



ENRON CORP. (ENE-NYSE)

Rating: 2

Beachheads And Breakouts

April 5, 2000

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REPORT OBJECTIVE: Initiation Of Coverage

INVESTMENT OBJECTIVE: Growth

INDUSTRY GROUP: Diversified Energy

HEADQUARTERS: Houston, Texas

Price (4/4/00)	\$65 7/16	Estimates (FY 12/31):	1999A	2000E	2001E
52-Wk Range	\$78-\$31	Q1-March	\$0.34	\$0.35	\$0.36
Dividend	\$0.50	Q2-June	0.27	0.32	0.37
Yield	0.8%	Q3-September	0.27	0.33	0.41
Book Value	\$11.48	Q4-December	0.31	0.35	0.41
Quality Rating	1	Full-Year EPS	\$1.18	\$1.35	\$1.55
Trading Data		Price/Earnings Ratio	55.5X	48.5X	42.2X
Shares Outs (MM)	715	Revenue (MM)	\$40,108	\$47,274	\$59,385
Est. Float (MM)	679	Return on Equity	2.5%	2.7%	2.9%
Avg. Daily Vol. (MM)	2.79	Capitalization (9/30/99)			
Market Value (MM)	\$46,788	Long-Term Debt	\$8,592	47.9%	
Inst. Holdings	87%	Shareholders' Equity	\$9,345	52.1%	
Insider Holdings	5%				

Key Points

- Focus on leadership in emerging markets
- Themes of energy deregulation, outsourcing, and privatization around the world
- Intermediation as a profit center and business facilitator
- We believe unique skill set carries business template to Broadband Services
- Price target \$90

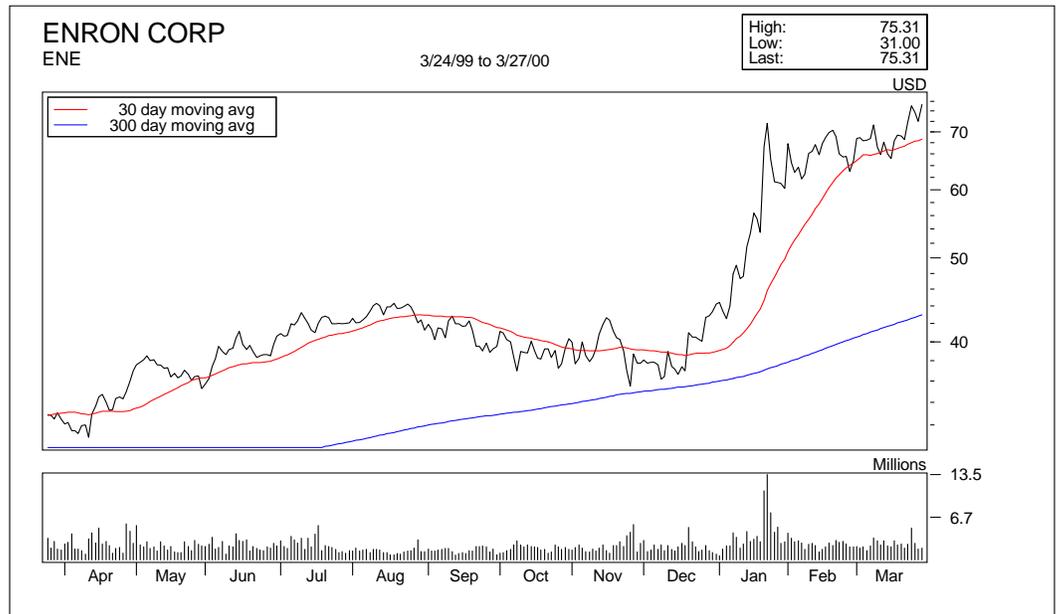
INVESTMENT OPINION: BUY

We believe that with a steady earnings anchor in its pipeline and intermediation operations, Enron Corp. systematically identifies emerging markets; establishes early beachheads; and seeks breakouts to positions of market leadership. Already the market leader in natural gas and electricity intermediation, Enron Corp. is making a major move to establish bandwidth intermediation on a global basis and establish a software standard for that market. In our opinion, the most important aspect of Enron Corp. is its culture: aggressive and focused, it is able to rapidly adjust to changing environments while establishing leadership positions in new markets. We anticipate a sustainable compounded earnings growth rate in excess of 15%, with more rapid spurts possible contingent on the speed of development in the broadband market.

Enron Corp. is a diversified company, with the majority of EBIT generated by wholesale power activity. The company supplies a vertical chain of services to its customers, and is transferring its business template to the emerging broadband market.

Rating Legend

- 1—Strong Buy
- 2—Buy
- 3—Hold
- 4—Underperform
- 5—Sell



Source: First Union Securities, Inc.

COMPANY DESCRIPTION

Enron Corp. was formed in 1985 by the merger of two natural gas transmission pipeline companies. Business operations have expanded to include intermediation, wholesale, and retail energy services, as well as broadband services. On a relatively minor basis, the company has a presence in exploration & production and water management.

Two primary themes run through this diversified company's operations. First, Enron Corp.'s revenue base is migrating away from hard assets to "knowledge-based" assets. As an example of this trend, in August 1999, Enron significantly diminished its exploration and production activities through the sale of its ownership of Enron Oil & Gas, an asset-intensive business. In counterpoint, although supported by physical infrastructure, the company's development of a Broadband Services business is accented toward software management of bandwidth.

A second theme is identification of and early presence in emerging market opportunities. Deregulation in U.S. energy markets has been one driving factor. As successful examples, Enron has a leading position in both the natural gas intermediation market (see Table 2) and the electricity intermediation market (see Table 3). Also note the section in this report for the distinction between "intermediation" and "trading." Outsourcing has been another driving factor, with management of various companies' energy needs provided under long-term contracts. Overseas, privatization has been a driving factor, as state-run or sanctioned entities have turned to outside management to improve service and decrease costs.

As an important financial discipline, Enron makes risk-contained withdrawals from ventures that fail to fulfill expectations. The orderly retreat from the California and Pennsylvania residential markets are examples, as regulatory impedance and consumer apathy dampened initial expectations. Enron has tested many new ideas, some of which have not been successful. However, the company does not stubbornly cling to an idea but jettisons further development if conditions warrant.

TRADING VERSUS INTERMEDIATION

Enron Corp. carefully makes a distinction between the word "trading," which has an implied connotation of market exposure to price fluctuations, and the word "intermediation," which defines the company's participation in making markets in such commodities as natural gas, electricity, and bandwidth. Simplistically, trading can be viewed as bets on commodity price, with gains or losses occurring depending on the accuracy of such bets.

However, Enron Corp.'s primary goal is to facilitate a convenient, liquid market. The company has strict limits, set by the board of directors, as to how much capital may be exposed. Ideally, for every long commitment, the company establishes an offsetting short position, resulting in zero capital exposure. On net, Enron Corp. typically has only 1% to 3% of its total positions unhedged.

Rather than profiting from being on the "right" side of commodity price swings, in establishing offsetting positions the company realizes a small spread, nominally 4% of the total transaction value. Hence, volume is the profitability driver, making Enron Corp.'s intermediation activity largely independent of direction or magnitude of commodity price swings.

CORPORATE STRATEGY

Emerging Markets

Strategically, Enron Corp. seeks to leapfrog stages of emerging market development, using organization and capital to seize a leading position early and extend profitability by using efficiencies of scale instead of price warfare as a competitive tool. In deregulating markets, such as North American and European power markets, Enron has dedicated significant efforts to understanding issues and legislative timetables. The company will actively lobby for terms and conditions to optimize chances of success.

Markets may be profiled in life-cycle terms. In the initial phase, emerging markets often have low barriers to entry and numerous would-be "companies of the future." As the emerging market becomes more defined, volumes are still relatively low but profit margins remain high enough to support embryonic players. As the emerging market begins to mature, volumes increase but price competition becomes a competitive tool and profit margins tend to decline. Less-efficient players are forced out. In an early maturity stage for a market, margins have tended to stabilize and market share, with attendant economies of scale, becomes the dominant element for success.

By jumping to a leading market share position early in the game, Enron seeks to capture above-average profitability for an extended period. Over a longer run, as the market settles into maturity, it becomes a cash cow, with capital available to direct into what is perceived to be new opportunity.

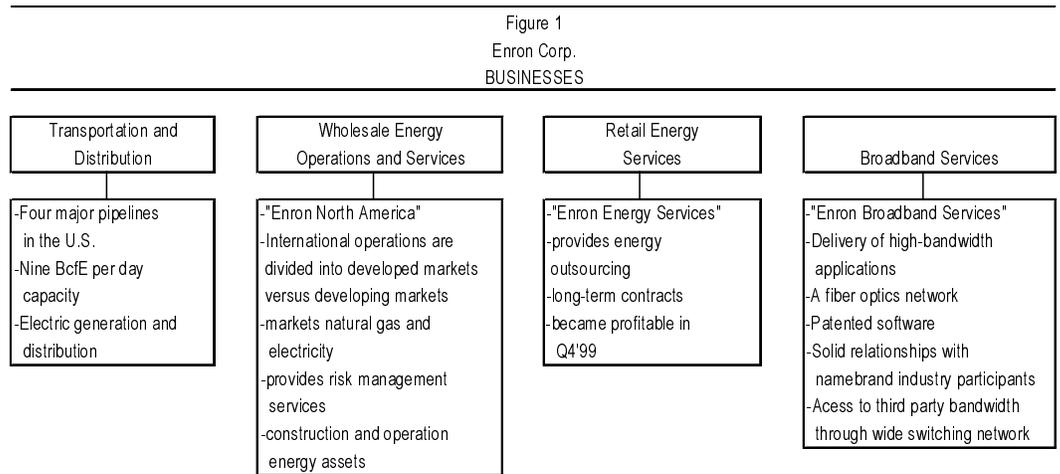
The company is conscious of brand-name recognition. In addition to corporate advertising, it has purchased the rights to have the new Houston Astros professional baseball team stadium, named "Enron Field." Broadcasts of the games give attendant radio and TV exposure.

“Fluidity”

To adjust to changes in the market place, Enron Corp periodically undergoes organizational changes. Business elements are renamed and reshuffled, with successful ventures emphasized and less successful ones quietly faded. In a single word, Enron Corp. can be characterized as “fluid,” with a highly disciplined approach to identifying opportunity and marshalling appropriate resources for establishing leading positions in emerging markets.

BUSINESSES

Several businesses comprise Enron Corp.’s operations: Transportation and Distribution, Wholesale Energy Operations and Services, Retail Energy Services, and Broadband Services. Exploration and production operations are included with the Wholesale segment, and interests in water management are included in Corporate and other.



Data Source: Company reports

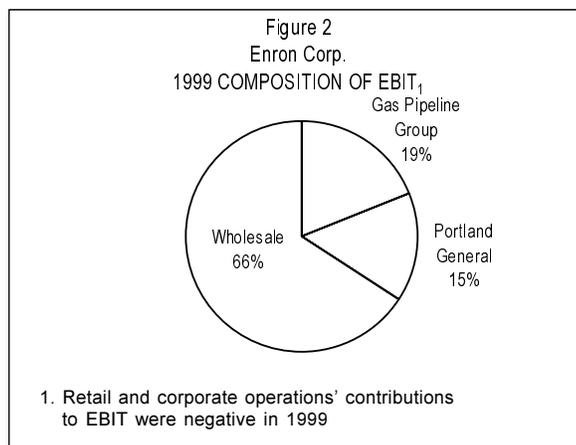
In 1999, Enron Corp.’s wholesale operations accounted for 66% of earnings before interest and taxes (EBIT). This business manages a large portfolio of global energy investments. Conceptually, international operations are further subdivided into developed economies, such as Western Europe, and developing economies, such as Latin America. Enron Wholesale Operations and Services markets natural gas and electricity, offers energy-related risk management services, builds and operates energy infrastructure, and develops natural gas and crude oil properties in India and China.

Through Enron Corp.’s retail energy operations, the company provides energy outsourcing services to commercial and industrial businesses under its subsidiary Enron Energy Services. Enron Corp. initiated its retail energy services at the beginning of 1997, and it achieved profitability on schedule with projections in Q4'99. The infrastructure of Enron Energy Services is essentially in place, the business has achieved profitability, and incremental contracts should accelerate contributions to corporate profitability. Enron secured \$3.8 billion in contract value in 1998 and \$8.5 billion in contract value in 1999.

Under the Transportation and Distribution group, Enron Corp. operates four major interstate natural gas pipelines in the United States and provides electric utility services in the Northwest through Portland General. On November 11, 1999, Enron Corp. announced the sale of its Portland General subsidiary to **Sierra Pacific Resources** (SRP-NYSE-\$12 3/8) for a total of \$3.1 billion (\$2.1 billion in cash and \$1.0 in debt). The close of the sale is contingent upon regulatory approval and is expected to occur in late 2000. For the year ended 1999, the Transportation and Distribution group accounted for approximately 34% of EBIT.

Enron Corp. has a presence in development of water asset management through a 34.3% ownership of **Azurix** (AZX-NYSE-\$7 1/16), a global water company.

Enron Corp.'s latest undertaking is the development of a Broadband Services business. "Enron Broadband Services" will offer two types of services: bandwidth intermediation and content delivery services. In general, Enron Broadband Services will deliver high bandwidth information and applications over a nationwide network using patented software, InterAgent®. In early December 1999, Enron Broadband Services executed its first bandwidth trade.



FINANCES

Enron Corp. announced a two-for-one stock split of its common shares effective August 13, 1999, bringing total common basic shares outstanding to approximately 714 million and fully diluted shares to approximately 781 million. The company pays an annual dividend of \$0.50 on its common shares.

Enron Corp. has two series of preferred convertible shares outstanding. As of Q4'99, there were 1.546 million preferred shares outstanding in aggregate.

In September 1999, Enron issued 0.250 million shares of 6.5% Junior Mandatorily Convertible Preferred stock. Each share is mandatorily convertible into 200 shares of Enron common stock on January 14, 2003. Additionally, Enron has 1.296 million shares outstanding of Series J Second Preferred stock. Each share may be converted into common stock any time at the option of the shareholder into 27.304 common shares. The convertible preferred stock pays

an annual dividend at an amount equal to the higher of \$10.50 per share or the equivalent dividend payable if the shares were converted. The convertible preferred stock is currently subject to redemption at Enron Corp.'s option for \$100 per share plus accrued dividends.

In August 1999, Enron Corp. announced the sale of its 53% ownership in **Enron Oil & Gas** (now named **EOG Resources** [EOG-NYSE-\$22 11/16, Rated 1]). Proceeds from the transaction included \$600 million in cash received from Enron Oil & Gas and \$400 million from sale of EOG shares, bringing total proceeds of approximately \$1.0 billion.

Table 1	
Enron Corp.	
CONDENSED BALANCE SHEET - 12/31/99	
(\$ in millions)	
Current assets	\$7,255
Investments and other	15,445
Net PP&E	10,681
Current liabilities	\$6,759
Long-term debt	7,151
Deferred credits	6,471
Minority interests	2,430
Preferred securities of subsidiaries	1,000
Shareholders' equity	9,570

Source: Company reports

At the close of the fourth quarter of 1999, long-term debt to total capitalization was 42.8%. Enron Corp. had interest coverage for the fourth quarter of 1999, expressed as the ratio of earnings before interest and taxes (EBIT) to interest, of 4.0x. The company's debt is rated BBB+ by Standard & Poor's.

CORPORATE CULTURE

Enron's environment encourages bright, ambitious, competitive people. Current employment is approximately 17,900 people. By maintaining a high level of standards for its employees, a corporate culture has developed that rewards achievement and promotes excellence. Mindset might be described as "identify and conquer."

In recruiting, Enron Corp. seeks highly motivated and competitive candidates, typically from well-regarded business schools. Under a management-trainee program, Enron rotates its employees among various departments within the company for two years. The maximum amount of time a participant will spend in one division of the company is six months. This approach constantly challenges employees, eliminates tedium, and exposes business divisions to fresh perspectives.

WHOLESALE ENERGY OPERATIONS

The company divides its operations into two categories: (1) commodity sales and services, and (2) energy assets and investments. In 1999, Wholesale operations contributed 66% to Enron's overall EBIT. Wholesale operations typically have about a 4% operating margin, making up for this relatively anemic number through an enormous volume of transactions.

Commodity Sales And Services. Commodity sales and services includes the purchase, sale, and marketing of energy commodities, risk management services, and management of operating assets. Providing a vertical chain of services for its clients, Enron makes a market in natural gas and electricity and acts as a principal in these markets. The company offers a variety of financial derivative products, suitable for client use. On an outsource basis, the company can manage client energy assets.

Enron Corp. has a market-leading position in both natural gas and electricity intermediation. See Tables 2 and 3.

Table 2		
Enron Corp.		
TOP 10 NORTH AMERICAN GAS MARKETERS		
(in billion cubic feet per day equivalent)		
1	Enron North America	13.4
2	Duke Energy Trading	10.5
3	Aquila Energy	10.4
4	Coral Energy	9.8
5	PG&E	9.2
6	Dynegy	8.8
7	Reliant Energy	7.9
8	Sempra Energy	6.9
9	El Paso Energy Marketing	6.7
10	TransCanada	6.6

Source: Natural Gas Week, March 6, 2000

Table 3		
Enron Corp.		
TOP 10 NORTH AMERICAN POWER MARKETERS		
(in million megawatt hours)		
1	Enron North America	380.5
2	American Electric Power	306.6
3	Aquila Power	236.6
4	Southern Co. Energy	217.7
5	PG&E Energy Trading	204.1
6	Avista Energy	135.1
7	Duke Energy Trading	109.6
7	Reliant Energy	109.6
9	PacifiCorp Power Marketing	98.0
10	Citizens Power	93.3

Source: Natural Gas Week, March 6, 2000

In our opinion, further gains in natural gas intermediation will tend to come from increases in market share. While Enron Corp. can probably gain market share in electricity, the primary growth factor is continuing expansion of the overall market.

EnronOnline

On November 29, 1999, Enron launched EnronOnline, a global Internet-based transaction system for wholesale energy and other commodities. At the website, www.enrononline.com, customers can view commodity prices in real time and make transactions free of commission for worldwide commodities. The array of commodities includes U.S., Canadian, and European natural gas; U.S. and European power; coal; plastics; pulp and paper; emissions; LPGs; petrochemicals; oil and refined products; and weather. EnronOnline does not match buyers with sellers but instead acts as a principal. The number of transactions executed has grown exponentially since it was brought online. Enron's leading intent behind the implementation of EnronOnline is to extend its existing business and participate in e-commerce. The initial capital requirement was \$15 million for start-up costs. Scalability will require more servers and personnel.

Assets And Investments. Enron Corp.'s strategy has been to make low-risk investments in countries with emerging market opportunities. Assets and investments include power plants and natural gas pipelines, and equity investments the company has made in energy intensive companies. Typically, financing is done on a project basis through an entity such as the World Bank, which offers insurance against political risk. A typical financial arrangement would be project financing, with 70% debt and 30% equity. Of the equity portion, Enron Corp. might typically hold half, for a net equity interest of 15%.

Enron separates its wholesale opportunities into those it considers **developed** markets and those it considers **developing** markets. The developed markets include Enron North America, formerly Enron Capital & Trade, and Enron Europe. The developing markets are divided geographically, and they include Asia Pacific, Latin America, and India, which are in various stages of development. Enron's ultimate goal is to replicate its North American and European business models in developing markets. Sample project involvements are listed in following paragraphs; the projects described are only a portion of Enron Corp.'s overall portfolio.

India. Enron Corp., along with its 50% owned subsidiary, Dabhol Power Company; Bechtel; and **General Electric Company** (GE-NYSE-\$154), is developing phase two of an electricity generating power plant in the State of Maharashtra, India, with a total combined cycle power plant of 1,624-megawatts. Gross cost of the Dabhol power plant will be approximately \$2.9 billion.

Brazil. Enron has a controlling interest in Elektro Electricidade e Servicos, a local distribution company for electricity that serves 1.5 million customers in the coastal state of Sao Paulo, Brazil. Enron is also constructing a 425-megawatt gas-fired power plant in Cuiaba, a city in the interior of Brazil. A spur from the 1,875-mile Bolivia/Brazil natural gas pipeline will supply natural gas to the plant.

Poland. ENS, a wholly owned subsidiary of Enron Corp., is currently constructing a 116-megawatt capacity plant in Poland. The facility will complement a power purchase agreement signed with the Polish Power Grid Company in April 1997 to supply the city of Nowa Sarzyna with steam.

Exploration And Production. Effective August 16, 1999, Enron Corp. sold its 53% ownership of Enron Oil & Gas (now called EOG Resources). In the corporate divorce, Enron Corp. maintained its production from the Panna and Mutka fields offshore India. Net to Enron Corp., recent production was about 5,500 barrels of oil per day and 70 million cubic feet of natural gas per day.

India is undergoing a program of privatization, looking to outside operators as an alternative to the state-owned oil company. Accelerated development of natural gas reserves provides physical assets for Enron to potentially develop a wholesale market, and such production could potentially be synergistic for the electrical power plants being constructed in Dabhol.

The company has a 1.8 million non-producing acreage concession in China. Two challenges are present: cost-effectively drilling and completing wells in tight sands, and developing infrastructure for natural gas should development proceed. The timeline will probably be measured in years, but in line with Enron's corporate philosophy, the early presence provides a foothold in what could potentially be a huge market.

RETAIL ENERGY SERVICES

Enron Energy Services provides energy outsource products and services to industrial and commercial customers. Enron Corp. entered the retail energy services business in 1997 and achieved profitability in Q4'99. The infrastructure for Enron Energy Services is essentially in place, and over a dozen long-term contracts have been signed. Above the breakeven point, incremental contracts should accelerate profitability for the segment.

Outsourcing has become an effective financial tool as it relieves client companies of support functions such as energy management and allows them to focus on value-added activity. The energy contracts Enron Energy Services has established vary in length, value, and the type of service offered. Different types of services include the supply of natural gas and electricity; design and implementation of energy infrastructure projects; commodity price risk management; upgrading and replacing energy equipment; review of existing energy contracts; maintenance of energy conversion assets; services for heating, ventilation, and air conditioning; installation of meters; and analysis of energy consumption. Listed below are examples of contracts Enron has signed in the last two years.

	Company	Contract		
		Value	Length	Date Signed
1	Simon Property Group	\$1.5 billion	10 years	Oct-99
2	Owens Corning	\$1.0 billion	10 years	Sep-99
3	Suiza Foods Corporation	not public	10 years	Jul-99
4	Houston Astros	not public	30 years	Apr-99
5	Ocean Spray Cranberries, Inc.	\$116 million	10 years	Mar-99
6	Archdiocese of Chicago	\$246 million	7 years	not public
7	San Francisco Giants	\$30 million	11 years	Dec-98
8	Pacific Bell Park	\$30 million	15 years	Dec-98
9	General Cable Corporation	\$120 million	not public	Jun-98
10	CB Richard Ellis (CBG-NYSE-\$)	not public	not public	May-98
11	Lockheed Martin Missiles & Space	\$75 million	4 years	May-98
12	California State University and University of California	\$300 million	4 years	Feb-98
13	Pacific Telesis	not public	4 years	Jan-98

Source: Company reports

Enron is able to emphasize customer service. Each contract is customized to each customer's particular needs. An operating margin goal of approximately 8% is targeted.

TRANSPORTATION AND DISTRIBUTION

Enron Corp. operates four major interstate natural gas pipelines in the United States, and through Portland General it provides electric utility services in the Northwest. This segment provides a stable source of cash flow. For the year ended 1999, Transportation and Distribution contributed 34% of EBIT.

	Enron's Interest	Length of System (in miles)	1999 Avg Volumes (Bbtu/d)	Peak Capacity (Bbtu/d)	Location
Northern Natural Gas Co.	100%	16,463	3,820	4,300	Texas to Michigan
Transwestern Pipeline Co.	100%	2,487	1,462	1,600	West Texas to California
Florida Gas Transmission Co.	50%	4,795	1,495	1,500	South Texas to Florida
Northern Border Partners, L.P.	8%	1,214	2,405	2,426	Chicago, IL to neighboring states

Sources: Company reports and First Union Securities estimates

Enron Corp. announced the sale of Portland General to Sierra Pacific Resources in November 1999. The close of the sale is anticipated to occur towards the end of 2000. Excluding Portland General, we expect the Pipeline Group to contribute approximately 15% to pro forma EBIT in 2000.

Pipelines

Northern Natural Gas Company. Enron Corp. owns a 100% interest in Northern Natural Gas Company, which operates an approximated 16,500-mile natural gas pipeline system that transports natural gas to various market areas in the Midwest. The majority of the company's revenues are comprised of monthly demand charges based on contracted capacity. Additionally, Northern Natural Gas operates three natural gas storage facilities.

Transwestern Pipeline Company. Enron Corp. owns a 100% interest in Transwestern Pipeline Company, which operates a 2,500-mile interstate pipeline that primarily transports gas from southwestern states to the California market. The pipeline is capable of bi-directional flow, which increases utilization, and has access to the San Juan Basin, the Permian Basin, and the Anadarko Basin, three predominantly natural gas basins. The company received approval in January 2000 to expand the system into California. The expansion, called the Gallop expansion, is estimated to cost approximately \$14 million.

Florida Gas Transmission Company. Enron Corp. indirectly owns 50% of Florida Gas Transmission, which transports gas via a 4,795-mile interstate pipeline that runs from South Texas to southern Florida. Florida Gas Transmission currently transports natural gas for third parties and has filed an application to Federal Energy Regulatory Committee to expand its pipeline capacity to meet local distribution company and industrial demand. The table below shows the proposed three expansion phases for the Florida Gas Transmission pipeline.

The company operates the only interstate natural gas pipeline serving peninsular Florida. It uses the FERC-mandated rate design, which allows pipelines to recover substantially all fixed costs, a return on equity, and income taxes in the capacity reservation component of their rates. Hence, recovery of fixed costs is not contingent upon demand levels.

Florida Gas Transmission announced in November 1999 its acquisition of 300 Mmf per day of pipeline capacity from Koch Gateway Pipeline Company. The sale is expected to close in the spring of 2002, coinciding with Phase V completion.

	Daily Incremental Capacity	Approximate Cost (\$ in millions)	Target Completion
Phase IV	250 Bbtu	\$270	2001
Phase V	400 Bbtu	\$420	2002
Phase VI	350 Bbtu	\$400	2003

Source: Company reports

Northern Border Partners, L.P. Enron Corp. indirectly owns 8.7% of Northern Border Pipeline through Northern Border Partners, L.P. The 1,214-mile pipeline transports natural gas from the Montana-Saskatchewan border to interconnecting pipelines and local distribution systems in North Dakota, South Dakota, Minnesota, Iowa, and Illinois. Northern Border's capacity of 2.404 billion cubic feet per day (Bcf) is contracted in its entirety through October 2001. The company is currently undergoing the approval process to expand the pipeline system into Indiana by November 2000.

Portland General

Portland General is an electric utility that services a retail customer base in Oregon and wholesale customers throughout the western United States. In November 1999, Enron Corp. announced the sale of Portland General to Sierra Pacific Resources for \$3.1 billion. The sale price includes approximately \$2.1 billion in cash and \$1.0 billion in assumed debt/preferred securities. The close of the sale is subject to regulatory approval, anticipated to occur towards the end of 2000.

Enron Corp. had merged with Portland General mid-1997. The merger gave Enron a template for penetration into the individual end-user market, and a presence in the northwest United States. The grand concept was to follow consumer power deregulation around the country offering a cost-effective choice, much as occurred in the telephone market two decades earlier. However, the sticky issue of stranded costs and unexpected apathy by the potential client base caused Enron to rethink its strategy. The electricity intermediation operation has been kept, and the initial idea for bandwidth intermediation came from Portland General, but service to the individual retail client base is being sold.

AZURIX EQUITY POSITION

Enron Corp. owns approximately 34.3% of Azurix Corp., which owns, operates, and manages water and wastewater plants and infrastructure, and develops water resources. Azurix had an initial public offering in June 1999 that raised about \$300 million. A primary asset of the company is Wessex Water plc in England. Azurix has acquired concessions in Cancun, Mexico, as well as an interest in concessions in Argentina. Water Asset Management's operating results are reported in the "Corporate and Other" section of the income statement.

BROADBAND SERVICES

A new business segment was formed late in 1998 that operates under the name Enron Broadband Services. The segment was formally called Enron Communications. Although we expect the organizational structure of broadband services to change as this new market unfolds, for the time being, Enron Broadband Services' revenue centers are subdivided into **content delivery** and **bandwidth intermediation**. The content delivery division will deliver content for customers that require high-bandwidth applications. The bandwidth intermediation division is being designed to exploit the inefficiencies of the bandwidth delivery market, and it will be patterned after Enron's successful wholesale business in natural gas and electricity.

Internet

Thus far, the Internet explosion has been driven by demand for low bandwidth applications, primarily text and voice. As the Internet matures, **high bandwidth applications**, such as video and large file transfers, are anticipated to eclipse the initial market. **Streaming video** should be one driver, as industry segments such as Media and Entertainment integrate broadband technology into their business models. CAD/CAM data management and storing/archiving data should find acceptance when suitable data conduits become available. As with many emerging markets, new functionality is likely to appear in step with platform availability.

The current Internet, oriented to low bandwidth applications, does not have the capacity or quality control to adequately service the markets targeted by Enron Broadband Services. Enron's solution provides not only the physical pieces needed, but also ancillary services, such as scheduling and reserving bandwidth, documenting quality of service, and billing. In addition to the Media and Entertainment industry, Enron believes the Financial Services industry and technology companies themselves will be early adopters in the broadband Internet market.

Physical Plant

Enron Broadband Services has servers in approximately 40 U.S. cities, with plans to expand into Europe and Tokyo. The network structure eliminates intermediate protocols, and provides "one hop" jumps onto totally fiber optic networks. This simplified architecture overlays the public Internet, increasing the speed and quality of data transmission. Enron Broadband Services is constructing a fiber network that connects the Northwest United States to the Southeast (Seattle to Miami), with estimated completion in December 2000. At that time, Enron will have about 15,000 miles of fiber optic route miles. Fiber optic network capacity is being leased to service other areas. Currently, the company has public bandwidth intermediation available at two sites, Los Angeles and New York, with plans to bring on another site in London by mid-year 2000.

At year-end 1999, the system had 222 server complexes, with plans to expand to 1,500 by the end of 2000. Each central processing unit (CPU) has the capacity for approximately 5,000 streams of 28.8 kb per second. One server has the capacity of two to four CPUs, and each server complex has up to 50 servers. Thus, each server complex will be capable of up to 750,000 streams.

Bandwidth Operating System (BOS)

Enron Broadband Services has developed a Broadband Operating System (BOS) positioned to define the standard protocol for accessing real-time bandwidth. Operating system functions include routing, bandwidth reservation, metering, user authentication, data transmission encryption, and definition of and confirmation of quality of service. A publicly available application-programming-interface links the Broadband Operating System with network resources, encouraging third-party software development. This business model, establishing the industry-standard operating system with an open interface for third-party applications developers, has proven to be notably successful for **Microsoft** (MSFT-OTC-\$88 7/8) in the personal computer arena.

Third-Party Alignments

Enron Broadband Services signed ten new distribution partners, primarily Internet service providers (ISPs), in October 1999. The distribution partners will be connected directly to the Enron Intelligent Network (EIN) and will share revenue according to agreed upon interests with Enron Broadband Services. The EIN includes the fiber optic network, pooling points, server complexes, and a software control layer (InterAgent®). Local servers are integrated with the distributor partners' local points of presence. Enron provides the backbone system, splicing with its partners for ultimate delivery.

Enron Broadband Systems favors off-the-shelf hardware, but it also encourages vendors in each particular niche to optimize its hardware or services for sale to Enron. With Enron Broadband Systems' projected \$650 million expenditure program, the quid pro quo could be commercially important to the selling company.

Enron Corp. has developed alliances with several established players to implement the Enron Intelligent Network (which includes BOS and additional features). **Cisco Systems** (CSCO-OTC-\$73 1/8) provides routers capable of bypassing unnecessary network layers; **Ciena Corp.** (CIEN-OTC-\$102 1/8) provides the dense wavelength division multiplexing system that enhances the transmission of bandwidth intensive data; and **Sun Microsystems** (SUNW-OTC-\$90) provides the server platform hardware.

Sun Microsystems and Enron Broadband Services announced agreements in January 2000 to accelerate adoption of broadband Internet services. In particular, the two companies will work in a collaborative effort to optimize hardware and software for next-generation broadband infrastructure. As part of the interaction, Enron Broadband Services will purchase 18,000 servers and associated storage from Sun to expand Enron Broadband Services' footprint to more than 2,000 points of presence.

Low Cost

Under the Enron Broadband Services model, customers are able to reserve bandwidth for their customized use. Payments are based on the amount of data transferred, contrasted with a typical service provider charging a flat rate for a stipulated period of time. The ability to offer "use only" service is embedded in a unique combination of optimized off-the-shelf hardware and proprietary software.

Other Services

To help spur the acceptance of Enron Broadband Services' proprietary software, functions such as bandwidth management, intermediation, and finance are offered. As the market for broadband grows (both on the Internet and on more traditional networks), management complexities will also grow. Rather than internally staffing up, clients will be offered the option of outsourcing bandwidth management to Enron Broadband Services.

By standardizing benchmarks and establishing liquidity in the cash and forward markets for Bandwidth, Enron is following the template established in its successful natural gas and electricity intermediation activity. In both these arenas, Enron is the market-share leader. Benchmarks for the bandwidth market would include city pairs (for instance, New York to Los Angeles), bandwidth unit (TDM DS-3 at 44.7 Mbps), term (one month), and quality of service (for instance, not more than 26 unavailable seconds per month).

As with the natural gas and electricity markets, Enron can create new finance alternatives for the market. For instance, structured finance and risk management are two elements that can be used to enhance performance and content of a managed network.

Bandwidth Intermediation As A Global Commodity

The target outcome would be (1) to proactively create leading positions in parallel synergistic new markets, including bandwidth management, broadband internet service, and financial products, (2) to have the standard operating system (BOS) for the bandwidth management market, and (3) to have bandwidth intermediation to expand into a global commodity.

With an impressive game plan, experience in selected portions of the business model (intermediation in particular), and \$650 million dedicated to achieve critical mass, in our opinion Enron Broadband Services may be able to substantially achieve its ambitious goals.

MANAGEMENT

Kenneth Lay was named chairman of the board and chief executive officer of Enron Corp. in 1986 after the merger of Houston Natural Gas and InterNorth in July 1985. Lay joined Houston Natural Gas in June 1984 as chairman and chief executive officer after holding various executive management positions at such companies as Transco Energy Company and Continental Resources Company.

Jeffrey Skilling is president and chief operating officer of Enron Corp. Skilling joined Enron Capital & Trade in 1990, where he pioneered the use of risk management products in the natural gas industry. Before joining Enron, Skilling was a senior partner at McKinsey & Company, where he oversaw the firm's worldwide energy consulting practices.

Joseph Sutton is the vice chairman of Enron Corp. Sutton joined the company in 1995. Sutton has held various positions at Enron and played a leading role in the Dabhol Power Project in India. Previously, Sutton was chairman and chief executive officer of Enron International.

Joseph Hirko is the co-chairman and chief executive officer of Enron Broadband Services. Hirko was with Portland General Electric for 18 years. As chief financial officer of Portland General, Hirko helped negotiate the merger with Enron.

Kenneth Rice is the co-chairman and chief commercial officer of Enron Broadband Services. Rice previously was the chairman and chief executive officer of Enron Capital & Trade. He began his energy career in 1980 at InterNorth, which subsequently merged into Enron in 1985.

Lou Pai is the chief executive officer of Enron Energy Services, making him responsible for providing energy outsource solutions. Prior to this position, Pai has held several positions, namely president and chief operating officer of the former Enron Capital & Trade. Pai joined Enron in 1987 from **Conoco, Inc** (COC.B-NYSE-\$25 3/4).

Clifford Baxter is the chairman and chief executive officer of Enron North America. Since joining Enron in 1991, Baxter has served as Enron's chief investment officer and senior vice president of corporate development.

Mark Frevert is the president and chief executive officer of Enron Europe since 1996. Frevert joined Enron Capital & Trade in 1991 as VP of Enron Power Services. After serving various positions at Enron Capital & Trading, Frevert relocated to London.

EVALUATION

Selectively, Enron Corp. functions as a merchant bank, providing seed capital and arranging financing. Equity interests may be monetized at appropriate junctures. The pipeline businesses are heavily regulated, with stable cash flow characteristics. In the company's intermediation activity, per-transaction margins are low but transactional velocity is high. Intermediation market volumes are expanding; additionally, Enron Corp. is modestly increasing market share. The company's initiative in Broadband Services is programmed for losses in 2000 and 2001, achieving breakeven in 2002. Over time, we believe Broadband Services has the potential to become one of the larger contributors to EBIT.

Enron Corp.'s business mix has a variety of growth potentials and profit margins, spanning a cross-section of industries. In our opinion, a comparison with a pipeline peer group ignores the relatively small importance of pipeline operations (about 15% of estimated 2000 EBIT).

Our earnings model estimates an average compounded annual growth rate of 19% for fully diluted earnings over the next four years. Based on our 2000E earnings estimate, ENE stock currently has a 49x P/E ratio compared with 31x for the S&P 500.

RISKS

Enron Corp. is a diversified company, and as such, individual risk factors are lessened. The company's pipeline transportation operations are relatively stable. Wholesale operations have exposure on a project by project basis to changes in expectations, but the individual projects or contracts are part of a large portfolio. Again, diversification lowers risk. The intermediation portion of Enron Corp.'s businesses typically exposes only 1% to 3% of capital without a balancing transaction. Hence, Enron Corp. has relatively minor exposure to commodity price fluctuation under typical circumstances.

Expectations for Broadband Services probably constitutes the biggest risk factor in ENE stock price. We believe expectations regarding broadband comprise 25% - 30% of ENE's current stock price. Breakeven for the business is not anticipated until 2002, and changes in expectations until then could cause volatile stock price action.

COMMENTS

The nature of the company's business strategy lends itself to abrupt jumps, whether up or down, in stock price. For instance, on January 20, 2000, ENE stock jumped up by 24% as details of Broadband Services strategy were unveiled in a joint presentation that included Sun Microsystems. Enron Corp. has, in our opinion, the resources and corporate culture to become a notable 21st century company. Keying off these perceptions, we would advocate a counterpunching philosophy, looking to buy ENE when random shocks elicit a downward price shear, and considering overenthusiastic upward price runs as possible windowns for profit-taking. We currently rate the stock 2 or Buy.

Additional information is available upon request.

Table 7
Enron Corp.
ANNUAL INCOME STATEMENT
(\$ in millions, except per share amounts)

Revenues	1999	2000E	2001E	2002E	2003E
Transportation and distribution					
Gas pipeline group	634	645	689	702	726
Portland General	1,379	1,559	-	-	-
Wholesale energy operations and services	35,759	43,250	55,336	64,548	75,602
Retail Energy services	1,563	1,540	3,080	4,200	5,600
Exploration and production	429	-	-	-	-
Corporate and other	344	280	280	314	351
Total Revenues	40,108	47,274	59,385	69,764	82,279
Expenses					
Transportation and distribution					
Gas pipeline group	254	261	284	295	310
Portland General	1,073	1,260	-	-	-
Wholesale energy operations and services	34,442	41,520	53,122	61,966	72,578
Retail Energy services	1,656	1,466	2,933	3,999	5,332
Exploration and production	364	-	-	-	-
Corporate and other	361	280	280	374	411
Non-recurring items	13	-	-	-	-
Total Expenses	38,163	44,786	56,619	66,633	78,631
Income before interest and taxes (IBIT)					
Transportation and distribution					
Gas pipeline group	380	384	405	407	416
Portland General	305	300	-	-	-
Wholesale energy operations and services	1,317	1,730	2,213	2,582	3,024
Retail Energy services	(68)	74	147	201	268
Broadband Services		(60)	(60)	-	60
Exploration and production	65	-	-	-	-
Corporate and other	(17)	(60)	(60)	(60)	(60)
Nonrecurring Items	13	-	-	-	-
Total IBIT	1,995	2,367	2,646	3,130	3,708
Interest and related charges, net	656	707	669	657	657
Dividends on company-obligated preferred securities of subsidiaries	76	80	80	80	80
Minority interests	135	130	130	140	140
Income Tax	104	283	380	451	566
Net Income Before Extraordinary Item	1,024	1,168	1,387	1,802	2,265
Extraordinary Item	(131)	-	-	-	-
Net Income	893	1,168	1,387	1,802	2,265
Preferred stock dividends	66	77	77	77	77
Earnings on common stock	827	1,091	1,310	1,725	2,188
Net Income per Share - basic	\$1.18	\$1.49	\$1.72	\$2.16	\$2.64
Average Basic Shares Outstanding	705	730	760	800	830
Net Income per share before non-recurring item - diluted	\$1.19	\$1.35	\$1.55	\$1.98	\$2.43
Net Income per Share - diluted	\$1.10	\$1.35	\$1.55	\$1.98	\$2.43
Average Diluted Shares Outstanding	769	807	844	870	900

Table 8
Enron Corp.
1999 QUARTERLY INCOME STATEMENT
(\$ in millions, except per share amounts)

Revenues (Net of Intercompany)	Q1'99	Q2'99	Q3'99	Q4'99	1999
Exploration and production	149	175	105	-	429
Transportation and distribution					
Gas pipeline group	178	121	160	175	634
Portland General	299	296	407	377	1,379
Wholesale energy operations and services	6,516	8,558	10,749	9,936	35,759
Retail Energy services	363	301	344	555	1,563
Corporate and other	127	221	72	(76)	344
Total Revenues	7,632	9,672	11,837	10,967	40,108
Expenses					
Transportation and distribution					
Gas pipeline group	52	49	75	78	254
Portland General	207	239	355	272	1,073
Wholesale energy operations and services	6,196	8,202	10,371	9,673	34,442
Retail Energy services	394	327	362	573	1,656
Exploration and production	137	155	72	-	364
Corporate and other	113	230	95	(77)	361
Non-recurring items	-	-	13	-	13
Total Expenses	7,099	9,202	11,343	10,519	38,163
Income before Interest and Taxes (IBIT)					
Exploration and production	12	20	33	-	65
Transportation and distribution					
Gas pipeline group	126	72	85	97	380
Portland General	92	57	52	104	305
Wholesale energy operations and services	320	356	378	263	1,317
Corporate and other	14	(9)	(23)	1	(17)
Retail Energy services	(31)	(26)	(18)	7	(68)
Non-recurring items	-	-	13	-	13
Total IBIT	533	470	520	472	1,995
Interest and related charges, net	175	175	187	119	656
Dividends on company-obligated preferred securities of subsidiaries	19	19	19	19	76
Minority interests	33	23	38	41	135
Income Tax	53	30	(14)	35	104
Net Income before extraordinary items	253	223	290	258	1,024
Extraordinary item	(131)				(131)
Net Income	122	223	290	258	893
Preferred stock dividends	4	19	19	24	66
Earnings on common stock	118	204	271	234	827
Net Income per Share - basic	\$0.17	\$0.29	\$0.38	\$0.33	\$1.18
Average Basic Shares Outstanding	683	708	714	715	705
Net Income per share before non-recurring item - diluted	\$0.34	\$0.27	\$0.27	\$0.31	\$1.19
Net Income per Share - diluted	\$0.16	\$0.27	\$0.35	\$0.31	\$1.10
Average Diluted Shares Outstanding	745	771	781	779	769

Table 9
Enron Corp.
2000E QUARTERLY INCOME STATEMENT
(\$ in millions, except per share amounts)

Revenues	Q1'00E	Q2'00E	Q3'00E	Q4'00E	2000E
Transportation and distribution					
Gas pipeline group	161	159	161	163	645
Portland General	411	369	369	411	1,559
Wholesale energy operations and services	10,922	10,667	10,852	10,809	43,250
Retail Energy services	385	385	385	385	1,540
Corporate and other	70	70	70	70	280
Total Revenues	11,950	11,650	11,836	11,838	47,274
Expenses					
Transportation and distribution					
Gas pipeline group	65	64	65	66	261
Portland General	325	304	304	325	1,260
Wholesale energy operations and services	10,486	10,240	10,418	10,377	41,520
Corporate and other	70	70	70	70	280
Retail Energy services	367	367	367	367	1,466
Non-recurring items	-	-	-	-	-
Total Expenses	11,313	11,045	11,224	11,205	44,786
Income before interest and taxes (IBIT)					
Transportation and distribution					
Gas pipeline group	96	95	96	97	384
Portland General	85	64	64	85	300
Wholesale energy operations and services	437	427	434	432	1,730
Retail Energy services	18	18	18	18	74
Broadband Services	(15)	(15)	(15)	(15)	(60)
Corporate and other	(15)	(15)	(15)	(15)	(60)
Non-recurring items	-	-	-	-	-
Total IBIT	607	574	583	603	2,367
Interest and related charges, net	177	177	177	177	707
Dividends on company-obligated preferred securities of subsidiaries	20	20	20	20	80
Minority interests	33	33	33	33	130
Income Tax	74	67	69	73	283
Net Income before extraordinary items	304	278	285	301	1,168
Extraordinary item	-	-	-	-	-
Net Income	304	278	285	301	1,168
Preferred stock dividends	19	19	19	19	77
Earnings on common stock	285	259	265	282	1,091
Net Income per Share - basic	\$0.39	\$0.35	\$0.36	\$0.39	\$1.49
Average Basic Shares Outstanding	730	730	730	730	730
Net Income per share before non-recurring item - diluted	\$0.35	\$0.32	\$0.33	\$0.35	\$1.35
Net Income per Share - diluted	\$0.35	\$0.32	\$0.33	\$0.35	\$1.35
Average Diluted Shares Outstanding	807	807	807	807	807

Table 10
Enron Corp.
2001 E QUARTERLY INCOME STATEMENT
(\$ in millions, except per share amounts)

Revenues	Q1'01E	Q2'01E	Q3'01E	Q4'01E	2001E
Transportation and distribution					
Gas pipeline group	171	171	173	175	689
Portland General	-	-	-	-	-
Wholesale energy operations and services	13,227	13,337	14,293	14,478	55,336
Retail Energy services	770	770	770	770	3,080
Corporate and other	70	70	70	70	280
Total Revenues	14,238	14,348	15,306	15,492	59,385
Expenses					
Transportation and distribution					
Gas pipeline group	70	71	71	72	284
Portland General	-	-	-	-	-
Wholesale energy operations and services	12,698	12,804	13,722	13,899	53,122
Corporate and other	70	70	70	70	280
Retail Energy services	733	733	733	733	2,933
Non-recurring items	-	-	-	-	-
Total Expenses	13,572	13,678	14,596	14,774	56,619
Income before interest and taxes (IBIT)					
Transportation and distribution					
Gas pipeline group	100	100	102	103	405
Portland General	-	-	-	-	-
Wholesale energy operations and services	529	533	572	579	2,213
Retail Energy services	37	37	37	37	147
Broadband Services	(15)	(15)	(15)	(15)	(60)
Corporate and other	(15)	(15)	(15)	(15)	(60)
Non-recurring items	-	-	-	-	-
Total IBIT	636	641	680	688	2,646
Interest and related charges, net	167	167	167	167	669
Dividends on company-obligated preferred securities of subsidiaries	20	20	20	20	80
Minority interests	33	33	33	33	130
Income Tax	90	91	99	101	380
Net Income before extraordinary items	327	331	361	368	1,387
Extraordinary item	-	-	-	-	-
Net Income	327	331	361	368	1,387
Preferred stock dividends	19	19	19	19	77
Earnings on common stock	308	311	342	349	1,310
Net Income per Share - basic	\$0.40	\$0.41	\$0.45	\$0.46	\$1.72
Average Basic Shares Outstanding	760	760	760	760	760
Net Income per share before non-recurring item - diluted	\$0.36	\$0.37	\$0.41	\$0.41	\$1.55
Net Income per Share - diluted	\$0.36	\$0.37	\$0.41	\$0.41	\$1.55
Average Diluted Shares Outstanding	844	844	844	844	844

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