

The Evolution of Prepayment Metering in North America: Update 2003

Alexandra Behringer

Executive Summary

In our 2000 report, "Prepayment Metering Services: A Fit for North America?" we examined burgeoning prepayment metering programs, weighed their costs and benefits, and concluded that prepayment did indeed merit serious consideration. Although prepayment metering has garnered acceptance in about 40 countries around the world, it has been slow to develop in North America for reasons that include the high up-front costs of technology and back-office integration. At the same time, information about the benefits of prepayment has caught the attention of many energy providers seeking new ways to increase customer satisfaction and reduce costs associated with payment-troubled customers.

In recent years, changes in the North American regulatory environment have supported the development of prepayment. While growing numbers of prepayment pilots and programs indicate that regulators are increasingly open to the idea of prepayment metering, many are still wary of how it will ultimately be used. Vocal resistance from community advocates remains fairly common.

In January 2003, the leading vendor of prepayment solutions announced its exit from the business. Although this has created short-term uncertainty, it does not appear to spell the end of prepayment in North America. Several new players have stepped in to fill the void.

After a second look, we still believe prepayment merits consideration, but the business case is not clear cut. Most utilities that are operating prepayment programs were not willing to share cost information, while some reported a payback period of several years. Yet all the utilities we spoke to emphasized that the reduction in customer arrearages is well worth the investment in equipment and infrastructure. Many program managers have also found that prepayment has a less tangible, but equally compelling, positive effect on customer satisfaction.

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Introduction

In our 2000 report, "Prepayment Metering Services: A Fit for North America?" (*RES Currents-1*), we examined burgeoning prepayment programs and weighed their costs and benefits. We concluded that prepayment did indeed merit serious consideration. After a second look, we still believe it has value, but the business case is not clear cut. Most utilities operating prepayment programs were not willing to share cost information, while some reported a payback period of several years. All the utilities we spoke to emphasized that the reduction in customer arrearages is well worth the investment in equipment and infrastructure. Many program managers have also found that prepayment has a less tangible, but equally compelling, positive effect on customer satisfaction.

Prepayment: A Refresher

Prepayment metering enables customers to buy energy in advance, receiving an energy credit that is transferred to a home meter using a smart card, keypad-entered code, or other technology such as power line carrier signals. Most prepayment programs allow customers to buy energy that is credited to a card at kiosks located at utility service centers and other locations such as convenience stores. Some enable customers to replenish their accounts over the phone or the Internet, or through point-of-purchase locations. In-home displays provide the customer with information on energy use and remaining credit.¹ If the customer allows the remaining credit to run out, the home meter will automatically shut off the power. An exception is a situation where the utility programs the meter to revert to credit mode (as is sometimes done in the winter months).

Most North American prepayment programs are offered by cooperatives and municipal utilities, although the number of

programs at investor-owned utilities is increasing (**Figure 1**, page 3). Utilities typically charge participants an additional monthly charge or transaction fee to help offset the capital cost of deploying one of these programs. For the prepayment pilot at Florida Power & Light, regulators approved a 7 percent rate increase for pilot participants. Louisville Gas & Electric (LG&E) charged participants a monthly equipment fee of \$7.50 during its pilot, while prepayment customers of Salt River Project (SRP) pay a \$12.78 monthly service charge.

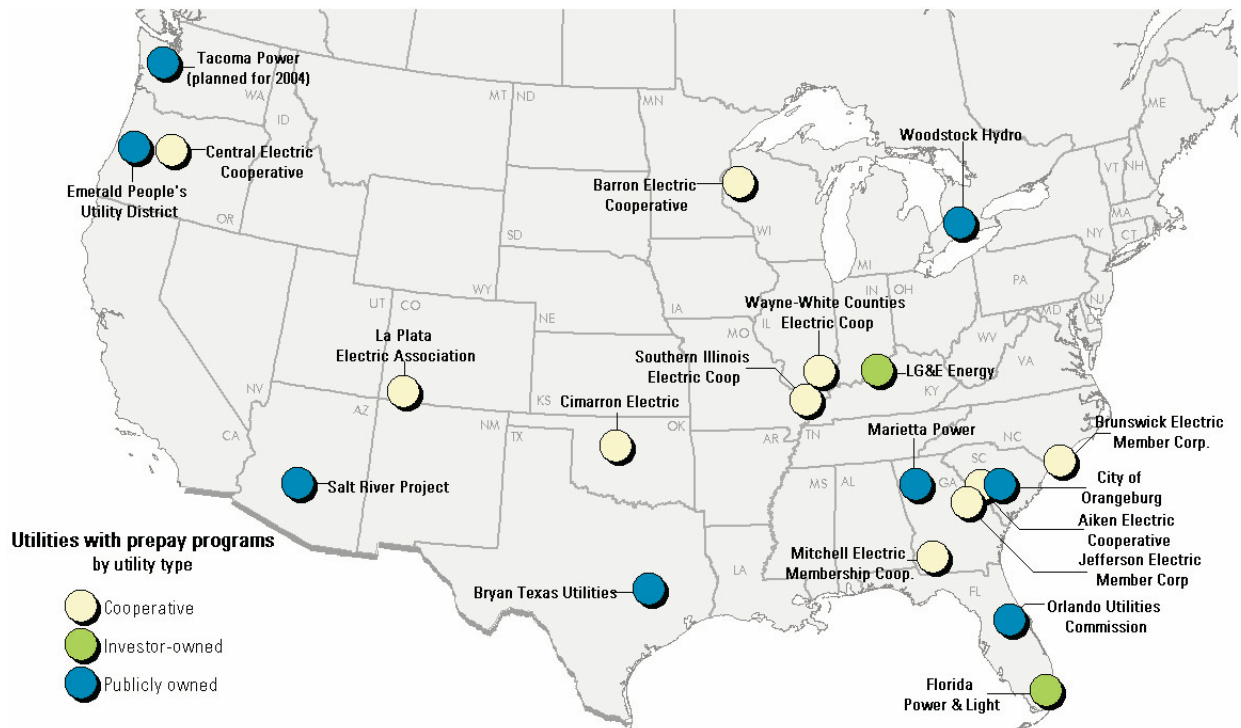
Although the concept of paying for energy in advance is fairly novel in the U.S. and Canada, prepayment metering has a long history in the United Kingdom and has garnered acceptance in about 40 countries around the world. In comparison, prepayment has been slow to develop in North America. Reasons include the high upfront costs of technology and back-office integration, as well as resistance from some low-income advocates and regulatory bodies. Yet, information about the benefits of prepayment has caught the attention of many energy providers seeking new ways to increase customer satisfaction and reduce costs associated with payment-troubled customers.

Vendor Changes

Since the 1990s, CIC Global and Motorola were the predominant providers of prepayment meters and in-home displays in North America, while Diebold kiosks are used in many programs that utilize smart cards. Until recently, the CIC PowerStat system was based on hard-wired technology, which meant utilities had to drill a hole in the wall of the house to connect the customer interface to the outside meter. This labor-intensive installation did not allow the customer to move the interface elsewhere in the home. Motorola's PowerCom technology, based on power line carrier (PLC)

Figure 1: Geographic distribution of prepayment programs in North America

Our research uncovered 20 prepayment programs in North America; prepayment is most prevalent in the Southeast U.S. (This is not meant to be an exhaustive list of all prepayment programs in North America.)



Source: Platts; created with POWERmap®

communication, enabled quicker and more cost-effective installation, since the in-home display could be plugged into any outlet. CIC Global recently introduced PowerStat Version 4, also based on power line technology.

The exit of Motorola and Diebold.

Despite the high price point of PowerCom (\$450 to \$500 per home), Motorola quickly became the dominant player in the North American prepay market. But the company experienced a significant devaluation of its stock in recent years and decided to refocus on its core business of security communications.² In January 2003, Motorola announced it was shuttering its Utility Solutions business, including its PowerCom prepayment group. Motorola's utility customers hoped for a rumored management buyout that would allow its prepayment business to continue. But, by mid-May, an employee of the

Utility Solutions unit acknowledged the buyout "didn't work out as planned."³ Motorola's exit has led to some confusion in the market and left many prepayment programs with an uncertain future.

SRP, a Motorola customer, has the largest prepayment program in North America (about 30,000 customers as of May 2003). According to John Soethe, manager of revenue cycle services, "The obvious challenges going forward are looking for alternatives to the Motorola solution. SRP is still evaluating all its options. However, we are still absolutely committed to offering prepay to our customers and growing the program beyond where we are today."⁴ SRP aims to increase enrollment by 10,000 customers a year, although this growth rate may be slowed by the search for an alternative vendor.

Tips from the Experts

Program managers and vendors offer the following advice.

Make it voluntary and available to all. Every program manager we spoke to emphasized the importance of making prepayment programs voluntary. Although most prepayment programs are geared toward the payment-troubled or high-maintenance customer, they provide benefits to numerous customer segments and should be promoted to all as another flexible payment option.

Prepare for resistance. When designing a new prepayment program, prepare for resistance from inside and outside your organization. Executive buy-in is essential: Appoint an internal liaison to take ownership of the program and educate employees on the benefits of prepayment.⁵ Community advocacy groups may be a roadblock: LG&E recommends involving low-income advocates from the very beginning and inviting them to focus groups.⁶

Choose vendors carefully. Major players have recently exited the prepay arena, including Motorola and kiosk vendor Diebold. This situation exemplifies why it is important to gather as much information as possible before choosing vendors. When formulating contracts, address how support and maintenance will be continued if they exit the business. If possible, train internal employees to maintain the equipment or select alternate vendors as potential backups.

Provide internal training. Since almost every department will be affected by your prepay program, proper employee training is crucial. Create a Frequently Asked Questions reference for call center reps and divert calls to a project hot line during the pilot phase.⁷

Integrate with your back office. In order to have a program that runs smoothly, it is critical to integrate the prepay system with your company's back-office system. This serves to automate account setup and other functions through your customer information system (CIS). If these systems are not integrated from the beginning, you risk time-consuming problems (such as having to set up accounts manually) if demand is higher than expected.⁸

Create a workable vending solution. Decide well in advance of your program launch the type of vending solution that meets your needs and offers convenience for your customers. These might be smart card kiosks, electronic funds transfers at convenience stores, and/or remote vending over the phone or Internet. Because volume grows quickly and customers tend to buy on a weekly basis, Brunswick EMC advises that multiple vending channels should be in place at startup.⁹

Be patient and think big. Utilities running prepayment pilots often look for a quick return on their investment, yet managers of successful prepayment programs note that it typically takes several years to see a payback. Woodstock Hydro advises other utilities to develop their prepayment metering offering with "a three- to five-year plan" in mind.¹⁰ SRP emphasizes commitment to growth. "You need to get beyond the pilot stage to see the big benefits in terms of customer satisfaction and the economies of scale."¹¹

Adding to the upheaval, Diebold stopped making bill-payment kiosks. The company has declined to comment on its reasons for withdrawing from this market.¹² Nevertheless, rumors abound that Diebold is considering re-entering the kiosk arena.

Filling the void. Although the exit of Motorola and Diebold has created short-

term uncertainty, it does not appear to spell the end of prepayment in North America. Several new players have stepped in to fill the void. Landis+Gyr, which offers both hard-wired and PLC keypad solutions, has signed on its first North American customer, a Texas cooperative.¹³ These systems do not feature a smart card; instead, when customers purchase energy (at the utility service center, over the phone or Internet, at a

convenience store, or at a vending kiosk), they are given a 20-digit number. The customer enters this number into their display unit at home via the keypad. The number is decrypted, and the credit is transferred to the meter.

LG&E and Woodstock Hydro will be migrating to a smart card PLC prepayment solution from Ampy Automation Digilog Ltd., a UK company, in late summer 2003. LG&E has partnered with Ampy, the provider of prepayment systems for LG&E Energy's parent company Powergen, to develop the new system for the North American market. Silver Spring Networks (formerly Innovatec) enables advanced meter data management through a fixed two-way wireless network that integrates tokenless prepayment options.

The exit of Motorola and Diebold may mean the end of some pilots for utilities that cannot justify further investment in alternate technologies. Orlando Utilities Commission (OUC), the municipal utility of Orlando, Florida, uses the Motorola system and two Diebold kiosks. "We don't want to sacrifice the technology investment that we've already made. But, if possible, we hope to continue offering prepayment because it is a very worthwhile program that provides value to our customers," says Terry Torres, director of residential customer service. OUC will continue the prepayment program with the few hundred meters it has in inventory and hopes that another vendor can offer technology similar to Motorola's. "We're all looking toward LG&E's experience with Ampy to see if it's successful. If it is, I suspect that many utilities will be knocking on Ampy's door."¹⁴

While some utilities have been investigating alternatives to the Diebold kiosks such as electronic funds transfers and remote vending, others have been in talks with

kiosk vendors Clarusys Inc., EPOS Corp., InfoTouch Corp., and Touch Controls. CIC Global is also looking at introducing its own payment kiosks. (See **Table 1**, page 6, and **Table 2**, page 7) for more information on vendors.)

New Program Developments

Over the past three years, several utilities have introduced prepayment, while others with long-running programs have found that prepayment can serve as an effective conservation tool. We highlight a few of these programs below.

LG&E: Pay As You Go. LG&E began the first dual-fuel prepayment pilot program, dubbed "Pay As You Go," in January 2001. Modeling its pilot on SRP's program, LG&E selected Motorola's PowerCom system and installed two Diebold kiosks where customers could recharge their smart cards. Unlike electricity charges, gas charges were not applied according to real-time usage. Instead, customers participating in prepay had to enroll in budget billing for gas. The monthly gas charge was combined with other fixed monthly fees, programmed into the meter as a single monthly fee, and deducted on an hourly pro rata basis over the month. Customer enrollment grew to about 450 by August of 2001. Although the pilot was scheduled to continue through March 2002, in January of that year the Kentucky Public Service Commission (PSC) ordered the pilot to continue in its current form until post-pilot reports could be analyzed.

Participants who stayed with Pay As You Go throughout the pilot had accrued nearly \$23,000 in disconnect and late fees during the 12 months prior to joining the program. During the pilot period, LG&E found that participants reduced consumption by

Utilities with long-running programs have found that prepayment can serve as an effective conservation tool.

Table 1: Vendors of prepayment solutions in North America

Company		Solution
Ampy Automation Digilog Limited		
<i>Distributor for Canada and the Northeast U.S.:</i> Info Energy 16 Graham Street P.O. Box 245 Woodstock, Ontario, Canada N4S 7X4 tel 888-229-2290 ext 280 web www.infoenergy.net	<i>Distributor for southern and western U.S.:</i> Widefield 13601 E. Jenan Drive Scottsdale, AZ 85259 tel 602-361-6683	This UK vendor is developing a power line carrier unit for the North American market. This system, which will work for both prepaid and postpaid customers, is said to enable interval metering capabilities and multiple rates such as time-of-use. Scheduled to be available late summer 2003.
CIC Global LLC		
<i>U.S. headquarters:</i> The Shiloh Building 214 Centerview Drive, Suite 260 Brentwood, TN 37027 tel 615-834-3131 web www.cicglobal.com	<i>New Zealand office:</i> c/o Orion Ltd., Manchester & Armagh 399 Madras Street Christchurch, New Zealand tel 011 64 3 363 9750	PowerStat meter: magnetic card system; recently introduced Version 4, a power line carrier unit.
Landis+Gyr		
<i>U.S. office (Landis+Gyr Inc.)</i> 2800 Duncan Road Lafayette, IN 47904-5012 tel 765-429-1482 web www.cashpower.com	<i>South African office (Landis+Gyr [PTY] Ltd.):</i> 60 Electron Avenue, Isando Gauteng P.O. Box 281, Isando, 1600 South Africa tel 27 11 921 7962	Cashpower Form 2S and Form 2S PLC Split Prepayment Metering System: The Form 2S is hard-wired whereas the Form 2S PLC is a power line carrier unit. Both are keypad solutions with one-way communications.
Silver Spring Networks (formerly Innovatec)		
13000 W. Silver Spring Drive P.O. Box 910 Butler, WI 53007-0910 tel 262-364-5307 web www.innovatec.com		Offers a fixed two-way wireless network that enables advanced meter data management and integrates tokenless prepayment options.

Source: Platts

about 15 percent. These electricity and gas savings, combined with avoided late fees and disconnect fees, resulted in an overall customer savings of about \$74,000. Although the average enrollment stayed at around 480 customers, a total of 589 customers participated in the pilot. Therefore, the average savings per customer came in at around \$125 to \$150 per year. Since pilot participants paid an additional \$7.50 per month, or \$90 per year, they realized net savings of only \$1 per week.¹⁵ The new rate for the full-blown program would bring the additional fee down to \$24 per year —saving each Pay As You Go customer about \$100 per year.

Susan Sanchez, program manager of Pay As You Go, expects the cost of the new Ampy meter and display unit to be about

\$250 per home, not counting installation and administration costs. LG&E, which is in the process of testing the meters and integrating its CIS with the Ampy system, is talking with two other kiosk vendors. The utility plans a slow rollout of the new system to approximately 500 customers in the summer of 2003, but aims to enroll 40,000 customers within five years.¹⁶

Tacoma Power Gateway Pilot. Tacoma Power is planning a gateway and prepayment pilot that will leverage its broadband network, which currently delivers cable TV and data services over a combination of fiber-optic and coaxial cables. (A gateway is a device that links one or more home networks to an external network such as a paging network or the Internet.) Digital interval meters will be installed, each

embedded with a gateway and cable modem. Of the 10,000 residential gateway pilot participants, 1,000 will test “card-less” prepayment. Additional services to be tested include remote meter reading, remote connect/disconnect, outage detection, and load control of appliances.

A novel aspect of Tacoma’s prepayment system is that both the meter and the in-home display will communicate with the utility’s back-end database over the broadband network. When customers purchase electricity—over the Internet, at the utility service center, or at one of nine Diebold kiosks—the database will notify the customer’s meter over the network that the account has been recharged, without any need for a smart card. The database will also supply consumption data and messages from the utility (such as information about planned neighborhood outages) to the in-home display.

Although some pilot participants will be recruited from a pool of payment-troubled customers, Tacoma Power hopes to make the service attractive to many different customer segments. Eventually, the utility envisions a prepayment service geared toward customers who have no history of payment problems. This service would emphasize convenience in that customers would not have to put up a deposit, monitor their consumption data to avoid running out of power, or recharge their own accounts. For example, if a prepay account fell to \$5, the utility would automatically charge the customer’s credit card for a specified amount.

Tacoma Power, which is currently building the back-end database and software for the pilot, will be integrating several new systems, including CIS and billing. Plans are being finalized for suppliers of the meter, gateway, and in-home display, which the utility expects will be well

below the \$500-per-household cost that other utilities have paid for the Motorola system. The prepayment phase of the pilot is scheduled to begin in the first quarter of 2004.¹⁷

Woodstock Hydro: Pay As You Go Smart Metering. Woodstock Hydro in Ontario, Canada, initially began its prepayment program in 1989 to address the 1 to 2 percent of its customer base that were slow to pay. Yet “when we looked at this technology, we realized it was a very amiable and friendly way of getting customers on a program that would lead to a better relationship with the utility,” says Carl Kelly, business development manager at Woodstock Hydro’s affiliate Info Energy Inc.¹⁸ Although the utility did virtually no advertising or marketing, the program grew significantly through word of mouth. Currently, more than 2,600 customers participate in the Pay As You Go program—roughly 22 percent of Woodstock Hydro’s 12,000 residential customers.

Customers in arrears can choose to have 10 to 50 percent of prepay purchases allocated to their account balances. The utility has seen a reduction in arrearages from about \$70,000 per year to around \$5,000 per year.¹⁹ Since participants tend to buy power in smaller increments, Kelly says they are able to budget their resources better. They also get real-time information on their hourly consumption. At the end of 2002, Woodstock Hydro compared the consumption of prepay customers to the provincial average in Ontario and found that Pay As You Go customers used 20 percent less energy. Although the program was initially geared toward the high-maintenance customer, “It’s evolved to where it’s now become a conservation tool,” Kelly says.

Instead of recharging smart cards at kiosks, customers buy power from

Table 2: Vendors of prepayment kiosks in North America

Clarusys Inc.
4040 East McDowell Suite 201A Phoenix, AZ 85008 tel 602-267-1332 web www.clarysys.com
EPOS Corp.
177 Technology Parkway Auburn, AL 36830 tel 334-321-EPOS (3767) web www.epos.com
InfoTouch Corp.
303 Research Drive Suite 200 Norcross, GA 30092 tel 404-315-8500 web www.infotouch.com
Touch Controls
520 Industrial Way Fallbrook, CA 92028 tel 800-848-4385 web www.touchcontrols.com

Source: Platts

cashiers at convenience stores. The cashier connects to the local utility via a dial-up network and uses a small device to encode the customer's card with the purchase amount. The convenience stores, which earn a fee on each transaction, help to promote the program because it builds customer traffic. Kelly says that several major utilities in the U.S. have been looking at Woodstock Hydro's vending process as an alternative to kiosks.

Woodstock Hydro initially used technology from CIC Global but switched to Motorola in 2001. Now it will gradually phase in technology from Ampy, which "is considerably more cost-effective," Kelly says.²⁰ Beginning in late summer 2003, Info Energy Inc. will be the distributor for Ampy technology throughout Canada and the northeastern United States.

Regulatory Issues

Changes in the North American regulatory environment in recent years have also influenced the development of prepayment. Just three years ago, deregulation was looming, and many utilities were investigating prepayment with some urgency. Today, as deregulation proceeds at a slower pace, utilities are taking more time to explore prepayment.

Vocal resistance from community advocates remains fairly widespread. Increasing numbers of prepayment pilots and programs indicate that regulators are increasingly open to the idea of prepayment metering, yet many are still wary of how it will ultimately be used. It is therefore critical for utilities to provide education to regulators and community advocate groups alike, stressing that prepayment is an optional service and one that typically results in high levels of customer satisfaction.

For example, customer surveys reveal that prepayment has significantly enhanced customer satisfaction at SRP. According to John Soethe, the program ranks very high with participants, who identify benefits such as the ability to budget for prepay purchases and access real-time information on usage. He explains that prepayment allows the utility to treat payment-troubled customers with dignity and respect while they pay off back balances. "No more collection letters, late payment fees, threat of disconnect, et cetera. I call this 'the downward slide' of Customer Service, which prepay allows the utility to avoid completely." Soethe believes SRP's prepayment program is a major reason why the utility has received the J.D. Power award for exceptional customer service among large western utilities three of the last four years. "Customers that we'd expect to be our largest critics are in fact very satisfied."

Advocacy groups fight prepayment at LG&E. In Kentucky, advocacy groups representing low-income consumers intervened in LG&E's program. These groups contend that LG&E's Pay As You Go program targets customers who can least afford prepayment's additional fees. They argue that the program provides a lesser service: For example, prepayment may prevent customers from accessing federal energy assistance funds (because the utility does not provide prepayment participants with a disconnect notice when they are in danger of losing service.) They feel that the program is not truly voluntary, since prepayment may be presented as the alternative to paying arrearages in full in order to get service restored. In addition, they believe that LG&E's assumptions about the program's cost-effectiveness are too optimistic.²¹

LG&E says the program does not target low-income customers, but instead is

geared toward payment-troubled customers. In addition, the utility contends that the prepayment program provides greater quality of service because it gives customers more information about and control over their energy consumption as well as increased payment flexibility. The utility cites efforts it made to protect participants from “lesser service” situations, such as programming the meters to operate even when there is no remaining balance from November through March. It also worked with the Kentucky Association for Community Action to generate notices of estimated arrears to ensure that LIHEAP (Low Income Home Energy Assistance Program) assistance would be available to eligible participants.²²

Despite the vociferous opposition of community advocacy groups, the Kentucky PSC approved the expansion of Pay As You Go throughout LG&E’s service territory in March 2003. The PSC ordered LG&E to reduce the monthly equipment fee to \$2, to work with energy assistance organizations to ensure eligible participants can access funds, and to continue treating prepayment participants as credit customers from November through March. LG&E must submit biannual reports on the program and undergo an independent evaluation after three years.²³

The opponent groups have appealed the PSC’s decision in court. “We think we have pretty solid legal grounds for judicial review of this case,” says Jack Burch, executive director of Community Action Council for Lexington-Fayette, Bourbon, Harrison, and Nicholas counties. “We feel strongly that prepaid meters pose some serious potential risks for low-income people, especially the elderly, and we have a commitment to do everything we can to prevent them from going forward.”²⁴ Sanchez says the appeal is “slowing us down a bit.”²⁵

Other utilities weigh in. This debate highlights the importance of differentiating low-income customers from high-maintenance or payment-troubled customers. “Our experience is they’re not the same,” says SRP’s Soethe. SRP waives the \$12.78 prepayment fee for low-income participants who meet federal poverty guidelines; these customers are also eligible for a discount of \$9 (available to all of SRP’s low-income customers). Soethe therefore argues that SRP’s prepay program “is a closer fit with the universal service concept than any other program that we have to offer.”²⁶

OUC did not encounter much resistance when it initiated its prepayment pilot. “In fact, the community social services agencies wanted to know more about prepay metering, because they felt it would be a way to help payment-challenged customers, and have additional funds to assist others,” says Torres.²⁷

Carl Kelly of Info Energy Inc. points out that high-maintenance customers “exist no matter where you are. But if you give those customers a tool to help them better manage their resources, you’re providing a much better service. Letting an energy bill get out of control, and having to disconnect them is not a desirable situation. Customers quickly realize, ‘This is not a negative thing; this is a positive thing. My utility is trying to work with me on this program.’ The key is, if the customer can monitor their energy, they can manage it and will make wise decisions.”²⁸

Is There a Business Case for Prepayment?

Program managers support vendors’ assertions that prepayment provides clear benefits to both customers and utilities. Customers enjoy greater control over their payment schedules and immediate feedback about their energy consumption.

“If you give [high-maintenance] customers a tool to help them better manage their resources, you’re providing a much better service.”

**—Carl Kelly
Info Energy Inc.**

High-maintenance customers no longer have to deal with energy bills, up-front deposits, fees for reconnects or late payments, the embarrassment of the utility truck coming to disconnect them, or unhappy visits to the utility office to make payment arrangements. Often, the combination of real-time consumption information and fee reductions enables these customers to save both energy and money. (Program managers interviewed for this report said their prepayment customers reduced consumption by 8 to 20 percent.)

Prepayment metering provides a utility with lower operational costs related to reduced meter reads, disconnects and reconnects, and employee hours spent on dispatch, collections, and customer service. In addition, several utilities have been able to significantly reduce arrearages (although 95 percent of LG&E's Pay As You Go customers joined the program with back debt, only 15 percent now have arrearages, while Brunswick EMC's bad debt write-offs have dropped 30 to 40 percent since the program's inception²⁹). However, the up-front costs of equipment, infrastructure, and employee training are significant. As a result, many utilities still wonder: Is there really a business case for prepayment?

Analyzing costs and benefits. Often, utilities try to make the business case from a pilot program with only a few hundred units, a situation in which it's difficult to get costs down. Florida Power & Light (FP&L), which has been running a 600-unit pilot since 2001, conducted a cost-benefit analysis and concluded that the results "are not good enough for us to warrant moving ahead at this time."³⁰ Yet, it's important to keep in mind that the costs associated with acquiring and installing prepayment equipment decrease on a per-unit basis once higher levels of penetration are reached. Deployments much larger than the typical

pilot (less than 1,000 units) will have a significant impact on equipment costs and create more opportunities to build efficiencies. Jon Thomas of CIC Global says his utility clients tend to see positive financial results once their prepayment programs reach a 10 percent level of penetration.³¹ At the same time, some program managers report that overall prices for prepayment equipment are falling.

A common refrain heard from our experts is this: Utilities need to think of prepayment metering as a service that provides numerous benefits to customers and therefore warrants a premium price. Thomas believes that customers will be willing to pay an additional fixed fee or higher rate because "they see it as a benefit and believe they are in most cases lowering their energy bill. Customers who pay 7 percent more a month but are lowering energy usage by 12 percent are still ahead of the game."³² Kelly agrees. "Although cost is an issue, on a broader scale, utilities can offer a service that empowers their customers and allows them to conserve energy. So we're finding even with a small additional monthly cost associated with the technology, the benefits from energy savings outweigh the cost of that fee."³³

Customizing your analysis. To assess the business case accurately, you should clearly understand both the benefits of offering prepayment and the true costs of serving your high-maintenance customers. As Kelly points out, some of these costs disappear once customers join a prepayment program, such as costs related to meter reads, disconnects and reconnects, customer service, and billing.³⁴ Sanchez says the biggest benefit of prepayment metering by far is the reduction of bad debt write-offs.³⁵ Program managers agree that no hard and fast formula exists to determine whether prepayment makes sense for

your organization—the size of your company and the customer base you serve will strongly impact your cost analysis.

In the case of LG&E, the Kentucky PSC determined that a facilities charge of \$2 per month should fully recover the program's fixed costs based on the Ampy meter cost (assuming projected participation rates are reached) plus produce additional revenues that will benefit LG&E and non-participants. In an appendix to this decision, the PSC detailed the calculation through which it arrived at this monthly facilities charge, based on the cost of an Ampy prepay meter (with a portion of the reduction in bad debt write-offs included as a credit). This calculation showed the gross reduction in bad-debt write-offs to

be \$37.17 per prepay participant, and the total annual customer-specific costs, including administrative, to be \$24.³⁶

Ultimately, the business case for prepayment will vary based on your goals, the prepay vendor you select, your back-office and administrative processes, and how efficiently prepayment is integrated with those processes. When analyzing whether prepayment makes financial sense for your organization, assess how quickly you can ramp up the program to build efficiencies and keep in mind that it can take years to build a successful program. It is also important to remember that prepayment can provide a significant value in the form of enhanced customer satisfaction.

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Notes

- 1 Karen George, "Prepayment Metering Services: A Fit for North America?" *E SOURCE Residential Energy Service, RES Currents 1* (July 2000), pp. 1–2.
- 2 Leland Keller, "2003 Begins with a Bang for the EIS Industry," *E SOURCE EIC News* (January 27, 2003).
- 3 Duane Pearson, personal communication (May 20, 2003), Motorola Utility Solutions, Scottsdale, Arizona, tel 480-441-5530, e-mail duane.pearson@motorola.com.
- 4 John Soethe, personal communication (May 2, 2003), Manager of Revenue Cycle Services, Salt River Project, Phoenix, Arizona, tel 602-236-2173, e-mail jrsoethe@srpnet.com.
- 5 David Huff, "Garnering Executive Support and the Importance of Effective Project Management," PowerPoint presentation, p. 3; Director of Revenue Collection, LG&E Energy Corp., Louisville, Kentucky, tel 502-627-3998, e-mail david.huff@lgeenergy.com.
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