




Values of customer reliability methodology

Appendix A to revised draft determination:

2024 pilot questionnaires for
residential and business customers

June 2024

A.1 Residential survey questionnaire



Lonerган Research is carrying out a survey on behalf of the Australian Energy Regulator (AER), Australia's national energy regulator. The survey will be used by the AER to determine how much customers value reliable electricity supply.

Why your view matters to us

Power reliability is important. Electricity interruptions can be costly, but it can be expensive to avoid them completely due to the cost of building and maintaining electricity poles and wires.

This survey is for you to share your thoughts on how unexpected power outages affect you and how far we should go to avoid them. The results of this survey will be used by the AER to help ensure electricity providers invest the right amount, balancing reliability and affordability to deliver power to energy consumers.

This survey should take about 15 to 20 minutes to complete. But please, take as long as you need because accurate responses are what matter.

Please be assured of complete confidentiality. Lonerган Research is bound by the Research Society Code of Professional Behaviour and the Privacy Act.

During the survey, please do not use your browser's FORWARD and BACK buttons. Instead, please always use the "Next" button below to move forward through the survey.

[Next](#)

LONERGAN.



What is the postcode where you live?

Please enter the 4-digit postcode below *

Next

LONERGAN.



Which of the following best describes your current employment status?

Please select one response only *

- Self-employed / business owner
- Employed full time
- Employed part time / casual
- Student
- Home duties (including maternity/paternity leave, full time carer)
- Retired
- Unemployed

Next

LONERGAN.




Do you have any responsibility for paying or managing your business's electricity bill?

Please select one response only *


- Yes ← Divert to Business survey
- No

Next

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Australian Government



AUSTRALIAN
ENERGY
REGULATOR

How often do you receive your home electricity bill?

Please select one response only *

- Monthly
- Bi-monthly (every two months)
- Quarterly (every three months)
- Pay-as-you-go/Other
- Don't know

Populates
hidden
variables

Billing Period	Billing Period (Numeric)
<input type="radio"/> Monthly	<input type="radio"/> 6
<input type="radio"/> Bi-monthly	<input type="radio"/> 3
<input type="radio"/> Quarterly	<input type="radio"/> 2

Next

LONERGAN.



← Insert billing frequency.

Approximately how much was your last electricity bill for your household?

Please enter amount below *

\$

Don't know

Next

LONERGAN.



Which of the following best describes your local area?

Please select one response only *

- Most people live in units, townhouses or high rise apartments
- Most people live in standalone houses in a capital city suburb
- Most people live in a suburb in a regional town or city
- Most people live on acreage or a farm

Next



Whenever we talk about a power outage in this survey, we mean an unexpected failure of the electric supply network occurring on average once in every six month period, which affects your household and areas nearby.

This section includes eight questions which we ask you to consider carefully. For each question, please choose your preferred option out of the three options. These questions may appear repetitive, but your choices will help us work out different customer preferences.

We ask you to make eight choices, one on each of the following eight screens.

To answer these questions consider whether you would accept less reliable electricity supply if you received lower electricity bills. This may mean you would experience more severe unexpected power outages.

Note: Italicised text *like this* means this particular characteristic is the same in all three options.

Definitions for the terms used in the question are included below.

← Insert billing frequency.

Change in your electricity bills	To answer these questions consider whether you would accept less reliable electricity supply if you received lower electricity bills. This may mean you would experience more severe unexpected power outages.
Localised/Widespread outage	Definition based on local area.
Duration	Duration is the number of hours your home is without power.
Frequency	Frequency is the number of outages each year.
Summer/Winter	Electricity is important all year round, but some people value it more at particular times of the year. Summer = December, January and February. Winter = June, July and August.
Weekday/Weekend	You may use more or less electricity on weekends compared to weekdays.
Time of day	In this survey, Peak time occurs between 7-10am and 5-8pm every day. Off-peak time occurs anytime except 7-10am and 5-8pm every day.

Next

The below screenshot presents one set of three hypothetical outage scenarios and asks respondents to select their preferred outage scenario. In the pilot survey, respondents were given eight different sets of three hypothetical scenarios.

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Australian Government | AUSTRALIAN ENERGY REGULATOR

Please indicate which of the three options you would prefer: *

Change in your electricity bills
No change
Localised/widespread outage
Localised
Duration
1 hour
Frequency
Twice a year
Summer/winter
Winter
Weekday/weekend
Weekdays
Time of day
Off-Peak

Change in your electricity bills
less per bill
Localised/widespread outage
Widespread
Duration
12 hours
Frequency
Twice a year
Summer/winter
Summer
Weekday/weekend
Weekends
Time of day
Off-Peak

Change in your electricity bills
less per bill
Localised/widespread outage
Localised
Duration
12 hours
Frequency
Twice a year
Summer/winter
Winter
Weekday/weekend
Weekends
Time of day
Off-Peak

Calculated based on electricity bill.

Insert billing frequency.

Definition based on local area.

Change in your electricity bills
Localised/Widespread outage
Duration
Frequency
Summer/Winter
Weekday/Weekend
Time of day

To answer these questions consider whether you would accept less reliable electricity supply if you received lower electricity bills. This may mean you would experience more severe unexpected power outages.

Duration is the number of hours your home is without power.
Frequency is the number of outages each year.
Electricity is important all year round, but some people value it more at particular times of the year.
Summer = December, January and February.
Winter = June, July and August.

You may use more or less electricity on weekends compared to weekdays.
In this survey, Peak time occurs between 7-10am and 5-8pm every day. Off-peak time occurs anytime except 7-10am and 5-8pm every day.

Next

LONERGAN.






Many outages could mostly be avoided if the electricity network was improved. However, improvements would be funded by higher electricity bills.

To answer the following questions there is no 'right answer'.

When considering your responses please take into account how much you value a reliable electricity network. You could consider, for example, the inconvenience of having to reset your clocks, not being able to watch TV or access the internet/wi-fi during an outage and interruption to other at-home activities requiring electricity.

Next



Imagine you experience two unexpected power outages a year. It turns out that each unexpected outage occurs on a different random weekday in winter (Jun, Jul, Aug) and lasts for one hour in off peak times (outside of 7-10am, 5-8pm). Each one only affects your local area.

← **Insert billing frequency.**

Would you be willing to pay an increase of \$ in your electricity bills (over six months this is a total of \$) to avoid both the power outages described in the above scenario?

*Please select one response only**

Yes

No

↑ **Value set by random number from 2 to 11**

↑ **Increase over 6 months**

[Next](#)

LONERGAN.



Imagine you experience two unexpected power outages a year. It turns out that each unexpected outage occurs on a different random weekday in winter (Jun, Jul, Aug) and lasts for one hour in off peak times (outside of 7-10am, 5-8pm). Each one only affects your local area.

← Insert billing frequency.

Would you be willing to pay an increase of \$ in your electricity bills (over six months this is a total of \$) to avoid both the power outages described in the above scenario?

Please select one response only*

↑ Original value * 2

↑ Increase over 6 months

- Yes
- No

Next

LONERGAN.



Imagine you experience two unexpected power outages a year. It turns out that each unexpected outage occurs on a different random weekday in winter (Jun, Jul, Aug) and lasts for one hour in off peak times (outside of 7-10am, 5-8pm). Each one only affects your local area.

Would you be willing to pay an increase of \$ in your electricity bills (over six months this is a total of \$) to avoid both the power outages described in the above scenario?

← Insert billing frequency.

↑ Original value / 2

↑ Increase over 6 months

Please select one response only*

- Yes
- No

Next

LONERGAN.



Imagine you experience two unexpected power outages a year. It turns out that each unexpected outage occurs on a different random weekday in winter (Jun, Jul, Aug) and lasts for one hour in off peak times (outside of 7-10am, 5-8pm). Each one only affects your local area.

← Insert billing frequency.

What is the maximum increase in \$ you would be willing to pay in your electricity bill to avoid both the power outages described in the above scenario?

Please enter the amount below*

\$

Next

LONERGAN.



How many people live in your household?

*Please select one response only**

- Just me
- 2-3 people
- More than 3 people

Next

LONERGAN.



Does your household have a pool i.e. one not covered by strata or a body corporate?

Please select one response only *

- Yes
- No

Next

LONERGAN.



Does your home use mains gas?

Please select one response only *

- Yes
- No
- Unsure

Next

LONERGAN.



Does your home have under-floor or slab heating?

*Please select one response only**

- Yes
- No
- Unsure

Next

LONERGAN.



Do you speak a language other than English at home?

*Please select one response only **

- Yes, always
- Yes, sometimes
- No
- Prefer not to say

Next

LONERGAN.



Which of the following apply to you now?

*Please select all that apply**

- You own/drive a fully electric vehicle (excludes hybrid vehicles and electric bikes/scooters)
- Your house has a home automation system (controlling appliances and devices in your home over the internet)
- You work from home at least one day per week (please state how many days) *
- Your house has a battery (connected to your solar system or your electricity supply)
- Your house has rooftop solar panels
- None of the above

Next

LONERGAN.



Which of the following do you think might apply to you in five years from now?

*Please select all that apply**

- You will work from home at least one day per week (please state how many days) *
- Your house will have a home automation system (controlling appliances and devices in your home over the internet)
- Your house will have rooftop solar panels
- Your house will have a battery (connected to your solar system or your electricity supply)
- You will own/drive a fully electric vehicle (excludes hybrid vehicles and electric bikes/scooters)
- None of the above

Next

LONERGAN.



Imagine a company could install a backup power system at your premises. The system will readily provide electricity at your premises for one hour if an outage occurs. The total cost of the system, including installation, would be \$32 per month.

Would you get the company to install the backup system at your premises at a cost of \$32 per month?

*Please select one response only**

- Yes ← Skip to Gender demo
- No

Next

LONERGAN. Ask if unwilling to pay at \$32 p/month

What is the maximum \$ you would be willing to pay per month for this system?

Please enter the amount below *

\$

Next

LONERGAN.



What is your gender?

*Please select one response only**

- Female
- Male
- Prefer to self-describe (Please specify)
- Prefer not to say

Next

LONERGAN.



How old are you?

*Please select one response only**

- 17 years or less
- 18-29 years
- 30-39 years
- 40-49 years
- 50-59 years
- 60-69 years
- 70 years or older
- Prefer not to say

Next

LONERGAN.



Which of the following best describes your current financial situation?

*Please select one response only**

- Live comfortably
- Meet basic expenses with a little left over for extras
- Just meet basic expenses
- Don't have enough to meet basic expenses
- Prefer not to say

Next

LONERGAN.



Thinking about your paying or managing your home electricity bill, do you have...?

*Please select one response only**

- Sole responsibility
- Shared responsibility (I know how much we pay each billing cycle)
- Limited responsibility (I don't know how much we pay each cycle)
- No responsibility

Next

LONERGAN.



We included the next questions on request from the Reliability Panel

The Reliability Panel monitors, reviews and reports on the safety, security and reliability of the national electricity system. By responding to these questions, you will help the Reliability Panel make informed decisions.

Imagine a series of one-hour power outages that affected your home and local area, every day for one week every winter.

What is the maximum increase, in \$ per month, you would be willing to pay in your electricity bill to avoid these power outages?

*Please enter the amount below**

\$

Next

LONERGAN.



What is the maximum increase, in \$ per month, you would be willing to pay if there was just a 1 in 10 chance of this happening *in any year*?

Please enter the amount below*

\$

Next

B.1 Business survey questionnaire

LONERGAN.



Lonerган Research is carrying out a survey on behalf of the Australian Energy Regulator (AER), Australia's national energy regulator. The survey will be used by the AER to determine how much customers value reliable electricity supply.

Why your view matters to us

Power reliability is important. Electricity interruptions can be costly, but it can be expensive to avoid them completely due to the cost of building and maintaining electricity poles and wires.

This survey is for you to share your thoughts on how unexpected power outages affect you and how far we should go to avoid them. The results of this survey will be used by the AER to help ensure electricity providers invest the right amount, balancing reliability and affordability to deliver power to energy consumers.

This survey should take about 15 to 20 minutes to complete. But please, take as long as you need because accurate responses are what matter.

Please be assured of complete confidentiality. Lonerган Research is bound by the Research Society Code of Professional Behaviour and the Privacy Act.

During the survey, please do not use your browser's FORWARD and BACK buttons. Instead, please always use the "Next" button below to move forward through the survey.

Next

LONERGAN.



Which of the following best describes your current employment status?

Please select one response only *

- Self-employed / business owner
- Employed full time
- Employed part time / casual
- Student
- Home duties (including maternity/paternity leave, full time carer)
- Retired
- Unemployed

Terminate

Next

LONERGAN.



Do you have any responsibility for paying or managing your business's electricity bill?

*Please select one response only **

- Yes
- No

Next

LONERGAN.



Which of the following categories best describes the business you work for?

If you'd like more information on the types of businesses that fit into these categories, this link will provide a detailed breakdown [here](#)

*Residential respondents**

- Agriculture, Forestry and Fishing
- Mining
- Manufacturing
- Electricity, Gas Water and Waste Services
- Construction
- Wholesale trade
- Retail Trade
- Accommodation and Food Services
- Transport, Postal and Warehousing
- Information Media and Telecommunications
- Financial and Insurance Services
- Rental, Hiring and Real Estate Services
- Professional, Scientific and Technical Services
- Administrative and Support Services
- Public Administration and Safety
- Education and Training
- Health Care and Social Assistance
- Arts and Recreational Services
- Other (Please specify)

Link
to <https://www.dcceew.gov.au/sites/default/files/documents/anzsic-code-hierarchy.pdf>

Next

LONERGAN.



The questions in this survey are designed to be answered in relation to a **single business site in Australia**. Please exclude overseas business locations.

If your business has multiple locations within Australia, choose one location, and answer the questions in this survey in relation to this location only. Choose the location that you know the most about how much is spent on electricity or how much electricity is consumed. If you are familiar with electricity usage and costs at multiple locations, where possible pick the location that uses the **most** electricity.

To complete this survey **you may need a copy of a recent electricity bill** for the business location you have chosen to answer the survey about.

You will need to refer to the bill to answer some questions in this survey.

Whenever we refer to ***your business site*** in this survey, we mean the single business location you have chosen to answer for in this survey.

Next

LONERGAN.



Describe the nature of your business site (for example, is it a head office, manufacturing site, farm site?)

*Please be as specific as possible**

Next

LONERGAN.



To answer the following questions you may want to refer to your electricity bill.

How often does your business receive an electricity bill?

If you are on pay as you go, please select the frequency which most closely matches how often you would usually recharge your pay as you go account.

Please select one response only*

- Monthly
- Bi-monthly (every two months)
- Quarterly (every three months)
- Half-yearly (every six months)
- Annually (every twelve months)

Populates hidden variables



Billing period	Billing period (numeric)
<input type="radio"/> Monthly	<input type="radio"/> 6
<input type="radio"/> Bi-monthly	<input type="radio"/> 3
<input type="radio"/> Quarterly	<input type="radio"/> 2
<input type="radio"/> Half-yearly	<input type="radio"/> 1
<input type="radio"/> Annual	<input type="radio"/> 0.5

Next

The screenshot shows a questionnaire form with the following elements:

- Logos:** LONERGAN. (left), Australian Government (center), and AUSTRALIAN ENERGY REGULATOR (right).
- Text:** "Approximately how much was the last electricity bill for your business? If you are on pay as you go, please estimate how much you spent over the most recent period."
- Input Field:** A text box preceded by a dollar sign (\$) and the instruction "Please enter amount below".
- Annotations:** Red arrows and text pointing to the form. "Insert billing frequency." points to the word "last" in the question. "Used for % increase in choice model" points to the input field. A red line with an arrow at the end points from the input field to the word "period" in the question.
- Buttons:** A red "Next" button is located below the input field.

LONERGAN.



Which of the following best describes the local area of your business site?

*Please select one response only**

- Inner city/CBD
- Suburban/industrial estate in a capital city
- Suburban/industrial estate in a regional town or city
- Rural (acreage properties and farms)

Next

LONERGAN.



What is the post code of your business site?

*Please enter the 4-digit postcode below**

Next

LONERGAN.



How many sites does your electricity bill cover?

Please enter the number of sites *

Next

LONERGAN.



How many employees work at your business site?

Please select one response only *

- 0
- 1-10
- 11-20
- 21-100
- 101-200
- More than 200

Next

LONERGAN.



Does your bill cover your business and residential electricity usage?

*Please select one response only**

- Yes, the electricity bill from my business is combined with my household bill(s)
- No, the electricity bill is solely for my business

Next

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Power outage description:

Whenever we talk about a power outage in this survey, we mean an unexpected failure of the electricity supply network which affects your business site and areas nearby.

To the best of your knowledge, how many times has your business site experienced power outages in the last 12 months?

Please select one response only *

- 0
- 1
- 2
- 3
- 4
- 5
- 6
- More than 6 times

Next

LONERGAN.



On a scale of 1 to 7, where 1 is not disruptive at all and 7 is extremely disruptive, how disruptive have these outages been to your business site?

Please select one response only*

- 1 – Not disruptive at all
- 2
- 3
- 4
- 5
- 6
- 7 – Extremely disruptive

Next

LONERGAN.



Please think about the potential losses you may incur during a power outage. Such losses can vary greatly across different business operations. Please select any that may apply to your business site.

Please select all that apply.*

- Downtime from expensive equipment kept idle
- Lost production
- Additional time and labour beyond usual duties in response to power outage
- Dissatisfied customers
- Spoilage or loss of perishable goods
- Additional time and labour to check activities/restart systems
- Overtime wages incurred
- Damage to processes and equipment
- Lost revenues from fewer sales
- Loss of work from paid staff
- Loss of livestock
- Other (Please specify) *
- None of the above

Next

LONERGAN.



Thinking of your business operations, is there a time of day that is worse for you to experience a power outage at your business site?

*Please select one response only**

Yes (Please elaborate)

No

Next

LONERGAN.



Is there a particular month or season in the year that is worse for you to experience a power outage at your business site?

*Please select one response only**

Yes (Please elaborate)

No

Next

LONERGAN.



This section includes eight questions which we ask you to consider carefully.

For each question, please choose your preferred option out of the three options. These questions may appear repetitive, but your choices will help us work out different customer preferences.

We ask you to make eight choices, one on each of the following eight screens.

To answer these questions consider whether you would accept less reliable electricity supply if you received lower electricity bills. This may mean you would experience more severe unexpected power outages.

Note: Italicised text *like this* means this particular characteristic is the same in all three options.

Definitions for the terms used in the question are included below.

Insert billing frequency.

Change in your electricity bill	To answer these questions consider whether you would accept less reliable electricity supply if you received lower electricity bills. This may mean you would experience more severe unexpected power outages.
Localised/Widespread outage	Definition based on local area.
Duration	Duration is the number of hours your business is without power.
Frequency	Frequency is the number of outages each year.
Summer/Winter	Electricity is important all year round, but some people value it more at particular times of the year. Summer = December, January and February. Winter = June, July and August.
Weekday/Weekend	You may use more or less electricity on weekends compared to weekdays.
Time of day	In this survey, Peak time occurs between 7-10am and 5-8pm every day. Off-peak time occurs anytime except 7-10am and 5-8pm every day.

Next

The below screenshot presents one set of three hypothetical outage scenarios and asks respondents to select their preferred outage scenario. In the pilot survey, respondents were given eight different sets of three hypothetical scenarios.

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Australian Government | AUSTRALIAN ENERGY REGULATOR

Please indicate which of the three options you would prefer: *

Calculated based on electricity bill.

Change in your electricity bills
2% lower (\$ per bill)
Localised/Widespread outage
Widespread
Duration
12 hours
Frequency
Twice a year
Summer/Winter
Winter
Weekday/Weekend
Weekdays
Time of Day
Peak

Change in your electricity bills
No change
Localised/Widespread outage
Localised
Duration
1 hour
Frequency
Twice a year
Summer/Winter
Winter
Weekday/Weekend
Weekdays
Time of Day
Off-Peak

Change in your electricity bills
2% lower (\$ per bill)
Localised/Widespread outage
Localised
Duration
3 hours
Frequency
Twice a year
Summer/Winter
Summer
Weekday/Weekend
Weekdays
Time of Day
Peak

Insert billing frequency.

Change in your electricity bills: To answer these questions consider whether you would accept less reliable electricity supply if you received lower electricity bills. This may mean you would experience more severe unexpected power outages.

Localised/Widespread outage

Duration: Duration is the number of hours your business is without power.

Frequency: Frequency is the number of outages each year.
Electricity is important all year round, but some people value it more at particular times of the year.
Summer = December, January and February.
Winter = June, July and August.

Summer/Winter

Weekday/Weekend: You may use more or less electricity on weekends compared to weekdays.

Time of day: In this survey, Peak time occurs between 7-10am and 5-8pm every day; Off-peak time occurs anytime except 7-10am and 5-8pm every day.

Definition based on local area.

Next

LONERGAN.



Many outages could mostly be avoided if the electricity network was improved. However, improvements would be funded by higher electricity bills.

To answer the following question there is no 'right answer'.

When considering your response please take into account how much you value a reliable electricity network for your business. You could also consider losses you may incur during a power outage.

Next

LONERGAN.



Imagine you experience two unexpected power outages a year. It turns out that each unexpected outage occurs on a different random weekday in winter (Jun, Jul, Aug) and lasts for one hour in off peak times (outside of 7-10am, 5-8pm). Each one only affects your local area.

← Insert billing frequency.

Would you be willing to pay an increase of \$ in your electricity bills (over six months this is a total of \$) to avoid both the power outages described in the above scenario?

Please select one response only *

- Yes
- No

↑ Value set by
random % from
1% - 10%

↑ Increase over 6
months

Next

LONERGAN.



Imagine you experience two unexpected power outages a year. It turns out that each unexpected outage occurs on a different random weekday in winter (Jun, Jul, Aug) and lasts for one hour in off peak times (outside of 7-10am, 5-8pm). Each one only affects your local area.

← Insert billing frequency.

Would you be willing to pay an increase of \$ in your electricity bills (over six months this is a total of \$) to avoid both the power outages described in the above scenario?




Please select one response only *

↑ Value above * 2

↑ Increase over 6 months

- Yes
- No

Next



Imagine you experience two unexpected power outages a year. It turns out that each unexpected outage occurs on a different random weekday in winter (Jun, Jul, Aug) and lasts for one hour in off peak times (outside of 7-10am, 5-8pm). Each one only affects your local area.

Would you be willing to pay an increase of \$ in your electricity bills (over six months this is a total of \$) to avoid both the power outages described in the above scenario?

*Please select one response only **

Yes

No

Next

Insert billing frequency.

*Initial value * 0.5*

Increase over 6 months

LONERGAN.



Imagine you experience two unexpected power outages a year. It turns out that each unexpected outage occurs on a different random weekday in winter (Jun, Jul, Aug) and lasts for one hour in off peak times (outside of 7-10am, 5-8pm). Each one only affects your local area.

← Insert billing frequency.

What is the maximum increase in \$ you would be willing to pay in addition to your electricity bill to avoid both the power outages described in the above scenario?

Please enter a numeric response *

\$

Next

LONERGAN.



The following section asks general questions relating to your business which will help us better understand your responses in this survey. Please answer these questions if they are applicable to your business.

Does your business use monitoring devices to indicate energy performance and usage?

*Please select all that apply**

- Smart meters
- Appliance consumption gauge
- Other energy monitoring devices
- Don't know/Prefer not to answer

Next

LONERGAN.



During a power outage, does your business have any back-up options (e.g. on-site generation, battery cells, back-up fuel, etc.) that can be used to supply power to your business?

Please select one response only *

- Yes
- No
- Don't know/Prefer not to answer

If Yes, show




Please estimate how long these back-up options can supply your business's energy needs for.

Please enter the amount of time below *

Hours

Minutes

Next



How much electricity did your business site consume for the period covered by your most recent electricity bill? **← Insert billing frequency.**

Electricity consumption is measured in 'kilowatt hours', or 'kWh'. This will likely appear on the back of your bill.

Please enter amount below *

kWh

Don't know

Next

LONERGAN.



We included the next questions on request from the Reliability Panel.

The Reliability Panel monitors, reviews and reports on the safety, security and reliability of the national electricity system. By responding to these questions, you will help the Reliability Panel make informed decisions.

Imagine a series of one-hour power outages that affected your business and local area, every day for one week every winter.

What is the maximum increase, in \$ per month, you would be willing to pay in your electricity bill to avoid these power outages?

*Please enter the amount below **

\$

Next

LONERGAN.



What is the maximum increase, in \$ per month, you would be willing to pay if there was just a 1 in 10 chance of this happening *in any year*?

Please enter the amount below*

\$

Next