guidelines for this case, we will consider them for all of GWC's customers and not just residential customers.

VI. Cost-Effectiveness

In evaluating the cost-effectiveness of converting to a metered system, we are concerned with the long-term impact on all ratepayers. We cannot merely consider the dollar cost of installing meters and alternative investments in plant. We must also consider the value of such alternatives over their expected service lives as well as their impact on operational costs. Thus, metering would be cost-effective if for the future the utility's revenue requirements would be lower as a result of metering.

The benefits of conversion claimed by GWC are the avoided or deferred capital costs which would otherwise be incurred by expanding the filter plant and adding storage capacity, and a reduction in water production costs such as pumping and chemicals. GWC maintains these benefits will outweigh the capital costs of installing meters and ongoing costs such as maintenance and meter reading.

FRPHA asserts that conversion to metering will impose net additional costs of approximately $55,000 per year, or the equivalent of $6.75 per customer per month. GPOA estimates that metering will cost $27,000 per year, including operational costs and amortization of installation cost. Neither of these estimates includes an allowance for capital expenditures that may be avoided by metering. Branch witness Donald McCrea does not believe that metering has been demonstrated to be cost-effective.

A. Cost of Installation

GWC's consulting engineer Martin Abramson estimates the cost of installing 652 meters to be $90,000. The material cost used by Abramson for a 5/8- x 3/4-inch meter is $36.20 each, including the meter, the coupling, and sales tax. No material cost was included for meter boxes since these are already installed on every service. Labor cost was estimated at $90 per meter, based on a labor cost of $20 per hour. Larger meters would cost more to install.

FRPHA's utility consultant Edward Cooke believes the installation cost will be substantially greater. His estimate was $182,200 for 635 meters, based on $287 per meter for labor and materials. During the hearings he revised this estimate upward to $346 per meter, and indicated that $182,200 is a very conservative estimate. The revision was based primarily on his determination after he arrived in Graeagle that it would be necessary to reposition the meter boxes, requiring more labor than he had originally estimated, and his discovery that the company's labor cost cost is $20 per hour. He had used $15 per hour in his original estimate. Cooke also determined that his original $36 estimate for the meter itself should be increased to $85, based on statements made during the public participation phase of the hearings. On cross-examination Cooke acknowledged that a curb stop and a meter box and lid, items included in the $287 estimate, would be unnecessary.

GPOA's consulting engineer Larry Fites concluded that the cost of meters would probably exceed the cost of adding needed storage capacity to the system. In doing so he used an assumed installation cost of $300 per meter.

We conclude that GWC's estimate of $90,000 is the most reliable. A major reason for the difference in the parties' projections is the estimated amount of work required to install meters. GWC's estimate of four man-hours per meter is based in

part on the personal experience of one of the partners, Daniel West, in installing meters in an existing box, and reflects the need to reposition the boxes. We find it to be more reliable than Cooke's estimate of nine hours per meter. Also, Cooke's estimate includes a truck cost of $45 per meter, but the record shows that under a rental arrangement with Graeagle Land and Water Company, trucks are available to GWC for $3,500 per year and with no additional charge for their use in installing meters. Finally, we find GWC's estimate of the purchase price of meters to be more reliable since it was based on information from two independent sources and reflects the quantity which would be purchased.

B. Ongoing Cost of Metering

GWC estimates that additional operating expenses resulting from conversion to a metered system will be $4,652 per year. This is based on estimates of $2,000 for meter reading, $652 per year for billing, and $2,000 for repair and maintenance of meters. FRPHA believes that the equivalent of an additional full-time employee (one field worker and one office worker, each on a half-time basis) will be required with conversion to a metered system. FRPHA's estimated personnel cost is $26,000 per year.

GWC's estimate may be understated to some degree in that no allowance was made for additional office expenses other than for labor to run the computer for billing. However, we find on balance that its estimate is more realistic than FRPHA's. The assumption that an additional full-time equivalent employee will be required appears to be overstated. As GWC's witness Abramson testified, meters will be read five times per year under the proposal. His cost estimate is based on the projection that all of the system's meters could be read in 2-1/2 days, or 12-1/2 per year. Compared to meter reading performance elsewhere, this estimate appears to be reasonably conservative and reflective of conditions likely to be encountered in Graeagle. Similarly, witness West's estimate of one

man-day per month for repair and service of meters appears to be adequate.

C. Deferred and Avoided Capital Improvements

GWC states that the purpose of the application is to "protect" the filter plant. The company takes the position that unless the system is metered in the near future to reduce consumption, water requirements will approach the peak capacity of the filter plant.

According to GWC's witness Abramson, "if the current demand continues to increase and closes in on the plants's peak capacity ...it may be necessary to expand or build a new treatment plant." (Tr. V.1, p. 77.) He indicates that at present, over 50% of the plant's peak capacity is being used in the summertime. The peak demand occurs on certain days in the summer, generally on holidays. He believes that the peak capacity of the filter plant is critical because of the limitations of the system's storage capacity. Should the filter plant fail during the summer, only two hours of usage would be available in storage.

Abramson notes that a new storage tank to alleviate this situation may be required. Such an improvement would cost in excess of $100,000. GWC did not provide specific estimates of the cost of expanding or rebuilding the filter plant, but Abramson believes the cost would be well over $100,000. He also noted that the original filter plant was built in 1981 at a cost of $267,000.

Abramson also notes that although the utility has an adequate supply of water at Long Lake, continued drought and continued population growth in Graeagle might make necessary raising the dam to increase the lakes's storage capacity. Raising the dam would cost over $150,0000 and would require a use permit from the U.S. Forest Service.

FRPHA's witness Cooke believes that based on the system growth rate of the past eight years, demand on the filter plant's full capacity will not occur for another 15 years.

GPOA's witness Fites believes that present water storage facilities are or will soon be overtaxed if consumption is not reduced. According to Fites, although metering will enhance present storage capacity, additional storage will be needed with full buildout in Graeagle even with metering. He also believes that new capital investment is required now, either for metering or for the construction of a new storage tank(s). As previously noted, Fites asserts that the cost of meters would exceed the cost of such storage that would be added.

On this record we are unable to determine with any reasonable level of precision the cost of capital improvements that might be avoided or at least deferred as a result of conversion to a metered system. Nor are we able to determine with a reasonable degree of certainty whether or when such improvements would be required without metering. Although it is apparent that construction of a new filter plant equivalent to the existing plant would cost considerably more than the 1981 investment of $267,000 in the current plant when a decade of inflation is factored in, the record does not show that an investment of that magnitude is necessary to maintain an adequate margin of safety in filter plant capacity assuming that flat rates are retained and growth continues. GWC did not present any analysis of the cost of alternatives such as expansion.

It does appear that the filter plant has adequate capacity for current needs, and there is no showing of an immediate need to expand system filter plant capacity. It also appears that if substantial growth in customers and system demand occurs in the future, additional storage may be required even with metering. On the other hand, such additional storage may alleviate capacity problems with the filter plant, since, as Abramson noted, the critical nature of the plant's capacity is related to the limited storage capacity. Thus, converting to a metered system may be in

addition to and not in lieu of other capital improvements, especially a storage tank.

Clearly, the extent to which costs would be avoided or deferred depends on the effect of metering on consumption, which is discussed in a subsequent section. We note at this point, however, that applicant's primary concern is system capacity on a limited number of summer days when peak demand occurs, perhaps as few as two or three days per year. Even if metering is effective in promoting significant consumption reductions by users over a period of time (such as a billing period), it does not necessarily follow that reductions necessary to alleviate capacity problems on any particular day or at any particular hour will be achieved more effectively through metering than by other means such as education or direct appeals to customers. On the basis of metering alone, a customer who has taken overall steps to cut back on usage may not necessarily also shift consumption from day to night or from one day to the next.

D. Water Production Cost Savings

There was little controversy among the parties concerning GWC's estimates of operational savings associated with metering. The company estimates that the annual cost savings from reductions in system demand will be $1,800 for chemicals (chlorine and polymers) and $1,800 for power bills due to reduced pumping requirements. We note that the savings could be less if the degree of consumption reductions anticipated by the company is not realized.

Company officials also believe that liability insurance costs will be reduced with consumption reductions. However, this effect was not quantified, and accordingly we give little weight to this possibility in evaluating the cost-effectiveness of the proposal.

E. Conclusion-Cost-Effectiveness

Although GWC considers the capacity of the filter plant in relation to future system demand to be a critical issue in its decision to convert to a metered system, we are not provided with adequate information about costs of alternative means of increasing capacity. Moreover, the record shows that metering will not necessarily eliminate the need for storage tank capacity, but that if such storage is added, potential future filter plant capacity problems could be alleviated. Thus, we are placed in the position of weighing a known capital investment estimated to be $90,000 and increased operational costs of at least $4,652 annually against potentially avoided or delayed capital expenditures whose costs are not well-defined, and water production cost reductions of $3,600 annually. Further, the annual impact of alternative investments on revenue requirements is not specified. We conclude that conversion of GWC from a flat rate to a metered rate system has not been shown to be cost-effective.

VII. Water Consumption

A. Water Supply in Graeagle

The second guideline derived from § 781(b) is whether metering will result in a significant reduction in water consumption. We believe this determination should be made in the context of water resource availability within the system under consideration. Preventing unnecessary and excessive use of water is appropriate policy in California, but the meaning of "significant" in § 781(b) clearly depends on the unique circumstances of the system under consideration, including water availability and quality as well as the nature of demand for water. For a water system in an arid region with very limited supply, a small percentage consumption reduction could be quite significant. For a system enjoying inexpensive, plentiful, and high quality

water, the same percentage reduction may be relatively less significant.

GWC expresses some concern about its water supply if growth and drought continue, but the company's witness and FRPHA's and GPOA's witnesses all agree that the water supply in Graeagle is adequate to satisfy prospective demand. The company's witnesses acknowledged that periodically severe drought conditions elsewhere in California have not materially affected Graeagle. On the basis of water supply available to the community for the forseeable future, there is no indication that conservation measures are required.

While § 781(b) provides that significant reductions are required within the service area of the utility, we believe it is appropriate to consider the effects of system consumption outside the service area as well. If high levels of water use within a service area adversely affect water resources elsewhere, conservation measures might be warranted. We note that it was strongly urged by many of the public participants and in sworn testimony that the level of consumption in the community of Graeagle does not have an appreciable effect on the availability of water to other users downstream on the Feather River.

B. Effect of Metering on Consumption

GWC's witness Abramson believes that under flat rates, some of GWC's customers water their lawns, shrubs, and property longer than necessary and at their convenience, "often during the heat of a summer day when evaporation is at the highest." He believes that metering will penalize these users sufficiently to change such use patterns. Abramson also states that metering the system will allow comparisons of total customer usage with system production as measured by the master meter. This would provide the company with useful information for detecting leaks. He notes that leaks may occur through broken mains and elsewhere in a water system, referring to a nationwide estimate of 12% losses due to

leaks. Although the metered charges would be inapplicable during four winter months, temporarily removing the incentive to conserve each year, Abramson notes that overall system usage during the winter is at a minimum.

Abramson obtained residential consumption information for certain districts of a large multidistrict water utility. This data shows that the average consumption per customer in 7 flat-rate districts (in Bakersfield, Chico, Marysville, Oroville, Selma, Visalia, and Willows) of that utility in 1987 was 387.4 hundred cubic feet (Ccf) annually, or 2.35 times the average consumption of 165.0 Ccf in three of the utility's metered districts (in Salinas, San Carlos, and San Mateo). He also considered the usage in a small metered system in Tuolumne. Abramson testified that he relied on this data in estimating that metering will reduce the system usage by a factor of two to three (i.e., by one-half to two-thirds).

Gunther L. Sturm, a senior sanitary engineer with the Public Water Supply Branch of the California Department of Health Services (DHS), testified at the request of GWC. In addition to an excerpt from the State Water Works Standards which specify a 50% to 55% greater maximum day demand in flat-rate systems than in metered systems, Sturm presented several comparisons of average consumption in selected metered and unmetered water systems in nine counties in the Lassen District of DHS. The comparisons generally show that flat-rate system usage exceeds metered usage. For example, based on 1988 consumption, the average usage among a group of 10 flat-rate systems (including GWC) was 898 gallons per day per connection (GPDC). The average for GWC was 869 GPDC. The average flat-rate system usage exceeded the 650 GPDC average for 15 metered rate systems by 38%.

GPOA's witness Fites believes that metered water consumption charges will result in an average 25% reduction in consumption for the system, assuming that the FRPHA golf course

remains on the system. However, Fites also believes that metering will probably result in the development of an alternate water source for the golf course by FRPHA. If metering were to have that result, the estimated reduction would be 43%.

In the opinion of FRPHA witness Cooke, metering will initially but not permanently result in reductions among residential customers. He notes that commercial and irrigation customers may not be able to conserve without large capital expenditures. Cooke also disagrees with the company's contention that metering will be effective for detecting leaks in the transmission and distribution system, pointing out that even if discrepancies between production and consumption are found, such information would not help to identify the location of a leak in the extensive system of transmission and distribution pipes.

We agree with the contention that reductions due to metering must be relatively permanent to be considered significant. We note that the studies presented by GWC and DHS are static comparisons of different systems which do not address the dynamic, long-term consumption effects that occur when a given system is converted to metered rates.

We find GWC's comparisons of average residential consumption in unmetered cities like Bakersfield and metered cities like San Mateo to be of little probative value in evaluating the likely effects of metering on residential, commercial, or irrigation consumers in a mountain resort community like Graeagle. The comparisons are limited to residential usage, whereas the issue in Graeagle involves commercial and irrigation customers as well. GWC's comparisons (as well as those of DHS) do not account for such system differences as the number of irrigation customers which could partially explain consumption differences among systems. Similarly, we can give but limited weight to the excerpt from the State Water Works Standards, since there is no indication that the

standards are reflective of or applicable to conditions that are unique to Graeagle.

We find little support for GWC's contention that metering will reduce consumption by 50% to 67%. We do note that the DHS data show the 1988 average usage of 650 GPDC for metered systems to be 25.2% less than GWC's average of 869 GPDC. Despite the limitations noted for such a comparison, it appears to be the most valid of the system comparisons presented in this proceeding since it directly compares GWC with metered systems in DHS's Lassen District. We further note that it compares favorably with witness Fites' estimate of a 25% reduction assuming the FRPHA golf course remains a customer of GWC.

Based on the foregoing estimates, we conclude that metered rates might be expected to induce average consumption reductions of as much as 25% in the GWC system. In doing so, we assume that the FRPHA golf course will remain as a customer since FRPHA, which is a party to this proceeding, did not express a willingness and ability to leave the system. Assuming a 25% reduction is attainable, however, we have no basis for estimating how long it would take to achieve such reductions, or once attained, whether they would be permanent. We also note that on a year-round basis the reductions would be of lesser magnitude since GWC proposes to forego metered charges four months each year. Finally, we give little additional weight to the contention that metering will assist in the detection of leaks since any value from this effect would be reflected in the comparison with metered systems.

C. Other Sources of Reductions

During the hearings FRPHA questioned whether GWC had undertaken efforts to reduce consumption by its customers. GWC did not identify any such program in the past or anticipated in the future, with the exceptions of water-saving devices which were

distributed more than ten years ago and a flier sent out two years ago that may or may not have addressed water conservation.

In evaluating the reductions which may be attributable to the incentives of a metered rate system, it is relevant to consider alternative means of achieving reductions as well. If reductions can be achieved through such means as conservation education and appeals to customers, measures which can presumably be accomplished without great expense, then the reductions attributed to metering would be less than if such measures were not undertaken. There is no evidence that GWC has considered other potential measures as alternatives to metering.

D. Conclusion-Significance of Consumption Reductions

Since GWC's untreated water supply is adequate for current and forseeable future needs, the question of whether reductions expected from metering are significant is limited to consideration of the impact such reductions would have on the need for system improvements. Consumption reductions would be significant if major capital improvements otherwise required could be avoided due to the reductions. As noted previously, it has not been established whether, or to what extent, such improvements will be avoided or deferred by reducing consumption, or that metering is the most appropriate means of accomplishing reductions, particularly since the reductions most likely to be needed are peak hour or peak day reductions.

We conclude that it has not been shown that metering will result in long-term reductions in consumption, which are significant to the community of Graeagle, that cannot be effectively achieved through other means.

VIII. Financial Burden on Customers

A. Interpretation of the Guideline

The final guideline obtained from § 781 is from subdivision (c). It provides that the costs of metering should not impose an unreasonable financial burden on customers unless necessary to assure adequacy of water supply. We rule out the exception in this case since we have found that water supply is adequate in Graeagle.

There are two aspects of this guideline. First, the overall net costs of metering the system must be considered. We have already seen that the proposal fails in this regard because it was not shown to be cost-effective. It would not be reasonable to impose a financial burden due to costs from investments which will not result in a net benefit to ratepayers. The second aspect is the financial burden imposed on individual customers or classes of customers when metered charges are assessed. We address the latter aspect in this section.

We first observe that the language of § 781(c) does not preclude the imposition of any financial burden on customers; it only precludes those burdens which are unreasonable. If by their consumption practices some customers or a class of customers impose disproportionate production or capacity costs on a system, then increases in charges which are reasonably related to those costs may be permissible even though a substantial financial burden is imposed on those customers. A major purpose of converting any system from flat rates to metered rates is to require those who use the most water (and cost the most to serve) to pay more than other customers who do not cost as much to serve. Clearly, the framers of the language of § 781(c) could not have intended to prevent such a result.

B. Golf Course Consumption

In this case the financial burden issue centered on the FRPHA golf course. FRPHA and Branch believe that metering will impose an unreasonable financial burden because of the large bill increases that will result from application of the proposed metered charges. The parties' estimates of the impact on FRPHA varied because of the assumptions and time frames used for comparisons, but clearly the increase would be substantial. GWC estimates the current annual charges of $9,061 paid by FRPHA for all use, including the golf course, will increase to $22,941, an increase of approximately 150%. Branch estimates that based on July 1988 usage, the charge for that month would have been $4,239.30, or 361% greater than the one-month flat charge of $755.10. FRPHA's witness predicts an increase of 623% by comparing the $22,941 estimate under metered rates with the flat rate for the golf course only. GPOA's witness projects an increase of 1,200%.

By any measure water usage by the FRPHA golf course is substantial. According to witness Fites' estimates it accounts for 25% of all system use on an average summer day. Recorded consumption data for 1988 reflects somewhat lower but still substantial usage. From April through October 1988 FRPHA used from 20% to 24% of total system production. (The recorded consumption is for all of FRPHA's use, but the record shows the vast majority of this is for golf course irrigation.) For the entire year 1988, usage recorded by the meter installed on FRPHA's service was 48,017 Ccf, or about 16.8% of GWC's total production. This recorded usage did not include any amounts that may have been consumed by FRPHA in winter months. [4]

4 In April 1989 GWC advised FRPHA of possible leaks in the FRPHA facilities. Two leaks were subsequently discovered and corrected by FRPHA. Future use by FRPHA may be lower as a result.

GWC asserts that the current flat-rate system is discriminatory because of FRPHA's high use and relatively low contribution to total system revenues of about 5.6%. Similarly, GPOA estimates that typical summer day consumption by the golf course is equivalent to the consumption of about 266 residential customers. GPOA notes that the combined flat-rate charges paid by these customers is 19.4 times the $264 monthly flat charge paid by FRPHA for the golf course, i.e., residential customers pay 19.4 times the rate paid by FRPHA for the same amount of water. GPOA urges metering for the golf course as well as other commercial and irrigation customers, and believes this will provide an incentive for FRPHA to develop its own source of untreated water for irrigation.

GPOA asserts that Branch's proposal to keep FRPHA on flat rates if the rest of the system is metered would make a currently inequitable situation more so. GPOA estimates that under the proposed rates, it would increase the relative contribution by residents from 19.4 times to 34.3 times FRPHA's relative contribution. GPOA concludes that metering to achieve conservation without charging FRPHA an equitable metered rate would be "meaningless." GWC agrees that the entire system should be metered without exceptions.

We recognize that FRPHA's high usage and relatively low contribution to GWC's revenues creates at least a perception that the current flat-rate system is inequitable for the other customers. However, we cannot find that the discrepancy is unreasonable or discriminatory unless there is no reasonable relation to costs. The record does not allow us to do so in this case. In fact, there is reason for inferring that to some degree such a discrepancy in rates and usage may be justified. Undoubtedly it costs more to serve 266 customers than it does to serve just one customer using same amount of water. There is also some basis in this record for concluding that the costs of

producing water are relatively low. We note that GWC estimated that a 50% reduction in system water production would reduce treatment and pumping costs by just $3,600.

Although we reject the proposal to charge metered rates at this time, we are compelled to observe that on the basis of this record there would be no justification for exempting FRPHA from metered rates if the rest of the system were to be metered. This proposal resulted from the concern we expressed in D.91741 about inordinate increases in charges for golf courses, but we cannot ignore the significance of a single customer using as much as 20% or more of the treated water supply for irrigation during summer months when peak use creates the most critical impact on system capacity. If it were shown that metering were necessary to protect the ability of the system to provide service, or to remove undue discrimination, we would not hesitate to require FRPHA and any other large user to pay appropriate quantity charges for water even though a financial burden might well be imposed on such customers.

C. Other Customers

GPOA estimates that in the summer residential and small commercial customers currently pay 93.5% of the the total system water bill and use 66% of the water. GPOA believes that the proposed metered rates would create "reasonable parity" among classes of users.

As previously noted, creating a system of charges which merely results in proportionality of water consumption and charges paid cannot be justified unless the utility's cost structure is consistent with such charges. The mere fact that different classes of customers now pay disproportionate amounts does not, alone, warrant adoption of a schedule of charges which imposes a significant financial burden on one or more users.

D. Conclusion-Financial Burden on Customers

As a general rule, where a utility's ability to provide service is in jeopardy, or where undue discrimination is shown to exist, for customers who consume large quantities of water, substantial increases in charges, even increases of several hundred percent, might be warranted in some circumstances. Such increases are not precluded by the language of § 781(c) if they can be shown to be reasonable.

GWC's proposed metered rate schedule would impose a significant financial burden on FRPHA and perhaps other large users, but it has not been shown that the current rates are unduly discriminatory or that the proposed realigning of charges is needed to address any discrimination that may exist. We conclude that the proposed metered rate schedule would unnecessarily impose an unreasonable financial burden on FRPHA and perhaps other customers.

IX. Other Issues

A. D.91741

Elements of GWC's proposal were offered in response to concerns we raised in 1980 by D.91741 concerning any future attempt to meter the system. These include the balancing account mechanism for returning possible excess revenues to customers and the elimination of quantity charges in winter when water is run to prevent freezing pipes. It is not necessary to address the issues raised concerning these elements in this decision since we are denying the proposal to assess metered charges.

B. Further Proceedings

G. I. Patterson recommends that the Commission advise that a period of time should elapse before another request to meter the system is considered. The purpose would be to allow the development of more information about the effects of metering,

evaluation of educational measures, and pursuit of similar measures.

Although this proposal appears to address the concerns we have expressed in this decision, we decline to specify a period of time that GWC must await before again pursuing the issue of metering. We have stated in considerable detail our concerns about this proposal, in part to advise parties of our concern for the future of this system. While it has not been shown that metering is necessary or appropriate at this time, we do not rule out the possibility that it would be in the future. Assuming that such options as conservation education (and even such innovations as establishment of peak hour interruptable service conditions for some customers) are considered and found not to be as effective as metering would be in addressing future capacity problems, we would not want to preclude the metering option.

GWC should actively pursue conservation measures designed to promote reduced consumption among all classes of customers, particularly consumption during critical peak demand periods. We encourage Branch and other parties to work cooperatively with GWC in developing and implementing such measures. Since GWC has already installed meters on 31 services, including FRPHA's, it should be able to make consumption comparisons which are useful in evaluating the impacts of these measures. If at any time in the future GWC decides to again seek authority to convert one or more classes of customers to metered rates, it should be prepared to show what conservation measures have been taken, and that such measures were not effective in achieving significant reductions.

X. Proposed Decision

The proposed decision of the ALJ was filed with the Commission and served upon all parties on April 10, 1990. GWC filed comments in which it requested that the proposed decision be

"rewritten to grant Applicant's request." No other party filed comments or replies to GWC's comments. We have carefully reviewed the comments and have determined that only minor changes in the text should be made. These have no effect on the findings, conclusions, or disposition of this matter, and do not require discussion. However, we are moved to comment on GWC's assertion that the DHS comparison of average water consumption in 10 flat-rate systems and 15 metered systems "showed average savings of 38% (Finding of Fact 28)." (Emphasis added.) A correct reading of Finding of Fact 28 in the proposed decision is that average consumption in the flat-rate systems exceeded that of the metered systems by 38%. If B is 38% greater than A, it cannot follow that A is 38% less than B.

The findings, opinion (as modified), and order made in the proposed decision are approved and confirmed by today's order, and are the findings, opinion, and order of the Commission.

Findings of Fact

1. At the time the application was filed, GWC had more than 650 customers, including 608 residential, 41 commercial, and 7 irrigation customers. Of these, one was on a metered rate schedule and the remainder were flat-rate customers.

2. D.91741 precludes GWC from charging metered rates except upon further order of the Commission.

3. GWC mailed notice of the application to its customers shortly after the application was filed and approximately eight months prior to the commencement of hearings.

4. The application notice did not indicate the effect, in dollar terms, of the proposed metered rate increases above the rates in effect when the application was filed or those subsequently authorized by D.88-10-056.

5. FRPHA did not raise an issue of deficiency of notice of the application until after hearings began.

6. Proposed changes in the metered rate schedules apply only to the one metered customer, the U. S. Forest Service; this customer is a large user which would enjoy a reduction in its water bills if the proposal were adopted.

7. No party contends that we should ignore the standards of § 781.

8. GWC's $90,000 estimate of the cost of installing 652 meters is the most reliable of the parties' estimates.

9. The estimate that all of the system's meters could be read in 2-1/2 days, or 12-1/2 per year appears to be reasonably conservative and reflective of conditions likely to be encountered in Graeagle.

10. The estimate of one man-day per month for repair and service of meters appears to be adequate.

11. GWC's estimate that additional operating expenses resulting from conversion to a metered system will be $4,652 per year is reasonable.

12. Peak demand occurs on certain days in the summer, generally on holidays.

13. Over 50% of the filter plant's peak capacity is being used in the summertime, but the plant appears to have adequate capacity for current needs, and there is no showing of an immediate need to expand system filter plant capacity.

14. If the filter plant were to fail during the summer, only two hours of usage would be available in storage.

15. Additional storage may be needed with full buildout in Graeagle even with metering.

16. A new storage tank to alleviate the potential problem of inadequate storage for peak demand may be required at a cost in excess of $100,000.

17. The cost of expanding or rebuilding the filter plant could be well over $100,000.

18. The record does not show that an investment equivalent in magnitude to the 1981 investment of $267,000 in the existing filter plant is necessary to maintain an adequate margin of safety in filter plant capacity assuming that flat rates are retained and growth continues.

19. We are unable to determine with any reasonable level of precision the cost of capital improvements that might be avoided or at least deferred as a result of conversion to a metered system, nor are we able to determine with a reasonable degree of certainty whether or when such improvements would be required without metering.

20. The estimated annual cost savings from reductions in system demand will be $1,800 for chemicals (chlorine and polymers) and $1,800 for power bills due to reduced pumping requirements, assuming the consumption reductions anticipated by the company are realized.

21. Metering will not necessarily eliminate the need for storage tank capacity, but that if storage is added, potential future filter plant capacity problems could be alleviated.

22. Conversion of GWC from a flat rate to a metered rate system has not been shown to be cost-effective.

23. The parties agree that untreated water supply in Graeagle is adequate to satisfy prospective demand.

24. Periodically severe drought conditions elsewhere in California have not materially affected Graeagle.

25. On the basis of water supply available to the community for the forseeable future, there is no indication that conservation measures are required.

26. The level of consumption in the community of Graeagle does not have an appreciable effect on the availability of water elsewhere.

27. Average consumption data from selected metered and unmetered water systems in nine counties in the Lassen District of

DHS generally show that flat-rate system average usage exceeds metered system average usage.

28. Based on 1988 consumption, the average usage among a group of 10 flat-rate systems (including GWC) exceeded the average for 15 metered rate systems by 38%.

29. GPOA estimates that GWC's proposed metered charges will result in an average 25% reduction in consumption for the system.

30. Static comparisons of consumption among different systems do not address the dynamic, long-term consumption effects that may occur when a given system is converted to metered rates.

31. Comparisons of average residential consumption in unmetered cities like Bakersfield and metered cities like San Mateo are of little probative value in evaluating the likely effects of metering on residential, commercial, and irrigation consumers in a mountain resort community like Graeagle.

32. GWC's comparisons (as well as those of DHS) do not account for such system differences as the number of irrigation customers which could partially explain consumption differences among systems.

33. The 1988 average usage of 650 GPDC for metered systems is 25.2% less than GWC's average of 869 GPDC, and this estimate compares favorably with GPOA's estimate of a 25% reduction.

34. Metered rates might be expected to induce average consumption reductions of as much as 25% in the GWC system, but on a year-round basis the reductions would probably be less since GWC proposes to forego metered charges four months each year.

35. FRPHA, which is a party to this proceeding, did not express a willingness and ability to leave the system.

36. There is no evidence that GWC has considered other potential measures such as education as alternatives to metering.

37. Consumption reductions would be significant if major capital improvements otherwise required could be avoided due to the reductions.

38. It has not been shown that metering will result in long-term reductions in consumption, which are significant to the community of Graeagle, that cannot be effectively achieved through other means.

39. Estimates of the impact of the proposed metered rate schedule on FRPHA varied from 150% to 1200%, but in any event the increase in FRPHA's cost of water would be substantial.

40. FRPHA's usage, most of which is for golf course irrigation, accounts for a substantial portion of total system consumption, with one estimate showing it to be 25% of all system use on an average summer day, and recorded consumption data for 1988 showing it to be from 20% to 24% of total system production during the period April through October.

41. For the entire year 1988, FRPHA used at least 16.8% of GWC's total production and contributed approximately 5.6% of total system revenues.

42. Residential customers pay 19.4 times the rate paid by FRPHA for the same amount of water, and the proposal to exempt FRPHA from metering if the rest of the system is metered would increase the relative contribution by residents from 19.4 times to 34.3 times FRPHA's relative contribution.

43. GPOA estimates that in the summer residential and small commercial customers currently pay 93.5% of the the total system water bill and use 66% of the water.

44. It is reasonable to infer that it costs more to serve 266 customers than it does to serve just one customer using same amount of water, and that the costs related to producing water are relatively low.

45. The proposed metered rate schedule would impose a significant financial burden on FRPHA and perhaps other large users.

46. It has not been shown that the current rates are unduly discriminatory or that the proposed realigning of charges is needed to address any discrimination that may exist.

47. The proposed metered rate schedule would unnecessarily impose an unreasonable financial burden on FRPHA and perhaps other customers.

Conclusions of Law

1. In accordance with Rule 56 of the Commission's Rules of Practice and Procedure, FRPHA should have raised the issue of deficient notice of the application before the commencement of hearings.

2. Notice of the application was deficient in failing to express the proposed metered rate increases in dollar terms, but the deficiency is not fatal in view of the unique circumstances of this case.

3. The motion of FRPHA to terminate the proceeding should be denied.

4. The findings provided for in PU Code § 781 need be made only when the Commission requires the installation of meters.

5. It is appropriate to apply the standards set forth in § 781 as guidelines in considering GWC's request.

6. The meaning of "significant" in § 781(b) depends on the unique circumstances of the system under consideration.

7. In evaluating the reductions which may be attributable to the incentives of a metered rate system, it is relevant to consider alternative means of achieving reductions as well.

8. The language of § 781(c) does not preclude the imposition of any financial burden on customers; it only precludes those burdens which are unreasonable.

9. We cannot find that the discrepancy in the relative contributions to revenues and the proportions of water used by customers and among classes of customers is unreasonable or discriminatory unless there is no reasonable relation to costs.

10. The mere fact that classes of customers now pay amounts disproportionate with their usage does not alone warrant adoption of a schedule of charges which imposes a significant financial burden on one or more users.

11. Because it has not been shown that metering would be cost-effective or that it would result in consumption reductions significant to Graeagle, and because the record shows that metering would unnecessarily impose a financial burden on one or more customers, the request of GWC for authority to convert from a flat rate to a metered rate system should be denied.

O R D E R

IT IS ORDERED that:

1. The request of Graeagle Water Company for authority to eliminate flat rates and charge metered rates is denied.

2. The motion of Feather River Park Homeowners Association to terminate the proceeding is denied.

3. Decision 91741, as previously modified, remains in full force and effect.

4. Application 88-09-033 is closed.

This order becomes effective 30 days from today.

Dated June 6, 1990, at San Francisco, California.

G. MITCHELL WILK
President
FREDERICK R. DUDA
STANLEY W. HULETT
JOHN B. OHANIAN
PATRICIA M. ECKERT
Commissioners

I CERTIFY THAT THIS DECISION WAS APPROVED BY THE ABOVE COMMISSIONERS TODAY

NEAL J. SHULMAN, Executive Director