KCPL GMO Case Name: Solar Generation Facilities Case Number: EA-2015-0256

FILED February 16, 2016 Data Center Missouri Public Service Commission

Response to Mueth Marcella Interrogatories - MPSC_20160108 Date of Response: 01/27/2016

Question:0013.3

ssue: General Information & Miscellaneous - Certificates of Convenience/Feasibility Analysis **Description:** (A) Has KCPL participated in national studies regarding consumer support for solar energy? If so, please provide the studies. (B) Has a report, study, or document been prepared by or for KCPL regarding KCPL's research over the past five years showing KCPL customer support for renewable energy? If so, please provide. (C) In response to DR 0013, KCPL GMO states "Customer desire to have additional renewable and solar generation in the KCP&L-GMO service territory." Have any studies been performed by KCPL or on behalf of KCPL to determine that its customers desire solar generation specifically in the KCPL-GMO service territory as opposed to the KCPL service territory or the region? If so, please provide the studies. DR requested by: Claire Eubanks (Claire.eubanks@psc.mo.gov).

Response:

(A) We are currently participating in several national studies conducted with EPRI. Those studies are not yet completed. In addition, we do not have the ability to disclose them until they are completed and published. We also have accessed publicly available studies from multiple entities:

http://www.seia.org/research-resources/polling-data-support-solar

http://www.gallup.com/poll/182180/support-nuclear-energy.aspx

http://morningconsult.com/polls/poll-public-opinion-different-sources-alternative-energy/

http://www.forbes.com/sites/jeffmcmahon/2015/01/01/americans-want-america-to-run-on-solarand-wind/#2715e4857a0b665f6b403699

http://www.usnews.com/news/articles/2013/04/01/poll-americans-overwhelmingly-supportalternative-energy

Attachment: Q0013.3 Verification.pdf

Date 211 15 Reporter A-2015

(B) Provided below (December 2013; conducted by WPA Research) and attached exhibits.

Now thinking about KCP&L pursuing additional renewable energy...

KCP&L is committed to providing clean, affordable energy that's why they have added renewable energy sources like wind, solar, blogas and hydro power to their generation. They were the first utility in Missouri or Kansas to own and operate a commercial scale wind facility with its Spearville Wind Generation Facility. And in January they added 400 megawatts of wind power to their fleet of power plants, bringing their total wind power to more than 1,000 megawatts of clean generation or enough to power more than 350,000 homes. Has this information given you a ROTATE more favorable or less favorable END ROTATION impression of KCP&L? 20.

[F MORE FAVORABLE/ LESS FAVORABLE, ASK] And, would you say you that this information has given you a MUCH (more/less) favorable impression or a SOMEWHAT (more/less) favorable impression of KCP&L?

	TOTAL MORE FAVORABLE	0 01 14 80%	<u>366 '15</u> 83%
	TOTAL LESS FAVORABLE	8%	7%
1.	Much more favorable	43%	45%
2.	Somewhat more favorable	37%	38%
3.	DK/Refused DNR	12%	10%
4.	Somewhat less favorable	6%	4%
5.	Much less favorable	2%	3%

(C) No distinction is made between Kansas City Power & Light service territory and KCP&L-GMO.

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Verification of Response

Kansas City Power & Light Company AND KCP&L Greater Missouri Operations

Docket No. EA-2015-0256

The response to Data Request #____0013.3_____ is true and accurate to the best of my knowledge and belief.

im Rush Signed: ___

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Date: January 27, 2016

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Missouri Public Service Commission

Respond Data Request

Data Request No.	0013.3
Company Name	KCP&L Greater Missouri Operations Company-Investor(Electric)
Case/Tracking No.	EA-2015-0256
Date Requested	1/8/2016
lssue	General Information & Miscellaneous - Certificates of Convenience/Feasibility Analysis
Requested From	Lois J Liechti
Requested By	Marcella Mueth
Brief Description	KCPL's research
Description	(A) Has KCPL participated in national studies regarding consumer support for solar energy? If so, please provide the studies. (B) Has a report, study, or document been prepared by or for KCPL regarding KCPL's research over the past five years showing KCPL customer support for renewable energy? If so, please provide. (C) In response to DR 0013, KCPL GMO states "Customer desire to have additional renewable and solar generation in the KCP&L-GMO service territory." Have any studies been performed by KCPL or on behalf of KCPL to determine that its customers desire solar generation specifically in the KCPL-GMO service territory as opposed to the KCPL service territory or the region? If so, please provide the studies. DR requested by: Claire Eubanks (Claire.eubanks@psc.mo.gov).
Response	Please see attached.
Objections	NA

The attached information provided to Missouri Public Service Commission Staff in response to the above data information request is accurate and complete, and contains no material misrepresentations or omissions, based upon present facts of which the undersigned has knowledge, information or belief. The undersigned agrees to immediately inform the Missouri Public Service Commission if, during the pendency of Case No. EA-2015-0256 before the Commission, any matters are discovered which would materially affect the accuracy or completeness of the attached information. If these data are voluminous, please (1) identify the relevant documents and their location (2) make arrangements with requestor to have documents available for inspection in the KCP&L Greater Missouri Operations Company-Investor(Electric) office, or other location mutually agreeable. Where identification of a document is requested, briefly describe the document (e.g. book, letter, memorandum, report) and state the following information as applicable for the particular document: name, title number, author, date of publication and publisher, addresses, date written, and the name and address of the person(s) having possession of the document. As used in this data request the term "document(s)" includes publication of any format, workpapers, letters, memoranda, notes, reports, analyses, computer analyses, test results, studies or data, recordings, transcriptions and printed, typed or written materials of every kind in your possession, custody or control or within your knowledge. The pronoun "you" or "your" refers to KCP&L Greater Missouri Operations Company-Investor(Electric) and its employees, contractors, agents or others employed by or acting in its behalf.

Security : Rationale :

http://pscprodweb/mpsc/commoncomponents/viewdocument.asp?DocId=935980558

Public

NA

2/9/2016

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News

Polling Data: Support for Solar

Latest Gallup Poll Shows Solar #1 Energy Choice Among Large Majority of Americans

This new nationwide poll (http://www.gallup.com/poll/182180/support-nuclear-energy.aspx) shows solar topping the list of domestic energy sources that need greater emphasis. Solar stood out, with 91% of respondents saying the U.S. should place more emphasis, or the same emphasis, on solar development.

QUESTION: Do you think that as a country, the United States should put more emphasis, less emphasis or about the same emphasis as it does now on producing domestic energy from each of the following sources?

	% MORE EMPHASIS	% SAME EMPHASIS	% LESS EMPHASIS
Solar power	79	12	9
Wind	70	14	14
Natural gas	55	32	12
Oil	41	27	30
Nuclear power	35	28	33
Coal	28	27	43

GALLUP Poll March 5-8, 2015

QUESTION: Do you think that as a country, the United States should put more emphasis, less emphasis or about the same emphasis as it does now on producing domestic energy from each of the following sources?

	GALLUP PO	II 2015 VS. 2013	
	% MORE EMPHASIS 2013	% MORE EMPHASIS 2015	DIFFERENCE
Solar power	76	79	+3
Wind	71	70	-1
Natural gas	65	55	-10
Oil	46	41	-5
Nuclear power	37	35	-2
Coal	31	28	-3

GALLUP Poll 2015 vs. 2013

http://www.seia.org/research-resources/polling-data-support-solar

Polling Data: Support for Solar | SEIA

QUESTION: Do you think that as a country, the United States should put more emphasis, less emphasis or about the same emphasis as it does now on producing domestic energy from each of the following sources?

	GALLUP	Poll March 5-8, 2015				
% REPUBLICANS % INDEPENDENTS % DEMOCRAT						
Solar power	70	83	82			
Wind	63	69	81			
Natural gas	66	52	49			
Oil	60	38	28			
Nuclear power	47	34	24			
Coal	40	24	22			

(This data was collected for Gallup's annual Environment Poll. The results are based on telephone interviews conducted March 5-8, 2015 with a random sample of -1,025—adults, aged 18+, living in all 50 U.S. states and the District of Columbia. For results based on this sample of national adults, the margin of sampling error is ±4 percentage points at the 95% confidence level.)

Topics Tags

Solar Energy Industries Association 202-682-0556 | 600 14th Street, NW, Suite 400, Washington, DC 20005

http://www.seia.org/research-resources/polling-data-support-solar



MARCH 30, 2015

U.S. Support for Nuclear Energy at 51%

by Rebecca Riffkin

WASHINGTON, D.C. -- A slim majority of Americans (51%) now favor the use of nuclear energy for electricity in the U.S., while 43% oppose it. This level of support is similar to what Gallup found when it last measured these attitudes two years ago, but it is down from the peak of 62% five years ago. Current support is on the low end of what Gallup has found in the past 20 years, with the 46% reading in 2001 the only time that it sank lower.

Slight Majority in U.S. Favors Nuclear Energy

Overall, do you strongly favor, somewhat favor, somewhat oppose, or strongly oppose the use of nuclear energy as one of the ways to provide electricity for the U.S.?



Note: 2012, and 2001-2009 measures were asked of a half sample

GALLUP'

The <u>high point in support for the use of nuclear power</u>, in 2010, was recorded shortly after President Barack Obama announced that the federal government would provide loan guarantees for the construction of two nuclear reactors, the first to be built in the U.S. in three decades.

support has generally dropped since then. However, between <u>2011 and 2012, support was</u> <u>stable</u>, with 57% favoring nuclear energy. This is notable given that Japan's Fukushima Daiichi nuclear disaster took place shortly after polling in 2011.

http://www.gallup.com/poll/182180/support-nuclear-energy.aspx?version=print

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The latest result comes from Gallup's annual Environment poll, conducted March 5-8.

Majority Wants More Emphasis on Solar, Wind Energy and Natural Gas

In the same poll, 35% of Americans say the U.S. should put more emphasis on nuclear power, while 33% favor less emphasis and 28% think the emphasis should remain the same as it is now. A majority of Americans favor putting more emphasis on solar energy, wind and natural gas.

> *Majority of Americans Want More Emphasis on Solar, Wind and Natural Gas* Do you think that as a country, the United States should put more emphasis, less emphasis or about the same emphasis as it does now on producing domestic energy from each of the following sources -- [RANDOM ORDER]?

	% More emphasis	% Less emphasis	% Same emphasis
Solar power	79	9	12
Wind	70	14	14
Natural gas	55	12	32
Oil	41	30	27
Nuclear power	35	33	28
Coal	28	43	27

March 5-8, 2015

GALLUP

Solar power is the most popular energy source on this question, with 79% of Americans saying the country should put more emphasis on it. Wind power is close behind at 70%. Americans are the least likely to want more emphasis on coal.

Support for Natural Gas Down Since 2013

Since 2013, support for "more emphasis" on natural gas production has dropped 10 percentage points and there has been a five-point drop in the percentage who want more emphasis on oil, possibly reflecting that the U.S. is producing more of these two commodities than in 2013. There has been no meaningful change in support for expanding solar power or wind as part of a national energy strategy; the same is true for nuclear and coal energy.

Percentage of Americans Favoring More U.S. Emphasis on Various Energy Sources, 2013 vs. 2015

Do you think that as a country, the United States should put more emphasis, less emphasis or about the same emphasis as it does now on producing domestic energy from each of the following sources -- {RANDOM ORDER}?

	More emphasis 2013	More emphasis 2015	Difference
	8	Ж	(pct. pts.)
Solar power	76	79	+3
Wind	71	70	-1
Natural gas	65	55	-10
Oil	46	41	-5
Nuclear power	37	35	-2
Coal	31	-28	-3

March 5-8, 2015

GALLUP

A solid majority of Republicans support more emphasis on oil, natural gas, wind and solar power, similar to their views in 2013. Meanwhile, a majority of Democrats support more emphasis on wind and solar power. The percentage of independents wanting greater emphasis on various energy sources is generally in between that of Republicans and Democrats.

U.S. Should Place "More Emphasis" on Each Source of Domestic Energy Production, by Party ID

Do you think that as a country, the United States should put more emphasis, less emphasis or about the same emphasis as it does now on producing domestic energy from each of the following sources ~?

	Republican <i>s</i>	Independents	Democrats
	%	%	%
Solar power	70	83	82
Wind	63	69	81
Natural gas	66	-52	49
Oil	60	38	28
Nuclear power	47	34	24
Coal	40	24	22

March 5-8, 2015

GALLIP

Republicans and Democrats show the greatest differences in their views of oil and nuclear power. Sixty percent of Republicans support putting more emphasis on oil, more than double the 28% of Democrats who support it. For nuclear energy, 47% of Republicans support greater emphasis, compared with 24% of Democrats.

http://www.gallup.com/poll/182180/support-nuclear-energy.aspx?version=print

Bottom Line

√hile fewer Americans think the <u>nation's energy situation is serious</u> than Gallup found as recently as 2011, the country remains divided, often along party lines, on which energy sources the U.S. should emphasize.

Americans overall continue to want more emphasis on so-called green energy: wind and solar. However, the percentage favoring nuclear energy, which provides about 20% of the nation's electricity, has seen several years of decline and is among the lowest Gallup has found. While a majority continues to want greater emphasis on natural gas, this is down significantly from 2013. This could be indicative of the divisive nature of fracking. Americans are <u>divided in their</u> <u>support for fracking</u>, one of the main ways the U.S. produces natural gas.

Survey Methods

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Results for this Gallup poll are based on telephone interviews conducted March 5-8, 2015, on the Gallup U.S. Daily survey, with a random sample of 1,025 adults, aged 18 and older, living in all 50 U.S. states and the District of Columbia. For results based on the total sample of national odults, the margin of sampling error is ±4 percentage points at the 95% confidence level. All reported margins of sampling error include computed design effects for weighting.

Each sample of national adults includes a minimum quota of 50% cellphone respondents and 50% landline respondents, with additional minimum quotas by time zone within region. Landline and cellular telephone numbers are selected using random-digit-dial methods.

View survey methodology, complete question responses, and trends.

Learn more about how <u>Gallup Poll Social Series</u> works.

RELEASE DATE: March 30, 2015 SOURCE: Gallup http://www.gallup.com/poll/182180/support-nuclear-energy.aspx CONTACT: Gallup World Headquarters, 901 F Street, Washington, D.C., 20001, U.S.A +1 202.715.3030 Copyright © 2016 Gallup, Inc. All rights reserved.

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Jeff McMahonContributor I cover green technology, energy and the environment from Chicago.

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TECH 1/01/2015 @ 9:02AM | 50,267 views

Americans Want America To Run On Solar and Wind

Americans "overwhelmingly" prefer solar and wind energy to coal, oil, and nuclear energy, according to a Harvard political scientist who has conducted a comprehensive survey of attitudes toward energy and climate for the last 12 years.

Americans see natural gas as a bridge fuel that falls somewhere in between, offering some benefits over traditional fuels but more "harms" than solar and wind, said Harvard Government Professor Stephen Ansolabehere during a December <u>appearance</u> at the University of Chicago.

"Americans want to move away from coal, oil and nuclear power and toward wind and solar," said Ansolabehere, introduced as "the leading energy political scientist in the world" to climate scientists, physicists, economists and publicpolicy experts at The Energy Policy Institute of Chicago (EPIC). Ansolabehere described solar and wind energy as "hugely popular, overwhelmingly popular."

So popular, in fact, that they easily cross the partisan divide that polarizes Americans on so many other issues. About 80 percent of Americans said they want solar and wind energy to "increase a lot," and another 10 percent or so want it to increase somewhat.

"In order to get 90 percent, that means a lot of Republicans like solar and wind—more than coal. Everybody likes those sources. This is nonpartisan."

Ansolabehere began surveying Americans on their energy preferences in 2001, when engineers and scientists at the Massachusetts Institute of Technology, including now-Energy Secretary Ernest Moniz, asked him to gauge public support for a plan to address climate change by building 300 new nuclear power plants.

Ansolabehere found that even Americans who worry about climate change don't support nuclear power. While such a result would not be surprising post-Fukushima, it surprised the engineers, who were envisioning a nuclear renaissance.

"People who were concerned about global warming did not want the technology that they were going to put forward. For the engineers, this was a show stopper."

Ansolabehere's findings might also be a show stopper for the Obama Administration's "all-ofthe-above" energy strategy.

"There are very few conservationists, people who want to use less electricity overall," he said. "There are also very few people who say all of the above, and this is an interesting note because I don't know if you remember a few years ago the Obama administration decided this would be a good thing to campaign on, this all-of-the-above strategy. It might have been a good idea to placate West Virginia coal miners, but in fact there aren't a lot of people who want all of the above in the energy sector."

Energy Secretary Ernest Moniz still routinely uses the phrase "all of the above" to describe the Energy Department's approach to energy sources.

People prefer solar and wind because they believe them to be less harmful—not to the global environment, but to the local, Ansolabehere said. People are less motivated by concerns about global warming than they are about local pollution and health risks.

"People think of solar and wind as relatively harmless, coal oil and nuclear as harmful and natural gas as somewhere in between."

And Americans are more motivated by perceived harm than they are by perceived cost.

But Ansolabehere also found that Americans do not have a good grasp of the true cost of solar and wind, nor are they willing to <u>shoulder that cost</u>. They believe solar and wind are cheaper than nuclear power and oil, which they perceive to be the most expensive sources. "The average member of the American public has the picture about right," he said. "People have the relative harms about right. People have the relative costs for traditional fuels about right. They're way too optimistic about [the cost of] solar and wind, and the caution is that if you inform them, you're going to get lower support."

Ansolabehere and Georgetown public policy professor David M. Konisky detail these findings and more in a recent book, "<u>Cheap and Clean:</u> <u>How Americans Think About Energy in the Age of</u> <u>GLobal Warming</u>" published by MIT Press. They discovered that Americans also have strong opinions about the best way to control carbon emissions and how much it should cost:

- Americans Favor EPA Regulation Over Carbon Tax, Cap And Trade
- <u>People Will Pay To Stop Climate</u> <u>Change—But Only \$5</u>



Stephen Ansolabehere at the University of Chicago

By Jeff McMahon, based in Chicago. Follow Jeff McMahon on <u>Facebook</u>, <u>Google Plus</u>, <u>Twitter</u>, or email him <u>here</u>.

RECOMMENDED BY FORBES

People Will Pay To Stop Climate Change -- But Only \$5

Americans Favor EPA Regulation Over Carbon Tax Or Cap And Trade

The Richest Person In Every State

Zenefits CEO Parker Conrad Resigns Amid Scandal

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Poll: Americans Overwhelmingly Support Alternative Energy

Expansion of solar energy topped the list of energy sources Americans want the nation to pursue.



A new poll finds solar power is America's preferred alternative energy.

By Meg Handley	 April 1, 2013, at 12:01 p.m.		+ More

Despite the nation's newfound abundance of fossil fuels thanks to the so-called "Shale Gale," Americans still overwhelmingly support more development of alternative energy, according to a new poll.

[ENJOY: Political Cartoons on Energy Policy]

Three-in-four Americans want the United States to pursue more solar energy according to Gallup and another 71 percent favor further development of wind power. Far fewer prioritized the expansion of oil production (46 percent) and nuclear expansion (37 percent), and less than one-third of respondents supported ramping up coal production.

The survey found Americans' opinion on the nation's energy options varied by political affiliation, with Democrats and independents championing solar power, while natural gas was the top choice for Republicans. Almost 90 percent of Democrats and nearly 75 percent of independents polled supported more solar power, compared to 68 percent among Republicans. More than two-thirds of Republicans supported more development of the nation's natural gas resources, compared to just 62 percent among independents and 59 percent of Democrats.

[PHOTOS: Florida's Next Generation Solar Energy Center]

Responses varied by geographic region as well. Those living in the South tend to support more traditional energy sources, such as oil and coal, than those living in other regions of the country.

Nevertheless, more investment in solar was the top priority overall, regardless of where respondents lived and Americans "overall and across political and socioeconomic groups generally are most likely to call for more emphasis on solar and wind power," the Gallup survey noted. But alternative energy sources are still in their infancy in terms of technology and affordability according to Gallup, which means they have a long way to go before achieving more significant contributions to U.S. domestic energy production.

[READ: Solar in the Spotlight]

In the meantime, that leaves natural gas, which is cleaner than coal and cheaper than many other energy sources. Almost 60 percent of Democrats support greater gas development, along with 62 percent of independents and almost 80 percent of Republicans. While advances in technology – including horizontal drilling and hydraulic fracturing – have allowed developers to tap into previously inaccessible stores of shale oil and gas, controversy over the environmental impacts of extraction and use of these fossil fuels could present a serious roadblock for further development.

"Questions remain about the safety of 'fracking technology' - meaning public support may not be enough to increase the U.S. emphasis on this energy source," the report noted.

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TAGS: energy, energy policy and climate change, renewable energy, solar energy, polls

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