

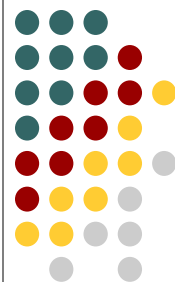
# **MG&E**

# ***Business Report***

# **2005**

## ***New Energy Reality***

Middleborough Gas & Electric Department



**Presented By:**

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### The Past Year and Present in General

As energy consumers, we are all facing new realities this year. The bar has been raised for what we now consider the average cost of most energy supplies and, in the coming year, MG&E customers should be aware of the potential for adjustment to fuel charges if trends for this new market set point continue to rise.

However, in spite of last year's unrelenting rising costs of power, we were able to hold electric fuel charges steady for the year. We increased our gas fuel adjustment at the end of 2003 to recover an increase of over \$1,000,000 in natural gas prices. However, our natural gas hedging strategies enabled us to avoid an additional \$400,000 of natural gas price increases.

Working with expert consultants, we continued to use sophisticated hedging strategies that limit our exposure to the highest market prices and keep us open to take advantage of the lowest prices. This allowed us to keep energy costs manageable for the year and our cash reserves allowed us to absorb the majority of unavoidable increases so that our customers were not affected more dramatically. We were also able to begin funding our unfunded pension liability reserves and it is now clear that we will meet this obligation as scheduled, well ahead of any future crisis point.

Incorporating new technologies into our strategic mix is helping, as is relying on the tried and true. We addressed the concern of an interruption in our imported Liquefied

Natural Gas (LNG) supply by purchasing an LNG peaking service from a local distribution company. The service provided its own liquefaction and allowed us to increase our peak day coverage by 20 percent. In addition, we renegotiated our Import LNG Contract at a discount to the prior year's contract.

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. . . while many public offices are facing dire fiscal constraints, it is important to note that MG&E is in excellent financial health.

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We continued to supply the Compressed Natural Gas fleet filling station on Route 44 in Middleborough and our own fleet of CNG vehicles continued to grow. While this alternative fuel station is not providing outstanding revenues to MG&E at this early stage, it is not an outstanding expense either. All facilities are owned and operated by a well-respected third party enterprise. And CNG remains the alternative fuel of choice for mandated alternative combustion-fired state fleet vehicles for Massachusetts.

We reviewed the energy potential for both methane recovery of landfill waste and windmill generation as the towns we serve took tentative steps in both directions. However, both alternatives showed limited value that ultimately proved these endeavors not worth further investigation at this time.

In 2004, we also concluded that our telecommunications venture, started five years earlier, had not developed into the companion service we had hoped. Our experience working with a third-party long distance phone service provider taught us valuable lessons about the competitive nature of the telecommunications industry. This relationship also saved us a more substantial investment in equipment and personnel. At this point, we have determined that a more dedicated and financially committed effort would be required to continue. We have elected to pass.

To continue with system reliability improvements in 2004, we focused on pre-emptive work to keep system interruptions at bay. We completed the upgrade of our Algonquin natural gas take station in South Middleboro, resulting in the relatively quiet operation during another winter of extreme weather conditions. This upgrade allows us to better balance pressures throughout our system during periods of high demand and makes room for continued high growth. On the electric side, we committed an additional \$50,000 to expand our tree-trimming program to attack areas of particular nuisance and reduce the reach of falling trees or sagging limbs along sensitive rights of way.

### **This year ...**

It is obvious now to most in the energy industry that we will not see oil or natural gas prices fall to the levels we enjoyed two years ago. While there are no pressing issues that threaten supply and all indications are for a normal year with no shortages or bottlenecks, prices remain at their new normal levels due to other market forces.

There are also no immediate transmission issues although this will be the first year for the Regional Transmission Organization which now has authority to run the regional transmission delivery points in New England. We expect that there will be little change in transmission pricing or regulation during this year of transition.

In our own area, growth seems destined to continue at the current rate of three percent with two new large industrial customers moving into the area and several others expanding. While many townships and public offices in Massachusetts are facing dire fiscal constraints, it is important to note that Middleborough Gas and Electric Department is in excellent financial health. In anticipation of lean times, we began a program of fiscal restraint and cash reserves in 2001 that has served us and our customers well. This included eliminating three upper management positions and spreading the remaining responsibilities among the current team. Our managers now deal more directly with customers and our general manager is directly involved in supply forecasting and purchasing. For our customers this means faster answers and a shorter timeline for response to reliability and rate issues. It also means that we are reacting faster and with more hands-on experience to volatile energy markets, finding opportunities for low cost supplies, keeping rates competitive.

On the electric side, we have been exploring long-term supply options to handle continued growth and cover current supply due to the expiration of a low cost power contract at the end of this year. The effects of new normal market pricing are beginning to take a toll as we negotiate this new long-term electric supply. In the current high cost market, we have received bids for power supply to 2011. These bid prices are far above historical averages and would increase our current rates by one to one and a half cents per kilowatt hour. To counter this effect, we have asked for the bids to be restructured so that we can hedge the natural gas component of the power costs to take advantage of a fall back to near normal

prices and pass those savings through to our customers. We are also part of a Municipal Group investigating the purchase of joint-ownership in distressed (bankrupt) generating plants currently for sale as another option. For now, we anticipate the purchase of this new supply to affect rates at the start of 2006. However, if market prices become unstable and rise sharply before that time, increases could come sooner. We urge all large power consumers to be prepared.

In answer to the pressure on operating costs this year, we are streamlining several areas of operation to gain efficiencies. An automated meter reading pilot program is now in place and, once billing issues have been completed, we will begin taking advantage of this labor saving technology, working to full deployment in our service territory. We are also actively upgrading our customer service training to strengthen cross-function abilities and develop a more diversified staff able to address overlapping duties and complex situations. And, more basically, we are working closely with customers to keep outstanding receivables at low levels.

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The effects of the new “normal” market pricing are beginning to take a toll ....

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Finally, we are working with our largest power and natural gas users to keep them and us informed of changes that affect our mutual interests. This report and the annual specific information about your usage is an example of that work. We invite you to take a few minutes to learn more about our ongoing activities in the rest of this report as they can and do have an important affect on your business operation. Then please review the business specific information we’ve included about your own commercial energy consumption. You should know that this information is available to you at any time you request. We have the capability to produce updated energy use data on demand, when you need it.

We believe knowing more about how you use energy and how it affects your bill is crucial for your business as well. We hope that you find this report and information useful.

### Competitive Position

#### The Bottom Line

The best measure of comparison between one rate and another or one bill and another is the calculation of the average cost paid per kilowatt-hour (for electricity) or per therm (for natural gas). In this way, we take into account all the variables and charges that affect the bottom line of the bill.

The average cost per kilowatt-hour currently paid by our largest 20 industrial customers for electricity is **9.16 cents**. The average cost per therm for natural gas paid by our largest 20 industrial customers is **\$1.07**.

The variables that affect that average cost, including demand levels and load factors which are controlled by the customer, are discussed later in this report. Your own company average cost per kilowatt-hour and, if applicable, per therm, are reported in the business specific pages.

Any tax paid to the state of Massachusetts or interest paid to us for past due amounts are not included in these averages.

#### Our Rates

MG&E large commercial and industrial rates are designed to recover the cost of the peak level of demand required by our customers, the cost of energy supplied, the cost of our distribution and maintenance of that supply and its components. Also included is a small margin of 2.8 cents per kilowatt-hour covering our administrative costs and facilities and funding continued expansion and capital improvements to the system without need for borrowing. Our Large Commercial General Service demand rate combines a low energy

charge with a moderate demand charge that rewards the more level load factors of our largest energy users.

Demand charges are a major component of the electric bill for our commercial customers. This fee of \$8.50 or \$8.75 per Kilowatt represents the cost to have reliable supply and distribution facilities available at all times – whenever the customer may require it.

Energy charges recover our costs to install and maintain our distribution systems – pipelines and wires – as well as a portion of our contracted energy supply costs that remain firm and stable.

Fuel adjustment charges are pass through costs of actual energy purchases as used and as charged in a fluctuating market. This is the variable component of the bill that may reflect changes in the cost of energy due to changeable gas and oil prices. However, MG&E is able to keep this charge stable by building our cash balances when market pricing is low and drawing on that balance when prices rise. We also work to negotiate long-term power deals mixed with opportune purchases in the spot market and sophisticated hedging techniques to mitigate power cost swings. In this way, our customers enjoy a steady charge and bill throughout the year.

*Our large industrial and commercial rate sheets are attached for your review. Also attached are **MG&E Typical Bill Comparison** sheets and current charts showing **MG&E Standings** for large commercial rates.*

### Some Important Elements

The following four elements have a direct impact on the large commercial and industrial bill and, so, should be considered integral to current and future energy costs for the customer. The first two elements, demand and load factor, affect the electric charges and are within control of the customer. The second two, rate stabilization and stranded costs, are important factors in the utility industry today and have an ultimate affect on all rates and billing.

#### **Demand**

MG&E and all utilities in Massachusetts charge separately for the component of the level of electric use or demand. A simple analogy – if your overall use of electricity (the total amount you use over time) is equivalent to the miles you travel in a car, then your demand level is equivalent to the speed you are traveling.

Demand is measured at its peak throughout the month and recorded at that highest level. MG&E charges a per kilowatt fee which is the effective cost to us to have at the ready this level of supply at all times. This is the cost of contracts with generating units for a dedicated amount of energy output on demand – whether we use it or not. These are the fixed costs of owning and maintaining a generating plant, a type of overhead cost.

This demand charge also recovers a portion of the cost of our distribution equipment needed to supply this level of demand reliably – namely our substation transformers which typically handles a peak use of nearly 52 megawatts in the summer and has the capacity to deliver a peak of up to 80 megawatts. This effectively ensures that, no matter what level of demand your new neighbors are using, MG&E will be able to supply your demand as well.

Because demand is charged at its peak level, the cost can have an inflationary effect on the average cost per kilowatt hour if that level of use is not sustained. If a bakery turns on all of its ovens in the early hours but then doesn't use them for the rest of the day, the owner may find that, while the quantity of energy used may be low, the charge for peak demand drives up the overall bill and the effect of all charges spread over a low number of kilowatt hours is a relatively high cost per kilowatt hour.

MG&E's demand charge and all utility demand charges reward a demand level that is relatively low and constant relating to its electric

use throughout the day and month. A bakery that cycles half its ovens on while others are off throughout the day will effectively keep its peak demand lower and enjoy a lower bill.

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This is the cost of contracts with generating units for a dedicated amount of energy output on demand – whether we use it or not.

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### **Load Factor**

The relationship between demand and energy use is called a load factor. The baker who turned on all ovens in the morning then used very little energy the rest of the day had a poor load factor. His demand was very high when compared to his overall energy use. This is the ratio of average load to peak load for a specified period. It is expressed as a percentage of the potential energy use available.

All utilities strive for a very efficient or high load factor because it allows the costs they must pay for peak demand supplies (whether used or not) to be spread over the higher number of kilowatt hours, driving down their overall cost per kilowatt hour. Generally, residential use is higher in the evening hours and commercial use in the daytime, effectively evening out the load throughout the day. In 2004, MG&E had a system-wide average load factor of 69.4%. A relatively high load factor is a contributing reason that our customers enjoy competitive rates.

As new commercial customers enter our service area, their energy use can have the effect of raising or lowering our load factor. A large industrial customer with multiple shifts and very efficient and long-running equipment – such as refrigeration – might have a very high load factor of 80 to 90 percent, helping to sustain our system-wide load factor. However, a new customer with heavy-duty equipment used sporadically and with wide seasonal changes in energy use could lower our system-wide load factor. Also, downsizing in shifts and runtimes for current industrial customers could have the same deleterious effect. A slower economy, no doubt, could be a blow to our system-wide load factor if not met with

new, high load factor growth and a balanced approach to maintaining current customer load factors while renegotiating supply contracts.

In the face of potential load factor loss, MG&E developed a load retention rate for customers who clearly demonstrate the near-certainty of closing of an operation or loss to an alternate location based on energy costs. The incentive rate carries a minimum term requirement and rewards a continued level of load and discounts added load for the length of the term.

### **Rate Stabilization Costs**

#### **–High Cash Balances, Power Purchasing Strategies**

There are unpredictable costs in every business and in the energy industry, the highest variable cost is that of fuel (oil, natural gas, coal, nuclear and even hydro) to fire the generating plants and the market cost of supply due to demand for natural gas.

Most utilities recover this cost through their fuel adjustment charges on the bill, adjusting these charges at least seasonally with the rising or falling costs of fuel. At MG&E, we have chosen to keep these charges constant, thereby keeping the entire bill constant throughout the year and year to year, if possible. Our customers have told us that a stable, known cost is easier to plan for and manage than a fluctuating bill and an unknown possibility. We increased the electric fuel adjustment charge by a half cent in 2003 after eight years at the same level. We raised the natural gas fuel adjustment charge by twenty-five cents at the end of 2004 to recover an increase of over \$1,000,000 in natural gas prices. The former level had been maintained for ten years until prices began climbing in 2002.

One method we employ to accomplish this stability is keeping a larger cash balance available to pay the higher costs, usually in the winter months and at peak air conditioning times in the summer. We build up this balance over the months of lower use and fuel costs, typically in the spring and fall and moderately warm months.

At the close of 2004, MG&E had a balance of just over five million dollars. This amount could normally cover a period of six months of higher winter costs as well as funding operating expenses, pension and insurance liabilities. However, harsh weather of the last two winters, and new normal market prices have the effect of draining this cash balance at a much faster rate.

Another important strategy to stabilize rates involves purchasing longer-term power contracts, typically lower in price – usually we target a five-year horizon. In this way we reduce our exposure to market variants while reserving a modest percentage of power

purchasing for the spot market to take advantage of any lower pricing and make use of hedging strategies. The market is now constantly evolving and we use these three methods – cash, long-term power and sophisticated hedging strategies in the spot market - in a carefully balanced approach. It means we are constantly looking for better opportunities and often chasing a moving target.

This year we were able to avoid over \$400,000 in higher natural gas costs using hedging strategies that limit our exposure to the highest market prices and keep us open to taking advantage of the lowest prices. On the electric side, non-power costs were well exceeding our revenues and outpacing our ability for the cash balance to compensate for this loss, until we enacted a half cent increase to the power fuel adjustment in 2003. This increase helped recover these extreme costs and rebuild this balance which is so critical to funding our

capital improvements program – ensuring that we meet future growth and demand reliability – without the need for costly borrowing. We are now facing the need to pay extra costs to fund the unfunded pension liability costs for Massachusetts municipal employees and we began building that fund in 2004.

It's important to note that, without these measures, we could likely be seeing

leapfrogging rate adjustments throughout any period of extreme weather or uncertainty in the energy markets. At this time, the cash balance acts as a cushion, absorbing some of the impact of soaring market prices. At most times, it serves to completely block the need for any increases. In either case, we regard it as a necessity and consider this tactic an integral component of sound financial planning in our industry.

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### **Stranded Cost Fund**

Stranded costs are those costs tied to past energy contracts required by previous regulation. Before deregulation law in Massachusetts was enacted in 1998, utilities were required to contract for energy supply in very long terms, some twenty years or more. When deregulation took effect, utilities faced losing customer load to competition yet remained obligated to pay these contracts. These costs are still being paid by utilities and the current law allows them to recover these costs in their rates until 2007 at which time these costs must be dropped from their rates.

Even though, as a publicly owned utility, MG&E is not governed by this same requirement, we are attempting to follow suit and mitigate our own long-term stranded costs in the same time-frame. To do this, we have been paying into a stranded cost fund – essentially putting away in a higher yield but safe investment vehicle, an amount that will grow to equal our cost to off-set our long-term obligations and fixed costs by 2007. That vehicle is now fully funded and future payments now contribute to our Rate Stabilization fund, effectively used to absorb dramatic changes to supply costs in the coming years.

By having these funds available, we will be prepared to compete with any lower rates charged by IOUs in Massachusetts. We completed our contribution to the Stranded Cost fund in 2004, and it is growing to the required levels through investment interest alone. The fund's current balance is over seven million dollars, all invested from our existing rate structure and margin.

### Summary

Like most utilities in Massachusetts, we are working to hold our competitive position in the new reality of today's energy market. And while we may be facing a certain amount of sticker shock in this new market, we at MG&E are finding ways to lessen the impact for our customers. We are prepared for certain oncoming transitions including the more competitive market without stranded costs and the obligation of future unfunded pension costs. We are experienced in the use of rate stabilization funds to avoid borrowing and cushion severe supply cost fluctuations. We are strengthened by working with experts and strategies to keep supply costs predictable. And we are ready for continued growth with important upgrades to our distribution systems complete.

This report represents our commitment to providing our commercial customers with vital information about our operations as it affects your business. We hope that it gives you some added insight as you plan for the future. We ask that you review the attached usage and comparative data and talk with us about any questions or concerns you have. We also ask that you consider involving us when you become aware of eminent changes to your operation that will affect your use of gas or electricity so that we can plan accordingly and continue to serve you well.

Finally, because we are a municipal utility, serving a relatively compact area, we consider your plans, opinions and requirements a large part of what drives our service. Thank you for taking the time to review this information and, we hope, come to a better understanding of our connection with your business. We look forward to working with you well into the future.