

Prospectus Supplement
(to Prospectus dated February 10, 2009)

20,000,000 Shares

CALPINE CORPORATION

Common Stock

The selling stockholders are offering all of the shares of our common stock offered by this prospectus supplement. We will not receive any proceeds from the sale by the selling stockholders of shares of common stock in this offering. Our common stock is listed for trading on the New York Stock Exchange under the symbol "CPN." On September 21, 2009, the closing price of our common stock on the New York Stock Exchange was \$12.21 per share.

Investing in our common stock involves significant risks. Before buying shares of our common stock you should read the discussion of material risks of investing in our common stock under the heading entitled "Risk Factors" beginning on page S-1 of this prospectus supplement and on page 2 of the accompanying prospectus.

The underwriter will purchase the common stock from the selling stockholders at a price of \$11.40 per share, resulting in \$228.0 million aggregate proceeds to the selling stockholders.

The underwriter may offer the shares from time to time to purchasers directly or through agents, or through brokers in brokerage transactions on the New York Stock Exchange, or to dealers in negotiated transactions or in a combination of such methods of sale, at a fixed price or prices, which may be changed, or at market prices prevailing at the time of sale, at prices related to such prevailing market prices or at negotiated prices. See "Underwriting."

The selling stockholders have granted the underwriter a 30-day option to purchase up to 3,000,000 additional shares of common stock.

Delivery of the shares will be made on or about September 28, 2009.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus supplement or the accompanying prospectus. Any representation to the contrary is a criminal offense.

Morgan Stanley

The date of this prospectus supplement is September 22, 2009.

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You should rely only on the information provided in this prospectus supplement, the related prospectus and the information incorporated by reference herein or therein. We and the selling stockholders have not authorized anyone to provide you with additional or different information. This document may only be used where it is legal to offer and sell these securities. You should assume that the information contained in this prospectus supplement, the related prospectus and the documents incorporated by reference is accurate only as of the respective dates of such documents.

ABOUT THIS PROSPECTUS SUPPLEMENT

This document consists of two parts. The first part is this prospectus supplement, which describes the specific terms of this offering. The second part is the accompanying prospectus, which describes more general information, some of which may not apply to this offering. You should read both this prospectus supplement and the accompanying prospectus, together with the additional information described below under the heading “Where You Can Find More Information.”

If the description of the offering varies between this prospectus supplement and the accompanying prospectus, you should rely on the information in this prospectus supplement.

Any statement made in this prospectus supplement or in a document incorporated or deemed to be incorporated by reference in this prospectus supplement will be deemed to be modified or superseded for purposes of this prospectus supplement to the extent that a statement contained in this prospectus supplement or in any other subsequently filed document that is also incorporated or deemed to be incorporated by reference in this prospectus supplement modifies or supersedes that statement. Any statement so modified or superseded will not be deemed, except as so modified or superseded, to constitute a part of this prospectus supplement. See “Where You Can Find More Information.”

RISK FACTORS

We urge you to carefully consider the risks described beginning on page 2 of the accompanying prospectus, as well as the other information we have provided in this prospectus supplement, the accompanying prospectus and the documents we incorporate by reference, before reaching a decision regarding an investment in our common stock.

USE OF PROCEEDS

We will not receive any of the proceeds from the sale of the shares by the selling stockholders.

PRICE RANGE OF COMMON STOCK AND DIVIDEND POLICY

Public trading of our previously outstanding common stock originally commenced on September 20, 1996, on the New York Stock Exchange, or NYSE, under the symbol “CPN.” Prior to that, there was no public market for our common stock. On December 2, 2005, the NYSE notified us that it was suspending trading in our common stock prior to the opening of the market on December 6, 2005, and the SEC approved the application of the NYSE to delist our common stock effective March 15, 2006. From December 6, 2005, to January 31, 2008, our common stock traded in the OTC market as reported on the Pink Sheets under the symbol “CPNLQ.PK.” On January 31, 2008, pursuant to our plan of reorganization related to our emergence from Chapter 11 bankruptcy protection, our previously outstanding common stock was canceled and we authorized and began issuance of 485 million shares of reorganized Calpine Corporation common stock to settle unsecured claims pursuant to the plan of reorganization. On January 16, 2008, the shares of reorganized Calpine Corporation common stock were admitted to listing on the NYSE and began “when issued” trading under the symbol “CPN-WI.” The reorganized Calpine Corporation common stock began “regular way” trading on the NYSE under the symbol “CPN” on February 7, 2008.

The following table sets forth the high and low bid prices for our old common stock for each quarter of the calendar year 2007, as reported on the Pink Sheets and high and low sales prices for reorganized Calpine Corporation common stock for each quarter of the calendar year 2008 and the calendar year 2009 to date, as reported on the NYSE. OTC market quotations reflect inter-dealer prices, without retail mark-up, mark-down or commissions, and may not necessarily reflect actual transactions.

	High	Low	Market/Report
2007			
First Quarter	\$ 2.19	\$ 1.09	Pink Sheets
Second Quarter	4.15	1.99	Pink Sheets
Third Quarter	3.75	1.05	Pink Sheets
Fourth Quarter	1.80	0.18	Pink Sheets
2008			
First Quarter	\$ 19.51	\$ 15.00	NYSE
Second Quarter	23.36	17.77	NYSE
Third Quarter	22.83	12.08	NYSE
Fourth Quarter	13.48	6.35	NYSE
2009			
First Quarter	\$ 9.34	\$ 4.76	NYSE
Second Quarter	14.95	6.64	NYSE
Third Quarter (through September 21, 2009)	13.75	10.10	NYSE

For a description of our dividend policy, please refer to our Annual Report on Form 10-K for the fiscal year ended December 31, 2008, filed with the SEC on February 27, 2009, as amended on March 31, 2009. For more information, see “Where You Can Find More Information.”

SELLING STOCKHOLDERS

Information below with respect to beneficial ownership has been furnished by the selling stockholders and we have not sought to verify such information. Except as stated in the footnotes below or otherwise disclosed in this prospectus supplement and the accompanying prospectus, neither the selling stockholders nor any of its affiliates, officers, directors or principal equity holders has held any position or office or has had any material relationship with us or any of our predecessors or affiliates within the past three years.

The following table sets forth the name of the selling stockholders, the number of shares of common stock beneficially owned by the selling stockholders as of September 21, 2009, the number of shares of common stock that each selling stockholder may offer and sell pursuant to this prospectus supplement, and the number of shares of common stock and the percentage of the class of common stock to be beneficially owned by each selling stockholder after completion of this offering.

Beneficial ownership is determined in accordance with the rules of the SEC and includes voting and investment power with respect to shares. Except as indicated by footnote and subject to community property laws where applicable, to our knowledge, each stockholder named in the table below has sole voting and investment power with respect to all shares of common stock shown as beneficially owned by it.

Name	Shares Beneficially Owned Before the Offering		Number of Shares Being Sold in This Offering		Shares Beneficially Owned After the Offering			
			Assuming No Exercise of Option to Purchase Additional Shares	Assuming Exercise of Option to Purchase Additional Shares	Assuming No Exercise of Option to Purchase Additional Shares		Assuming Exercise of Option to Purchase Additional Shares	
	Number	Percent(1)	Shares	Shares	Number	Percent(1)	Number	Percent(1)
Harbinger Capital Partners Master Fund I, Ltd.(2)	55,116,470	12.5%	13,333,334	15,333,334	41,783,136	9.4%	39,783,136	9.0%
Harbinger Capital Partners Special Situations Fund, L.P.(3)	31,863,577	7.2 %	6,666,666	7,666,666	25,196,911	5.7%	24,196,911	5.5%

(1) Calculated based on 442,384,931 shares of our common stock outstanding as of September 21, 2009.

(2)The address for Harbinger Capital Partners Master Fund I, Ltd. (the “Master Fund”), is c/o International Fund Services (Ireland) Limited, Third Floor, Bishop’s Square, Redmond’s Hill, Dublin 2, Ireland. The indicated amount includes (i) 48,926,825 shares of common stock registered in the name of the Master Fund and (ii) 6,189,645 shares of common stock registered in the name of Kelson Investments, Sàrl, an indirect wholly owned subsidiary of the Master Fund and Harbinger Capital Partners Special Situations Fund, L.P. (the “Special Situations Fund”). Harbinger Capital Partners LLC (“Harbinger LLC”) is the investment manager of the Master Fund. Harbinger Holdings, LLC (“Harbinger Holdings”) is the managing member of Harbinger LLC. Philip Falcone, the managing member of Harbinger Holdings, has power to vote or direct the vote of the shares. Mr. Falcone is also the portfolio manager of the Master Fund. Each of the Special Situations Fund, Harbinger LLC, Harbinger Holdings and Philip Falcone disclaims beneficial ownership of these shares, except to the extent of its or his pecuniary interest therein.

(3)The address for the Special Situations Fund is 450 Park Avenue, 30th Floor, New York, New York 10022. The indicated amount includes (i) 28,770,974 shares of common stock registered in the name of the Special Situations Fund and (ii) 3,092,603 shares of common stock registered in the name of Kelson Investments, Sàrl, an indirect wholly owned subsidiary of the Special Situations Fund and the Master Fund. Harbinger Capital Partners Special Situations GP, L.L.C. (“HCPSS”) is the general partner of the Special Situations Fund. Harbinger Holdings is the managing member of HCPSS. Philip Falcone, the managing member of Harbinger Holdings, has power to vote or direct the vote of the shares. Mr. Falcone is also the portfolio manager of the Special Situations Fund. Each of the Master Fund, HCPSS, Harbinger Holdings and Philip Falcone disclaims beneficial ownership of these shares, except to the extent of its or his pecuniary interest therein.

UNDERWRITING

Subject to the terms and conditions of an underwriting agreement, dated as of the date of this prospectus supplement, Morgan Stanley & Co. Incorporated, as sole underwriter, has agreed with us and with the selling stockholders to purchase from the selling stockholders the number of shares of common stock set forth opposite its name below:

Underwriter	Number of Shares
Morgan Stanley & Co. Incorporated	20,000,000
Total	20,000,000

Subject to certain conditions, the underwriter has agreed to purchase and accept delivery of all of such shares.

The underwriter will purchase the shares of our common stock from the selling stockholders at a price of \$11.40 per share, resulting in aggregate proceeds to the selling stockholders of \$228.0 million, before expenses. In addition, the selling stockholders has granted the underwriter a 30-day option to purchase up to 3,000,000 additional shares of common stock at the same price, for aggregate additional proceeds to the selling stockholders of up to \$34.2 million, before expenses. This option may be exercised, in whole or in part, at any time within the 30-day period after the date of this prospectus supplement.

The underwriter may offer the shares from time to time to purchasers directly or through agents, or through brokers in brokerage transactions on the New York Stock Exchange, or to dealers in negotiated transactions or in a combination of such methods of sale, at a fixed price or prices, which may be changed, or at market prices prevailing at the time of sale, at prices related to such prevailing market prices or at negotiated prices, subject to receipt and acceptance by it and subject to its right to reject any order in whole or in part.

In connection with the sale of the shares of common stock offered hereby, the underwriter may be deemed to have received compensation in the form of underwriting discounts. The underwriter may effect such transactions by selling shares of the common stock offered hereby to or through dealers, and such dealers may receive compensation in the form of discounts, concessions or commissions from the underwriter and/or purchasers of shares of common stock for whom they may act as agents or to whom they may sell as principal.

We presently expect to incur expenses of approximately \$180,000 in connection with this offering.

The selling stockholders have agreed with the underwriter that, subject to certain limited exceptions, without the prior written consent of the underwriter, the selling stockholders will not directly or indirectly, during the period commencing on the date hereof and ending 60 days after the date hereof, sell, offer to sell, grant any option for the sale of, enter into any agreement to sell, or otherwise dispose of any shares of our common stock.

The underwriter, in its sole discretion, may release the common stock and other securities subject to the lock-up agreement described above in whole or in part at any time with or without notice. When determining whether or not to release the common stock and other securities from lock-up agreements, the underwriter will consider, among other factors, the stockholder's reasons for requesting the release, the number of shares or other securities for which the release is being requested and market conditions at the time.

In order to facilitate the offering of the common stock, the underwriter may engage in transactions that stabilize, maintain or otherwise affect the price of the common stock. Specifically, the underwriter may sell more stock than it is obligated to purchase under the underwriting agreement, creating a naked short position. The underwriter must close out any naked short position by purchasing stock in the open market. A naked short position is more likely to be created if the underwriter is concerned that there may be downward pressure on the price of the common stock in the open market after pricing that could adversely affect investors who purchase in this offering. In addition, to stabilize the price of the common stock, the underwriter may bid for, and purchase, common stock in the open market. Any of these activities may stabilize or maintain the market price of the common stock above independent

market levels. These transactions may be effected on the NYSE or otherwise. The underwriter is not required to engage in these activities, and, if commenced, they may be discontinued at any time.

Neither we nor the selling stockholders and the underwriter make any representation or prediction as to the direction or magnitude of any effect that the transactions described above may have on the price of the common stock. In addition, neither we nor the selling stockholders and the underwriter make any representation that the underwriter will engage in these stabilizing transactions or that any transaction, once commenced, will not be discontinued without notice.

This prospectus supplement and the accompanying prospectus do not constitute an offer to sell or a solicitation of an offer to buy any security other than our shares offered hereby, and do not constitute an offer to sell or a solicitation of an offer to buy any shares to any person in any jurisdiction in which it is unlawful to make any such offer or solicitation to such person. Neither the delivery of this prospectus supplement and the accompanying prospectus nor any sale made hereby shall, under any circumstances, imply that there has been no change in our affairs or those of our subsidiaries or that the information contained herein is correct as of any date subsequent to the earlier of the date hereof and any earlier specified date with respect to such information. Any delivery of this prospectus supplement at any subsequent date does not imply that the information herein is correct at such subsequent date.

Shares of our common stock are listed on the NYSE under the symbol "CPN."

A prospectus in electronic format may be made available on websites or through other online services maintained by the underwriter of this offering, or by its affiliates. Other than the prospectus in electronic format, the information on the underwriter's website and any information contained in any other website maintained by the underwriter or its affiliates is not part of this prospectus supplement and accompanying prospectus or the registration statement of which this prospectus forms a part, has not been approved and/or endorsed by us or the underwriter in its capacity as underwriter and should not be relied upon by investors.

We and the selling stockholders have agreed to indemnify the underwriter against certain liabilities, including liabilities under the Securities Act of 1933, as amended, or if indemnification is not allowed, to contribute to payments the underwriter may be required to make because of those liabilities.

From time to time, the underwriter and certain of its affiliates have engaged, and may in the future engage, in transactions with, and perform investment banking and/or commercial banking services for, us and our affiliates in the ordinary course of business.

LEGAL MATTERS

We have been advised by White & Case LLP, New York, New York in connection with this offering. Cahill Gordon & Reindel LLP, New York, New York, has advised the underwriter in connection with this offering.

LIMITATION ON LIABILITY AND DISCLOSURE OF COMMISSION POSITION ON INDEMNIFICATION FOR SECURITIES ACT LIABILITIES

Our amended and restated certificate of incorporation and our bylaws provide that we will indemnify our directors and officers, and may indemnify our employees and other agents, to the fullest extent permitted by the Delaware General Corporation Law. Insofar as indemnification for liabilities arising under the Securities Act of 1933, as amended, may be permitted to directors, officers and controlling persons pursuant to the foregoing provisions, or otherwise, we have been advised that, in the opinion of the SEC, such indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable.

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and periodic reports, proxy statements and other information with the SEC. You may read and copy any document we file with the SEC at the SEC's public reference room at 100 F Street NE, Room 1580, Washington, D.C. 20549. You may obtain information on the operation of the SEC's public reference facilities by calling the SEC at 1-800-SEC-0330. You can request copies of these documents, upon payment of a duplicating fee, by writing to the SEC at its principal office at 100 F Street NE, Room 1580, Washington, D.C. 20549-1004. The SEC maintains an Internet website at <http://www.sec.gov> that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC. Our SEC filings are accessible through the Internet at that website. Our reports on Forms 10-K, 10-Q and 8-K, and amendments to those reports, are also available for download, free of charge, as soon as reasonably practicable after these reports are filed with the SEC, at our website at www.calpine.com. The content of our website is not a part of this prospectus supplement.

The SEC allows us to "incorporate by reference" the information we file with them, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is considered to be part of this prospectus supplement, and information that we file later with the SEC will automatically update and supersede this information. We incorporate by reference the documents listed below and any future filings made with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act between the date of this prospectus supplement and the termination of the offering:

Our Annual Report on Form 10-K for the year ended December 31, 2008, filed with the SEC on February 27, 2009;

Amendment No. 1 to our Annual Report on Form 10-K/A for the year ended December 31, 2008, filed with the SEC on March 31, 2009;

our Annual Proxy on Schedule 14A, filed with the SEC on March 20, 2009;

our Quarterly Reports on Form 10-Q for the quarters ended March 31, 2009 and June 30, 2009, filed with the SEC on May 8, 2009 and July 31, 2009, respectively;

our Current Reports on Form 8-K filed on August 26, 2009 and September 23, 2009; and

the description of our common stock set forth in our registration statement on Form 8-A filed with the SEC on January 15, 2008.

The most recent information that we file with the SEC automatically updates and supersedes older information. The information contained in any such filing will be deemed to be a part of this prospectus supplement, commencing on the date on which the filing is made.

Information furnished under Items 2.02 or 7.01 (or corresponding information furnished under Item 9.01 or included as an exhibit) in any past or future current report on Form 8-K that we file with the SEC, unless otherwise specified in such report, is not incorporated by reference in this prospectus.

We will provide to each person, including any beneficial owner, to whom this prospectus supplement is delivered a copy of any or all of the information that we have incorporated by reference into this prospectus supplement but not delivered with this prospectus supplement, at no cost to the requestor. To receive a free copy of any of the documents incorporated by reference in this prospectus supplement, other than exhibits, unless they are specifically incorporated by reference in those documents, call or write:

Calpine Corporation
717 Texas Avenue, Suite 1000
Houston, Texas 77002
Attention: Corporate Communications
Tel: (713) 830-8775

PROSPECTUS

CALPINE CORPORATION

165,715,835 Shares

COMMON STOCK

This prospectus covers 165,715,835 shares of our common stock that may be offered for resale by the selling stockholders named in this prospectus and the persons to whom the selling stockholders may transfer their shares. No securities are being offered or sold by us pursuant to this prospectus. We will not receive any of the proceeds from the sale of these shares by the selling stockholders.

Our common stock is listed on the New York Stock Exchange under the symbol "CPN." On February 9, 2009, the last reported sale price of our common stock on the New York Stock Exchange was \$8.17 per share.

The selling stockholders and their successors, which term includes the selling stockholders' pledgees, donees, transferees, assignees or other successors, may from time to time sell, transfer or otherwise dispose of any or all of their shares of common stock directly to purchasers or through broker-dealers or agents. The common stock may be sold in one or more transactions at fixed prices, prevailing market prices at the time of sale, prices related to the prevailing market prices, varying prices determined at the time of sale or negotiated prices. See "Plan of Distribution" beginning on page 14 for more information about how the selling stockholders may sell or dispose of their shares of common stock. We do not know when or in what amount the selling stockholders or their successors may offer the shares for sale. The selling stockholders or their successors may sell any, all or none of the shares offered by the prospectus.

Investing in our common stock involves risks. See "Risk Factors" beginning on page 2 of this prospectus and those set forth under the heading "Risk Factors" in our most recent Annual Report on Form 10-K, as well as any of our subsequently filed quarterly or current reports.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved these securities, or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The date of this prospectus is February 10, 2009

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ABOUT THIS PROSPECTUS

This prospectus is a part of a registration statement that we filed with the Securities and Exchange Commission utilizing a “shelf” registration process. Under this shelf registration process, the selling stockholders or their successors may from time to time sell the shares of common stock described in this prospectus in one or more offerings.

We have not authorized anyone to give any information or to make any representation other than those contained or incorporated by reference in this prospectus. You must not rely upon any information or representation not contained or incorporated by reference in this prospectus. The selling stockholders are offering to sell, and seeking offers to buy, shares of our common stock only in jurisdictions where it is lawful to do so. This prospectus does not constitute an offer to sell or the solicitation of an offer to buy any shares other than the registered shares to which they relate, nor does this prospectus constitute an offer to sell or the solicitation of an offer to buy shares in any jurisdiction to any person to whom it is unlawful to make such offer or solicitation in such jurisdiction. You should not assume that the information contained in this prospectus is accurate on any date subsequent to the date set forth on the front of the document or that any information we have incorporated by reference is correct on any date subsequent to the date of the document incorporated by reference, even though this prospectus is delivered or shares are sold on a later date.

In this prospectus, the words “we,” “us,” “our,” and “Calpine” refer to Calpine Corporation and its subsidiaries.

CALPINE CORPORATION

This summary highlights information about Calpine Corporation. Because it is a summary, it does not contain all the information you should consider before investing in our common stock. You should read carefully this entire prospectus and the documents that we incorporate herein by reference, including the section entitled "Risk Factors" and our financial statements and related notes. You may obtain a copy of the documents that we incorporate by reference without charge by following the instructions in the section below entitled "Where You Can Find More Information."

Our Business

We are an independent wholesale power generating company that operates and develops clean and reliable power generation facilities primarily in the U.S. Our fleet of power generation facilities, with nearly 24,000 megawatts of capacity as of September 30, 2008, makes us one of the largest independent power producers in the U.S. Our portfolio is comprised of two power generation technologies: natural gas-fired combustion (primarily combined-cycle) and renewable geothermal. We operate 61 natural gas-fired power plants capable of producing approximately 23,000 megawatts and 17 geothermal facilities in the Geysers region of northern California capable of producing 725 megawatts. Our renewable geothermal facilities are the largest producing geothermal resource in the U.S.

We are focused on maximizing value by leveraging our portfolio of power plants, our geographic diversity and our operational and commercial expertise to provide the optimal combination of products and services to our customers. To accomplish this goal, we seek to maximize asset performance, optimize the management of our commodity exposure and take advantage of growth and development opportunities that fit our core business and are accretive to earnings.

Corporate Information

Our principal executive offices are located at 717 Texas Avenue, Suite 1000, Houston, Texas 77002 and 50 West San Fernando Street, San Jose, California 95113, and our telephone number is (713) 830-8775. Our website is www.calpine.com. The content of our website is not a part of this prospectus.

RISK FACTORS

Investing in our common stock involves risk. Before you decide whether to purchase any of our common stock, in addition to the other information in this prospectus and in the documents incorporated herein by reference, you should carefully consider the risk factors below and those set forth under the heading “Risk Factors” in our most recent Annual Report on Form 10-K, as well as any of our subsequently filed quarterly or current reports. For more information, see the section entitled “Where You Can Find More Information.”

Risks Related to our Common Stock

The market pricing of our common stock may be volatile.

Our common stock began trading on the NYSE on a “when issued” basis on January 16, 2008, and began “regular way” trading on the NYSE on February 7, 2008. The liquidity of any market for our common stock will depend, among other things, upon the number of holders of our common stock and on our and our subsidiaries’ financial performance. The market price for our common stock has been volatile in the past, and the price of our common stock could fluctuate substantially in the future. Factors that could affect the price of our common stock in the future include general conditions in our industry, in the power markets in which we participate and in the world, including environmental and economic developments, over which we have no control, as well as developments specific to us, including fluctuations in our results of operations, our ability to comply with the covenants under our credit agreements and other debt instruments, our ability to execute our business plan, and other matters discussed in the risk factors set forth under Item 1A. “Risk Factors” in our most recent Annual Report on Form 10-K and our most recent Quarterly Report on Form 10-Q.

In addition, the sale of a substantial number of shares of our common stock in the public market, or the perception that such sales could occur, could significantly and negatively affect the market price for our common stock. Pursuant to our plan of reorganization, all shares of our common stock outstanding prior to the effective date of our plan of reorganization were canceled, and we authorized the issuance of 485 million shares of reorganized Calpine Corporation common stock, of which approximately 427 million shares have been distributed to holders of allowed unsecured claims, approximately 10 million shares are being held in escrow pending resolution of certain intercreditor matters and approximately 48 million shares remain in reserve for distribution to holders of disputed claims whose claims ultimately become allowed. The distribution of these additional shares could have a dilutive effect on our current holders and may adversely affect the market price of our common stock. Accordingly, trading in our securities is highly speculative and poses substantial risks.

Transfers of our equity, or issuances of equity in connection with our reorganization, may impair our ability to utilize our federal income tax net operating loss carryforwards in the future.

Under federal income tax law, net operating loss (“NOL”) carryforwards can be utilized to reduce future taxable income subject to certain limitations if we were to undergo an ownership change as defined by the Internal Revenue Code. We experienced an ownership change on the effective date of our plan of reorganization as a result of the distribution of our new common stock pursuant to our plan of reorganization. We do not expect the annual limitation from this ownership change to result in the expiration of the NOL carryforwards if we are able to generate sufficient future taxable income within the carryforward periods. If a subsequent ownership change were to occur as a result of future transactions in our stock, accompanied by a significant reduction in our market value immediately prior to the ownership change, our ability to utilize the NOL carryforwards may be significantly limited.

In accordance with our plan of reorganization, our common stock is subject to certain transfer restrictions contained in our amended and restated certificate of incorporation. These restrictions are designed to minimize the likelihood of any potential adverse federal income tax consequences resulting from an ownership change; however, these restrictions may not prevent an ownership change from occurring. These restrictions, which are designed to minimize the likelihood of an ownership change occurring and thereby preserve our ability to utilize our NOLs, are not currently operative but could become operative in the future if certain events occur and the restrictions are imposed by our board of directors. However, there can be no assurance that our board of directors would choose to impose these restrictions or that such restrictions, if imposed, would prevent an ownership change from occurring.

Our principal stockholders own a significant amount of our common stock, giving them influence over corporate transactions and other matters.

Three stockholder groups each beneficially own more than 10% of our common stock and collectively beneficially own approximately 62% of our common stock. These stockholder groups may be able to exercise substantial influence over all matters requiring stockholder approval, including the election of directors and approval of significant corporate action, such as mergers and other business combination transactions should these stockholder groups retain a significant ownership interest in us. If two or more of these stockholder groups vote their shares in the same manner, their combined stock ownership may effectively give them the power to elect our entire board of directors and control our management, operations and affairs. Members of two of these stockholder groups are named as selling stockholders in this prospectus. These two stockholder groups together beneficially own approximately 47% of our common stock, and the third remaining stockholder group beneficially owns approximately 15% of our common stock. Members of these three stockholder groups could receive additional shares of our common stock as a result of future distributions to holders of allowed unsecured claims resulting from our final Chapter 11 claims resolution. Currently, two members of our board of directors, including the chairman of our board of directors, are affiliated, directly or indirectly, with SPO Partners II, L.P. and San Francisco Partners II, L.P., two of the selling stockholders.

Circumstances may occur in which the interests of these stockholder groups could be in conflict with the interests of our other stockholders. This concentration of ownership may also have the effect of delaying or preventing a change in control over us unless it is supported by these stockholder groups, or could result in our entering into a change of control or other transaction supported by these stockholder groups. Accordingly, your ability to influence us through voting your shares may be limited or the market price of our common stock may be adversely affected.

We do not intend to pay cash dividends on our common stock in the foreseeable future.

We do not anticipate paying cash dividends on our common stock in the foreseeable future. Any payment of cash dividends will depend upon our financial condition, results of operations, capital requirements and other factors and will be at the discretion of our board of directors. In addition, our exit credit facility and certain of our other debt instruments restrict our ability to pay dividends and other distributions with respect to our stock. We may incur additional indebtedness that may further restrict or prohibit the payment of dividends.

Provisions of our amended and restated certificate of incorporation, amended and restated bylaws and Delaware law could delay or prevent an acquisition of us, even if the acquisition would be beneficial to our stockholders, and could make it more difficult for our stockholders to change management.

Provisions of our amended and restated certificate of incorporation and amended and restated bylaws may discourage, delay or prevent a merger, acquisition or other change in control that stockholders may consider favorable, including a proposal that might result in the payment of a premium over prevailing market prices for our common stock. In addition, these provisions may frustrate or prevent any attempt by our stockholders to replace or remove our current management by making it more difficult to replace or remove our board of directors. These provisions include:

- a prohibition on stockholder action through written consent;
- limitation of our stockholders entitled to call special meetings of stockholders;
- an advance notice requirement for stockholder proposals and nominations; and
- the authority of our board of directors to issue preferred stock with such terms as our board of directors may determine.

In addition, Delaware law prohibits a publicly-held Delaware corporation from engaging in a business combination with an interested stockholder, generally a person who, together with its affiliates, owns or within the last three years has owned 15% of our voting stock, for a period of three years after the date of the transaction in which the person became an interested stockholder, unless the business combination is approved in a prescribed manner. Accordingly, Delaware law may discourage, delay or prevent a change in control of our Company.

Provisions in our amended and restated certificate of incorporation, amended and restated bylaws and other provisions of Delaware law could limit the price that investors are willing to pay in the future for shares of our common stock.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING INFORMATION

In addition to historical information, this prospectus contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended (the “Securities Act”) and Section 21E of the Exchange Act. We use words such as “believe,” “intend,” “expect,” “anticipate,” “plan,” “may,” “will” and similar expressions to identify forward-looking statements. Such statements include, among others, those concerning our expected financial performance and strategic and operational plans, as well as all assumptions, expectations, predictions, intentions or beliefs about future events. You are cautioned that any such forward-looking statements are not guarantees of future performance and that a number of risks and uncertainties could cause actual results to differ materially from those anticipated in the forward-looking statements. Such risks and uncertainties include, but are not limited to:

- our ability to implement our business plan;
- financial results that may be volatile and may not reflect historical trends;
- seasonal fluctuations of our results and exposure to variations in weather patterns;
- potential volatility in earnings associated with fluctuations in prices for commodities such as natural gas and power;
- our ability to manage liquidity needs and comply with covenants related to our exit credit facility and other existing financing obligations;
- general financial and economic conditions including the cost and availability of capital and credit;
- the impact of the current financial crisis and the economic downturn on liquidity in the energy markets on which we rely to hedge risk and on the availability of our suppliers and service providers to perform under their contracts with us;
- our ability to complete the implementation of our plan of reorganization;
- disruptions in or limitations on the transportation of natural gas and transmission of electricity;
- the expiration or termination of our power purchase agreements and the related results on revenues;
- risks associated with the operation of power plants, including unscheduled outages;
- factors that impact the output of our geothermal resources and generation facilities, including unusual or unexpected steam field well and pipeline maintenance and variables associated with the waste water injection projects that supply added water to the steam reservoir;
- natural disasters such as hurricanes, earthquakes and floods that may impact our plants or the markets our plants serve;
- risks associated with power project development and construction activities as well as upgrades and expansions of existing plants;
- our ability to attract, retain and motivate key employees, including filling certain significant positions within our management team;
- our ability to attract and retain customers and counterparties;
- our ability to manage our customer and counterparty exposure and credit risk;

competition and regulation in the markets in which we participate;

risks associated with marketing and selling power from plants in the evolving energy markets, including changing market rules;

present and possible future claims, litigation and enforcement actions;

effects of the application of laws or regulations, including changes in laws or regulations or the interpretation thereof; and

other risks identified in our most recent Annual Report on Form 10-K and Quarterly Reports on Form 10-Q, which are incorporated herein by reference, as well as any of our subsequently filed quarterly or current reports, all of which are incorporated by reference into this prospectus.

You should also carefully review other reports that we file with the SEC. We undertake no obligation to update any forward-looking statements, whether as a result of new information, future developments or otherwise.

USE OF PROCEEDS

The selling stockholders will receive all of the proceeds from the sale of the shares of our common stock offered by this prospectus, and we will not receive any of such proceeds.

DESCRIPTION OF CAPITAL STOCK

Our authorized capital stock consists of 1,400,000,000 shares of common stock, \$0.001 par value, and 100,000,000 shares of preferred stock, \$0.001 par value. As of December 31, 2008, there were 428,960,025 shares of our common stock outstanding that were held of record by approximately 124 stockholders. No shares of our preferred stock are outstanding.

The following is a summary of the material rights of our capital stock and related provisions of our amended and restated certificate of incorporation, amended and restated bylaws and the provisions of applicable law. The following description of our capital stock does not purport to be complete and is subject to, and qualified in its entirety by, our amended and restated certificate of incorporation and amended and restated bylaws, which we have included as exhibits to our most recent Annual Report on Form 10-K.

Common Stock

Dividends. The holders of common stock are entitled to receive dividends, paid from our assets legally available for that purpose if and when declared from time to time by our board of directors.

Liquidation. Upon our liquidation, dissolution and/or winding up, after all securities ranking senior to our common stock have been paid in full, the holders of our outstanding common stock will be entitled to receive, pro rata, our remaining assets available for distribution to our stockholders.

Voting Rights. Each outstanding share of common stock entitles the holder thereof to one vote on each matter on which stockholders generally are entitled to vote.

Potential Trading Restrictions. Our amended and restated certificate of incorporation provides that prior to the fifth anniversary of our emergence from Chapter 11 bankruptcy protection, which occurred January 31, 2008, in the event that both (i) the Market Capitalization (which means, as of any date, our market capitalization calculated using the rolling 30-day weighted average trading price of our common stock) has decreased (as adjusted for any extraordinary dividends, as determined in good faith by our board of directors) by at least 35% from the Emergence Date Market Capitalization (which means our market capitalization calculated using the weighted average trading price of our common stock over the 30-day period following the date on which we emerge from Chapter 11 bankruptcy protection (which we determined to be approximately \$8.6 billion, as reported on our Current Report on Form 8-K filed with the SEC on March 25, 2008)) and (ii) at least 25 percentage points of “owner shift” (for purposes of Section 382 of the Internal Revenue Code of 1986, as amended, and the Treasury Regulations promulgated thereunder (collectively, “Section 382”)) has occurred with respect to our equity since our most recent “owner shift” as reasonably determined by us (in consultation with outside counsel) in accordance with Section 382, then our board of directors shall meet on an expedited basis to determine whether to impose restrictions on the trading of our stock in accordance with our amended and restated certificate of incorporation and to determine the definitive and ancillary terms of such restrictions, so long as such terms are consistent with the provisions of our amended and restated certificate of incorporation. In accordance with our amended and restated certificate of incorporation, we will make a prompt announcement if our board of directors determines that trading restrictions are required and the terms of such trading restrictions, which we expect would include:

any acquisition of our stock by a person or entity who is not a 5% stockholder will be null and void ab initio as to the purchaser to the extent such acquisition causes such person or entity to become a 5% stockholder, unless the acquisition of such stock (i) was previously approved in writing by our board of directors or (ii) will not result in an increase in an “owner shift” for purposes of Section 382 in excess of any “owner shift” that would have occurred if the seller had sold the same amount of stock through general public market transactions (e.g., because the stock is purchased from another 5% stockholder whose stock acquisition had caused an “owner shift”) (a “Permitted Acquisition”); and any person or entity who is a 5% stockholder shall not be permitted to acquire any additional stock without the prior written consent of our board of directors, unless the acquisition is a Permitted Acquisition, and any such acquisition of stock that is not a Permitted Acquisition will be null and void ab initio as to the purchaser.

In accordance with our amended and restated certificate of incorporation, if trading restrictions are applied, we will make a prompt announcement if our board of directors determines that trading restrictions are no longer required or if the trigger provisions are no longer satisfied; provided that if trading restrictions shall be imposed following a decline in the value of our Market Capitalization, any increase in the value of our stock shall not result in the lapse of such trading restrictions unless such increase (calculated using the rolling 30-day weighted average trading price of our common stock) shall be at least 10% greater than the trigger price.

Shares of Common Stock Not Subject to Calls or Assessments. No personal liability will attach to holders of our common stock under the laws of the State of Delaware (our state of incorporation) or of the State of Texas (the state in which our principal place of business is located).

Other. Our common stock is not convertible into, or exchangeable for, any other class or series of our capital stock. Holders of our common stock have no preemptive or other rights to subscribe for or purchase additional securities. Our amended and restated certificate of incorporation does not contain any sinking fund provisions or redemption provisions with respect to our common stock. There is no classification of our board of directors.

Preferred Stock

Our board of directors is authorized to provide for the issuance of shares of preferred stock in one or more series, and to fix for each series the associated powers (including voting rights, if any), preferences and relative, participating, optional or other special rights, if any, and such qualifications, limitations or restrictions as provided in a resolution or resolutions adopted by our board of directors.

Holders of preferred stock are not entitled to vote on any matter except as required by law or as is expressly granted by our amended and restated certificate of incorporation.

The purpose of authorizing our board of directors to issue preferred stock and determine its rights and preferences is to eliminate delays associated with a stockholder vote on specific issuances. The issuance of preferred stock, while providing flexibility in connection with possible acquisitions, future financings and other corporate purposes, may have the effect of making it more difficult for a third party to acquire, or could discourage a third party from seeking to acquire, a majority of our outstanding voting stock.

Certain Anti-Takeover Provisions

Effect of Delaware Anti-Takeover Statute. We are subject to Section 203 of the Delaware General Corporation Law, an anti-takeover law. In general, Section 203 prohibits a publicly held Delaware corporation from engaging in a merger or other business combination with any interested stockholder for a period of three years following the date that the stockholder becomes an interested stockholder, unless:

prior to the time the stockholder becomes an interested stockholder, the board of directors of the corporation approved either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder;

upon consummation of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, subject to certain exclusions; or

on or subsequent to the time the stockholder becomes an interested stockholder, the business combination is approved by the board of directors of the corporation and authorized at an annual or special meeting of stockholders, and not by written consent, by the affirmative vote of at least 66 % of the outstanding voting stock that is not owned by the interested stockholder.

In general, Section 203 of the Delaware General Corporation Law defines an “interested stockholder” as: any entity or person beneficially owning 15% or more of the outstanding voting stock of the corporation; any entity or person that is an affiliate or associate of the corporation and was the owner of 15% or more of the outstanding

voting stock of the corporation at any time within the three-year period prior to the date on which it is sought to be determined whether such person is an interested stockholder; and the affiliates or associates of any such entities or persons.

The provisions of Section 203 of the Delaware General Corporation Law described above could have the effect of:

- delaying, deferring or preventing our change in control;
- delaying, deferring or preventing the removal of our existing management;
- detering potential acquirers from making an offer to our stockholders; and
- limiting any opportunity of our stockholders to realize premiums over prevailing market prices of our common stock in connection with offers by potential acquirers.

This could be the case even if a majority of our stockholders might benefit from a change of control or offer.

Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws. Our amended and restated certificate of incorporation and amended and restated bylaws include provisions that may have the effect of discouraging, delaying or preventing a change of control or an unsolicited acquisition proposal that a stockholder might consider favorable, including a proposal that might result in the payment of a premium over prevailing market prices for our common stock. In addition, these provisions may adversely affect the prevailing market prices of our common stock. These provisions are summarized in the following paragraphs.

No Stockholder Action by Written Consent. Our amended and restated certificate of incorporation and amended and restated bylaws provide that stockholder action can be taken only at an annual or special meeting of stockholders and precludes stockholders from initiating or effecting any action by written consent in lieu of a meeting.

Special Meetings of Stockholders. Our amended and restated bylaws provide that special meetings of our stockholders may be called only by the chairman of our board of directors, by order of a majority of our whole board of directors or by the holders of a majority of our outstanding common stock entitled to vote generally in the election of directors. Stock ownership for these purposes may be evidenced in any manner prescribed by Rule 14a-8(b)(2) of the Exchange Act.

Advance Notice Procedures. Our amended and restated bylaws provide an advance notice procedure for stockholder proposals to be brought before an annual meeting of stockholders, including proposed nominations of persons for election to our board of directors. Stockholders at an annual meeting will only be able to consider proposals or nominations specified in the notice of meeting or brought before the meeting by or at the direction of our board of directors or by a stockholder who was a stockholder of record on the record date for the meeting, who is entitled to vote at the meeting and who has given our corporate secretary timely written notice, in proper form, of the stockholder's intention to bring that business before the meeting. Although our amended and restated bylaws will not give our board of directors the power to approve or disapprove stockholder nominations of candidates or proposals regarding other business to be conducted at a special or annual meeting, our amended and restated bylaws may have the effect of precluding the conduct of certain business at a meeting if the proper procedures are not followed or may discourage or deter a potential acquiror from conducting a solicitation of proxies to elect its own slate of directors or otherwise attempting to obtain control of us.

Authorized but Unissued Shares. Our authorized but unissued shares of common stock and preferred stock will be available for future issuance without stockholder approval, subject to the rules and regulations of the New York Stock Exchange. These additional shares may be utilized for a variety of corporate purposes, including future public offerings to raise additional capital, corporate acquisitions and employee benefit plans. The existence of authorized but unissued shares of common stock and preferred

stock could render more difficult or discourage an attempt to obtain control of a majority of our common stock by means of a proxy contest, tender offer, merger or otherwise.

Potential Trading Restrictions. As described under “—Common Stock—Potential Trading Restrictions,” under certain circumstances our board of directors may impose trading restrictions on our common stock which may prevent a change in control.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is Computershare Inc.

Listing

Our common stock is listed on the New York Stock Exchange under the symbol “CPN.”

SELLING STOCKHOLDERS

In connection with our plan of reorganization, we entered into a registration rights agreement on January 31, 2008, with certain of our stockholders who, together with their affiliates, received shares of our common stock constituting 10% or more of the issued and outstanding shares of our common stock immediately following the consummation of our plan of reorganization. Pursuant to the registration rights agreement, we agreed, among other things, to file a shelf registration statement covering the resale on a delayed or continuous basis of the common stock received by such stockholders. This prospectus covers 165,715,835 shares of our common stock that may be offered for resale by the selling stockholders named in this prospectus and the persons to whom the selling stockholders may transfer their shares.

Information below with respect to beneficial ownership has been furnished by each selling stockholder and we have not sought to verify such information. Except as stated in the footnotes below, none of the selling stockholders nor any of their affiliates, officers, directors or principal equity holders has held any position or office or has had any material relationship with us or any of our predecessors or affiliates within the past three years.

The following table sets forth information with respect to the selling stockholders and the shares of our common stock beneficially owned by the selling stockholders as of February 10, 2009, that may from time to time be offered or sold pursuant to this prospectus.

Information concerning the selling stockholders may change from time to time and any changed information will be set forth in supplements to this prospectus if and when necessary. The selling stockholders may offer all, some or none of their shares of common stock. We cannot advise you as to whether the selling stockholders will in fact sell any or all of such shares of common stock. In addition, the selling stockholders listed in the table below may have sold, transferred or otherwise disposed of, or may sell, transfer or otherwise dispose of, at any time and from time to time, shares of our common stock in transactions exempt from the registration requirements of the Securities Act after the date on which they provided the information set forth on the table below.

Name of Selling Stockholder	Shares Beneficially Owned Before the Offering		Number of Shares Being Offered	Shares Beneficially Owned After the Offering(1)	
	Number	Percent(2)		Number	Percent(2)
Harbinger Capital Partners Master Fund I, Ltd. (3)	73,302,165	17.1%	67,745,982	5,556,183	1.3%
Harbinger Capital Partners Special Situations Fund L.P. (4)	34,793,332	8.1%	33,869,892	923,440	*
SPO Partners II, L.P.(5)	84,360,913	19.7%	60,895,208	23,465,705	5.5%
San Francisco Partners II, L.P.(6)	3,204,753	*	3,204,753	—	—

* Less than 1%.

- (1) Assumes that the applicable stockholder sells all of the shares of our common stock set forth in the column entitled "Number of Shares Being Offered" and does not acquire any additional shares.
- (2) Calculated based on 428,960,025 shares of our common stock outstanding as of December 31, 2008.
- (3) The address for Harbinger Capital Partners Master Fund I, Ltd. (the "Master Fund"), is c/o International Fund Services (Ireland) Limited, Third Floor, Bishop's Square, Redmond's Hill, Dublin 2, Ireland. The indicated amount includes (i) 67,112,520 shares of common stock registered in the name of the Master Fund and (ii) 6,189,645 shares of common stock registered in the name of Kelson Investments, Sàrl, an indirect wholly owned subsidiary of the Master Fund and Harbinger Capital Partners Special Situations Fund, L.P. (discussed in footnote (4) below). Harbinger Capital Partners Offshore Manager, L.L.C. ("Harbinger Management") is the investment manager of the Master Fund. HMC Investors, L.L.C. ("HMC Investors") is the managing member of Harbinger Management. Philip Falcone, Raymond J. Harbert and Michael D. Luce are members of HMC Investors and have shared power to vote or direct the vote of the shares. Mr. Falcone is also the portfolio manager of the Master Fund. Each of Harbinger Management, HMC Investors, Philip Falcone, Raymond J. Harbert and Michael D. Luce disclaims beneficial ownership of these shares, except to the extent of their pecuniary interest therein.

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- (4) The address for Harbinger Capital Partners Special Situations Fund, L.P. (the “Special Fund”) is 555 Madison Avenue, 16th Floor, New York, New York 10022. The indicated amount includes (i) 31,700,729 shares of common stock registered in the name of the Special Fund and (ii) 3,092,603 shares of common stock registered in the name of Kelson Investments, Sàrl, an indirect wholly owned subsidiary of the Special Fund and Harbinger Capital Partners Master Fund I, Ltd. (discussed in footnote (3) above). Harbinger Capital Partners Special Situations GP, LLC (“HCPSS”) is the general partner of the Special Fund. HMC-New York, Inc. (“HMCNY”) is the managing member of HCPSS. Harbert Management Corporation (“HMC”) wholly owns HMCNY. Philip Falcone, Raymond J. Harbert and Michael D. Luce are shareholders of HMC and have shared power to vote or direct the vote of the shares. Mr. Falcone is also the portfolio manager of the Special Fund. Each of HCPSS, HMCNY, HMC, Philip Falcone, Raymond J. Harbert and Michael D. Luce disclaims beneficial ownership of these shares, except to the extent of their pecuniary interest therein.
- (5) The address for SPO Partners II, L.P., or SPO, is 591 Redwood Highway, Suite 3215, Mill Valley, California 94941. SPO Advisory Partners, L.P. is the sole general partner of SPO. SPO Advisory Corp. is the sole general partner of SPO Advisory Partners, L.P. John H. Scully, William E. Oberndorf, William J. Patterson and Edward H. McDermott are the four controlling persons of SPO Advisory Corp. and share voting and investment control over the shares held by SPO. Mr. Patterson is the chairman of the board of directors of Calpine Corporation. J. Stuart Ryan serves in an advisory capacity to SPO Advisory Corp. with respect to investments by SPO and is also on the board of directors of Calpine Corporation. Each of these individuals disclaims beneficial ownership of these shares, except to the extent of their pecuniary relationship therein. In addition, SPO Partners II Co-Investment Partnership, L.P., or SPO Co-Invest, owns 5,150,500 shares of common stock. SPO Advisory Partners, L.P. is the sole general partner of SPO Co-Invest. SPO Advisory Corp. is the sole general partner of SPO Advisory Partners, L.P. Messrs. Scully, Oberndorf, Patterson and McDermott are the four controlling persons of SPO Advisory Corp. and share voting and investment control over the shares held by SPO Co-Invest. The Elizabeth R. & William J. Patterson Foundation, or the Foundation, owns 129,900 shares of common stock. Voting and investment control over the shares held by the Foundation are exercised through its controlling persons, directors and executive officers, Mr. and Mrs. Patterson. In addition, Mr. Patterson owns 1,600 shares of common stock in his individual retirement account (IRA), 5,029 shares of restricted common stock and 2,720 restricted stock units. Mr. Ryan also owns 5,029 shares of restricted stock.
- (6) The address for San Francisco Partners II, L.P., or SFP, is 591 Redwood Highway, Suite 3215, Mill Valley, California 94941. SF Advisory Partners, L.P. is the sole general partner of SFP. SPO Advisory Corp. is the sole general partner of SF Advisory Partners, L.P. John H. Scully, William E. Oberndorf, William J. Patterson and Edward H. McDermott are the four controlling persons of SPO Advisory Corp. Mr. Patterson is also the chairman of the board of directors of Calpine Corporation. J. Stuart Ryan serves in an advisory capacity to SPO Advisory Corp. with respect to investments by SFP and is also on the board of directors of Calpine Corporation. Each of these individuals disclaims beneficial ownership of these shares, except to the extent of their pecuniary relationship therein. In addition, SPO Partners II Co-Investment Partnership, L.P., or SPO Co-Invest, owns 5,150,500 shares of common stock. SPO Advisory Partners, L.P. is the sole general partner of SPO Co-Invest. SPO Advisory Corp. is the sole general partner of SPO Advisory Partners, L.P. Messrs. Scully, Oberndorf, Patterson and McDermott are the four controlling persons of SPO Advisory Corp. and share voting and investment control over the shares held by SPO Co-Invest. The Elizabeth R. & William J. Patterson Foundation, or the Foundation, owns 129,900 shares of common stock. Voting and investment control over the shares held by the Foundation are exercised through its controlling persons, directors and executive officers, Mr. and Mrs. Patterson. In addition, Mr. Patterson owns 1,600 shares of common stock in his individual retirement account (IRA), 5,029 shares of restricted common stock and 2,720 restricted stock units. Mr. Ryan also owns 5,029 shares of restricted stock.

PLAN OF DISTRIBUTION

The selling stockholders and their successors, which term includes their pledges, donees, transferees, assignees or their respective successors, may from time to time sell, transfer or otherwise dispose of any or all of their shares of common stock directly to purchasers or through broker-dealers or agents. The common stock may be sold in one or more transactions at fixed prices, prevailing market prices at the time of sale, prices related to the prevailing market prices, varying prices determined at the time of sale or negotiated prices. The selling stockholders may use any one or more of the following methods when disposing of the shares or interests therein:

on any national securities exchange or quotation service on which our common stock may be listed or quoted at the time of sale, including the New York Stock Exchange;

in the over-the-counter market;

in transactions otherwise than on such exchanges or services or in the over-the-counter market; or

through the writing of options.

These transactions may include block transactions or crosses. Crosses are transactions in which the same broker acts as agent on both sides of the trade.

The selling stockholders may also sell shares under Rule 144 under the Securities Act, if available, rather than under this prospectus.

Broker-dealers engaged by the selling stockholders may arrange for other broker-dealers to participate in sales. Broker-dealers may receive commissions or discounts from the selling stockholders (or, if any broker-dealer acts as agent for the purchaser of shares, from the purchaser) in amounts to be negotiated.

The selling stockholders may from time to time pledge or grant a security interest in some or all of the shares of common stock owned by them and, if they default in the performance of their secured obligations, the pledgees or secured parties may offer and sell shares of common stock from time to time under this prospectus, or under a supplement to this prospectus amending the list of selling stockholders to include the pledgee, transferee or other successors-in-interest as selling stockholders under this prospectus.

The selling stockholders also may transfer the shares of common stock in other circumstances, in which case the pledgees, donees, transferees, assignees or other successors will be the selling beneficial owners for purposes of this prospectus and may sell the shares of common stock from time to time under this prospectus after we have filed a supplement to this prospectus amending the list of selling stockholders to include such pledgee, donee, transferee, assignee or other successor as a selling stockholder under this prospectus.

Upon our being notified in writing by a selling stockholder that any material arrangement has been entered into with a broker-dealer for the sale of common stock through a block trade, special offering, exchange distribution or secondary distribution or a purchase by a broker or dealer, a supplement to this prospectus will be filed, if required, pursuant to Rule 424(b) under the Securities Act, disclosing the name of each such selling stockholder and of the participating broker-dealers, the number of shares involved, the price at which such shares of common stock were sold, the commissions paid or discounts or concessions allowed to such broker-dealers, where applicable, that such broker-dealers did not conduct any investigation to verify the information set out or incorporated by reference in this prospectus, and other facts material to the transaction.

In connection with the sale of the shares of common stock or interests in shares of common stock, the selling stockholders may enter into hedging transactions after the effective date of the registration statement of which this prospectus is a part with broker-dealers or other financial institutions, which may in turn engage in short sales of the common stock in the course of hedging the positions they assume. The selling stockholders may also sell shares of common stock short after the effective date of the registration statement of which this prospectus is a

part and deliver these securities to close out their short positions, or loan or pledge the common stock to broker-dealers that in turn may sell these securities. The selling stockholders may also enter into option or other transactions after the effective date of the registration statement of which this prospectus is a part with broker-dealers or other financial institutions or participated in the creation of one or more derivative securities which require the delivery to such broker-dealer or other financial institution of shares offered by this prospectus, which shares such broker-dealer or other financial institution may resell pursuant to this prospectus (as supplemented or amended to reflect such transaction).

Selling stockholders and any broker-dealers or agents that are involved in selling the shares may be deemed to be “underwriters” within the meaning of the Securities Act in connection with such sales. In such event, any commissions received by such broker-dealers or agents and any profit on the resale of the shares purchased by them may be deemed to be underwriting commissions or discounts under the Securities Act.

Two of the selling securityholders are affiliates of broker-dealers. Each of these selling securityholders has informed us that: (1) such selling securityholder purchased its notes in the ordinary course of business and (2) at the time that the notes were purchased, the selling securityholder had no agreements or understandings, directly or indirectly, with any person to distribute the notes.

In order to comply with the securities laws of some states, if applicable, the shares must be sold in those states only through registered or licensed brokers or dealers. In addition, some states may restrict the selling stockholders from selling shares unless the shares have been registered or qualified for sale in the applicable state or an exemption from the registration or qualification requirement is available and is complied with.

We have advised the selling stockholders that they are required to comply with Regulation M promulgated under the Exchange Act during such time as they may be engaged in a distribution of the shares. The foregoing may affect the marketability of the common stock.

We are required to pay all expenses arising from or incident to the registration of the shares of common stock held by the selling stockholders, exclusive of underwriting fees, discounts, selling commissions and applicable stock transfer taxes, and certain other expenses of the selling stockholders. We have agreed to indemnify the selling stockholders against certain losses, claims, damages and liabilities, including liabilities under the Securities Act or otherwise.

We have agreed with the selling stockholders to keep the registration statement of which this prospectus is a part effective until December 31, 2018. However, a selling stockholder’s right to sell shares of our common stock pursuant to the registration statement of which this prospectus is a part will terminate as to such selling stockholder at such time as such selling stockholder can sell all of its remaining securities under Rule 144 of the Securities Act within a three month period.

We cannot assure you that the selling stockholders will sell all or any of the common stock offered under the registration statement.

LEGAL MATTERS

The validity of the shares of common stock will be passed upon for us by Skadden, Arps, Slate, Meagher & Flom LLP.

EXPERTS

The financial statements and management's assessment of the effectiveness of internal control over financial reporting (which is included in Management's Report on Internal Control over Financial Reporting) incorporated in this Prospectus by reference to the Annual Report on Form 10-K for the year ended December 31, 2007 have been so incorporated in reliance on the report of PricewaterhouseCoopers LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

WHERE YOU CAN FIND MORE INFORMATION

We have filed with the SEC a registration statement on Form S-3 under the Securities Act that registers the common stock to be sold by the selling stockholders. This prospectus does not contain all of the information set forth in the registration statement and the exhibits filed as part of the registration statement. For further information with respect to us and our common stock, we refer you to the registration statement and the exhibits filed as part of the registration statement. Statements contained or incorporated by reference in this prospectus concerning the contents of any agreement or any other document are not necessarily complete. If an agreement or document that has been filed as an exhibit to the registration statement, we refer you to the copy of such agreement or document that has been filed. Each statement in this prospectus relating to an agreement or document filed as an exhibit is qualified in all respects by the filed exhibit.

In addition, we file annual, quarterly and periodic reports, proxy statements and other information with the SEC. You may read and copy any document we file with the SEC at the SEC's public reference room at 100 F Street NE, Room 1580, Washington, D.C. 20549. You may obtain information on the operation of the SEC's public reference facilities by calling the SEC at 1-800-SEC-0330. You can request copies of these documents, upon payment of a duplicating fee, by writing to the SEC at its principal office at 100 F Street NE, Room 1580, Washington, D.C. 20549-1004. The SEC maintains an Internet website at <http://www.sec.gov> that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC. Our SEC filings are accessible through the Internet at that website. Our reports on Forms 10-K, 10-Q and 8-K, and amendments to those reports, are also available for download, free of charge, as soon as reasonably practicable after these reports are filed with the SEC, at our website at www.calpine.com. The content of our website is not a part of this prospectus.

The SEC allows us to "incorporate by reference" the information we file with them, which means that we can disclose important information to you by referring you to those documents. The following documents are incorporated by reference in this prospectus:

Our Annual Report on Form 10-K for the year ended December 31, 2007;

Our Quarterly Reports on Form 10-Q for the quarters ended March 31, 2008, June 30, 2008 and September 30, 2008;

Our Current Reports on Form 8-K filed with the SEC on February 1, 2008 (excluding Item 7.01 and related exhibits), February 6, 2008, February 22, 2008, March 18, 2008, March 25, 2008, May 8, 2008, May 28, 2008, June 5, 2008, July 3, 2008, July 14, 2008, July 22, 2008, August 12, 2008, August 14, 2008, August 29, 2008, September 4, 2008, October 2, 2008 (excluding Item 7.01 and related exhibits), December 19, 2008, January 8, 2009, January 15, 2009 and January 27, 2009; and

The description of our common stock set forth in our registration statement on Form 8-A filed with the SEC on January 15, 2008.

We also incorporate by reference all documents we may subsequently file pursuant to Section 13(a), 13(c), 14 or 15(d) of the Exchange Act after the initial filing date of the registration statement and prior to the termination of the offering, including prior to the effectiveness of the registration statement. The most recent information that we file with the SEC automatically updates and supersedes older information. The information contained in any such filing will be deemed to be a part of this prospectus, commencing on the date on which the document is filed.

Information furnished under Items 2.02 or 7.01 (or corresponding information furnished under Item 9.01 or included as an exhibit) in any past or future current report on Form 8-K that we file with the SEC, unless otherwise specified in such report, is not incorporated by reference in this prospectus.

We will provide to each person, including any beneficial owner, to whom this prospectus is delivered a copy of any or all of the information that we have incorporated by reference into this prospectus but not delivered with this prospectus, at no cost to the requestor. To receive a free copy of any of the documents incorporated by reference in this prospectus, other than exhibits, unless they are specifically incorporated by reference in those documents, call or write:

Calpine Corporation
717 Texas Avenue, Suite 1000
Houston, Texas 77002
Attention: Corporate Communications
Tel: (713) 830-8775

CALPINE CORPORATION

20,000,000 Shares

Common Stock

PROSPECTUS

SUPPLEMENT

Morgan Stanley