

City of Henderson Public Utilities

Community: Henderson, NC

Population: 16,095

Number of Accounts: 9,352

Annual Revenues: \$6,410,000

Sustainable Finance Problem: *Addressing customer account delinquency and non-payment through rates and customer assistance*

Background

The City of Henderson is a medium sized community in Northeastern North Carolina which has been profoundly impacted by the changing national economy. Many of Henderson's major industrial employers have ceased operations or moved elsewhere. As a result of the profound changes in the local economy, the median household income (\$23,745) is remarkably low in Henderson and the poverty rate (28.3%) is remarkably high in comparison to the rest of the country¹.

Pervasive economic problems have also increased the likelihood that customers are unable to pay their water and sewer bills in a timely fashion or even at all. With only 9,352 customers in the entire system, Henderson issued roughly 2,500 late notices and disconnected 600-700 customers per month in FY06-07. Annual bad debt write-off (approximately \$175,000) as a portion of the operating budget (2.7%) is high by national standards². Account delinquency and non-payment, therefore, represents an important financial sustainability challenge for the water utility.

The UNC Environmental Finance Center, by working with professional city staff, identified key initiatives for addressing account delinquency and non-payment. Getting the City Council to adopt these initiatives, however, required demonstrating their effects on customers and that utility financial sustainability would improve as a result of any changes. Some of the initiatives, such as a new customer assistance program which helps low-income customers pay their bills in times of hardship, have direct program costs which will be offset depending on the extent to which customers make regular payments the rest of the year. Other initiatives, such as changing from a decreasing block to a uniform rate structure to make service more affordable for small, mostly residential water users, have mixed revenue impacts which needed to be evaluated before the City Council would agree to such changes.

Solution

The UNC Environmental Finance Center developed cost and revenue projection models for Henderson professional staff for 1) a customer assistance program and 2) changing from a decreasing block to a uniform rate structure.

Customer Assistance Program

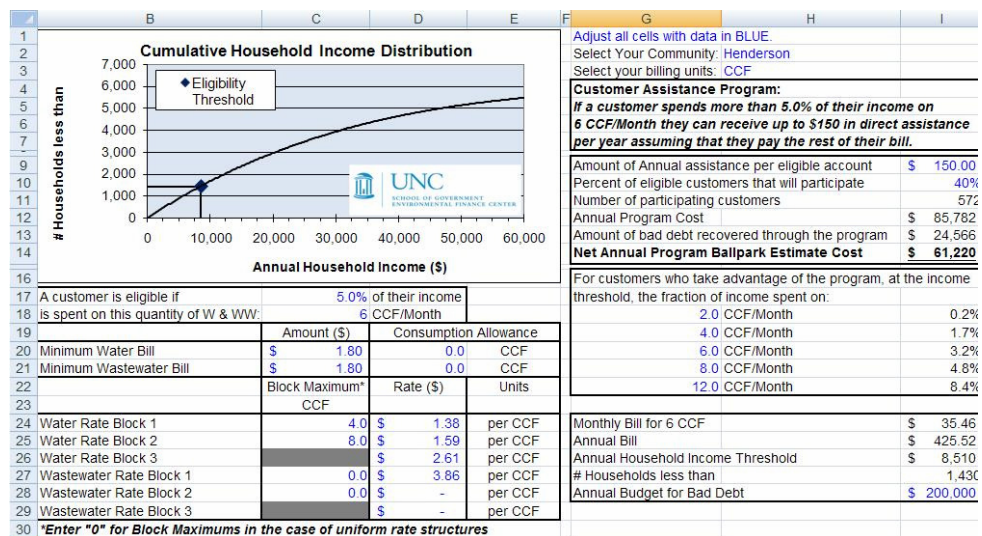
¹ 2000 Decennial Census, U.S. Census Bureau

² American Water Works Association, WITAF. March 2004.

In a 1998 study of water affordability programs, the American Water Works Association Research Foundation found that “poor households are typically not refusing to pay for water service; they are becoming more unable to pay for water service.”³ Temporary cash shortages because of medical emergencies, or repairs to a vehicle are a common cause of late or missed payments. Ultimately, customers want to make timely payments, but sometimes cannot.

With this in mind, the EFC proposed establishing an emergency customer assistance fund to help customers pay their bills in a crunch. The logic behind such a fund is that while the immediate usage of the funds will cost the utility, their customers will be more likely to make payments when they are able because of the assistance and therefore total receipts may increase. Furthermore, costs associated with managing unpaid accounts, cutting customers on and off, issuing late notices, etc will all be avoided. Such a program would entail some additional administration costs however in Henderson, as in many other places, the local Department of Social Services already has a budget and administrative staff for helping residents manage utility payments, and the Director of Social Services offered to combine utility customer assistance into their existing programs. Under the proposed agreement, the City would deposit a fixed amount in an account which DSS would draw from and from which DSS would earn interest to help defray administrative costs. Periodically, the City would replenish the depleted portion of the fund and record operating expenses.

For the City, a major consideration is the amount of direct operating expenses they would incur as a result of the assistance program. To help the City estimate direct program costs, the EFC built a tool which estimates the



number of customers which are likely to take advantage of the program, based on eligibility criteria, and then calculates the direct cost of assistance.

Adjusting Rates to Promote Equitable Cost-Sharing

Historically, the City has employed declining block rates to promote industrial development. Declining block rates are problematic, however, in that they shift a greater portion of the cost burden on low-volume users. This is particularly true for low-income households who tend to use less water than the average. With the shifting of the local economy away from heavy industry, some in the City thought it was an opportune time to change to a uniform rate structure. The primary advantage of a uniform

³ Water Affordability Programs, AWWARF, 1998.

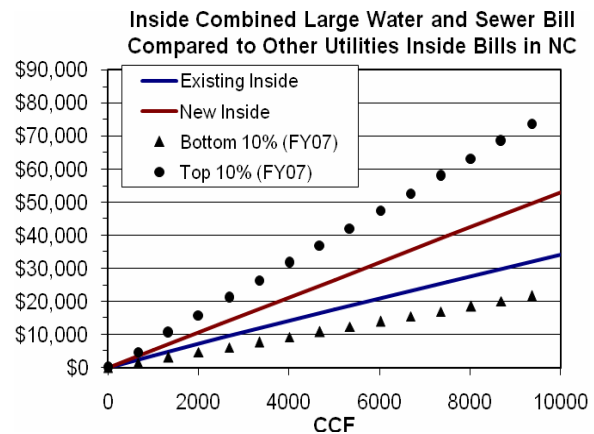
rates structure is that it has lower costs for low-volume users in comparison to a declining block structure. Furthermore, because all usage is charged at the same rate under a uniform rate structure, uniform rates can be more equitable than other types of rate structures.

The difficulty with changing rate structures is that it can be very hard to project the impact on revenues. Few utilities can afford a large decrease in revenues as a result of a rate change and changing rates multiple times in rapid succession to balance rates and revenues is unrealistic. So, a utility has to be able to make some reasonable projection of revenues after rates are changed. To assist the City, the EFC developed a second tool which allows different rate structures scenarios to be tested while ensuring that before and after rates are set to be revenue-neutral. The model is based on historical usage data aggregated according to consumption levels; in this case the consumption levels were determined by the volume cutoffs of each block. The rates for each block and the size of each block are all adjustable. The

Block Number	Begin Block CCF	New Rates		% Rates Change		Revenue Neutral Rate Change:	
		Inside per CCF	Outside per CCF	Inside	Outside	Inside	Outside
Block 1	0	\$0.00	\$0.00	NA	NA	\$0.12	\$0.43
Block 2	5.01	\$2.00	\$4.00	3%	-18%	\$0.18	\$0.62
Block 3	40.01	\$2.00	\$4.00	38%	9%	\$1.30	\$3.87
Block 4	60.01	\$2.00	\$4.00	47%	18%	\$0.86	\$2.07
Block 5	120.01	\$1.43	\$4.00	21%	36%	\$0.57	\$0.91
		Totals:					
Base Charge	-	\$9.25	\$20.15	7%	-6%	\$0.39	\$1.62

output of the model is a set of “Revenue Neutral Rate Change” requirements which show the amount which rates in a particular block would have to be increased or decreased to maintain revenue neutrality.

Another key feature of the tool shows how a customer’s bill would increase or decrease at a given usage level under a new rate structure. This information is important in that it showed that by changing to a uniform rate structure, the average residential water user’s bill in Henderson would decrease 7 to 8 percent without placing too great a burden on large water users. In the sample graph shown here, very large industrial-scale water users’ bills are shown to increase from the “Existing” (declining block) to the “New” (uniform) rate structure, but the “New” rate structure is still well within the bounds (upper and lower 10th percentile) of what other communities in North Carolina are charging their industrial customers based on data collected by the UNC EFC in a statewide utility rates survey.



Outcome

The professional staff in Henderson are still pushing to make some of these changes recommended to address customer non-payment and delinquencies. The tools developed for this work have greatly increased the City’s understanding of the financial impacts of enacting new rates and assistance programs and increased the likelihood that new policies will be adopted. The staff was very enthusiastic about the functionality of these tools. To quote Jerry Moss, the former City Manager: “This is some of the best information I have ever seen!”