

Milton Hydro



**Public Awareness of Electrical Safety
March 2020**

UtilityPULSE

Public Awareness of Electrical Safety Report

This is privileged and confidential material and no part may be used other than the intended purpose of providing a score for the Ontario Energy Board Scorecard.

Results are based on a telephone survey (Random Digit Dialing) among 401 Members of the General Public, 18 years of age or older, residing within the LDC's geographic service territory. The data has been statistically weighted according to Canadian census figures (2016) for age, gender and region.

Scores in this report follow Appendix A: Scorecard Methodology and Implementation Guide last published by the Ontario Energy Board November 25, 2015.

The questions used in the survey follow Appendix B: Biannual Standardized Scorecard Public Awareness of Electrical Safety Telephone Questionnaire last published by the Ontario Energy Board November 25, 2015.

All comments and questions should be addressed to:

UtilityPULSE

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March, 2020

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Public Awareness of Electrical Safety Report

Executive Summary

Milton Hydro's Public Safety Awareness Index Score is 82%.

This is the third execution of the Public Awareness Electrical Safety survey; the first execution occurred in 2016. This survey compiles data to measure the level of awareness of key electrical safety precautions among the public within the electricity distributor's service territory. Results are based on a telephone survey (Random Digit Dialing) among 401 Members of the General Public, 18 years of age or older, within the LDC's geographic service territory. The data has been statistically weighted according to Canadian census figures (2016) for age, gender and region.

The six core measurement questions correspond to the six most frequent incidents involving utility equipment in Ontario over the last decade. When looking at the distribution of responses for the six core measurement questions here are some of the key observations and recommendations going forward:

Question B5: Likelihood to “call before you dig” [50% scored 1.00 pts]

50% would 'definitely' and 24% were 'very likely' to call to locate electrical or other underground lines. While these figures indicate that many of your service territory's population would 'call before they dig', the remainder did not see this as a 'must do'. Even of those respondents who did reply they would definitely or very likely make the call, it is not clear if they would call because they were exerting due diligence for their property and household project OR if they were knowledgeable in the fact that this is the law that is in place.

Any education put forth on this core measurement must emphasize that **it is the law that one must 'call before you dig'**.



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Public Awareness of Electrical Safety Report

Executive Summary (continued)

Question B6: Impact of touching a power line [97% scored 1.00 pts]

97% knew that is 'very dangerous' and 2% believed it is 'somewhat dangerous' to touch an overhead power line with their body or any object.

Any education put forth on this core measurement must continue to emphasize & re-emphasize the perils associated with touching a power line. The key message that needs to continue to be driven to the public on this measurement is clear and simple: **It is very dangerous to touch an overhead power line with your body or any object.**

Question B7: Proximity to overhead power line [20% scored 1.00 pts]

This is one of two questions that contained a concept of measurement of distance from a power line constituting safe proximity. 20% indicated that they believed that there needed to be a distance of 3 metres to less than 6 metres and 63% indicated a distance of 6 metres or more to safely come close to an overhead power line with their body or an object. While this indicates there is knowledge that there needs to be a "certain" proximity maintained from an overhead power line, the exact measurement is not quite readily known. It is also indicative that while most people believed a "certain" distance was required, it is not clear how many chose the higher distance because of a prevailing thought that 'the further away the safer you are'.

While being further away i.e. 6 metres or more is not technically incorrect, the point of this question is to educate the public that there is a reasonable distance that needs to be maintained. Any education put forth on this core measurement must clearly emphasize that a person can be as close as 3 metres to safely come close to an overhead power line while undertaking outdoor activities. This message whether in print or graphically depicted has to be clear and identifiable as not to confuse with the second question concerning distance from a 'downed' power line (QB9).

One key to improving awareness is to help the public at large to learn & **remember the required minimum distance is 3 metres to an overhead power line.**



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Public Awareness of Electrical Safety Report

Executive Summary (continued)

Question B8: Danger of tampering with electrical equipment [85% scored 1.00 pts]

85% knew that is 'very dangerous' to tamper with electrical equipment, while 12% believed it was 'somewhat dangerous'.

Any education put forth on this core measurement must continue to emphasize & re-emphasize the perils associated with touching or tampering with electrical equipment. **Any electrical equipment is a no play zone for children and/or pets and in general all persons are not touch or tamper with the electrical equipment.**

Question B9: Proximity to downed power line [78% scored 1.00 pts]

This is the second question containing a concept of measurement of distance; in this instance it is safe proximity from a downed power line. 78% indicated that a distance of 10 metres or more needed to be maintained from a downed power line. As in QB7, while this indicates there is knowledge that there needs to be a "certain" proximity maintained from a downed power line, it is not clear how many chose the higher distance because of a prevailing thought that 'the further away the safer you are'. In this instance however, choosing the furthest distance is the correct answer.

The point of this question is to educate the public that there is a reasonable distance that needs to be maintained from a downed power line and this distance is at least 10 metres. This message whether emphasized in print or graphically depicted has to be clear and identifiable as not to confuse with the question concerning distance of 3 metres from an 'overhead' power line (QB7).

One key to improving awareness is to help the public at large to learn & remember **the minimum distance from a downed power line is 10 metres.**



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Public Awareness of Electrical Safety Report

Executive Summary (continued)

Question B10: Actions taken in vehicle in contact with wires [81% scored 1.00 pts]

81% responded the safer action in this case would be to 'stay in the vehicle until power was disconnected from the line'.

Any education put forth on this core measurement must continue to emphasize & re-emphasize the harm associated with stepping out of a vehicle that is in contact with a downed power line. While some people instinctually feel that getting out and seeking help would be the proper thing to do, **the public needs to be educated that should their vehicle come in contact with power lines, staying in the vehicle is their best and safest option until the power is disconnected.**



Additional Questions for Grid Smart City Clients:

Question GSC1: Primary source of electrical safety information

28% cited the primary source of their electrical safety information as their **local utility website**

40% cited **online searches**

17% cited the **ESA**

4% cited a **relative or friend**

1% cited **social media**

10% cited **other** and

2% **preferred not to say or simply did not know.**

It would seem overall the internet is the overwhelming source of electrical safety information whether it was from online searches or the utility's website as 68% of all respondents listed one or the other.



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Public Awareness of Electrical Safety Report

Executive Summary (continued)



Additional Questions for Grid Smart City Clients:

Question GSC2: Probing for households with children aged 6 to 13

31% responded that their household was comprised of school aged children.

Question GSC3: Conversations with children about the dangers of powerlines and playing near electrical equipment

Over half, **46%** claimed they did have a conversation with their children discussing the dangers of powerlines and playing near electrical equipment. While it is encouraging that parents and families recognize the need to discuss electrical safety with their children, more has to be done to ensure that more parents and families are motivated to have this discussion to prevent potential injury and even fatalities.

Conclusion:

This survey and previous years' surveys of the public in your service territory about electrical safety show many respondents do have good knowledge or have received some information pertaining to the 6 core measurement questions. Milton Hydro's Public Safety Awareness Index Score is 82%.

The OEB has indicated that the performance target for public awareness of electrical safety will be established once three years of data is gathered; two years of data of have been gathered as of this time. In the meantime, your LDC will be expected to demonstrate the impact of your public education efforts through biannual surveying of adults residing in your service territory.

As you continue to develop safety awareness campaigns, we recommend that you look through this report along with your data report to see where, among the population, awareness levels are lower and where outreach can be targeted. Focus on the messages which are simple and memorable which help the public **learn and remember**. We also recommend that you share your results with your employees, especially those who may be in contact with outside workers, as they too can help spread the safety message.

Sid Ridgley
UtilityPULSE



Milton Hydro Public Safety Awareness Index Score

This **index score** is calculated using the following formulas:

Step 1: Add each individual respondent's key measurement questions using the provided response values.

$$\begin{aligned}
 & B5 \\
 + & B6 \\
 + & B7 \\
 + & B8 \\
 + & B9 \\
 + & B10 \\
 = & \text{Individual respondent's cumulative score}
 \end{aligned}$$

Step 2:

$$\begin{aligned}
 & \text{Individual respondent's cumulative score} / \# \text{ of sections} \\
 = & \text{Respondent Standardized Score}
 \end{aligned}$$

Step 3:

$$\begin{aligned}
 & \text{Summation of all "Respondent Standardized Scores" / n-size (i.e. total sample size)} \\
 = & \text{Raw Index Score}
 \end{aligned}$$

Step 4:

$$\text{Raw Index Score} \times 100 = \text{Index Score (bound between 0-100\%)}$$

Responses will be **indexed** to create a single comparable Public Safety Awareness Score



In some cases, a respondent will have no intention of undertaking a project that requires digging. In this case, the index is based on only the 5 relevant sections of scorecard. This question (B5) will be removed from the calculation.



Milton Hydro Public Safety Awareness Index Score



82%



B5. Likelihood to "call before you dig"

If you were to undertake a household project that required digging – such as planting a tree or building a deck – how likely are you to call to locate electrical or other underground lines?

Response	Score	% of respondents
Definitely	1.00 pts	50%
Very likely	0.75 pts	24%
Somewhat likely	0.50 pts	11%
Not very likely	0.00 pts	4%
Not at all likely	0.00 pts	6%
I would not undertake a project that required digging	omitted ¹	2%
Don't know	0.00 pts	2%

¹Note: In some cases, a respondent will have no intention of undertaking a project that requires digging. In this case, the index is based on only the five relevant sections of the scorecard. This question will be removed from the calculation of the Individual Respondent's cumulative score.

CORRECT ✓ 85%

INCORRECT ✗ 15%

Correct: Any response which scored above 0 pts
 Incorrect: Any response which scored 0 pts including Don't know



Planting a tree, building a deck or a fence? Contact **ON1Call** first to get a locate so you can dig safely.

1-800-400-2255



B5. Likelihood to "call before you dig"

If you were to undertake a household project that required digging – such as planting a tree or building a deck – how likely are you to call to locate electrical or other underground lines?

Response	Gender Male	Gender Female	Age 18-24	Age 25-34	Age 35-44	Age 45-54	Age 55-64	Age 65+
Definitely	42%	58%	34%	45%	52%	59%	55%	51%
Very likely	31%	17%	13%	30%	28%	19%	27%	17%
Somewhat likely	13%	10%	26%	20%	4%	7%	9%	7%
Not very likely	6%	3%	6%	0%	9%	5%	0%	5%
Not at all likely	6%	7%	20%	0%	6%	6%	6%	11%
I would not undertake a project that required digging ¹	1%	2%	0%	0%	1%	5%	1%	5%
Don't know	1%	3%	0%	6%	0%	0%	2%	4%

¹Note: In some cases, a respondent will have no intention of undertaking a project that requires digging. In this case, the index is based on only the five relevant sections of the scorecard. This question will be removed from the calculation of the Individual Respondent's cumulative score.



Planting a tree, building a deck or a fence? Contact **ON1Call** first to get a locate so you can dig safely.

1-800-400-2255



B6. Impact of touching a power line

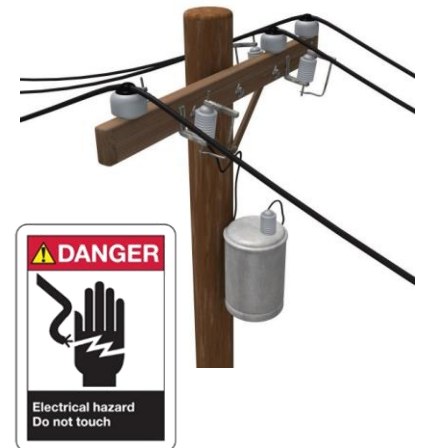
How dangerous do you believe it is to touch – with your body or any object – an overhead power line?

Response	Score	% of respondents
Very dangerous	1.00 pts	97%
Somewhat dangerous	0.50 pts	2%
Not very dangerous	0.00 pts	0%
Not at all dangerous	0.00 pts	0%
Don't know	0.00 pts	0%

CORRECT ✓ 99%

INCORRECT ✗ 1%

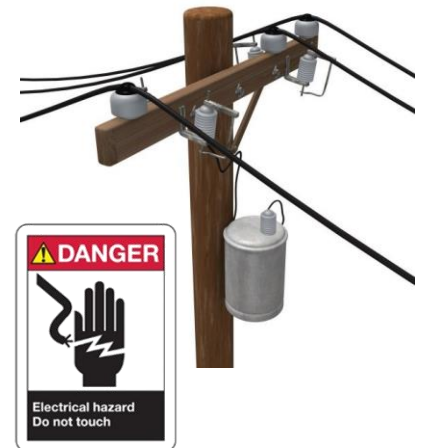
*Correct: Any response which scored above 0 pts
Incorrect: Any response which scored 0 pts including Don't know*



B6. Impact of touching a power line

How dangerous do you believe it is to touch – with your body or any object – an overhead power line?

Response	Gender Male	Gender Female	Age 18-24	Age 25-34	Age 35-44	Age 45-54	Age 55-64	Age 65+
Very dangerous	96%	98%	94%	100%	98%	98%	96%	90%
Somewhat dangerous	4%	1%	6%	0%	2%	2%	2%	5%
Not very dangerous	0%	0%	0%	0%	0%	0%	0%	1%
Not at all dangerous	0%	1%	0%	0%	0%	0%	1%	2%
Don't know	0%	0%	0%	0%	0%	0%	0%	2%



B7. Proximity to overhead power line

When undertaking outdoor activities – such as, standing on a ladder, cleaning windows or eaves, climbing or trimming trees – how close do you believe you can safely come to an overhead power line with your body or an object? Would you say ...

Response	Score	% of respondents
You can safely touch an overhead power line	0.00 pts	1%
Less than 1 metre (i.e. less than 3 feet)	0.00 pts	2%
1 to less than 3 metres (i.e. 3 to less than 10 feet)	0.00 pts	10%
3 metres to less than 6 metres (i.e. 10 feet to less than 20 feet)	1.00 pts	20%
You should maintain a distance of 6 metres or more (i.e. 20 feet or more)	0.75 pts	63%
Don't know	0.00 pts	4%

CORRECT ✓ 83%

INCORRECT ✗ 17%

*Correct: Any response which scored above 0 pts
Incorrect: Any response which scored 0 pts including Don't know*



B7. Proximity to overhead power line

When undertaking outdoor activities – such as, standing on a ladder, cleaning windows or eaves, climbing or trimming trees – how close do you believe you can safely come to an overhead power line with your body or an object? Would you say ...

Response	Gender Male	Gender Female	Age 18-24	Age 25-34	Age 35-44	Age 45-54	Age 55-64	Age 65+
You can safely touch an overhead power line	1%	0%	0%	0%	2%	1%	0%	0%
Less than 1 metre (i.e. less than 3 feet)	1%	4%	0%	0%	4%	2%	6%	0%
1 to less than 3 metres (i.e. 3 to less than 10 feet)	14%	7%	6%	8%	16%	9%	11%	8%
3 metres to less than 6 metres (i.e. 10 feet to less than 20 feet)	19%	21%	27%	12%	29%	17%	17%	18%
You should maintain a distance of 6 metres or more (i.e. 20 feet or more)	65%	61%	67%	80%	48%	65%	59%	57%
Don't know	1%	6%	0%	0%	1%	5%	7%	16%



B8. Danger of tampering with electrical equipment

Some electrical utility equipment is located on the ground, such as locked steel cabinets that contain transformers.

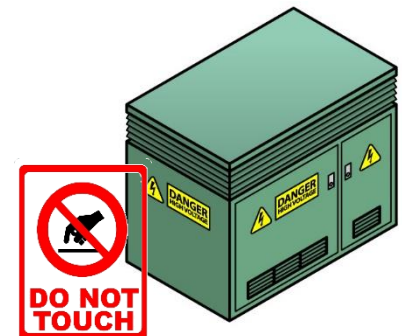
How dangerous do you believe it is to try to open, remove contents, or touch the equipment inside? Would you say ...

Response	Score	% of respondents
Very dangerous	1.00 pts	85%
Somewhat dangerous	0.50 pts	12%
Not very dangerous	0.00 pts	1%
Not dangerous at all	0.00 pts	1%
Don't know	0.00 pts	0%

CORRECT ✓ 98%

INCORRECT ✗ 2%

*Correct: Any response which scored above 0 pts
Incorrect: Any response which scored 0 pts including Don't know*

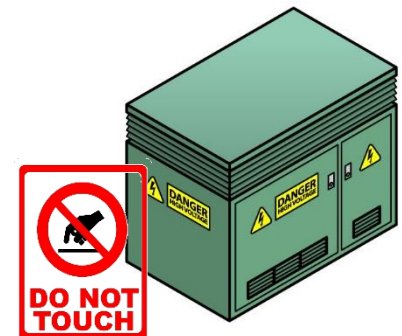


B8. Danger of tampering with electrical equipment

Some electrical utility equipment is located on the ground, such as locked steel cabinets that contain transformers.

How dangerous do you believe it is to try to open, remove contents, or touch the equipment inside? Would you say ...

Response	Gender	Gender	Age	Age	Age	Age	Age	Age
	Male	Female	18-24	25-34	35-44	45-54	55-64	65+
Very dangerous	88%	82%	87%	80%	88%	83%	92%	84%
Somewhat dangerous	10%	15%	13%	20%	7%	16%	8%	8%
Not very dangerous	1%	2%	0%	0%	4%	1%	0%	1%
Not dangerous at all	0%	1%	0%	0%	1%	0%	0%	2%
Don't know	1%	0%	0%	0%	0%	0%	0%	5%



B9. Proximity to downed power line

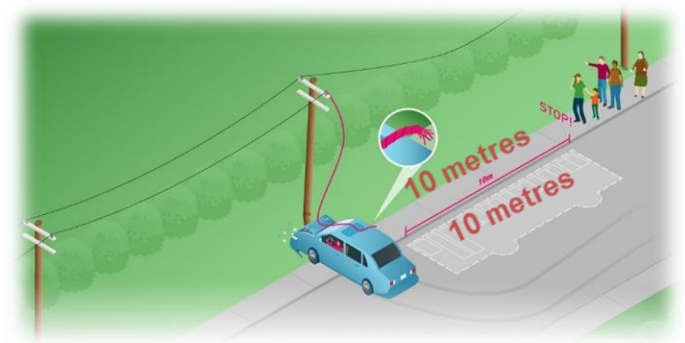
How close do you believe you can safely come to a downed overhead power line, such as a downed line caused by a storm or accident? Would you say ...

Response	Score	% of respondents
You can safely touch a downed overhead power line	0.00 pts	0%
Less than 1 metre (i.e. less than 3 feet)	0.00 pts	3%
1 to less than 5 metres (i.e. 3 to less than 16 feet)	0.00 pts	5%
5 metres to less than 10 metres (i.e. 16 feet to less than 33 feet)	0.00 pts	13%
You should maintain a distance of 10 metres or more (i.e. 33 feet or more)	1.00 pts	78%
Don't know	0.00 pts	1%

CORRECT ✓ 78%

INCORRECT ✗ 22%

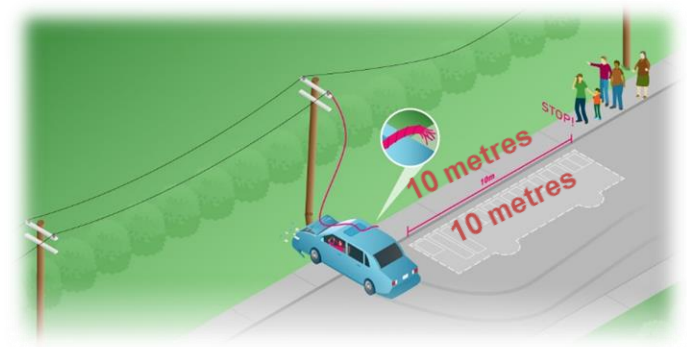
*Correct: Any response which scored above 0 pts
Incorrect: Any response which scored 0 pts including Don't know*



B9. Proximity to downed power line

How close do you believe you can safely come to a downed overhead power line, such as a downed line caused by a storm or accident? Would you say ...

Response	Gender Male	Gender Female	Age 18-24	Age 25-34	Age 35-44	Age 45-54	Age 55-64	Age 65+
You can safely touch a downed overhead power line	0%	0%	0%	0%	0%	0%	0%	1%
Less than 1 metre (i.e. less than 3 feet)	2%	3%	6%	0%	6%	1%	3%	2%
1 to less than 5 metres (i.e. 3 to less than 16 feet)	8%	3%	6%	8%	4%	3%	6%	2%
5 metres to less than 10 metres (i.e. 16 feet to less than 33 feet)	12%	14%	14%	8%	19%	12%	12%	14%
You should maintain a distance of 10 metres or more (i.e. 33 feet or more)	77%	78%	73%	84%	71%	81%	77%	77%
Don't know	0%	1%	0%	0%	0%	2%	1%	4%



B10. Actions taken in vehicle in contact with wires

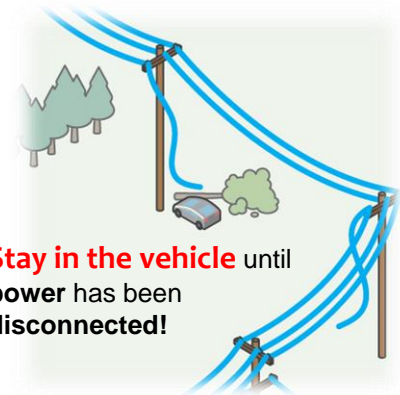
If you were in a vehicle – such as a car, bus, or truck – and an overhead power line came down on top of it, which of the following options do you believe is generally safer?

Response	Score	% of respondents
Get out quickly and seek help	0.00 pts	18%
Stay in the vehicle until power has been disconnected from the line	1.00 pts	81%
Don't know	0.00 pts	1%

CORRECT ✓ 81%

INCORRECT ✗ 19%

*Correct: Any response which scored above 0 pts
Incorrect: Any response which scored 0 pts including Don't know*



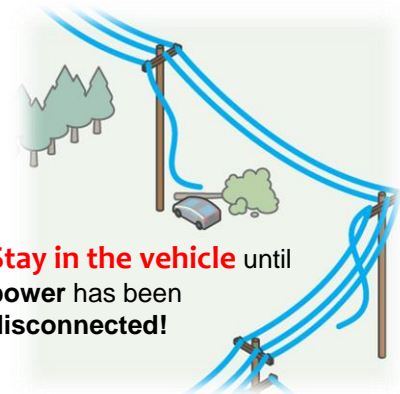
Stay in the vehicle until
power has been
disconnected!



B10. Actions taken in vehicle in contact with wires

If you were in a vehicle – such as a car, bus, or truck – and an overhead power line came down on top of it, which of the following options do you believe is generally safer?

Response	Gender Male	Gender Female	Age 18-24	Age 25-34	Age 35-44	Age 45-54	Age 55-64	Age 65+
Get out quickly and seek help	21%	14%	33%	30%	10%	13%	6%	16%
Stay in the vehicle until power has been disconnected from the line	79%	84%	60%	70%	90%	86%	93%	82%
Don't know	0%	2%	7%	0%	0%	1%	1%	2%



Milton Hydro

Public Awareness of Electrical Safety Report

Demographics

In what age category do you fall into?

Response	% of respondents Based on Census data
18 to 24	10%
25 to 34	24%
35 to 44	26%
45 to 54	17%
55 to 64	12%
65 or older	10%



Gender

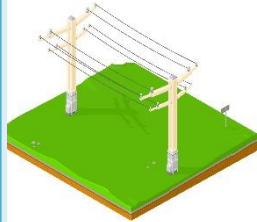
Response	% of respondents Based on Census data
Male	49%
Female	51%



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Public Awareness of Electrical Safety Report

Demographics



Does your job regularly cause you to come close to energized power lines?

Response	% of respondents
Yes	6%
No	94%
Don't know	0%

Proceed to the following question only if Respondent answers 'Yes' ...



Do you work in any of the following fields?

Response	% of respondents
Transportation	0%
General labour	3%
Construction or outdoor trades	64%
Electrician	10%
Other	24%
Don't know/Prefer not to say	0%



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Public Awareness of Electrical Safety Report

Demographics

How would you describe your primary residence? Would you say...

Response	% of respondents
A fully-detached home	68%
A semi-detached home	10%
A townhome or row house	15%
An apartment or condo building less than 5 storeys	1%
An apartment or condo building 5 storeys or higher	5%
A farm	0%
Other	0%



Does your primary residence receive electricity through overhead wires or underground cables?

Response	% of respondents
Overhead wires	16%
Underground cables	71%
Don't know	14%



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GSC1. Where would you go first to find information about electricity safety?

Response	Overall	Gender Male	Gender Female	Age 18-24	Age 25-34	Age 35-44	Age 45-54	Age 55-64	Age 65+
Local utility website	28%	30%	26%	0%	22%	34%	35%	34%	37%
Electrical Safety Authority	17%	21%	13%	13%	20%	17%	21%	11%	16%
Online search	40%	38%	41%	53%	47%	41%	36%	34%	16%
Social media	1%	0%	1%	0%	0%	1%	0%	0%	2%
Relative or friend	4%	5%	3%	13%	0%	3%	1%	7%	5%
Other	10%	5%	15%	14%	12%	3%	7%	10%	23%
Don't Know, Refused, Prefer not to say	2%	2%	2%	6%	0%	1%	0%	3%	1%

¹Note: Unweighted data

This slide is for Grid Smart City Clients only



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GSC2. Do you have any children, living with you, who are 6 to 13 years old?

Response	% of respondents
Yes	31%
No	69%
Did not answer	0%



¹Note: Unweighted data

GSC3. Have you had a conversation within the last year with your child or children about the dangers of powerlines and playing near electrical equipment?

Response	% of respondents
Yes	46%
No	54%
Did not answer	1%

Electrical Safety and children



¹Note: Unweighted data

This slide is for Grid Smart City Clients only



UtilityPULSE, through polls and surveys, provides executives and managers with feedback that assists in making both strategic and operational decisions. You know lots of companies that can gather data and provide a report. We believe that by specializing in the utility sector with our polls and surveys, you get stronger analysis of data and answers to key questions that help you formulate key strategies to assist your leaders in creating a better place to work and a better place to do business with.

UtilityPULSE is uniquely positioned to help your utility get feedback from Customers, through its Annual Electric Utility Customer Satisfaction Survey or customized research designed for you. In addition, we understand what it takes to create an organization where employees are engaged and enthusiastic about customers and the work that they do. Knowing what is going on with your customers and employees is one thing, doing something about it is another. We get paid for, and earn our clients' loyalty by, delivering objective insights with actionable recommendations; accomplished when every step of the process is completed with professionalism and pride. Our mission is to help you and your leadership team move from knowing to doing while improving performance and creating value to your customers, employees, stakeholders and the public at large.

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