



### The 1990s had scarcely begun when the world's energy resources once again were thrust onto center stage. The reason this time was the Iraqi invasion of Kuwait.

Irag's August 1990 incursion into its oil-producing neighbor incited an economic scare that quickly drove the price of oil from \$21 a barrel at the end of July up to \$46 per barrel in mid-October.

This "oil shock," although remedied by the subsequent ejection of Iraqi occupiers from Kuwait by U.S.-led coalition forces in the early months of 1991, nonetheless sparked a short, relatively mild recession that lasted from July 1990 to March 1991.

But alarm over the event subsided nearly as guickly as it had arisen. Once the world's economies recovered, the remainder of the 1990s entered history as a period of robust U.S. expansion.

One of the key factors that shaped American business overall during the 1990s was the rapid and widespread growth and adoption of digital technology. Computers became smaller, faster and more powerful. The Internet proliferated with the introduction of the browser-based World Wide Web. Online and wireless communications flourished. As new businesses mushroomed in these sectors, their technologies coalesced to enable a new Information Age.

Washington Gas, like nearly every industry, was affected in some way by this digital revolution. But for Washington Gas, the main driver of change in the 1990s was not primarily technological, but regulatory.

#### A New Paradigm

It all revolved around how gas was bought, sold and transported.

As noted earlier, the gas shortages of the 1970s had motivated Congress and the Federal Energy Regulatory Commission to take steps to ensure a steady supply of gas. One of the first steps—the deregulation of gas prices at the wellhead through the Natural Gas Policy Act of 1978—had helped to spark exploration for new sources of gas supply.

At the same time, FERC also had encouraged interstate pipeline companies—which had a monopoly over the long-distance gas transportation infrastructure—to transport not only the gas the pipelines themselves sold, but also gas that their customers had purchased directly from producers. Under this more liberal "open access" policy, Washington Gas entered the 1990s already purchasing about half of its supply directly from natural gas producers.



Plenty of Heat

While "The Heat is On" campaign was in full swing "back home" at the gas company, it was also quite a hit with at least one group of U.S. Marines in Kuwait. The Marketing Department seen Appliance Servicomen Serve Robeson — on military large to serve with the marines during Operation Desert Scorn — 120 pages and gold "The Heat is On" baseful caps for the men in his U.S. Marine Corps Reserve company. Robeson, hatless, is in the back own, fourth from the left.

Several Washington Gas employees served in Operation Desert Storm. Employees also sent care packages and donations to those serving, including these baseball caps to the U.S. Marines.

In the early part of the decade, about 150 interstate pipeline companies were transporting gas for delivery to approximately 1,300 local distribution companies<sup>3</sup>.

For much of their history, those local distribution companies had been closely tethered to certain pipeline companies for their supplies of natural gas. Under traditional arrangements with pipelines, local gas companies historically paid not only for the gas itself, but rather for a "bundle" that included gas, transportation, storage and other services.

But that was about to end. In April 1992, FERC initiated the next phase in the deregulation of the gas industry with the issuance of Order 636, which diminished pipelines' role in natural gas sales, and compelled them instead to focus on transporting and storing gas.

Among its key provisions, Order 636 required natural gas pipeline companies to unbundle their services and price each separately. It also compelled them to open up access to their pipelines to other gas suppliers, and to provide those suppliers with the same level of transportation service they used to deliver their own supplies.

Pipeline companies also were required to allocate sufficient storage capacity, and enough so-called "firm," or uninterruptible, transportation services to replicate the bundled product it had sold previously.

Order 636, which became effective Nov. 1, 1993, set into motion changes that would affect not only Washington Gas, but every one of its customers.

<sup>&</sup>lt;sup>3</sup>Source: Federal Energy Regulatory Commission: http://www.ferc.gov/legal/maj-ord-reg/land-docs/gao-636study-1993.pdf



Washington Gas debuted "e-bill" services in the 90s to allow customers to pay bills electronically. The service also enabled bill consolidation for commercial customers. From left, Ginny Keys, Ron Riley, Nora Crouch and Nell Ann Shelley discuss the e-bill "demo disk" to be mailed to customers.

#### Reaping the Benefits of Competition

With fewer restrictions on the purchase and supply of gas, Washington Gas in the 1990s began reshaping its business to take advantage of the new competitive opportunities that Order 636 had opened up.

Washington Gas was now fully responsible for purchasing its own gas supplies directly from gas producers and marketers. Moreover, the company was also now responsible for arranging the delivery of these gas supplies using transportation and storage capacity that it now purchased on an unbundled basis from interstate pipeline companies.

This new flexibility allowed the company to adopt a new gas supply strategy that no longer hinged on the long-term contracts that were more typical of the old pipeline-supplied regime. Instead, the company now was free to fashion a more nimble strategy that took advantage of the newly competitive supplier landscape.

In the early 1990s, Washington Gas still purchased about half of its gas supply under long-term contracts. As those contracts expired, the company began to enter into more flexible short-term arrangements. By 1995, the company had access to seven pipelines, was buying gas from 50 marketers and producers, and was steadily reducing its exposure to long-term purchasing commitments.

One of the company's principal pipeline suppliers, Columbia Gas Transmission Corp, and its parent, the Columbia Gas System, Inc.,



Washington Gas helps the U.S. Navy cut dependence on foreign oil with a natural gas fueling station at its Public Works Center. Company vice president Pat Clarke (third from right) helps senior Navy officers and other officials "cut the gasoline pump."

were not so fortunate. In July 1991, the companies filed for Chapter 11 bankruptcy. Among the causes behind the bankruptcy were contracts that the pipeline company had entered to buy gas from producers at above-market prices.

Many pipeline companies had entered such long-term contracts, which required them to buy large quantities of gas at above-market prices. Such agreements—some covering up to 20 years—had looked more reasonable during the 1970s, when gas appeared to be scarce.

Washington Gas itself was a member of an official committee of Columbia Gas customers who participated in the firm's bankruptcy proceedings. While the bankruptcy did not affect Washington Gas

service, a court-approved rejection of the high-cost gas contracts did reduce the cost of the gas being charged to the company by Columbia. Washington Gas also shared in a settlement paid out as part of Columbia's Chapter 11 reorganization.

#### **Unbundling Local Offerings**

Following the unbundling of services provided by interstate pipelines, Washington Gas began to unbundle its own services at the local level.

Gas utility service that had always been offered as a package was now split into discrete elements such as gas sales, interstate transportation, storage and local delivery. This unbundling would give

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end-users the freedom to purchase competitive elements of the former bundle—even the gas itself—from an alternate source.

In 1995, the company began to offer these unbundled services often known as "customer choice" programs—to very large customers in Maryland. The following year, Washington Gas unveiled unbundled service for both commercial and residential customers in Maryland. Subsequent years saw unbundled services rolled out to the company's customers in Virginia and the District of Columbia as well.

Appliance service, a traditional part of the service bundle offered to local customers, also was unbundled from utility service in 1995 and offered for a separate charge.

#### Leaner Structure

By the mid 1990s, Washington Gas was making significant strides in adapting its businesses to gain the greatest benefit from the new deregulated gas market.



1994 saw record low temperatures hit the Washington, D.C., area.



Employee Damon Downing (right) joins President Bill Clinton to dedicate a new town home built by D.C. Habitat for Humanity.



A major project in the 1990s was bringing natural gas service to the Patuxent Naval Air Station. The project involved creative engineering to run transmission lines below the Patuxent River.

With various kinds of businesses under its corporate roof, Washington Gas began to take steps to separate its utility and non-utility operations. In this streamlining process, it also shed some peripheral businesses, and acquired others that aligned with the company's plans for the more competitive marketplace of the 1990s. For example, in 1992, Washington Gas sold Davenport Insulation, Inc., and its subsidiaries.

All in all, however, the company's primary aim was to focus on its core gas businesses, and to reduce its involvement in non-utility ventures.

As part of its reorganization, the company in 1997 formed Washington Gas Resources Corp. to serve as its holding company for non-utility subsidiaries. That same year, the company also formed Washington

Gas Energy Services, an unregulated energy marketing company, as a subsidiary of that new holding company. American Combustion Industries, acquired in 1998, also was organized under the umbrella of Washington Gas Resources.

In 1999, Washington Gas took a half-stake in Primary Investors LLC, formed in partnership with co-investor Thayer Capital Partners in 1999. Organized as a direct subsidiary of Washington Gas, Primary focused on investment opportunities in after-market products and services for the HVAC industry.

During the decade, the company also worked to shed some of the holdings of Brandywood Estates. In 1999, Brandywine was able to

## WGES makes its debut

They got their new name on July 22 and moved into their new offices a week ago. "Washington Gas Energy Services" of Herndon, Va., is the company's energy marketing affiliate and wholly owned subsidiary. WGES promises to be quick, flexible and sophisticated in its ability to meet customers' needs and seize sales opportunities.

Washington Gas created this non-utility operation last year so it could bring customers new and different ways to buy energy. It has been joined in competing for customers' busi-



Brian Alexander (seated) takes a short break with the WGES sta left, the staff includes: Kevin Anderson, Les Lewis, John Colpitts Shaw, Andrea Baroncelli, Phil Woodyard and Greg Karr. Not pi Claire Munter and Steve Pritchett.

ness by the likes of Peco's "Horizon Energy" mar-

Washington Gas Energy Services started from scratch with just a handful of clients and has grown into one of the leading energy marketers in the region with more than 350,000 customers. The company is expanding into new territories and bringing clean and sustainable energy solutions to residents and businesses.





Computer Aided Dispatch (left) was a major technology advance for employees in the field, while in offices and control centers, newer, faster desktop computers helped employees work more efficiently. At right, employee Steve Shaiko gives a tour of the company's Gas Control Center to members of the Maryland Public Service Commission.

complete the sale of about 1,000 acres of property originally purchased for underground storage, but which had not been used for that purpose.

The effort to create a leaner Washington Gas also included measures aimed at simplifying the structure of the company's expanding utility business. The company made a number of major moves during the 1990s to set the stage for Washington Gas to become the sole utility subsidiary under a new, soon-to-be-created holding company. That holding structure would take effect soon after the beginning of the coming millennium.

To that end, the company's Frederick Gas subsidiary in Maryland was merged into Washington Gas in 1995. In 1998, Washington Gas also sold its propane assets—which had been owned and operated by Frederick—to Columbia Gas.

Further south in Virginia, the company's Shenandoah Gas subsidiary in 1998 sold off its West Virginia gas distribution assets, which primarily had served the Martinsburg area. The following year, plans were laid to merge Shenandoah into Washington Gas as well.

As Washington Gas refocused and consolidated its holdings, it also revamped its internal business organization. To replace the jurisdictional, state-based business organization it had been using, Washington Gas in 1995 established three new business units that focused instead on function—customer support, delivery service and new business.

The following year, 1996, Washington Gas also established a "flatter" corporate hierarchy that resulted in fewer supervisory positions. The company offered certain eligible employees voluntary separation incentives, which a number of employees accepted.

#### A Solid Core Business

Despite a somewhat sluggish start, the 1990s were good years for Washington Gas. During a multi-year streak beginning in 1992, a combination of factors—including cold weather, meter growth and lower operating expenses—helped Washington Gas post record earnings for six consecutive years.

At the beginning of the decade in 1990, the outlook for growth was still unclear. New housing markets were soft across the country. Housing starts in the Washington Gas region would not begin to recover until 1993.

But as the tide turned, the company quickly resumed posting solid gains in meters served. In 1993, the company added its 700,000th meter to the system—an increase of 100,000 meters since 1987. By 1995—only two years after hitting the 700,000 meter mark—the company had added more than 50,000 additional meters to its system.

For the remainder of the 1990s, Washington Gas would continue to grow the number of meters served at an average rate of more than 3 percent per year. In several years during the period—1994, 1995 and 1997—the company reported record meter growth.

The firm's expanding utility business also benefited from another trend—a fast-growing preference for gas among builders and homeowners. The change in the market was striking: the percentage of new homes being built with gas heat in the Washington Gas service area increased from about 50 percent in 1990 to more than 95 percent in 1999.

Other gas applications in the home, such as the use of gas for fireplaces and drying, also expanded during the decade. In 1998, the company reported that over the prior five-year period, the number of new homes being built in its service territory with gas fireplaces or log sets had doubled, and the number of new homes with gas ranges had risen by 25 percent.

Washington Gas helped to drive that market by supporting appliance dealers with promotions and advertising that touted gas fireplaces and gas logs. In 1995, the company reported that such promotions had helped sell 23,000 of these units over the prior three years.

The company also continued to market gas air conditioning during the 1990s, both for residential and commercial cooling. The efforts paid off. Natural gas cooling was adopted by a number of major facilities during the period, including the Capital Hilton in Washington, and Holy Cross Hospital in Silver Spring, Md.

The 1990s also saw a number of major customers join the interruptible rate class during the period. Potomac Electric Power Co. became the company's largest single interruptible customer, accounting for 9 percent of annual therm sales in 1991 on an interruptible basis.

Other interruptible customers included several large federal facilities, including the National Institutes of Health in Bethesda, Md., and St. Elizabeth's Hospital in Washington. In 1997, Washington's newly opened MCI Center came onboard as an interruptible customer, using gas for space and water heating, cooking and air conditioning.



Lee Green, Joe Dobbins and Dawn Galloway care for children at St. Ann's Infant and Maternity Home in Maryland.



Carol Lavin (left) accepts a community service award on behalf of Washington Gas from the American Lung Association of Northern Virginia.



Employees Linh Chamaj and Mark Ingrao volunteer at the company's booth at the Fairfax Fair.



Light The Night is one of the most popular and longest standing employee volunteer activities. Each year, employees raise money for cancer research and celebrate with a 2-mile illuminated walk around the U.S. Capitol.



During the 1990s, as well as throughout several preceding decades, Washington Gas added meters not only by bringing on new customers in its existing service area, but also by annexing adjacent areas into its gas distribution franchise.

As it had on numerous other occasions, the company once again extended its reach into a substantial expanse of new territory, this time by gaining authority in 1990 to expand its franchise into eastern Virginia's Lancaster, Northumberland, Richmond and Westmoreland counties.

#### Conversion Markets

Meter growth during the 1990s also was driven in part by conversion from other energy sources to gas. To prod meter growth during the construction slowdown at the beginning of the decade, the company had ramped up its efforts to convert residential and commercial energy-users to gas.

Through an "on mains" program, the company identified potential residential customers located close to existing gas mains, and then targeted them with direct mail campaigns. In 1995, the company also worked with more than 300 residential subdivisions interested in converting to natural gas.

The initiatives bore fruit. In 1996, the company reported taking on almost 6,000 conversion customers over the prior year—about half of them identified through the "on mains" program.

The company also converted many commercial customers to natural gas during the 1990s, including shopping centers, restaurants, schools and drycleaners.

Among the larger conversion customers was The Rotunda—a complex of five 10-story buildings in Tysons Corner, Va., that converted to gas for common areas and made gas available for individual unit conversion.



Maryland Governor William Donald Schaefer (in cap) points out the benefits of natural gas vehicles, specifically the NGV that Washington Gas leased to him.

The company also converted a competing electric company's largest customer on a single meter. This was the Watergate at Landmark, a four-building residential high-rise complex in Alexandria, Va.

#### **New Market Niches**

While its major focus during the 1990s was on its core gas business, Washington Gas nonetheless continued to explore opportunities in peripheral markets during the decade.

For example, Washington Gas continued to promote the use of natural gas vehicles. At the beginning of the decade, the company already was collaborating with the Washington Metropolitan Area Transit

Replacing aging infrastructure is a continual process to maintain safety and reliability. Here, contractors insert replacement pipe into a 12-inch cast iron main.

## Washington Gas made a number of significant additions and improvements in the 1990s.

Authority to develop a natural gas bus demonstration project, and was working with Amoco to install a compressed natural gas facility at a filling station near the Capitol.

Later in the 1990s, the company's natural gas vehicle efforts were helped in part by new federal requirements that mandated the use of alternative-fuel fleet vehicles—beginning in 1998—in urban areas that failed to meet federal clean air standards. These areas included Washington, D.C.

The company experimented with other sideline initiatives, as well.

In 1998, for example, the company initiated a merchandising program for carbon monoxide detectors as the use of improved, less expensive versions of the devices became more widespread.

Through yet another program, the company entered a marketing alliance through which it earned fees for selling paging and paging services—another quickly expanding market. That arrangement lasted for about two years.

#### **Bolstering Infrastructure**

But the focus remained on gas. The growth of its core gas business—together with the increased demands on its distribution system—required Washington Gas to make a number of significant additions and improvements to its gas infrastructure during the 1990s, particularly in southern Maryland.

Among the company's major achievements of the decade was the installation of a 3,900-foot section of transmission pipeline beneath Maryland's Patuxent River in 1992.

The river crossing was the most difficult section to complete in the construction of a new 19-mile pipeline to serve the southern Maryland counties of Calvert and St. Mary's, which Washington Gas had added to its franchise in 1989. The new pipeline enabled the company to begin service to the Patuxent River Naval Air Station.

Two years later, the company completed another addition to its Maryland gas transmission system—this time a 9.5-mile section of pipeline from Upper Marlboro to Brandywine. The new north-south extension reinforced the company's transmission system by providing an additional route for natural gas to enter the area. The company also built a new gate station at White Plains, Md., to strengthen the system in Charles County.

This Upper Marlboro/Brandywine extension was built to address a weak spot in the transmission system that unfortunately became even more apparent in January 1994—only shortly before the new pipeline was completed.

That month, increased gas usage due to extreme cold temperatures caused a loss of pressure on a line serving portions of Prince George's County—and a temporary loss of service to more than 2,000 customers.

Employees help to improve the home of a resident in need through "Christmas in April."



But Washington Gas handled the emergency quickly. Local officials praised the company for its swift response in furnishing temporary shelter to affected customers, and later providing reimbursement for freeze damages.

The company during the 1990s also looked for new ways to manage the ongoing expense of maintaining its existing pipe. Washington Gas reported in 1993 that the replacement or repair of underground pipe along with other safety-related measures such as system surveys and corrosion control—cost the company more than \$30 million a year.

To help mitigate some of these costs, the company in 1994 participated in a joint project with the Gas Research Institute to evaluate a new pipe replacement system that involved inserting a new polyethylene liner into pipes that otherwise would have to be replaced. Using the liner reduced or eliminated the need to trench, repave or restore an excavation site. The company subsequently adopted the technology.

Further addressing the issue of broken pipes, the company in 1997 introduced two new initiatives to improve emergency response time. The first was the assignment of "one-man crews" to specific service areas so that gas workers could respond more quickly to calls involving broken lines. The second was the establishment of a "designated leak force," a team of highly trained technicians to address customers' most urgent calls.

#### Other Changes in the Field

The company's adoption of new electronic technology reached more deeply into the customer premises during the 1990s with increased installation of automated meter reading technology at the customer site.



Joe Schepis was elected Washington Gas president in 1998. Sadly, he would pass away just two years later.

The new encoder-receiver transmitters, or ERTs, installed on customer meters allowed Washington Gas employees to accurately read meters remotely without entering the customer's home or business.

The technology allowed the company to increase the number of actual readings and reduce estimates. By 1998, Washington Gas was reading nearly 400,000 meters equipped with the new devices.

New technology also helped the company to make more effective and productive use of its field service technicians' time through increased use of computer-aided dispatching. The new system provided better scheduling to the benefit of both customers and technicians.

In addition to these technologies, Washington Gas, like most other companies, underwent a massive program to prepare for "Y2K" and the new millennium. Washington Gas began its efforts in 1995. Because of the diligence and initiative of employees, not only was Y2K a "nonevent" at the company, but many new office technologies, including key computing software and hardware enhancements, were introduced as well to boost efficiency and productivity.



James H. DeGraffenreidt Jr. was elected president and chief operating officer in 1994 and assumed the role of chairman and chief executive officer in 1998.

#### Entering the New Millennium

As Washington Gas navigated the new business and growth opportunities of the 1990s, the company once again welcomed new members to its leadership team. James H. DeGraffenreidt, Jr. was elected President and Chief Operating Officer in 1994. In 1998, DeGraffenreidt replaced the retiring Pat Maher as Chairman and Chief Executive Officer. That year also saw the election of Joe Schepis as President and Chief Operating Officer.

Washington Gas Light Co., which had reached 150 years of age during the decade, had spent the 1990s preparing its operations to meet the

challenges of the next century. Performance went along with these preparations. The 1990s saw record earnings for Washington Gas in six consecutive years.

But the company was about to enter a new millennium—one that would demand a keener competitive edge, a more nimble response to market demands, and a new set of strategies to address the emerging socioeconomic concerns related to renewable energy and sustainability.

That company would be known as WGL Holdings, Inc. 10