

Equity Research

Americas

U.S./Energy/Natural Gas

July 6, 1999

BUY
LARGE CAP

Enron—A Real (and Valuable) Option in Communications

ENE

Business Development Is Occurring Faster than Expected

Steven A. Parla, CFA
1 212 325 3145
steven.parla@csfb.com

David M. Zusman
1 212 325 2518
david.zusman@csfb.com

- We expect Enron to devote more time, resources, and capital toward its Communications efforts as strategic business developments accelerate in the second half of 1999.
- High acceptance of Enron's network and bandwidth trading strategies is evident as Communication makes major headway in network rollout, forming alliances, and privately negotiating a bandwidth trade.
- Telecom is a natural extension of our "EDSing" of Energy (total outsourcing) thesis. The properties of a developing and deregulating energy industry are strikingly similar to the properties of a developing and deregulating telecom market place.
- We expect the perception of Communications to evolve from "potential opportunity" (option value) to "core business" (DCF value) as Enron reaches each telecom milestone and surpasses each strategic hurdle.

Price 7/1/99 ¹	Target (12 Months)	Dividend	Yield	Mkt. Value (Millions)	52-Week Price Range	
USD 81.13	\$100	\$1.00	1.2%	\$31,072.8	\$82.94–40.63	
	Annual EPS	Prev. EPS	Abs. P/E	Rel. P/E	EV/ EBITDA	EBITDA/ Share
12/00E	\$2.70		30.0X	118%	12.54X	\$8.36
12/99E	2.35		34.5	124	14.66	6.97
12/98A	2.01		40.4	129	16.74	5.92
	March	June	September	December	FY End	
2000E	\$0.77	\$0.57	\$0.62	\$0.74	Dec. 31	
1999E	0.68	0.50	0.55	0.62		
1998A	0.65	0.42	0.47	0.48		
ROIC (3/99)	5.3%	Total Debt (3/99)		\$8.5 bil.	Book Value/Share (3/99) \$13.50	
WACC (3/99)	8.7%	Debt/Total Capital (3/99)		32%	Common Shares 383 mil.	
EP Trend²	Up	Est. 5-Yr. EPS Growth		15%	Est. 5-Yr. Div. Growth 5%	

¹On 7/1/99 DJIA closed at 11066.4 and S&P 500 at 1381.0.

²Economic profit trend.

Enron is one of the world's largest energy companies with operations in energy marketing and outsourcing, international infrastructure development, oil and gas E&P, electricity, natural gas transmission and storage, and telecommunications.

Enron—A Real (and Valuable) Option in Communications

Six months ago, Enron told the investing public that Enron Communications should be thought of as an option. In now seems that management intends to exercise that option to the fullest extent.

Enron's pure-IP network will focus on the exploding data market

First, it is important to immediately understand that Enron is not Qwest, Level 3, or Williams. Enron is not creating a platform for voice and looking for that next big long-distance voice contract. Instead, Enron is building a pure-IP network focused on capturing the enormous explosion in the data market. Thus, Enron will not need to deploy ATM, frame relay, and sonet technologies, resulting in a 60% operating cost reduction and a 30% capital expenditure reduction versus traditional legacy networks. Enron links the application provider with the service provider in a revenue sharing, charge-by-the stream (or by the bit) fashion. Enron will offer rich media and high-bandwidth, delay-sensitive content, including live television content, videoconferencing, streaming video, and network-hosted applications.

Get ready for bandwidth trading—because it's here

Enron's physical network presence is necessary to create a bandwidth trading market—a market that we believe is inevitable given the vast capacity inefficiencies that currently exist. The network provides access to key markets, a pooling point for networks, asset flexibility, the ability to swap into a broader network reach, and telecommunications credibility. Finally, Enron's network strategy is very much a viable business on its own.

We believe that as we enter the second half of the year, it will become clear that *management intends to make Communications a top priority*. Leading indicators are as follows:

- Alliances with content providers and internet service providers (ISPs) as well as the expansion of the Enron Intelligent Network is exceeding even management's January expectations.
- Our discussions with management indicate a much more positive stance regarding the deployment of capital into Communications.
- A market for bandwidth trading is becoming a reality at a much faster pace than we anticipated. Even Qwest and Level 3 Communications have commented at industry conferences about the reality of a not-so-distant bandwidth market.
- Communications employment has substantially increased since January by two-fold. In fact, the group is so large now that the staff intends to relocate to larger facilities.

The network build is accelerating...

Communications Is Running Faster and Momentum Is Building

- The network build is much accelerated from initial conversations we had with management just three months ago. We believe that Enron is on pace to build, swap into, or acquire at least 18,000 route miles by year-end 2000. More important, the network should reach 15 cities by year-end 1999 and 45 cities by year-end 2000. (Each city may have multiple points of presence.) To accelerate its network in-service plan, Enron has swapped into 9,800 route miles of the Frontier network. These 9,800 miles are currently lit and service Enron's presence in eight cities.

...and Enron is attracting business!

- In our recent discussions with Enron management, application providers, and ISPs, it is clear that the interest in Enron's product mix is extremely high. Enron has already signed deals with at least nine applications providers and as many as eight service providers. We believe that negotiation with at least twice as many applications and service providers are currently under way.

Enron should standardize a bandwidth contract for trading by year-end 1999, well ahead of our expectations

- Enron's bandwidth trading business, which focuses on pairing parties that have excess lit network capacity with parties that have a shortage (or temporary shortage) of lit network capacity, is developing at a much faster pace than expected. Enron has already privately negotiated the selling of lit capacity (immediately available bandwidth). We believe that by year-end 1999, Enron will offer standardized bandwidth contracts regulated by an outside party. This transaction would come 18 months sooner than management's initial expectations. New York to Los Angeles should be the first city pair (T1 connection), and Washington DC to San Francisco should be the second city pair (DS3 connection). Conducting a standardized bandwidth transaction by year-end would be a major accomplishment and would clearly give Enron a major first-mover advantage in creating what could be a multibillion-dollar franchise.

Telecom is a natural extension of our EDSing of Energy thesis

There Are Several Implications from the Above Discussion

- We believe that the investing public will increasingly view Communications as a core business—valuing the entity as a part of a whole. Considering that the world is probably just at the beginning of a 20-year telecom infrastructure build and a 50-year telecom/networking revolution, Enron's efforts in telecom should be considered by investors to have large potential. Furthermore, telecom is a natural extension of our "EDSing" of Energy (total outsourcing) thesis. *If Enron has proven anything during the past decade, it is that it is the master of risk management, capturing inefficiencies in volatile and developing markets by identifying arbitrage opportunities, and being first-to-market at just about everything it does.* The properties of a developing and deregulating energy industry are strikingly similar to the properties of a developing and deregulating telecom market place.

More capital deployed toward Communications

- We expect more capital to be deployed toward Communications than the \$400 million that has been announced. However, it should be noted that higher capital costs would be a result of an accelerated growth plan (network, partnerships, and revenues) and not as a result of lower capital efficiencies in constructing the network. In addition, we stress that Enron is constructing a pure-IP network, which requires less capital and operating commitment than traditional ATM networks.

A likely result is lower sales of dark fiber

- The acceleration of the Enron Intelligent Network will increasingly result in swapping into routes or acquiring routes rather than building routes. This will most likely result in lower dark fiber sales. Enron guided the street toward a modest second quarter dark fiber operating contribution. We now estimate dark fiber operating profits to be negligible for the quarter.

Conclusion

What do we make of all this? The key to understanding Enron is understanding Michael Mauboussin's recent work on real options (see June 23, 1999, report, *Get Real: Using Real Options in Security Analysis*). Enron can be thought of as a core energy business (valued using DCF) plus a basket of potential business opportunities (valued using option theory). In this case, the potential business opportunity is telecom. Now let us evaluate the option of entering the telecom marketplace.

- The characteristics and needed skill sets of Enron's core energy business and Enron's telecommunications efforts are virtually identical.
- Given the magnitude of the current and coming telecom/Internet revolution, winners will reap profits for *very long time horizons*.

Simple option theory would suggest that the value of such an option would be substantial given Enron's ability to exercise the option (it already has the skill set)

The perception of Communications should evolve from “potential opportunity” to “core business”

and the time and order of magnitude (50-year telecom revolution) associated with the option.

Given the apparent acceleration in the size, scope, and breadth of Enron's communication strategy, it is our opinion that *Enron intends to devote more time, resources, and capital toward its telecom option*. This is a substantial shift from management's stance at its January analyst conference as well as from our discussions with the company just two months ago.

We would like to emphasize that the purpose of this note is not to simply throw out what would be considered a random valuation of Enron Communications (\$2 billion, \$3 billion, \$5 billion, etc.). Instead, the purpose is to offer collected data that shows that Enron holds an option (perhaps a very valuable option) that has not been fully recognized in the stock. Accelerating telecom business plans indicate to us that management has made the decision to deploy more shareholder capital toward exercising its telecom option. *We expect the perception of Communications to evolve from “potential opportunity” (option value) to “core business” (DCF value) as Enron reaches each telecom milestone and surpasses each strategic hurdle.*

N.B.: CREDIT SUISSE FIRST BOSTON CORPORATION may have, within the last three years, served as a manager or co-manager of a public offering of securities for or makes a primary market in issues of any or all of the companies mentioned. Closing prices are as of July 1, 1999:

Enron (ENE, \$81.13, Buy)
Frontier (FRO, \$58.94, NR)
Level 3 (LVL3, \$65.56, NR)
Qwest (QWST, \$33.38, NR)
Williams (WMB, \$44.19, Buy)

Americas

Eleven Madison Avenue
New York, NY 10010, U.S.A.
1 212 325 2000

Atlanta	1 404 656 9500	Pasadena	1 626 395 5100
Boston	1 617 556 5500	Philadelphia	1 215 851 1000
Buenos Aires	1 541 394 3100	Portland, ME	1 207 780 6210
Chicago	1 312 750 3000	San Francisco	1 415 836 7600
Houston	1 713 220 6700	São Paulo	55 11 822 4862
Mexico City	1 525 202 6000	Toronto	1 416 352 4500

Europe

One Cabot Square
London E14 4QJ, England
44 171 888 8888

Amsterdam	31 20 575 4444	Paris	33 1 40 76 8888
Budapest	36 1 202 2188	Prague	42 2 248 10937
Frankfurt	49 69 75380	Vienna	43 1 512 3023
Geneva	41 22 707 0130	Warsaw	48 22 695 0050
Madrid	34 1 532 0303	Zug	41 41 726 1020
Milan	39 2 7702 1	Zurich	41 1 335 7711
Moscow	7 501 967 8200		

Asia Pacific

Three Exchange Square
8 Connaught Place
Central, Hong Kong
852 2101 6000

Auckland	64 9 302 5500	Shanghai	86 21 6219 0808
Beijing	86 10 6410 6611	Singapore	65 538 6322
Melbourne	61 3 9 280 1666	Sydney	61 2 9394 4400
Mumbai	91 22 284 6888	Taipei	8862 2718 5919
Osaka	81 6 243 0789	Tokyo	81 3 5404 9000
Seoul	82 2 3707 3700	Wellington	64 4 474 4400

Copyright ©1999 Credit Suisse First Boston Corporation 1999. All rights reserved

This report is provided to you solely for informational purposes and does not constitute an offer or solicitation of an offer, or any advice or recommendation, to purchase any securities or other financial instruments and may not be construed as such. This report may not be reproduced or redistributed to any other person, in whole or in part, without the prior written consent of the distributor listed below. The information set forth herein has been obtained or derived from sources believed by Credit Suisse First Boston Corporation and its affiliates ("CSFB" or "the firm") to be reliable, but CSFB does not make any representation or warranty, express or implied, as to its accuracy or completeness.

Past performance should not be taken as an indication or guarantee of future performance, and no representation or warranty, express or implied is made regarding future performance. Opinions and estimates may be changed without notice. The firm, or one or more of its partners or employees, from time to time may have long or short positions in, or buy and sell and make markets in, any of the securities discussed herein. The firm may underwrite or provide investment banking, credit and other financial services to any company or issuer of securities or financial instruments referred to herein. If CSFB makes a market in any security, there can be no assurance that CSFB will continue to do so. Additional information is available upon request.

CSFB may have issued other reports that are inconsistent with, and reach different conclusions from, the information presented herein. Those reports reflect the different assumptions, views and analytical methods of the analysts who prepared them.

This report is being distributed in the United States by CSFB, and in Canada by Credit Suisse First Boston Securities Canada, Inc. ("CSFBSC") with CSFB as mailing/delivery agent. In jurisdictions where CSFB is not registered or licensed to trade in securities, any trade will be made only in accordance with applicable securities legislation which will vary from jurisdiction to jurisdiction and may require that the trade be made in accordance with applicable exemptions from registration or licensing requirements. CSFBSC has approved the distribution of this memorandum. Any U.S. customer wishing to effect a transaction in any security should do so only by contacting a representative at Credit Suisse First Boston Corporation, Eleven Madison Avenue, New York, NY 10010 (212) 325-2000. gt2294.doc