DEPARTMENT OF ENVIRONMENTAL QUALITY INDUSTRY ENERGY SURVEY

REPORT OF RESULTS

PREPARED BY

BECKY VOGT

UNIVERSITY OF NEBRASKA-LINCOLN

DEPARTMENT OF AGRICULTURAL ECONOMICS

FOR THE

NEBRASKA DEPARTMENT OF ENVIRONMENTAL QUALITY

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Introduction

The University of Nebraska-Lincoln Department of Agricultural Economics and the Nebraska Department of Environmental Quality (DEQ) conducted an online survey of businesses in the state about their opinions about energy sources and the Clean Power Plan. This report details 94 responses to the survey.

Survey Methodology

Businesses were surveyed about their opinions about energy sources and the Clean Power Plan through an online survey conducted in November and December 2015 by the University of Nebraska-Lincoln Department of Agricultural Economics. The link to the online survey was sent to an internal listserv of businesses via email from staff at the Nebraska Department of Environmental Quality. Two emails were sent approximately two weeks apart that contained the URL of the online survey.

The percentages presented in this report may not always add to 100 percent due to rounding.

Respondent Profile

Sixteen percent of the businesses are in communities with populations less than 5,000. Sixteen percent are in communities with populations ranging from 5,000 to 19,999. Twenty-seven percent are in communities with populations ranging from 20,000 to 49,999 and 41 percent are located in communities with populations of 50,000 or more.

The average number of people employed by the businesses was 398. Answers ranged from 2 to 5,000. However, at least three in ten respondents skipped the question. The businesses have been operating in Nebraska for an average of 52 years. The answers ranged from 4 to 160. However, many respondents (40%) skipped this question.

Many of the respondents (37%) are the environmental officer for their business. Nineteen percent are the plant manager and nine percent are the CEO. Over one-third (35%) answered other.

Few respondents (12) answered the questions asking about the total quantity of electricity purchased by and delivered to their establishment during 2014. Of those that did respond, the average response was 41,898,555 kilowatt hours. Similarly, few (10) gave their total expenditures for the purchased electricity. Of those that did, the average response was $1,906,278.55.

Knowledge of Clean Power Plan and Perceptions of Impacts

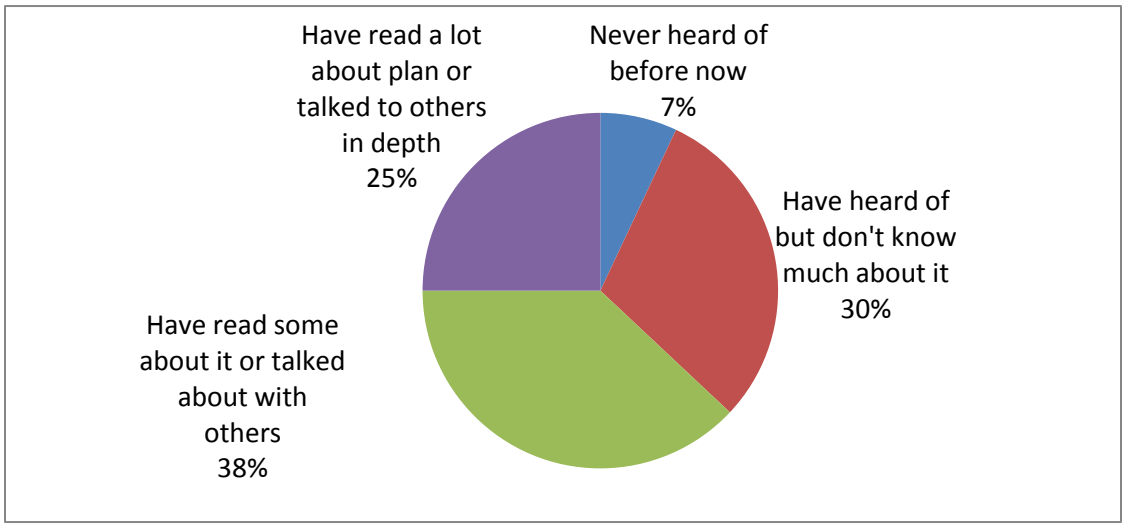
Respondents were given the following paragraph as an introduction to the survey:

In August, 2015, the federal government announced the Clean Power Plan which establishes guidelines for states to use in developing plans to reduce carbon dioxide emissions from existing power plants that use coal or natural gas to produce electricity. The Clean Power Plan requires states to begin complying with initial emission reductions in 2022-2024, with a goal of cutting carbon dioxide emissions nationwide by about 30% in 2030 and beyond.

How familiar are you with these new regulations?

Only seven percent of the respondents say they have never heard of the Clean Power Plan before receiving the survey. Three in ten (30%) say they have heard of the Clean Power Plan but don't know much about it. Thirty-eight percent have read some about the Clean Power Plan or talked about it with others and one-quarter (25%) have read a lot about the Plan or talked about it with others in depth.

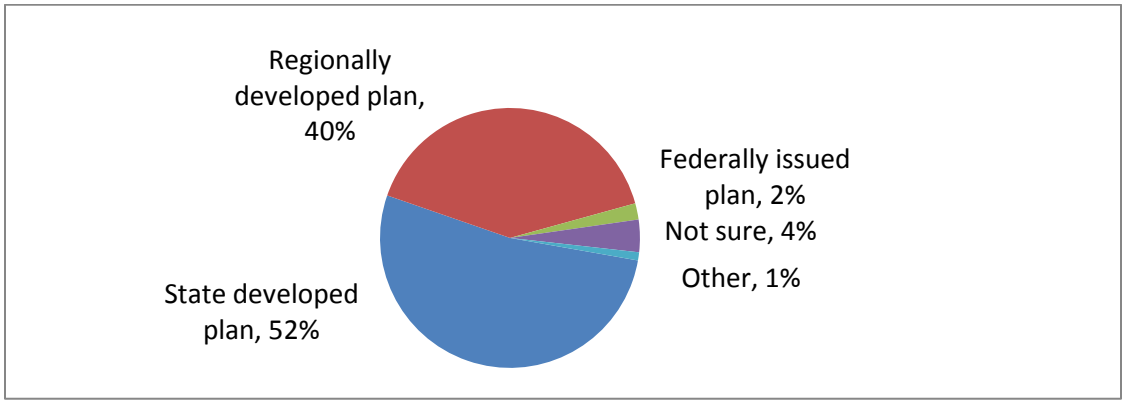
Knowledge of Clean Power Plan



States will need to develop a plan, either individually or regionally (with other states), that complies with the Clean Power Plan and limits carbon dioxide emissions. If a state fails to submit an approvable plan, the federal government can issue a plan for the state. Which of these options do you think would be most preferable for Nebraska?

More than one-half (52%) of the respondents chose a state developed plan. Four in ten (40%) think a regionally developed plan (with other states) would be best and two percent chose a federally issued plan. Four percent are not sure and one percent chose the other response.

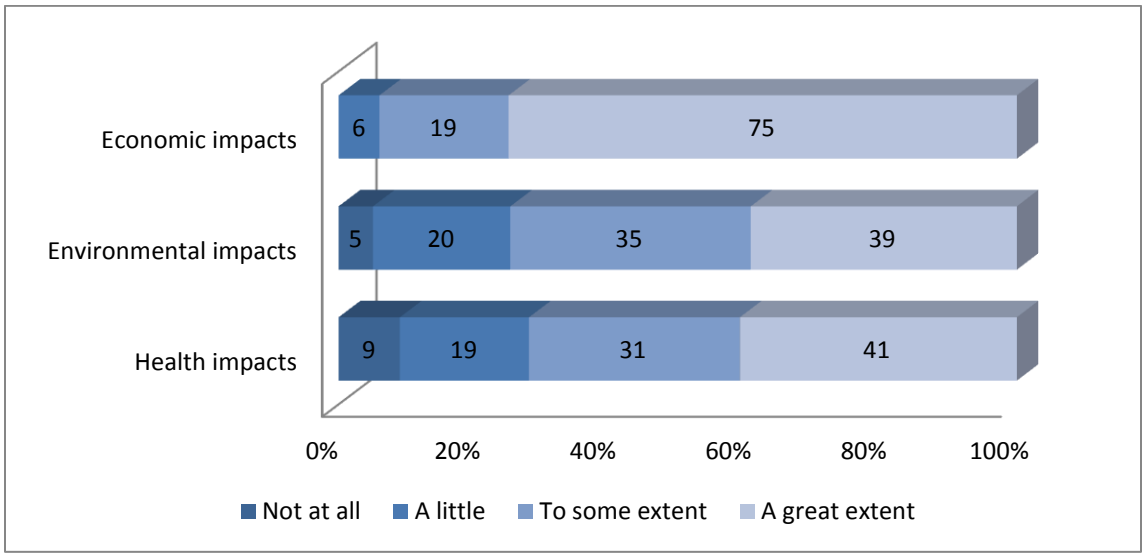
Type of Plan Preferable for Nebraska



As Nebraska begins to evaluate how to comply with the Clean Power Plan, how much should the following items be considered?

Most of the respondents believe the economic impacts of reducing carbon dioxide emissions (75%) should be considered to a great extent. Forty-one percent of respondents think the health impacts should be considered to a great extent and 39 percent think the environmental impacts of reducing carbon dioxide emissions should be considered to a great extent.

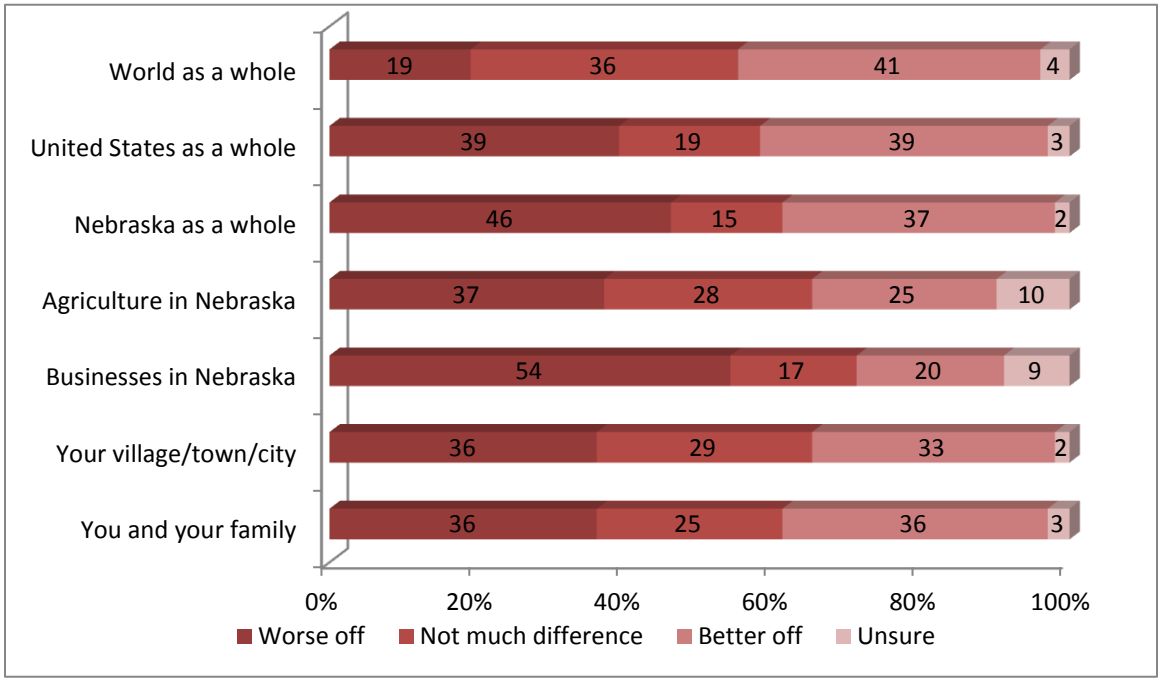
Extent Items Should be Considered in Complying with Clean Power Plan



In the long term, do you think the following groups will be better or worse off under the Clean Power Plan?

Most of the respondents (54%) believe businesses in Nebraska would be worse off in the long term under the Clean Power Plan. Approximately four in ten believe the world as a whole (41%) and the United States as a whole (39%) would be better off in the long term under the Plan. For Nebraska as a whole, more respondents believe it will be worse off in the long term (46%) than better off (37%).

Perceived Impacts of Clean Power Plan



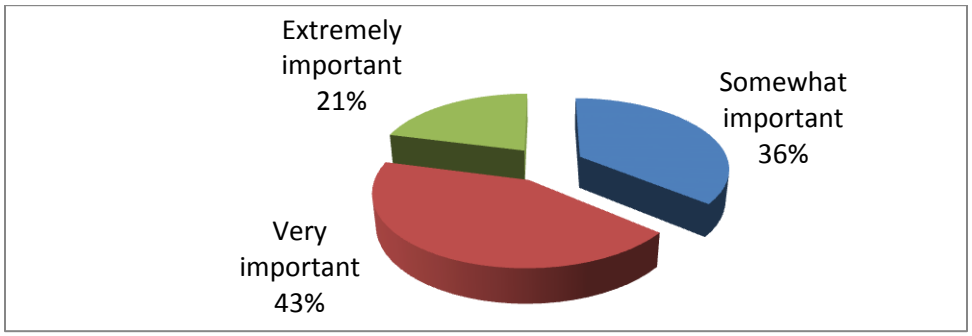
Opinions about Energy Sources

The businesses were also asked a series of questions that examine their opinions about energy sources.

How important is conserving energy to your company/business?

Thirty-six percent of the respondents said conserving energy is somewhat important to their company/business, 43 percent said it is very important and 21 percent answered extremely important. None of the respondents said conserving energy was not at all important or not too important.

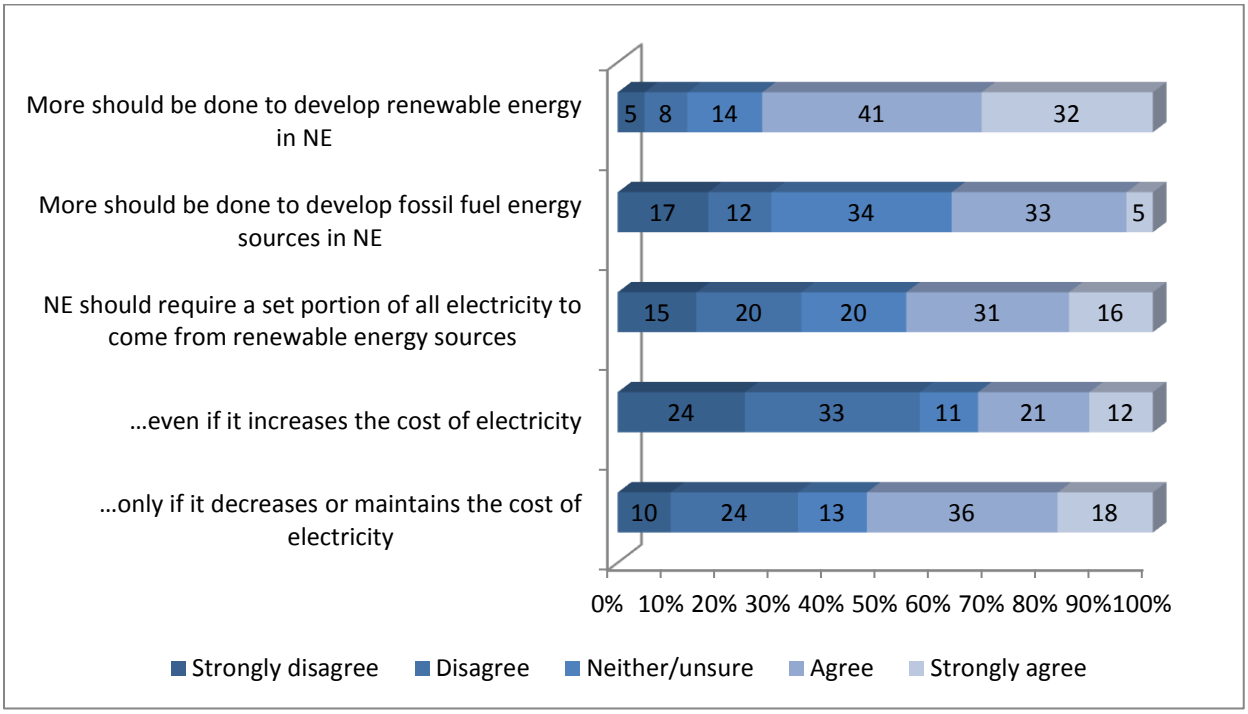
Importance of Conserving Energy to Company/Business



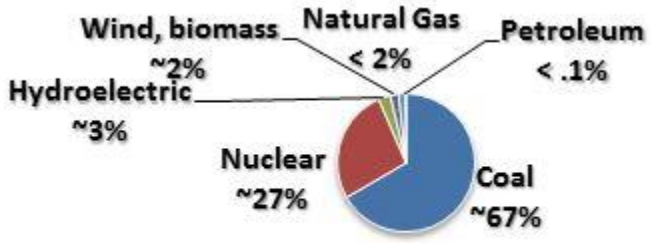
People have different opinions on the types of energy sources that should be used in Nebraska. Please indicate your level of agreement or disagreement with each of the following statements.

Most of the respondents agree or strongly agree that more should be done to develop renewable energy (such as wind and solar) in Nebraska. Forty-one percent agree with that statement and 32 percent strongly agree. However, most of the respondents agree that Nebraska should require a set portion of all electricity to come from renewable energy sources only if it decreases or maintains the cost of electricity. Most of the respondents *disagreed* that a set portion of all electricity should be required to come from renewable energy sources even if it increases the cost of electricity.

Opinions about Energy Sources in Nebraska



Respondents were next shown the following graphic that depicts the proportion of Nebraska's electricity that came from various sources during 2001-2014.

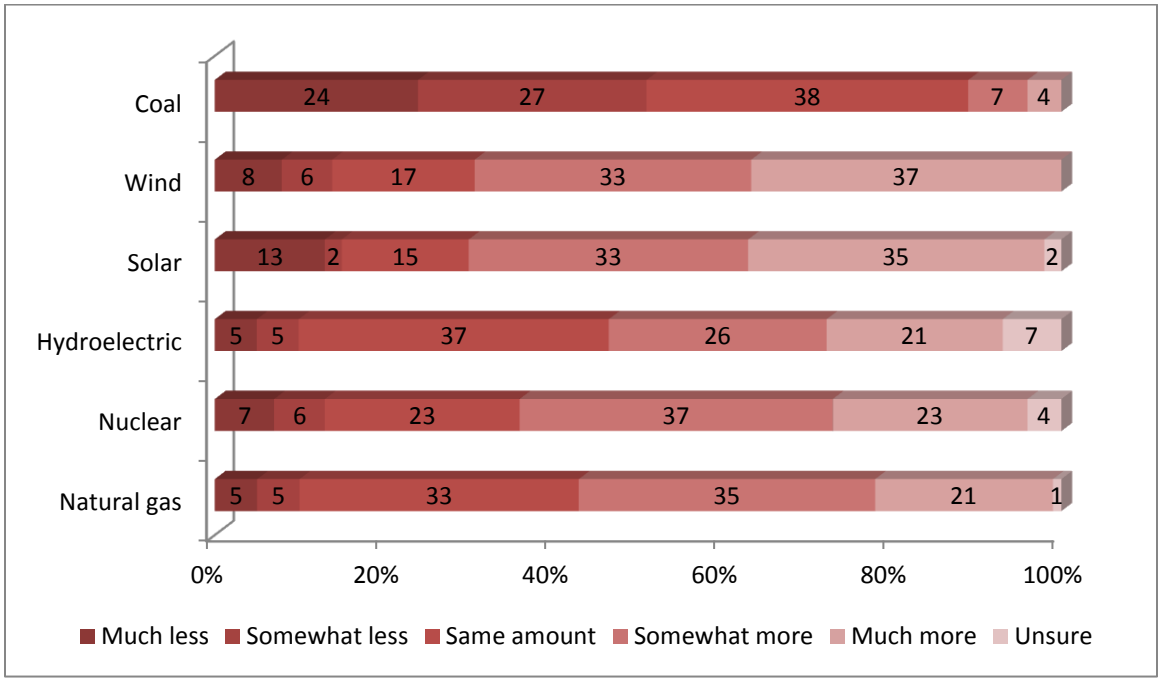


Source: U.S. Energy Information Administration

As shown above, electricity can come from many different sources. Over the next several years, do you think Nebraska should invest less, more or about the same in each of the following sources of electrical energy?

Most of the respondents believe Nebraska should invest either somewhat more or much more in the following sources of electricity over the next several years: wind, solar, nuclear, and natural gas. Just over one-half (51%) believe Nebraska should invest much less or somewhat less in coal over the next several years. And, almost four in ten respondents (37%) believe the state should invest the same amount in hydroelectric.

Amount of Investment Nebraska Should Put in Various Sources of Electricity over Next Several Years

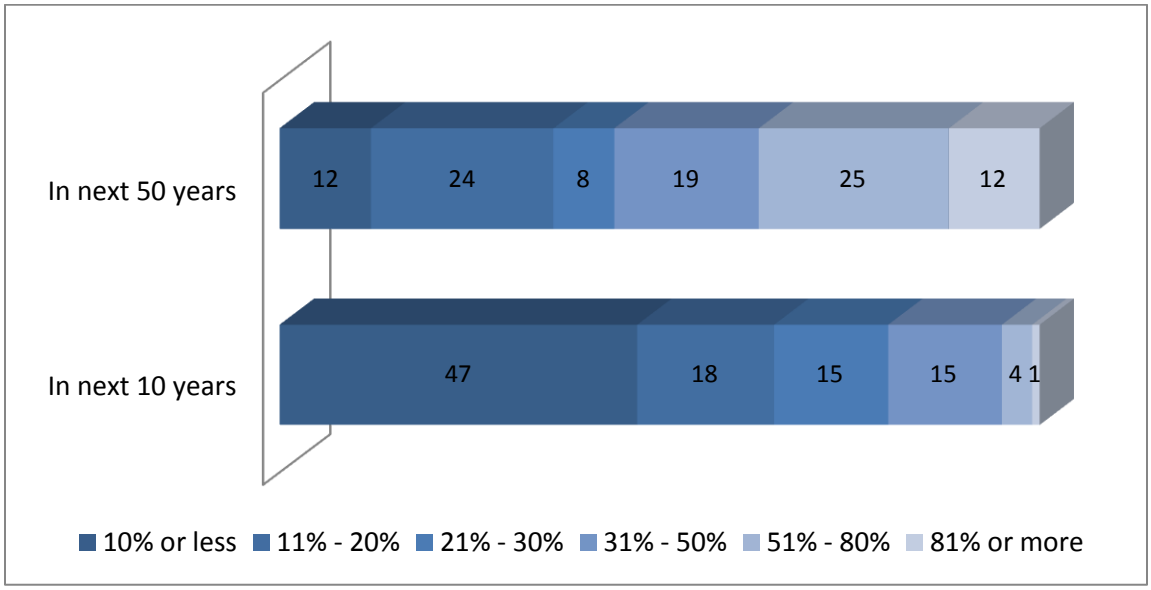


What percentage of Nebraska's electricity should come from renewable energy sources (e.g., wind, solar) in each of the following time periods?

The average answer given for the next 10 years was 21%. The answers given ranged from 3 to 90. Almost one-half (47%) of the respondents gave responses of 10% or less. Almost two-thirds (65%) gave responses of 20% or less.

When asked the same question for the next 50 years, the average response was 46%. The answers given ranged from 0 to 100. Just over one-third of the respondents (35%) gave responses of 20% or less. Sixty-two percent gave responses of 50% or less.

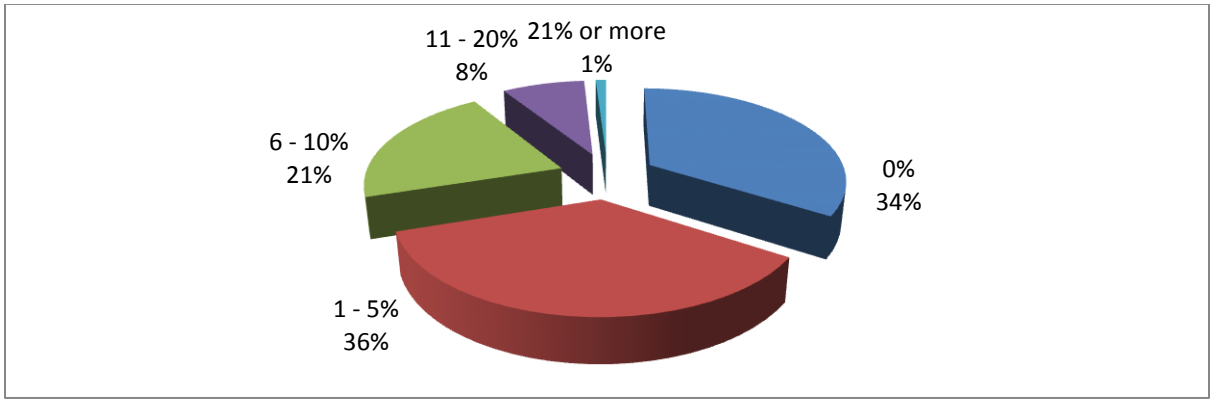
Percentage of Nebraska's Electricity that Should Come from Renewable Energy Sources



How much more would your company be willing to spend for each month to have electricity come from renewable sources?

Just over one-third (34%) answered 0% (they are unwilling to spend any more per month to have electricity come from renewable sources). Just over one-third (36%) are willing to spend between 1 and 5% more per month to have electricity come from renewable sources. Twenty-one percent are willing to spend between 6 and 10 percent more per month.

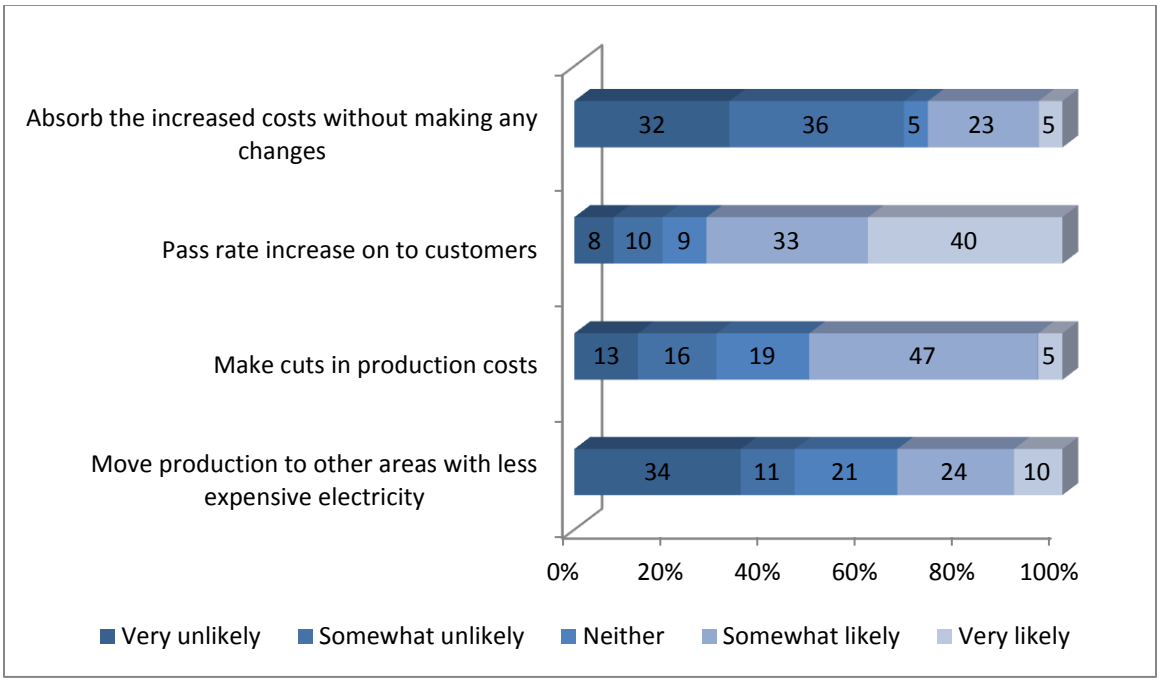
Amount More per Month Company is Willing to Spend to Have Electricity Come from Renewable Sources



If you experience an increase in electricity rates, how likely would your business use the following methods to handle that increase?

Many businesses (40%) said they are very likely to pass the rate increase on to customers. Almost one-half (47%) are somewhat likely to make cuts in production costs. Most of the respondents said it was very or somewhat *unlikely* that they would absorb the increased costs without making any changes.

Likelihood of Using Various Methods to Handle an Increase in Electricity Rates



Open-Ended Responses

States will need to develop a plan, either individually or regionally (with other states), that complies with the Clean Power Plan and limits carbon dioxide emissions. If a state fails to submit an approvable plan, the federal government can issue a plan for the state. Which of these options do you think would be most preferable for Nebraska?

Site specific

If you are willing, please explain the reason(s) for your answer to Q2:

Time constraints. More flexible.

1) Nebraska is the only Public Power State.2) Working through the Governor's of multiple states will likely not be in NE best interest.

Individual states will have more control over achieving and maintaining compliance with the plan. A regional plan would mean that concessions and compromises may be necessary for lower-emitting states to compensate for higher emitting states, and a federal plan would leave no local control.

I believe that Nebraskans can work with our public power facilities to determine how to create clean energy such as wind and solar to meet the requirements of the Clean Power Plan.

The people at NDEQ and the public utilities of the state have a long history of working together and solving issues to the best possible extent. No one other than the people of the State care more on how new regulations affect the people here. It does not make sense to defer decision making to people outside of Nebraska.

Keep it in-house. Less federal interference.

I remember the challenges we had with the regional plan for disposal of low level radioactive waste and think it would be best if Nebraska had their own plan.

State only, because if looking at combining emissions with other states, we could possibly be ""shorted"" and it would hurt Nebraska.

I think that it will cause less issues in the future if we can have a plan that us and states around us are willing to accept.

If the state is given the right to create their own plan it allows the state to control how the regulation will be implemented and met. It also allows the state the flexibility to met the regulation in many different ways.

I believe the state should have as much input as possible. We are more familiar with out state than the Federal Government.

A plan that reflects Nebraska issues and conditions may be better serve our state.

I think we should be in control of what occurs in our state.

Since air pollution impacts go beyond state boundaries it seems logical to look at regional measures

Air does not recognize state borders.

If the opportunity is there and it makes sense to work with other states that may be the direction that needs to be taken. Somehow states may need to go through the process individually first and then communicate with others.

The state needs to be in control of how they comply with the regulation.

It will depend on who they drag into the regulation and what the requirements will be.

Then everyone plays by the same rules.

The issues that others may bring could adversely affect the plan.

Regionally you can generate more ideas and if the goal can't be reached it is not just one state not making the goal.

regional issues require a regional approach to solve the problem

Coordinating with neighboring states seems like a good idea, as Wyo produces the coal we burn and gas.

A state developed plan should take into consideration more of the challenges that may be created for our local industries.

Limit the number of layers of governing bodies. For example, Nebraska businesses should be regulated by Nebraska only, not Iowa, Kansas and Missouri.

Coordination with other states such as Wyo should be helpful, beings we burn lots of their coal and gas.

flexible, lower cost, ability to trade, reliability, etc

many more compliance options---flexible, lower cost,

More opportunity for direct input and consideration of site specific concerns.

Air quality, much like water quality, is not contained or easily managed by political boundaries. This is why a regional solution might work best.

the state should have people in power that can decide on the plan and not have the federal government dictate it

I think it is important that Nebraska be proactive in choosing the best plan for our state. I would like to see the state make an approvable plan rather than relying on the federal government to do so.

Understanding the electric grid and it's connectivity in multiple states, it seems necessary to organize the response to the CPP based on a regional grid system.

To leverage the diversity of the regional mix of energy sources.

It will be difficult to get all parties in the state to agree. Next to impossible to get all parties in a RTO to agree in a short amount of time

It keeps ownership and accountability in the State of Nebraska.

As Nebraska begins to evaluate how to comply with the Clean Power Plan, how much should the following items be considered?

Health impacts of associated emissions (mercury, sulfur oxides and other emissions) from coal

Most things we do we have some setback for doing what we do but the impact usually out weighs the risk if there is truly any.

electric rates and reliability must be evaluated

The long term economic impacts of NOT reducing CO2 will impact NE and the rest of the U.S. This is not a short term economic issue. Climate change is real. The last 5 years were the hottest ever recorded. A new record is set on average temperature almost every month. We have to take this seriously!

CO2 emissions related to climate change which effects the three categories listed above

compliance with regulations

CO2 has no health impacts and only minimal env impacts

Protecting public health and the natural environment should be the drivers not the economics.

As shown above, electricity can come from many different sources. Over the next several years, do you think Nebraska should invest less, more or about the same in each of the following sources of electrical energy?

Wind and solar are great, but of little use if the sun isn't shining and the wind isn't blowing at the right speed. Hydroelectric is great, but I'd assume that it's already been implemented to the extent possible.

Can we derive energy from elements whose boiling points are higher than the temperature of ground water? Do that.

I do not see any mention of reliability

Sequestration research for coal-fired power plants.

biogas from feedlots

Capture methane from animal confinement operations!

These are all things that private companies should do, not ""Nebraska"" the state government

biomass, fuel cells

If you experience an increase in electricity rates, how likely would your business use the following methods to handle that increase?

Implement energy conservation methods

Look for more energy savings projects

Reduce repairs on federal buildings, since that's the budget that money comes from

Retrofit older facilities

At what electricity price would you be unable to continue your business?

.20

unsure

?

Will pay what it costs

.10/kwh

0.50

12 cents /KWH

Not sure

not sure

Not my department

unknown

confidential

20

Not Sure

That would be a corporate decision

unknown

not sure

unsure

15c/kwh

Unknown

unknown

N/A

Not Sure

dont know

not sure

?

$.12/kWh

Would have to get Management Team together to answer this

unknown

Will pay what it costs

It depends on the cost of other variable costs, including fuel, labor, etc.

Not sure?

10 cents/kwh

10.7 cents/kwhr

What is your position in your business?

CONTROLLER

Engineer

HSE Leader

program director

Director of Environmental

Plant Engineer

Plant engineer

Office manager

General manager

Technical Manager

hourly staff

Safety

Worker

Worker

Project Manager

Mfg. Engineer

Director

prefer not to say

Safety, Health, Environmental Coordinator

QES Manager

Development Specialist

Principal

Team Leader

Senior Consultant

If you have any additional comments that you would like to make, please feel free to note them below. Thank you!

The CPP is intended to show the world that the US is willing to reduce its carbon, and there are many theories to how it will help. The theories have many variables which are not completely accounted for, and in the end it will touch everyone. There will be a shift in economics, some will prosper, many will need to give up some luxuries, maybe even some necessities. Everyone will need to decide if they are willing to pay the price.

If the federal government had more money to pony up for our budget, we could pay almost whatever the cost change for utilities will be. As a proponent of net zero buildings and resource consumption/creation, I would like to permanently get away from using any fuel with a finite lifespan.

Climate change is a joke!! There is nothing that we on earth can do to change it. Climate has and will always change. We have to adapt.

Government subsisties are trying to push wind. Wind cannot sustain itself without this support. It is expensive and unreliable since the wind does not blow all the time. Solar and new technology nuclear should be invested in as long term solutions for the future.

Energy consumption is very important to our business and represents a large fraction of our overall production costs. We are extremely interested in this issue and commit extensive resources to energy efficiency efforts where practicable.

The Clean Power Plan is not perfect but it takes us in the right direction. We need this policy!