

# **GETTING BACK TO NORMAL IS NOT GOOD ENOUGH**

**Joe Marone  
Occidental Chemical Corporation**

**Rebuilding Utility Infrastructure:  
Challenges & Opportunities  
February 21, 2006**

# OCCIDENTAL CHEMICAL

- 3 CHLOR-ALKALI FACILITIES IN LOUISIANA
- 920 DIRECT AND CONTRACT EMPLOYEES
- ONE OF LARGEST ELECTRIC CONSUMERS IN LOUISIANA
  - 580 MW OF LOAD
  - 320 MW PURCHASES
  - 260 MW SELF SUPPLY

# HURRICANES' DIRECT IMPACT ON OCCIDENTAL OPERATIONS

- NO SIGNIFICANT STORM DAMAGE TO OCCIDENTAL FACILITIES
- NORMAL SHUT-DOWNS ASSOCIATED WITH STORM PREPARATION
- LIMITED DELAYS IN START-UP ASSOCIATED WITH FEEDSTOCK SUPPLIERS AND CUSTOMERS REGAINING POWER
- GAS DELIVERED DESPITE SOME UNCERTAINTIES IN SUPPLY

# HURRICANES INDIRECT IMPACT ON OCCIDENTAL OPERATIONS

- INCREASED NATURAL GAS COSTS  
BECAUSE OF
  - LOSS OF PRODUCTION
  - CURTAILMENT OF PROCESSING
  - POWER FAILURE/TRANSMISSION OUTAGES
- INCREASED ELECTRICITY COSTS DUE TO
  - INCREASED NATURAL GAS COSTS

# POST-STORM HIGH PRICES DUE IN PART TO LACK OF POWER SUPPLY

- “HONESTLY, THE FIX FOR THIS IS A MORE ROBUST GRID. ENTERGY HAS NOT INVESTED IN TRANSMISSION AS I THINK IT SHOULD. IT’S A STANDING ISSUE I HAD AS A REGULATOR AND STILL HAVE WITH THE COMPANY.”
  - PAT WOOD III  
FORMER FERC CHAIRMAN  
HOUSTON CHRONICLE (10/9/05)
- “IT IS COUNTER INTUITIVE TO SUGGEST THAT PUTTING ADDITIONAL TRANSMISSION FACILITIES IN THE HURRICANE’S PATH WOULD HAVE SOMEHOW IMPROVED THE SITUATION. IT WOULD HAVE JUST RESULTED IN MORE LINES ON THE GROUND AND THE NEED FOR AN EVEN MORE EXTENSIVE RESTORATION EFFORT”
  - JOHN ZEMANEK  
VICE PRES. OF TRANSMISSION  
ENTERGY CORPORATION  
HOUSTON CHRONICLE (10/9/05)
- ENTERGY’S ONLY CONNECTION BETWEEN THE COMPANY’S EASTERN AND WESTERN POWER GENERATION IS A 500 kV LOOP WHICH WAS SEVERELY DAMAGED BY HURRICANE RITA. EIGHTEEN STRUCTURES ALONG THE LINE WERE DAMAGED.
  - MEGAWATT DAILY  
SEPTEMBER 29, 2005

# OPPORTUNITIES FOR IMPROVEMENT

- “IF YOU ARE GOING TO REBUILD THAT TRANSMISSION SYSTEM, IS IT POSSIBLE FOR YOU TO RECONFIGURE THAT SO AS TO USE THE MOST EFFICIENT POWER GENERATION ASSETS AVAILABLE IN YOUR REGIONS, EVEN IF THOSE DON’T BELONG TO ENTERGY?”
  - U.S. SENATOR JEFF BINGAMEN  
PLAAT’S INSIDE FERC, 10/10/05
  
- “ENTERGY’S TRANSMISSION SYSTEM WAS DESIGNED TO SERVE ITS NATIVE LOAD. IT’S DOING EXACTLY THAT. IT IS PERFORMING EFFICIENTLY AND ADMIRABLY”
  - JOHN ZEMANEK  
VICE PRES. OF TRANSMISSION  
ENTERGY CORPORATION  
MEGAWATT DAILY (10/26/05)

# **ENERGY PRE AND POST STORM ELECTRICITY PRICES ARE UNCOMPETITIVE**

- **OXY PURCHASED POWER PRICES IN LOUISIANA ARE 12-40% HIGHER IN LOUISIANA THAN IN NEIGHBORING STATES WITH OXY FACILITIES**
- **ENERGY RATES FOR RESIDENTIAL, COMMERCIAL AND INDUSTRIAL CUSTOMERS RANK IN THE TOP 6 HIGHEST RATES ON A SOUTHEAST REGIONAL BASIS**

# EEl Typical Bill Cost for Residential Users for Winter 2005 and Summer 2005

<u>Line</u>	<u>Utility Company</u>	<u>1,000 kWh</u>
1	El Paso Electric Company	10.66
2	Tampa Electric Company	9.81
3	Entergy Gulf States, Inc.-TX	9.55
4	Progress Energy Florida, Inc.	9.44
<b>5</b>	<b>Entergy Louisiana, Inc. – LA</b>	<b>9.29</b>
<b>6</b>	<b>Entergy Gulf States, Inc.</b>	<b>9.24</b>
7	South Carolina Electric & Gas Company	9.14
8	Dominion North Carolina Power	9.13
9	Entergy Mississippi, Inc.	9.12
10	Florida Power & Light Company	9.06
*	* * * * *	*
37	Southwestern Electric Power Company, TX	6.04
38	AEP (Appalachian Power Rate Area), VA	5.78
39	Kentucky Utilities Company	5.61
40	AEP (Appalachian Power Rate Area), WV	5.53
41	AEP (Kingsport Power Rate Area)	5.20

# EEI Typical Bill Cost for Commercial Users for Winter 2005 and Summer 2005

<u>Line</u>	<u>Utility Company</u>	Commercial 500 kW <u>180,000 kWh</u>
1	El Paso Electric Company	10.18
2	Progress Energy Florida	9.50
<b>3</b>	<b>Entergy Louisiana, Inc. - LA</b>	<b>8.02</b>
<b>4</b>	<b>Entergy Gulf States, Inc.</b>	<b>8.00</b>
5	Tampa Electric Company	7.84
6	Florida Power & Light Company	7.70
7	Entergy Gulf States, Inc. - TX	7.67
8	Entergy Mississippi, Inc.	7.60
9	Alabama Power Company	7.51
10	South Carolina Electric & Gas Company	7.44
*	* * * * *	*
37	Kentucky Utilities Company	4.83
38	AEP (Kingsport Power Rate Area)	4.79
39	Appalachian Power Company,VA	4.49
40	Southwestern Electric Power Company,AR	4.25
41	Southwestern Electric Power Company,TX	4.20

# EEI Typical Bill Cost for Small Industrial Users for Winter 2005 and Summer 2005

<u>Line</u>	<u>Utility Company</u>	<u>Industrial 1,000 kW 650,000 kWh</u>
1	Entergy Gulf States, Inc. - LA	7.21
2	El Paso Electric Company	7.14
3	Entergy Louisiana, Inc.	7.04
4	Tampa Electric Company	6.90
5	Progress Energy Florida	6.80
6	Florida Power & Light Company	6.64
7	Entergy Gulf States, Inc.	6.45
8	Entergy Mississippi, Inc.	6.21
9	Central Louisiana Electric Company, Inc.	6.20
10	Entergy New Orleans, Inc.	5.78
*	* * *	*
37	AEP (Kentucky Power Rate Area)	3.61
38	Southwestern Electric Power Company, TX	3.57
39	Kentucky Utilities Company	3.31
40	Appalachian Power Company, WV	3.25
41	Appalachian Power Company, VA	3.05

**January 2006 Survey of Electricity Cost with 2005 Average Fuel  
Costs for an Industrial Customer 50,000 kW Load, 90% Load  
Factor, 90% Power Factor and Transmission Service**

<b><u>Line</u></b>	<b><u>Utility Company</u></b>	<b><u>Cents per kWh</u></b>
1	Entergy Gulf States, Inc. - LA	7.29
2	Entergy Louisiana, Inc.	7.06
3	Central Louisiana Electric Company, Inc.	6.76
4	Progress Energy Florida, Inc.	6.72
5	Entergy New Orleans, Inc.	6.69
6	Entergy Mississippi, Inc.	6.24
7	Entergy Gulf States, Inc. - TX	6.04
8	Tampa Electric Company	6.03
9	Florida Power & Light Company	5.80
10	Savannah Electric Company	5.64
*	* * *	*
27	Kentucky Power Company	3.47
28	Monongahela Power Company, WV	3.42
29	AmerenUE, MO	3.34
30	Appalachian Power Company, WV	2.83
31	Appalachian Power Company, VA	2.70
<b>32</b>	<b>Average</b>	<b>4.79</b>

# **ENTERGY USE OF INEFFICIENT GAS GENERATION EXACERBATES HIGH GAS COSTS**

- **ENTERGY AND EGSIS RELY ON ENTERGY INEFFICIENT OIL/GAS GENERATION FOR 20% OF RESOURCE SUPPLY, ON AVERAGE**
- **ENTERGY ADMITS SAVINGS OF \$30 MILLION FOR EVERY PERCENTAGE POINT DECREASE**
- **ENTERGY HAS NOT REDUCED LEVEL OF 20% RELIANCE SINCE 2003**
- **THIS, DESPITE FACT THAT THERE ARE 14,000 MW OF EFFICIENT GAS GENERATION LOCATED IN ENTERGY FOOTPRINT**

**“WE CONTINUE TO RUN THE OLD GAS FIRED PLANTS BECAUSE NO OFFERS HAVE BEEN MADE AT THE MARKET THAT ARE MORE ECONOMICAL. IT’S NOT HOW EFFICIENT YOU ARE BUT WHAT YOU OFFER IT FOR AT THE MARKET. IF THE POWER MARKET GETS PRICY THEN WE CAN FALL BACK ON OUR OLD UNITS. KEEPING THE OLD PLANTS AS A CEILING PROTECTS CONSUMERS IN LOUISIANA FROM THE PRICE SPIKES CAUSED BY SHORTAGES.”**

**JOHN ZEMANEK  
VICE PRES. OF TRANSMISSION  
ENERGY CORPORATION  
MEGAWATT DAILY (10/26/05)**

## ENERGY EGSI

Operating Month	Energy Gas Generation		Actual Purchases	Rejected Purchases
	% Of Resources	\$/MWH	\$/MWH	\$/MWH
2005 Jan	20.92	\$68.96	\$38.59	\$40.26
Feb	15.69	\$71.41	\$38.63	\$40.94
Mar	17.58	\$80.47	\$42.93	\$47.24
Apr	18.63	\$82.59	\$48.34	\$48.50
May	21.20	\$74.22	\$46.60	\$52.08
Jun	25.96	\$78.10	\$51.15	\$45.06
Jul	29.37	\$83.63	\$53.69	\$50.87
Aug	28.42	\$99.73	\$61.23	\$56.63
Sep	28.65	\$129.88	\$60.37	\$65.57
Oct	23.72	\$140.88	\$58.81	\$80.60
Nov	26.64	\$99.17	\$83.58	\$78.80
Dec	23.84	\$129.89	\$65.46	\$68.78

## ENTERGY ELI

Operating Month	Entergy Gas Generation		Actual Purchases	Rejected Purchases
	% Of Resources	\$/MWH	\$/MWH	\$/MWH
2005 Jan	18.89	\$78.43	\$43.93	\$44.49
Feb	12.83	\$98.18	\$43.44	\$44.49
Mar	16.71	\$75.19	\$52.30	\$43.14
Apr	24.45	\$91.97	\$48.41	\$50.21
May	42.79	\$78.10	\$46.03	\$49.81
Jun	29.23	\$81.66	\$45.22	\$45.12
Jul	30.86	\$88.65	\$49.85	\$49.39
Aug	29.41	\$96.80	\$52.25	\$56.36
Sep	29.39	\$140.32	\$58.02	\$68.76
Oct	23.90	\$152.82	\$70.58	\$80.19
Nov	16.78	\$186.85	\$61.28	\$85.59
Dec	17.78	\$136.86	\$56.34	\$70.89

# OPPORTUNITIES FOR POST STORM ECONOMIC RECOVERY

- ISSUE RFP TO TEST MARKET FOR RETIREMENT OF INEFFICIENT GAS GENERATION AND SHUT OFF ASAP
- IDENTIFY ECONOMIC TRANSMISSION UPGRADES TO SHUT DOWN “MUST RUN” GAS GENERATION
- PURCHASE AGC AND RAMPING CAPABILITIES

- **“The arch enemy of utilities is always the industrial customer. The industrial customer generally finds it offensive that the utility doesn’t have to be efficient, they can pass on all their costs regardless of the bozo decisions that they make, etc. It just bothers them. Of course, the utility is offended at the industrial customer because they are so demanding and ruthless in terms of their demands of performance, and they believe they oversimplify the manufacturing of electricity. ”**

**C. John Wilder**

**CEO of TXU Corp.**

**Former Entergy CFO**

**Quoted in Public Utilities Fortnightly, June, 2005.**