

UTILITY 101

Utilities & Districts Section
Water Supply Division
TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ)
June, 2011

HISTORY OF RATES IN TEXAS – The TCEQ or its predecessor agencies first became involved in rate regulation when the 1913 Irrigation Act provided broad general powers to set rates for waters of the State, i.e. surface water. (Current Water Code Sections 11.036 – 11.041 & 12.013) On September 1, 1975, the Texas Public Utility Commission was created to regulate telephone, electric, water and sewer utilities. On March 1, 1986, portions of the Public Utility Regulatory Act related to jurisdiction of retail water and sewer service were transferred from the Texas Utilities Code to the Texas Water Code and the authority over water and sewer utility regulation moved to the Texas Water Commission. Water Code Chapter 13 jurisdiction covers jurisdiction over retail water and sewer rates and utility service areas and is quite complex.

WATER AND SEWER UTILITY SERVICE PROVIDERS -- There are three types of entities that can provide water or utility service in Texas:

- Public utilities, also known as private or investor owned utilities (IOUs) are those for profit entities owned or operated by a person, corporation, cooperative corporation, affected counties, or combination of persons or entities, other than a municipal corporation, water supply or sewer corporation or political subdivision of the state, or their lessees, trustees and receivers. IOUs must obtain approval from the regulatory authority to change rates. Their rates generally cover reasonable operating and maintenance costs, depreciation expense and a return on the net book value of their utility investment. With a very few exceptions, IOUs are not eligible for low interest government loans or grants for infrastructure costs;
- Water supply or sewer service corporations (WSCs) are non-profit member owned and controlled corporations with membership elected boards. The WSC's board sets rates. Their rates generally cover reasonable operating and maintenance costs, a reserve fund and loan debt service expenses. The rate payers may appeal rate changes to the TCEQ. WSCs are eligible for low interest government loans and grants for infrastructure costs; and
- Political subdivisions, which includes counties (other than affected counties), water districts and cities, are non-profit entities with elected boards, councils or commissions. The political subdivision's boards sets rates. Their rates generally cover reasonable operating and maintenance costs, a reserve fund and also may include loan or bond debt service expenses unless that debt is pay for through taxes. The rate payers, except for in city customers, may appeal rate changes to the TCEQ. Political subdivisions are eligible for low interest government loans and grants or may sale bonds to cover infrastructure costs.

All of these entities are defined as “retail public utilities” in Water Code, Chapter 13. However, the IOUs are further defined in Chapter 13 as “public utilities or utilities”, a subset of the retail public utilities.

RATE JURISDICTION – Under Water Code Chapter 13, the TCEQ has original rate jurisdiction over public utilities; however, Water Code Section 13.042 grants cities original rate jurisdiction over public utilities operating within their corporate boundaries. The TCEQ does have appellate jurisdiction over the city’s rate making decisions affecting public utilities operating within its corporate limits. The TCEQ also has appellate jurisdiction under § 13.043(b) over rates for out-of-city retail customers of a municipality, all district retail customers, all water supply or sewer service customers and for retail customers of affected counties as defined by Water Code Section 13.002(26). For customers of these retail public utilities to appeal a rate change, they must file a petition signed by 10% of the affected customers with the TCEQ within 90 days of the effective date of the rate change (See RG-024). Cities and districts serving outside their corporate boundaries and affected counties are required to provide individual written notice of a rate change to affected customers. There are no requirements to provide notice of a rate change to customers receiving service from a city or district inside their corporate boundaries, or for customers of water supply or sewer service corporations, or other counties.

The TCEQ has appellate jurisdiction over wholesale rates of potable water and wastewater service under Water Code § 13.043(f) as well as wholesale rates for surface water (state water) under Water Code § 11.036 – 11.041 & 12.013. For wholesale water or sewer rate appeals, TCEQ rules provide for a bifurcated hearings process at the State Office of Administrative Hearings. The first step is a hearing to establish jurisdiction and determine if it is in the public interest based on the contract or agreement between the wholesale provider and purchaser to proceed to the second phase, a hearing on the wholesale rates. If it is determined during the first phase that the contract or agreement is in the public interest the hearing is concluded. However, if it is determined that the contract or agreement is not in the public interest, a hearing is held to set cost based wholesale rates.

BASIC UTILITY REGULATION

- A. ***OVERVIEW*** – Utility service providers are typically monopolies in the areas that they serve. The TCEQ grants Certificates of Public Convenience and Necessity (CCNs) which designate their service areas, in most cases making them the sole provider in the area. Utility regulation serves as a substitute for competition. The basic principles of rate regulation are based on the concepts of fairness and equity without unreasonable discrimination. A utility is entitled to rates that are just and reasonable. Decisions in utility cases have been based on constitutional prohibitions against the confiscation of private property. A utility is entitled to an opportunity to earn a fair return on the value of property used in providing utility service. Water Code Chapter 13

charges the TCEQ with assuring “rates, operations, and services that are just and reasonable to the consumers and to the retail public utilities.”

- B. *CCNs* – CCNs are designated utility service areas granting a virtual monopoly or franchise to a specific geographic area. They can eliminate expensive and impractical competition and provide a stable customer base to encourage a utility service provider to make the large capital expenditures for infrastructure necessary to provide quality service. Generally CCNs are issued for a geographic area identified by distinct physical boundaries such as metes and bounds, roads, creek, railroad tracks, etc. Occasionally they are issued for a strip of service area consisting of facilities plus 200 feet to either side of the facilities. Unless it infringes on another CCN, a service provider can extend service $\frac{1}{4}$ of a mile beyond the CCN boundaries without having to file for an amendment to their CCN. TCEQ can grant dual certification for two utilities to the same area; however this may negatively impact their ability to attract capital for infrastructure improvements. Extending service beyond the boundaries does not automatically extend the CCN and the service provider could be subject to competition in those areas. It is important to note that for a customer to be within a CCN area, the customer’s primary point of use (in most cases the residence) must be within the CCN area or within $\frac{1}{4}$ of a mile of the CCN boundary for extensions.

CCNs are required for public utilities, WSCs and affected counties. They are optional in most cases for cities, districts and other counties unless they want to serve in areas where service is already being lawfully provided by another utility. In those situations, a CCN is required. Although not required for districts, cities or other counties, many of these entities have acquired CCNs. The CCN clearly identifies where the utility service provider is required to serve, allows for master planning even beyond the corporate or district boundaries, limits potential competition and problems associated with having to take over utility systems in the future that do not meet standards and ensure customer confidence which can encourage planned growth.

The TCEQ approves applications to obtain, amend, transfer and cancel CCNs. CCNs are granted on a nondiscriminatory basis after consideration of the following criteria:

1. The financial, managerial and technical capability of the applicant;
2. The adequacy of service currently provided to the requested area;
3. The need for additional service in the requested area;
4. The effect of granting the CCN on landowners or other utilities in the area;
5. The ability of the applicant to provide adequate service;
6. The feasibility of obtaining service from an adjacent utility;
7. The financial ability and stability of the applicant;
8. Environmental integrity;

9. The probable improvement of service or lowering of cost to consumers; and
10. The effect on the land.

The CCN applicant must provide notice to affected current customers, landowners with 25 acres or more partially or wholly in the proposed area, neighboring utilities and must also publish notice in a local newspaper once a week for two consecutive weeks. Uncontested applications that meet all criteria are processed administratively. Contested applications are referred to the State Office of Administrative Hearings (SOAH) and a preliminary hearing is scheduled.

Public utilities and WSCs providing water service may be exempt from the requirement to obtain a CCN if they have less than 15 potential connections and are not within the service area of another retail public utility. Potentially exempt systems that already have a CCN may request cancellation, but must consider the potential benefits of operating under a CCN, especially if they are near another utility. There are currently no exemptions for sewer utilities.

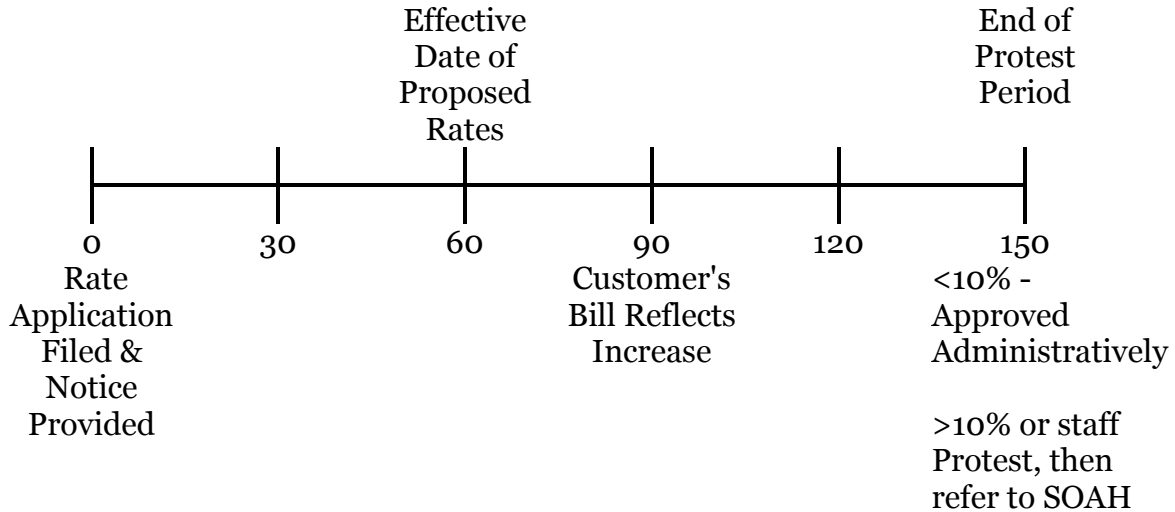
CCN areas can be transferred between utilities. If the utilities agree to the transfer, if there are no affected customers they may submit an agreement under Water Code § 13.248, if there are affected customers, they must submit a Sale, Transfer, Merger application under Water Code § 13.301. If the utilities cannot agree on a transfer, the uncertificated utility has three options: to submit a regular application to obtain a CCN and to either decertify the certificated utility or request dual certification under Water Code § 13.246; if it's a city it may submit an application under Water Code § 13.255 to be single certified; or a landowner may submit a request under Water Code § 13.254 for an expedited release.

- C. *PLANNING FOR FUTURE CAPACITY* – Any utility service provider that possesses a CCN is obligated to ensure adequate system capacity to service qualified applicants within its CCN area. If the system demand has reached 85% or more of design capacity when compared to the most restrictive criteria (well capacity, pumping, etc.) of the Commission's minimum capacity requirements in the Chapter 290 Rules and Regulations for Public Water Systems, the utility service provide must submit a planning report to the Commission in accordance with § 291.93(3) of the Commission's Rules explaining how the service provider plans to expand capacity to meet demands in the foreseeable future. Although the services of a licensed professional engineer are not required for the planning report required by the rule, it may be wise for a utility service provider to consult with an engineer when preparing the report. The report is due no later than 120 days after the system becomes aware that the demand reached 85% of capacity.
- D. *TARIFFS* – A tariff is the schedule of a retail public utility containing all rates, tolls, and charges along with the applicable rules, regulations and policies

which may include but not be limited to customer service, billings, disconnections, extensions, and drought contingency plans. The tariff provides a single, ready reference for utility staff and management and promotes customer confidence when the customer can be shown written policies. Public utilities, affected counties, and WSCs are required by the TCEQ to have tariffs and although cities, districts and other counties are not required to have them, but they are a very useful tool. WSCs are required to file their tariffs with the TCEQ, but are not required to obtain TCEQ approval of the tariffs. Political subdivisions are not required to file a tariff with the TCEQ and may have rate orders or ordinances that cover their rates, rules, policies, extensions and drought contingency plans.

An extension policy is a vital part of the tariff. If the policy is not followed consistently it may result in charges of discrimination. The extension policy describes the requirements, procedures and costs an applicant for new service may be required pay to connect to the utility's system. It may also include cost sharing programs to reimburse an original applicant when additional customers are added to a line originally paid for by the first applicant. The Commission has original jurisdiction over extension policies for IOUs, appellate jurisdiction over WSC extension policies, and no jurisdiction over extension policies for cities, districts and affected or other counties.

- E. *RETAIL RATE SETTING PROCESS FOR IOUs* – Public utilities or IOUs must file an application with the TCEQ or regulatory authority and provide notice to its affected customers when proposing to change rates. The comment or protest period is 150 days from the date the application is submitted and customer notice is provided. Sixty days after the notice is provided, the utility is required to put the proposed rates into effect so the customers see the impact of the proposed rates 30 days later when they receive their first affected bills. Thereafter, the customers have an additional 60 days to comment on the proposed rates. The chart below is a timeline of the comment period showing when the proposed rates are put into effect.



The staff may recommend interim rates if the proposed rates cannot be supported by the financial information provided by the utility in its initial application, or if the increase results in a significant change in an average customer's bill. If interim rates are set, the utility is required to notify its customers. The interim rate will be charged until a final rate is set. An interim rate is a temporary rate charged until a final rate is approved and is typically a lower amount somewhere between the current rate and the proposed rate increase. Under current law, an interim rate may only be set by the Commissioners or by an Administrative Law Judge (ALJ) after SOAH has assumed jurisdiction. The utility may have to credit the customers if a lower final rate is set or if a higher final rate is set, the customers may have to pay a surcharge to make up the difference.

If less than 10% or 1000 customers protest the application in writing, the application may be approved administratively. However, if 10% or 1000 customers, whichever is less, protest the IOU's customers protest the rate change application or if the Executive Director protests the rates, then it is referred to SOAH to schedule a hearing. Regardless, the TCEQ reviews the proposed rates to determine if the rates are just and reasonable. At SOAH, the ALJ names parties and allows the parties to mediate. If a settlement is reached then the case is referred back to the TCEQ to be approved administratively. If a settlement is not reached, a discovery schedule and evidentiary hearing date is set. After the evidentiary hearing the ALJ prepares a Proposal for Decision (PFD) based on the testimony for the Commission to consider. The Commission sets a final rate which can be appealed to District Court by any of the parties in the case.

F. Some of the key issues for a rate change include:

- a. **Cost Based Rates** – According to Chapter 13 of the Water Code and Chapter 291 of the Commission’s Rules, rates for public utilities must be cost based and may not be unreasonably preferential or prejudicial. Although there is a difference in the true cost to serve individual customers depending on how far they are from a well, elevation, etc., it isn’t practical to set a different rate for each customer. Therefore, rates are typically set by meter size since it represents the potential demand of the customer. Occasionally, rates are set for classes of customers with similar cost characteristics such as residential, commercial, or industrial users.
- b. **Frequency of Rate Changes** – Chapter 13 establishes a rate change procedure for public utilities which should encourage frequent, but smaller rate adjustments by allowing rate changes every 12 months and not requiring public hearings unless 10% of the customers protested. Frequent, smaller rate adjustments are preferable to less frequent, larger increases, but the vast majority of utilities have not taken advantage of this opportunity.
- c. **Historical Test Year** – Water Code Chapter 13 establishes a rate setting method for public utilities based on a historical test year. The historic test year looks at actual expenses over a recent 12 month period and includes adjustments for known and measurable changes such as power, chemical and salary expense changes, to establish the utility’s reasonable cost of service.
- d. **Rate Implementation** – Water Code Chapter 13 allows public utilities to place their proposed rates in effect 60 days after proper notice is provided to affected customers and to continue charging the proposed rates while the case proceeds through the hearing process. Customers can see how their utility bill will be impacted by the proposed change and the utility can begin to cover expenses already incurred. Refunds, with interest, are required if the proposed rates are not granted.
- e. **Interim Rates** – TCEQ can set interim rates under Water Code Chapter 13 to remain in effect during the pendency of the rate case or require that rates be escrowed. In instances where an increase is clearly unwarranted, interim rates can be set by the Commissioner or at the preliminary hearing by SOAH. One concern with setting interim rates is that if the final rates are higher than the interim rates, customers must pay the new rates plus a surcharge to make up the under payment.
- f. **Suspended Rates**- TCEQ can suspend rates for 150 days if the application or the statement of intent is not substantially complete or does not comply with the rules, the application may be rejected and the rate change suspended for up to 150 days.

- g. Revenue Requirement – The revenue requirement is the amount of money the utility reasonably needs every year to provide service to customers. The basic formula is:

$$\begin{aligned} \text{Revenue Requirement} = & \text{Reasonable Operations \& Maintenance} \\ & \text{Expenses} \\ & + \text{Depreciation on Utility Property} \\ & + \text{Taxes} \\ & + \text{Return on Rate Base (Invested Capital)} \\ & + \text{Acquisition Adjustment (if any)} \end{aligned}$$

Under the historical test year method, a utility looks at last year's expenses and revenues and raises the rates to cover the apparent revenue deficiency. There are a number of factors that affect revenues and expenses. The following abbreviated list of factors should help illustrate this point.

<u>Revenues Depend On</u>	<u>Revenues Requirements Depend On</u>
Number of customers	Number of customers
Customer water usage	Customer water usage
Weather	Weather
Conservation	Conservation
Rate changes	Capital Needs
Price elasticity	Compliance

Maintaining a stable or hopefully growing customer base is crucial to both revenues and revenue requirements or expenses. It is equally important to understand customer water usage patterns, the effects of weather changes, price elasticity, conservation and the effect of rate changes. Understanding and planning for changing capital needs in many cases is driven by changes in the TCEQ's requirements and the federal requirements in the Safe Drinking Water Act and Clean Water Act. A utility's compliance with federal and state requirements is absolutely essential to its long term viability.

A little planning when rate changes are being considered can go a long way toward heading off problems in the future. An effective cost of service study, which doesn't necessarily have to be expensive, may identify the reasons for cost increases and may also help properly assign or allocate these costs. The study is also invaluable when trying to communicate the reasons for rate increases to customers. If a study identifies needs to make major adjustments in how rates are allocated, it is usually wise to gradually make the adjustments to prevent rate shock and allow customers to adjust usage patterns, if necessary. Some of the key components of a cost of service study for a public utility or an IOU include:

- i. Operations & Maintenance Expenses – These are the actual day to day expenses of running the utility, The expenses may include but are not limited to salaries, contract labor, purchased water, chemicals, utilities, repairs and maintenance, office expenses, accounting and legal, insurance, miscellaneous, etc. The “known and measureable” changes in the cost of service that may include adjustments for expenses that have changed or will change after the end of the 12 month period such as fuel or insurance costs.
- ii. Depreciation of Utility Property – The utility recovers its actual initial investment in plant and equipment through depreciation using a straight line method over the projected useful life of the asset. For example, distribution lines have a recommended service life of 50 years which means that if a utility invested \$1,000,000 on the distribution system, a portion of the annual depreciation expense would include \$20,000 ($1,000,000/50$) to account for recovery of the cost of the distribution system.
- iii. Taxes – Payroll, property and federal income taxes on the profits are included.
- iv. Return on Rate Base (Invested Capital) – A utility is entitled to an opportunity to earn a reasonable rate of return on its investment in plant and equipment. The rate base is essentially the utility’s original investment at the time the assets were placed in service less the accumulated depreciation. It also includes a working capital allowance which includes reasonable inventories of materials and supplies, reasonable prepayments for operating expenses and an allowance up to 1/8 of operational and maintenance (O & M) expenses. In recent years the TCEQ has typically started with the most current BAA public utility bond average and made adjustments based on factors such as quality of service, compliance, water loss, and size of the system to determine the rate of return. (Note that this is after tax return because income taxes on the projected return were included above.) The return is not guaranteed. Rate of return, should reflect similar return that an investor would hope to receive on another investment with similar risks.
- v. Acquisition Adjustment – To encourage regionalization and consolidation, in addition to the depreciation of the original cost and return on rate base, a utility that purchases another utility at a price higher than the net book value (original cost less accumulated depreciation) may be eligible for a positive acquisition adjustment. A positive acquisition adjustment, if granted, would allow recovery of the difference between the purchase price and the net book value

in a straight line manner over the weighted average remaining useful life of the assets at an interest rate equal to the rate of return.

h. Rate Design

i. Principles of Rate Design – Rates should be designed and schedules developed to yield the necessary revenue requirement. That may sound simple, but the revenue requirement is not guaranteed to the utility. Just because a rate design indicates that the revenues may be generated, it doesn't always equate to those revenues being collected or received. However, the closer rates are designed to match the true cost of service, the smaller the fluctuations in cash flow will be. There are at least eight attributes of a good rate design:

1. Yield total revenue requirements;
2. Practical to implement;
3. Freedom from controversy of interpretation;
4. Revenue stability from year to year;
5. Stability of rates themselves;
6. Fairness of rates in recovering cost of service;
7. Avoid undue discrimination; and
8. Efficiency of rates in discouraging wasteful use (Conservation).

ii. Basic Rate Structures

1. Fixed or flat rates – There is one charge no matter how much water is used. This design is typically used by sewer systems. It is also used by some small water systems that do not have customer meters but it is strongly discouraged by TCEQ because it does not encourage water conservation.
2. Variable rates – There is no base charge. This design does not include a “demand” component so water is paid for as it is used. This rate structure does encourage conservation but also causes large revenue fluctuations for the utility.
3. Fixed-variable – The fixed costs are used to calculate a base monthly charge which represents the demand the customer

can put on the system (by meter size or customer class) and may include some water. The variable costs are used to calculate a volume charge for the actual water usage. This structure is the most commonly used and also encourages conservation. Many water utilities that use this type of design are moving toward a base charge with no amount of water included in the bill and incorporating an increasing block rate structure for the volume charge. Increasing block consumption rate structures include higher gallonage charges for the higher gallon block tiers, but they can increase financial risk and revenue fluctuations, such as winter versus summer or wet versus dry years, and do not always change customer usage patterns.

4. Winter months averaging – This is often used for sewer customers instead of a flat rate if water consumption data is available. The monthly sewer bill is allocated based on the amount of water the customer used during the winter months. This provides a more accurate depiction of the amount of water the customer sends to the wastewater treatment plant since there is little or no outside watering done during the winter months.
- iii. System-wide or single tariff rates – Utilities often operate a number of separate, unconnected utility systems, but when they have similar physical and operational cost characteristics, the utility will typically request a system-wide or single tariff rate for all of its systems. Many utilities prefer a system wide rate because it may simplify record keeping, and enables utilities to make capital improvements that might not be supportable if each system operated as a stand alone operation. It is also necessary to consider, however, whether the costs of operating the systems involved are so different that it would be unfair to set the same rate for all. TCEQ rules allow system wide rates only if the utility can demonstrate similar conditions exist in the systems involved.
 - i. Customer Acceptance – Rates based on the true cost of service yield revenues that are properly matched to expense and in the long term can build customer acceptance. Customers will typically accept rates based on the concepts of fairness and equity without unreasonable discrimination. Customers frequently do not understand how a utility’s revenue requirement is determined or how rates are designed, but they do understand how they are impacted by the rates. It is essential that a utility effectively communicate with its customers the true cost of service and the constraints it faces related to supply, demand and the need for capital improvements. Failure to effectively communicate, especially before a rate increase is requested, could result in a contentious public hearing.

- G. *RETAIL RATE SETTING FOR WSCs AND POLITICAL SUBDIVISIONS*- When a board, council or commission sets rates, those affected customers that have an appeal have 90 days from the effective date of the rate change to file a petition with the TCEQ that provides specific information about the old rates, new rates and the nature of the appeal. If the petition is signed by over 10 percent of the affected customers the petition is referred to SOAH. The hearing process for retail rate appeals is very similar to the hearing process for IOUs and many of the issues outlined above are similar.

Current Rate Applications

The number of rate reviews performed annually is a key performance measure reported to the Legislative Budget Board. The TCEQ's total performance standard is set at 80 rate reviews per year. In FY 2010 the Water Supply Division completed a total of 129 rate reviews. As of June 30, 2011, the Water Supply Division has completed a total of 107 rate applications.

There are currently several controversial rate cases pending that have a high level of interest from legislators. Those cases include Monarch Utilities I, LP, Aqua Utilities, Inc. (Southeast Region Only), Canyon Lake Water Company, LCRA's rate appeals, Deer Creek Ranch Water Company, LLC, and Texas Landing Utilities.

The number of rate reviews performed annually is a key performance measure reported to the Legislative Budget Board. The TCEQ's total performance standard is set at 80 rate reviews per year. In FY 2010 the Water Supply Division completed a total of 129 rate reviews. Of those, 68 were contested and 54 settled and 7 went on to evidentiary hearing. As of June 30, 2011, the Water Supply Division has completed 123 rate applications.