A meeting of the Carson City Utilities Advisory Committee was scheduled for 3:00 p.m. on Friday, August 16, 2002 in the Cooperative Extension Conference Room, 2621 Northgate Lane, Suite 12, Carson City, Nevada.

PRESENT: Chairperson Ron Knecht
Vice Chairperson Glen Martel
John Degenkolb
Craig Mullet
Larry Osborne
James Polito
James Riggs
Jeffrey Smeath

STAFF: Andy Burnham, Development Services Director
Tom Hoffert, Utilities Operations Manager
David Heath, Finance Director/Risk Manager
Nick Providenti, Accounting Manager
John Bonow, Consultant
Kathleen King, Recording Secretary

NOTE: A tape recording of these proceedings is on file in the Clerk-Recorder's Office and is available for review and inspection during regular business hours.

A. CALL TO ORDER AND DETERMINATION OF A QUORUM (1-0024) **-** Chairperson Knecht called the meeting to order at 3:05 p.m. Roll was called; a quorum was present. Member Langson was absent.

B. APPROVAL OF MINUTES - None.

C. PUBLIC COMMENT (1-0060) **-** None.

D. MODIFICATION OF AGENDA (1-0072) **-** None.

E. DISCLOSURES (1-0078) **-** Vice Chairperson Martel advised of providing an update to the Builders Association of Western Nevada Board during their weekly meeting. Member Mullet advised of providing an update to the Chamber of Commerce Manufacturers Subcommittee, and that the Manufacturers Subcommittee was informed of the 1% sewer and water franchise fee. Chairperson Knecht advised of speaking with Mayor Masayko, who requested that the Committee present the Board of Supervisors with revenue requirements options, including possibilities of deferring non-cash expenses, and expressed a concern regarding an efficient, equitable rate structure which reflects cost causation on the system. Chairperson Knecht further advised of a meeting with City Manager John Berkich and other City staff members, who expressed a concern regarding hindrances to economic development.

F. PUBLIC MEETING ITEMS:

F-1. PRESENTATION, DISCUSSION, AND POSSIBLE ACTION REGARDING OVERVIEW OF WATER AND WASTEWATER UTILITY RATE STRUCTURES AND CALCULATION METHODS (1-0151) **-** Mr. Hoffert briefly summarized the discussion which took place at the last meeting. Mr. Bonow suggested considering this item in terms of discreet elements. There are costs to be recovered in some way, shape, or form. Defining the costs can be done in a number of ways which represents one element. The second element is how to allocate those costs to particular customer classes. In response to a question, Mr. Bonow provided clarification regarding the costs to be recovered. He explained that the costs are defined as revenue requirements, which can be generated from a variety of customers based on allocation. All of this precedes the discussion which took place at the last meeting. In response to a question, Mr. Heath advised that water/wastewater utility accounting is done on an accrual basis. Mr. Bonow advised that it is important to understand "revenue requirements," and suggested that this is a better term to use. Without regard to rate design or rate structures, actual levels of revenue have been insufficient.

Mr. Bonow clarified that, on the accrual basis, revenues are recognized when billed not when received. He acknowledged that liabilities are recognized as they are incurred; the concepts of accounts receivable and accounts payable are germane to the discussion. In response to a question, Mr. Heath advised that the percentage of uncollected billings is very, very small. There would be very little difference between cash and accrual in terms of revenue requirements because the fluctuation of receivables and payables is very minor. Depreciation is the largest non-cash item listed on the income statement. Mr. Bonow noted that, by accounting definitions, depreciation may not be entirely reflective of capital replacement costs because of the actual versus presumed life of infrastructure. Mr. Heath acknowledged that depreciation is the only non-cash item to consider.

Mr. Bonow explained that revenue requirements need to be defined and then a determination made regarding the portions of the rate base from which revenues will be generated. This is where terms such as base excess capacity, commodity demand, etc. come up. Extracting revenue requirements from the rate base requires a method. Mr. Bonow acknowledged that the 1989 study used the base excess capacity method. Revenue requirements were defined and allocated, and then a fundamental revenue base to cover certain costs was established. Everything else was commodity-based. Mr. Bonow referred to the demand curves distributed at the last meeting, and explained that they are one way of looking at base excess capacity in the extreme. In response to a question, he explained that different types of costs are known but latitude exists regarding how much revenue needs to be generated. He acknowledged that the minimum level of revenue requirements is known. Revenue requirements are recovered by allocating them to particular customers. Rate design is the mechanism for calculating what the customer owes and billing them accordingly.

In response to a question, Mr. Bonow explained that fixed and variable costs are almost irrespective of base excess capacity, marginal cost, and other methods. The question is the nature of the costs and whether they should be recovered based on their character. Fixed and variable costs are not in the same category as base excess capacity and marginal cost; it is just a way of understanding the nature of revenue requirements.

Mr. Bonow acknowledged that allocation of costs can be thought of as either base and excess, demand and commodity, or marginal. Discussion took place regarding the various methods as pertaining to the allocation process. Mr. Bonow displayed the demand curve of various customer classes which was distributed at the last meeting, and pointed out what would be the minimum level of water usage. This could be defined as the base; i.e., the system could be scaled down to that level and, at least for the minimum usage month, there would be enough water for consumption uses. It's one way of determining that the system doesn't need to be any bigger. Another way of defining the base is to consider the average consumption for the entire year. The AWWA Manual provides an example which takes the average consumption for the year, compares it to the peak consumption for the year, and that becomes the base and the excess capacity. Costs associated with operating the system at the average level consumption are allocated to the base; everything above that is allocated to the excess capacity. Base usage is covered by one element of revenue recovery; everything above that is recovered by the excess capacity charges. Mr. Bonow acknowledged that the base amount would include some commodity and demand costs. In response to a question, he explained that base charges would be analogous to commodity charges. The base includes the absolute minimum and something above that. In response to a further question, he advised that there is no difference between demand costs and extra capacity costs in the AWWA Manual examples. The examples are constructed so that commodity equals base and demand equals excess capacity. The lines get crossed when considering fixed and variable costs.

In response to a question, Mr. Bonow advised that the forward-looking elements of the marginal cost method are particularly important. Costs can be considered in a couple different ways. Both are forward-looking and consider future costs to operate the system. Chairperson Knecht explained that an allocated embedded cost study starts with the accounting books and records and considers various costs for operations, maintenance, administration, chemicals, etc. Costs are then allocated between the customer classes using various methods depending on the nature of the cost. A marginal cost study sets aside the books and records and focuses on the services provided. It determines the cost of acquiring water at the source and distributing it, using an engineering/economics approach. Costs are assigned and allocated from a customer perspective by defining the elements of service. Only by coincidence do the engineering/economic estimates equal the costs of running the system, so the other element of the marginal cost method is modification of customer-specific or subclass costs to generate the correct amount of revenue. Chairperson Knecht characterized the allocated embedded cost study as "just an allocation." The marginal cost method is based on an engineering/economic cost analysis for each class of customers. The results are then modified to ensure that the costs allocated to each equal the total.

Member Osborne inquired as to which method is more likely to be determined based upon actual costs and usage. He commented that one of the methods seems to involve a great deal of conjecture. Member Polito provided background information on his education and experience, and advised that he is a proponent of the embedded cost method for Carson City. He agreed that the allocated embedded cost method begins with the books and records of the utility but, in many cases, the costs are modified to take into account certain known and measurable future costs which are then allocated into certain components: distribution, transmission, etc. Based on principles of cost causation, the costs are then allocated to the customer classes. He distributed a table entitled "Marginal Cost versus Embedded Cost in Ratemaking Studies." He referred to Member Osborne's earlier question, and reiterated his suggestion that the embedded cost method, adjusted to account for certain forward-looking costs, will be best for Carson City. The Committee members reviewed the table and, in response to a question, Member Polito advised that he wrote the descriptions contained in the table based on his review of various sources. Discussion took place regarding the elements of each method.

Chairperson Knecht expressed the view that resource costs are very amenable to engineering/economic marginal cost analyses, and that it is best to take a marginal approach. Infrastructure costs represent the overwhelming fraction of costs being considered in this process. In response to a question, Mr. Bonow advised that neither of the methods play any role in the engineering design and planning of the system, nor in arranging the financing. He noted that there are elements of rate design, namely the method by which expansion is paid for, which do influence decisions regarding design, planning, and financing. Member Polito suggested that the meaningful question is whether the rate making method appropriately allocates engineering costs to those customers who incurred them. He stated that embedded cost methods use reasonable measures and data to determine who is causing the costs, which class is contributing more significantly to costs, and allocating the costs accordingly. Additional discussion took place regarding the elements of each method. Vice Chairperson Martel commented that regardless of the method chosen, assumptions will be made based on theories and history.

In response to a question, Mr. Bonow expressed the opinion that, in reviewing the data provided by staff and acknowledging the role of the consultants, the framework is not available to conduct a marginal cost study in its purest form. He advised that the embedded cost method, with elements that look to the future, is most consistent with the available data and the capabilities of the consultants. He noted that the embedded cost method is easiest to explain to the general public. Vice Chairperson Martel discussed the importance of being able to understand and explain the method to the general public. Member Osborne expressed an interest in hearing input from the other Committee members.

Member Riggs advised of his accounting background, and discussed the importance of generating enough revenue to cover fixed and variable costs, and to accumulate reserves. He expressed an interest in considering numbers rather than discussing theory. He agreed that the fixed, monthly charge should cover fixed costs and the commodity charge should cover variable costs, with the understanding that there is a point where using more than the base commodity should cost more. Mr. Hoffert and Mr. Bonow responded to questions regarding the most recent phase of the Northridge subdivision, infrastructure cost, connection fees, and user rates. Chairperson Knecht explained the process for determining infrastructure in a new development as related to connection fees. In response to a question, Mr. Hoffert indicated that revenue requirements need to be covered. The Committee's task is to understand and categorize the costs. One element is connection fees and what costs they should cover. Mr. Hoffert acknowledged that the City anticipates growth using a five-year projection on water and wastewater supplies and capacities. This is based on 3% growth, together with a safety factor associated with drought or wet year conditions. Connection fees have been collected at less than 2% for the last several years. In response to a question, Mr. Hoffert advised that industrial growth has taken place as anticipated; it's the residential component that has fallen behind. In response to a question, Mr. Bonow advised that residential customers use 62% of the total water. Government, commercial, and industrial customers use the balance.

Member Mullet commented that the only advantage to the marginal cost approach is the forward-looking element. He expressed a concern that federally-mandated costs will not be distinguished from administrative costs in the rate structure, but acknowledged that this issue will need to be addressed by the Board of Supervisors. He suggested moving forward using the embedded cost approach, ensuring that costs are allocated correctly, and eliminating the disparity between commercial and residential customers. In response to a question, he commented that the subtleties between the examples provided in the manual are so small the terms seem interchangeable. Member Smeath commented that the only fair way to allocate costs is for all fixed costs to be recovered by the fixed charge and all usage costs to be recovered by the commodity. Following clarification, he acknowledged this would work only if every customer was the same. He agreed with eliminating subsidies. Member Mullet expressed a concern regarding the meter size factor, and discussion took place with regard to the same.

Vice Chairperson Martel expressed appreciation for the input and examples provided by Mr. Bonow, Member Polito and Chairperson Knecht. He favored the base excess embedded cost method with forward-looking elements. In response to a question, Mr. Bonow advised that embedded cost versus marginal cost is the fundamental split and that most of the differences between base excess and commodity demand occur in the calculations. He acknowledged that he could conduct the study at this level, but advised that translating both into a different rate design would not be possible. He strongly encouraged the Committee members to review the examples in the manual. Member Osborne expressed concern that there is not an exact science and that there won't be answers to certain questions. However, there are proven methods and he agreed with earlier comments that the Committee members have to be comfortable with the chosen method. He advised he is least uncomfortable with the embedded cost method, and doesn't see much difference between base and average excess. In response to a question, he advised he is not comfortable with commodity demand. Member Polito expressed a preference for the embedded cost approach, and indicated that the Committee needs to get up to speed on how the costs will be allocated to the different classes once they are functionalized. He suggested that although the differences in the two methods may not be fully understood, the Committee members need to be comfortable that the chosen method represents equity. Chairperson Knecht suggested choosing a forward-looking embedded cost analysis focusing on the allocation and not jumping ahead to the rate design. **Vice Chairperson Martel moved that the Committee instruct the staff and the consultant to proceed on a forward-looking, embedded cost analysis with an option explaining both allocations of base excess demand and demand commodity, and that the Committee present that recommendation to the Board of Supervisors on September 5th.** Discussion took place regarding the intent of the motion. **Member Smeath seconded the motion. Motion carried 8-0.**

Mr. Bonow discussed the need to heighten awareness that the rates designed during this process must be implemented. He expressed a concern that the City will have spent money, resources, and the Committee members' time, and not completely implement the rates. He suggested reconciling each action to the objectives, one of which is to annually review the rate structure and "heighten the awareness of just how short we are." Mr. Hoffert discussed the importance of implementation and follow through, and acknowledged the responsibility of City staff in keeping the objectives before the Board of Supervisors. Mr. Bonow acknowledged that one of the objectives is to establish a method for annually reviewing rates. Mr. Burnham advised that the Committee is the result of City staff anticipating the problem and presenting it to the Board of Supervisors over the last three to four years.

In response to a question regarding non-cash expenditures which could be deferred, Mr. Heath advised that staff has considered using the actual replacement plan or depreciation. The differences are fairly substantial. The short-term replacement horizon is fairly manageable and is far below depreciation. He advised that the City has prepared for both scenarios. He distributed and reviewed Revenue Requirement Scenarios for the Water and Sewer Funds, and discussion took place with regard to the same.

Chairperson Knecht suggested presenting the Revenue Requirement Scenarios to the Board of Supervisors at the September 5th meeting, and asking them to choose one of the two scenarios or an alternative thereto. Member Riggs discussed the origin and purpose of depreciation, and expressed a preference for the cash-based scenario. He agreed with presenting both scenarios to the Board of Supervisors and allowing them to make the decision. The Committee members concurred, and discussion took place regarding the information to present to the Board. Mr. Bonow suggested that one of the Committee members be prepared to provide answers regarding differences between the cash and depreciation methods. Discussion ensued regarding the same.

Mr. Bonow suggested considering what the bottom line will be under one of the two approaches and how the revenue requirements will look over time. One will be much more smooth, by definition, than the other. Chairperson Knecht referred to Scenario 1 of the Water Fund Revenue Requirement and discussed the possibility of financing the cash capital outlay and replacement. Mr. Bonow suggested that this may be non-compliant with existing policy if any of the costs are not expansion-related. Chairperson Knecht requested Mr. Heath to develop a third scenario showing financing of the cash outlay. Member Polito suggested presenting the costs and benefits of the debt financing method versus the pay-as-you-go method. Mr. Heath advised that the City cannot issue bonds relying solely on revenues of the sewer and water utilities. Bonds must be backed with the full faith and credit of the City because coverages are low. Because the policy has been pay-as-you-go, the City has been exploring ways to increase coverages. Mr. Bonow advised that, at the very least, a "whole stream of interest costs not currently there" will be injected. He pointed out that more costs are pushed into the future with debt financing, which may be acceptable, but not without cost and implications both on policies and coverage requirements.

Chairperson Knecht expressed the opinion that the Board of Supervisors would like to see all three options, and that the Committee has an obligation to present them with an explanation of the problems and contingencies attendant to the full debt financing scenario to the extent it is possible within the bond covenants. In response to a question, Mr. Heath advised that a third scenario can be added. He expressed reservation with regard to submitting a third scenario to the Board without the Committee having an opportunity to review and discuss it. Additional discussion took place regarding the September 5th presentation, and consensus of the Committee was to present the two scenarios and defer a third until the Committee has reviewed and discussed it in a regular meeting. **Member Polito moved that, in addition to the previously discussed presentation, the Committee present to the Board of Supervisors Scenarios 1 and 2 with respect to the water and sewer fund, ask for their guidance on the appropriate treatment of certain costs, and suggest that the Committee is exploring ways to minimize these costs through alternative means; and that the Committee will present those results to the Board as soon**

as a good understanding is reached. Vice Chairperson Martel seconded the motion. Motion carried 8-0.

In response to a question regarding tiered rates, Mr. Hoffert suggested deferring this discussion until after the September 5th Board of Supervisors meeting and the Committee members concurred.

F-2. DISCUSSION OF ISSUES/CONCERNS BROUGHT UP BY CITIZENS CONCERNING UTILITIES RATES/PRACTICES (1-2585) **-** Consensus of the Committee was to defer this item to the next meeting.

G. INTERNAL COMMUNICATIONS AND ADMINISTRATIVE MATTERS

G-1. FUTURE AGENDA ITEMS (2-2591) **-** Chairperson Knecht noted that item F-2 will be reagendized. He requested Mr. Hoffert to agendize a report on the September 5th Board of Supervisors meeting. Member Polito requested staff to agendize a presentation by the consultant regarding differences in the way base excess and demand commodity allocate costs to the cost components and distribute them to the customer classes. Member Mullet requested staff to agendize a presentation by City staff on the debt financing revenue requirement scenario. Chairperson Knecht requested Mr. Hoffert to develop data on marginal costs for summer peak versus tail block rate level. Member Mullet requested staff to agendize discussion regarding connection fees.

H. ADJOURNMENT (2-2905) **-** Member Smeath moved to adjourn the meeting at 5:52 p.m. Vice Chairperson Martel seconded the motion. Motion carried 8-0.

The Minutes of the August 16, 2002 meeting of the Carson City Utilities Advisory Committee are so accepted this 4th day of October, 2002.

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RON KNECHT, Chair