



the gandalf group

Ontario Power Generation

Opinion Research on Nuclear Emergency Procedures & Preparedness: Durham Focus Groups

Final Report

December 10, 2013



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I. Introduction & Methodology

The following report is based on findings from four focus groups conducted by the Gandalf Group in November 2013 on behalf of Ontario Power Generation (OPG). The groups were held with community members living in close proximity to a nuclear plant (either Darlington or Pickering) and were designed to explore their awareness and understanding of emergency procedures and preparedness in the event of a nuclear incident.

The research focused on safety and procedures in the community (off-site) as it would relate to and involve them as residents. Results from the research are intended to inform OPG's efforts to educate and communicate with community members on these issues. In the second half of each group, copies of several recent Durham and OPG publications and pamphlets were shared as stimuli for feedback as well as a calendar document published by the Tennessee Valley Authority. Detailed questions asked are included in the guide in the attached appendix.

Groups were held with local residents representing a mix of genders and ages in the following locations. The first group (held at 5:30pm) included only "Involved" citizens. This group is more likely to be involved in community public affairs and consume related news and media.

November 27, 2013

Clarington/Bowmanville:

Residents of Clarington, Darlington/Port Darlington, Bowmanville, Orono, Newcastle, Courtice and the eastern end of Oshawa (i.e. east of Simcoe Street).

Group 1 – "Involved Ontarians"

Group 2 – Gen Pop.

November 28, 2013

Pickering/Oshawa:

Residents of Pickering and Ajax

Group 1 – "Involved Ontarians"

Group 2 – Gen Pop.

Each group consisted of 9 to 10 participants and lasted just less than two hours in length.

A note of caution in interpreting results: because of the small samples involved in qualitative research, such as groups, findings are directional in nature only and cannot be projected with any accuracy onto the broader population.



II. Executive Summary

- Findings from the four groups suggest that residents have very low levels of awareness of and engagement in nuclear safety and emergency preparedness issues.
- Few have noticed any communications on these topics arriving at their homes; somewhat more said they or family members received or heard about information at school or at work in the past. Residents in the Pickering tended to be either more informed or exposed to information on this topic than those in the vicinity of Darlington.
- Even those who said they have been exposed to messaging, however, had not absorbed or remembered key points of those communications.
- Underlying all of this is a minimal understanding about how an emergency might unfold and how that would relate to them and community response.
- Sirens and potassium iodide pills were the most common elements of community response that participants knew something about, but even here knowledge was scant and almost none had obtained free pills that have been advertised in regional communications or pamphlets.
- Importantly, the topic of sheltering/remaining in place and evacuation was not understood by participants based on what they knew coming into the groups. Most believed evacuation is the likely response community residents should undertake and they were resistant to the suggestion of remaining in place even if asked to.
- We saw an opportunity in groups to present a range of interesting information and facts to participants. Nuclear safety in general is in some respects so important it is difficult to prioritize some information ahead of other information; or consider what one or two medium/media would best serve public education objectives. People want assurance that they will receive important and timely information across a range of media and topics.
- There are some clear findings around how dense text on its own in a pamphlet is less likely to be read or kept, and how some publications are more eye catching. Less may be more.
- There are other barriers at work making it difficult to reach residents with information they are likely to retain or recall.
 - There may be an element of denial at work, with few wanting to acknowledge the safety issue and tuning out and refusing to assume any personal responsibility as a



coping mechanism. Most believed an accident was unlikely. Many find the idea of an emergency unimaginable and few have thought about how one would unfold. Many know about Fukushima but only two participants were able to explain the likely timeline of events around an evacuation or incident. Those who could told us they expected either an explosion or very little if not any time to respond.

- There is little detailed and specific information in standard communications about the actions they would be likely to undertake. This combined with the fact that one of the key messages in the past – among other messages – is that residents will receive detailed instructions in the event of an emergency, is potentially a cue to retain little from media they are receiving in advance.
- In light of this, OPG should consider creative content that gets attention as well as detailed information with more specifics: e.g. not just numbers to call, maps of locations to know and checklists and basic instructions of what to do; but potentially details of how response would unfold, both what it would look like (location of centres, evacuation routes) and why (the reasons for sheltering in place or awaiting instructions before evacuation, that it may be safer than other locations, the fact that an incident or evacuation could take days to occur). In the absence of this many are under the assumption that there is little to know or learn before instructions are issued at the time of an event or that there is little that can be done to keep safe in the event of an incident.

III. Detailed Findings

Nuclear Safety

Overall, most in the groups were relatively comfortable with nuclear energy as a reliable and clean form of energy and, generally speaking, safe. One of the concerns seemed to be about nuclear waste disposal but even then this was not seen as an immediate worry. There is a concern expressed by the minority that the public is possibly not made aware of small accidents or leaks or that there have been tritium or radioactive releases into the lake that were downplayed.

An accident or emergency involving a reactor however does not weigh on peoples' minds, either, many of whom had lived in the area for many years or their entire lives. The general consensus here was that while it might not be ideal, nothing serious has ever happened.

- *“We live close and are just used to the idea that everything is fine.”*



- *“Not so happy about it, maybe, but not living in fear, either.”*

That’s not to say that nuclear safety and accidents were not important. Fukushima was mentioned repeatedly, unaided, across the groups, but while some said that events in Japan had made them stop and think, most chalked it up to exceptional events, which couldn’t, feasibly, be reproduced here. Some knew specifics about Canadian reactors and how they are constructed: differently and safer as a result.

On the question of how prepared we are locally to handle any kind of emergency or incident, most were sanguine and not too concerned. The collective sense was that it wasn’t likely and, even then, most seemed to either assume or have never questioned whether there would be safeguards and measures in place.

- *“I’m sure there are lots of safeguards in place”*

There was an assumption that safety at the plant must be paramount, and that any off-site response would involve the provincial government, the police and fire and OPG itself. Durham EMO and Emergency Management Ontario per se were not named as among the responsible agencies.

Unaided Awareness

Very few had a demonstrated understanding of how an incident at a nuclear plant would unfold, and perhaps because they identified the risk as extremely low, didn’t feel they needed to know. Few knew what kind of scenarios might play out or what the chain of events or timing might be. Most thought an incident would be fast, like a weather event, with little awareness that it could take place over days, and that safeguards could provide lead time for the management, and even aversion, of a crisis. Of concern is that the few that had imagined what an incident or emergency would occur, believed that any warning would give them very little time if any to respond and be safe.

Few had knowledge or top-of-mind awareness of the kinds of procedures that would roll out or the types of preparations they should undertake in case of a nuclear incident (or general emergency). Very little, in fact, came up unaided other than mentions of alert sirens, evacuations routes and the availability of iodide pills. Awareness about these things or media explaining them was higher among Pickering and Ajax residents – where almost half the participants said they knew this because of information from or sessions at local schools or workplaces.



Otherwise, few recalled having seen any information, and those who did tended to be vague on the details and/or say it was a while back. A handful of people across all the groups indicated that they had received something in the mail, like a brochure, over the years, but nothing stood out as memorable, they weren't sure who sent it and they didn't recall the contents. Virtually no one was certain about information on the topic in their homes currently as a reference.

Only a small handful of people indicated that they had ever had a conversation within their family about nuclear safety at the local plant and what would happen or should be done in the event of an incident. And even then, few to none in each group had an emergency plan or provisions in place. Some felt that they probably had provisions at home for three days (i.e. 72 hours) for each of their family members, but not consciously put aside as preparation for an emergency.

Once they realized their lack of knowledge and preparation, most acknowledged that they probably should know and do more and felt that authorities have an obligation to inform them. This is a positive sign going forward in terms of the receptivity of the public for this information.

Prompted Awareness

For each of the key elements below, we asked participants: what they knew and thought about each; what they felt they needed to know; what questions they had; and what their response was to some basic information and facts on each:

- **Proximity:** Most knew something about the idea that distance is a factor and, in a few instances, that a certain radius applies (the most common example being 10 kilometers or living in the proximity of sirens located near the plants). Few knew what a safe distance might be and some questioned whether anyone really knew or if there was such a thing. Most felt, however, that proximity to the plants mattered and would probably impact the type of action they might be asked to undertake in the event of an incident, but it wasn't something most of them knew, per se, but more like something they heard or assumed would be true. In the material they reviewed, participants liked seeing the map with information about the zones within a ten-km radius. If nothing else they told us this was eye-catching and a reminder that they would be among the affected as they could reasonably see where they lived relative to the radius, compared to others in their community (e.g. Oshawa or east of Newcastle) who lived just outside the radius.



- **Authorities involved:** Emergency Management Ontario was not a known entity to participants in these groups, although many assumed that some kind of government organization would be in charge of overseeing an emergency or incident if one occurred. The written outline that we shared covering off on who does what in an emergency (EMO, DEMO, local first responders, OPG) made sense to participants. It reassured some to know that a dedicated provincial authority would be in charge, but many were quick to stress the importance of local agencies (police, fire, ambulance, etc.), being involved too, along with the plant operator (OPG). Residents did not know who would be doing what, exactly, when initially asked, and they didn't seem too interested in those details, as long as they could be reassured that the authorities are prepared to mitigate the risk and manage an effective, coordinated response to any emergency. It was difficult for them to have confidence in DEMO and EMO per se since none can visualize what employees of those agencies do, as opposed to first responders.
- **72-hour family survival kit and emergency plan:** While widely viewed as a smart thing to do, none had consciously done it. In communicating about this with residents, OPG may need to look for better ways to make this information more persuasive by bringing it to life with some concrete examples of what can happen if you don't plan.
- **Alerting the public:** Again, there was no real knowledge but a lot of assumptions and vague guesses about how people would be notified in case of a nuclear incident. The general agreement was that it made sense to have an alert system with a combination of sirens, an automated phone dialing system and communications through all forms of media, including TV, radio, online, especially social media. Notably, discussion on this point, prompted some anxiety about whether information would get through ("what if my cell phone's not on?"), be consciously held back ("what if they don't tell us right away") or even misleading ("what if they tell us to stay because they don't want to cause a panic?").
- **Remaining in place:** Most were surprised that this might be an option. In part this is because there is no basic understanding of safeguards that would slow down or temporarily avert impact of an incident to the off-site area: e.g. a release of air from the plant/reactor vacuum chamber or steps that could avert a crisis altogether, making it wiser for them to stay vs. leave. Instead, almost everyone assumed that the only response in the event of an incident would be to evacuate. When told that they might be asked to stay indoors and specifically to seal their windows and doors instead, this was apparently new information to all. But importantly most didn't understand how this could be the best response for them, personally, or trust the suggestion that it would. People needed more



information on this front to understand why, and the reasons are credible, with respect to the different scenarios that might play out, but people have to know this.

- **Potassium iodide pills:** A number of participants knew about these, but none had these pills on hand at home for their household, and few knew that they were made available for free at certain pharmacies. These facts were of interest to people but we heard that almost none believed they would likely go out and procure these pills based on information presented in the groups. Yet most said the information was relevant for any communications and important to know. It was in fact somewhat more reassuring to know about it – none found this information per se disconcerting. One question that came up in different groups was about the shelf life of the pills.
- **Monitoring and decontamination centres:** This is not something that people were previously thinking of or informed about, but it wasn't a surprise to learn that these types of centres would be set up and people liked the idea of knowing where these might be in a district or on a map as part of information they might receive. They said knowing this was reassuring and evidence of a plan in place. It was generally seen as important information to have and include in any communications with residents. A few participants wanted information about the location of these centres in detailed material that they could access or that could be provided.

Materials Testing

Participants reviewed four documents:

- Two page from DEMO
 - <http://www.durham.ca/departments/demo/nuclearbrochure.pdf>
- One page from Durham – with map
 - <http://www.durham.ca/departments/demo/EmergencyInfo.pdf>
- OPG Booklet attached – Protecting you and your family
- Watts Bar TVA 2013 Calendar attached

Participants were generally interested in all the materials they reviewed and found the information, especially anything concrete or actionable, to be relevant and important for them to know.

None were very familiar with the documents reviewed in the groups. Only in the Pickering and Ajax groups did some recall one of the specific documents.



Participants were interested in seeing basic information included in any pamphlet:

- Maps and images that place the resident in proximity to the plants and get their attention.
- Basic info about alert systems.
- Basic instructions that people will be asked to follow – “What should I do if notified? Go...Listen...Follow”.
- Basic facts about pills, evacuation vs. sheltering in place, reception centres.

Protective Actions
In the event of an emergency, you may be directed to shelter in place.

- Stay indoors (including pets).
- Close all windows and doors.
- Turn off heating and air conditioning to avoid drawing in potentially contaminated air from outside.
- Prepare to evacuate in case the situation changes.

Shelter in place

- Close and lock windows and doors.
- Follow the instructions/routes given by emergency officials. All routes out will be used.
- Take with you:
 - Important documents and identification.
 - Sufficient clothing, medications, hygiene items, canned or dried food, water, cash.
 - Specialty items (baby needs, medical equipment).
 - Pets, food, carriers, leashes, vaccination forms.
- If you do not have a vehicle, go to a designated transit stop, when directed.

Report to a Reception Centre for Monitoring
If required, Reception Centres will be set up to monitor you to determine if you have come in contact with contaminated material. If you have, you and your vehicle will be decontaminated.

- Once decontamination is complete, you would be free to leave and go to an alternate location (family, friends, hotel, etc.) or to an evacuation centre (if you have nowhere else to go).

Potassium Iodide (KI) Pills
In a severe nuclear accident, radioactive iodine may be released and could accumulate in the thyroid gland. KI pills minimize the absorption of the radioactive iodine.

KI pills are available FREE to those living within the 10 Km radius of the nuclear generating stations at the following pharmacies:

Bay Ridges Pharmacy - 1794 Liverpool Rd., Pickering
Pickering Medical Pharmacy - 1805 Glenanna, Pickering
Liverpool Pharmacy - 725 Kroono Blvd. Pickering
Remedy's Rx Drug Mart - 130 Waverly Rd. Bowmanville
Countryside Pharmasave - 2727 Courtice Rd. Courtice

Take KI pills only if instructed to do so. KI pills are distributed to schools, daycares, and health care facilities, located within 10 km of the nuclear stations.

Schools, Daycares, and Long Term Care Facilities
Prior to any emergency, check with your children's school or daycare about their emergency plans. Follow instructions on the media for picking up your children at school or daycare. Designate people to pick up your children, if you are unable to do so immediately, and let your child's school or daycare know whom you have appointed.

Should you have aging family members in long-term care facilities, check with these agencies about their emergency plans.

For more information on nuclear power and emergency preparedness, visit:

- www.opg.com
- www.emergencymanagementontario.ca
- www.durham.ca/demo

Nov 2012

NUCLEAR PUBLIC SAFETY

Durham Emergency Management Office
605 Roseland Road East, Box 823
Whitby, ON L1N 6A3

Phone: 905-430-2792
Fax: 905-430-8635
Email: demo@durham.ca
Website: www.durham.ca/demo

If you require this information in an accessible format, please contact the Accessibility Coordinator at 1-800-372-1102 ext. 2009

Word of Mouth
There is a possibility that first responders may need to go door-to-door to ensure that people evacuate. Also, co-workers, friends, and/or neighbours may notify you by phone, email, text, or social media.

What should I do?
The sounding of the siren is a warning and does not mean to evacuate.

GO Inside and turn on your radio, television, computer, or hand held device.

LISTEN to media reports, relaying emergency information.

FOLLOW instructions provided from the Province, as relayed by the media.

Stay calm, avoid using the phone, call 911 only for life threatening emergencies, and do not evacuate unless instructed to do so. Check on your elderly or special needs neighbours.

facebook.com/regionofdurham
twitter.com/regionofdurham
youtube.com/user/regionofdurham

NUCLEAR EMERGENCY PLANNING

The Durham Emergency Management Office (DEMO) works closely with Emergency Management Ontario and Ontario Power Generation (OPG) to ensure that nuclear emergency preparedness is in place for residents of Durham Region. With staff on duty 24 hours, 7 days a week, DEMO is ready to respond to any incident that may threaten the lives and well-being of residents.

Under the Provincial Nuclear Emergency Response Plan, the Province is in control of off-site emergency operations, while Durham Region is responsible for local off-site activities to ensure public safety.

The Province of Ontario and the Region of Durham have developed comprehensive emergency plans that include evacuation, transportation, and sheltering. Municipal plans and procedures address local issues related to a nuclear emergency. Similarly, Ontario Power Generation has developed plans to deal with emergencies that might occur within their stations.

DEMO manages the Regional Emergency Operations Centre, which is activated in response to a major event and is the central point of emergency coordination for the Region.

DEMO also works with local municipalities, community groups, and schools to promote an understanding of all aspects of nuclear emergency preparedness.

OPG Preparedness

Many safety features are built into the CANDU reactor technology at both Darlington and Pickering Nuclear Generating Stations, operated by Ontario Power Generation. Darlington and Pickering Nuclear Generating Stations are licensed by the Canadian Nuclear Safety Commission, which regulates the use of nuclear energy and materials.

CANDU reactors are enclosed in sealed concrete buildings. The CANDU system includes several ways to quickly shutdown the reactors. In the unlikely event of a serious incident, the multiple barrier safety system is designed to prevent any harmful release of radiation.

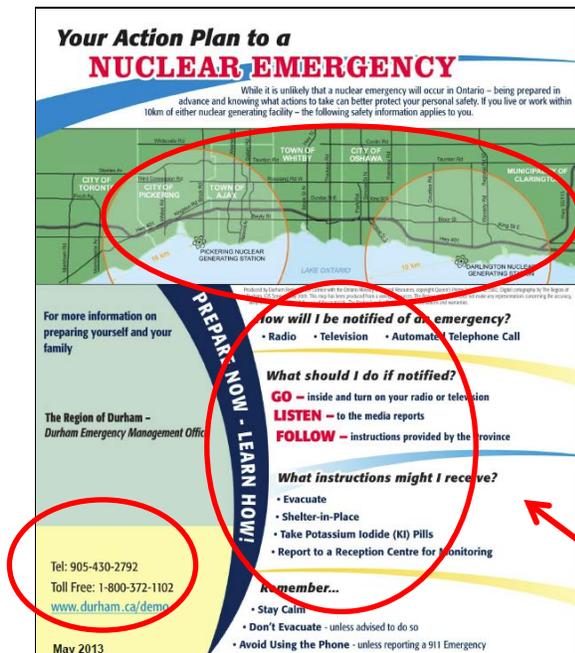
How will I be notified if there is a serious accident?

Durham Region's public alerting system is made up of two components – a siren system for outdoor alerting and an automated telephone dialing system for indoors.

Sirens
Sirens are essentially loud speakers, mounted on poles, which emit a single tone alarm that can be heard outdoors. These sirens are located within 3 kilometres of the Darlington and Pickering Nuclear Generating Stations.

Telephone Dialing System
An automated telephone dialing system will deliver a recorded emergency message through landline home phones to a large population in a short time.

Radio, Television, and Social Media
Local radio and television stations, and social media, will broadcast information from the Province of Ontario, by way of nuclear Emergency Bulletins, and from the Region on public health, safety, and welfare.



Key facts from the longer Durham document were

largely and effectively summarized here.

Participants were somewhat split, however, in terms of what an ideal document or pamphlet to homes should look like.

Some felt that any brochure should be short and to the point if it's going to get read, absorbed and kept, and that the Durham document with the map was most consistent with that: i.e. memorable and eye catching of the two one-pagers. (It contained most of the key information contained in the longer 2 pager, but was substantially easier to read. It was also the kind of thing they'd be more likely to post on their fridge or keep at home, than a document that was heavy in text.) Yet some did not like the fact that that the DEMO document didn't list much in terms of concrete steps for people to take despite being titled "Your Action Plan". Participants generally tended to want more specifics like check lists, evacuation routes, maps, locations, phone numbers, social media pages, and so on. The longer calendar document from the TVA is a contrast compared to the OPG and Durham/DEMO documents in terms of what is possible in this respect with great detail relating to very specific audiences, notably around specific schools.

Others felt that a one-pager would be very easy to overlook, throw away or put aside and forget about, and said that there isn't enough concrete information in them to make them memorable or worth keeping. These participants tended to think that a bigger piece like the



OPG booklet or the TVA Watts Bar Calendar would more likely be noticed and kept as a reference. They liked the additional information and greater opportunity to learn about:

- Who is responsible for what and what is being done, such as drills and tests, to ensure they are prepared?
- What are the evacuation routes? What do specific area-schools do?
- About the reactors and their safety features, including how they are different/better than the ones that have experienced incidents, such as Fukushima.
- How those features and other factors would allow for more orderly response than they had thought and circumstances that would make sheltering in place more acceptable.
- The kinds of procedures, preparation and tests in place.
- Safety and preparedness measures for children at schools.

To the extent that the TVA Watts Bar calendar document was preferred, this was more because of the extensive content in the calendar than because of the useful calendar feature was attractive and more likely to be kept handy (though for some the latter was true)

Other Media

In general, anything eye-catching like a map, functional like a calendar, or informational like locations, phone numbers, websites, etc., was seen as better, more useful and more likely to be kept. Some suggested these elements would be greater motivation to put something up on the fridge or by the front door, for example. The only suggestion we heard that gave a clue as to what people are more likely to keep than not is anything laminated, such as are found on emergency cards in hotel rooms on the back of doors.

Websites are an important complement to one- or two-page pamphlets, it was suggested, but few have visited those websites to date. Smartphone applications held limited appeal for these groups as did YouTube videos or other digital options suggested.

IV. Conclusions

OPG's target audience of people living within a ten-kilometer radius of the nuclear plants at Darlington and Pickering are not well informed when it comes to nuclear safety and emergency procedures and preparedness.



Living next to nuclear facilities is normalized, and most believe the risks are low, which may explain the complacency so prevalent among participants, most of whom have never made an effort to get informed about nuclear safety or prepare for any kind of emergency.

If OPG wants to cut through with some communications that get noticed, it should focus on concrete, visual pieces that provide practical information to be kept or displayed, like phone numbers, checklists, locations, websites, etc.

It is clear that basic information in existing plants is essential to any similar document. The essentials according to participants were:

- Maps and images that place the resident in proximity to the plants and get their attention.
- Basic info about alert systems.
- Basic instructions that people will be asked to follow – “What should I do if notified? Go...Listen...Follow”.
- Basic facts about pills, evacuation vs. sheltering in place, reception centres.

Other things to consider including in any communications to make them more meaningful:

- Information on actual scenarios that might unfold.
- An explanation of how and why an instance could occur where it is safer for people to remain at home than to evacuate.

This should not be viewed as supplementary information, in addition to the basics. It would appear that it is critical to ensuring people accept the idea that evacuation is likely a bad idea, especially in the absence of evacuation instructions. It is critical to note that many will not just evacuate according to authorities’ plans but would flee of their own accord.

An added level of detail may be more helpful at getting some readers’ attention, in contrast to a main message that might otherwise give them the impression that there is little to share with them or for them to know before an incident occurs. That impression is what some have taken from past iterations of documents (that more information will be shared in the event of an incident) and may be why many have tuned out and absorbed little to date. In a longer document, other items that might support this are:

- Some details about evacuation routes and how different schools will act.
- Detailed locations about the monitoring centres.
- Information on safety features and safeguards at the plants.
- Information on or reference to plans and procedures already in place.



- Information on who does what and who's responsible for what among the different players and authorities involved in nuclear safety and emergency management.
- Assurances that all levels of government and OPG are working together to mitigate risks and are prepared for a fully coordinated emergency response should it ever be needed.

When it comes to the message that people should not evacuate but be prepared to stay put in their homes and seal their windows and doors, if OPG wants to persuade people to seriously consider this, they need to do more to explain why that would and should happen and how it would benefit residents; otherwise, people's instinct and assumption is to flee.

Finally, people want to be reassured that all information will be shared with them as it is known, and honestly, by that authorities. They also want guarantees that whatever alerts and vehicles are used for instructions won't miss them – e.g. they want to know there's a number they can call if only to get a recorded message so that there's information on-demand not just information that would reach them if their phone is on. So they need to be told that TV channels or some in particular would be dedicated to this, that phone lines would likewise be dedicated to this, that this info will be hard to miss or available on demand if they sign up to receive or have the number to call.



V. Appendix A - Moderator's Guide

I. Warm-up/Introduction (5 minutes)

- *Thank participants for attending*
- *Lay out key ground rules, goals of the discussion*
- *Note video/audiotape, assure complete confidentiality*
- *Participants introduce themselves, will be asked where they live and how long they have lived in the community. If they lived elsewhere, probe where and how long in total they have lived in the area near the plants.*

II. General Discussion (10 minutes)

This section of the discussion will look for the context in which this is discussed.

- We will be discussing energy, electricity and the ways it's generated and then issues relating to nuclear power and nuclear safety. First off, what do you think about the various ways Ontario uses currently to generate electricity?
- Overall, how do you feel about the use of nuclear power to generate electricity? Would you say you are positive, negative, neutral - and why? (probe on reliability, safety not just environmental impact, cost)
- Has your opinion of nuclear power changed over time? Has it changed at all in recent years? If so, in what way and why? (Probe: Fukushima, other?).
- (If raised) How did events in Fukushima make you feel about your own proximity to a nuclear station? Did it increase your concern? Why/why not?
- Overall, how concerned are you living in close proximity to a nuclear station? Why? What considerations increase concern? Which ones decrease your concern?
- How well prepared do you feel we are locally should any kind of emergency or incident occur at one of our nuclear stations. Why do you say that? What drives your confidence? What undermines it?



III. Unaided Discussion of EP (30 minutes)

1. Emergency preparedness is the topic that I'd like to discuss with you today. These focus groups are part of routine outreach and preparedness efforts and what you tell me today will help inform the development of a booklet that is regularly distributed to households near nuclear facilities.
2. To begin, generally speaking, what do you understand about how an incident at a nuclear plant could occur and what would unfold?
 - a. Probe around what is top of mind in terms of what the risks are, what the events are and what the timeline for the chain of events is.
3. For any kind of emergency, whether it's a power outage or hazardous weather conditions, would you say that you and your household are prepared? Why do you say that?
 - a. What are examples of plans you've made for emergency preparedness?
4. Is there anything that people can or should do in advance to prepare for any kind of emergency or incident? What steps are you supposed to take? Is this something that you have done?
5. How about if an emergency occurs, what should people be expected to do? Do you have any sense of what the main steps would be or how events would unfold?
6. We're going to get into those steps next, but now that we've talked about it, how informed do you feel you are about what to do in the case of any kind of emergency or incident? What kinds of questions do you have, if any, about what you should do to prepare or on the off chance that anything did happen?
7. I'm going to ask now about incidents at a nuclear facility. First of all, do you know how close your residence is to the plants in the province? Is that something you're familiar with, in terms of distance?
 - a. Is distance from the plants important?
 - b. Is there a safe distance depending on incidents?
 - c. Does distance from the plants impact emergency response or what you might be asked to do in the event of an incident?



8. Different organizations have responsibility when it comes to a response to a nuclear incident. Do any of you know what the roles and responsibilities are when it comes to ensuring emergency plans and preparedness are in place off of the nuclear sites in communities? Which comes to mind?
9. Who is responsible for:
 - a. Emergency response?
 - b. Evacuation or sheltering?
 - c. Alerts and information?
10. Is this something that you've read up on or looked to outside experts for advice? What sources of information?
 - a. (Probe pamphlets, ads)
 - b. Have you received materials from governments? Which ones?
 - c. From anyone else?
 - d. What do you think of the materials you have - are they helpful, informative, clear, etc?
11. How about when it comes to a nuclear emergency, specifically? Have you received information or materials from government or other sources? If yes, can you describe them? Were they helpful – why or why not?
12. Is this material handy in your home? Is this something you reviewed recently? Have you reviewed this with family members, babysitters, etc
13. What did that information say most clearly? What do you know as a result - key take away, main messages?

IV. Aided Discussion (30 minutes)

(Moderator will discuss who is responsible either by reading the following aloud or presenting it on paper.)

Emergency Management Ontario, an agency of the provincial government, is responsible for the overall Provincial Nuclear Emergency Plan and public safety during nuclear emergencies. If a nuclear emergency were to take place the provincial government takes over the off-site response. It has responsibility for making decisions on the proper level of public action.



Regional and local municipalities all have emergency plans in place. But more importantly, it is their emergency responders, the police, fire and ambulance crews, with support from a host of other groups, who make sure the emergency plans are implemented properly.

The Durham Emergency Management Office (DEMO) works closely with Emergency Management Ontario and Ontario Power Generation (OPG) to ensure that nuclear emergency preparedness is in place for residents of Durham Region. With staff on duty 24 hours, 7 days a week, DEMO is ready to respond to any incident.

Under the Provincial Nuclear Emergency Response Plan, the Province is in control of off-site emergency operations, while Durham Region is responsible for local off-site activities to ensure public safety. The Province of Ontario and the Region of Durham have developed plans that include evacuation, transportation, and sheltering. Municipal plans and procedures address local issues related to a nuclear emergency.

Ontario Power Generation has developed plans to deal with emergencies that might occur within their stations.

1. What is your reaction to that plan? Do you have questions about it?
2. What do you think of the responsibilities? The role of Emergency Management Ontario. The role of the Durham Emergency Management Office.
3. Had you heard of those agencies before?
4. Is that different than what you had thought?
5. Is it different than what you would expect? Would you expect different agencies? Who?
6. Have you ever heard of Emergency Management Ontario? (Prompt: this is the Ontario government agency responsible for overseeing the management of any incident or emergency in the province. They work 24/7 and would oversee response working with regional and local emergency response forces, such as the local Emergency Management office, local and regional police, fire, etc.) How does it make you feel that there is a dedicated government agency in charge of managing emergencies? More



confident/less confident? Do you have any questions about this agency and how it works?

7. At this point the moderator will discuss various key elements or facts to emergency communications in this area. After reading each aloud, will ask:
 - *Were they aware of this fact?*
 - *Is this important to them?*
 - *Is this helpful to preparedness?*
 - *Reactions to that fact (probe around whether it establishes trust or reassurance that an effective plan is in place or an element of preparedness that raises concern or questions).*
 - *Do you have any questions about that information?*
 - a) *It's important to be prepared for 72 hours with a family survival kit for that time.*
 - b) *Families need an emergency plan and where to meet.*
 - c) *A Public alert system is established within 3 kilometres of nuclear facilities to alert residents to an incident using both sirens and an automated phone dialing system.*
 - d) *When the alert system sounds, residents are advised to listen to media reports and follow instructions from the province.*
 - e) *You may receive instructions to stay in place at your home or to evacuate. It's important to note that you shouldn't evacuate the area until or unless you are asked to.*
 - f) *You might receive instructions to take potassium iodide pills.*
 - g) *These are free of charge to anyone within 10 km of a plant, available at certain pharmacies.*
 - h) *You might be asked to report to a reception centre for monitoring.*
8. About monitoring centres, and you can let me know your reaction to the following: "If required, Reception Centres will be set up to monitor you to determine if you have come in contact with contaminated material. If you have, you and your vehicle will be decontaminated. Once decontamination is complete, you would be free to leave and go to an alternate location (family, friends, hotel, etc.) or to an evacuation centre (if you have nowhere else to go)."
 - a. Is that new information to you?
 - b. What is your reaction to that?
9. About the potassium iodide pills. Do you have these? Do you know where you can obtain them? Did you know they were dispensed free at pharmacies?



V. Testing of Existing Materials

For each of the following respondents will be asked to:

- *Identify if they have this at home.*
- *Have seen it before.*
- *Review the document and identify by circling new and helpful information.*
- *Identify information they find confusing, crossing out that language.*
- *Flag questions they have with question marks.*
- *They will be asked to describe what they like and dislike and why.*

This will be repeated for each:

1. Nuclear Public Safety Brochure from DEMO
<http://www.durham.ca/departments/demo/nuclearbrochure.pdf>
2. One page from Durham
<http://www.durham.ca/departments/demo/EmergencyInfo.pdf>
3. Please give each of these two documents an overall rating from 1-10 based on how helpful and informative it is 1-very helpful, 10- very unhelpful, and how reassuring it is.
4. OPG Brochure attached – Protecting you and your family
 - a. Additional question: Does the information about how the plants work interest you? That's available in the Watts Bar and the OPG documents
 - b. What does the information about CANDU's say most clearly to you?
 - c. Additional question: Does information about what happened in Chernobyl or Three Mile Island or Japan help? Would you like to see some info on Japan in here and what the differences are? Is that important to provide around what happened there and why it what makes Canadian plants different. Would you want that in a document like this?
5. Watts Bar 2013 Calendar attached
 - a. Additional question: Pages 8 discuss different types of alerts and emergencies – a range. What is your reaction to that information

After discussing each:

6. Which of these do you prefer? Why?



7. Which is most helpful? Why?
8. Is any unhelpful?
9. Which is more reassuring to you?
10. Which would be helpful to family?
11. What's the best way to communicate - vehicles - pamphlet/brochure, post card, calendar, videos?
12. Which are you likely to keep handy?

(Probe around whether the calendar is better than a permanent document. Whether something small or short in length is better than something longer, or too little.)

VI. Wrap Up (5 minutes)

- This is an opportunity to return to the question “How do you feel about the use of nuclear power to generate electricity?” and whether their views have changed on that. What information changed that?