Dynegy: Carbon Risk Accompanies LS Power Merger

In September 2006, Dynegy Inc. and LS Power Group announced an agreement to combine Dynegy's current assets and operations with LS Power Group's generation portfolio, and for Dynegy to acquire a 50% ownership interest in a development joint venture with LS Power. The proposed merger would create an entity with more than 20,000 MW of generating capacity comprised of 31 power plants in 15 states.[1] The merger would also provide Dynegy with joint ownership of nine greenfield projects currently under various stages of development by LS Power. These proposed power plants represent over 7,600 MW of additional generating capacity for the newly created entity.[2]

Although the proposed deal is presented as a growth opportunity for Dynegy, the carbon risk associated with the merger warrants significant concern for investors. Approximately 91% (6,915 MW) of the planned capacity will utilize high CO2 emitting pulverized coal technology.[3] The addition of this capacity, independent of LS Power's current generating assets, would increase Dynegy's annual CO2 emissions by an estimated 62.4 million tons.[4] If the proposed plants are not incorporated into the company's baseline, the combined entity could face annual CO2 allowance expenses of between $624 million and $1.56 billion, assuming CO2 costs of between $10 and $25/ton. Carbon costs could therefore account for between 27% and 68% of the $2.3 billion value of the merger.[5] The proposed merger will increase Dynegy's carbon profile and risk exposure. LS Power's plans to develop both wind and solar generating capacity will do little to mitigate the risks associated with the proposed coal plants.

Meanwhile, recent regulatory developments and the likelihood of federal legislation on greenhouse gas emissions continue to shift the competitive balance away from new coal capacity and towards cleaner forms of power generation. Failure to address the material implications of climate change on the proposed merger could damage Dynegy's stakeholder relations and investor confidence. Dynegy's decision to assume the role of the nation's largest developer of new coal generating capacity will involve significant financial challenges. Despite these challenges, Dynegy has disclosed little information on the company's plans to manage increased carbon risks and to protect long-term shareholder value.

Carbon Regulation and the Power Sector

Although the exact design of federal carbon regulation in the United States remains uncertain, consensus within the power sector and industry at-large suggests that a mandatory reduction in greenhouse gas emissions is impending. During the 109th Congress (2005-2006), 106 bills, resolutions, and amendments specifically addressing global climate change and greenhouse gas (GHG) emissions were introduced.[6] Under Democratic leadership, the 110th Congress has raised climate change to a top-tier issue. House leaders have pledged to enact aggressive legislation on climate change this year. As a result, long-time opponents of CO2 regulation realize that federal legislation is inevitable. This trend was highlighted earlier this month, when the CEOs of the four largest automobile manufacturers testified in support of a federal cap-and-trade bill. Additional support for climate legislation has come from industry leaders through the United States Climate Action Partnership (US CAP), a group that includes several electric power companies.

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Several economy-wide and sector-specific bills have been introduced in both the House and Senate. The proposed bills differ in both scope and timeline; however nearly all seek to regulate CO2 emissions in the power sector. Future legislation will likely utilize a cap-and-trade system in which direct costs are associated with greenhouse gas emissions.

Recently Senator Boxer, the Chairman of the Senate Committee on Environment and Public Works, and Senator Bingaman, the Chairman of the Energy and Natural Resources Committee, announced that proposed coal facilities would not be 'grandfathered' under future carbon regulations. Dynegy would be imprudent to assume that LS Power's proposed coal facilities would be exempt from regulation, and should therefore recognize and inform shareholders of the potential costs associated with carbon intensive coal generation.

Renewable Portfolio Standards and State Climate Regulations

In the absence of federal regulation on greenhouse gas emissions, numerous states have developed legislation to address growing concern over climate change. Currently, 23 states and the District of Columbia have established standards requiring electric utilities to generate a certain amount of electricity from renewable sources. These requirements, which generally take the form of renewable portfolio standards, will serve to further discourage the development of new coal capacity. State standards could directly threaten the profitability of the combined entity's planned coal capacity as five of the eight units are planned in states with current renewable energy standards including: Colorado, Texas, Iowa, Nevada, and New Jersey

Dynegy's decision to pursue ownership of LS Power's proposed West Deptford plant in New Jersey highlights the risks associated with existing state regulations. New Jersey is a participating member of the Regional Greenhouse Gas Initiative (RGGI), the nation's first mandatory cap-and-trade program for CO2. Under RGGI, an agreement signed by the governors of the participating states, New Jersey and eight other states have committed to capping emissions at current levels in 2009 and then reducing emissions 10% by 2019. New Jersey has also established a non-binding GHG reduction target to achieve 1990 levels by 2020 and 80% below 2006 levels by 2050.

RGGI is indicative of a developing trend in which states are working towards interstate compacts to set binding emissions limits. The governors of Arizona, California, New Mexico, Oregon, and Washington have signed an agreement establishing the Western Regional Climate Action Initiative. Under this initiative, the participating states will establish a regional emissions target by August 2007. This will be followed by the development of a market based system to aid in meeting the target by August 2008.

Prudent investors should recognize that significant risks exist in entering markets that have demonstrated a public policy shift away from carbon intensive power generation. Dynegy's shareholders should be particularly aware of how state and regional policies may curtail future demand for coal-fired electricity generation.

Carbon Regulation Presents Significant Risks to Merchant Power

As a provider of merchant power, Dynegy is forced to compete for wholesale customers, and is exposed to current trends in market demand. Dynegy's effort to increase its reliance on coal-fired generation while decreasing its natural gas capacity will present new challenges. In the short term, Dynegy will likely be able to secure baseload purchase agreements for the proposed power plants. As regulations continue to be implemented, the costs of coal generation will likely rise. This trend would most severely impact Dynegy and other merchant power providers as utilities will seek alternative forms of generation and discontinue the practice of entering into long-term contracts for coal-fired electricity generation.

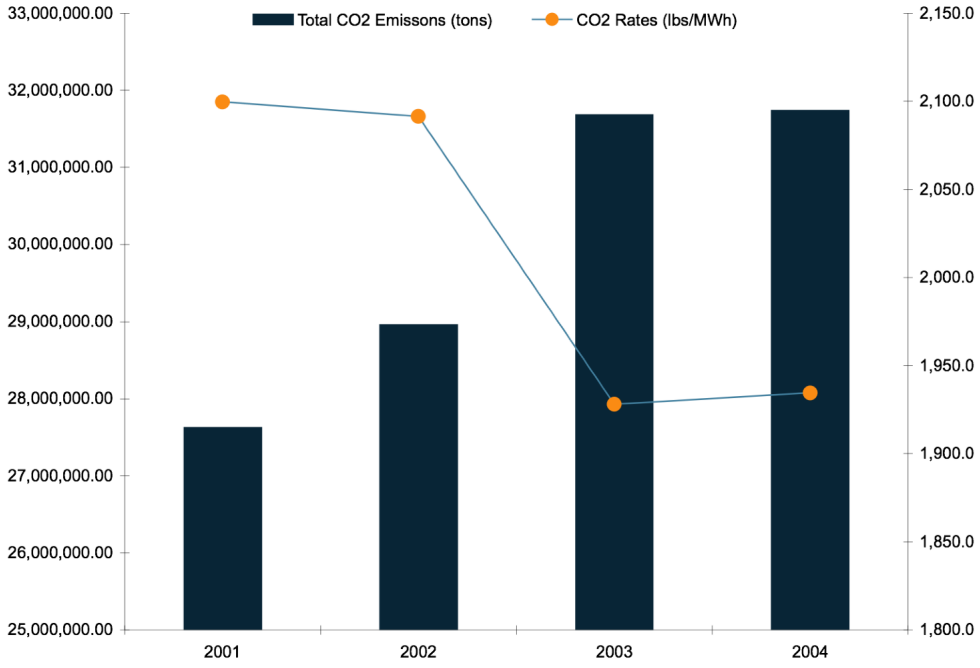
As the competitive balance favors less carbon intensive forms of generation, Dynegy may be forced to invest in costly retrofits to ensure compliance at the proposed coal facilities. The Department of Energy and National Energy Technology Laboratory estimates that the cost of capturing CO2 at pulverized coal plants requires additional capital costs of 70-75% compared to 25-30% for integrated gasification combined cycle plants.[7]

Proposed Entity's Carbon Profile

Between 2001 and 2004, Dynegy's CO2 emissions increased by approximately 15%. This increase can be directly attributed to the acquisition of additional generating capacity. In contrast, the company's historic focus on natural gas capacity allowed Dynegy to achieve an 8% reduction in its CO2 emissions rate (lbs/MWh) during the same time period.

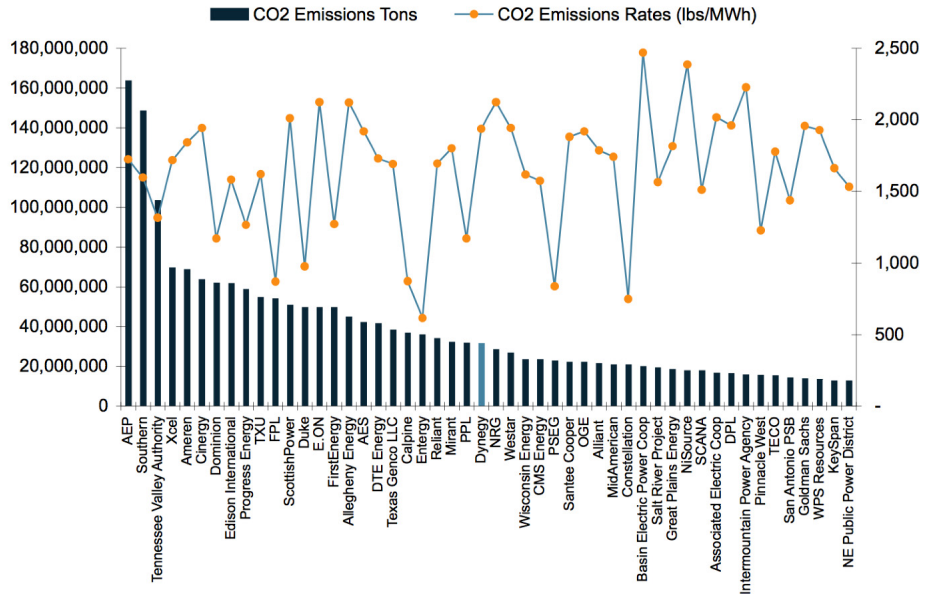
The addition of eight new coal plants will propel Dynegy into a higher carbon risk profile by: increasing the company's coal capacity by 260% and annual CO2 emissions by 200%. The merger will reverse Dynegy's recent trend of improved emissions rates and will position the company as one of the nation's largest emitters of greenhouse gases.

Dynegy's Historic CO2 Emissions and Rates



Despite improved rate performance, the company ranks 25th and 26th among the nation's power producers for absolute CO2 emissions and CO2 emissions rate respectively.[8]

Dynegy's Pre-Merger CO2 Emissions Profile



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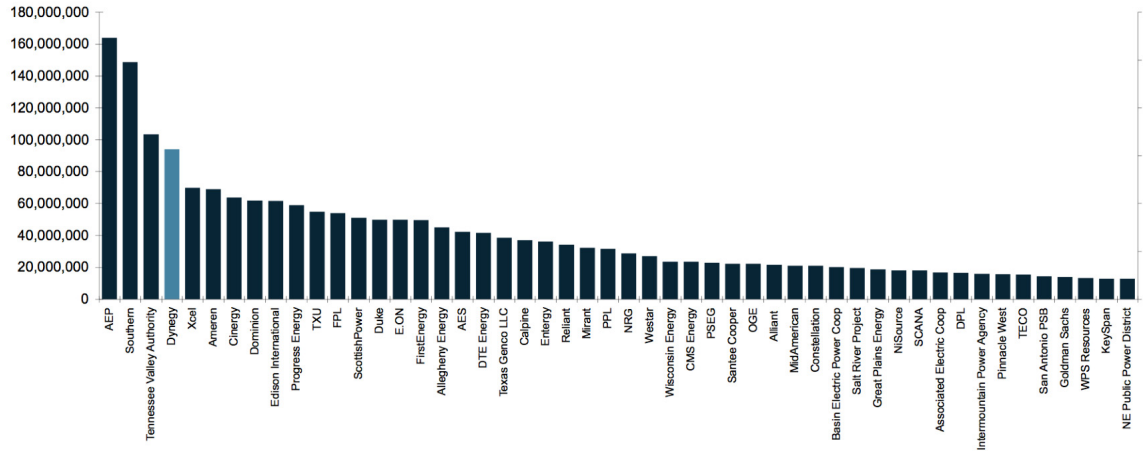
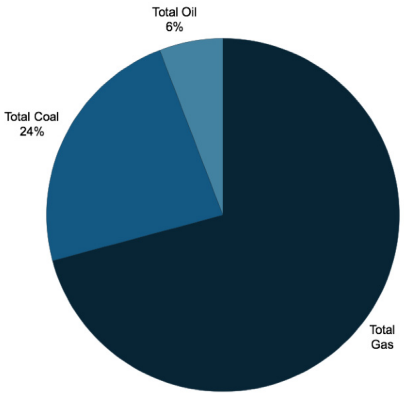
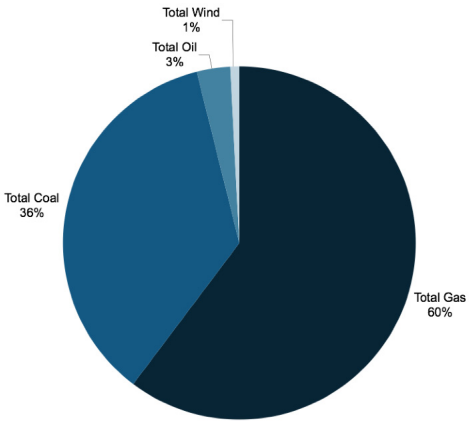
Dynegy's Post-Merger CO2 Emissions Profile



Dynegy's Current Fuel Mix



Dynegy's Proposed Fuel Mix Including Projects Under Development



Given the proposed use of pulverized coal technology, the shift in Dynegy's fuel mix will create increased exposure to carbon risks. Based on typical CO2 emissions rates for coal plants, shareholders can expect that once the proposed 6,915 MW of new coal capacity is operating, the company's annual CO2 emissions will increase by 62.4 million tons.[10]

Dynegy's decision to expand its coal capacity while it looks to divest natural gas assets will raise the company's emissions rates further. The decision to divest a portion of its natural gas assets reflects growing concern over the increasing cost of natural gas and an attempt to create a more diversified generating portfolio. However, investors should question whether Dynegy is prepared to mitigate the risks associated with a significant shift in its carbon profile.

The risks associated with a dramatic increase in Dynegy's CO2 emissions are difficult to quantify, and are dependent on the structure of future legislation. However, it is reasonable to assume that Dynegy will be required to purchase some emissions allowances to comply with future CO2 regulation. If the proposed plants are not incorporated into the company's baseline (or 'grandfathered'), Dynegy/LS Power could be required to pay for 100% of its CO2 emissions. Assuming this scenario, and using a range of $10 to $25/ton of CO2, the result of constructing 6,915 MW of new coal capacity could be between $624 million and $1.56 billion in carbon credits. The uncertainty of potential costs signifies a specific risk to investors and should raise questions over Dynegy's decision to pursue a more carbon intensive generating portfolio.

Regulatory and Stakeholder Opposition to New Coal Capacity

Additional risks to Dynegy's proposed merger stem from the likelihood of strong regulatory and stakeholder opposition. Recent and ongoing decisions regarding the expansion strategies of both Duke Energy and TXU Corp. demonstrate that state regulators are becoming increasingly critical of proposed coal-fired power plants. Elevated scrutiny is based on pollution control systems, project costs, and the perceived demand for new capacity. In February 2007, the North Carolina Utility Commission rejected half of Duke Energy's proposed 1600 MW of new coal-fired generation. The commission found that Duke was only able to demonstrate the need for 800 MW when demand side management, energy efficiency, and renewable resources were considered.[11] Meanwhile, TXU's three proposed coal power plants will face regulatory hurdles as regulators examine whether the projects will allow for compliance with National Ambient Air Quality Standards.

LS Power is currently experiencing delays as stakeholder opposition continues to mount. Although the company has been issued the necessary permits for the 800 MW Sandy Creek plant in Texas, further progress is being hindered by stakeholder appeals. Similarly, the 1,200 MW Long Leaf plant in Georgia, the 500 MW West Deptford plant in New Jersey, and the 1,600 MW White Pine/Egan plant in Nevada continue to be the target of significant stakeholder opposition. Legal action has also been initiated in an effort to prevent the construction of LS Power's proposed 750 MW Elk Run plant in Iowa.

Current Status of LS Power's Proposed Generating Facilities

		Sandy Creek	Long Leaf	White Pine/ Egan	Elk Run	Plum Point Unit 2	High Plains	Five Forks	West Deptford	West Texas
Location		Texas	Georgia	Nevada	Iowa	Arkansas	Colorado	Virginia	New Jersey	Texas
Fuel/MW		Coal/800	Coal/1,200	Coal/Wind 1,600/200	Coal/750	Coal/665	Coal/600	Coal/800	Coal/500	Natural Gas/500
Site Secured		✓	✓	✓	✓	✓	✓		✓	✓
Zoning Approved/Not Required		✓	✓			✓		✓		✓
Water Supply Secured/Available		✓	✓	✓	✓	✓	✓	✓	✓	✓
Solid Waste Permit	Application Filed	✓	✓	✓		✓				*N/A*
	Permit Issued	✓				✓				*N/A*
Water Discharge Permit	Application Filed	✓	✓	✓						
	Permit Issued	✓	*Draft*							
Air Permit	Application Filed	✓	✓	✓						
	Permit Issued	✓	*Draft*							

[12]

Regulatory and stakeholders delays will likely create additional risks, as Dynegy will have to contend with increasing construction costs. Recent trends in power plant construction indicate that increased demand has led to a rise in the cost of key inputs. In 2006, the cost of new coal-fired power plants increased by 40%. This is representative of a continuing trend in which capital costs have increased by 90-100% since 2002.[13] Several recent examples involving Duke Energy, Westar, and American Electric Power have demonstrated how rising costs have forced utilities to postpone or reassess construction plans.

Increased stakeholder opposition to new coal plants poses risks to any company's reputation. This risk will be elevated for Dynegy/LS Power, given that the combined company will have more proposed coal-fired power plants than any other entity. The company will also be exposed to litigation as a result of dramatic increases in greenhouse gas emissions.

Although the cumulative effect of regulatory and stakeholder delays are difficult to predict, investors should be cognizant of the significant uncertainties and reputational risks that surround the construction and operation of new coal-fired power plants.

Conclusion

Environmental due-diligence has and will continue to be a crucial element of any well developed merger and acquisition planning process. Traditionally, environmental due-diligence has focused on contaminated site liabilities and regulatory compliance. However, Dynegy's proposed merger demonstrates the need for both companies and investors to look beyond traditional environmental risks. More specifically, Dynegy must consider the risks associated with becoming the nation's largest developer of new pulverized coal generating capacity. Although the proposed merger may provide a short-term growth opportunity for Dynegy, the company does not appear to have adequately considered the apparent risks.

Recent trends indicate that Dynegy will experience regulatory hurdles and will likely incur significant costs associated with future legislation on climate change. Given the risks highlighted above, Dynegy should disclose how it plans to mitigate the carbon risks associated with the decision to merge with LS Power.

ABOUT INNOVEST

Innovest Strategic Value Advisors was founded in 1995 with the mission of integrating sustainabilityand finance by identifying non-traditional sources of risk and value potential for investors. Our analysis is designed to assist our clients in constructing and managing portfolios that out-perform the market. We do this by tracking company performance and strategic positioning on over 120 factors that are not captured or explained by the traditional, accounting-driven securities analysis. **To learn more about Innovest please see the contact information listed below, or visit us online at www.innovestgroup.com. We look forward to assisting you.**

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