

A photograph of a residential street under a blue sky with scattered clouds. On the left, a tall wooden utility pole stands with several cross-arms and insulators. Power lines run across the scene. In the foreground, there is a grassy area with a wooden fence and a large, leafy tree. In the background, more trees and a road with a few cars are visible. A banner is stretched across the road in the distance.

Milton Hydro

UtilityPULSE 

**Public Awareness of Electrical Safety
March 2016**



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 400 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 (2011) for age, gender and region.

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

All comments and questions should be addressed to:

UtilityPULSE
Toll free: 1-888-291-7892 or Local: 905-895-7900
Project lead: Sid Ridgley
Email: sidridgley@utilitypulse.com
March, 2016



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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 first year for compiling 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 400 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 (2011) 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" [51.7% scored 1.00 pts]

51.7% would 'definitely' and 19.7% 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 [94.7% scored 1.00 pts]

94.7% knew that is 'very dangerous' and 4.0% 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 [19.7% scored 1.00 pts]

This was one of two questions that contained a concept of measurement of distance from a power line constituting safe proximity. 19.7% indicated that they believed that there needed to be a distance of 3 metres to less than 6 metres and 59.0% 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). A catchy phrase or tag line to help the public remember is worthwhile.

For example, the tag line "On a ladder or climbing trees, 3 to 6 metres you need to be" or "On a ladder or climbing trees, at least 3 metres you need to be"; either tag line noted next to an image of a person on a ladder in proximity of an overhead power line helps instill the message. Remember, you are trying to get the public at large to learn & remember the 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 [86.2% scored 1.00 pts]

86.2% knew that is 'very dangerous' to tamper with electrical equipment, while 12.0% 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. This is a no play zone for children and/or pets and in general all persons need to leave the electrical equipment alone.

Question B9: Proximity to downed power line [75.4% scored 1.00 pts]

This is the second question containing a concept of measurement of distance, this time from a downed power line constituting safe proximity. 75.4% 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). Again, a catchy phrase or tag line to help the public remember is worthwhile.

For example, the tag line "Downed line on the floor, stay away 10 metres or more" or "Downed line on the ground, back 10 metres if standing around" ; either tag line noted next to an image of a person in proximity of a downed power line helps instill the message.

Remember, you are trying to get the public at large to learn & remember the minimum distance from a downed 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 [85.0% scored 1.00 pts]

85.0% 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, they need to be educated that staying in the vehicle is their best and safest option until the power is disconnected.

Conclusion:

This first year of surveying the public in your service territory about electrical safety shows that many 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. 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 begin or 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 that you need to drive home to 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.

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

Step 2:

Individual respondent's cumulative score / # of sections
= Respondent Standardized Score



Step 3:

Summation of all "Respondent Standardized Scores" / n-size (i.e. total sample size)
= Raw Index Score

Step 4:

Raw Index Score × 100 = 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	51.7%
Very likely	0.75 pts	19.7%
Somewhat likely	0.50 pts	14.9%
Not very likely	0.00 pts	4.1%
Not at all likely	0.00 pts	6.8%
I would not undertake a project that required digging	omitted ¹	2.3%
Don't know	0.00 pts	0.6%

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.



86.3%

CORRECT



13.7%

INCORRECT

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.



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	48.1%	55.1%	19.7%	46.0%	56.7%	55.8%	65.9%	60.0%
Very likely	20.2%	19.2%	17.0%	25.3%	20.1%	18.6%	13.9%	17.2%
Somewhat likely	14.3%	15.5%	45.0%	14.2%	12.1%	16.3%	6.6%	1.4%
Not very likely	6.5%	1.7%	5.7%	3.0%	3.4%	3.5%	3.7%	8.0%
Not at all likely	8.0%	5.6%	5.7%	11.5%	6.0%	2.3%	6.6%	6.9%
I would not undertake a project that required digging¹	1.6%	2.9%	7.0%	0.0%	0.8%	2.3%	3.3%	5.2%
Don't know	1.2%	0.0%	0.0%	0.0%	0.9%	1.2%	0.0%	1.3%

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.

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	94.7%
Somewhat dangerous	0.50 pts	4.0%
Not very dangerous	0.00 pts	0.6%
Not at all dangerous	0.00 pts	0.8%
Don't know	0.00 pts	0.0%

 98.6%
CORRECT

 1.4%
INCORRECT

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	92.8%	96.4%	81.7%	97.0%	97.4%	95.4%	96.3%	92.1%
Somewhat dangerous	4.4%	3.6%	12.7%	3.0%	1.7%	4.6%	2.5%	4.0%
Not very dangerous	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	1.2%	3.8%
Not at all dangerous	1.7%	0.0%	5.7%	0.0%	0.9%	0.0%	0.0%	0.0%
Don't know	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%



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	0.4%
Less than 1 metre (i.e. less than 3 feet)	0.00 pts	4.7%
1 to less than 3 metres (i.e. 3 to less than 10 feet)	0.00 pts	12.1%
3 metres to less than 6 metres (i.e. 10 feet to less than 20 feet)	1.00 pts	19.7%
You should maintain a distance of 6 metres or more (i.e. 20 feet or more)	0.75 pts	59.0%
Don't know	0.00 pts	4.1%



78.7%

CORRECT



21.3%

INCORRECT

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	0.5%	0.4%	0.0%	0.0%	1.7%	0.0%	0.0%	0.0%
Less than 1 metre (i.e. less than 3 feet)	6.9%	2.5%	17.0%	3.0%	1.6%	5.8%	2.9%	4.1%
1 to less than 3 metres (i.e. 3 to less than 10 feet)	16.4%	7.9%	11.4%	14.4%	13.8%	7.0%	13.1%	10.5%
3 metres to less than 6 metres (i.e. 10 feet to less than 20 feet)	22.5%	17.0%	5.7%	28.6%	23.2%	16.3%	16.8%	13.2%
You should maintain a distance of 6 metres or more (i.e. 20 feet or more)	52.1%	65.7%	65.9%	51.2%	57.2%	67.4%	58.6%	61.2%
Don't know	1.6%	6.5%	0.0%	2.8%	2.4%	3.5%	8.6%	10.9%



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	86.2%
Somewhat dangerous	0.50 pts	12.0%
Not very dangerous	0.00 pts	0.6%
Not dangerous at all	0.00 pts	1.0%
Don't know	0.00 pts	0.3%



INCORRECT

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 Male	Gender Female	Age 18-24	Age 25-34	Age 35-44	Age 45-54	Age 55-64	Age 65+
Very dangerous	83.1%	89.2%	57.6%	88.5%	87.7%	93.0%	90.2%	89.3%
Somewhat dangerous	14.2%	9.9%	36.7%	11.5%	10.5%	7.0%	7.0%	6.7%
Not very dangerous	0.7%	0.4%	0.0%	0.0%	0.9%	0.0%	1.6%	1.3%
Not dangerous at all	2.0%	0.0%	5.7%	0.0%	0.9%	0.0%	1.2%	0.0%
Don't know	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	2.8%



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	0.0%
Less than 1 metre (i.e. less than 3 feet)	0.00 pts	4.0%
1 to less than 5 metres (i.e. 3 to less than 16 feet)	0.00 pts	3.8%
5 metres to less than 10 metres (i.e. 16 feet to less than 33 feet)	0.00 pts	16.3%
You should maintain a distance of 10 metres or more (i.e. 33 feet or more)	1.00 pts	75.4%
Don't know	0.00 pts	0.5%



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%	0.0%	0.0%	0.0%	0.0%	0.0%
Less than 1 metre (i.e. less than 3 feet)	5.9%	2.2%	5.7%	5.9%	3.4%	1.2%	4.1%	4.0%
1 to less than 5 metres (i.e. 3 to less than 16 feet)	2.0%	5.6%	7.0%	2.8%	3.3%	2.3%	7.4%	2.6%
5 metres to less than 10 metres (i.e. 16 feet to less than 33 feet)	19.2%	13.5%	18.3%	26.1%	16.1%	12.8%	7.0%	9.3%
You should maintain a distance of 10 metres or more (i.e. 33 feet or more)	72.6%	78.1%	69.0%	65.3%	77.1%	82.6%	81.6%	81.5%
Don't know	0.3%	0.7%	0.0%	0.0%	0.0%	1.2%	0.0%	2.7%



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	14.5%
Stay in the vehicle until power has been disconnected from the line	1.00 pts	85.0%
Don't know	0.00 pts	0.5%

 85.0%
CORRECT

 15.0%
INCORRECT

Correct: Any response which scored above 0 pts

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



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	Gender	Age	Age	Age	Age	Age	Age
	Male	Female	18-24	25-34	35-44	45-54	55-64	65+
Get out quickly and seek help	9.5%	19.3%	32.3%	8.3%	17.6%	11.6%	12.3%	10.7%
Stay in the vehicle until power has been disconnected from the line	90.5%	79.7%	67.7%	91.7%	82.4%	87.2%	87.7%	86.5%
Don't know	0.0%	1.0%	0.0%	0.0%	0.0%	1.2%	0.0%	2.8%



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	10.3%
25 to 34	23.7%
35 to 44	26.1%
45 to 54	17.1%
55 to 64	12.4%
65 or older	10.3%



Gender

Response	% of respondents Based on Census data
Male	49.2%
Female	50.8%



Milton Hydro

Public Awareness of Electrical Safety Report

Demographics



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

Response	% of respondents
Yes	9.8%
No	89.9%
Don't know	0.3%

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



Do you work in any of the following fields?

Response	% of respondents
Transportation	6.0%
General labour	6.0%
Construction or outdoor trades	29.0%
Electrician	38.4%
Other	18.3%
Don't know/Prefer not to say	2.4%

Milton Hydro

Public Awareness of Electrical Safety Report

Demographics

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


Response	% of respondents
A fully-detached home	70.2%
A semi-detached home	8.4%
A townhome or row house	16.2%
An apartment or condo building less than 5 storeys	2.2%
An apartment or condo building 5 storeys or higher	3.0%
A farm	0.0%
Other	0.0%



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

Response	% of respondents
Overhead wires	12.9%
Underground cables	79.7%
Don't know	7.4%





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.

Your personal contact is:

Sid Ridgley

Phone: (905) 895-7900 x 29 Fax: (905) 895-7970

E-mail: sidridgley@utilitypulse.com

www.utilitypulse.com

