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TXU faces a Texas coal rush

Energy company TXU plans to build 11 new plants powered by coal. They will generate electricity and greenhouse gases. They are already generating political heat, says Fortune's Marc Gunther.

By Marc Gunther, Fortune senior writer

February 5 2007: 7:20 AM EST

(Fortune Magazine) -- For whatever reason - the wreckage of Hurricane Katrina, Al Gore's "An Inconvenient Truth," the plight of polar bears in the Arctic, the Democratic takeover of Congress - this is the moment when corporate America has at long last decided to get serious about global warming.

Joining hands with environmentalists, the CEOs of ten *Fortune* 500 companies, among them GE (Charts), Alcoa (Charts), DuPont, and utilities Duke Energy and PG&E (Charts), last month called on the government to regulate the greenhouse gases caused by burning fossil fuels. Dozens of big companies, including Wal-Mart (Charts), have pledged to reduce their own emissions of carbon dioxide. In a twist on the theme, Dell (Charts) will arrange to have trees planted for customers who pay \$2 to offset the CO2 generated when a computer is plugged into the power grid.



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Aore from Fortune

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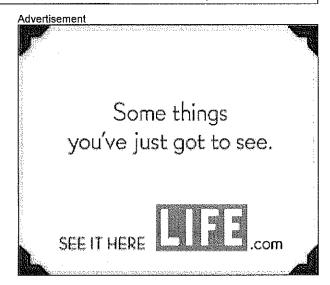
SCHOOL BOX

And then there is TXU (Charts)

A \$10.4-billion-a-year energy company based in Dallas, TXU is staking its future on coal - the dirtiest of all fuels used to generate electricity. Last spring the company announced plans to build 11 new coal-fired power plants in Texas at a cost of nearly \$1 billion apiece. That has set off a firestorm of opposition lawsuits, pickets, petitions, anti-TXU Web sites, lobbying at the state capitol, even a hunger strike.

One environmental group calculated that the new plants would generate 78 million tons of CO2 each year - more than the emissions of Sweden, Denmark, or Portugal.

Texas already ranks first in



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the U.S. in carbon emissions.

Texas's big global warming battle

"This is an \$11 billion step in the wrong direction," fumes David Hawkins, a climate-change expert at the Natural Resources Defense Council. "And when you're marching backward with \$11 billion, you can do a lot of damage."

But TXU is just getting started. The company says it will soon unveil plans to build another e ight to 15 coal-burning plants outside Texas, counting on economies of scale to hold costs down. TXU also operates strip mines, which supply 70 percent of the coal it burns.

To explore the logic behind TXU's plans, I went to see Mike McCall, the company executive in charge of selling the coal plants to Texans. A burly, easygoing 49-year-old, McCall is a coal man to his core. He went to the college at the Missouri School of Mines with the financial help of Peabody Coal, the nation's largest producer, worked in coal mines in Illinois, ran a private railroad that shipped coal, and climbed the ladder at TXU to become head of its wholesale electricity unit.

McCall's argument on behalf of coal is straightforward. Coal is abundant, and it is mined in the U.S. It's cheaper than natural gas and more reliable than wind or solar power.

TXU would like to generate more nuclear energy - it plans to apply for permits to build up to three nukes in 2008 - but getting a green light from industry-friendly Texas regulators for coal plants, even with all the

brouhaha, is a lot easier than obtaining the federal government's approval to build a nuclear power plant. No new permits for nukes have been issued since the 1970s.

That leaves coal as the best fuel available to satisfy America's ever-expanding appetite for electricity - all our computers and bigscreen TVs and air-conditioned homes and offices need juice.

Currently, coal supplies about 52 percent of the nation's electricity, and U.S. demand for electric power is projected to grow by about 1.5 percent a year. (Nationally, more than 150 new coal plants are planned.) With its hot summers, fast-growing population, and expanding industrial base, Texas has an even more urgent need for power; peak demand could exceed supply as soon as the summer of 2008.

"If you care about national security and you care about energy independence," McCall says, "you want to find a way to use coal that's acceptable to the public."

As for climate change, he allows that it's an



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"important and long-term issue" and says TXU's plants will be designed so that someday they can be retrofitted to capture and store carbon. Right now, there's no way to capture carbon from coal-burning plants. But, McCall says, "we have confidence that technology will come along."

That, say TXU's critics, is hokum.

A long list of opponents

TXU is fighting not just the usual activists from the Sierra Club and Public Citizen but environmental groups like Environmental D efense and the Natural Resources Defense Council, which are ordinarily business-friendly. (With GE, DuPont, and others, they formed the coalition of big companies to lobby for carbon caps.)

Opposing the plants, too, are the Democratic mayors of Dallas and Houston, Texas celebrities such as rocker Don Henley, and prominent businesspeople, including real estate scion Trammell S. Crow and Garrett Boone, the chairman of the Container Store.

Albert J. Huddleston, a pro-business Republican who helped finance the Swift Boat television ads against John Kerry in 2004, is funding a lawsuit against TXU because he's concerned about mercury contamination of lakes and fish.

So intense is the fervor that a 50-year-old activist, Karen Hadden, went on a ten-day hunger strike last fall to call attention to the issue. "It is certainly an uphill battle," Hadden says, "but we're trying to keep the pressure on every front."

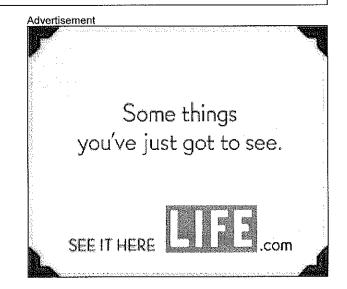
Opponents have sued Texas regulators as

well as TXU. They are asking the Texas legislature to impose a moratorium on new coal plants. They have taken their case to Wall Street, where Merrill Lynch, Morgan Stanley and Citigroup, the lead underwriters for the plants, have come under fire. They are telling the TXU story in Washington as Congress moves closer to setting mandatory caps on greenhouse-gas emissions.

"TXU is becoming the poster child for why we need mandatory federal legislation," says Jim Marston, who runs Environmental Defense's Texas operations.

Next page: A Texas coal rush (cont.)

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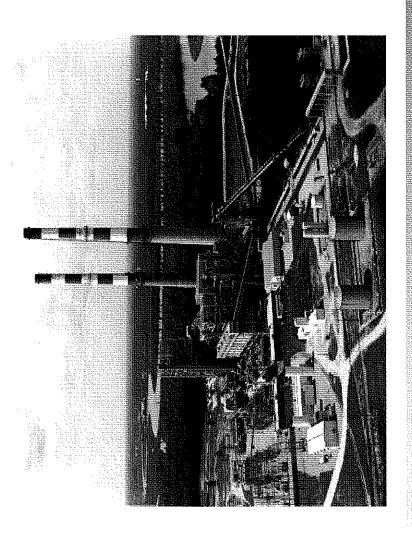


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SCHEDULES WHD2010-10 through WHD2010-16

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Tracking New Coal-Fired Power Plants



Coal's Resurgence in Electric Power Generation







Tracking New Coal-Fired Power Plants

Although comprehensive, this information is not intended to represent that is available from various tracking organizations and news groups. every possible plant under consideration but is intended to illustrate proposed new coal-fired power plants that are under consideration. The results contained in this package are derived from information "Coal's Resurgence in Electric Power Generation" by examining This information package is intended to provide an overview of the large potential that exists for new coal-fired power plants.

built. For example, out of a total portfolio (gas, coal, etc) of 500 GW of changing economic climate of power generation markets. As such, it newly planned power plant capacity announced in 2001, 91 GW have should be noted that many of the proposed plants will not likely be typically operate on "boom & bust" cycles, based upon the ever Proposals to build new power plants are often speculative and been already been scrapped or delayed¹.

The Department of Energy does not guarantee the accuracy or suitability of this information.

Sources: 1 - Energy Central Daily & Wall Street Journal



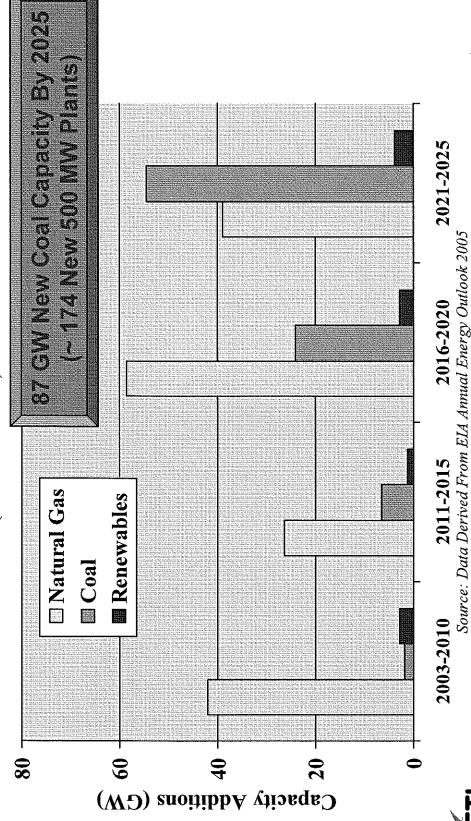
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Schedule WHD2010-8

87 GW New Coal Capacity By 2025 (Accounts for 33% of New Capacity Additions)

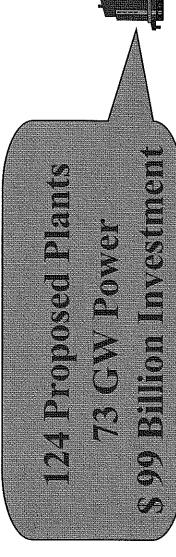
New Electricity Capacity Additions

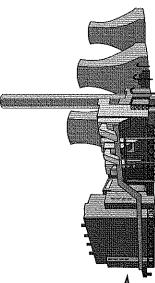
(EIA Reference Case)

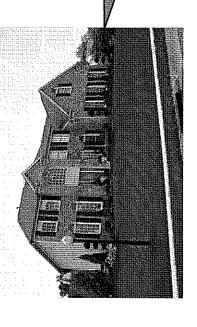


OCES 7/25/2005

Erik Shuster, erik.shuster@sa.netl.doe.gov NETL Contacts: Scott Klara, klara@netl.doe.gov





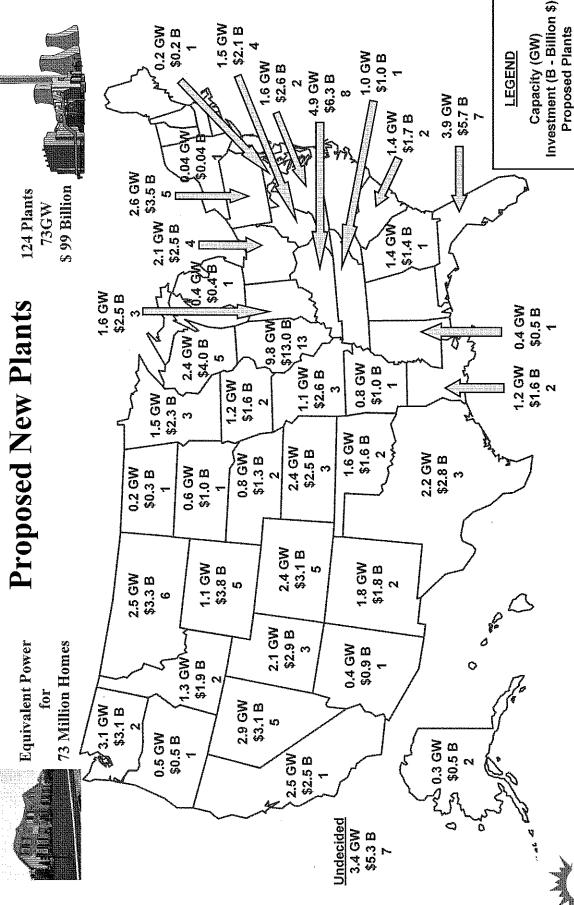


Equivalent Power 73 Million Homes



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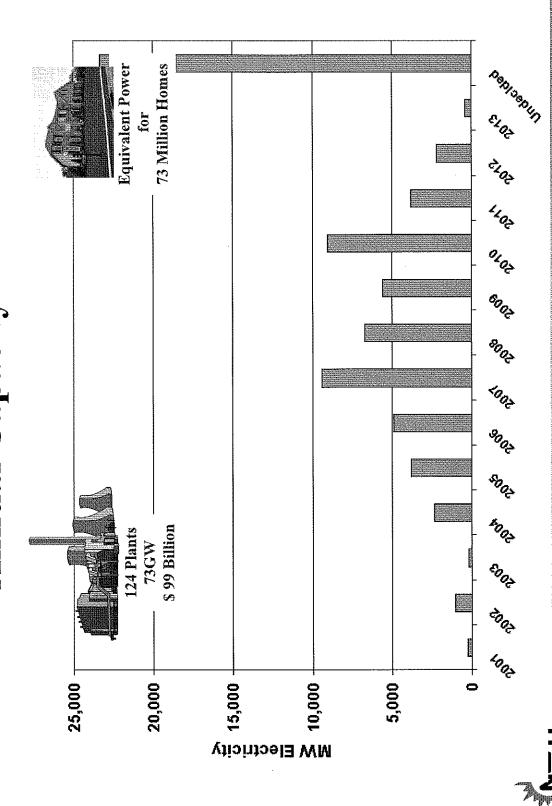
Schedule WHD2010-8



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Coal's Resurgence in Electric Power Generation ** Annual Capacity Additions **



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Schedule WHD2010-8

Coal's Resurgence State Summary

Investment

Investment (Million S)

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Capacity

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\$ 99 Billion 124 Plants 73 GW



Equivalent Power	for	73 Million Homes

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OCES 7/25/2005 \$99,254 \$5,300 100 NETL Contacts: Scott Klara, klara@netl.doe.gov 3,350 72,977 TOTALS 124 Undecided

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53 100

\$3,835



** Database **

SPONSOR	PROPOSED LOCATION	SIZE TECHNOLOGY	TIMING Status - (Date Indicates latest reference) In Service - Planned Date	INVESTMENT	COAL SOURCE	SOURCES
TVA:Ballafonta Sita	Alabama Jackson County	1500.MW 1600.Texaso	Cancelled (4/2003) In Sandso 2005	- \$ 1.5 Billion	High Sulfur Coal	8, 7, 9, 12
Nivista	Alaska Bethel	400 MW	Proposed (3/2004) In Service - 2010	- \$ 100 Willian	Coal	
Usibelli Coal Mine Inc	Alaska Healy	200 MW	Proposed (5/2003) In Service - TBD	\$ 421 Million	Coal	
Rollant Resources Hopt Telke	Arizona Not yot located	4,200 MW	Cancelled (5/2002) In Sewice 2008	- \$ 1.2 Billion	Iow Sulfac Sub- bituminous	K. U.
Tuscon Electric Power	Arizona Springerville	400 MW	Approved (11/2003) In Service - 2006	\$ 939 Million	Sub-Bituminous	2, 3, 4, 12
Alabama Electric	Arizona Sumter County	WWW DOS	Cancelled 2007	wo ₩ 105; \$ ~	Sub Bituminous	
Fort Chaffee Authority	Arkansas Eort Chaffee	2-Plants 750-MM-each	Cancelled In Service 2007	\$-2.5-Billion	Arkansas Coal	
LS Power Development	Arkansas Osceola	WW 008	Permitting (10/2003) In Service - 2008	\$ 1 Billion	Powder River Basin Coal	6,9,11
Femald Power	California Humbolt City	2,500 MW	Proposed (10/2001) In Service - TBD	-\$25 Billion	Coal	•
Rada: Acquisitions Corp. / Kiewit	Colorado	400 - 500 MW	Feasibility Study (10/2003) In Service - TBD	-\$ 500 Million	Coal	
DOE Foster Wheeler	Colorado Colorado Colorado	150 MW CFB	On Hold (12/2003) In Service 2008	\$ 275 Million	Coal	u')
Tri-State Generation and Transmission	Colorado Front Range	1,000 MW	Proposed (10/2004) In Service - 2011	S 1 Billion	Coal	



Red text above indicates recent updates

Investment costs notated by "~" were unavailable and estimated by DOE at \$1000 per kW

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** Database **

SPONSOR	PROPOSED	SIZE	TIMING Status - (Date indicates latest reference) In Service - Planned Date	INVESTMENT	COAL TYPE	SOURCES
Larmar Light & Power Ark: River Power Auth.	Colorado Lamar	39 MW increase Conversion	Feasibility study (8/2004) In Service : TBD	uojiliMi 29 \$	Coal to replace natural gas	2
Tri State Generation and Transmission	Colorado Las Animas	3-Units 400-MW sach	Cancelled (4/03) In Service 2005,06,07	8.1.2 Billion	Coal	11,4,12
Xcel Energy	Colorado Puebio	750 MW	Air Permit (7/2005) In Service - 2009	\$ 1.3 Billion	Coal	5
Deseret Generation & Transmission Corp.	Colorado Rangely	BO-DOW	Cancelled (1/2005) In Sewice 2004	\$ 240 Million	Maste Coal	1, 3, 12
Florida Municipal Power Agency	Florida	MW 009-005	Considering (10/2002) In Service - 2009	\$ 600 Millian	Coal	
Florida Power & Light	Florida Crystal River		Operational In Service - 2001	~ \$ 100 Million	Coal	7
Jacksonville Electric	Florida Duval	(2) 300 MW Units CFB	Operational (7/2002) In Service - 2002	-\$ 600 Million	Coal/Pet Coke	12, 3, 9
Orlando Utilities Comm. U.S. DOE	Florida Orange County	285 MW 16CC	Proposed (10/2004) In Service - 2010	\$750 Million	Coal	1,22
Lakoland Electric & Water	Florida Polk County	350 MW	Cancelled In Sewice 180	2.5. Sect. William	Geal	~
Seminole Electric Cooperative	Florida Putnam County	750 MW	Proposed (3/2005) In Service - 2012	\$1.2 Billion	Coal	J.
Florida Power & Light	Florida St. Lucie County	Units	Considering (3/2005) In Service - 2012, 13	~\$1 Billion	Coal	
JEA	Florida Taylor County	WM 008	Considering (7/2005) In Service - 2012	\$1.4 Billion	Coal	23



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** Database **

WOSNOS STATES	PROPOSED LOCATION	SIZE	TIMING Status - (Date indicates latest reference) In Service - Planned Date	INVESTMENT	COAL TYPE	SOURCES
LS Power Development	Georgia Early County	1,200 - 1,600 MW	Permitting (8/2002) In Service - 2005	~ \$1,4 Billion	Coal	9
Sempra Energy Resources	Idaho Elmore or Jerome	WM 027	Proposed (9/2004) In Service - TBD	\$1Billion	Coal Low-Sulfur	12
Southeast Idaho Energy LLC	ldaho Pocatello	~ 500 MW	Proposed (3/2005) In Service - 2010	\$850 Million	Coal	
Dynegy	Illinois Baldwin	2 Plants 650 MW each	Proposed (10/2001) In Service - 2007	((S Billion	Illinois Coal	
Illinois Energy Group	Minois Benton	2 units 750 MW each	Proposed (8/2002) In Service - TBD	\$1.7 Billion	Coal	70/10
Com Belt Energy (DOE)	Illinois Elkhart	91 MW Lebs	Development (6/2005) In Service - 2004	\$140 Million	Waste Coal	1, 2, 8, 12
Turis Coal Company	Illinois Elkhart	25 - 35 MW	Proposed (10/2001) In Service : TBD	~ \$ 35 Million	Coal	
Indeck Energy Service	Illinois Elwood		Final Permitting (6/2005) In Service - 2007	\$1BIIIon	Illinois Coal	77
Clean Coal Power Resources	Illinois Fayette County	2,400 MW Gasification	Proposal (10/2002) In Service - TBD	~ \$2,8 Billion	Coal	1
Enviro Power	Illinois Franklin County	200 MW	Permitting (5/2003) In Service - 2007	~ \$ 500 Million	Coal	8,12
Madison Power Corp.	Warion	500 MW Gasification	Proposal (10/2004) In Service - TBD	\$2.0 Billion	Coal (Mine-Mouth)	2
Southern Illinois Power	(Illinois Marion	120 MW	Operational (6/2003) In Service - 2003	\$50 Million	Bituminous Coal Fines	8,9,12



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** Database **

SPONSOR	PROPOSED	SIZE	TIMING Status - (Date Indicates latest reference) In Service - Planned Date	INVESTMENT	COAL TYPE	SOURCES
Erora Group	Illinois Taylorville	677 MW IGCC/ Coprod.	Proposal (3/2005) In Service - TBD	\$700 Million	Coal (Mine-Mouth)	6) 1
Peabody Prairie Energy Campus	Mashington City	2 units 750 MW each	Air Permit Rejected (6/2005) In Service - 2008	\$ 2.0 Billion	Illinois Coal High Sulfur	1,11,12
Steelhead Energy Company	Milliamson County	545 MW IGCC	Proposal (6/2005) In Service - TBD	~600 Million	Coal	
Cinergy Corp.	Indiana Edwardsport	229) MW 009	Proposal (10/2004) In Service - TBD	\$ 900 Million	Coal	62
	Eayotta County		Development (7/2002) In Service 2004	110111101 575 \$ -	1453 to Cool	12,8
2007/00 00 17/11	Indiana Pika County	300 PWW	Initiate 2001 Cancelled 2002	4011111/1 009 K	Waste Coal	2, 5, 8, 9, 12
Tondu	Indiana St. Joseph County	2291 1900	Considering (3/2005) In Service - TBD	\$4 Billion	Coal	2
EnviroPower	Indiana Sullivan County	200 MW	Permitting - (10/2002) In Service - TBD	\$ 600 Million	Waste Coal	2, 5, 8, 9, 12
Alliant-Inot-gy	Power.		D evelopment (5/2003) Cancelled - 2003	-\$-450 Million	C984	72.1
MidAmerican Energy	Lowa Council Bluffs	790 MW Super-critical	Construction (8/2004) In Service - 2007	\$ 1.2 Billion	Coal	13, 1, 8, 11
Dairyland Power Cooperative	Mitchell or Chickasaw		On Hold (12/2004) In Service - 2009-2014	~\$400 Million L	Low Sulfur PRB and Colorado	2,11
Sunflower Electric & International Energy	Kansas Garden City (Holcomb)	MM 099	Near Construct. (6/2005) In Service . 2008	~\$660 MIllion	Coal PBR	27/1/17



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