

Electric City Power, Incorporated

Regular Meeting of the Board of Directors

June 4, 2007; 5:30 PM
Gibson Room, Great Falls Civic Center

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Electric City Power, Incorporated.

Regular Meeting of the Board of Directors

June 4, 2007; 5:30 PM.

Gibson Room; Great Falls Civic Center

AGENDA

Call to Order 5:30 PM
Roll Call

A. EXECUTIVE DIRECTOR REPORT

1. Highwood Station Update by SME (Introduced by John Lawton)
 - a. Project Update
 - b. Financing Update
2. Sales program update
3. Discussion of ECPI's debt obligations vis à vis taxpayer
4. Discussion of ECPI Ordinance and Rules of Operation

B. OLD BUSINESS

1. Table of ECPI rates
2. Recommendation to Great Falls City Commission RE: RES. 9648, Establishing Electric City Power utility rates through June 30, 2011, for Block One customers.

C. NEW BUSINESS

1. Accept Board Meeting Minutes from May 7, 2007

D. BOARD MEMBER REPORTS

E. COMMUNICATIONS

1. Regional and state electricity price update
2. *New York Times* article on energy demand in India
3. On-site air quality modeling at Highwood Station
4. RUS presentation

F. ADJOURN

H. NEXT BOARD MEETING

July 2, 2007

CITY OF GREAT FALLS, MONTANA
AGENDA REPORT

AGENDA # 9
DATE: May 1, 2007

ITEM Set Public Hearing on Resolution 9648, Establish Electric City Power utility rates through June 30, 2011 for Block One customers

INITIATED BY Fiscal Services and Electric City Power

ACTION REQUESTED Set the Public Hearing On Resolution 9648, for 7:00 p.m. June 5, 2007

PREPARED BY Martha Cappis, Operations Supervisor

APPROVED BY Coleen Balzarini, Fiscal Services Director

RECOMMENDATIONS:

Staff recommends the City Commission set a Public Hearing on June 5, 2007 to hear public comment on Resolution 9648, Establish Electric City Power Utility Rates through June 30, 2011.

MOTIONS: "I move the City Commission set a Public Hearing on June 5, 2007 to hear public comment on Resolution 9648, Establish Electric City Power Utility Rates through June 30, 2011."

SYNOPSIS: The City of Great Falls, in an effort to find more cost effective electrical supply, joined the Southern Montana Electrical Generation and Transmission Co-operative in the fall of 2004. On October 1, 2004, the City of Great Falls began supplying electricity to Great Falls Public Schools, the Great Falls Airport Authority, Federal Express, Great Falls Housing Authority, and Montana Air National Guard, under contracts through December 31, 2008 and to its own facilities, including the wastewater treatment plant under Veolia Water, NA, collectively referred to as "Block One Customers". This has proven to be a cost effective savings for the customers and extensions of these contracts have been requested. In October, 2006, the City Commission approved the purchase of additional power to accommodate this request. The recommended rates will extend the contracts for service through June 30, 2011. The rates for the City owned facilities have been authorized administratively and included in the budget process for FY2008. The May 2007 Northwestern Energy default price for electricity is \$55.12. The rate review process calendar is attached as exhibit A.

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RESOLUTION 9648

ESTABLISH ELECTRIC CITY POWER UTILITY RATES FROM JULY 1, 2006 THROUGH JUNE 30, 2011 FOR BLOCK ONE CUSTOMERS AFTER APPROVAL BY THE CITY COMMISSION

WHEREAS:

The City Commission of the City of Great Falls met and conducted the hearing in regular session on June 5, 2007 at the Civic Center, Great Falls, Montana, at 7:00 p.m. and did consider the cost of operating and servicing the customers of Electric City Power;

WHEREAS:

The City Commission approved the entering into an agreement with Southern Montana Electric to purchase blocks of power consisting of 5 MWh's for the term of 10/01/2004 through 12/31/2008 and 7 MWh's for the term of 01/01/2007 through 12/31/2008 and 12 MWh's for the term of 01/01/2009 through 03/31/2011; and

WHEREAS:

The City of Great Falls has previously entered into supply contracts with large and medium sized retail use customers and has been requested to continue such contracts,

NOW, THEREFORE:

The City Commission of the City of Great Falls does hereby establish Electric City Power Utility Rates as follows through June 30, 2011:

SUPPLY:

07/01/2006 – 06/30/2007	\$42.91 /MW	City, Veolia Water
07/01/2007 – 06/30/2008	\$47.21 /MW	City, Veolia Water
07/01/2008 – 12/31/2008	\$50.83 /MW	City, Veolia Water
01/01/2009 – 06/30/2009	\$51.34 /MW	Block One
07/01/2009 – 06/30/2010	\$51.85 /MW	Block One
07/01/2010 – 06/30/2011	\$52.37 /MW	Block One

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TRANSMISSION:		
04/01/2007 – 03/30/2008	\$7.402	Recalculated each March in accordance with Title 5, Chapter 20, OCCGF
ADMINISTRATIVE FEE:		
07/01/2006 – 06/30/2007	\$3.00	Per Account, Block One
07/01/2007 – 06/30/2011	3%	City, Veolia Water
07/01/2007 – 06/30/2009	\$3.00	GFPS, GFAA, Fed Ex,
		MANG, GFHA,
01/01/2009 – 06/30/2011	3%	Per Account, Block One

Passed by the Commission of the City of Great Falls, Montana, on this 5th day of June, 2007.

Dona R. Stebbins, Mayor

ATTEST:

Peggy Bourne City Clerk

(SEAL OF CITY)

State of Montana)
County of Cascade :ss
City of Great Falls)

I, Peggy Bourne, City Clerk of the City of Great Falls, Montana, do hereby certify that the foregoing Resolution 9648 was placed on its agenda and passed by the Commission of the City of Great Falls, Montana at a meeting thereof held on the 5th day of June, 2007, and approved by the Mayor of said City on the 5th day of June, 2007.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the Seal of said City this 5th day of June, 2007.

Peggy Bourne, City Clerk

(SEAL OF CITY)

Approved for legal content

City Attorney

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Exhibit A

**2007 ELECTRIC UTILITY
RATE REVIEW CALENDAR
Resolution 9648**

Set Public Hearing
Tuesday, May 1, 2007
City Commission Meeting

Presentation to ECP, Inc Board
Monday, May 7, 2007
ECP Board Meeting

Publish Public Notices
1st Notice – Friday, May 11, 2007
2nd Notice – Friday, May 18, 2007
3rd Notice – Friday, May 25, 2007

Mailed Notices
To the various electric utility customers on May 11, 2007

Public Hearing & Commission Action
Tuesday, June 5, 2007
City Commission Meeting

Electric Utility Rates & Fees Take Effect
July 1, 2007

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Electric City Power, Incorporated

JOURNAL OF BOARD PROCEEDINGS

May 7, 2007

Electric City Power, Incorporated (ECPI): Regular meeting of the Board of Directors
Great Falls Civic Center, Gibson Room

CALL TO ORDER: 5:30 PM

ROLL CALL: Directors present: Chairman Bob Pancich, George Golie, Randy Gray Bill Ryan, and Dawn Willey. Also present were the ECPI Executive Director, City Manager, Assistant City Manager, Administrative Officer and the Operations Supervisor.

EXECUTIVE DIRECTOR REPORT

Executive Director Coleen Balzarini updated the Board on remaining legislation that had not been finalized by the Montana Legislature. She reported that House Bill 25, the so-called "re-regulation" bill was passed by the House and the Senate, but had not yet been transmitted to the Governor. Devising a customer base development strategy will be more straightforward once the proposal's fate is known, she said.

Balzarini then discussed ECPI's sales strategy. She said that the work of bond counsel, bond underwriters, and consulting engineers has now been integrated to look at the current customer base mix to determine what characteristics are needed for an optimal financing. Issues such as energy demand, credit quality, and eligibility for tax exempt financing will be considered, she said. The team will also begin developing potential "green" products for ECPI customers who are interested. George Golie asked if staff was actively pursuing large customers. Ms. Balzarini responded that staff is talking with several prospective customers with individual demands in excess of four megawatts.

I. OLD BUSINESS

Development Agreement Status Report. Executive Director Balzarini reported work on the Development Agreement between the City and SME had been put on hold due to uncertainty created by House Bill 25

R.W. Beck, Phase II Tasks 1-4 approved to begin. Ms. Balzarini outlined the first four tasks of Phase II for which R.W. Beck, Inc. was authorized by the City Commission to proceed. The tasks are as follows:

1. Project transition and near term strategy consulting,
2. Project management and weekly calls,

3. Assistance to the City of Great Falls with its Marketing Plan, and
4. General assistance to the City of Great Falls

Ms. Balzarini reported that the total cost of Phase II would be up to \$400,000 and that \$181,000 was approved for the first four tasks. The cost of Beck's work will be covered by the \$2 million authorized by the City Commission and will be repaid at the time of financing or from the City's economic revolving fund.

II. NEW BUSINESS

Recommendation to Great Falls City Commission RE: RES. 9648, Establishing Electric City Power utility rates through June 30, 2011, for Block One customers. ECPI's Block one Customers were contracted through 2008. They recently signed supply contracts through 2011, and this resolution sets their rates for the additional term, Balzarini said. Chairman Bob Pancich asked which customers are in Block One. Balzarini responded that the Block One customers are: The City of Great Falls, the Great Falls Public School District, the Great Falls Housing Authority, FedEx, and the Montana Air National Guard.

Ms. Balzarini also reported that the previous administrative fee of \$3.00 per account has been changed to a percentage of each account's energy charge to reflect the correlation in electricity consumption to cost of services.

Randy Gray asked if ECPI currently rewards customers for conservation. Balzarini responded that there is not currently a mechanism in place to incentivize conservation, but that staff would look into this issue further.

George Golie asked how these rates compare to NorthWestern Energy's. Balzarini responded that the rates begin at \$51.34 in 2009 and reach \$52.37 in 2011. NorthWestern Energy's current default supply rate is \$55.12, she said.

Chairman Bob Pancich directed staff to produce a table showing all of the rates for all of ECPI's customers. He then moved to defer action on the recommendation until the June 5th ECPI Board meeting.

Accept Board Meeting Minutes of April 2, 2007. Dawn Willey moved to adopt the April 2nd minutes. Bill Ryan seconded the motion and the April 2, 2007 minutes were accepted unanimously.

III. BOARD MEMBER REPORTS

IV. COMMUNICATIONS

Executive Director Coleen Balzarini discussed the following articles with the Board:

1. Wind article from *Arizona Daily Star*
2. CO2 capture article from Lee Newspapers

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3. *Great Falls Tribune* article on Great Falls' air quality

She also discussed SME's comment to the RUS relating to its commitment to mercury control at Highwood Station.

4. Public Comment.

Richard Liebert suggested that the Board read the United Nations Intergovernmental Panel on Climate Change's most recent report. He also asked about the basis for setting ECPI rates. Ms. Balzarini responded that ECPI provides cost-based electricity, so the cost of providing the power is what is charged to the customer. Bill Ryan added that ECPI uses a non-profit business model.

Neil Taylor said that he would like to see the Board pass a resolution saying that taxpayers would not be affected in the event Highwood Station was not built.

Cheryl Reichert said that she was pleased to see in the *Great Falls Tribune* that Great Falls' air is so clean. She also stated that the air dispersion modeling done for Highwood Station is inaccurate because it was done on Gore Hill at the airport.

Mary Jolley asked if the rates are self-sufficient. Ms. Balzarini responded that the rates are sufficient to cover the City's cost of procuring the electricity.

Ken Thornton noted that Alstom is a foreign company and that Colstrip units 1-4 were American made. He said that the Board should consider the cost of a carbon tax as it moves forward.

Ron Gessaman asked the Board about how ECPI's rates are set. Ms. Balzarini reiterated that the rates are recommended by considering the cost of the electricity to the City and the price necessary to cover that cost. Mr. Gessaman also said that the NorthWestern Rate cited earlier was incorrect. Balzarini noted that the price for May 2007 is \$55.12. Mr. Gessaman did not agree and said he would apologize to the board if he is mistaken and that he expected the same if Ms. Balzarini was incorrect.

ADJOURN: Executive Director Bob Pancich adjourned the meeting at 6:45 PM. The next meeting is set for July 2, 2007 at 5:30 in the Gibson Room of the Great Falls Civic Center.

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NorthWestern Energy
Electric Utility
Monthly Electric Supply Tracker
Rate Change Detail
June 1, 2007

Electric Default Supply Rate (\$/kWh)	Current 5/1/2007	Proposed 6/1/2007	Rate Change	Percentage Change
EDSS-1 Rate Schedule				
Residential	\$ 0.055122	\$ 0.056629	\$ 0.001507	2.73%
Residential - Employee	\$ 0.033073	\$ 0.033977	\$ 0.000904	2.73%
General Service - 1 Secondary Non-Demand	\$ 0.049864	\$ 0.051227	\$ 0.001363	2.73%
General Service - 1 Secondary Demand	\$ 0.055122	\$ 0.056629	\$ 0.001507	2.73%
General Service - 1 Primary Non-Demand	\$ 0.053614	\$ 0.055079	\$ 0.001465	2.73%
General Service - 1 Primary Demand	\$ 0.048955	\$ 0.050293	\$ 0.001338	2.73%
General Service - 2 Substation	\$ 0.053151	\$ 0.054604	\$ 0.001453	2.73%
General Service - 2 Transmission	\$ 0.052830	\$ 0.054274	\$ 0.001444	2.73%
Irrigation	\$ 0.049864	\$ 0.051227	\$ 0.001363	2.73%
Lighting	\$ 0.049864	\$ 0.051227	\$ 0.001363	2.73%



LCG CONSULTING

ENERGYONLINE

DOW JONES INDEXES

Mid-Columbia (Daily)

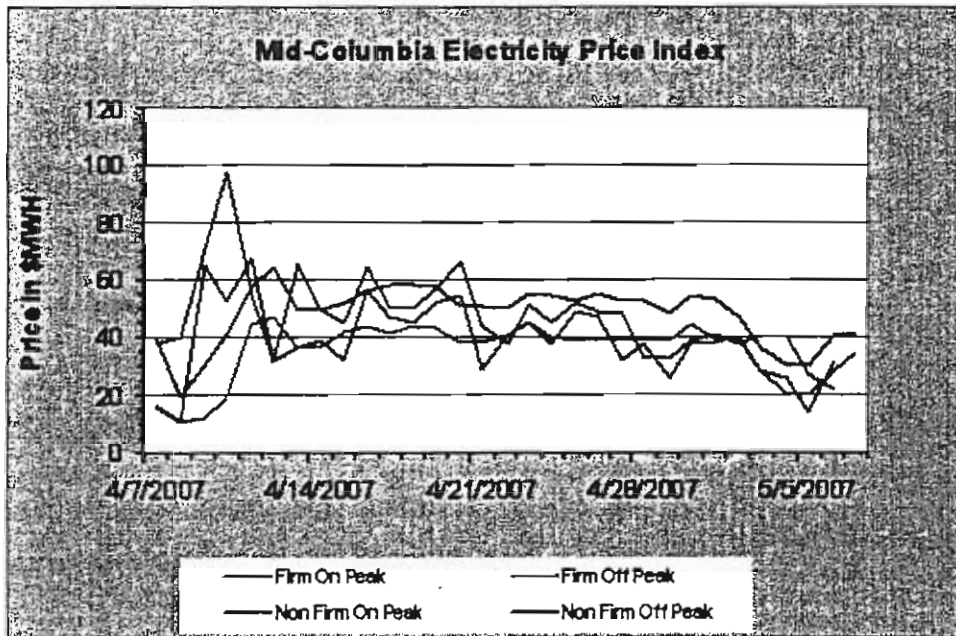
Other Indexes:

Weighted Average Price of Electricity traded in Mid-Columbia
30-Day Electricity Prices at Mid-Columbia

Date	Firm On - Peak	Volume MWHs	Firm On Peak High	Firm On Peak Low	Firm Off Peak	Volume MWHs	Firm Off Peak High	Firm Off Peak Low	Non Firm On Peak	Volume MWHs	Non Firm Off Peak	Volume MWHs	Sunday & NERC 24 Hr	Volume MWHs	Sunday & NERC Peak High	Sunday & NERC Peak Low
05/12/07	\$55.46	73.712	\$57.75	\$50.00	\$37.15	25.520	\$40.25	\$34.00								
05/11/07	\$55.46	73.712	\$57.75	\$50.00	\$37.15	25.520	\$40.25	\$34.00								
05/10/07	\$56.81	55.520	\$59.50	\$53.00	\$35.76	24.920	\$40.50	\$34.00	\$50.44	510	\$51.30	470				
05/09/07	\$53.01	80.592	\$61.00	\$46.00	\$29.65	34.496	\$31.00	\$26.00	\$53.24	165	\$45.70	500				
05/08/07	\$42.11	76.592	\$49.00	\$37.00	\$27.09	40.168	\$30.00	\$21.00	\$66.79	420	\$50.95	365				
05/07/07	\$41.54	63.632	\$48.00	\$38.00	\$34.06	40.904	\$39.00	\$31.50	\$59.19	483	\$33.53	800				
05/06/07	\$40.69	3.600	\$42.00	\$38.00	\$28.33	480	\$29.00	\$25.00	\$21.48	690	\$30.98	425	\$34.06	122,712	\$39.00	\$31.50
05/05/07	\$30.15	78.752	\$40.00	\$23.25	\$19.67	33.480	\$23.00	\$17.75	\$27.18	485	\$14.10	447				
05/04/07	\$30.15	78.752	\$40.00	\$23.25	\$19.67	33.480	\$23.00	\$17.75	\$39.96	981	\$26.05	190				
05/03/07	\$36.03	78.352	\$40.00	\$31.00	\$28.19	34.016	\$30.50	\$24.00	\$41.00	20	\$28.00	0				
05/02/07	\$46.59	60.752	\$49.75	\$41.00	\$39.28	33,096	\$42.25	\$30.00	\$38.05	215	\$40.00	300				
05/01/07	\$53.40	69,184	\$55.50	\$49.00	\$39.45	32,296	\$45.50	\$32.00	\$40.75	415	\$38.43	255				
04/30/07	\$54.54	62,800	\$57.00	\$52.00	\$44.22	21,328	\$47.00	\$35.50	\$38.90	660	\$37.56	330				
04/29/07	\$48.02	6,288	\$52.00	\$35.00	\$38.70	1,000	\$46.50	\$32.00	\$32.47	225	\$25.67	225	\$44.22	63,984	\$47.00	\$35.50
04/28/07	\$52.88	70,352	\$58.75	\$51.75	\$38.87	22,384	\$41.50	\$37.50	\$32.10	465	\$37.00	80				
04/27/07	\$52.88	70,352	\$58.75	\$51.75	\$38.87	22,384	\$41.50	\$37.50	\$47.81	920	\$32.00	130				
04/26/07	\$54.93	61,136	\$56.50	\$51.00	\$39.18	22,528	\$40.50	\$36.00	\$48.75	200	\$47.00	250				
04/25/07	\$52.98	53,024	\$57.50	\$51.00	\$38.89	20,528	\$40.50	\$37.50	\$51.49	195	\$48.53	95				
04/24/07	\$54.86	64,992	\$56.50	\$52.25	\$39.98	20,848	\$41.50	\$38.50	\$45.07	975	\$37.67	375				
04/23/07	\$55.03	58,880	\$60.00	\$50.00	\$45.13	23,000	\$47.00	\$40.00	\$50.87	495	\$45.00	150				
04/22/07	\$50.04	10,400	\$51.00	\$48.75	\$41.00	400	\$41.00	\$41.00	\$37.50	310	\$40.62	0	\$45.13	69,000	\$47.00	\$40.00
04/21/07	\$50.68	60,944	\$52.75	\$49.00	\$38.60	28,656	\$41.00	\$37.25	\$44.10	250	\$29.00	200				
04/20/07	\$50.68	60,944	\$52.75	\$49.00	\$38.60	28,656	\$41.00	\$37.25	\$66.25	1,035	\$54.31	290				
04/19/07	\$57.62	47,520	\$59.00	\$56.00	\$43.30	20,336	\$44.50	\$41.00	\$57.30	810	\$51.67	255				

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04/18/07	\$58.33	54,528	\$60.00	\$56.00	\$43.63	16,120	\$44.75	\$42.00	\$50.04	552	\$45.00	117				
04/17/07	\$57.98	67,856	\$59.75	\$53.00	\$41.44	16,664	\$44.75	\$35.00	\$50.15	375	\$46.86	175				
04/16/07	\$56.25	64,768	\$61.50	\$49.00	\$43.74	17,120	\$47.00	\$41.00	\$63.95	315	\$56.13	155				
04/15/07	\$52.14	2,800	\$53.00	\$51.00	\$42.00	200	\$42.00	\$42.00	\$44.87	428	\$32.00	75	\$43.74	51,360	\$47.00	\$41.00
04/14/07	\$49.07	69,504	\$55.00	\$47.00	\$35.99	27,376	\$39.50	\$33.00	\$48.97	435	\$39.15	130				
04/13/07	\$49.07	69,504	\$55.00	\$45.75	\$35.99	27,376	\$39.50	\$33.00	\$65.64	935	\$35.75	0				
04/12/07	\$64.11	62,080	\$68.00	\$60.25	\$46.85	29,608	\$50.25	\$41.50	\$30.98	1,066	\$32.00	240				



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For more information on these price indices, refer the Explanatory Notes.

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Hub	DATE	Hour Type	5/4/07	6/5/07	5/6/07	5/7/07	5/8/07	5/9/07	5/10/07	5/11/07
Mead	09/01/2009	OnPeak	\$81.89	\$81.91	\$81.93	\$82.15	\$80.88	\$81.89	\$82.40	\$82.66
Mead	10/01/2009	OnPeak	\$83.38	\$83.40	\$83.41	\$83.64	\$82.35	\$83.38	\$83.90	\$84.16
Mead	11/01/2009	OnPeak	\$78.28	\$77.18	\$77.22	\$78.52	\$77.30	\$78.28	\$78.76	\$79.01
Mead	12/01/2009	OnPeak	\$93.59	\$93.61	\$93.63	\$93.88	\$92.43	\$93.59	\$94.17	\$94.46
Mead	01/01/2010	OnPeak	\$74.27	\$76.62	\$76.65	\$74.74	\$73.56	\$74.27	\$74.98	\$75.45
Mead	02/01/2010	OnPeak	\$76.55	\$76.56	\$76.58	\$77.03	\$75.81	\$76.55	\$77.28	\$77.76
Mead	03/01/2010	OnPeak	\$73.41	\$73.43	\$73.44	\$73.88	\$72.71	\$73.41	\$74.11	\$74.58
Mead	04/01/2010	OnPeak	\$68.57	\$68.59	\$68.60	\$69.01	\$67.92	\$68.57	\$69.23	\$69.66
Mead	05/01/2010	OnPeak	\$68.57	\$70.52	\$70.56	\$69.01	\$67.92	\$68.57	\$69.23	\$69.66
Mead	06/01/2010	OnPeak	\$77.14	\$80.75	\$80.79	\$77.64	\$76.41	\$77.14	\$77.88	\$78.37
Mead	07/01/2010	OnPeak	\$92.15	\$92.16	\$92.18	\$92.73	\$91.27	\$92.15	\$93.03	\$93.61
Mead	08/01/2010	OnPeak	\$91.27	\$87.99	\$88.03	\$91.85	\$90.40	\$91.27	\$92.14	\$92.72
Mead	09/01/2010	OnPeak	\$79.86	\$79.87	\$79.89	\$80.37	\$79.10	\$79.86	\$80.62	\$81.13
Mead	10/01/2010	OnPeak	\$81.31	\$81.33	\$81.34	\$81.83	\$80.53	\$81.31	\$82.09	\$82.60
Mead	11/01/2010	OnPeak	\$76.33	\$77.18	\$77.22	\$76.82	\$75.60	\$76.33	\$77.06	\$77.55
Mead	12/01/2010	OnPeak	\$91.27	\$91.28	\$91.30	\$91.85	\$90.39	\$91.27	\$92.14	\$92.72
Mead	01/01/2011	OnPeak	\$72.43	\$72.44	\$72.46	\$72.38	\$71.43	\$72.14	\$72.62	\$73.09
Mead	02/01/2011	OnPeak	\$74.64	\$74.66	\$74.67	\$74.60	\$73.62	\$74.35	\$74.84	\$75.33
Mead	03/01/2011	OnPeak	\$71.59	\$71.61	\$71.62	\$71.54	\$70.61	\$71.31	\$71.78	\$72.24
Mead	04/01/2011	OnPeak	\$66.87	\$66.89	\$66.90	\$66.83	\$65.95	\$66.61	\$67.04	\$67.48
Mead	05/01/2011	OnPeak	\$66.87	\$66.89	\$66.90	\$66.83	\$65.95	\$66.61	\$67.04	\$67.48
Mead	06/01/2011	OnPeak	\$75.23	\$75.24	\$75.26	\$75.18	\$74.20	\$74.93	\$75.42	\$75.92
Mead	07/01/2011	OnPeak	\$89.85	\$89.86	\$89.88	\$89.80	\$88.62	\$89.50	\$90.09	\$90.68
Mead	08/01/2011	OnPeak	\$88.99	\$87.99	\$88.03	\$88.94	\$87.78	\$88.65	\$89.23	\$89.82
Mead	09/01/2011	OnPeak	\$77.87	\$77.89	\$77.90	\$77.82	\$76.81	\$77.57	\$78.08	\$78.59
Mead	10/01/2011	OnPeak	\$79.29	\$79.30	\$79.32	\$79.24	\$78.20	\$78.98	\$79.50	\$80.02
Mead	11/01/2011	OnPeak	\$74.44	\$77.18	\$77.22	\$74.39	\$73.41	\$74.14	\$74.63	\$75.12
Mead	12/01/2011	OnPeak	\$88.99	\$89.01	\$89.02	\$88.94	\$87.78	\$88.65	\$89.23	\$89.81
Mead	01/01/2012	OnPeak	\$70.77	\$70.79	\$70.80	\$70.72	\$69.92	\$70.49	\$70.72	\$71.20
Mead	02/01/2012	OnPeak	\$72.94	\$72.95	\$72.97	\$72.89	\$72.06	\$72.64	\$72.89	\$73.38
Mead	03/01/2012	OnPeak	\$69.95	\$69.97	\$69.98	\$69.91	\$69.11	\$69.67	\$69.91	\$70.37
Mead	04/01/2012	OnPeak	\$65.35	\$65.36	\$65.37	\$65.30	\$64.55	\$65.08	\$65.30	\$65.73
Mid_Columbia	05/01/2007	OnPeak	\$40.04	\$40.05	\$40.06	\$39.50	\$39.50	\$46.50	\$46.50	\$51.00
Mid_Columbia	06/01/2007	OnPeak	\$39.25	\$38.75	\$38.78	\$39.12	\$42.50	\$44.12	\$45.25	\$46.75
Mid_Columbia	07/01/2007	OnPeak	\$68.49	\$68.51	\$68.52	\$67.26	\$68.13	\$68.63	\$69.25	\$70.49
Mid_Columbia	08/01/2007	OnPeak	\$78.26	\$78.27	\$78.29	\$76.96	\$76.70	\$76.96	\$77.48	\$79.04
Mid_Columbia	09/01/2007	OnPeak	\$73.74	\$73.75	\$73.77	\$72.52	\$72.27	\$72.52	\$73.01	\$75.19
Mid_Columbia	10/01/2007	OnPeak	\$69.39	\$69.41	\$69.42	\$68.40	\$67.68	\$67.92	\$67.99	\$69.58
Mid_Columbia	11/01/2007	OnPeak	\$67.93	\$69.50	\$69.54	\$66.96	\$66.26	\$66.49	\$66.56	\$68.12
Mid_Columbia	12/01/2007	OnPeak	\$81.80	\$81.82	\$81.84	\$80.64	\$79.80	\$80.08	\$80.15	\$82.04
Mid_Columbia	01/01/2008	OnPeak	\$72.36	\$72.37	\$72.39	\$72.19	\$71.62	\$72.11	\$72.44	\$73.02
Mid_Columbia	02/01/2008	OnPeak	\$73.82	\$70.78	\$70.82	\$73.65	\$73.06	\$73.57	\$73.91	\$74.50
Mid_Columbia	03/01/2008	OnPeak	\$74.07	\$74.09	\$74.10	\$73.76	\$73.14	\$73.64	\$73.89	\$74.51
Mid_Columbia	04/01/2008	OnPeak	\$55.49	\$58.23	\$58.27	\$55.94	\$55.34	\$55.80	\$56.13	\$56.72
Mid_Columbia	05/01/2008	OnPeak	\$52.87	\$52.88	\$52.89	\$53.30	\$52.73	\$53.17	\$53.48	\$54.05
Mid_Columbia	06/01/2008	OnPeak	\$48.68	\$48.69	\$48.70	\$49.07	\$48.56	\$48.96	\$49.25	\$49.76
Mid_Columbia	07/01/2008	OnPeak	\$74.16	\$74.17	\$74.19	\$74.29	\$73.77	\$74.29	\$74.81	\$75.33

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Mid_Columbia	08/01/2008	OnPeak	\$78.70	\$78.71	\$78.73	\$78.84	\$78.28	\$78.84	\$79.39	\$79.94
Mid_Columbia	09/01/2008	OnPeak	\$74.16	\$74.17	\$74.19	\$74.29	\$73.77	\$74.29	\$74.81	\$75.33
Mid_Columbia	10/01/2008	OnPeak	\$80.67	\$80.69	\$80.70	\$80.81	\$80.25	\$80.81	\$81.38	\$81.95
Mid_Columbia	11/01/2008	OnPeak	\$78.97	\$78.99	\$79.00	\$79.11	\$78.56	\$79.11	\$79.67	\$80.22
Mid_Columbia	12/01/2008	OnPeak	\$95.11	\$95.13	\$95.15	\$95.28	\$94.61	\$95.28	\$95.94	\$96.61
Mid_Columbia	01/01/2009	OnPeak	\$69.68	\$69.69	\$69.71	\$69.93	\$69.68	\$69.93	\$70.08	\$70.57
Mid_Columbia	02/01/2009	OnPeak	\$71.09	\$70.78	\$70.82	\$71.34	\$71.09	\$71.34	\$71.49	\$72.00
Mid_Columbia	03/01/2009	OnPeak	\$70.53	\$70.54	\$70.55	\$70.78	\$70.53	\$70.78	\$70.93	\$71.43
Mid_Columbia	04/01/2009	OnPeak	\$29.83	\$29.84	\$29.84	\$29.85	\$29.85	\$29.86	\$29.86	\$29.87
Mid_Columbia	05/01/2009	OnPeak	\$52.07	\$52.08	\$52.09	\$52.26	\$52.07	\$52.26	\$52.37	\$52.74
Mid_Columbia	06/01/2009	OnPeak	\$47.95	\$47.96	\$47.97	\$48.12	\$47.95	\$48.12	\$48.22	\$48.56
Mid_Columbia	07/01/2009	OnPeak	\$73.25	\$73.26	\$73.27	\$73.51	\$73.25	\$73.51	\$73.66	\$74.18
Mid_Columbia	08/01/2009	OnPeak	\$77.73	\$77.75	\$77.76	\$78.01	\$77.73	\$78.01	\$78.17	\$78.73
Mid_Columbia	09/01/2009	OnPeak	\$73.25	\$73.26	\$73.27	\$73.51	\$73.25	\$73.51	\$73.66	\$74.18
Mid_Columbia	10/01/2009	OnPeak	\$79.68	\$79.69	\$79.71	\$79.96	\$79.68	\$79.96	\$80.13	\$80.70
Mid_Columbia	11/01/2009	OnPeak	\$78.00	\$78.02	\$78.03	\$78.28	\$78.00	\$78.28	\$78.45	\$79.00
Mid_Columbia	12/01/2009	OnPeak	\$93.94	\$93.96	\$93.97	\$94.27	\$93.94	\$94.27	\$94.47	\$95.14
Mid_Columbia	01/01/2010	OnPeak	\$67.45	\$67.46	\$67.48	\$67.95	\$67.45	\$68.94	\$68.59	\$69.09
Mid_Columbia	02/01/2010	OnPeak	\$68.81	\$70.78	\$70.82	\$69.32	\$68.81	\$70.33	\$69.98	\$70.48
Mid_Columbia	03/01/2010	OnPeak	\$68.27	\$68.28	\$68.29	\$68.77	\$68.27	\$69.77	\$69.42	\$69.92
Mid_Columbia	04/01/2010	OnPeak	\$29.83	\$29.84	\$29.84	\$29.85	\$29.85	\$29.86	\$29.86	\$29.87
Mid_Columbia	05/01/2010	OnPeak	\$50.41	\$50.42	\$50.43	\$50.78	\$50.41	\$51.52	\$51.26	\$51.63
Mid_Columbia	06/01/2010	OnPeak	\$46.41	\$46.42	\$46.43	\$46.75	\$46.41	\$47.44	\$47.20	\$47.54
Mid_Columbia	07/01/2010	OnPeak	\$70.90	\$70.91	\$70.93	\$71.42	\$70.90	\$72.46	\$72.10	\$72.62
Mid_Columbia	08/01/2010	OnPeak	\$75.24	\$73.64	\$73.68	\$75.79	\$75.24	\$76.90	\$76.51	\$77.07
Mid_Columbia	09/01/2010	OnPeak	\$70.90	\$70.91	\$70.93	\$71.42	\$70.90	\$72.46	\$72.10	\$72.62
Mid_Columbia	10/01/2010	OnPeak	\$77.13	\$77.14	\$77.16	\$77.69	\$77.13	\$78.83	\$78.43	\$79.00
Mid_Columbia	11/01/2010	OnPeak	\$75.50	\$75.52	\$75.53	\$76.06	\$75.50	\$77.17	\$76.78	\$77.34
Mid_Columbia	12/01/2010	OnPeak	\$90.93	\$90.95	\$90.96	\$91.60	\$90.93	\$92.94	\$92.47	\$93.14
Mid_Columbia	01/01/2011	OnPeak	\$66.01	\$62.83	\$62.86	\$66.21	\$65.96	\$66.61	\$66.76	\$67.25
Mid_Columbia	02/01/2011	OnPeak	\$67.34	\$67.36	\$67.37	\$67.55	\$67.29	\$67.95	\$68.10	\$68.61
Mid_Columbia	03/01/2011	OnPeak	\$66.81	\$64.83	\$64.86	\$67.01	\$66.76	\$67.41	\$67.56	\$68.07
Mid_Columbia	04/01/2011	OnPeak	\$29.83	\$29.84	\$29.84	\$29.85	\$29.85	\$29.86	\$29.86	\$29.87
Mid_Columbia	05/01/2011	OnPeak	\$49.34	\$49.35	\$49.36	\$49.48	\$49.29	\$49.78	\$49.89	\$50.26
Mid_Columbia	06/01/2011	OnPeak	\$45.44	\$45.45	\$45.46	\$45.56	\$45.39	\$45.83	\$45.94	\$46.28
Mid_Columbia	07/01/2011	OnPeak	\$69.38	\$69.40	\$69.41	\$69.60	\$69.34	\$70.01	\$70.17	\$70.69
Mid_Columbia	08/01/2011	OnPeak	\$73.63	\$73.64	\$73.68	\$73.86	\$73.58	\$74.30	\$74.47	\$75.02
Mid_Columbia	09/01/2011	OnPeak	\$69.38	\$69.40	\$69.41	\$69.60	\$69.34	\$70.01	\$70.17	\$70.69
Mid_Columbia	10/01/2011	OnPeak	\$75.47	\$75.49	\$75.50	\$75.71	\$75.43	\$76.16	\$76.33	\$76.90
Mid_Columbia	11/01/2011	OnPeak	\$73.89	\$73.90	\$73.92	\$74.12	\$73.84	\$74.56	\$74.73	\$75.28
Mid_Columbia	12/01/2011	OnPeak	\$88.97	\$88.99	\$89.01	\$89.26	\$88.92	\$89.79	\$89.99	\$90.66
Mid_Columbia	01/01/2012	OnPeak	\$65.51	\$62.83	\$62.86	\$65.71	\$65.37	\$65.56	\$65.22	\$65.71
Mid_Columbia	02/01/2012	OnPeak	\$66.84	\$66.85	\$66.86	\$67.04	\$66.69	\$66.89	\$66.54	\$67.04
Mid_Columbia	03/01/2012	OnPeak	\$66.31	\$64.83	\$64.86	\$66.51	\$66.16	\$66.36	\$66.01	\$66.51
Mid_Columbia	04/01/2012	OnPeak	\$29.83	\$29.84	\$29.84	\$29.85	\$29.85	\$29.86	\$29.86	\$29.87
NP_15	05/01/2007	OnPeak	\$71.00	\$68.91	\$68.95	\$72.50	\$72.75	\$73.50	\$77.50	\$75.50
NP_15	06/01/2007	OnPeak	\$75.13	\$75.14	\$75.13	\$75.17	\$75.00	\$72.10	\$72.17	\$72.17

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May 21, 2007

Electricity Crisis Hobbles an India Eager to Ascend

By SOMINI SENGUPTA

GURGAON, India — This suburb south of New Delhi is where the fruits of India's economic advance are on full display: sprawling malls, skyscrapers housing India's acclaimed software companies, condominiums with names as fanciful as Nirvana Country.

But this fashionable address of the new India is also a portrait of ambition bumping up against reality, namely an electricity crisis that represents one of the major hurdles to India's ability to hoist itself into the front ranks of the global economy.

Look up at the tops of buildings, and on any given day, you are likely to find three, four or six smokestacks poking out of each, blowing gray-black plumes into the clouds. If the smokestacks are being used, it means the power is off and the building — whether bright new mall, condominium or office — is probably being powered by diesel-fed generators.

This being India, a country of more than one billion people, the scale is staggering. In just one case, Tata Consultancy Services, a technology company, maintains five giant generators, along with a nearly 5,300-gallon tank of diesel fuel underground, as if it were a gasoline station.

The reserve fuel can power the lights, computers and air-conditioners for up to 15 days to keep Tata's six-story building humming during these hot, dry summer months, when temperatures routinely soar above 100 degrees and power cuts can average eight hours a day.

The Gurgaon skyline is studded with hundreds of buildings like this. In Gurgaon alone, the state power authority estimates that the gap between demand and supply hovers around 20 percent, and that is probably a conservative estimate.

For all those who suffer from crippling power cuts in cities like this, there are others who have no connection to electricity at all. According to the Planning Commission of India, 600 million people — roughly half the population — are off the electric grid. For this reason, it is impossible to estimate accurately the total national shortfall.

No matter how it is calculated, there is no doubt that India's electricity crisis is becoming all the more acute for the roaring pace of the country's economic growth and the new material aspirations it has generated.

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Rachna Tandon, a prosperous housewife, is a good example. She moved here to a quiet street of row houses 14 years ago, settling in what was one of the first residential sites built by DLF Universal, Gurgaon's and India's largest builder.

Back then, electricity was in short supply, but she was fully confident things would improve. The advertisements at the time described Gurgaon as the best address south of Delhi. It was pitched as a millennium city.

Today Ms. Tandon says she prefers to think of it as a medieval city. The day before, the power went out for roughly 11 hours. Her power inverter, which is basically a series of rechargeable batteries — a household necessity here — failed after four hours.

For respite, some of her neighbors drove around in their air-conditioned cars. Her own children lingered outside and finally, when they nodded off to sleep, they lay on the living room floor, the coolest spot in the house.

Each appliance in her well-stocked home — an air-conditioner in each room, a flat-screen television, a microwave and an electric stove — speaks to the gap between India's dreams and its realities.

The power cuts thawed the chicken sausage in her freezer and she had to throw it away, just in case it had spoiled. She did not dare use her electric oven, for fear that the power would go out in the middle of baking.

With no television, her 10-year-old son has been so bored that he took out his old cricket bat and ended up putting a ball through the kitchen window. Her daughter, 13, has had to study by flashlight. This summer, Ms. Tandon said, the family will have to choose between buying a generator and going on vacation. "We're living in the Dark Ages," she said.

For all her middle-class suffering, a reminder of the other India came earlier in the week, when her mother called from her hometown in rural north India and said she had had electricity for just one hour during the day.

In part because of these limitations, Indians are, for now, relatively conservative consumers of energy: about 600 units per capita per year, or one-fifth that of a typical American. But that will certainly increase as Indian desires reach those of the wealthy Western countries.

A recent report by McKinsey Global Institute frothily predicted a fourfold increase in consumer spending by 2025, vaulting India, as it said, "into the premier league among the world's consumer markets." McKinsey forecast that India would surpass Germany as the fifth-largest market in the world.

Driven by the increasing need for power, India has stepped up generation in recent years at the pace of about 6 percent a year. It is a pittance compared with what neighboring China adds on each year and in any case insufficient to keep up with India's galloping demand.

The government has promised electric connections for all — which means access to the grid, not round-the-clock power — by 2009. That is a target that does not seem plausible at current rates of power generation.

Development of power plants, meanwhile, is constrained by a lack of access to land, fuel and water, all of which a power plant needs in large quantities. The power grid remains weak.

In Gurgaon, for instance, transformers routinely blow out because of heavy loads. Voltage fluctuations damage electrical appliances of all sorts.

What the state cannot provide efficiently, many take for themselves. The World Bank estimates that at least \$4 billion in electricity is unaccounted for each year — that is to say, stolen. Transparency International estimated in 2005 that Indians paid \$480 million in bribes to put in new connections or correct bills.

The country's energy needs are one of the government's main arguments for a nuclear deal with the United States, which would allow India to buy reactors and fuel from the world market.

But even if the deal goes through, it would lift nuclear power, which provides 3 percent of India's energy, to no more than 9 percent, said Leena Srivastava, executive director of the Energy and Resources Institute, a private research group.

Similarly, in the coming years, alternative sources of energy, like wind, are expected to double, but to no more than about 8 percent of supply.

Coal will continue to dominate power generation, and already more than a third of India's coal plants do not meet national emissions standards.

For Indian business, coping with chronic power shortages is a part of the cost of business.

At Tata, company managers took pains to say that power shortages did not hinder their ability to meet deadlines for their clients.

"The work as such does not suffer," said Gurinder Virk, an assistant general manager. "We have sufficient stocks of diesel at all times." Behind the building, three generators purred as a sweltering evening descended. A 2004 World Bank survey found that 60 percent of companies in India have such facilities.

Still, construction here surges ahead. With few exceptions, there is little effort to reduce power consumption, beyond the use of low-energy light bulbs. Gurgaon is dotted with buildings that are effectively curtains of glass, soaking up the searing summer heat.

"Not so good for New York, not Gurgaon," was the verdict of Niranjjan Khatri, a general manager with ITC, an Indian conglomerate whose office tower here is one of the few to comply with so-called green building codes.

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Across the highway, the nearly completed Ambi Mall promises almost a mile of shopping on each floor. Next to it, a billboard for the Mall of India promises an even bigger shopping center, one that will put India on the “global retail map.”

Never mind that Gurgaon does not have a sewage treatment plant of its own, or that the city’s Metropolitan Mall burns an average of 1,600 gallons of diesel a day to run its generators during power cuts.

Farther south, in Nirvana Country, there are only generators. The 800-unit complex of row houses and apartment blocks, still under construction, is not even connected to the electric grid. It swallows 6,000 gallons of diesel each week to meet its needs — with only a fifth of its units occupied.

It was unclear how the power needs would be met once it reached full occupancy, said M. K. Pant, a retired army colonel who is now Nirvana’s estate manager. “There’s nothing in the files,” he said. “There’s nothing in the thinking also.”

No matter. Newspaper advertisements for Nirvana Country promise “air-conditioning in all rooms.”

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MONTANA AIR QUALITY PERMIT

Issued To: Southern Montana Electric Permit: #3423-00
 Generation and Transmission Cooperative – Application Complete: 5/16/06

Highwood Generating Station Preliminary Determination Issued: 3/30/06
 3521 Gabel Road, Suite 5 Supplemental Preliminary Determination
 Billings, MT 59102 Issued: 6/22/06

Department’s Decision Issued: 05/11/07
 Permit Final:
 AFS #013-0038

[Excerpt]

V. Existing Air Quality

The air quality classification for the SME-HGS project area is “Unclassifiable or Better than National Standards” (40 CFR 81.327) for the National Ambient Air Quality Standards (NAAQS) for all criteria pollutants. However, the facility will locate in an area that has recently been re-designated attainment for CO under a limited maintenance plan. The SME-HGS facility has not been identified in any studies as impacting the previous CO nonattainment area.

Under the requirements of the PSD program, SME-HGS was required to conduct modeling to determine pollutant-specific pre-monitoring applicability. Because air modeling showed that the concentration of PM₁₀ exceeded the level identified in ARM 17.8.818(7), SME-HGS was required to conduct on-site pre-monitoring for this pollutant. SME-HGS collected PM₁₀ pre-monitoring data at the proposed site from November 12, 2004, through November 11, 2005. The following table lists the background monitoring data from the SME-HGS PM₁₀ monitoring site. The measured PM₁₀ values establish the baseline concentrations and demonstrate compliance with all applicable ambient air quality standards.

PM₁₀ Pre-monitoring Results

Pollutant	Avg. Period	High Impact (ppm)	High Impact ₃ (µg/m ³)	HSH Impact (ppm)	HSH Impact ₃ (µg/m ³)	Ambient Standard ^a (µg/m ³)	% of Standard
PM ₁₀	24-hr	-----	23	-----	19	150	13
	Annual	-----	7	-----	-----	50	14

^a MAAQS and NAAQS

VI. Ambient Air Impact Analysis

The nearest PSD Class I area is the Gates of the Mountains

