## ENRON CORPORATION

(ENE \$66-11/16)
Leading the Charge as the Electric Utility Industry Restructures
Hugh F. Holman (617) 526-7437 hugh_holman@rsco.com

| Rating: Buy |  |  |  |
| :--- | :---: | :---: | :---: |
| Change in... | Yes/No | Was | Is |
| EPS 1998: | Actual |  | $\$ 2.01$ |
| EPS 1999E: | No |  | $\$ 2.35$ |
| EPS 2000E: | No |  | $\$ 2.70$ |


| 52-Week Range: | $\$ 71-41$ |
| :--- | ---: |
| Shares Outstanding (MM): | 372.0 |
| Market Cap (\$MM): | $\$ 24,808$ |
| Average Daily Volume (000): | $1,231.0$ |
| 12/98 Book Value/Share: | $\$ 18.95$ |
| 1998 ROE: | $11.1 \%$ |
| 1998 IBIT Margin: | $5.1 \%$ |
| Tot. Debt /Cap as of 12/98: | $24.8 \%$ |
| 12/98 Net Cash/Share: | $\$ 0.30$ |
| Dividend/Yield: | $1.5 \%$ |
| 3 Year Sec Growth Rate: | $15 \%$ |


| FY December |  | 1998 | 1999 E | 2000E |
| :--- | ---: | ---: | ---: | ---: |
| EPS: | 1Q | $\$ 0.65$ | $\$ 0.68$ |  |
|  | 2Q | $\$ 0.42$ | $\$ 0.50$ |  |
|  | 3Q | $\$ 0.47$ | $\$ 0.57$ |  |
|  | 4 Q | $\$ 0.48$ | $\$ 0.60$ |  |
|  | Year | $\$ 2.01$ | $\$ 2.35$ | $\$ 2.70$ |
|  | P/E | - | 28.4 x | 24.7 x |


| Revs (MM): | 1998 | 1999 | E |
| ---: | ---: | ---: | ---: |
| 2000E |  |  |  |

- Enron is moving aggressively to capitalize on opportunities created as the U.S. and Europe deregulate the electric utility industry and open this massive industry to competition. Enron's wholesale electricity trading volume in the U.S. is up almost sevenfold since 1996. In Europe, where the deregulation of the market lags the U.S. by about two years, Enron's trading volumes grew fourfold in 1998 versus 1997, albeit from a small base. Enron's expansion into the retail electric market in the U.S. is accelerating and this business unit, after two years of investment, should reach break-even by year end.
- In Europe, Asia, and Latin America, Enron has invested $\$ 6.7$ billion in large energy infrastructure projects (gas pipelines and power plants) that will be completed and enter service in 1999 and the year 2000. Many of these projects originated in the global trend toward privatization of the energy infrastructure. This trend will continue to generate new opportunities for Enron in the years to come.
- This stock has been on a tear-up $59 \%$ since touching $\$ 42$ last August-but remains, in our view, the best surrogate to play the restructuring of the energy industry. Our conclusion is to buy the shares of this stock on weakness. Appreciation potential stems in part from Enron's investments in energy services, water, and telecommunications. These investments generate limited or no earnings flow today, and, hence, go largely unrewarded by investors; maturation of these investments will create earnings upside potential in 2000 and 2001.

Headquartered in Houston, Texas, Enron is an integrated energy company. Its operations span the production of natural gas and oil; the transmission and distribution of natural gas; the generation, transmission, and distribution of electricity; wholesale trading of energy in all forms; and retail sales of energy and of services associated with retail energy use. Approximately $80 \%$ of Enron's revenues are derived from its domestic businesses; its international operations are principally in Europe, South America, and Asia. In 1998, the company reported revenues of $\$ 31.3$ billion and net income of approximately $\$ 700$ million.

## Investment Thesis

Enron is a large, complex, and changing company. Yet, we believe the key elements of Enron's strategy may be reduced to a few simple propositions:

- Enron seeks to take advantage of structural shifts in domestic and international markets-principally, energy markets, although the company has recently entered the water and telecommunications businesses-that unlock opportunities to achieve better-thanmarket growth rates and returns.
- In the U.S., the restructuring of the electric utility industry, along with other forces at work, is shifting the point of value creation away from producers of energy, toward consumers of energy. With raw energy in ample supply and generating assets increasingly fungible, it becomes harder and harder to make money as a producer. By contrast, lack of competition due to decades of regulation has left opportunities to add value at the consumer level unrealized.
- Abroad, continued development of the energy infrastructure in Asia and South America is creating opportunities to develop integrated production, processing, and distribution capabilities that unlock value throughout the vertical chain. In Europe, deregulation of the electric utility industry is opening opportunities in wholesale trading and, ultimately, retail services, that parallel the opportunities emerging in the United States.
- Enron uses ownership of regulated businesses to "go to school" on markets that are about to undergo structural change. Ownership of these businesses-Portland General Electric and Wessex Water are examples-allows Enron to systematically identify and evaluate opportunities that may arise as an industry restructures.
- Finally, Enron is creating a corporate culture that rewards risk taking. We believe this corporate culture has migrated significantly away from the traditional culture of the energy industry, toward a
more forward-thinking, motivated, and ambitious culture-in short, a higher-beta culture.
We view Enron as the premier, large-cap play on the restructuring of the energy industry. In our view, the opportunities created by this restructuring, both domestic and international, are more than enough to motivate a Buy rating on this stock. We are cautiously positive on the prospects for Azurix, Enron's new venture in the water industry, and for its budding venture in telecommunications.


## Investment Risks

Among the risks faced by Enron are possible losses stemming from any unhedged commodity price exposure in its oil, gas, and energy trading operations. The electricity market is exceptionally volatile: A Federal Energy Regulatory Commission report noted that during June 25 and 26, 1998, spot prices for electricity in the Midwest rose from $\$ 25$ per megawatt hour to as much as $\$ 2,600$ per megawatt hour, and reached as high as $\$ 7,500$ per megawatt hour at one point. As noted in our discussion below of Risk Management, we believe Enron has in place the hedges, protocols, and oversight to manage its exposure to fluctuations in commodity prices. Additional risks may lie in the "lumpiness" of Enron's large energy infrastructure projects (where project delays might affect results) and in the possibility that the pace of utility deregulation in the U.S. and Europe may be slower than expected; thus, delaying Enron's returns on its investment in trading and retail energy services. Lastly, Enron is making a substantial investment in developing a retail energy services business. This is a new business with an as yet unproven business model; while we are very positive on the prospects of this enterprise, Enron must execute effectively to translate this promise into returns for investors.

## Key Driving Force: The Restructuring of the Utility Industry

In our November 20, 1998 report "Rejoice Re: Juice" (since updated and republished as "Rejoice Re: Juice Redux," April 12, 1999), we laid out our thesis on the restructuring of the electric utility industry. Our key points are as follows:

- Utility analysts have generally focused on the bearish aspects of utility deregulation: the negative impact on shareholder values of less-than-full recovery of sunk investment in utility plant and equipment (the "stranded cost" problem); the prospect of falling prices in a competitive market and the resulting squeeze on margins and profitability.
- We like the bullish side of the story. If the fundamental laws of economics still hold-and we think they do-falling prices for electricity will stimulate demand and catalyze the emergence of new technologies and devices that use electricity. For the power industry itself, we believe competition will reshape the infrastructure of the industry, bringing new entrants and spurring innovation.
- We believe investors should focus, not on utilities, but on the new entrants and on companies that will bring new technologies and services to the market. History has shown that the winners in deregulation have not been an industry's incumbents, but lean and aggressive newcomers (Southwest in the airline industry, MCI in telecommunications) and providers of goods and services to the industry that benefit from industry growth and from its appetite for new technologies (Boeing in airlines, Tellabs in telecommunications).
- We believe the opportunity is huge. The utility industry is the most capital-intensive industry in the United States. It generates over $\$ 200$ billion in revenues annually and consumes over one third of all energy used in the United States. Even a modest tweak to this industry will have significant impacts on the energy industry and on the economy as a whole.


## Enron's Current Business

We think of Enron's current business as comprising two structural groupings:

- The flywheel businesses are Enron Oil and Gas Company (EOG), Gas Pipeline Group, and Portland General Electric. These businesses combined contributed $8.4 \%$ of Enron's revenues in 1998, down from $10.8 \%$ in 1997; and $40.6 \%$ of Enron's IBIT in 1998, versus $44.8 \%$ in 1997 . With the exception of EOG, these are stable, regulated businesses. As indicated above, the strategic importance of the Gas Pipeline Group and Portland General Electric may be twofold, in their predictable and substantial cash flow and in their ability to provide Enron with a window on industries that are in the midst of, or verging on, significant change.
- The growth businesses include Enron Capital and Trade, Enron International, Enron Energy Services, and the new businesses, Enron Renewable Energy, Enron Communications, and Azurix. These businesses combined contributed $91.6 \%$ of the company's 1998 revenues, up from $89.2 \%$ in 1997; and 59.4\% of Enron's IBIT, up from $55.2 \%$ in 1997. In absolute terms, revenues from the growth businesses grew 56.9\% from 1997 to 1998, and IBIT was up $37.6 \%$.

Figure 1: ENRON REVENUE GROWTH: FLYWHEEL VERSUS GROWTH BUSINESSES


Source: Company reports and BancBoston Robertson Stephens estimates.

Figure 2: ENRON IBIT GROWTH: FLYWHEEL VERSUS GROWTH BUSINESSES


Source: Company reports and BancBoston Robertson Stephens estimates.

## The Flywheels

## Enron Oil and Gas

Enron owns approximately $53.5 \%$ of Enron Oil and Gas, an exploration and production company with its principal operations in the United States, Canada, Trinidad, and India. The company announced in a 13D filing on December 15, 1998 that it had received an unsolicited offer for its stake in EOG. At current share prices, Enron's investment in EOG would fetch approximately $\$ 1.6$ billion.

Of the businesses in Enron's portfolio, EOG has historically demanded the most capital. In the four years from 1994 to 1998, Enron estimates that EOG required capital investment of $\$ 2.3$ billion, fully $50 \%$ of all capital expenditures by Enron during this period. This capital intensity, coupled with a low return on investment and a soft outlook for oil and gas prices, would, in our view, tempt Enron to sell its EOG interest and redeploy that capital in faster growing businesses that are more strategic to the company's future. Thus, we would expect Enron to divest this asset, or some portion of it, this year.

The one arena in which EOG's assets may prove strategically valuable to Enron is in selected international markets where there is the potential to develop vertically integrated production and delivery projects. In China, for example, Enron is in the preliminary stages of evaluating the potential of a gas field that could lead, if proven, to the construction of a distribution pipeline and, thinking even further down the road, to projects to develop gas-fired power plants along the pipeline. Given this potential strategic value, Enron may try to retain selected ownership stakes in the international assets while selling the domestic and nonstrategic international assets.

## Gas Pipeline Group

Enron owns outright two natural gas pipeline companies, Northern Natural Gas Company and Transwestern Pipeline Company. In addition, it owns $50 \%$ of Florida Gas Transmission Company and an 11.8\% stake in Northern Border Partners, L.P., which owns a $70 \%$ interest in the Northern Border Pipeline system. Taken altogether, these pipelines are 32,000 miles in extent, with peak capacities totaling 9.7 billion cubic feet/day.

Enron's pipelines are subject to the jurisdiction of the Federal Energy Regulatory Commission (FERC). Gas transmission rates are regulated, and we estimate that $80-90 \%$ of the revenues of the Gas Pipeline Group are demand charges, which are paid by customers irrespective of their gas usage and are designed to cover the pipeline's fixed costs of operation, including a rate of return on capital. Thus, the revenues and cash flow of the Pipeline Group are highly predictable.

Two significant expansion projects are underway in the Pipeline Group. The most important of these is in Florida, where Enron will extend its supply into Southwest Florida. This extension is anchored by an agreement to bring gas to a 1,400 MW repowered Florida Power and Light plant in Fort Myers. Construction on this project is expected to begin spring 2000, with in-service by May 2001 and a total investment of $\$ 350$ million. The second project extends the Northern Border pipeline to serve the Chicago market, and, in a second phase, extends the pipeline further to reach the northern Indiana market. The Chicago portion of this project was completed late 1998; the Indiana portion is expected to be in service in late 2000.

## Portland General Electric

Enron acquired Portland General Electric (PGE) on July 1, 1997 in a stock-forstock transaction valued at $\$ 1.9$ billion. PGE is an electric utility serving the northwest corner of Oregon, including the cities of Portland and Salem. The utility serves just over 700,000 retail customers and reported revenues of \$1.2 billion in 1998.

In late 1997, PGE filed a proposal with the Oregon Public Utility Commission to implement a "Customer Choice" program. This program would effectively open PGE's market to competition from other generating companies. PGE would sell its generating assets, while maintaining the transmission and distribution system as a regulated monopoly.

## The Growth Businesses

## Wholesale Energy Operations and Services

Wholesale Energy Operations and Services is comprised principally of Enron's energy trading activities in North America and Europe, the company's unregulated electric generating assets in North America and Europe, and the energy infrastructure projects that Enron has completed or has under development in South America and Asia. These operations and assets represent the largest source of revenues and IBIT for Enron, generating 86\% of revenues and $61 \%$ of IBIT in 1998. They are also among the fastest growing businesses at Enron, with revenues up $54 \%$ from 1997 to 1998 , and IBIT up $48 \%$. With the restructuring of the utility industry picking up momentum in the U.S., the European market liberalizing about two years after the U.S., and a portfolio of infrastructure projects amounting to $\$ 6.7$ billion of investment that will enter service between 1999 and 2000, we expect Wholesale Energy Operations and Services to continue to drive Enron's near-term earnings growth.

## Enron Capital and Trade-North America

In North America, Enron Capital and Trade's (ECT's) business is riding the crest of the utility restructuring wave. Electricity volumes traded tripled from 1996 to 1997, and doubled again in 1998. To capitalize further on the upheaval in the industry triggered by deregulation, Enron has bought and is building generating assets in markets that offer significant upside: the New York City market area, where in-bound constraints create a transmission-locked market; and the Midwest, where peak prices in June 1998 reached as high as $\$ 2,600$ per MWh from the $\$ 25$ per MWh level due to a confluence of factors including generating plant downtime, transmission constraints, and record high loads due to unseasonably high temperatures.

Enron has three peaking plants under construction totaling 1,300 MW. It is our understanding that Enron may sell the output of these plants, located in Mississippi (two plants) and Tennessee, to TVA or third-party buyers, and that TVA has a commitment to take a portion of the output at a specified price. This arrangement would appear to limit the downside exposure of Enron's investment in these plants, while creating significant upside should the Midwest experience a price spike similar to the June 1998 events. Enron has said that it believes the IRR on these projects may approach $80 \%$-plus.

## Enron Europe

In Europe, we would characterize the market as moving toward the model emerging in the domestic market-where wholesale and retail trading and energy services versus production will offer the greatest profit leverage-but lagging behind the U.S. in stage by several years. Much as it did in the U.S. through its purchase of Portland General Electric, Enron has opened a window on the European electricity market through a number of power production investments. These include the Teesside 1,725 megawatt plant in the U.K., in which Enron has a $31 \%$ stake, and the Bitterfeld, Germany 125 megawatt plant, in which Enron owns a $50 \%$ share. In addition to these, Enron has under development a 790 megawatt plant in Sutton Bridge, U.K. (25\% owned by Enron), a 551 megawatt plant in Sardinia, Italy ( $45 \%$ owned), and a 478 megawatt plant near Istanbul, Turkey (50\% owned). Both the Sutton Bridge and Istanbul projects will begin commercial operation in 1999; the Sardinia project is slated for commercial operation in early 2000.

As these projects move into their commercial phase, Enron's focus in Europe is shifting to trading and services. Enron now has trading and marketing offices in ten countries (including six marketing offices opened in 1998) and grew its staff in Europe from 425 to more than 700 over the past year. The EU Directive on open access to the electricity market took effect February 1999. This Directive mandates competitive access to approximately $25 \%$ of the EU market.

## Enron International

Enron holds an extensive portfolio of investments in international projects. These investments take advantage of the varying stages and pace of energy industry privatization and deregulation in each market served. In Latin America and Asia, the markets are at an earlier stage in their maturation, offering opportunities to leverage investment in the energy infrastructure from production through delivery of energy, in the form of gas or electricity, to the ultimate customer.

## Latin America

Enron has under development a very large, integrated energy project in South America that accesses gas reserves in Bolivia via an Enron pipeline; the project will use the gas to generate electricity at a 480 megawatt combined cycle plant in Brazil, and distribute electricity in the Sao Paulo region of Brazil through a 47\% owned electric utility. This project represents a capital commitment of approximately $\$ 2.8$ billion by Enron and will position the company to be a leading supplier of both gas and electricity to Brazil, as well as establishing the platform for other projects, such as additional power plants, that will leverage this investment over time.

Asia
In India, Enron has just completed the first phase of the Dabhol Power Plant, a 826 megawatt combined cycle plant serving Bombay and its environs. A second phase will add a parallel 1,624 megawatt unit, with commercial operation expected in 2001.

## Enron Energy Services

Enron Energy Services was formed in late 1996 to act as Enron's direct sales and services arm dealing with end-use energy customers. The deregulation of the electric utility industry is opening these customers, after almost 100 years of regulation and monopoly supply, to competing energy providers. Enron, as an
early entrant to this business, is vying with such firms as PG\&E Energy Services, Duke Energy Services, and a newcomer, New Energy Ventures, to become one of a handful of energy services companies serving the $\$ 200$-billion market for electricity.

There is no consensus yet on the business model that will best fit the emerging retail market for electricity. The two competitors with which we are most familiar-Enron and New Energy Ventures—are focusing, for now, on light industrial and commercial customers where economic incentives to minimize energy costs may be more acute than with residential customers. (See listing of key customers in Figure 4 on the next page.) Their service offering typically includes the following elements:

- The energy commodity (natural gas and electricity).
- Services, including maintenance of on-site heating and cooling equipment.
- Investment in energy-saving appliances and equipment.

Enron has experienced dramatic growth in its retail energy business since its formation in 1996. Revenues in this segment reached $\$ 1.1$ billion in 1998 and we estimate that they may hit approximately $\$ 2.0$ billion this year. Potential revenues of signed contracts now total $\$ 17$ billion, with the company on a pace to sign contracts with potential revenues of $\$ 8$ billion this year. After cumulative losses totaling approximately $\$ 250$ million to date, the company projects breakeven for the retail energy business in Q4:99.

Figure 3: GROWTH IN RETAIL ENERGY SERVICES


Source: Company reports and BancBoston Robertson Stephens.

Figure 4: STATUS OF STATE ELECTRIC UTILITY DEREGULATION ACTIVITY AS OF APRIL 1, 1999


Source: Energy Information Administration, company reports, and BancBoston Robertson Stephens.

## New Businesses

Enron has made significant market-entry investments in two new businesses. These are water, through its acquisition of Wessex Water in 1998 for approximately $\$ 2.2$ billion and the formation of a new subsidiary, Azurix, under Rebecca Mark's direction; and telecommunications, through the buildout of a 15,000 -mile fiber optic network to serve the business telecommunications market. In addition to these, Enron has numerous smaller investments in businesses that may benefit from the restructuring of the utility industry.

## Azurix

In November 1998, Enron's 50\%-owned Azurix subsidiary closed on the acquisition of Wessex Water, one of ten regional water companies providing water and wastewater treatment services in the United Kingdom. Wessex serves the southwestern region of the U.K. and has 1.1 million water customers and 2.5 million wastewater customers. According to Wessex, statistics published by the Office of Water Services show that Wessex Water Services is, overall, the most efficient water and sewage company in England and Wales.

Wessex generates revenues of approximately $\$ 425$ million per year, split approximately $1 / 3-2 / 3$ between water and wastewater treatment. Operating profit of approximately $\$ 220$ million is split about $1 / 4-3 / 4$ between the two operating units. Included in the wastewater treatment business is a small Swissbased company, SC Technology, which designs and sells a sludge drying process. This business generates about $\$ 15$ million in annual revenues.

While apparently a departure from Enron's core businesses in energy production, distribution, and trading, Enron's publicly stated rationale for the Wessex acquisition highlighted the following similarities: an industry undergoing significant structural change both in the U.S. and abroad (privatization); a capital-intensive business in which projects are large, lumpy, and complex, typically involving multiple constituencies, hence, requiring sophisticated project development skills; and lastly, a market-water-that by its very nature would seem to be a basic and fundamental societal need, yet a market in which the worldwide infrastructure is inadequate and expected to require massive investment in the future.

Two others acquisitions followed the Wessex deal. In June 1998, Enron, as part of a consortium, purchased a $70 \%$ stake in Obras Sanitarias de Mendoza SA in Argentina for $\$ 150$ million. In January 1999, the company announced that it had acquired a $49.9 \%$ ownership of the water utility serving Cancun, Mexico, for a purchase price of $\$ 13.5$ million. The stated goal is to continue to grow Azurix's business, via further acquisitions in the international arena and through project development and investment domestically.

In March, Enron announced that it would take Azurix public, selling \$350 million in new shares to the public to finance Azurix's further expansion. An additional $\$ 400$ million of shares would be sold by Atlantic Water Trust, the 5050 partnership between Enron and Marlin Water Trust that owns Azurix. The likely result of these transactions is that Enron's ownership in Azurix will be diluted, but until the terms of the IPO are settled, we cannot say how much. The company indicates that Azurix's results will not be consolidated by Enron post IPO, but recorded as minority interest.

## Communications

Enron has built out 4,500 miles of a projected 15,000 mile fiber optic network. Net investment to date in this network is approximately $\$ 50$ million-as Enron has built out the network, it has sold capacity to third parties to reduce its net investment while retaining capacity for its own commercial use. As with Enron Energy Services and Azurix, we would expect Enron to seek means of recapitalizing its investment in Enron Communications, possibly through a sale of equity.

## Dereg Investments

Over the past several years, Enron has systematically sought to invest in companies, both public and private, that will benefit from the restructuring of the utility industry. The results of this effort are listed in Figure 5.

Figure 5: ENRON'S UTILITY DEREG INVESTMENTS

| Company | Business | Investment |
| :--- | :--- | :--- |
| Catalytica Combustion | Commercializing technology that | $12 / 97, \$ 30$ million for $15 \%$ <br> Systems, subsidiary of <br> Catalytica (CTAL) |
|  | limits formation of nitrous oxides <br> in gas turbines | option to purchase an additional |
| Quanta Services (PWR) | Electric power and telecommuni- | $5 \%$ for $\$ 14.4$ million |
|  | cations infrastructure contracting | $10 / 98, \$ 50$ million convertible <br> subordinated notes, convertible |
|  |  | into Quanta common at <br> Zond Corporation |
|  | Wind power | $1 / 97$, outright purchase, no nare |

Source: Company reports and BancBoston Robertson Stephens.

Enron Oil and Gas was a 50\% owner of Solarex, the world's second-largest solar cell manufacturer, from 1995 through April of 1999, when BP Amoco acquired Enron's 50\% for $\$ 45$ million.

## Enron's Positioning: Moving Toward the Customer

In regulated markets, monopolist sellers provide what buyers want; in open markets, competing sellers vie to redefine what buyers want. There is no fundamental urgency on our part, as buyers, to redefine our needs to force innovation. We buy innovative products when they are dangled before us, but, as consumers, we rarely have the means or the motivation to develop innovative products ourselves. Do consumers even feel unmet needs, inchoate material dissatisfactions (apart, that is, from basic biological yearnings)? So, ironically, it would seem that buyers get only what they want in regulated markets; and it is in competitive markets that this is not enough, as competing suppliers find new ways to entice buyers.

The utility industry is a $\$ 200$-billion market that has been regulated for almost its entire existence; thus, it is a market in which competitive forces have never
been at work to define the demand side. This suggests to us that an enormous well-a backlog, if you will-of potential demand-side innovation exists. Certainly, companies that make appliances and other devices that use electricity, functioning in competitive environments, have had incentives to innovate. But, in our view, deregulation of the supply of electricity will add a new dimension to this innovation. Let's try an analogy. What if the oil industry, including the downstream petrochemical industry, were a regulated monopoly: would we today have the same proliferation of petrochemical compounds that has enabled, in turn, our huge and diverse array of applications of these compounds in drugs, plastics, elastomers, sealants, etc.?

We are perhaps making too philosophical a point here. But, our conclusion, based on this logic, is that power marketers, power retailers, become the locus of value creation in a competitive power market. They are the ones vying for the customers, with all the incentives in the world to find the next "hot" thing. They are, in essence, defining demand. We would argue that Enron's strategy appears to reflect agreement with our conclusion: broadly, shedding production assets as they become commoditized (Enron Oil and Gas); building a retail presence as the locus of value creation migrates toward the customer.

## Management: A Growth-Oriented Culture


#### Abstract

The management at Enron strikes us as atypical for the energy industry, certainly atypical for the utility industry, in its aggressiveness and willingness to take risks. This is not a criticism, but, rather, an endorsement. Through its proactive MBA and associate hiring programs, Enron has systematically worked to assemble a team of highly motivated, activist managers. We think this culture is well suited to the high-growth opportunities targeted by Enron and gives the company an advantage relative to its less aggressively managed competitors.


## Risk Management

A high-beta corporate culture brings with it exposure to risk. At Enron, risk is managed in two key ways. First, the company has a professional staff of about 125 persons devoted to the on-going quantification and evaluation of the business risk, by unit, by geography, and by project. (This unit reports directly to the CEO and to the audit committee of the board.) Second, Enron hedges certain key risks to maintain its overall risk profile within acceptable limits. These hedges principally cover the company's exposure to fluctuations in commodity prices. $100 \%$ of the firm's share in EOG's exposure to gas price fluctuations has been hedged for 1999 and $85 \%$ of the firm's oil price exposure.

## Valuation

The valuation of Enron poses a substantial challenge to the analyst. The tendency has been to approach the valuation exercise on a break-up, or sum-of-the-parts, basis, given the diversity of Enron's asset mix. As illustrated in Figure 6, we have adopted this approach with a reductio ad absurdem spin, backing into a residual value for Enron's Wholesale Energy Operations and Services business unit by deducting all other business unit values from Enron's market capitalization. The implicit value for Wholesale Energy Operations and Services, at Enron's current market price, is approximately $\$ 8.1$ billion. Thus, the growth engine at Enron, which is contributing 66\% of incremental IBIT, 1999 versus 1998 (our estimates), is valued at a 6.5 x estimated 1999 IBIT-lower than any of Enron's other business units save Portland General Electric.

Figure 6: VALUATION BY BUSINESS UNIT (in millions, except per share data)

| Business Unit | 1999E IBIT | Value | Multiple of IBIT | Basis |
| :---: | :---: | :---: | :---: | :---: |
| Enron Oil and Gas | \$74 | \$1,555 | 21.0 | Market |
| Portland General Electric | \$329 | \$1,866 | 5.7 | Estimated PGE 1999 net income times forward multiple of 12.1 based on 6 utility comps |
| Natural Gas Pipeline Group | \$399 | \$2,750 | 6.9 | Estimated GPG 1999 net income times forward multiple of 12.5 based on 4 gas pipeline comps |
| Retail Energy Services | \$(85) | \$5,300 | NM | Estimated 1999 revenues times forward multiple of 2.8 based on $\$ 1.9$ billion valuation as of late 1997 |
| Communications | - | \$3,750 | NM | Estimated 2000 revenues times forward multiples of carrier comps |
| Azurix | \$25 | \$1,490 | - | Trailing EBITDA times acquisition multiple paid by Vivendi for US Filter |
| Wholesale Energy Operations and Services | \$1,239 | \$8,097 | 6.5 |  |
| Total | \$1,981 | \$24,808 | 12.5 |  |

Source: Company reports and BancBoston Robertson Stephens estimates.

Note that our analysis places a conservative valuation on Azurix, driven principally by our use of U.S. Filter as the comp. U.S. Filter is largely an equipment and systems maker, rather than, as Azurix is, a project owner and operator. Our analysis also probably underestimates the value of the Retail Energy Services business, insofar as we are using a multiple established 18 months ago. Today's multiple would reflect the progress this business has made over these months, the better visibility on the emerging deregulated market, and the resulting reductions in business and market risks.

Let us, for the sake of argument, assume that we could attract new investors to Enron with the prospect of a short-term 20\% gain in Enron's stock price to $\$ 80$. To achieve this gain, we simply must move the multiple on Enron's growth business from its current 6.5 x forward IBIT to 10.5 x estimated forward IBIT. This, in our view, is not such a stretch; hence, we feel comfortable recommending this stock at current levels.

Figure 7: ENRON CORPORATION-ASSUMPTIONS FOR EARNINGS MODEL

| FY December | 1996 | Q1 | Q2 | $\begin{array}{r} -1997- \\ \text { Q3 } \\ \hline \end{array}$ | Q4 | Year | O1 | Q2 | $-1998-\text { Q3 } \quad \text { Q4 } \quad \text { Year }$ |  |  | Q1A | Q2 | 1999 E |  | Year | 2000E |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |  |  | Q3 |  | Q4 |  |  |
| ENRON OIL \& GAS |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Wellhead Delivery Volume Year Over Year \% Change |  |  |  |  |  | 6.8\% | 6.7\% | 4.4\% | 15.4\% | 15.8\% | 10.7\% | 11.2\% | 5.0\% | 5.0\% | 5.0\% | 6.4\% | 5.0\% |
| Natural Gas as \% of Total Deliveries | 85.9\% | 87.0\% | 88.2\% | 84.9\% | 84.7\% | 86.2\% | 86.4\% | 85.5\% | 83.6\% | 84.4\% | 85.0\% | 86.5\% | 85.0\% | 85.0\% | 85.0\% | 85.4\% | 85.0\% |
| Crude Oil/Condensate as \% of Total Deliveries | 12.2\% | 12.0\% | 10.2\% | 11.7\% | 12.5\% | 11.6\% | 12.8\% | 12.7\% | 13.6\% | 12.7\% | 13.0\% | 13.3\% | 13.0\% | 13.0\% | 13.0\% | 12.9\% | 13.0\% |
| Natural Gas Liquids as \% of Total Deliveries | 1.6\% | 2.4\% | 1.9\% | 2.5\% | 2.1\% | 2.3\% | 2.2\% | 2.0\% | 2.0\% | 1.9\% | 2.0\% | 1.6\% | 2.0\% | 2.0\% | 2.0\% | 1.9\% | 2.0\% |
| Price of Natural Gas (\$ per Mcf) | 1.78 | 2.38 | 1.70 | 1.84 | 2.37 | 2.07 | 1.86 | 1.87 | 1.67 | 1.73 | 1.78 | 1.53 | 1.55 | 1.55 | 1.55 | 1.55 | 1.85 |
| Price of Crude Oil/Condensate (\$ per Mcf) | 20.60 | 21.76 | 18.31 | 18.81 | 18.40 | 19.30 | 14.64 | 13.01 | 12.13 | 11.31 | 12.66 | 10.76 | 11.00 | 11.25 | 11.25 | 11.07 | 1.25 |
| Price of Natural Gas Liquid (\$ per Mcf) | - |  | - | - | 11.21 | 10.85 | 8.48 | - | - | 6.77 | 6.70 | 7.34 | 7.35 | 7.35 | 7.35 | 7.35 | 7.50 |
| Margin Assumptions as \% of Revenues |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Corporate Hedging Activities | 0.0\% | 0.0\% | 0.0\% | 0.0\% | (3.5)\% | (1.0)\% | 3.0\% | 0.0\% | 0.0\% | 4.4\% | 2.4\% | 14.5\% | 2.5\% | 2.5\% | 2.5\% | 5.2\% | 2.5\% |
| Operating Expenses | 24.9\% | 30.0\% | 29.1\% | 29.0\% | 24.3\% | 27.1\% | 28.0\% | 28.5\% | 27.1\% | 28.4\% | 27.8\% | 39.0\% | 30.0\% | 29.5\% | 29.0\% | 31.6\% | 30.0\% |
| Oil \& Gas Exploration Expenses | 12.3\% | 12.2\% | 14.0\% | 11.4\% | 14.8\% | 13.2\% | 17.0\% | 14.5\% | 17.1\% | 13.2\% | 15.4\% | 15.7\% | 15.5\% | 15.0\% | 15.0\% | 15.3\% | 15.0\% |
| Depreciation, Depletion \& Amortization | 34.6\% | 35.0\% | 40.1\% | 37.3\% | 32.2\% | 35.9\% | 36.0\% | 40.8\% | 42.2\% | 42.2\% | 40.0\% | 51.6\% | 45.0\% | 44.0\% | 43.0\% | 45.7\% | 44.0\% |
| Other Income, net | (0.7)\% | 0.6\% | 0.6\% | 0.0\% | (1.7)\% | (0.3)\% | (0.5)\% | 0.0\% | (1.0)\% | (1.0)\% | (0.6)\% | (0.6)\% | 0.0\% | 0.0\% | 0.0\% | (0.1)\% | 0.0\% |
| TRANSPORTATION \& DISTRIBUTION |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Gas Pipeline GroupGross Margin as \% of Total Revenue |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 58.9\% | 63.2\% | 52.7\% | 54.8\% | 60.6\% | 58.2\% | 62.1\% | 52.3\% | 53.9\% | 57.6\% | 56.7\% | \#DIV/0! | 57.5\% | 57.5\% | 57.5\% | 78.7\% | 57.5\% |
| Year Over Year Volume \% Change Northern Natural Gas |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Northern Natural Gas Additional Volume from Expansion Projects (Bbtu) |  |  |  |  |  | (4.7)\% | (6.9)\% | (5.0)\% | (6.7)\% | (5.7)\% | (6.1)\% | 1.5\% | $\begin{gathered} -3.0 \% \\ 88 \end{gathered}$ | $\begin{gathered} -3.0 \% \\ 88 \end{gathered}$ | $\begin{gathered} -3.0 \% \\ 88 \end{gathered}$ | $\begin{aligned} & 1.5 \% \\ & 263 \end{aligned}$ | ${ }^{0.0 \%}$ |
| Transwestern Pipeline <br> Additional Volume from Expansion Projects (Bbtu) |  |  |  |  |  | 5.6\% | 33.3\% | 15.7\% | 7.6\% | 0.7\% | 13.6\% | (8.2)\% | 7.0\% | 7.0\% | $\stackrel{7.0 \%}{-}$ | 3.0\% | ${ }^{5.0 \%}$ |
| Florida Gas Transmission |  |  |  |  |  | 3.5\% | (4.3)\% | (7.8)\% | (1.0)\% | 7.1\% | 0.0\% | 4.9\% | 2.0\% | 2.0\% | 2.0\% | 0.8\% | 2.0\% |
| Additional Volume from Expansion Projects (Bbtu) |  |  |  |  |  |  |  |  |  |  |  |  | - | - | , | - |  |
| Northern Border Pipeline |  |  |  |  |  | (0.1)\% | (0.9)\% | (2.7)\% | (1.0)\% | (2.1)\% | (1.7)\% | 35.1\% | (1.5)\% | (1.5)\% | (1.5)\% | 38.8\% | 0.0\% |
| Additional Volume from Expansion Projects (Bbtu) |  |  |  |  |  |  |  |  |  |  |  |  | 175 | 175 | 175 | 525 | - |
| Transportation Rate (\$ per Bbtu) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Northern Natural Gas | 0.30 | 0.31 | 0.27 | 0.28 | 0.33 | 0.31 | 0.37 | 0.28 | 0.30 | 0.33 | 0.32 | - | 0.30 | 0.30 | 0.30 | 0.23 | 0.30 |
| Transwestern Pipeline | 0.36 | 0.31 | 0.27 | 0.28 | 0.26 | 0.28 | 0.23 | 0.24 | 0.25 | 0.27 | 0.28 | - | 0.28 | 0.28 | 0.28 | 0.21 | 0.28 |
| Florida Gas Transmission | 0.69 | 0.74 | 0.59 | 0.57 | 0.64 | 0.63 | 0.71 | 0.65 | 0.56 | 0.64 | 0.63 | - | 0.65 | 0.55 | 0.60 | 0.45 | 0.63 |
| Northern Border Pipeline | 0.32 | 0.28 | 0.28 | 0.25 | 0.28 | 0.27 | 0.29 | 0.31 | 0.31 | 0.31 | 0.30 | - | 0.31 | 0.31 | 0.31 | 0.23 | 0.31 |
| Margin Assumptions |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Operating Expenses | 25.9\% | 22.4\% | 28.8\% | 29.5\% | 28.8\% | 27.1\% | 22.3\% | 26.0\% | 25.5\% | 24.5\% | 24.5\% | \#DIV/0! | 24.0\% | 26.0\% | 25.0\% |  | 25.0\% |
| Depreciation and Amortization | 5.4\% | 5.5\% | 6.1\% | 6.1\% | 6.5\% | 6.0\% | 5.2\% | 6.5\% | 6.4\% | 6.9\% | 6.2\% | \#DIV/0! | 6.0\% | 6.0\% | 6.0\% |  | 6.0\% |
| Equity in Earnings | 2.9\% | 3.1\% | 3.0\% | 4.2\% | 3.8\% | 3.5\% | 3.6\% | 3.4\% | 3.0\% | 1.4\% | 2.8\% | \#DIV/0! | 3.0\% | 3.0\% | 3.0\% |  | 3.0\% |
| Other Income, net | 3.6\% | 3.1\% | 6.8\% | 3.8\% | 0.0\% | 3.3\% | 2.6\% | 4.2\% | 0.7\% | 1.4\% | 2.2\% | \#DIV/0! | 2.5\% | 2.5\% | 2.5\% |  | 2.5\% |
| Portland General |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Retail Customers Year Over Year \% Change |  |  |  |  |  | 2.5\% | 2.4\% | 2.5\% | 2.5\% | 2.8\% | 2.8\% | 2.9\% | 3.0\% | 3.0\% | 3.0\% | 3.0\% | 3.0\% |
| Residential Customers as \% of Total | 40.3\% | 44.3\% | 35.1\% | 32.2\% | 41.0\% | 38.4\% | 44.9\% | 35.9\% | 33.1\% | 43.7\% | 40.7\% | 45.2\% | 38.0\% | 34.0\% | 45.0\% | 40.7\% | 40.0\% |
| Commercial Customers as \% of Total | 37.5\% | 35.4\% | 38.9\% | 42.4\% | 36.9\% | 38.3\% | 35.8\% | 38.0\% | 42.4\% | 36.7\% | 38.9\% | 35.1\% | 38.0\% | 42.4\% | 36.7\% | 37.9\% | 40.0\% |
| Industrial Customers as \% of Total | 22.3\% | 20.3\% | 26.0\% | 25.3\% | 22.1\% | 23.3\% | 19.3\% | 26.1\% | 24.5\% | 19.6\% | 20.4\% | 19.7\% | 24.0\% | 23.6\% | 18.3\% | 21.3\% | 20.0\% |
| Annual kWh per Retail Customer | 26.3 | 28.8 | 24.6 | 25.3 | 28.3 | 26.5 | 26.9 | 24.5 | 25.2 | 26.7 | 24.8 | 29.3 | 27.0 | 26.0 | 28.0 | 27.6 | 28.0 |
| Wholesale Customers as \% of Total | 36.7\% | 57.0\% | 62.5\% | 66.5\% | 51.7\% | 60.0\% | 43.6\% | 36.0\% | 37.9\% | 32.3\% | 38.4\% | 20.5\% | 22.0\% | 25.0\% | 25.0\% | 23.1\% | 25.0\% |
| Average Billed Revenue (cents/kWh) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 6.05 | 5.45 | 5.68 | 5.71 | 5.57 | 5.60 | 5.91 | 6.40 | 6.45 | 5.75 | 6.07 | - | 6.00 | 6.00 | 6.00 | 4.50 | 5.50 |
| Commercial | 5.45 | 5.07 | 5.14 | 5.01 | 5.10 | 5.08 | 5.07 | 5.15 | 5.20 | 4.94 | 5.09 | - | 5.10 | 5.10 | 5.10 | 3.83 | 4.80 |
| Industrial | 3.82 | 3.36 | 3.46 | 3.45 | 3.25 | 3.38 | 3.43 | 3.18 | 4.34 | 3.86 | 3.69 | - | 3.70 | 3.70 | 3.70 | 2.78 | 3.50 |
| Wholesale | 1.83 | 1.81 | 1.44 | 2.10 | 2.03 | 1.85 | 1.82 | 1.72 | 2.61 | 2.59 | 2.15 | - | 2.50 | 2.50 | 2.50 | 1.88 | 2.45 |
| Margin Assumptions |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Purchased Power \& Fuel | 28.5\% | 42.7\% | 41.7\% | 57.3\% | 46.7\% | 47.4\% | 38.8\% | 34.9\% | 37.1\% | 39.4\% | 37.7\% | 33.4\% | 34.0\% | 35.0\% | 33.0\% | 33.8\% | 34.0\% |
| Operating Expenses | 27.1\% | 18.2\% | 24.1\% | 17.9\% | 23.6\% | 20.8\% | 23.8\% | 29.0\% | 27.1\% | 19.9\% | 24.7\% | 23.4\% | 23.5\% | 23.5\% | 23.0\% | 23.3\% | 23.0\% |
| Depreciation \& Amortization | 14.0\% | 10.6\% | 12.7\% | 11.7\% | 12.8\% | 11.9\% | 13.8\% | 16.7\% | 16.8\% | 14.4\% | 15.3\% | 15.4\% | 15.5\% | 15.5\% | 15.0\% | 15.3\% | 15.0\% |
| Other Income, net | 0.5\% | 0.0\% | 0.3\% | 0.0\% | 0.6\% | 0.2\% | 0.9\% | 3.7\% | 2.9\% | (0.6)\% | 1.6\% | 3.0\% | 0.0\% | 0.0\% | 0.0\% | 0.8\% | 0.0\% |
| Source: Company reports and BancBoston Robertson Stephens estimates. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | (Con | nued) |

Figure 7: ENRON CORPORATION-ASSUMPTIONS FOR EARNINGS MODEL

| FY December | 1996 | Q1 | Q2 | Q3 Q4 |  | Year | Q1 | Q2 | - 1998 |  |  | Q1A | Q2 | 1999E |  |  | 2000E |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | Q3 |  |  | Q4 | Year | Q3 |  |  | Q4 | Year |  |
| WHOLESALE ENERGY OPERATIONS |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total IBIT Year Over Year \% Change |  |  |  |  |  |  | 40.3\% | 49.1\% | 85.4\% | 60.1\% | 9.2\% | 48.0\% | 28.5\% | 28.0\% | 26.0\% | 45.0\% | 27.2\% | 25.0\% |
| Energy Assets IBIT Year Over Year \% Change |  |  |  |  |  | 114.8\% | 184.9\% | 69.7\% | (15.8)\% | (17.6)\% | 25.5\% | (9.9)\% | 5.0\% | 5.0\% | 5.0\% | 1.3\% | 20.0\% |
| Unallocated Expenses | (145) | (28) | (31) | (39) | (62) | (160) | (31) | (40) | (35) | (46) | (152) | (40) | (52) | (56) | (39) | (188) | (195) |
| IBIT as a Percentage of Revenues | 4.1\% | 3.5\% | 4.7\% | 3.5\% | 3.6\% | 3.6\% | 5.3\% | 4.2\% | 2.7\% | 3.0\% | 3.5\% | 4.9\% | 3.0\% | 3.0\% | 3.1\% | \#DIV/0! | 3.4\% |
| Physical Volumes Year Over Year \% Change |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Gas: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| United States |  |  |  |  |  | 9.4\% | (15.5)\% | (8.6)\% | 5.8\% | 7.7\% | (3.1)\% | 24.9\% | 10.0\% | 5.0\% | 5.0\% | 11.2\% | 0.0\% |
| Canada |  |  |  |  |  | 61.0\% | 36.5\% | 55.2\% | 55.4\% | 66.4\% | 54.0\% | 37.5\% | 40.0\% | 40.0\% | 40.0\% | 39.4\% | 40.0\% |
| Europe |  |  |  |  |  | 128.4\% | 144.6\% | 85.7\% | 57.2\% | 87.9\% | 88.3\% | 59.3\% | 60.0\% | 60.0\% | 60.0\% | 59.8\% | 60.0\% |
| Other |  |  |  |  |  | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% |
| Transport Volumes |  |  |  |  |  | (15.4)\% | 117.4\% | (8.2)\% | 41.0\% | 4.5\% | 21.5\% | 23.6\% | 20.0\% | 20.0\% | 20.0\% | 20.9\% | 10.0\% |
| Oil |  |  |  |  |  | 115.6\% | 164.9\% | 458.1\% | 279.5\% | 415.0\% | 329.0\% | 110.9\% | 150.0\% | 150.0\% | 150.0\% | 140.2\% | 150.0\% |
| Liquids |  |  |  |  |  | (16.8)\% | (47.6)\% | (49.1)\% | (24.0)\% | (23.7)\% | (38.2)\% | (11.3)\% | (35.0)\% | (35.0)\% | (35.0)\% | (29.1)\% | (35.0)\% |
| Electricity |  |  |  |  |  | 218.9\% | 123.4\% | 125.7\% | 125.2\% | 64.5\% | 109.7\% | 16.1\% | 50.0\% | 55.0\% | 75.0\% | 49.0\% | 50.0\% |
| Dollars IBIT per Bbtu | 77 | 92 | 6 | 12 | 46 | 38 | 63 | 10 | 49 | 41 | 41 | 84 | 60 | 48 | 44 | 59 | 55 |
| WESSEX |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Effect of $\mathrm{P}(\mathrm{o}) \mathrm{Cut}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 17.5\% |
| Year Over Year \% Turnover Change | 5.1\% |  |  |  |  | 5.7\% |  |  |  |  | 4.6\% |  |  |  |  | 4.0\% | 5.0\% |
| Percent of Turnover |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Operational Costs | 35.7\% |  |  |  |  | 33.3\% |  |  |  |  | 32.2\% |  |  |  |  | 31.5\% | 31.0\% |
| Depreciation | 15.9\% |  |  |  |  | 11.4\% |  |  |  |  | 11.9\% |  |  |  |  | 12.0\% | 12.0\% |
| Infrastructure Renewal Charge | 0.0\% |  |  |  |  | 4.2\% |  |  |  |  | 4.1\% |  |  |  |  | 4.0\% | 4.0\% |
| Exchange Rate | \$1.60 |  |  |  |  | \$1.60 |  |  |  |  | \$1.70 |  |  |  |  | \$1.62 | \$1.62 |
| ENRON COMMUNICATIONS |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Revenue Year Over Year Change IBIT as a Percentage of Segment Revenues |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| RETAIL ENERGY SERVICES |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Year Over Year Change in Revenues IBIT as a Percentage of Revenues | 0.0\% | (6.54)\% | (17.61)\% | (19.38)\% | (21.72)\% | $\begin{array}{r} 33.1 \% \\ (15.67) \% \end{array}$ | $\begin{gathered} (8.88) \% \\ (13.85) \% \end{gathered}$ | $\begin{array}{r} 8.5 \% \\ (27.92) \% \end{array}$ | $\begin{aligned} & 210.1 \% \\ & (5.75) \% \end{aligned}$ | $\begin{array}{r} 63.1 \% \\ (8.05) \% \end{array}$ | $\begin{array}{r} 57.0 \% \\ (11.10) \% \end{array}$ | $\begin{gathered} 89.7 \% \\ (8.38) \% \end{gathered}$ | $\begin{gathered} 150.0 \% \\ (6.00) \% \end{gathered}$ | $\begin{gathered} 40.0 \% \\ (4.00) \% \end{gathered}$ | $\begin{array}{r} 80.0 \% \\ (1.50) \% \end{array}$ | $\begin{array}{r} 76.9 \% \\ (4.49) \% \\ \hline \end{array}$ | 60.0\% 2.7\% |

Source: Company reports and BancBoston Robertson Stephens estimates.

Figure 8: ENRON CORPORATION-QUARTERLY SALES \& EARNINGS MODEL (in millions, except per share data)

| FY December |  | Q1 $\quad 1 9 9 7 - \quad 1 2 4 \longdiv { \text { Qear } }$ |  |  |  |  | 1998- |  |  |  |  | 1999E |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1996 |  |  |  |  |  | Q1 | Q2 | Q3 | Q4 | Year | Q1A | Q2 | Q3 | Q4 | Year | 2000E |
| Revenues, Net of Intercompany |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Core Businesses |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Exploration and Production | 647 | 210 | 168 | 188 | 223 | 789 | 231 | 176 | 186 | 190 | 750 | 203 | 162 | 187 | 192 | 700 | 759 |
| Transportation and Distribution |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Gas Pipeline Group | 702 | 201 | 137 | 143 | 175 | 656 | 188 | 141 | 145 | 167 | 637 | 182 | 166 | 159 | 165 | 671 | 696 |
| Portland General | - | - | - | 386 | 360 | 746 | 320 | 271 | 280 | 327 | 1,196 | 299 | 280 | 276 | 309 | 1,164 | 1,179 |
| Wholesale Energy Operations and Services | 11,413 | 4,713 | 2,786 | 4,954 | 4,891 | 17,344 | 4,872 | 5,774 | 10,225 | 6,484 | 27,220 | 6,595 | 9,713 | 11,053 | 9,302 | 36,663 | 40,356 |
| Corporate and Other | 14 | 6 | 18 | 6 | 25 | 55 | (135) | 41 | 84 | 211 | 385 | (17) | 58 | 62 | 65 | 168 | 253 |
| Revenues - Core Businesses | 12,776 | 5,130 | 3,109 | 5,677 | 5,674 | 19,590 | 5,476 | 6,403 | 10,920 | 7,379 | 30,188 | 7,262 | 10,380 | 11,738 | 10,032 | 39,412 | 43,243 |
| Azurix | - | - | - | - | - | - | - | - | - | - | - | - | 112 | 112 | 112 | 450 | 405 |
| Enron Communications | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 300 |
| Retail Energy Services | 513 | 214 | 142 | 129 | 198 | 683 | 206 | 154 | 400 | 323 | 1,072 | 370 | 385 | 560 | 581 | 1,896 | 3,034 |
| Total Revenues | 13,289 | 5,344 | 3,251 | 5,806 | 5,872 | 20,273 | 5,682 | 6,557 | 11,320 | 7,702 | 31,260 | 7,632 | 10,877 | 12,411 | 10,726 | 41,645 | 46,982 |
| IBIT (Loss) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Core Businesses |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Exploration and Production | 200 | 42 | 30 | 49 | 62 | 183 | 43 | 29 | 25 | 31 | 128 | 12 | 15 | 22 | 25 | 74 | 83 |
| Transportation and Distribution |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Gas Pipeline Group | 416 | 135 | 73 | 71 | 85 | 364 | 126 | 72 | 69 | 84 | 351 | 126 | 95 | 86 | 92 | 399 | 388 |
| Portland General |  | - | - | 51 | 63 | 114 | 79 | 62 | 61 | 84 | 286 | 92 | 76 | 72 | 90 | 329 | 330 |
| Wholesale Energy Operations and Services | 466 | 167 | 130 | 173 | 184 | 654 | 249 | 241 | 277 | 201 | 968 | 320 | 291 | 332 | 288 | 1,231 | 1,372 |
| Corporate and Other | (22) | (3) | 19 | (8) | (39) | (31) | 1 | (16) | (4) | 26 | 7 | 14 | - | - | - | 14 | - |
| IBIT from Core Businesses | 1,060 | 341 | 252 | 336 | 355 | 1,284 | 498 | 388 | 428 | 426 | 1,740 | 564 | 478 | 511 | 495 | 2,047 | 2,173 |
| Azurix |  | - |  | - | - |  | - | - | - | - | - | - | 6 | 6 | 6 | 25 | 24 |
|  |  | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |  |
| Retail Energy Services |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Gain on Sale of 7\% Interest |  | (14) | (25) | (25) | (43) 61 | $(107)$ 61 | (27) | (43) | (23) | (26) | (119) - | (31) | (23) | (22) | (9) | (85) | 82 |
| Non-Recurring Items | 178 | 102 | (775) | - | - | (673) | - | - | - | (39) | (39) | - | - | - | - | - | - |
| Total IBIT | 1,238 | 429 | (548) | 311 | 373 | 565 | 471 | 345 | 405 | 361 | 1,582 | 533 | 461 | 495 | 492 | 1,981 | 2,279 |
| Interest and Related Charges, net | 274 | 70 | 79 | 122 | 130 | 401 | 133 | 131 | 134 | 152 | 550 | 175 | 165 | 165 | 155 | 660 | 700 |
| Dividends on Company-Obligated Preferred Securities | 34 | 15 | 16 | 19 | 19 | 69 | 19 | 20 | 19 | 19 | 77 | 19 | 20 | 20 | 20 | 79 | 80 |
| Minority Interests | 75 | 19 | 17 | 22 | 22 | 80 | 25 | 19 | 16 | 17 | 77 | 33 | 40 | 40 | 35 | 148 | 150 |
| Income Tax Provision (Benefit) | 271 | 103 | (240) | 14 | 33 | (90) | 80 | 30 | 68 | (3) | 175 | 53 | 42 | 49 | 51 | 195 | 297 |
| Tax Rate | 31.7\% | 31.7\% | 36.4\% | 9.5\% | 16.3\% | -600.0\% | 27.2\% | 17.1\% | 28.8\% | -1.7\% | 19.9\% | 17.3\% | 18.0\% | 18.0\% | 18.0\% | 17.8\% | 22.0\% |
| Net Income (Loss) | 584 | 222 | (420) | 134 | 169 | 105 | 214 | 145 | 168 | 176 | 703 | 253 | 194 | 221 | 231 | 899 | 1,052 |
| Non-recurring Effect of Accounting Changes |  |  |  |  |  |  |  |  |  |  |  | (131) |  |  |  |  |  |
| Preferred Stock Dividend | 16 | 4 |  | 5 | 4 | 17 | 4 | 5 | 4 | 4 | 17 | 4 | 5 | 4 | 4 | 17 | 17 |
| Earning (Loss) on Common Stock | 568 | 218 | (424) | 129 | 165 | 88 | 210 | 140 | 164 | 172 | 686 | 118 | 189 | 217 | 227 | 751 | 1,035 |
| Earnings (loss) per share (diluted) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Basic | 2.31 | 0.88 | (1.71) | 0.44 | 0.55 | 0.32 | 0.69 | 0.44 | 0.50 | 0.52 | 2.14 |  |  |  |  |  |  |
| Diluted |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Core Businesses | 1.82 | 0.60 | 0.44 | 0.51 | 0.43 | 1.98 | 0.71 | 0.50 | 0.52 | 0.53 | 2.25 | 0.74 |  |  |  |  |  |
| Retail Energy Services |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Results | - | (0.03) | (0.06) | (0.05) | (0.09) | (0.24) | (0.06) | (0.08) | (0.05) | (0.05) | (0.24) | (0.06) |  |  |  |  |  |
| Gain on Sale of 7\% Interest | - |  | - | , | 0.19 | 0.21 | - |  | - | - |  |  |  |  |  |  |  |
| Before Non-recurring Items |  |  |  |  |  |  |  |  |  |  |  | 0.68 | 0.50 | 0.57 | 0.60 | 2.35 | 2.70 |
| Non-recurring Items | 0.34 | 0.24 | (2.09) | (0.04) | - | (1.63) | - | - | - | 0.01 | 0.01 | (0.35) |  |  |  |  |  |
| Reported | 2.16 | 0.81 | (1.71) | 0.42 | 0.53 | 0.32 | 0.65 | 0.42 | 0.47 | 0.48 | 2.01 | 0.32 | 0.50 | 0.57 | 0.60 | 1.99 | 2.70 |
| Average shares outstanding (diluted) | 270.1 | 272.5 | 248.4 | 316.6 | 322.0 | 295.0 | 329.8 | 346.3 | 356.3 | 358.0 | 348.0 | 372.0 | 379.0 | 379.0 | 380.0 | 377.5 | 383.8 |

Figure 8: ENRON CORPORATION—QUARTERLY SALES \& EARNINGS MODEL (in millions, except per share data)


Source: Company reports and BancBoston Robertson Stephens estimates.

Figure 9: ENRON OIL \& GAS-QUARTERLY MODEL (in millions)

| FY December |  | Q1 | Q2 | $1997-2$ |  |  | Q1 | Q2 | $\begin{array}{r} 1998- \\ \text { Q3 } \\ \hline \end{array}$ | Q4 | Year | Q1A | Q2 | $\begin{array}{r} 1999 \mathrm{E}- \\ \text { Q3 } \end{array}$ | Q4 | Year | 2000E |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1996 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Net Operating Revenues | 726 | 180 | 172 | 193 | 230 | 775 | 200 | 179 | 199 | 204 | 788 | 159 | 162 | 187 | 192 | 700 | 759 |
| Corporate Hedging Activities |  |  |  |  | (8) | (8) | 6 |  |  | 9 | 19 | 23 | 4 | 5 | 5 | 37 | 19 |
| Operating Expenses | 181 | 54 | 50 | 56 | 56 | 210 | 56 | 51 | 54 | 58 | 219 | 62 | 49 | 55 | 56 | 222 | 228 |
| Oil \& Gas Exploration Expenses | 89 | 22 | 24 | 22 | 34 | 102 | 34 | 26 | 34 | 27 | 121 | 25 | 25 | 28 | 29 | 107 | 114 |
| Depreciation, Depletion \& Amortization | 251 | 63 | 69 | 72 | 74 | 278 | 72 | 73 | 84 | 86 | 315 | 82 | 73 | 82 | 82 | 320 | 334 |
| Other Income, net | (5) | 1 | 1 | - | (4) | (2) | (1) | - | (2) | (2) | (5) | (1) | - | - | - | (1) | - |
| IBIT | 200 | 42 | 30 | 49 | 62 | 183 | 43 | 29 | 25 | 31 | 128 | 12 | 15 | 22 | 25 | 74 | 83 |
| Percent of Revenues |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Corporate Hedging Activities | 0.0\% | 0.0\% | 0.0\% | 0.0\% | (3.5)\% | (1.0)\% | 3.0\% | 0.0\% | 0.0\% | 4.4\% | 2.4\% | 14.5\% | 2.5\% | 2.5\% | 2.5\% | 5.2\% | 2.5\% |
| Operating Expenses | 24.9\% | 30.0\% | 29.1\% | 29.0\% | 24.3\% | 27.1\% | 28.0\% | 28.5\% | 27.1\% | 28.4\% | 27.8\% | 39.0\% | 30.0\% | 29.5\% | 29.0\% | 31.6\% | 30.0\% |
| Oil \& Gas Exploration Expenses | 12.3\% | 12.2\% | 14.0\% | 11.4\% | 14.8\% | 13.2\% | 17.0\% | 14.5\% | 17.1\% | 13.2\% | 15.4\% | 15.7\% | 15.5\% | 15.0\% | 15.0\% | 15.3\% | 15.0\% |
| Depreciation, Depletion \& Amortization | 34.6\% | 35.0\% | 40.1\% | 37.3\% | 32.2\% | 35.9\% | 36.0\% | 40.8\% | 42.2\% | 42.2\% | 40.0\% | 51.6\% | 45.0\% | 44.0\% | 43.0\% | 45.7\% | 44.0\% |
| Other Income, net | (0.7)\% | 0.6\% | 0.6\% | 0.0\% | (1.7)\% | (0.3)\% | -0.5\% | 0.0\% | (1.0)\% | (1.0)\% | (0.6)\% | (0.6)\% | 0.0\% | 0.0\% | 0.0\% | (0.1)\% | 0.0\% |
| IBIT | 27.5\% | 23.3\% | 17.4\% | 25.4\% | 27.0\% | 23.6\% | 21.5\% | 16.2\% | 12.6\% | 15.2\% | 16.2\% | 7.5\% | 9.5\% | 11.5\% | 13.0\% | 10.5\% | 11.0\% |
| Year Over Year Change |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Net Operating Revenues |  |  |  |  |  | 6.7\% | 11.1\% | 4.1\% | 3.1\% | (11.3)\% | 1.7\% | (20.5)\% | (9.2)\% | (5.9)\% | (6.0)\% | (11.1)\% | 8.3\% |
| Operating Expenses |  |  |  |  |  | 16.0\% | 3.7\% | 2.0\% | (3.6)\% | 3.6\% | 4.3\% | 10.7\% | (4.4)\% | 2.3\% | (4.2)\% | 1.2\% | 2.7\% |
| Oil \& Gas Exploration Expenses |  |  |  |  |  | 14.6\% | 54.5\% | 8.3\% | 54.5\% | (20.6)\% | 18.6\% | (26.5)\% | (3.1)\% | (17.4)\% | 6.5\% | (11.5)\% | 6.3\% |
| Depreciation, Depletion \& Amortization |  |  |  |  |  | 10.8\% | 14.3\% | 5.8\% | 16.7\% | 16.2\% | 13.3\% | 13.9\% | 0.2\% | (1.9)\% | (4.2)\% | 1.6\% | 4.3\% |
| IBIT |  |  |  |  |  | (8.5)\% | 2.4\% | (3.3)\% | (49.0)\% | (50.0)\% | (30.1)\% | (72.1)\% | (46.8)\% | (13.8)\% | (19.6)\% | (42.3)\% | 12.9\% |

Source: Company reports and BancBoston Robertson Stephens estimates.


[^0]Figure 10: TRANSMISSION AND DISTRIBUTION GROUP-QUARTERLY MODEL (in millions)


Source: Company reports and BancBoston Robertson Stephens estimates.

Figure 10: TRANSMISSION AND DISTRIBUTION GROUP-QUARTERLY MODEL (in millions)


[^1]

Source: Company reports and BancBoston Robertson Stephens estimates.

Figure 11: WHOLESALE ENERGY OPERATIONS AND SERVICES (in millions)

| FY December | 1996 | Q1 | Q2 | $1997 —$ |  |  | Q1 | Q2 | $\begin{array}{r} 1998-23 \\ \hline \end{array}$ | Q4 | Year | Q1A | Q2 | $\begin{array}{r} 1999 \mathrm{E}- \\ \mathrm{Q} 3 \\ \hline \end{array}$ | Q4 | Year | 2000E |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total Revenues | 11,413 | 4,713 | 2,786 | 4,954 | 5,069 | 18,022 | 4,738 | 5,774 | 10,225 | 6,618 | 27,725 | 6,595 | 9,713 | 11,053 | 9,302 | 36,663 | 40,356 |
| Year over Year Change |  |  |  |  |  | 57.9\% | 0.5\% | 107.3\% | 106.4\% | 30.6\% | 53.8\% | 39.2\% | 68.2\% | 8.1\% | 40.6\% | 32.2\% | 10.1\% |
| IBIT |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Commodity Sales and Services | 348 | 142 | 9 | 22 | 76 | 249 | 129 | 23 | 152 | 107 | 411 | 224 | 193 | 220 | 181 | 818 | 846 |
| Percent of Revenues | 3.0\% | 3.0\% | 0.3\% | 0.4\% | 1.5\% | (28.4)\% | 2.7\% | 0.4\% | 1.5\% | 1.6\% | 1.5\% | 3.4\% | 1.5\% | 1.5\% | 1.5\% | 2.0\% | 1.5\% |
| Energy Assets and Investments | 263 | 53 | 152 | 190 | 170 | 565 | 151 | 258 | 160 | 140 | 709 | 136 | 150 | 168 | 147 | 601 | 721 |
| Percent of Revenues | 2.3\% | 1.1\% | 5.5\% | 3.8\% | 3.4\% | 3.1\% | 3.2\% | 4.5\% | 1.6\% | 2.1\% | 2.6\% | 2.1\% | 3.0\% | 3.0\% | 3.0\% | 2.8\% | 3.0\% |
| Year Over Year Percent Change |  |  |  |  |  | 114.8\% | 184.9\% | 69.7\% | (15.8)\% | (17.6)\% | 25.5\% | (9.9)\% | 5.0\% | 5.0\% | 5.0\% | 1.3\% | 20.0\% |
| Unallocated Expenses | (145) | (28) | (31) | (39) | (62) | (160) | (31) | (40) | (35) | (46) | (152) | (40) | (52) | (56) | (39) | (188) | (195) |
| Percent of Revenues | (1.3)\% | (0.6)\% | (1.1)\% | (0.8)\% | (1.2)\% | (0.9)\% | (0.7)\% | (0.7)\% | (0.3)\% | (0.7)\% | (0.5)\% | (0.6)\% | (0.5)\% | (0.5)\% | (0.5)\% | (0.5)\% | (0.5)\% |
| TOTAL IbIT ALL SEGMENTS | 466 | 167 | 130 | 173 | 184 | 654 | 249 | 241 | 277 | 201 | 968 | 320 | 291 | 332 | 288 | 1,231 | 1,372 |
| Percent of Revenues | 4.1\% | 3.5\% | 4.7\% | 3.5\% | 3.6\% | 3.6\% | 5.3\% | 4.2\% | 2.7\% | 3.0\% | 3.5\% | 4.9\% | 3.0\% | 3.0\% | 3.1\% | 3.4\% | 3.4\% |
| Year Over Year Percent Change |  |  |  |  |  | 40.3\% | 49.1\% | 85.4\% | 60.1\% | 9.2\% | 48.0\% | 28.5\% | 20.9\% | 19.7\% | 43.5\% | 27.2\% | 11.4\% |
| Commodity Sales and Services |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Physical Volumes (Bbtue/d)Gas: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| United States | 6,998 | 8,611 | 7,330 | 7,321 | 7,370 | 7,654 | 7,276 | 6,696 | 7,749 | 7,941 | 7,418 | 9,088 | 7,366 | 8,136 | 8,338 | 8,251 | 9,088 |
| Canada | 1,406 | 2,107 | 2,123 | 2,353 | 2,464 | 2,263 | 2,876 | 3,295 | 3,656 | 4,101 | 3,486 | 3,954 | 4,613 | 5,118 | 5,741 | 4,858 | 5,536 |
| Europe | 289 | 460 | 572 | 748 | 854 | 660 | 1,125 | 1,062 | 1,176 | 1,605 | 1,243 | 1,792 | 1,699 | 1,882 | 2,568 | 1,987 | 2,867 |
| Other | - | - | - | - | - | - | 1 | 5 | 4 | 4 |  | 7 | 5 |  | 4 |  | 7 |
| Total | 8,693 | 11,178 | 10,025 | 10,422 | 10,688 | 10,577 | 11,278 | 11,058 | 12,585 | 13,651 | 12,155 | 14,841 | 13,683 | 15,140 | 16,651 | 15,104 | 17,498 |
| Transport Volumes | 544 | 207 | 686 | 456 | 488 | 460 | 450 | 630 | 643 | 510 | 559 | 556 | 756 | 772 | 612 | 676 | 612 |
| Total Gas Volumes | 9,237 | 11,385 | 10,711 | 10,878 | 11,176 | 11,037 | 11,728 | 11,688 | 13,228 | 14,161 | 12,714 | 15,397 | 14,439 | 15,912 | 17,263 | 15,780 | 18,109 |
| Oil | 320 | 663 | 454 | 684 | 956 | 690 | 1,756 | 2,534 | 2,596 | 4,923 | 2,960 | 3,704 | 6,335 | 6,490 | 12,308 | 7,111 | 9,260 |
| Liquids | 1,187 | 1,248 | 1,080 | 858 | 768 | 987 | 654 | 550 | 652 | 586 | 610 | 580 | 358 | 424 | 381 | 433 | 377 |
| Electricity | 1,648 | 3,699 | 4,193 | 7,854 | 5,232 | 5,256 | 8,262 | 9,463 | 17,684 | 8,609 | 11,024 | 9,594 | 14,195 | 27,410 | 15,066 | 16,429 | 14,391 |
| Total Physical Volumes (Bbtue/d) | 12,392 | 16,995 | 16,438 | 20,274 | 18,132 | 17,970 | 22,400 | 24,235 | 34,160 | 28,279 | 27,308 | 29,275 | 35,326 | 50,236 | 45,018 | 39,752 | 42,137 |
| Dollars IBIT per (Bbtue) | 77 | 92 | 6 | 12 | 46 | 38 | 63 | 10 | 49 | 41 | 41 | 84 | 60 | 48 | 44 | 59 | 55 |
| Electricity Volumes Marketed (Thousand MWh) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| United States | 60,150 | 33,242 | 28,141 | 72,338 | 48,125 | 191,746 | 74,272 | 86,075 | 162,527 | 78,969 | 401,843 | 85,962 |  |  |  |  |  |
| Europe and Other | - | 50 | 18 | 19 | 13 | 100 | 82 | 40 | 165 | 242 | 529 | 384 |  |  |  |  |  |
| Total | 60,150 | 33,292 | 38,159 | 72,257 | 48,138 | 191,846 | 74,354 | 86,115 | 162,692 | 79,211 | 402,372 | 86,346 |  |  |  |  |  |
| Financial Settlements (Notional)(Bbtue/d) | 35,259 | 39,916 | 45,647 | 51,953 | 58,574 | 49,082 | 69,918 | 67,411 | 83,653 | 79,211 | 75,266 | 94,974 |  |  |  |  |  |
| Year Over Year Change Physical Volumes (Bbtue/d) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Gas: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| United States |  |  |  |  |  | 9.4\% | (15.50)\% | (8.65)\% | 5.8\% | 7.7\% | (3.08)\% | 24.9\% | 10.0\% | 5.0\% | 5.0\% | 11.2\% | 0.0\% |
| Canada |  |  |  |  |  | 61.0\% | 36.5\% | 55.2\% | 55.4\% | 66.4\% | 54.0\% | 37.5\% | 40.0\% | 40.0\% | 40.0\% | 39.4\% | 40.0\% |
| Europe |  |  |  |  |  | 128.4\% | 144.6\% | 85.7\% | 57.2\% | 87.9\% | 88.3\% | 59.3\% | 60.0\% | 60.0\% | 60.0\% | 59.8\% | 60.0\% |
| Other |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0.0\% |  |
| Total |  |  |  |  |  | 21.7\% | 0.9\% | 10.3\% | 20.8\% | 27.7\% | 14.9\% | 31.6\% | 23.7\% | 20.3\% | 22.0\% | 24.4\% | 17.9\% |
| Transport Volumes |  |  |  |  |  | (15.44)\% | 117.4\% | (8.16)\% | 41.0\% | 4.5\% | 21.5\% | 23.6\% | 20.0\% | 20.0\% | 20.0\% | 20.9\% | 10.0\% |
| Total Gas Volumes |  |  |  |  |  | 19.5\% | 3.0\% | 9.1\% | 21.6\% | 26.7\% | 15.2\% | 31.3\% | 23.5\% | 20.3\% | 21.9\% | 24.3\% | 17.6\% |
| Oil |  |  |  |  |  | 115.6\% | 164.9\% | 458.1\% | 279.5\% | 415.0\% | 329.0\% | 110.9\% | 150.0\% | 150.0\% | 150.0\% | 140.2\% | 150.0\% |
| Liquids |  |  |  |  |  | (16.85)\% | (47.60)\% | (49.07)\% | (24.01)\% | (23.70)\% | (38.20)\% | (11.31)\% | (35.00)\% | (35.00)\% | (35.00)\% | (29.08)\% | (35.00)\% |
| Electricity |  |  |  |  |  | 218.9\% | 123.4\% | 125.7\% | 125.2\% | 64.5\% | 109.7\% | 16.1\% | 50.0\% | 55.0\% | 75.0\% | 49.0\% | 50.0\% |
| Total Physical Volumes (Bbtue/d) |  |  |  |  |  | 45.0\% | 31.8\% | 47.4\% | 68.5\% | 56.0\% | 52.0\% | 30.7\% | 45.8\% | 47.1\% | 59.2\% | 45.7\% | 43.9\% |

${ }^{* *}$ Model is hardwired off of year over year IBIT.
Source: Company reports and BancBoston Robertson Stephens estimates.

Figure 12: WESSEX WATER—QUARTERLY SALES \& EARNINGS MODEL (in million British Pounds)

| FY March | F1993 | F1994 | F1995 | F1996 | F1997 | F1998 | F1999E | F2000E | F2001E |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Turnover (Revenues) | 206 | 217 | 229 | 241 | 254 | 266 | 277 | 278 | 241 |
| Operational Costs | 94 | 92 | 88 | 86 | 85 | 86 | 87 | 86 | 89 |
| Depreciation | 31 | 33 | 37 | 38 | 29 | 32 | 33 | 33 | 32 |
| Goodwill Amortization (converted from dollars) |  |  |  |  |  |  |  | 8 | 32 |
| Infrastructure Renewal Charge |  |  |  |  | 11 | 11 | 11 | 11 | 11 |
| Total Costs | 125 | 125 | 125 | 124 | 125 | 128 | 131 | 139 | 165 |
| Operating Profit | 81 | 92 | 105 | 117 | 130 | 138 | 145 | 139 | 76 |
| Share of Results of Associated Undertakings (Sold) | 5 | 9 | 10 | 12 | 13 | 12 | - | - | - |
| Profit on Ordinary Activities Before Interest (IBIT) | 86 | 101 | 115 | 129 | 142 | 149 | 145 | 139 | 76 |
| Net of Share of Assoc. Undertakings | 81 | 92 | 105 | 117 | 130 | 138 | 145 | 139 | 76 |
| Net Interest (payable)/recievable | 1 | 2 | 2 | 5 | 3 | (10) |  |  |  |
| Profit on Ordinary Activities Before Taxation | 86 | 103 | 117 | 134 | 145 | 139 |  |  |  |
| Net of Share of Assoc. Undertakings | 82 | 94 | 107 | 122 | 132 | 128 |  |  |  |
| Taxation on Profit on Ordinary Activities | 9 | 10 | 16 | 21 | 24 | 23 |  |  |  |
| Tax Provision for Associated Undertakings |  |  |  |  | 3 | 4 |  |  |  |
| Estimated Tax Exposure Net of Assoc. Undertakings | 9 | 9 | 15 | 19 |  |  |  |  |  |
| Tax Rate | 10.6\% | 9.5\% | 13.8\% | 15.7\% | 16.6\% | 16.7\% |  |  |  |
| Utility Tax | - | - | - | - | - | 99 |  |  |  |
| Profit Attributable to Shareholders | 77 | 94 | 101 | 113 | 121 | 17 |  |  |  |
| Net of Share of Assoc. Undertakings and Utility Tax | 73 | 85 | 92 | 103 | 112 | 108 |  |  |  |
| Percent of Turnover |  |  |  |  |  |  |  |  |  |
| Effect of P(o) Cut |  |  |  |  |  |  |  | 17.5\% | 17.5\% |
| Operational Costs | 45.5\% | 42.2\% | 38.4\% | 35.7\% | 33.3\% | 32.2\% | 31.5\% | 31.0\% | 37.0\% |
| Depreciation | 15.1\% | 15.4\% | 15.9\% | 15.9\% | 11.4\% | 11.9\% | 12.0\% | 12.0\% | 13.5\% |
| Infrastructure Renewal Charge | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 4.2\% | 4.1\% | 4.0\% | 4.0\% | 4.5\% |
| Total Costs | 60.6\% | 57.6\% | 54.3\% | 51.6\% | 49.0\% | 48.2\% | 47.5\% | 49.9\% | 68.5\% |
| Year Over Year Percent Change |  |  |  |  |  |  |  |  |  |
| Turnover (Revenues) |  | 5.6\% | 5.5\% | 5.1\% | 5.7\% | 4.6\% | 4.0\% | 5.0\% | 5.0\% |
| Operational Costs |  | (2.03)\% | (3.93)\% | (2.39)\% | (1.28)\% | 0.9\% | 1.8\% | (1.19)\% | 3.4\% |
| Depreciation |  | 7.4\% | 9.3\% | 4.7\% | (23.82)\% | 8.6\% | 5.1\% | 0.4\% | (2.55)\% |
| Infrastructure Renewal Charge |  |  |  |  |  | 2.8\% | 0.6\% | 0.4\% | (2.55)\% |
| Total Costs |  | 0.3\% | (0.40)\% | (0.32)\% | 0.4\% | 2.9\% | 2.5\% | 5.5\% | 18.8\% |
| Operating Profit |  |  |  |  |  |  |  |  |  |
| Net of Share of Assoc. Undertakings and Utility Tax |  | 13.8\% | 13.4\% | 11.5\% | 11.2\% | 6.2\% | 5.4\% | (4.21)\% | (45.46)\% |



[^2]Figure 13: RETAIL ENERGY SERVICES-QUARTERLY SALES \& EARNINGS MODEL (in millions)


Figure 14: ENRON "FLYWHEEL" SUBSIDIARIES—QUARTERLY SALES \& EARNINGS MODEL (in millions)

| FY December | 1996 | Q1 $\quad \mathrm{Q} 2$Q3 <br> 1997 |  |  |  |  | $1998 \longrightarrow$ |  |  |  |  | - 1999E |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  | Q1 | Q2 | Q3 | Q4 | Year | Q1A | Q2 | Q3 | Q4 | Year | 2000E |
| Total Revenues for Enron Corp. | 13,289 | 5,344 | 3,251 | 5,806 | 5,872 | 20,273 | 5,682 | 6,557 | 11,320 | 7,702 | 31,260 | 7,632 | 10,877 | 12,411 | 10,726 | 41,645 | 46,982 |
| Revenues |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Exploration and Production | 726 | 180 | 172 | 193 | 230 | 775 | 206 | 179 | 199 | 204 | 788 | 159 | 162 | 187 | 192 | 700 | 759 |
| Net of Intercompany Considerations | 647 | 210 | 168 | 188 | 223 | 789 | 198 | 176 | 186 | 190 | 750 |  |  |  |  |  |  |
| Percent of Total Segment Revenues | 89.1\% | 116.7\% | 97.7\% | 97.4\% | 97.0\% | 101.8\% | 96.1\% | 98.3\% | 93.5\% | 93.1\% | 95.2\% |  |  |  |  |  |  |
| Transportation and Distribution |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Gas Pipeline Group | 719 | 206 | 139 | 143 | 177 | 665 | 192 | 137 | 144 | 167 | 640 | 181 | 166 | 159 | 165 | 671 | 696 |
| Net of Intercompany Considerations Percent of Total Segment Revenues | 702 | 201 | 137 | 143 | 175 | 656 | 184 | 141 | 145 | 167 | 637 |  |  |  |  |  |  |
| Portland General | - | - | - | 386 | 360 | 746 | 320 | 269 | 280 | 327 | 1,196 | 299 | 280 | 276 | 309 | 1,164 | 1,179 |
| Net of Intercompany Considerations | - | - | - | 386 | 360 | 746 | 318 | 271 | 280 | 327 | 1,196 |  |  |  |  |  |  |
| Percent of Total Segment Revenues |  |  |  | 100.0\% | 100.0\% | 100.0\% | 99.4\% | 100.7\% | 100.0\% | 100.0\% | 100.0\% |  |  |  |  |  |  |
| Total Revenues | 1,349 | 411 | 305 | 717 | 758 | 2,191 | 702 | 586 | 611 | 684 | 2,583 | 639 | 609 | 623 | 665 | 2,536 | 2,634 |
| Percent of Enron Total Revenues Year over Year Change | 10.2\% | 7.7\% | 9.4\% | 12.3\% | 12.9\% | 10.8\% | 12.4\% | 8.9\% | 5.4\% | 8.9\% | 8.3\% | 8.4\% | 5.6\% | 5.0\% | 6.2\% | 6.1\% | 5.6\% |
| Total IBIT for Enron Corp., net non-recurring IBIT (Loss) | 1,060 | 327 | 227 | 311 | 312 | 1,177 | 471 | 345 | 405 | 400 | 1,621 | 533 | 461 | 495 | 492 | 1,981 | 2,279 |
| Exploration and Production | 200 | 42 | 30 | 49 | 62 | 183 | 43 | 29 | 25 | 31 | 128 | 12 | 15 | 22 | 25 | 74 | 83 |
| Transportation and Distribution |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Gas Pipeline Group | 416 | 135 | 73 | 71 | 85 | 364 | 126 | 72 | 69 | 84 | 351 | 126 | 95 | 86 | 92 | 399 | 388 |
| Portland General | - | - | - | 51 | 63 | 286 | 79 | 62 | 61 | 84 | 286 | 92 | 76 | 72 | 90 | 329 | 330 |
| Corporate and Other | (22) | (3) | 19 | (8) | (39) | (31) | 1 | (16) | (4) | 26 | 7 | - | - | - | - | - | - |
| Total | 594 | 174 | 122 | 163 | 171 | 802 | 249 | 147 | 151 | 225 | 772 | 230 | 187 | 179 | 206 | 802 | 801 |
| Percent of Enron Total IBIT | 56.0\% | 53.2\% | 53.7\% | 52.4\% | 54.8\% | 68.1\% | 52.9\% | 42.6\% | 37.3\% | 56.3\% | 47.6\% | 43.2\% | 40.4\% | 36.2\% | 41.9\% | 40.5\% | 35.2\% |
| Average shares outstanding (diluted) | 270.1 | 272.5 | 248.4 | 316.6 | 322.0 | 295.0 | 329.8 | 346.3 | 356.3 | 358.0 | 348.0 | 367.0 | 376.1 | 385.5 | 395.2 | 380.94 | 437.7 |

[^3]Figure 15: ENRON GROWTH COMPANIES-QUARTERLY SALES \& EARNINGS MODEL (in millions)

| FY December | 1996 |  |  | $\begin{array}{r} 1997- \\ \text { Q3 } \\ \hline \end{array}$ | Q4 | Year | Q1 | Q2 | $\begin{array}{r} -1998-23 \\ \hline \end{array}$ | Q4 | Year | Q1A | Q2 | $\begin{array}{r} -1999 \mathrm{E}- \\ \mathrm{Q} 3 \\ \hline \end{array}$ | Q4 | Year | 2000E |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Q1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Revenues |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Azurix |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Wessex | 401 | 105 | 105 | 105 | 105 | 421 | 116 | 116 | 116 | 116 | 466 | 112 | 112 | 112 | 112 | 450 | 405 |
| Mendoza |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Cancun |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Enron Communications |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 300 |
| Retail Energy Services | 513 | 214 | 142 | 129 | 198 | 683 | 195 | 154 | 400 | 323 | 1,072 | 370 | 385 | 560 | 581 | 1,896 | 3,034 |
| Wholesale Energy Operations and Services | 11,413 | 4,713 | 2,786 | 4,954 | 5,069 | 18,022 | 4,738 | 5,774 | 10,225 | 6,618 | 27,725 | 6,595 | 9,713 | 11,053 | 9,302 | 36,663 | 40,356 |
| Total Revenues | 12,327 | 5,032 | 3,033 | 5,188 | 5,372 | 19,126 | 5,049 | 6,044 | 10,741 | 7,057 | 29,263 | 7,077 | 10,210 | 11,726 | 9,995 | 39,008 | 44,095 |
| IBIT (Loss) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Azurix |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Wessex | 202 |  |  |  |  | 217 |  |  |  |  | 244 |  |  |  |  | 228 | 223 |
| Mendoza |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Cancun |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Enron Communications |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | - |
| Retail Energy Services |  | (14) | (25) | (25) | (43) | (107) | (27) | (43) | (23) | (26) | (119) | (31) | (23) | (22) | (9) | (85) | 82 |
| Wholesale Energy Operations and Services | 466 | 167 | 130 | 173 | 184 | 654 | 249 | 241 | 277 | 201 | 968 | 320 | 291 | 332 | 288 | 1,231 | 1,372 |
| Total Net Income | 668 | 153 | 105 | 148 | 141 | 764 | 222 | 198 | 254 | 175 | 1,093 | 289 | 268 | 309 | 280 | 1,374 | 1,677 |
| IBIT as a Percentage of Segment Revenues Azurix |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Wessex | 5.4\% | 3.0\% | 3.5\% | 2.9\% | 2.6\% | 4.0\% | 4.4\% | 3.3\% | 2.4\% | 2.5\% | 3.7\% | 4.1\% | 2.6\% | 2.6\% | 2.8\% | 3.5\% | 3.8\% |
| Mendoza <br> Cancun |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Enron Communications |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Retail Energy Services | 0.0\% | (6.54)\% | (17.61)\% | (19.38)\% | (21.72)\% | (15.67)\% | (13.85)\% | (27.92)\% | (5.75)\% | (8.05)\% | (11.10)\% | (8.00)\% | (5.00)\% | (2.50)\% | 2.5\% | (4.49)\% | 5.0\% |
| Wholesale Energy Operations and Services Total Net Income | 4.1\% | 3.5\% | 4.7\% | 3.5\% | 3.6\% | 3.6\% | 5.3\% | 4.2\% | 2.7\% | 3.0\% | 3.5\% | 4.9\% | 3.0\% | 3.0\% | 3.1\% | 3.4\% | 3.4\% |
| Year Over Year Change |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Azurix |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Wessex |  |  |  |  |  | 4.9\% | 10.7\% | 10.7\% | 10.7\% | 10.7\% | 10.7\% | (3.49)\% | (3.49)\% | (3.49)\% | (3.49)\% | (3.49)\% | 260.2\% |
| Mendoza <br> Cancun |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Enron Communications |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Retail Energy Services |  |  |  |  |  | 33.1\% | (8.9)\% | 8.5\% | 210.1\% | 63.1\% | 57.0\% | 50.0\% | 50.0\% | 50.0\% | 50.0\% | 76.9\% | 50.0\% |
| Wholesale Energy Operations and Services |  |  |  |  |  | 57.9\% | 0.5\% | 107.3\% | 106.4\% | 30.6\% | 53.8\% | 39.2\% | 68.2\% | 8.1\% | 40.6\% | 32.2\% | 511.9\% |

Source: Company reports and BancBoston Robertson Stephens estimates.

BancBoston Robertson Stephens maintains a market in the shares of Applied Materials, Cisco Systems Inc., MCI Worldcom, Sun Microsystems Inc. and Tellabs, Inc.

## Additional information is available upon request.

The information contained herein is not a complete analysis of every material fact respecting any company, industry or security. Although opinions and estimates expressed herein reflect the current judgment of BancBoston Robertson Stephens, the information upon which such opinions and estimates are based is not necessarily updated on a regular basis; when it is, the date of the change in estimate will be noted. In addition, opinions and estimates are subject to change without notice. This Report contains forward-looking statements, which involve risks and uncertainties. Actual results may differ significantly from the results described in the forward-looking statements. Factors that might cause such a difference include, but are not limited to, those discussed in "Investment Risks." BancBoston Robertson Stephens from time to time performs corporate finance or other services for some companies described herein and may occasionally possess material, nonpublic information regarding such companies. This information is not used in the preparation of the opinions and estimates herein. While the information contained in this Report and the opinions contained herein are based on sources believed to be reliable, BancBoston Robertson Stephens has not independently verified the facts, assumptions and estimates contained in this Report. Accordingly, no representation or warranty, express or implied, is made as to, and no reliance should be placed on, the fairness, accuracy, completeness or correctness of the information and opinions contained in this Report. BancBoston Robertson Stephens, its managing directors, its affiliates, and/or its employees may have an interest in the securities of the issue(s) described and may make purchases or sales while this report is in circulation. BancBoston Robertson Stephens International Ltd. is regulated by the Securities and Futures Authority in the United Kingdom. This publication is not meant for private customers.

The securities discussed herein are not FDIC insured, are not deposits or other obligations or guarantees of BankBoston N.A., and are subject to investment risk, including possible loss of any principal amount invested.

Unless otherwise noted, prices are as of Wednesday, April 21, 1999.
Copyright © 1999 BancBoston Robertson Stephens Inc.


## Hugh F. Holman

Hugh Holman joined the firm in 1998 as senior equity analyst covering the environmental sector and the deregulation of the electric utility industry. Prior to joining the firm, he ran his own consulting firm, Environmental Capital Associates, Inc. Hugh has seven years of experience on Wall Street as an equity analyst, principally with Alex. Brown. In 1994, The Wall Street Journal recognized him as an All-Star pollution control analyst.

Prior to joining Alex. Brown in 1989, Hugh was a management consultant with Putnam, Hayes \& Bartlett. He also worked for the U.S. Environmental Protection Agency, where he was the lead policy analyst for the Agency's hazardous and solid waste programs. He received his BA degree from Dartmouth College and his MBA degree from Stanford University.

Boston
Chicago
London
Los Angeles
Menlo Park
New York
San Francisco
Tel Aviv


[^0]:    Source: Company reports and BancBoston Robertson Stephens estimates.

[^1]:    Source: Company reports and BancBoston Robertson Stephens estimates.

[^2]:    Source: Company reports and BancBoston Robertson Stephens estimates.

[^3]:    Source: Company reports and BancBoston Robertson Stephens estimates

