

BEFORE THE CORPORATION COMMISSION OF THE STATE OF OKLAHOMA

**APPLICATION OF PUBLIC SERVICE)
COMPANY OF OKLAHOMA FOR A) CAUSE NO. PUD 200500516
DETERMINATION THAT ADDITIONAL)
ELECTRIC GENERATING CAPACITY)
WILL BE USED AND USEFUL)**

**APPLICATION OF PUBLIC SERVICE)
COMPANY OF OKLAHOMA FOR A) CAUSE NO. PUD 200600030
DETERMINATION THAT ADDITIONAL)
BASELOAD GENERATING CAPACITY)
WILL BE USED AND USEFUL)**

**IN THE MATTER OF THE APPLICATION)
OF OKLAHOMA GAS AND ELECTRIC) CAUSE NO. PUD 200700012
FOR AN ORDER OF THE COMMISSION)
GRANTING PRE-APPROVAL TO)
CONSTRUCT RED ROCK GENERATING)
FACILITY AND AUTHORIZING A)
RECOVERY RIDER)**

AMENDED

REDACTED EXHIBITS

OF

JOHN G. ATHAS

ON BEHALF OF

OKLAHOMA ATTORNEY GENERAL

MAY 22, 2007

FILED
MAY 22 2007

**COURT CLERK'S OFFICE - OKC
CORPORATION COMMISSION
OF OKLAHOMA**

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MAY 22, 2007

John G. Athas Exhibits	
JGA-1	Resume of John Athas
JGA-2	Referenced Data Requests (Moved to the end of the exhibits package)
JGA-3	OG&E's Response to DR AG 20-1 Describing Recent Changes to Its CEM and PAR Models
JGA-4	La Capra Associates View of PSO's Potential Capacity Requirements
JGA-5	La Capra Associates View of OG&E's Potential Capacity Requirements
JGA-6	La Capra Associates Analysis of PSO DSM Opportunities
JGA-7	Comparison of OG&E NPVRR Costs "With" and "Without" Red Rock
JGA-8	A Block Power Cost Analysis For OG&E: Comparison of Various Pulverized Coal and Combined Cycle Facility Generation Costs
JGA-9	A Bus-bar Cost Analysis For PSO: Comparison of Red Rock to 600 MW Pulverized Coal and 506 MW Combined Cycle Facility Generation Costs
JGA-10	Various PSO and OG&E Coal Project Capital Cost Estimates

Exhibit JGA-1

John G. Athas

Managing Consultant

Mr. Athas joined La Capra Associates in 2006, bringing nearly 30 years of diverse electric industry experience. He has substantial, hands-on skills having worked for an electric utility, a competitive retail electric services provider, a power technology manufacturer, and a energy industry consulting firm. Through extensive practical application, he has established strengths in electric resource planning, analysis of competitive wholesale and retail markets, financial and risk analysis, strategic planning, and contracts and transactions, with much of his experience based in the Northeastern US markets. With expertise in utility regulation, energy marketing and product development, energy policy, asset valuation, mergers and acquisitions, and corporate strategy, Mr. Athas provides a unique blend of strategy consulting, technical evaluations and practical implementation skills.

PROFESSIONAL EXPERIENCE

La Capra Associates
Boston, MA

February, 2006 to present

Managing Consultant

RECENT ASSIGNMENTS –

GMP – Project Manager and Principal Consultant leading the La Capra Associates Team in conducting the Integrated Resource Planning analysis for Green Mountain Power. This including developing a multiattribute decision tradeoff process and culminated in the the submittal of a comprehensive IRP on behalf of GMP with the Vermont Public Utilities Board.

CEAB Technical Consultants - Part of La Capra Associates Team, principally involved in the Connecticut Resource Needs Determination, the DPUC's proceeding leading to its RFP seeking opportunities for Long Term Capacity Contracts, Distillation of ISO-NE Market Rules and Planning activities for implications to Connecticut, and the review of Connecticut Energy Plans.

Cooperative Formation Investigation – Cape Light Compact – Project manager for a La Capra Associates lead team to study the benefits and implications of forming a power cooperative to enhance the Municipal Aggregation Power Supply and promote the development of Renewable Energy Projects.

Analysis of PSO Integrated Resource Plan – Oklahoma Attorney General – Reviewed as part of a formal regulatory proceeding the PSO IRP filing for validity in terms of assumptions, analytical

techniques, accuracy and technical (planning) process conclusions. This includes reviewing the Demand Management, Load Forecasting, Transmission and Generation issues collectively evaluated within the IRP.

Direct Energy North America
Stamford, CT

March 2005 – December 2005

Independent Consultant

ASSIGNMENT – New England Market Entry Business Plan, Channel Management Plan Development
Northeastern US Markets

Developing a business plan outlining the potential market entry for the client into the New England power market. This includes the development of:

- Fact bases of the Massachusetts electric market by utility service area; operating rules by electric utility service area; and regulatory requirements
- Head Room Analysis of most medium and large customer segments
- Review of Market Channels including affinity group sales
- Facilitating Direct Energy's evolving Channel Management Strategy

Cambridge Energy Research Associates
Cambridge, MA

2001- February 2005

Associate Director, North American Electric Power

2001-2005

Eastern North American Energy Service Principal

Developed independent primary research on various aspects of power markets around the Eastern US and Canada, primarily responsible for northeast and mid-west, including price outlooks for energy and full requirements electric power. Analyzed market structure, supply/demand balances, price caps, market clearing prices, capacity markets, and generation technologies.

- Authors a monthly power outlook and market assessment report for CERA's Eastern North American Energy Advisory Service
- Author of papers and multi-media client presentations on the topics of price caps, retail competitive market development, retail electric commodity pricing, and the POLR Options being used in the US Markets.
- Principal in CERA's multi-client studies on *The Future of Midwest Gas & Power Markets*, a scenario project, and the current *New Realities, New Risks – North American Gas & Power Scenarios*

Northeast Utilities
Berlin, CT

1981- 2000

- **Director, Retail Business Strategy - Select Energy** 1997 – 2000
Managing Director, Marketing - Select Energy
Directed market strategy, market research, product development, product management, strategic alliance development, retail electric energy supply management and pricing strategy issues of Northeast Utilities' unregulated retail energy service company, Select Energy, formed in 1997. Managed the activities of 31 professionals, including six managers.
 - Developed new products and marketing initiatives for all customer classes within the Northeast.
 - Successfully negotiated two major power supply agreements with the National Energy Choice Aggregation in New England.
 - Initiated energy services related products, including hardware, software and professional services.
 - Created a multi-year book of business totaling over \$250 million in the first two years.
 - Established Select Energy branding and market position as the leader in New England.

- **Director, Market Pricing & Policy** 1995 - 1997
Managed the work of three managers and 24 professionals in all areas of pricing for Northeast Utilities and its operating companies; CL&P, WMECo, PSNH and HWPCo., with revenues totaling over \$3 billion.
 - Developed the strategy for NU and testified with regards to utility restructuring in Massachusetts and Connecticut.
 - Initiated a new pricing function for non-energy products for the NU companies.
 - Created unbundled cost of service parameters for the NU utility companies.

- **Brand Manager / Principal** for CL&P's Northfield Mountain Energy offering in the 1996 New Hampshire Retail Competition Pilot. Directed sales force deployment, public relations and collateral development, contract negotiations and pricing.
 - Successful in acquiring Residential, Enterprise, National Account and Industrial Customers.

- **Manager, Market Analysis** 1990 - 1995
Led market planning and market research functions in developing strategies to prepare NU for the competitive business environment, including sales force program training and development.
 - Successfully launched a long-term contracting initiative, which retained over \$250 million of revenue for NU companies.
 - Performed extensive due diligence and financial evaluation of manufacturing customers business environment.
 - Launched technology based programs to increase electric utilization by large customers.
 - Re-initiated NU's economic development function.

Professional Experience – cont'd.

- **Manager, Strategic Analysis & Long Term Resource Planning** 1987 - 1990
Responsible for the overall integrated resource planning and competitive positioning of the NU companies, managing the work of 5 professionals.
 - Led the company's diversification activities in establishing NU's IPP development subsidiary and acquiring HEC Inc., an engineering services company.
 - Conducted competitive evaluations as part of the acquisition of PSNH by NU.

EMPLOYMENT HISTORY

La Capra Associates, Inc. <i>Managing Consultant</i>	Boston, MA 2006 - Present
Direct Energy North America <i>Independent Consultant</i>	Stamford, CT 2005 - 2006
Cambridge Energy Research Associates <i>Associate Director, North American Electric Power</i> <i>Eastern North American Energy Service Principal</i>	Cambridge, MA 2001 – February 2005
Northeast Utilities <i>Director, Retail Business Strategy - Select Energy</i> <i>Managing Director, Marketing - Select Energy</i>	Berlin, CT 1997 – 2000
<i>Director, Market Pricing & Policy</i>	1995 – 1997
<i>Manager, Market Analysis</i>	1990 – 1995
<i>Manager, Strategic Analysis & Long Term Resource Planning</i>	1987 – 1990
<i>Held various positions within the Capacity Planning Department</i>	1981 – 1987
United Technologies <i>Analytical Engineer – International Fuel Cells/Pratt & Whitney Aircraft</i>	Hartford, CT 1977 – 1981

EDUCATION

University of Connecticut <i>Masters of Business Administration</i>	Storrs, CT 1987
Rensselaer Polytechnic Institute -- HGC <i>M.S., Mechanical Engineering</i>	Troy, NY 1982
Cooper Union <i>B.E., Mechanical Engineering</i> <i>Elected to Pi Tau Sigma - Mechanical Engineering Honor Fraternity</i>	New York, NY 1977

PROFESSIONAL ACHIEVEMENTS

- Recipient, **1998 Northeast Utilities Chairman's Award** for innovation in developing offerings and negotiating with large aggregation groups
- Recipient, **1996 Northeast Utilities Chairman's Award and 1996 Retail Business Group's President's Award** for the role in leading efforts in the Retail Competition Pilot in New Hampshire
- Recipient, **Northeast Utilities 1994 Retail Business Group's President's Award** for developing and successfully implementing special utility contracting efforts,
- Licensed **Professional Engineer** - State of Connecticut
- Appointed to the **Electric Power Research Institute (EPRI)** Industrial Business Unit Council
- Participation in the Energy Committee of the Manufacturer's Alliance of Connecticut, Inc.
- Past participation in NEPOOL Committees
- Member - The Association of Energy Engineers
- Speaking Experience includes:
 - **US Chamber Of Commerce Satellite Seminar** Series on Deregulation (tape available)
 - Massachusetts HEFA sponsored conference on '**Organizing Energy Buying Groups**'
 - INFOCAST Seminars on '**Negotiating Power Contracts**'
 - Interviewed on national syndicated news show '**First Business**' on energy deregulation
 - Author of the paper '**Fulfilling on the Promises of Deregulation**'

Exhibit JGA-2: Referenced Data Requests	
AG 2-2 Att. 1	CONFIDENTIAL DR Response, with Attachment
AG 2-9a and Att.	DR Response, with excerpts from the Attachment
AG 2-46d and Att.	CONFIDENTIAL DR Response, with Attachment
AG 7-5	DR Response
AG 7-9	DR Response
AG 7-11	DR Response
AG 10-3 Att.	DR Response, with Attachment
AG 10-7 Att.	DR Response, with Attachment
AG 12-1	DR Response
AG 12-13	DR Response
AG 17-4	DR Response
AG 17-14	DR Response
AG 19-3	DR Response
AG 19-4	DR Response
AG 20-2 Atts.	CONFIDENTIAL DR Response, with excerpts from Att. 1 Supplement
AG 20-3	DR Response
AG 20-4	DR Response
AG 22-1 Att. 3	CONFIDENTIAL DR Response, with Att.
OCC 1-15	DR Response
OCC 1-31 Att.	CONFIDENTIAL DR Response, with Att.
OCC 3-1	DR Response
OCC 3-3 Att.	CONFIDENTIAL DR Response, with Att.
OCC 5-12	DR Response

AG 2-2_Att. 1

CONFIDENTIAL

Attorney General of Oklahoma
2nd Set of Data Request to OG&E
Cause No. PUD 200700012

- 2-9 **In reference to Mr. Langston's Direct Testimony at 5, lines 29-31, and Exhibit JBL-2, please provide a copy of all workpapers that currently support the incremental capacity needs presented, including but not limited to:**
- a. **A copy of the Company's most recent load forecast, including all related workpapers and assumptions;**
 - b. **The current forecast of annual and cumulative capacity savings from demand-side programs;**
 - c. **The current forecast of capacity contributions from existing generating capacity;**
 - d. **Etc.**

- Response*: a. A copy of OG&E's most current load forecast is attached as AG 2-9a_Att.
- b. Please see Section III.A.5 beginning on Page III-6 of OG&E's IRP.
 - c. Please see Table II-8 on Page II-14 of OG&E's IRP.
 - d. Do not understand this request.

Response provided by:	<u>Jesse Langston</u>
Response provided on:	<u>February 19, 2007</u>
Contact & Phone No:	<u>Bob Koenig 553-3358</u>

*By responding to these Data Requests, OG&E is not indicating that the provided information is relevant or material and OG&E is not waiving any objection as to relevance or materiality or confidentiality of the information or documents provided or the admissibility of such information or documents in this or in any other proceeding.

Draft Final Report

OG&E 2006 Load Forecast

Prepared for:
OG&E Electric Services
Customer Programs and Product Development

July 21, 2006



Raising the bar in analytics™

Table 7. 2006 Load Responsibility Forecast

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Demand (MW)												
FERC Load (without losses)												
MUNICIPAL	11.0	11.3	11.4	11.5	11.6	11.7	11.9	12.0	12.1	12.2	12.4	12.5
COOPERATIVE	219.9	224.8	219.7	226.5	233.3	240.2	247.0	253.8	260.6	267.5	274.3	281.1
SPA	32.9	32.7	32.9	33.2	33.5	33.8	34.0	34.3	34.6	34.9	35.1	35.4
OMPA PSA	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
MEAM & MDEA	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Total FERC Load (w/o losses)	298.7	303.8	299.0	306.2	313.4	320.7	327.9	335.1	342.3	349.6	356.8	364.0
Losses	25.8	26.3	25.9	26.5	27.1	27.7	28.4	29.0	29.6	30.2	30.9	31.5
Total FERC Load (losses added)	324.6	330.1	324.9	332.7	340.5	348.4	356.2	364.1	372.0	379.8	387.7	395.5
Percentage Change in Total FERC Load		1.70%	-1.58%	2.43%	2.36%	2.31%	2.26%	2.21%	2.16%	2.11%	2.07%	2.03%
Total Retail Load (with losses)	5,586	5,661	5,747	5,854	5,959	6,057	6,152	6,241	6,347	6,468	6,604	6,723
Percentage Change in Total Retail Load		1.34%	1.51%	1.86%	1.80%	1.66%	1.57%	1.44%	1.70%	1.92%	2.10%	1.79%
Load Responsibility (with losses)												
Load Responsibility = Total Retail Load + FERC, Losses Added (includes curtailable load)	5,911	5,991	6,071	6,186	6,299	6,406	6,509	6,605	6,719	6,848	6,992	7,118
Percentage Change in Load Responsibility		1.36%	1.34%	1.89%	1.83%	1.69%	1.60%	1.48%	1.72%	1.93%	2.10%	1.81%
Load Factor												
Load Responsibility = Total Retail Load + FERC, Losses Added	5,911	5,991	6,071	6,186	6,299	6,406	6,509	6,605	6,719	6,848	6,992	7,118
Total Retail Sales + FERC Losses Added (See Table III.5)	28,006,683	28,414,046	28,894,998	29,536,357	30,169,160	30,767,682	31,345,766	31,887,831	32,532,137	33,268,860	34,090,036	34,813,417
Load Factor	54.09%	54.14%	54.33%	54.50%	54.67%	54.83%	54.98%	55.11%	55.28%	55.46%	55.66%	55.83%

Table 11. Energy Forecast Accounting for Changes in Wholesale Load

Energy (MWH)	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
FERC Sales (without losses)												
MUNICIPAL	40,410	40,307	40,628	40,950	41,271	41,592	41,913	42,235	42,556	42,877	43,199	43,520
COOPERATIVE	1,029,400	1,025,280	1,023,980	1,057,682	1,091,385	1,125,087	1,158,789	1,192,491	1,226,193	1,259,895	1,293,597	1,327,299
SPA	136,643	140,497	142,094	143,690	145,286	146,883	148,479	150,076	151,672	153,269	154,865	156,461
OMPA PSA	210,775	219,000	219,000	219,000	219,000	219,000	219,000	219,000	219,000	219,000	219,000	219,000
MDEA	79,650	61,320	61,320	61,320	61,320	61,320	61,320	61,320	61,320	61,320	61,320	61,320
Total FERC Sales	1,496,878	1,486,403	1,487,022	1,522,642	1,558,262	1,593,882	1,629,502	1,665,122	1,700,741	1,736,361	1,771,981	1,807,601
Growth Rate in FERC sales		-0.70%	0.04%	2.40%	2.34%	2.29%	2.23%	2.19%	2.14%	2.09%	2.05%	2.01%
Retail Sales (without losses)												
Residential	8,590,757	8,705,441	8,848,495	9,046,905	9,252,710	9,473,795	9,675,980	9,866,633	10,070,359	10,292,560	10,511,246	10,750,927
Commercial	6,067,689	6,210,060	6,338,937	6,502,485	6,669,157	6,844,391	7,004,346	7,155,348	7,316,570	7,492,454	7,670,253	7,864,277
Industrial	4,720,849	4,724,071	4,812,168	4,929,234	5,044,651	5,165,259	5,280,621	5,399,832	5,534,583	5,686,038	5,865,712	6,061,894
Industrial Petroleum	2,535,936	2,584,344	2,600,832	2,603,059	2,589,020	2,508,170	2,455,300	2,384,253	2,361,780	2,367,690	2,426,418	2,335,256
Total Industrial	7,256,785	7,308,415	7,413,000	7,532,293	7,633,672	7,673,429	7,735,921	7,784,084	7,896,363	8,053,728	8,292,130	8,397,150
Public Authority and Street Lighting	2,835,953	2,919,527	2,993,145	3,077,360	3,160,951	3,250,193	3,331,726	3,414,314	3,505,317	3,604,710	3,703,814	3,807,428
Total Retail Sales	24,751,185	25,143,443	25,593,576	26,169,043	26,716,490	27,241,809	27,747,974	28,220,380	28,788,609	29,443,452	30,177,444	30,819,782
Growth Rate in Retail Sales		1.58%	1.79%	2.21%	2.13%	1.97%	1.86%	1.70%	2.01%	2.27%	2.49%	2.13%
Total MWH Sales (with losses)												
Total Retail Sales + FERC	26,248,063	26,629,846	27,090,598	27,681,684	28,274,751	28,835,691	29,377,475	29,885,502	30,489,351	31,179,813	31,949,425	32,627,382
Losses (.0718)	1,758,620	1,784,200	1,814,400	1,854,673	1,894,408	1,931,991	1,968,291	2,002,329	2,042,786	2,089,047	2,140,611	2,186,035
Total Retail Sales + FERC, Losses Added	28,006,683	28,414,046	28,894,998	29,536,357	30,169,160	30,767,682	31,345,766	31,887,831	32,532,137	33,268,860	34,090,036	34,813,417
Growth Rate in Total Sales		1.45%	1.69%	2.22%	2.14%	1.98%	1.88%	1.73%	2.02%	2.26%	2.47%	2.12%

AG 2-46d_Att.

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**ATTORNEY GENERAL'S SEVENTH SET OF DATA REQUESTS TO PUBLIC
SERVICE COMPANY OF OKLAHOMA**

Question No. 7-5:

Please state which if any bids received and evaluated by PSO in the RFP process included any requirements for prior regulatory approval of including CWIP in rate base?

Response No. 7-5:

None of the proposals specifically required regulatory approval of CWIP in rate base.

Preparer: Steven Fate

Title: System Liaison Manager

BEFORE THE CORPORATION COMMISSION OF THE STATE OF OKLAHOMA

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ATTORNEY GENERAL'S SEVENTH SET OF DATA REQUESTS TO PUBLIC SERVICE COMPANY OF OKLAHOMA

Question No. 7-9:

Please compare PSO's currently anticipated installed capital cost for Red Rock to the capital cost used in the RFP evaluation process. Provide the total cost in millions of dollars and dollars per KW year.

Response No. 7-9:

The information requested herein is confidential in nature and is provided under the terms of the Protective Order entered in this docket.

The installed capital cost evaluated in the RFP process was \$806.9 million. The current estimated installed cost is \$903.5 million. Based on the net capacity contained in the proposal the unit cost of the project was \$1,820/kW. Since the net capacity of the current design has not been established, the dollars per kW calculation can not be performed.

Preparer: Steven Fate

Title: System Liaison Manager

Attorney General of Oklahoma
7th Set of Data Request to OG&E
Cause No. PUD 200700012

- 7-11 **In reference to Mr. Langston's Direct Testimony at 8 regarding the factors driving OG&E's need for incremental capacity,**
- (a) **please state whether OG&E considered the impact on system reserve requirements of the size of the capacity addition in the selection of the 950 MW Red Rock facility, and if so,**
 - (b) **please provide the analyses of incremental system reserve requirements that would result from the introduction of this facility to the local transmission grid.**
 - (c) **if OG&E did not consider the potential implications on system reserve requirements, is it possible that SPP will identify additional reserve capacity as needed to support the Red Rock facility.**

- Response*: (a) Yes.
- (b) No analysis was needed to determine that the introduction of Red Rock into the SPP will not affect system reserve requirements. OG&E complies with SPP Criteria for reserve requirements.
 - (c) Not applicable.

Response provided by: Jesse Langston
Response provided on: February 28, 2007
Contact & Phone No: Bob Koenig 553-3358

*By responding to these Data Requests, OG&E is not indicating that the provided information is relevant or material and OG&E is not waiving any objection as to relevance or materiality or confidentiality of the information or documents provided or the admissibility of such information or documents in this or in any other proceeding.

Attorney General of Oklahoma
10th Set of Data Request to OG&E
Cause No. PUD 200700012

10-3 Please provide OG&E's current projections (in \$2006) of the (a) levelized carrying charge (per kWh) and (b) all-in levelized cost (per kWh) for the Red Rock facility; and (c) the spreadsheets (in a machine-readable format) and workpapers that support these calculations.

Response*: (a) The levelized carrying charge per kWh for Red Rock is \$0.05823.
(b) The all-in levelized cost per kWh for Red Rock is \$0.01572.
(c) See attachment AG 10-3_Att.

Note: After correspondence with a consultant for the Attorney General's Office, it was determined that the requested response would be performed with nominal, undiscounted dollars. Please see the attached spreadsheet for specifics on the calculation.

Response provided by: Chuck Walworth
Response provided on: April 2, 2007
Contact & Phone No: Bob Koenig 553-3358

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	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
\$	585,278	\$ 562,983	\$ 540,691	\$ 518,396	\$ 496,104	\$ 473,809	\$ 451,517	\$ 429,222	\$ 406,930	\$ 384,635	\$ 362,343	\$ 340,048	\$ 317,756	\$ 302,165	\$ 293,278	\$ 284,391
\$	72,231	\$ 69,479	\$ 66,728	\$ 63,976	\$ 61,225	\$ 58,474	\$ 55,723	\$ 52,971	\$ 50,220	\$ 47,469	\$ 44,718	\$ 41,966	\$ 39,215	\$ 37,291	\$ 36,194	\$ 35,097
	14,351	14,351	14,351	14,351	14,351	14,351	14,351	14,351	14,351	14,351	14,351	14,351	14,351	14,351	14,351	14,351
\$	86,581	\$ 83,830	\$ 81,079	\$ 78,327	\$ 75,576	\$ 72,825	\$ 70,073	\$ 67,322	\$ 64,571	\$ 61,819	\$ 59,068	\$ 56,317	\$ 53,566	\$ 51,642	\$ 50,545	\$ 49,448
\$	13,313	\$ 13,608	\$ 13,948	\$ 14,297	\$ 14,695	\$ 15,021	\$ 15,396	\$ 15,781	\$ 16,221	\$ 16,580	\$ 16,995	\$ 17,420	\$ 17,905	\$ 18,302	\$ 18,759	\$ 19,228
	4,670	4,750	4,884	4,964	5,072	5,234	5,352	5,437	5,432	5,689	5,871	5,972	6,083	6,323	6,449	6,686
	36,439	37,032	38,548	39,688	40,517	41,819	42,835	44,126	44,673	47,436	49,608	50,551	52,566	55,304	57,040	59,823
	9,683	9,477	9,271	9,065	8,859	8,653	8,447	8,241	8,035	7,830	7,624	7,418	7,212	7,006	6,800	6,594
\$	64,105	\$ 64,867	\$ 66,651	\$ 68,014	\$ 69,143	\$ 70,727	\$ 72,030	\$ 73,585	\$ 74,361	\$ 77,535	\$ 80,097	\$ 81,360	\$ 83,765	\$ 86,934	\$ 89,048	\$ 92,330
\$	150,686	\$ 148,697	\$ 147,730	\$ 146,341	\$ 144,719	\$ 143,552	\$ 142,104	\$ 140,907	\$ 138,932	\$ 139,355	\$ 139,166	\$ 137,677	\$ 137,331	\$ 138,575	\$ 139,592	\$ 141,778
2,754	2,733	2,742	2,718	2,710	2,729	2,722	2,698	2,629	2,687	2,705	2,705	2,684	2,667	2,705	2,692	2,723

**Red Rock: Calculation of Average Monthly Investment
Immediate Recovery Rider**
in thousand dollars

	(1) Monthly Expenditures	(2) Cumulative Investment	(3) Weighting in Months	(1 x 3) Weighted Expenditures	(4) Wtd. Avg Rate Base
2006 Jan	-	-	11.5	-	
2006 Feb	-	-	10.5	-	
2006 Mar	-	-	9.5	-	
2006 Apr	-	-	8.5	-	
2006 May	-	-	7.5	-	
2006 Jun	-	-	6.5	-	
2006 Jul	55	55	5.5	25	
2006 Aug	55	111	4.5	21	
2006 Sep	84	194	3.5	24	
2006 Oct	83	278	2.5	17	
2006 Nov	4,704	4,982	1.5	588	
2006 Dec	1,788	6,770	0.5	75	750
2007 Jan	3,707	10,477	6	1,853	
2007 Feb	4,785	15,261	6	2,392	
2007 Mar	3,902	19,164	6	1,951	
2007 Apr	3,504	22,668	6	1,752	
2007 May	3,516	26,184	6	1,758	
2007 Jun	3,668	29,852	6	1,834	
2007 Jul	5,482	30,246	393	393	
2007 Aug	3,703	35,728	5.5	2,512	Assume rider starts Jul 1 2007
2007 Sep	3,781	39,430	4.5	1,389	
2007 Oct	15,745	43,212	3.5	1,103	
2007 Nov	16,745	58,957	2.5	3,280	
2007 Dec	17,352	75,702	1.5	2,093	
2008 Jan	17,769	93,055	0.5	723	
2008 Feb	20,165	110,824	11.5	17,029	
2008 Mar	22,653	130,989	10.5	17,644	
2008 Apr	22,509	153,641	9.5	17,933	
2008 May	22,810	176,150	8.5	15,944	
2008 Jun	22,688	198,959	7.5	14,256	
2008 Jul	22,905	221,647	6.5	12,289	
2008 Aug	23,600	244,552	5.5	10,498	
2008 Sep	23,688	268,153	4.5	8,850	
2008 Oct	24,931	291,841	3.5	6,909	
2008 Nov	25,384	316,772	2.5	5,194	
2008 Dec	29,703	342,155	1.5	3,173	
2009 Jan	30,697	371,858	0.5	1,238	
2009 Feb	31,057	402,555	11.5	29,418	
2009 Mar	30,315	433,612	10.5	27,175	
2009 Apr	28,303	463,926	9.5	23,999	
		492,230	8.5	20,048	
					224,012

Column (4) is the sum of weighted expenditures plus the full amount spent in the previous year

Weighting on these months is 6 because revenue will be earned for 6 months of 2007

Assume rider starts Jul 1 2007

26,420 includes 1/2 2006 balance because revenue will be earned for 6 months of 2007

in thousand dollars

	(1) Monthly Expenditures	(2) Cumulative Investment	(3) Weighting in Months	(1 x 3) Weighted Expenditures	(4) Wtd. Avg Rate Base
2009 May	26,602	518,832	7.5	16,626	
2009 Jun	24,563	543,395	6.5	13,305	
2009 Jul	23,385	566,780	5.5	10,718	
2009 Aug	21,855	588,634	4.5	8,195	
2009 Sep	20,183	608,817	3.5	5,887	
2009 Oct	18,287	627,104	2.5	3,810	
2009 Nov	16,526	643,631	1.5	2,066	
2009 Dec	13,899	657,529	0.5	579	533,684
2010 Jan	12,863	670,392	11.5	12,327	
2010 Feb	12,018	682,411	10.5	10,516	
2010 Mar	10,752	693,163	9.5	8,512	
2010 Apr	9,489	702,651	8.5	6,721	
2010 May	8,463	711,114	7.5	5,289	
2010 Jun	7,598	718,712	6.5	4,116	
2010 Jul	6,843	725,555	5.5	3,136	
2010 Aug	6,245	731,800	4.5	2,342	
2010 Sep	5,885	737,685	3.5	1,716	
2010 Oct	5,542	743,227	2.5	1,155	
2010 Nov	5,212	748,439	1.5	652	
2010 Dec	6,745	755,185	0.5	281	714,292
2011 Jan	9,908	765,092	11.5	9,495	
2011 Feb	9,660	774,752	10.5	8,452	
2011 Mar	5,667	780,419	9.5	4,486	
2011 Apr	3,206	783,625	8.5	2,271	
2011 May	5,660	789,285	7.5	3,538	
2011 Jun	-	789,285	6.5	-	
2011 Jul	-	789,285	5.5	-	
2011 Aug	-	789,285	4.5	-	
2011 Sep	-	789,285	3.5	-	
2011 Oct	-	789,285	2.5	-	
2011 Nov	-	789,285	1.5	-	
2011 Dec	-	789,285	0.5	-	783,427

788,892

dollars in thousands

Year	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Tax dep rate	3.75%	7.22%	6.68%	6.18%	5.71%	5.29%	4.89%	4.52%	4.46%	4.46%	4.46%	4.46%	4.46%	4.46%
Tax depreciation	29,583	56,950	52,674	48,730	45,069	41,693	38,561	35,674	35,200	35,192	35,200	35,192	35,200	35,192
Book depreciation	14,343	14,343	14,343	14,343	14,343	14,343	14,343	14,343	14,343	14,343	14,343	14,343	14,343	14,343
Difference	15,240	42,607	38,331	34,386	30,726	27,349	24,218	21,330	20,857	20,849	20,857	20,849	20,857	20,849
Tax benefit (@ 38.09%)	5,805	16,229	14,600	13,098	11,703	10,417	9,224	8,125	7,944	7,941	7,944	7,941	7,944	7,941
Accumulated balance	5,805	22,034	36,634	49,732	61,435	71,853	81,077	89,202	97,146	105,088	113,032	120,973	128,918	136,859
AFUDC book depreciation	7	7	7	7	7	7	7	7	7	7	7	7	7	7
Beg rate base	789,285	769,130	738,550	709,599	682,151	656,097	631,329	607,754	585,278	562,983	540,691	518,396	496,104	473,809
Less prior year book depreciation	(14,351)	(14,351)	(14,351)	(14,351)	(14,351)	(14,351)	(14,351)	(14,351)	(14,351)	(14,351)	(14,351)	(14,351)	(14,351)	(14,351)
Less def income tax	(5,805)	(16,229)	(14,600)	(13,098)	(11,703)	(10,417)	(9,224)	(8,125)	(7,944)	(7,941)	(7,944)	(7,941)	(7,944)	(7,941)
Ending rate base	769,130	738,550	709,599	682,151	656,097	631,329	607,754	585,278	562,983	540,691	518,396	496,104	473,809	451,517
in 2006 dollars														
Fixed O&M	9,422	9,396	9,396	9,396	9,422	9,396	9,396	9,396	9,422	9,396	9,396	9,396	9,422	9,396
Variable O&M	3,307	3,288	3,276	3,274	3,287	3,268	3,284	3,288	3,305	3,280	3,290	3,262	3,252	3,274
Fuel	24,896	25,074	25,416	25,692	25,328	24,819	24,798	25,243	25,789	25,569	25,967	26,083	25,978	26,159
in nominal dollars														
Fixed O&M	10,927	11,169	11,448	11,734	12,061	12,328	12,637	12,952	13,313	13,608	13,948	14,297	14,695	15,021
Variable O&M	3,835	3,908	3,991	4,089	4,208	4,288	4,417	4,533	4,670	4,750	4,884	4,964	5,072	5,234
Fuel	28,872	29,805	30,967	32,086	32,422	32,565	33,351	34,798	36,439	37,032	38,548	39,688	40,517	41,819

	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
	4.46%	4.46%	4.46%	4.46%	4.46%	4.46%	2.23%										
	35,200	35,192	35,200	35,192	35,200	35,192	17,600										
	14,343	14,343	14,343	14,343	14,343	14,343	14,343	14,343	14,343	14,343	14,343	14,343	14,343	14,343	14,343	14,343	14,343
	20,857	20,849	20,857	20,849	20,857	20,849	3,257	14,343	14,343	14,343	14,343	14,343	14,343	14,343	14,343	14,343	14,343
	7,944	7,941	7,944	7,941	7,944	7,941	1,240	(5,463)	(5,463)	(5,463)	(5,463)	(5,463)	(5,463)	(5,463)	(5,463)	(5,463)	(5,463)
	144,803	152,745	160,689	168,631	176,575	184,516	185,757	180,293	174,830	169,366	163,903	158,440	152,976	147,513	142,049	136,586	131,122
7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
	451,517	429,222	406,930	384,635	362,343	340,048	317,756	302,165	293,278	284,391	275,503	266,616	257,729	248,842	239,955	231,067	222,180
	(14,351)	(14,351)	(14,351)	(14,351)	(14,351)	(14,351)	(14,351)	(14,351)	(14,351)	(14,351)	(14,351)	(14,351)	(14,351)	(14,351)	(14,351)	(14,351)	(14,351)
	(7,944)	(7,941)	(7,944)	(7,941)	(7,944)	(7,941)	(1,240)	5,463	5,463	5,463	5,463	5,463	5,463	5,463	5,463	5,463	5,463
	429,222	406,930	384,635	362,343	340,048	317,756	302,165	293,278	284,391	275,503	266,616	257,729	248,842	239,955	231,067	222,180	213,293
	9,396	9,396	9,422	9,396	9,396	9,396	9,422	9,396	9,396	9,396	9,422	9,403	9,403	9,403	9,403	9,403	9,403
	3,266	3,237	3,155	3,224	3,246	3,221	3,201	3,246	3,230	3,267	3,229	3,258	3,258	3,258	3,258	3,258	3,258
	26,141	26,272	25,949	26,882	27,427	27,267	27,662	28,393	28,570	29,233	29,226	26,393	26,393	26,393	26,393	26,393	26,393
	15,396	15,781	16,221	16,580	16,995	17,420	17,905	18,302	18,759	19,228	19,763	20,217	20,723	21,241	21,772	22,316	22,874
	5,352	5,437	5,432	5,689	5,871	5,972	6,083	6,323	6,449	6,686	6,773	7,005	7,180	7,360	7,544	7,733	7,926
	42,835	44,126	44,673	47,436	49,608	50,551	52,566	55,304	57,040	59,823	61,304	56,746	58,164	59,619	61,109	62,637	64,203

	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059
	14,343	14,343	14,343	14,343	14,343	14,343	14,343	14,343	14,343	14,343	14,343	14,343	14,343	14,343	14,343	14,343	14,343
	(14,343)	(14,343)	(14,343)	(14,343)	(14,343)	(14,343)	(14,343)	(14,343)	(14,343)	(14,343)	(14,343)	(14,343)	(14,343)	(14,343)	(14,343)	(14,343)	(14,343)
	(5,463)	(5,463)	(5,463)	(5,463)	(5,463)	(5,463)	(5,463)	(5,463)	(5,463)	(5,463)	(5,463)	(5,463)	(5,463)	(5,463)	(5,463)	(5,463)	(5,463)
	125,659	120,196	114,732	109,269	103,805	98,342	92,878	87,415	81,952	76,488	71,025	65,561	60,098	54,634	49,171	43,707	38,244
7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
213,293	204,406	195,519	186,631	177,744	168,857	159,970	151,082	142,195	133,308	124,421	115,534	106,646	97,759	88,872	79,985	71,098	62,210
(14,351)	(14,351)	(14,351)	(14,351)	(14,351)	(14,351)	(14,351)	(14,351)	(14,351)	(14,351)	(14,351)	(14,351)	(14,351)	(14,351)	(14,351)	(14,351)	(14,351)	(14,351)
5,463	5,463	5,463	5,463	5,463	5,463	5,463	5,463	5,463	5,463	5,463	5,463	5,463	5,463	5,463	5,463	5,463	5,463
204,406	195,519	186,631	177,744	168,857	159,970	151,082	142,195	133,308	124,421	115,534	106,646	97,759	88,872	79,985	71,098	62,210	
9,403	9,403	9,403	9,403	9,403	9,403	9,403	9,403	9,403	9,403	9,403	9,403	9,403	9,403	9,403	9,403	9,403	9,403
3,258	3,258	3,258	3,258	3,258	3,258	3,258	3,258	3,258	3,258	3,258	3,258	3,258	3,258	3,258	3,258	3,258	3,258
26,393	26,393	26,393	26,393	26,393	26,393	26,393	26,393	26,393	26,393	26,393	26,393	26,393	26,393	26,393	26,393	26,393	26,393
23,446	24,032	24,633	25,248	25,880	26,527	27,190	27,870	28,566	29,280	30,012	30,763	31,532	32,320	33,128	33,956	34,805	35,675
8,124	8,327	8,535	8,749	8,967	9,192	9,421	9,657	9,898	10,146	10,399	10,659	10,926	11,199	11,479	11,766	12,060	12,360
65,808	67,453	69,139	70,868	72,639	74,455	76,317	78,225	80,180	82,185	84,239	86,345	88,504	90,717	92,985	95,309	97,692	100,130

	2060	2061	2062	2063	2064	2065	2066
	14,343	14,343	14,343	14,343	14,343	14,343	14,343
	(14,343)	(14,343)	(14,343)	(14,343)	(14,343)	(14,343)	(14,343)
	(5,463)	(5,463)	(5,463)	(5,463)	(5,463)	(5,463)	(5,463)
	32,781	27,317	21,854	16,390	10,927	5,463	0
7	7	7	7	7	7	7	7
	62,210	53,323	44,436	35,549	26,662	17,774	8,887
	(14,351)	(14,351)	(14,351)	(14,351)	(14,351)	(14,351)	(14,351)
	5,463	5,463	5,463	5,463	5,463	5,463	5,463
	53,323	44,436	35,549	26,662	17,774	8,887	-
	9,403	9,403	9,403	9,403	9,403	9,403	9,403
	3,258	3,258	3,258	3,258	3,258	3,258	3,258
	26,393	26,393	26,393	26,393	26,393	26,393	26,393
	35,675	36,567	37,481	38,418	39,379	40,363	41,372
	12,362	12,671	12,987	13,312	13,645	13,986	14,336
	100,134	102,638	105,204	107,834	110,530	113,293	116,125

Attorney General of Oklahoma
10th Set of Data Request to OG&E
Cause No. PUD 200700012

10-7 **In reference to the September 1, 2006 Draft IRP at ES-3, please provide a copy of the “preliminary analysis” of the value of DSM, and any related initial reports, as prepared by Global Energy.**

Response*: The preliminary analysis was a part of overall IRP analysis and consisted of a capacity expansion strategy allowing for 20MW of no cost DSM added each year for 10 years. The 20MW of DSM modeled could only be used to offset capacity margin needs and was not allowed to offset any energy needs. The difference in total Net Present Value of Revenue Requirements between the base case and this DSM case resulted in a preliminary estimate of DSM capacity value. Please see attachment **AG 10-7_Att** for a summary of the results.

Global Energy has not prepared any reports.

Response provided by:	<u>Jesse Langston</u>
Response provided on:	<u>April 2, 2007</u>
Contact & Phone No:	<u>Bob Koenig 553-3358</u>

*By responding to these Data Requests, OG&E is not indicating that the provided information is relevant or material and OG&E is not waiving any objection as to relevance or materiality or confidentiality of the information or documents provided or the admissibility of such information or documents in this or in any other proceeding.

Attachment to OG&E's Response to Attorney General Data Request 10-7

Real 2006 thousand \$

	Base Case	20MW Annual DSM	DSM Value \$/kW	\$/kW-yr	\$/kW-mo
Levelized CapEx	\$1,766,674	\$1,607,514			
Production Cost	\$8,663,831	\$8,762,800			
Par Estimate =	\$10,430,506	\$10,370,314	\$301	\$32.23	\$2.69

Additional DSM, MW

1/1/2007	0
6/1/2007	20
6/1/2008	40
6/1/2009	60
6/1/2010	80
6/1/2011	100
6/1/2012	120
6/1/2013	140
6/1/2014	160
6/1/2015	180
6/1/2016	200

Attorney General of Oklahoma
12th Set of Data Request to OG&E
Cause No. PUD 200700012

12-1 In reference to the September 1, 2006 Draft IRP, Table II-8, please (a) state whether OG&E has conducted recent planning studies (e.g., to support the McClain acquisition) in which it assumed greater capacity contributions from DSM resources (i.e., greater than the current 127 MWs), and if so, (b) state and explain the difference between those earlier DSM assumptions and the current amount.

Response*: (a) DSM resources in Table II-8 are made up entirely of curtailable loads. Presently the capacity contributions from curtailable loads are 127 MW. Values used in past planning studies have varied both higher and lower than 127 MW.

 (b) The capacity contribution for curtailable loads is based the number of customers (and associated load) signed up for the program, as well as their expected participation if called upon. This determination is reviewed annually.

Response provided by: Jesse Langston
Response provided on: March 20, 2007
Contact & Phone No: Bob Koenig 553-3358

*By responding to these Data Requests, OG&E is not indicating that the provided information is relevant or material and OG&E is not waiving any objection as to relevance or materiality or confidentiality of the information or documents provided or the admissibility of such information or documents in this or in any other proceeding.

Attorney General of Oklahoma
12th Set of Data Request to OG&E
Cause No. PUD 200700012

12-13 (a) Has OG&E prepared an analysis of the cost-effective potential for distributed generation resources? (b) If so, please provide a copy of that analysis. (c) Please provide a forecast (through the year 2016) of foreseeable capacity and energy contributions from customer-owned generation, including that from distributed generating facilities.

Response*: (a) No.
(b) Not applicable.
(c) OG&E has no foreseeable capacity and energy contributions from customer owned generation.

Response provided by: Jesse Langston
Response provided on: March 20, 2007
Contact & Phone No: Bob Koenig 553-3358

*By responding to these Data Requests, OG&E is not indicating that the provided information is relevant or material and OG&E is not waiving any objection as to relevance or materiality or confidentiality of the information or documents provided or the admissibility of such information or documents in this or in any other proceeding.

Attorney General of Oklahoma
17th Set of Data Request to OG&E
Cause No. PUD 200700012

17-4 **In reference to the SPP Aggregate Study, please describe the nature of any transmission-related costs that may be assigned to Oklahoma customers (i.e., as a consequence of improvements deemed necessary by SPP to support Red Rock).**

Response*: Unknown at this time but OG&E expects the cost to approximate \$71 million.

Response provided by: Jesse Langston
Response provided on: April 3, 2007
Contact & Phone No: Bob Koenig 553-3358

*By responding to these Data Requests, OG&E is not indicating that the provided information is relevant or material and OG&E is not waiving any objection as to relevance or materiality or confidentiality of the information or documents provided or the admissibility of such information or documents in this or in any other proceeding.

Attorney General of Oklahoma
17th Set of Data Request to OG&E
Cause No. PUD 200700012

17-14 **Please describe whether and how the potential sale of emissions allowances is factored into the resource planning process. Please provide a copy of all documents that show how such sales are considered.**

Response*: Potential sale of emission allowances are not factored into the resource planning process.

Response provided by: Jesse Langston
Response provided on: April 3, 2007
Contact & Phone No: Bob Koenig 553-3358

*By responding to these Data Requests, OG&E is not indicating that the provided information is relevant or material and OG&E is not waiving any objection as to relevance or materiality or confidentiality of the information or documents provided or the admissibility of such information or documents in this or in any other proceeding.

Attorney General of Oklahoma
19th Set of Data Request to OG&E
Cause No. PUD 200700012

19-3 Please provide the price elasticities used, per class, in the load forecast.

Response*: The table below shows the implicit price elasticities from the 2005 and 2006 regression models, using the elasticity formula provided in response to AG 19-2.

Oklahoma Revenue Class	Price elasticity calculated at historical price and consumption averages 2005 Models	Price elasticity calculated at historical price and consumption averages 2006 Models
Residential	-0.103	-0.100
Commercial	-0.087	-0.112
Industrial	-0.030	0.007
Public Authority	-0.066	-0.066
Petroleum	-0.026	-0.020
Street Lighting	-0.007	-0.002

As noted in response to AG 19-1 part c), OG&E's prices were very stable during the historical period over which the regression models are estimated. Given the fact that OG&E's electric rates are relatively low compared to the industry as a whole, and this price stability, it is not surprising that these elasticities are quite small. Indeed, notice that the industrial price elasticity actually flipped signs in the 2006 model. Price became an insignificant model predictor in both that model, and the streetlighting model.

Response provided by: Dr. Ken Seiden
Response provided on: May 3, 2007
Contact & Phone No: Bob Koenig 553-3358

*By responding to these Data Requests, OG&E is not indicating that the provided information is relevant or material and OG&E is not waiving any objection as to relevance or materiality or confidentiality of the information or documents provided or the admissibility of such information or documents in this or in any other proceeding.

Attorney General of Oklahoma
19th Set of Data Request to OG&E
Cause No. PUD 200700012

19-4 **If prices used in the load forecast had not changed from 2007 to 2012, how much higher (in MWs or mwhs) would the projected load of the residential, commercial, public authority, and industrial customer classes be in 2012?**

Response*: If the 2007 electricity prices were held constant for the residential, commercial, public authority, and industrial customer classes through 2012 the load forecast would be lower rather than higher. The table below contains the actual 2005 load forecast for OG&E's Oklahoma service territory that was produced using price forecasts described in AG19-1, as well as the load forecast that would result from holding the 2007 prices constant in the forecast horizon. In the year 2012 Oklahoma energy sales would be minimally lower (approximately 0.5%) if prices were held constant at 2007 levels. This would translate into approximately 27 MW of reduced capacity requirements in the year 2012.

Year	Oklahoma Weather Normalized MWh (Actual Price Forecast)	Oklahoma Weather Normalized MWh (Constant 2007 Price Forecast)	MWh Difference (Actual Price Forecast - Constant 2007 Prices)
2007	22,601,181	22,601,181	-
2008	22,997,243	22,891,259	105,985
2009	23,247,235	23,182,686	64,548
2010	23,696,093	23,563,058	133,034
2011	24,011,267	23,903,867	107,400
2012	24,402,304	24,264,946	137,358

Response provided by: Jesse Langston
 Response provided on: May 3, 2007
 Contact & Phone No: Bob Koenig 553-3358

*By responding to these Data Requests, OG&E is not indicating that the provided information is relevant or material and OG&E is not waiving any objection as to relevance or materiality or confidentiality of the information or documents provided or the admissibility of such information or documents in this or in any other proceeding.

Attorney General of Oklahoma
20th Set of Data Request to OG&E
Cause No. PUD 200700012

20-2 Please rerun the CEM and/or PAR models, using the revised model(s) that incorporate the changes described in response to the preceding Data Request, so as to “update” the Capacity Expansion Strategies presented in Table IV-9 of the IRP and (other affected IRP results) for the Base Case, each of CERA Alternate Cases, and the “Low Growth” scenario (Planning Case 7).

Response*: Please see Confidential CD containing attachments AG 20-2_Att 1 through AG 20-2_Att 6 for the output results of modeling with changes, as described in response to AG Data Request 20-1, for the Base Case and each of the four scenarios based on CERA’s scenarios.

Response provided by: Jesse Langston
Response provided on: April 13, 2007
Contact & Phone No: Bob Koenig 553-3358

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AG 20-2_Att. 1

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Attorney General of Oklahoma
20th Set of Data Request to OG&E
Cause No. PUD 200700012

20-3 Please perform several other “tests” of the revised CEM and/or PAR models (as discussed in the preceding questions) as follows:

- Part 1:** As a variation to the above Base Case scenario, assume that capital costs for all new generating facilities are now 30 percent greater than the input costs to the model as were used to develop the IRP.
- Part 2:** As a variation to the above Base Case scenario, assume that OG&E’s FERC Loads total 27 MW in 2010, and beyond.
- Part 3:** As a variation to the above Base Case scenario, assume that neither the Super PC-365 facility nor any 900 MW coal-fired facility is available to the model.
- Part 4:** As a variation to the modeling run requested in Part 3, above, assume that the only facility not available is the Super PC-365 (i.e., all other coal units are available to the model(s)).

Response*: The Company filed an objection to this data request which will be heard on April 26.

Response provided by: Jesse Langston
Response provided on: April 23, 2007
Contact & Phone No: Bob Koenig 553-3358

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Attorney General of Oklahoma
20th Set of Data Request to OG&E
Cause No. PUD 200700012

20-4

Please perform the following additional runs of the revised CEM and/or PAR models (as discussed in the preceding questions) for each possible combination of the following “Scenarios” and “Constraints on Capacity Additions.”

Scenarios:

Scenario A: OG&E’s Base Case conditions from the IRP, *but with* OG&E’s 2006 Load forecast (see AG 2-9(a)) adjusted to reflect the assumption that OG&E’s FERC Loads total 27 MW in 2010 and beyond *and with* construction costs of all new facilities are increased by 30 percent *and with* current heat rate and other performance assumptions for all new facilities.

Scenario B: Scenario A, *but with* \$6.00 per MMBTU average gas prices (\$2006).

Scenario C: Scenario A, *as modified* to accommodate the “average demand forecast growth” and “average fuel prices” of CERA’s “Shades of Green” “Planning Case 3” (see Table IV-8 of the IRP).

Constraints on Capacity Additions

Part 1: Provide the results of each of Scenarios A, B and C for each of the facility types identified in Table IV-1 of the IRP (i.e., with Red Rock “in,” and all modifications necessary to conform to the cost and performance requirements of Scenario A, above).

Part 2: Provide the results of a “Red Rock ‘out’” scenario (meaning that OG&E’s share of the Red Rock facility is not available to the model to select as part of the least-cost plan), but with all other coal facilities still “in.” All other assumptions from Part 1, above, should be retained.

Part 3: Provide a “Red Rock ‘out’” scenario with other coal facilities “in,” but excluding 900 MW coal facilities (and any other facilities that would be deemed beyond OG&E’s financial capabilities) before 2016. All other assumptions from Part 1, above, should be retained.

Part 4: Provide a current view of Red Rock “out” and other coal facilities “in,” but excluding 900 MW coal facilities (and any other facilities that would be deemed beyond OG&E’s financial capabilities) before 2016 (as in Part 2, above). All other assumptions from Part 1, above, should be retained except that a scaled-back version of the Red Rock facility should be included in the modeling to reflect a 100 MW facility (e.g., it would become something of a “Super PC-

100” with the same per-unit costs as Red Rock, as updated to reflect a 30 percent construction cost escalation, updated heat rate assumptions, etc.).

NOTE: Please provide a Table that presents the results of each run of the production cost model described in AG 19-2, AG 19-3 and AG 19-4, above. This Table of results should include the following, for each year:

- a. Energy production (MWh) in total and for each unit;*
- b. Average CF for each unit;*
- c. Fuel costs in total and for each unit;*
- d. Production costs (NPVRR) in total and for each unit; and*
- e. CO2 emissions in total and for each unit (that is part of the mix prior to 2015).*

Also provide a summary of the Company’s fuel mix in each year, considering all facilities in the existing and expansion plans.

Response*: The Company filed an objection to this data request which will be heard on April 26.

Response provided by:	<u>Jesse Langston</u>
Response provided on:	<u>April 23, 2007</u>
Contact & Phone No:	<u>Bob Koenig 553-3358</u>

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AG 22-1_Att. 3

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Oklahoma Corporation Commission
1st Set of Data Request to OG&E
Cause No. PUD 200700012

1-15 Direct Testimony of Jesse B. Langston

Page 11, Lines 12-14.

- a) **Please provide workpapers in support of the expected reduction in fuel cost by \$65 million.**
- b) **Did the Company prepare a total cost comparison of a new combined cycle and coal plant? If yes, please provide a copy of such analysis. If no, then why?**

- Response*:
- a) Please see OG&E's response to Attorney General Data Request 2-17 for the workpapers in support of the expected reduction in fuel cost.
 - b) New combined cycle plants were considered as an alternative to meet OG&E's needs. Please see OG&E's IRP provided in response to Attorney General Data Request 2-1 for details of alternative planning case analysis beginning on Page IV-15.

Response provided by:	<u>Jesse Langston</u>
Response provided on:	<u>March 30, 2007</u>
Contact & Phone No:	<u>Bob Koenig 553-3358</u>

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OCC 1-31_Att.

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Oklahoma Corporation Commission
3rd Set of Data Request to OG&E
Cause No. PUD 200700012

3-1 Please refer to the response to AG 12-1

- a) Please provide the maximum interruptible /curtailable loads signed up by all customers.
- b) If the maximum amount provided above is more than 127 MW, please explain the reasons for not curtailing up to the maximum amount.
- c) Please provide the actual amounts curtailed during the years 2004, 2005 and 2006.
- d) Please indicate how much interruptible load has been excluded from the Company's load forecasts. If the excluded amount is less than 127 MW, and maximum interruptible load, please explain the reasons for not excluding 127 MW and the maximum interruptible load.
- e) Please provide a copy of all of the Company's interruptible and controllable tariffs.
- f) Please indicate whether the Company implemented other DSM programs. If yes, please provide details and loads covered by these programs. If not, please explain the reasons for not doing so.

Response*: a) The annual total interruptible/curtailable contracts signed by all customers for the years 1999 through 2005 (the analysis period for the Integrated Resource Plan) is provided below.

Year	Load Under Contract (MW) ¹
1999	164.5
2000	161.2
2001	166.5
2002	186.5
2003	187.6
2004	195.5
2005	212.6

- b) The customer has the choice to curtail or not. Consequently, OG&E does not receive 100% participation

¹ As recorded at the customer's meter

- c) There were no load curtailment events during 2004 and 2005. The following table provides the actual curtailed loads in 2006.

Season	Date	Load Curtailed (MW) ²
Winter	1/23/2006	154.4
Winter	4/13/2006	143.6
Winter	4/18/2006	155.9
Summer	10/2/2006	140.3
Summer	10/3/2006	142.3
Summer	10/4/2006	136.3
Summer	10/5/2006	137.6

- d) None. The amount of interruptible load has no relationship with load forecasting.
- e) The Company's interruptible and controllable tariffs are provided as Attachment I.
- f) Yes. In addition to the above mentioned programs, the company has implemented 18 additional DSM programs which are listed in the Draft IRP (see pages III-6 through III-13). A summary of these programs and their effect on the Company's system is listed below. This effect is incorporated in the Company's load forecast and not reflected separately.

Demand Side Management Programs

	DSM Target	Program Initiated	2005 Measurements	
			Energy Reduction Annual (MWh)	Demand Reduction Peak Period (MW)
Time of Use				
Residential	Load Shifting - Energy	1985	134.8	0.05
General Service	Load Shifting - Energy	1986	3,548.83	0.13
Public Schools - Non-Demand	Load Shifting - Energy	2006	Note 2	
Public Schools - Non-Demand - Compressed	Load Shifting - Energy	2006	Note 2	
Oil & Gas Producers	Load Shifting - Energy	1997	517.35	0.29
Power & Light	Load Shifting - Energy and Demand	1985	1950	3.54
Public Schools - Demand	Load Shifting - Energy and Demand	2006	Note 2	Note 2

² As recorded at the customer's meter

Demand Side Management Programs

	DSM Target	Program Initiated	2005 Measurements	
			Energy Reduction Annual (MWh)	Demand Reduction Peak Period (MW)
Public Schools - Demand - Compressed	Load Shifting - Energy and Demand	2006	Note 2	Note 2
Large Power & Light	Load Shifting - Energy and Demand	1994	146,913.40	13.41
Real Time Pricing (RTP) - DAP	Load Shifting - Demand	1996		39.45
Energy Star® Homes Program	Load Shape Reduction	1998	2,558	1.77
Geothermal heat pumps				
Residential	Load Shape Reduction	1997	711.60	0.89
Commercial	Load Shape Reduction	1997	1,301.20	1.63
Multi-Family	Load Shape Reduction	1997	89.60	0.11
Heat Pumps	Load Shape Reduction	1987	959.18	4.81
Home Weatherization	Load Shape Reduction	1997	\$20,000	
RateTamer	Education / Decision	2003		
Power Factor Correction	Power Quality		N/A	N/A

Response provided by: Jesse Langston
 Response provided on: April 4, 2007
 Contact & Phone No: Bob Koenig 553-3358

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OCC 3-3_Att.

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Oklahoma Corporation Commission
5th Set of Data Request to OG&E
Cause No. PUD 200700012

5-12 Please refer to Tables III-4 and III-5.

- a) Please provide the net Contract Demand for the Years 2006 and 2007.
- b) Please explain the reasons for designating Net Contract Demand and explain whether it is different from the Gross or Total Contract Demand. If the Net Contract Demand is less than the Gross or Total Contract Demands for any of the Years 1999-2007, then explain the derivation of the Net Values.
- c) Please explain the meaning of Average Performance.
- d) Please explain how much the forecasted demands in Table II-8 have been reduced to reflect the loads, which are subject to curtailment/interruption under Riders CR-1 and IR-1. If these reductions are not reflected, please explain the reasons for not doing so.

Response*: a) The net CCD (contract curtailable demand) for the years 2006 and 2007 are:

Year*	Gross Contract Demands at OGE's Generation (MW)	Net CCD at Customer's Meter (MW)
CR-1 Rider:		
2006	205.7	189.5
2007	140.8	129.7
IR-1 Rider:		
2006	12.6	11.6
2007	12.6	11.6

*Based on all active contracts as of January 1 of that year.

- b) The Net CCD is the aggregate of contract loads as measured at the customer's meter. Gross contract demand is the effect the Net CCD has on the Company's generation requirements. The difference between the two numbers is the Company's average system peak loss factor.
- c) The average performance is the actual performance during each event divided by the number of events in the year. For illustrative purposes, an example for a hypothetical year might be as follows:

Assumptions:

- Two customers have contracts for the CR-1 rider.
 - Customer1's CCD is 500 kW and
 - Customer2's CCD is 1,000 kW.
- Two events were initiated during the year:

	Did customer Perform during Event?	
	Customer1	Customer2
Event 1	No	Yes
Event 2	Yes	No

Evaluation:

	Customer1	Customer2	Actual Performance
Event 1	-	500	500
Event 2	1,000	-	1,000
Total Performance all Events (kW)			1,500
Number of Events in Year			2
Average Performance (Net CCD)			750

This example highlights the calculation of average performance.

- b) Forecasted demand is decreased by the expected participation of customers not the net CCD. OG&E's experience is that not all curtailment customers will or can provide their contracted curtailable demand (CCD) during any given event. For reliability purposes, OG&E analyzes historical performance to identify participation levels that will yield an 84% probability of participation.

Response provided by: Jesse Langston
 Response provided on: May 8, 2007
 Contact & Phone No: Bob Koenig 553-3358

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Exhibit JGA-3

**OG&E's Response to Data Request AG 20-1
Describing Recent Changes to Its CEM and PAR Models**

Attorney General of Oklahoma
20th Set of Data Request to OG&E
Cause No. PUD 200700012

20-1 **Please state whether OG&E has introduced changes to its CEM and/or PAR models (i.e., as those models were used for purpose of developing the Company's IRP) in order to address anomalies observed during the course of the March workshop discussion. For each such modeling change that has been introduced, please describe the nature of the problem that it was intended to address, and describe (in qualitative terms) how the change is expected to affect the output of the model(s).**

Response*: OG&E has introduced modeling changes to both the CEM and PAR models in response to discussions between parties at the March 13, 14 and 15 "Technical Conference". The response to AG 20-2 below provides the output of the PAR modeling. The following is a list of changes made to the model:

1. The Load Forecast was updated by using the 2006 Load Forecast, replacing the 2005 Load Forecast
2. OG&E existing unit capability was updated to reflect the 12/31/06 capability report, replacing the 12/31/06 capability report numbers.
3. Capital costs were increase by 24% for coal units (excluding Red Rock) and 17% for gas units; Red Rock costs were increased to reflect the "cap" requested by OG&E (\$758M); these steps are intended to reflect more recent construction costs and to reflect a confidence level of 94% for all three categories (non-Red Rock coal units, gas units and the Red Rock unit).
4. Capital costs for wind generation was increased from the Burns McDonnell estimate of \$1130/kW to \$1700/kW in order to reflect the more recent cost of the Centennial Wind facility
5. Unit availability was changed to allow coal units (excluding Red Rock) to be selected as early as 2011 (previously, these coal units could be picked no earlier than 2012); and the Red Rock unit was made available in 2011, 2012, or 2013 (previously Red Rock was only available to be selected in 2011 and 2012). These changes were made to reduce the impact of timing on the model selection.
6. Planning Capacity Margin was limited to a maximum of 18% (previously there was no modeling limitation). This change is designed to reflect the newly instituted SPP Market.
7. The model was adjusted to reflect the impact on existing OG&E units of the installation of environmental equipment as proposed by OG&E in its March 30, 2007 filing with ODEQ to satisfy Regional Haze requirements

8. SO₂, NO_X, Hg and CO₂ costs were added to the base case; these costs were the average of each category's respective cost in all 4 CERA scenarios.
9. The modeling was adjusted so as to require the McClain unit to be run as one unit (previously the McClain was viewed as two separate units). This change mirrors the historic and expected output of McClain.

Response provided by: Jesse Langston
Response provided on: April 13, 2007
Contact & Phone No: Bob Koenig 553-3358

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EXHIBIT JGA-4

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EXHIBIT JGA-5

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**Exhibit JGA-6
La Capra Associates View of PSO's Economic Program Impact Level
Potential for DSM**

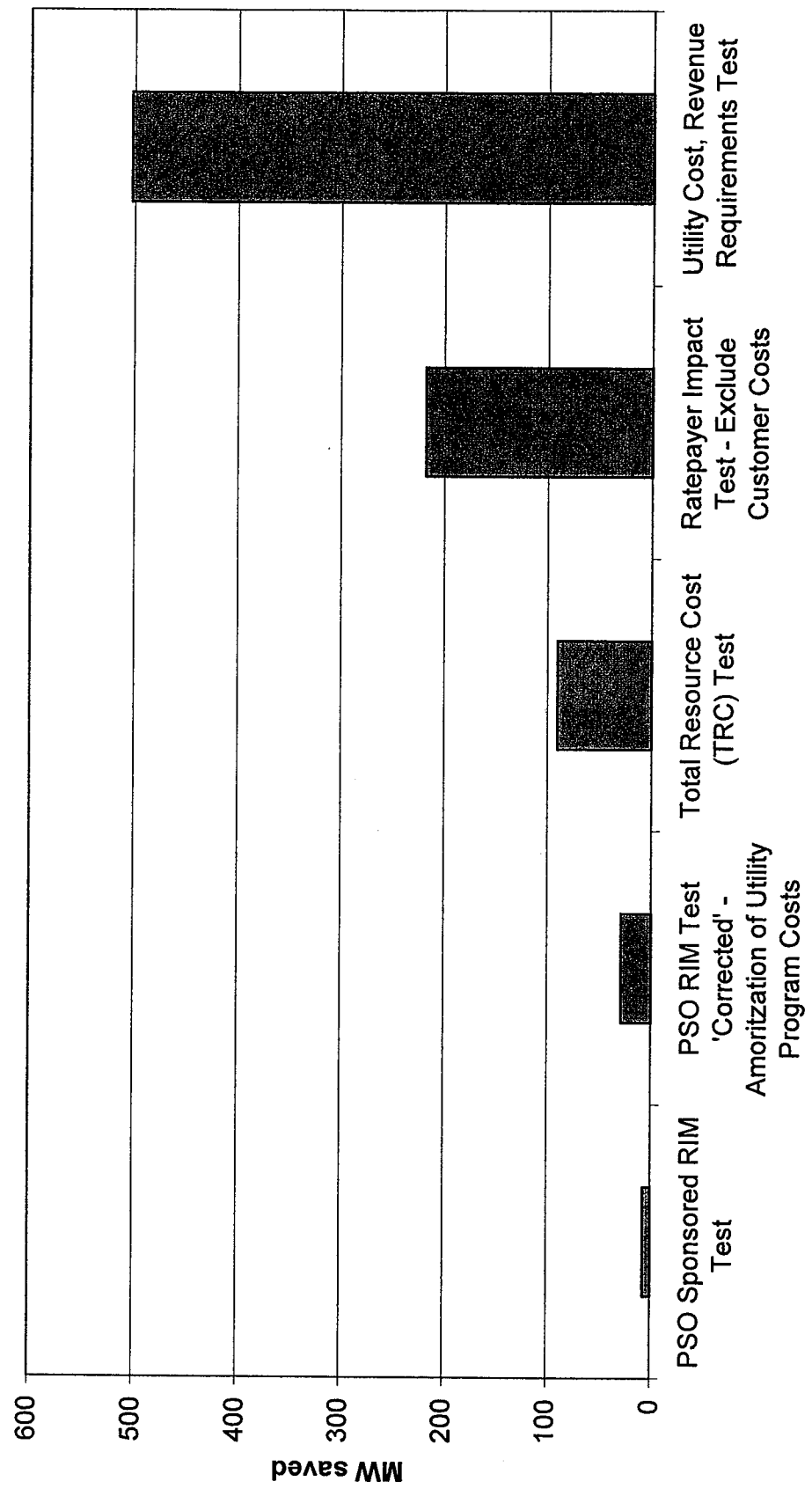


EXHIBIT JGA-7

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Exhibit JGA-9

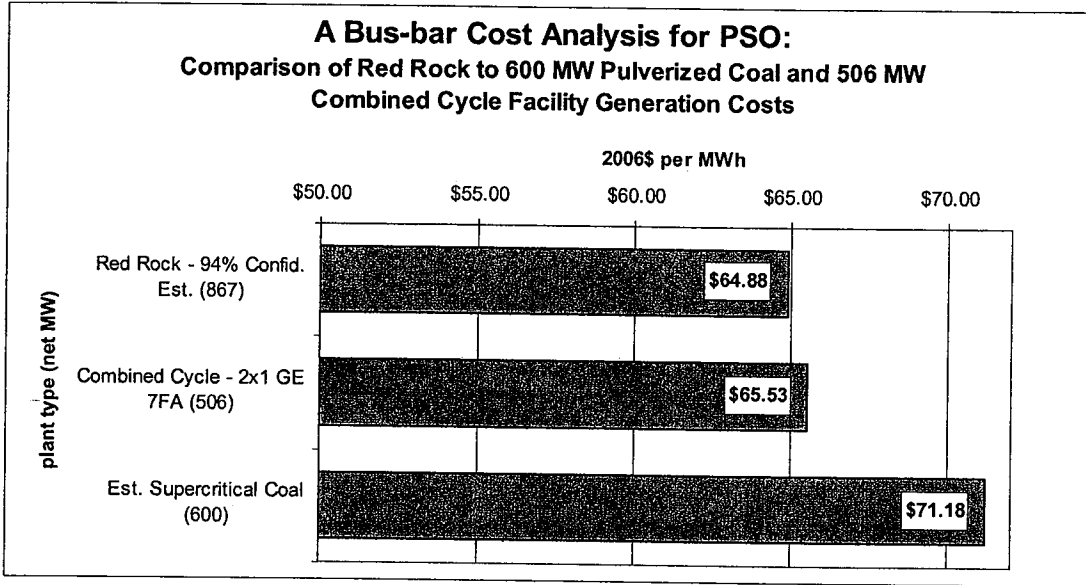


EXHIBIT JGA-10

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