

**(Informed consent presented in the beginning)**

As we explained in the consent form, all of your responses will be kept anonymous. In this survey, a “power outage” means a complete loss of electricity to your home. Many factors can cause power outages, including severe weather, accidents, maintenance of electrical equipment, or equipment failures.

1. How old are you?

\_\_\_\_\_ years

*[If the respondent is under 18, (s)he will be considered ineligible]*

2. Roughly how much did you pay for your monthly electricity bill in pre-COVID times?

During shoulder seasons (Mar-May, Sep-Nov):

- ☐ \$0-99/month  
☐ \$100-199/month  
☐ \$200-299/month  
☐ \$300 or above/month  
☐ Cannot estimate

During summer (Jun-Aug):

- ☐ \$0-99/month  
☐ \$100-199/month  
☐ \$200-299/month  
☐ \$300 or above/month  
☐ Cannot estimate

During winter (Dec-Feb):

- ☐ \$0-99/month  
☐ \$100-199/month  
☐ \$200-299/month  
☐ \$300 or above/month  
☐ Cannot estimate

*[If the respondent selects “cannot estimate” for all the three questions, (s)he will be considered ineligible]*

3. During normal times (i.e., not during the COVID-19 pandemic), do you, or anyone else who lives in your house, work from home?

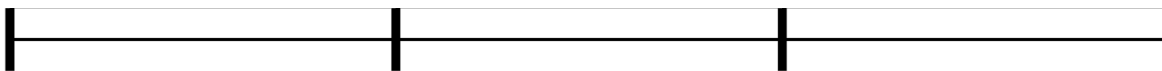
- ☐ Yes ☐ No

*[If the respondent answers “yes,” ask the following question]*

Do you, or these other household members, need electric power to work at home?

- ☐ Yes ☐ No

4. What impact has the COVID-19 pandemic had on your, or your household members’, life?



Significantly impacted

Somewhat impacted

Slightly impacted

Not impacted

*[If the respondent’s answer is negative, ask the following question]*

How have your, and your household members’ routines been affected by the COVID-19 pandemic? Please select all that apply.

- ☐ Have started to work from home
- ☐ Have traveled less
- ☐ Have children at home because they are not at school or in childcare
- ☐ Have become unemployed or had a reduction in work schedule
- ☐ Other

*[If the respondent answers "other," ask the following question]*

Please describe other ways that you and your household members have been affected by the COVID-19 pandemic.

Please enter your answer here. Use as much space as you need:

5. Do you, or anyone in your household, have health conditions that would be affected by a power outage (for example, need power for an oxygen ventilator, have medicines that need refrigeration, etc.)?

☐ Yes ☐ No

*[If the respondent answers "yes," ask the following question]*

Please describe what devices need power for health reasons, whether those devices have back-up power, and how long they can operate when there is no electric power:

Please enter your answer here. Use as much space as you need:

6. Do you have a heating system that does not require electricity (for example, a wood-fired stove or gas furnace that can operate without electricity)?

☐ Yes ☐ No

*[If the respondent answers "yes," ask the following questions]*

What is the fuel source for the heating system? Select all that apply.

- ☐ Dry wood and pellet
- ☐ Propane (only if the pumps or blowers do not require electricity)
- ☐ Kerosene (only if the pumps or blowers do not require electricity)
- ☐ Other. Please specify: \_\_\_\_\_

How long would you be able to run the heating system using the fuel stored at your home?

\_\_\_\_\_ hours

7. Do you have a back-up generator for your home?

☐ Yes ☐ No

*[If the respondent answers "yes," ask the following questions]*

What things in your home could you run with this generator?

- ☐ A few lights and the refrigerator
- ☐ All the critical electric appliances that I might need, including heaters and cooking appliances
- ☐ Pretty much the whole house
- ☐ Do not know

What is the fuel source for the generator? Select all that apply.

☐ Gasoline

☐ Propane

☐ Diesel

☐ Other. Please specify: \_\_\_\_\_

How long would you be able to run your generator at full capacity with the fuel you have stored?

\_\_\_\_\_ hours

In the sections that follow, we will ask you to think about three different example power outages that might happen in (the community). The table below summarizes the three outage scenarios that we will ask about. *When answering the questions about the outage scenarios, please assume that the COVID-19 pandemic has ended, and life has returned to normal.*

	Outage Scenario 1	Outage Scenario 2	Outage Scenario 3
Duration	6 hours	2 days	7 days
Time of year	February weekday	February weekday	February weekday
Weather condition	Relatively warm winter morning (36 °F)	Average winter morning (28°F)	Relatively cold winter morning (19°F)
Initiating event	Power line damaged during digging	Thick cloud of volcano ash	Severe earthquake
Geographic scope	A few neighboring homes	The entire city	All of Southcentral and Southeast Alaska
Planned	No	No	No
Cell towers	Working	Down after several hours	Down after several hours
City water and sewer service	Working	Not working	Minimally working
Critical public services (for example, hospitals, emergency shelters, and Stores/Businesses	Working	Working	Minimally working
Travel	Possible	Only a few with their own back-up generators and fuel are open	Most likely closed
COVID status	The COVID-19 pandemic has ended, and life has returned to normal.		

Now, we will ask you to answer some questions about the consequences associated with the outages. *There are no right or wrong answers to these questions.* If a question is difficult for you to answer, please give your best guess. At the end of the survey, you will be able to add comments about any of your answers.

**[Scenario #1. Six-hour-long, localized power outage]**

It is a **relatively warm (36 °F) winter morning** on a weekday in February with clear skies. The power has just gone out with no warning. When you call **(the utility)**, you find out that someone damaged a buried power line while digging to get to a frozen water pipe. This caused a power outage to your home and a few nearby homes that are served by that power line. The utility already knows about the problem and is working to fix it. **You are told to expect that the power will come back on in about 6 hours.**

During the power outage, equipment that runs on a battery (if charged) or that does not need electricity will work. If you have your own generator and can produce some power, you may be able to power a few key appliances, including your refrigerator and heaters. If you have an individual well or electric water pump, they will not work unless they are connected to the generator. Even if you don't have a back-up generator, you could spend time somewhere else that has power (such as a neighbor's house, a restaurant, a local store, or your workplace) because the outage affects only a few homes. You can stay at your home if you want to, but your heaters might not work if they need electricity to run pumps or blowers.

1-1. Please select all the steps that you would take to adjust to the 6-hour power outage.

- ☐ Stay home and do activities that do not require electricity
- ☐ Run your back-up generator using the fuel you have stored to meet your most important electrical needs
- ☐ Go to a nearby place that has electricity
- ☐ Use your heating systems that can be operated without electricity
- ☐ Use your non-electric cooking appliances for cooking perishable food (for example, a propane/gas stove or grill)
- ☐ Other

*[If respondent selects "Other," ask the following question]*

Please describe what other steps you would take to adjust to the power outage.

Please enter your answer here. Use as much space as you need:

1-2. Would you have access to electricity during the power outage for one of the following reasons?

- ☐ I have a back-up generator or can borrow one; therefore, I would be able to generate some electricity during the power outage.
- ☐ I would be able to stay at the home of someone else who still has power or at a business location in a part of town where the power is on.
- ☐ I would not be able to produce electricity or go to other places that have electricity.

*[If the respondent answers "I can generate some electricity," show the following question]*

Considering the effects of the power outage that have been mentioned so far, and any other effects of a power outage on your household, how much would this 6-hour power outage cost your household? Please only include the costs that would directly result from this power outage, not the costs that your household would have had to pay even if there was no power outage.

Costs resulting from the 6-hour power outage	Cost estimate
Cost of additional supplies purchased because of the outage	\$
Cost of fuel to run a generator	\$
Cost of fuel for alternative non-electric heating and cooking devices that you would only use because of the outage	\$
Other costs of the 6-hour power outage	\$

*[If the respondent answers "my home will not have electricity, but I can stay at a neighbor's home or a business that still has power," show the following question]*

Considering the effects of the power outage that have been mentioned so far, and any other effects of a power outage on your household, how much would this 6-hour power outage cost your household? Please only include the expenses that would directly result from this power outage, not the costs that your household would have had to pay even if there was no power outage.

Costs resulting from the 6-hour power outage	Cost estimate
Cost of additional supplies purchased because of the outage	\$
Cost of staying at a neighbor's home or business	\$
Other costs of the 6-hour power outage, including the cost of fuel to run your car	\$

*[If the respondent answers "I would not have access to electricity at all," show the following question]*

Considering the effects of the power outage that have been mentioned so far, and any other effects of a power outage on your household, how much would this 6-hour power outage cost your household? Please only include the costs that would directly result from this power outage, not the costs that your household would have had to pay even if there was no power outage.

<b>Costs resulting from the 6-hour power outage</b>	<b>Cost estimate</b>
Cost of additional supplies purchased because of the outage	\$
Cost of fuel for alternative non-electric heating and cooking that you would only use because of the outage	\$
Other costs of the 6-hour power outage	\$

**1-3.** If the power goes out at your home and a few nearby homes for 6 hours, will your and/or your household members' employers pay you? Please select all that applies.

- ☐ Nobody else in my household is currently employed.
- ☐ My work, or other household members' work, would not be affected by this power outage.
- ☐ I and/or other household members could not go to work but would not lose any pay.
- ☐ I and/or other household members could make up the missed work later and get paid.
- ☐ I and/or other household members could not go to work and would not get paid.

*[If the respondent answer "Could not go to work and would not get paid," ask the following]*

How much in wages would your household expect to lose during the 6-hour power outage?

The household would lose \$ \_\_\_\_\_ in wages

**1-4.** Now let's go back to our power outage scenario and assume that there is a nearby local company where you can rent a generator during the outage. This company can quickly hook up a generator to your home and provide all the electric power that you would have normally used during the time that the power is out. Your cell phone has enough power to call and request that service. You will receive a bill later, by mail, for a one-time payment for the generator rental.

How much would you be willing to pay for a generator rental service like this during this 6-hour power outage? For each of the following questions, please indicate whether you would be willing to pay the amount of money stated. For example, consider the first row of the table: Would you be willing to pay \$10 or less in exchange for the back-up generator service? If yes, please check the "Yes" box. If you are not sure, please check the "Not sure" box. If no, please check the "No" box. Do the same thing for the remaining rows of the table.

**Summary of the outage**

**Time of year:** February, Tuesday

**Duration:** 6 hours

**Cause:** Power line damaged during digging

**Start time:** Morning (relatively warm, 36 °F)

**Affected areas:** A few residential homes

**Advance warning before the outage:** No

	Would you be willing to pay at least this amount extra <i><b>per day</b></i> to get the full back-up service during the power outage?		
	Yes	Not sure	No
Less than \$10	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
\$10-\$19.99	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
\$20-\$29.99	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
\$30-\$39.99	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
\$40-\$49.99	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
\$50-\$59.99	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
\$60-\$69.99	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
\$70-\$79.99	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
\$80-\$89.99	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
\$90-\$99.99	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
More than \$100	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

*[If the respondent selects "yes" for "more than \$100," ask the following question]*

What is the largest amount you would be willing to pay per day to receive back-up generator service for 6 hours?

\$ \_\_\_\_\_



**1-5.** Now we would like to ask you how the same outage would affect your household if you had advance warning that the power was going to be out. Imagine that (the utility) tells you on a Monday in February that they are going to turn off the power for approximately 6 hours the next day, on Tuesday morning, to perform some routine system maintenance. Would having an advance warning of a 6-hour outage help you better prepare for the power outage?

☐ Yes ☐ No

*[If the respondent answers “yes,” ask the following question]*

What would you be willing to pay to get back-up service in this case with 24 hours of advance notice?

\$ \_\_\_\_\_

**1-6.** Now let’s consider whether your preference for the backup service might be different at another time of year. How might your willingness-to-pay for the backup service be different if an unexpected 6-hour power outage happened in July instead of in February?

- ☐ My willingness-to-pay for the backup service would be higher.  
☐ My willingness-to-pay for the backup service would be about the same.  
☐ My willingness-to-pay for the backup service would be lower.

*[If the respondent answers “my willingness-to-pay for the backup service would be higher,” ask the following question]*

Roughly how much higher would your willingness-to-pay for the backup service be?

\$ \_\_\_\_\_ higher in July than in February

Please explain why your willingness-to-pay value would be higher in July.

Please enter your answer here. Use as much space as you need:

*[If the respondent answers “my willingness-to-pay for the backup service would be lower,” ask the following question]*

Roughly how much lower would your willingness-to-pay for the backup service be?

\$ \_\_\_\_\_ lower in July than in February

Please explain why your willingness-to-pay value would be lower in July.

Please enter your answer here. Use as much space as you need:

Next, we would like to know about your (or your household's) response to an outage that lasts several days or weeks. We will begin by asking a few questions regarding your past experiences and plans for future outages.

1. Has your household ever experienced an unexpected power outage lasting longer than 2 days?

☐ Yes

☐ No

*[If the respondent answers "yes," ask the following questions]*

How long did the outage last? When did it occur? What caused the power outage?

Please enter the respondent's answer here. Use as much space as you need:

What steps did you take to deal with the outage?

Please enter the respondent's answer here. Use as much space as you need:

2. What, if any, consequences would your household experience:

If power were lost for 2 days unexpectedly:

Please enter the respondent's answer here. Use as much space as you need:

If power were lost for 1 week unexpectedly:

Please enter the respondent's answer here. Use as much space as you need:

If power were lost for longer than 1 week unexpectedly:

Please enter the respondent's answer here. Use as much space as you need:

3. Does your household have a plan for what to do during an unexpected long power outage that would last several days to several weeks?

☐ Yes

☐ No

*[If the respondent answers "yes," ask the following question]*

Please describe your household's plan for an unexpected long power outage in a brief sentence or two:

Please enter the respondent's answer here. Use as much space as you need:

### [Scenario #2. Two-day-long, citywide outage]

It is **an average (28 °F) winter morning** on a weekday in February. The power goes out with no warning. You learn from the radio that the Redoubt Volcano has had a major eruption, and the winds have brought a heavy ash cloud to **(the community)**. You can see ash in the air and on the ground when you look outside. The ash could damage **(the utility)**'s diesel generators, so there is no back-up power from **(the utility)**. Because it is winter, the streams are frozen, so the hydroelectric power plants are not producing electricity. The Federal Aviation Administration issues a safety warning to pilots in Southcentral Alaska, so planes cannot fly. **(The utility)** **says the weather forecast indicates that the winds will change in about 2 days (48 hours).** **(The utility)** **expects to restore power then.**

During the outage, all regular power to the city will be shut off. Private and social services in the **(the community)** that have their own emergency back-up generators with good air filters would continue to operate. Other public and private services that would normally receive back-up power from **(the utility)** and that do not have emergency generators would probably not be operating. This includes water and sewer service. Cellular towers have enough emergency back-up power to operate for several hours. You will lose both cell phone and internet services after the cell towers lose power. If you have generators or wood-fired heaters, these could be used for heating, but note that these appliances should be used carefully because they can produce carbon monoxide. You may want to leave **(the community)**, but there will be no ferry service because it is winter, and there will be no air taxis and local air charter services until the safety warning is lifted.

**2-1.** Please choose all the steps that you would take to adjust to this 2-day power outage.

- ☐ Stay home and do activities that do not require electricity
- ☐ Run your back-up generator, using fuel you have stored, to power essential electrical demands
- ☐ Visit or stay at a friend or neighbor's home that has a back-up generator and stored fuel
- ☐ Use your heating systems that can be operated without electricity
- ☐ Use your non-electric cooking appliances for cooking perishable food (for example, propane/gas stove or grill)
- ☐ Other

*[If respondent select "Other," ask the following question]*

Please describe what steps you will take to adjust to this power outage.

Please enter your answer here. Use as much space as you need:

*[Follow up question for all the respondents]*

What percentage of your normal activities could you continue during the outage?

\_\_\_\_\_ % of the normal activities for \_\_\_\_\_ hours

**2-2.** Would you have access to electricity during the power outage?

- ☐ I have a back-up generator and would be able to generate some electricity during the power outage. (Note: you should assume that you cannot purchase a back-up generator from a store if you do not already have one)
- ☐ I would not have electricity at my house, but I would be able to visit or stay at the home of someone else who has a generator.
- ☐ I would not be able to produce electricity or go to other places that have a generator.

*[If the respondent answers "I would be able to generate some electricity during the power outage," ask the following question]*

Considering the effects of the power outage that have been mentioned so far, and any other effects of a power outage on your household, how much would this 2-day power outage cost your household? Please only include the costs that would directly result from this power outage, not the costs that your household would have to pay even if there was no power outage.

Costs of the 2-day power outage	Cost estimate
Cost of additional supplies, batteries, etc. purchased because of the outage	\$
Cost of fuel to run a generator for up to 2 days	\$
Cost of fuel for alternative non-electric heating and cooking that you would only use because of the outage	\$
Other costs of the 2-day power outage	\$

*[If the respondent answers "I would be able to stay with someone else's house," ask the following question]*

Considering the effects of the power outage that have been mentioned so far, and any other effects of a power outage on your household, how much would this 2-day power outage cost your household? Please only include the costs that would directly result from this power outage, not the costs that your household would have to pay even if there was no power outage.

Costs of the 2-day power outage	Cost estimate
The value of perishable food in your refrigerator and freezer that you would have to throw out	\$

Cost of additional supplies, batteries, etc. purchased because of the outage	\$
Cost of fuel for alternative non-electric heating and cooking that you would only use because of the outage	\$
Other costs of the 2-day power outage	\$

*[If the respondent answers “I would not be able to produce electricity or go to other places that have electricity,” ask the following question]*

Considering the effects of the power outage that have been mentioned so far, and any other effects of a power outage on your household, how much would this 2-day power outage cost your household? Please only include the costs that would directly result from this power outage, not the costs that your household would have to pay even if there was no power outage.

<b>Costs of the two-day power outage</b>	<b>Cost estimate</b>
The value of perishable food in your refrigerator and freezer that you would have to throw out	\$
Cost of additional supplies, batteries, etc. purchased because of the outage	\$
Cost of fuel for alternative non-electric heating and cooking that you would only use because of the outage	\$
Other costs of the 2-day power outage	\$

**2-3.** If the power goes out in (the community) for 2 days, will your and/or your household members’ employers pay you? Please select all that applies.

- ☐ Nobody else in my household is currently employed.
- ☐ My work, or other household members’ work, would not be affected by this power outage.
- ☐ I and/or other household members could not go to work but would not lose any pay.
- ☐ I and/or other household members could make up the missed work time and get paid.
- ☐ I and/or other household members could not go to work and would not get paid.

*[If the respondent answers “Could not go to work and would not get paid,” ask the following]*

How much in wages would your household expect to lose during the 2-day power outage?

The household would lose \$ \_\_\_\_\_ in wages

**2-4.** Now we would like to ask you how much you would be willing to pay to have full emergency back-up electricity service during this example 2-day power outage. This would be a one-time payment, and the payment would only be used to provide power to you during this outage. As you answer, think about two things: (1) the dollar amount of loss that you just estimated that your household would experience from a 2-day power outage and; (2) what it would be worth to you and your household members to have all the electric appliances in your home operate during the outage.

**Summary of the outage**

**Time of year:** February, Tuesday

**Start time:** Morning (about average, 28 °F)

**Duration:** 2 days (48 hours)

**Affected areas:** (entire community)

**Cause:** Heavy volcano ash cloud from a major eruption of Mount Redoubt

**Advance warning before the outage:** Only for volcanic eruption, not for the power outage

	Would you be willing to pay at least this amount extra <i><b>per day</b></i> to get the full back-up service during the power outage?		
	Yes	Not sure	No
\$0-9.99 per day	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
\$10-19.99 per day	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
\$20-29.99 per day	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
\$30-39.99 per day	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
\$40-49.99 per day	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
\$50-59.99 per day	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
\$60-\$69.99 per day	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
\$70-\$79.99 per day	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
\$80-\$89.99 per day	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
\$90-\$99.99 per day	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
More than \$100 per day	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

*[If the respondent selects “yes” to “more than \$100 per day,” ask the following question]*

What is the largest amount you would be willing to pay *per day* to receive back-up generator service for 2 days?

\$ \_\_\_\_\_ per day

2-5. How might your willingness-to-pay for the backup service be different if the 2-day power outage that affects (the community) happened in July rather than in February?

- ☐ My willingness-to-pay for the backup service would be higher.
- ☐ My willingness-to-pay for the backup service would be about the same.
- ☐ My willingness-to-pay for the backup service would be lower.

*[If the respondent answers “my willingness-to-pay for the backup service would be higher,” ask the following question]*

Roughly how much higher would your willingness-to-pay for the backup service be?

\$ \_\_\_\_\_ higher in July than in February

Please explain why your willingness-to-pay value would be higher in July than in February.

Please enter your answer here. Use as much space as you need:

*[If the respondent answers “my willingness-to-pay for the backup service would be lower,” ask the following question]*

Roughly how much lower would your willingness-to-pay for the backup service be?

\$ \_\_\_\_\_ lower in July than in February

Please explain why your willingness-to-pay value would be lower in July than in February.

Please enter your answer here. Use as much space as you need:

### [Scenario #3. 7-day-long (1-week-long), widespread outage]

Next, we would like to ask you about an even longer outage than the two we have discussed so far. It is a **relatively cold (19 °F) winter morning** on a weekday in February. At sunrise, you feel a big earthquake. The power goes out immediately. Fortunately, your home is not significantly damaged, and nobody is hurt. You learn from your battery-operated radio that the earthquake has severely disrupted the coastal areas of Southcentral Alaska and Southeast Alaska. The radio also tells you that **(the utility)**'s power plant and substation, and a number of other parts of the power system have been seriously damaged. Also, the underground fiber optic cables, communication system, water supply, and waste system are damaged. **(The utility) expects it will be a full week—7 days—before they can restore power to your home and most of (the community) area.**

You were given no warning and did not have a chance to prepare for this disaster. The government declares a state of emergency that bans all non-essential travel. **(The utility)**'s emergency generators are operated to power critical services, including undamaged portions of the water and sewer systems, some communications, **(the community)** community medical center, and other government buildings. The government is planning to evacuate all residents who have life-threatening medical conditions to nearby emergency shelters. Emergency responders tell you that they will begin to distribute basic supplies within the next day, including food, water, first aid supplies, flashlights, and batteries.

Because this outage is more widespread and takes a longer time to fix than the two previous scenarios, the consequences of this power outage would be very different. During this 7-day outage, only a few critical public services, including water and sewer service, communications services, and **(the community)** community medical center, would receive a limited amount of back-up power from **(the utility)**. Private and social services with their own emergency back-up generators and fuel stored on site would continue to operate. However, other services without back-up power will be immediately unavailable. If you cannot get some heat or drain your water pipes, they could freeze and burst after a day or two with no electricity. If you cannot hook up your refrigerators and freezers to a generator, your perishable food – including meats, such as moose and salmon – might become unsafe to eat and need to be thrown out. You might not be able to temporarily leave the affected area because of the state of emergency.



**3-1.** Please select all the steps that you would take to adjust to this 7-day (1-week) power outage, including what you would attempt to do to heat your home and avoid having your pipes freeze and burst. (Note: please assume that you cannot buy a back-up generator or additional fuel from local stores).

- ☐ Stay home and do activities that do not require electricity
- ☐ Run your back-up generator, using the fuel you have stored, to power essential electrical demands
- ☐ Use your heating systems that can be operated without electricity
- ☐ Use your non-electric cooking appliances for cooking perishable food (for example, propane/gas stove or grill)
- ☐ Rely on perishable food stored in your (or your friends') refrigerator/freezer, non-perishable food, bottled water, and distributed essential supplies
- ☐ Temporarily move to other places with back-up power, including other homes or emergency shelters
- ☐ Other

*[If respondent select "Other," ask the following question]*

Please describe what other steps you will take.

Please enter your answer here. Use as much space as you need:

*[Follow up question for all the respondents]*

What fraction of your normal activities could you continue during the outage?

\_\_\_\_\_ % of normal activities for \_\_\_\_\_ days

**3-2.** Considering the consequences of the power outage and the steps you would take to adjust to the power outage, how much would this 7-day (1-week) power outage cost your household? Please consider only the costs that would directly result from this power outage, not costs that your household would have to pay regardless of the power outage.

<b>Costs incurred because of the 7-day (1-week) power outage</b>	<b>Cost estimate</b>
The value of perishable food in your refrigerator and freezer that you could not consume and would have to throw out	\$
Cost of additional supplies, food, batteries, etc. purchased because of the outage	\$
Cost of fuel to run generator for up to 7 days	\$
Cost of fuel for alternative non-electric heating and cooking that you would only use because of the outage	\$
Cost of thawing or repairing frozen pipes	\$
Other costs because of the 7-day (1-week) power outage	\$

**3-3.** If the power goes out in Southcentral and Southeast Alaska for 7 days (1 week), will your and/or your household members' employers pay you? Please select all that applies.

- ☐ Nobody else in my household is currently employed.
- ☐ My work, or other household members' work, would not be affected by this power outage.
- ☐ I and/or other household members could not go to work but would not lose any pay.
- ☐ I and/or other household members could make up the missed work later and get paid.
- ☐ I and/or other household members could not go to work and would not get paid.

*[If the respondent answers "Could not go to work and would not get paid," ask the following]*

How much in wages would your household expect to lose during the 7-day power outage?

The household would lose \$ \_\_\_\_\_ in wages

**3-4.** Now we would like to ask you how much you would be willing to pay for full electric back-up power during the 7-day (1-week) power outage. This would be a one-time extra payment, and the payment would only be used to provide power to you during this outage. As you answer, think about two things: (1) the financial losses you just described; and (2) what it would be worth to you and your household members to have all the electric appliances in your home be able to operate during the outage.

**Summary of the outage:**

**Time of year:** February, Tuesday

**Start time:** Morning (relatively cold, 19 °F)

**Duration:** 7 days (1 week)

**Affected areas:** All of Southcentral and Southeast Alaska

**Cause:** A catastrophic earthquake

**Advance warning before the outage:** No

	Would you be willing to pay at least this amount extra <i><b>per day</b></i> to get the full back-up service during the power outage?		
	Yes	Not sure	No
\$0-9.99 per day	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
\$10-19.99 per day	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
\$20-29.99 per day	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
\$30-39.99 per day	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
\$40-49.99 per day	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
\$50-59.99 per day	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
\$60-\$69.99 per day	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
\$70-\$79.99 per day	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
\$80-\$89.99 per day	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
\$90-\$99.99 per day	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
More than \$100 per day	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

*[If the respondent selects “yes” for “more than \$100 per day,” ask the following question]*

What is the largest amount you would be willing to pay *per day* to receive back-up electrical service for 7 days (one week) during the outage?

\$ \_\_\_\_\_ per day

**3-5.** Because some essential services could run out of fuel for back-up power in a few days and become unavailable during the outage. Let's imagine a situation in which, if everyone in the community helped out, members of your community who might not have enough money for back-up electricity service or essential social services could get limited electric service during the 7-day (1-week) power outage. Assume that all of your neighbors who can afford to pay will also contribute the same amount as you.

Would you be willing to pay an extra amount of money to provide back-up electricity services during the power outage to those in need? This is a one-time payment during the outage only.

☐ Yes ☐ No

*[If the respondent answers "yes," ask the following question]*

What would you be willing to pay to provide back-up services to your vulnerable neighbors and community? Again, this is a one-time, daily payment during the outage only.

\$ \_\_\_\_\_ additional payment per day

**3-6.** How might your willingness-to-pay for the backup service be different if the 7-day (1-week) power outage happened in July rather than in February?

- ☐ My willingness-to-pay for the backup service would be higher.  
☐ My willingness-to-pay for the backup service would be about the same.  
☐ My willingness-to-pay for the backup service would be lower.

*[If the respondent answers "my willingness-to-pay for the backup service would be higher," ask the following question]*

Roughly how much higher would your willingness-to-pay for the backup service be?

\$ \_\_\_\_\_ higher in July than in February

Please explain why your willingness-to-pay value would be higher in July.

Please enter your answer here. Use as much space as you need:

*[If the respondent answers "my willingness-to-pay for the backup service would be lower," ask the following question]*

Roughly how much lower would your willingness-to-pay for the backup service be?

\$ \_\_\_\_\_ lower in July than in February

Please explain why your willingness-to-pay value would be lower in July.

Please enter your answer here. Use as much space as you need:

For the final questions, we would like to collect some information about your household, past power outage experiences at your home, and any comments you want to add about your answers. Please answer the following questions to the best of your ability. If you live in an apartment building or duplex, answer only for the part of the building in which you actually live.

1. How would you categorize yourself in terms of race or ethnicity? Please select all that apply.

- ☐ Caucasian
- ☐ Hispanic
- ☐ American Indian or Alaska Native
- ☐ Asian
- ☐ Native Hawaiian or other Pacific Islander
- ☐ African American
- ☐ Other (please describe) \_\_\_\_\_
- ☐ Prefer not to say

2. How would you describe your dwelling?

- ☐ Mobile home
- ☐ Multi-family home (apartment, condo, etc.)
- ☐ Single-family house
- ☐ Other (please describe) \_\_\_\_\_

3. Who pays for your electricity?

- ☐ You
- ☐ Another household member
- ☐ Your landlord (utility is included in the rent)

4. How many people (including yourself) live in your household in each of the following age groups? If there is no one in specific age groups, enter "0."

Under 18 years: \_\_\_\_\_  
18 to 44 years: \_\_\_\_\_  
45 to 64 years: \_\_\_\_\_  
65 years and over: \_\_\_\_\_

5. Which of the following categories best describes your total annual household income before taxes and other deductions? Please include all household income, including social security, interest, welfare payments, child support, etc.

- ☐ Under \$25,000
- ☐ \$25,001 to \$50,000
- ☐ \$50,001 to \$100,000
- ☐ \$100,001 to \$150,000
- ☐ \$150,001 to \$200,000
- ☐ Above \$200,000

6. In a typical year, how many power outages do you experience at your home?

Power outages lasting less than 5 minutes \_\_\_\_\_times per year

Power outages lasting between 5 minutes and 6 hours	_____	times per year
Power outages lasting between 6 hours and 2 days	_____	times per year
Power outages lasting between 2 days and 7 days (1 week)	_____	times per year
Power outages lasting longer than 1 week	_____	times per year

**7. Please share any additional comments:**

Please enter your answer here. Use as much space as you need:

**Thank you very much for participating in this study.**

If you have any questions or comments about this study, please feel free to contact the survey administrator.