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SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

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POST-EFFECTIVE AMENDMENT NO. 1  
TO  
FORM S-8  
Registration Statement  
Under  
The Securities Act of 1933

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GREAT PLAINS ENERGY INCORPORATED  
(Exact name of registrant as specified in its charter)

Missouri 43-1916803  
(State of other jurisdiction (I.R.S. Employer  
of Identification No.)  
incorporation or organization)

1201 WALNUT  
KANSAS CITY, MISSOURI 64106  
(Address and Zip Code of principal executive offices)

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LONG-TERM INCENTIVE PLAN

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Jeanie Sell Latz, Corporate Secretary  
1201 Walnut  
Kansas City, Missouri 64106  
(Name and address of agent for service)

(816) 556-2936  
(Telephone number, including area code, of agent for service)

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AMENDMENT NO. 1 TO FORM S-8  
GREAT PLAINS ENERGY INCORPORATED  
LONG-TERM INCENTIVE PLAN

This post-effective amendment No. 1 to Registration Statement on Form S-8 (Registration No. 33-45618) is being filed pursuant to Rule 414 under the Securities Act of 1933 as amended to reflect the completion by Kansas City Power & Light Company, a Missouri Corporation ("KCPL"), of a corporate restructuring to create a holding company structure. The holding company organizational structure was effected pursuant to an agreement and plan of merger among Kansas City Power and Light Company, Great Plains Energy Incorporated, a Missouri Corporation ("GPE"), and KCPL Merger Sub Incorporated, a Missouri Corporation ("Merger Sub") and wholly owned subsidiary of GPE. The merger agreement provides for, among other things, the merger of Merger Sub with and into KCPL, with KCPL continuing as the surviving corporation. Pursuant to Section 351.448 of the General Corporation Law of the State of Missouri, stockholder approval of the merger was not required.

As a result of the merger, which was consummated on October 1, 2001, KCPL became a direct wholly owned subsidiary of GPE. Immediately following the merger, GPE became the successor issuer on the New York Stock Exchange, replacing KCPL. Effectively, the new GPE trading symbol GXP replaced the old trading symbol KLT.

As a result of the merger, all outstanding shares of KCPL will be honored on a share for share basis as shares of GPE with

the same voting powers, designations, preferences, and rights, and the same qualifications, restrictions, and limitations, as the shares of KCPL previously held by the stockholders prior to the holding company merger. The shares of the holding company will continue to be represented by the same stock certificates that previously represented shares of KCPL capital stock prior to the holding company merger. No actual (or physical) exchange of stock certificates will occur.

As a result of the merger, each outstanding employee stock option and warrant to purchase shares of KCPL's common stock granted under any employee stock option or compensation plan or arrangement or warrant agreement of KCPL was converted into an option to purchase one share of GPE's common stock in accordance with the provisions of such employee stock option or compensation plan or arrangement or warrant agreement.

In accordance with paragraph (d) of Rule 414 under the Securities Act, GPE hereby expressly adopts this registration statement as its own registration statement for all purposes of the Securities Act and the Securities Exchange Act of 1934, as amended.

The applicable registration fees were paid at the time of the original filing of this registration statement.

Powers of Attorney for individual signatories are included with this filing.

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS:

That the undersigned, a Director of Great Plains Energy Incorporated, a Missouri corporation, does hereby constitute and appoint Bernard J. Beaudoin and/or Jeanie Sell Latz, their true and lawful attorney and agent, with full power and authority to execute in the name and on behalf of the undersigned as such director all amendments to Registration Statement on Form S-8 (Registration Statement No. 333-32636) for the Employee Savings Plus Plan; hereby granting unto such attorney and agent full power of substitution and revocation in the premises; and hereby ratifying and confirming all that such attorney and agent may do or cause to be done by virtue of these presents.

IN WITNESS WHEREOF, I have hereunto set my hand and seal this 1st day of October, 2001.

/s/David L. Bodde  
David L. Bodde

STATE OF MISSOURI    )  
                          ) ss  
COUNTY OF JACKSON    )

On this 1st day of October, 2001, before me the undersigned, a Notary Public, personally appeared David L. Bodde, to be known to be the person described in and who executed the foregoing instrument, and who, being by me first duly sworn, acknowledged that they executed the same as their free act and deed.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my official seal the day and year last above written.

/s/Jacquetta L. Hartman  
Jacquetta L. Hartman  
Notary Public  
Ray County, Missouri

My Commission Expires:

April 8, 2004

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS:

That the undersigned, a Director of Great Plains Energy Incorporated, a Missouri corporation, does hereby constitute and appoint Bernard J. Beaudoin and/or Jeanie Sell Latz, their true and lawful attorney and agent, with full power and authority to execute in the name and on behalf of the undersigned as such director all amendments to Registration Statement on Form S-8 (Registration Statement No. 333-32636) for the Employee Savings Plus Plan; hereby granting unto such attorney and agent full power of substitution and revocation in the premises; and hereby ratifying and confirming all that such attorney and agent may do or cause to be done by virtue of these presents.

IN WITNESS WHEREOF, I have hereunto set my hand and seal this 1st day of October, 2001.

/s/Mark A. Ernst  
Mark A. Ernst

STATE OF MISSOURI    )  
                          ) ss  
COUNTY OF JACKSON    )

On this 1st day of October, 2001, before me the undersigned, a Notary Public, personally appeared Mark A. Ernst, to be known to be the person described in and who executed the foregoing instrument, and who, being by me first duly sworn, acknowledged that they executed the same as their free act and deed.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my official seal the day and year last above written.

/s/Jacquetta L. Hartman  
Jacquetta L. Hartman  
Notary Public  
Ray County, Missouri

My Commission Expires:  
April 8, 2004

POWER OF ATTORNEY

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IN WITNESS WHEREOF, I have hereunto set my hand and seal this 1st day of October, 2001.

/s/William K. Hall  
William K. Hall

STATE OF MISSOURI    )  
                          ) ss  
COUNTY OF JACKSON    )

On this 1st day of October, 2001, before me the undersigned, a Notary Public, personally appeared William K. Hall, to be known to be the person described in and who executed the foregoing instrument, and who, being by me first duly sworn, acknowledged that they executed the same as their free act and deed.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my official seal the day and year last above written.

/s/Jacquetta L. Hartman  
Jacquetta L. Hartman  
Notary Public  
Ray County, Missouri

My Commission Expires:  
April 8, 2004

POWER OF ATTORNEY

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IN WITNESS WHEREOF, I have hereunto set my hand and seal this 1st day of October, 2001.

/s/Luis A. Jimenez  
Luis A. Jimenez

STATE OF MISSOURI    )  
                          ) ss  
COUNTY OF JACKSON    )

On this 1st day of October, 2001, before me the undersigned, a Notary Public, personally appeared Luis A. Jimenez, to be known to be the person described in and who executed the foregoing instrument, and who, being by me first duly sworn, acknowledged that they executed the same as their free act and deed.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my official seal the day and year last above written.

/s/Jacquetta L. Hartman  
Jacquetta L. Hartman  
Notary Public  
Ray County, Missouri

My Commission Expires:  
April 8, 2004

POWER OF ATTORNEY

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IN WITNESS WHEREOF, I have hereunto set my hand and seal this 1st day of October, 2001.

/s/William C. Nelson  
William C. Nelson

STATE OF MISSOURI    )  
                          ) ss  
COUNTY OF JACKSON    )

On this 1st day of October, 2001, before me the undersigned, a Notary Public, personally appeared William C. Nelson, to be known to be the person described in and who executed the foregoing instrument, and who, being by me first duly sworn, acknowledged that they executed the same as their free act and deed.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my official seal the day and year last above written.

/s/Jacquetta L. Hartman  
Jacquetta L. Hartman  
Notary Public  
Ray County, Missouri

My Commission Expires:

April 8, 2004

POWER OF ATTORNEY

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That the undersigned, a Director of Great Plains Energy Incorporated, a Missouri corporation, does hereby constitute and appoint Bernard J. Beaudoin and/or Jeanie Sell Latz, their true and lawful attorney and agent, with full power and authority to execute in the name and on behalf of the undersigned as such director all amendments to Registration Statement on Form S-8 (Registration Statement No. 333-32636) for the Employee Savings Plus Plan; hereby granting unto such attorney and agent full power of substitution and revocation in the premises; and hereby ratifying and confirming all that such attorney and agent may do or cause to be done by virtue of these presents.

IN WITNESS WHEREOF, I have hereunto set my hand and seal this 1st day of October, 2001.

/s/Linda H. Talbott  
Linda H. Talbott

STATE OF MISSOURI    )  
                          ) ss  
COUNTY OF JACKSON    )

On this 1st day of October, 2001, before me the undersigned, a Notary Public, personally appeared Linda H. Talbott, to be known to be the person described in and who executed the foregoing instrument, and who, being by me first duly sworn, acknowledged that they executed the same as their free act and deed.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my official seal the day and year last above written.

/s/Jacquetta L. Hartman  
Jacquetta L. Hartman  
Notary Public  
Ray County, Missouri

My Commission Expires:

April 8, 2004



POWER OF ATTORNEY

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IN WITNESS WHEREOF, I have hereunto set my hand and seal this 1st day of October, 2001.

/s/Robert H. West  
Robert H. West

STATE OF MISSOURI    )  
                          ) ss  
COUNTY OF JACKSON    )

On this 1st day of October, 2001, before me the undersigned, a Notary Public, personally appeared Robert H. West, to be known to be the person described in and who executed the foregoing instrument, and who, being by me first duly sworn, acknowledged that they executed the same as their free act and deed.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my official seal the day and year last above written.

/s/Jacquetta L. Hartman  
Jacquetta L. Hartman  
Notary Public  
Ray County, Missouri

My Commission Expires:  
April 8, 2004

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this registration statement or amendment thereto to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Kansas City, and State of Missouri on the 1st day of October, 2001.

GREAT PLAINS ENERGY INCORPORATED

By: /s/Bernard J. Beaudoin  
(Bernard J. Beaudoin)  
Chairman of the Board,  
President and Chief Executive Officer

Pursuant to the requirements of the Securities Act of 1933, this registration statement or amendment has been signed below by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
/s/Bernard J. Beaudoin (Bernard J. Beaudoin)	Chairman of the Board, President and Chief Executive Officer (Principal Executive Officer)	October 1, 2001
/s/Andrea F. Bielsker Andrea F. Bielsker	Vice President-Finance, Chief Financial Officer and Treasurer (Principal Financial Officer)	
/s/Neil Roadman (Neil Roadman)	Controller (Principal Accounting Officer)	
/s/David L. Bodde* (David L. Bodde)	Director	
Mark A. Ernst* (Mark A. Ernst)	Director	
William K. Hall* (William K. Hall)	Director	
Luis A. Jimenez* (Luis A. Jimenez)	Director	
William C. Nelson* (William C. Nelson)	Director	
Linda Hood Talbott* (Linda Hood Talbott)	Director	
Robert H. West* (Robert H. West)	Director	

\*By /s/Bernard J. Beaudoin  
(Bernard J. Beaudoin)  
Attorney-in-fact