



**Electrical
Safety
Authority**

Ontario Powerline Safety Strategy 2009-2013

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Utility Regulations Department

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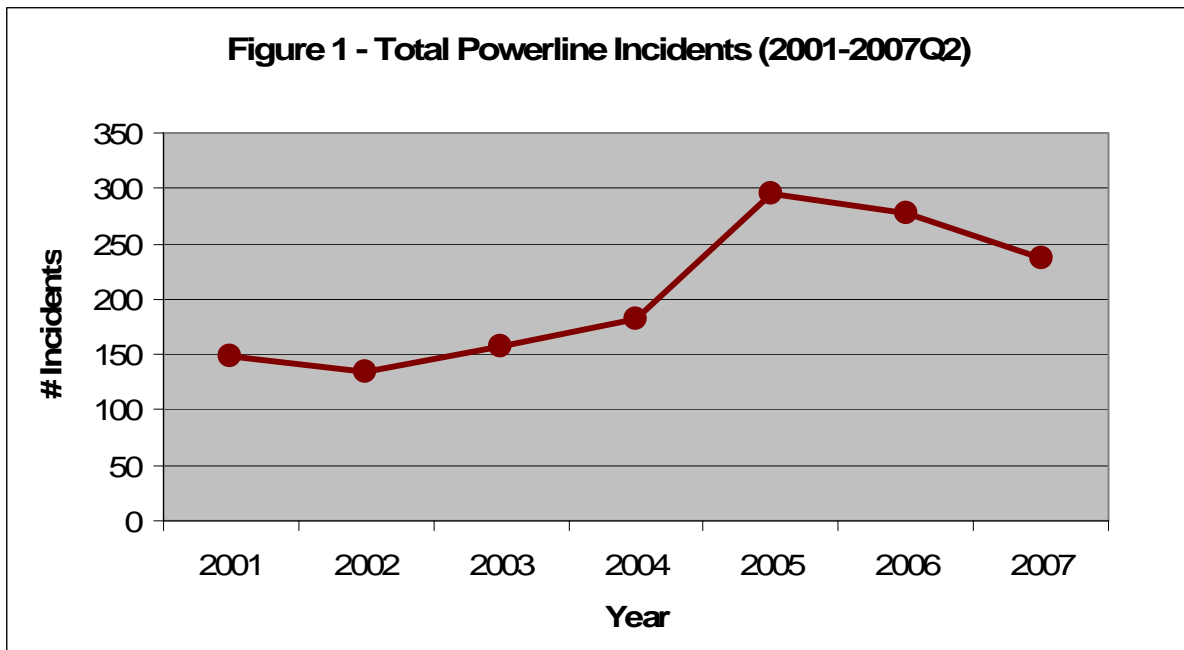
Waterloo North Hydro Inc.

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BACKGROUND

Incidents related to electrical powerlines in Ontario represent more than 50% of the total reported electrical occurrences (Electrical Safety Authority & Ministry of Labour). Powerline incidents are shown in Figure 1.



ESA's strategic plan FY2008 (SA8) included a plan to develop a strategy to reduce powerline related fatalities in the province every year.

Prior to establishing new initiatives in the strategy, it was important to examine existing data to identify the highest risk areas in order to focus initiatives over the next five (5) years.

The powerline data was compiled by ESA in the form of two (2) reports which documented the identification and recommendations of powerline high risk areas; "Ontario Powerline Incidents & High Risk Activities" dated January 22, 2008 and "Ontario Coroner's Recommendations Related to Powerline Fatalities" dated January 31, 2008.

It was identified between the years 2001 and first half of 2007 that the leading sectors for incidents involving powerline contacts are the Construction sector with 1,140 incidents, of which 14 were fatalities and the Public sector with 198 incidents, of which 9 were fatalities.

The high risk areas were identified by using risk assessment tools; which included ESA's Risk Ranking Tool and the United States Department of Energy's (DOE) Electrical Severity Measurement Tool. The results identified five (5) groups of activities which represent 83% of the overall powerline hazards, see Table 1.

Finally, a Powerline Safety Strategy Workgroup was formed with key stakeholders, and a workshop was conducted to help focus and develop the strategies.

These strategies along with anticipated resourcing and timelines are presented in this report.

Table 1 - Prioritized High Risk Activities		
<i>Activity</i>	<i>Equipment Involved/Contact Type</i>	<i>Sectors Involved</i>
Haulage – Materials/Waste	Dump Trucks, Cement Trucks, Garbage Trucks, Snow Trucks	Construction
Roof/Eavestrough/Exterior Work on Buildings/Structures	Ladders, Scaffolds, Man Lifts, Extension Poles, Conveyors	Public & Construction
Aerial Lifting	Cranes, Boom Trucks, Forklifts	Construction
Excavating/Landscaping	Backhoes, Bulldozers, Vac Truck, Shovels	Public & Construction
Tree Trimming/Cutting	Trimmers, Chainsaw, Ladders, Bucket Trucks	Public & Construction

APPROACH TO SAFETY

When developing strategies to reduce powerline hazards, the approach involves analyzing the most effective method of hazard reduction, as seen in Figure 2 and integrating with key partners as seen in Figure 3.

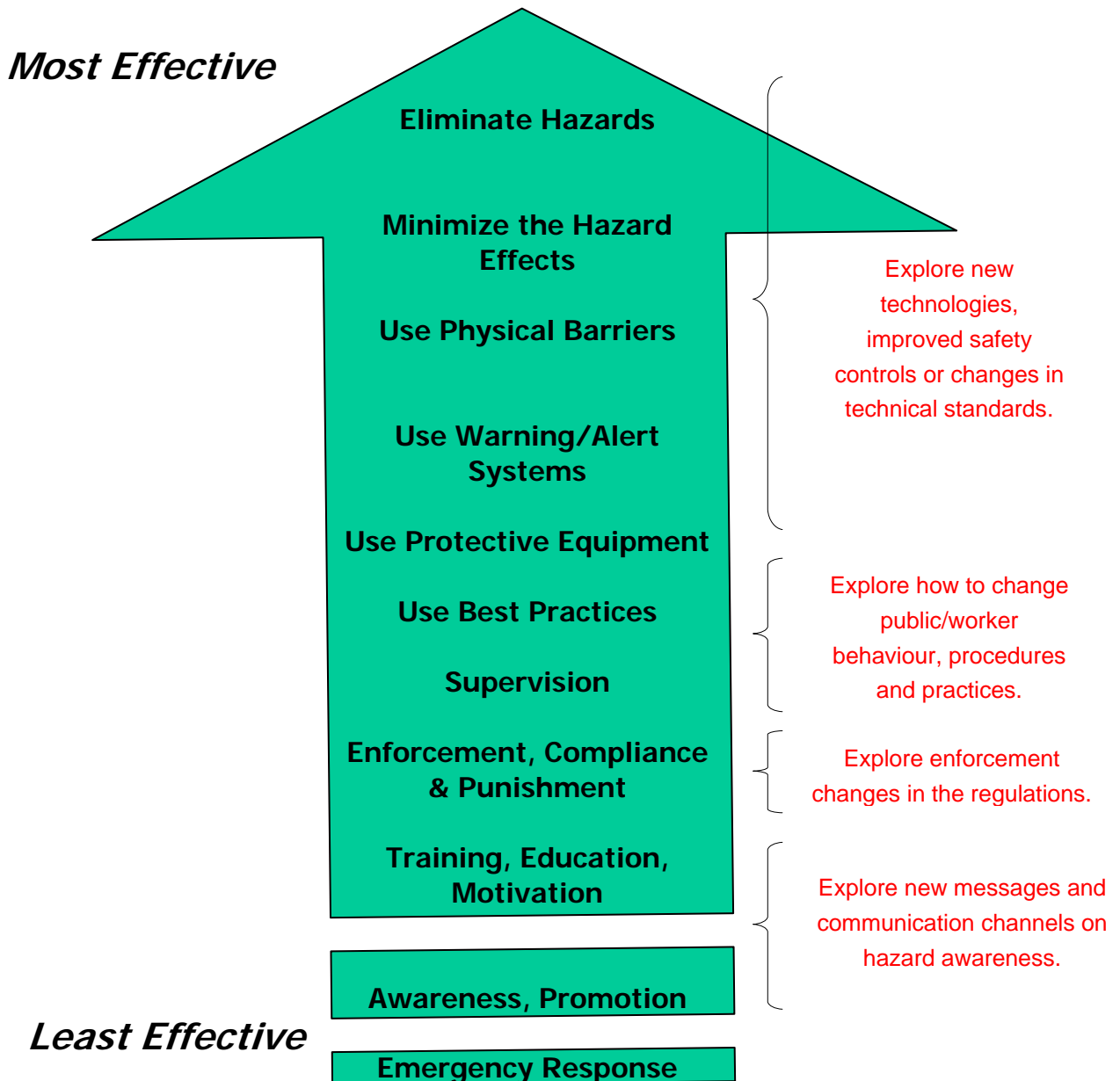
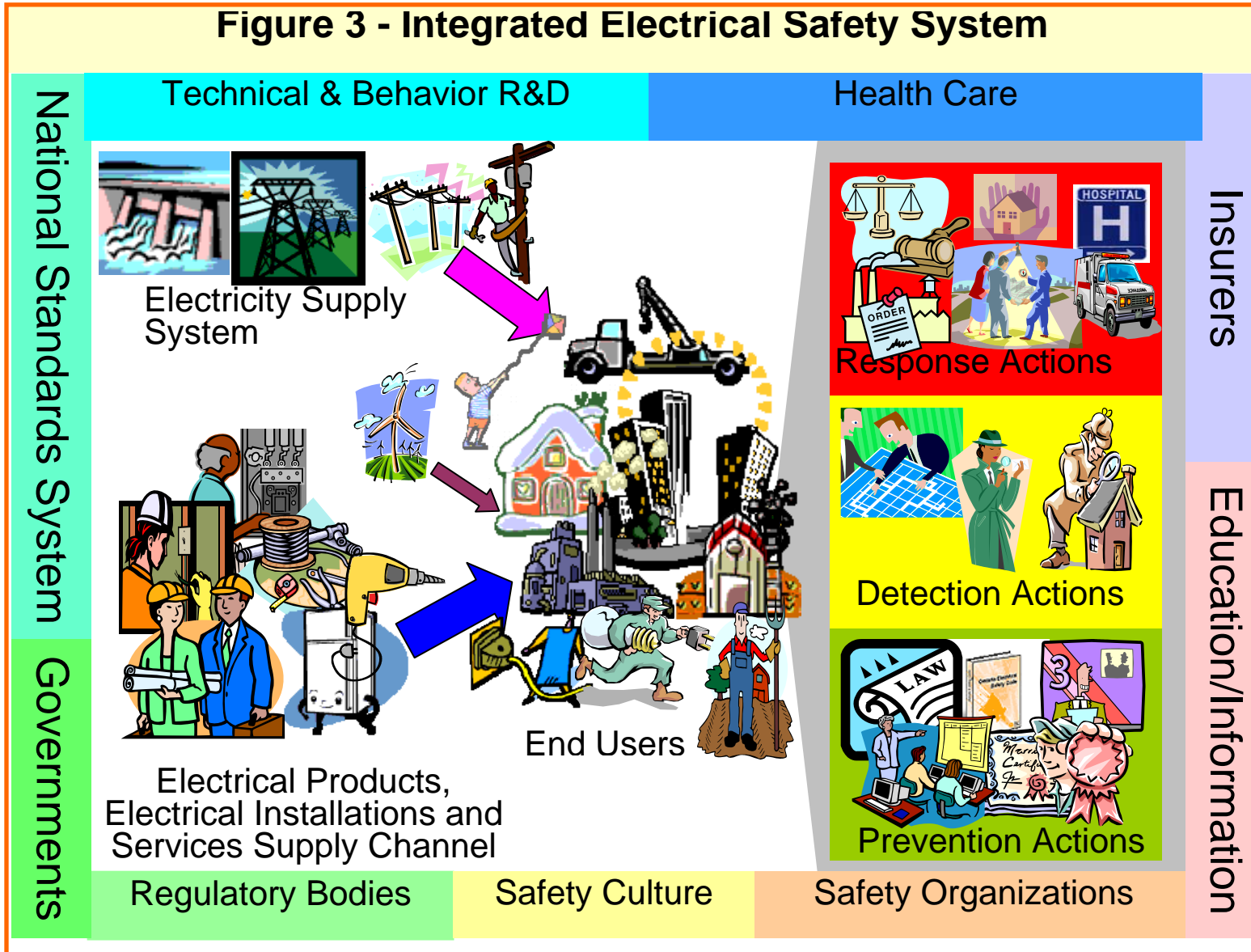


Figure 2 – Effective Hazard Reduction

Figure 3 - Integrated Electrical Safety System



STRATEGY TARGET

This Strategy aims to reduce the five (5) year rolling average of powerline related fatalities by 30%, from 0.34 (per million population) in 2007 to no more than 0.24 (per million population) in 2013.

Table 2 – Historical Powerline Related Fatalities								
	2001	2002	2003	2004	2005	2006	2007	Target 2013
Fatalities	10	3	6	2	6	5	2	
Fatality Rate (per 1million population)	0.84	0.25	0.49	0.16	0.48	0.39	0.16	
Fatality Rate (5 year rolling average per 1million population)	0.66	0.69	0.59	0.48	0.44	0.35	0.34	0.24

STRATEGY MANAGEMENT MODEL

A Strategy Model has been developed that incorporates the initiatives identified in the stakeholder workshop. The model is based on a model originally developed by the Australian Road Safety Authority.

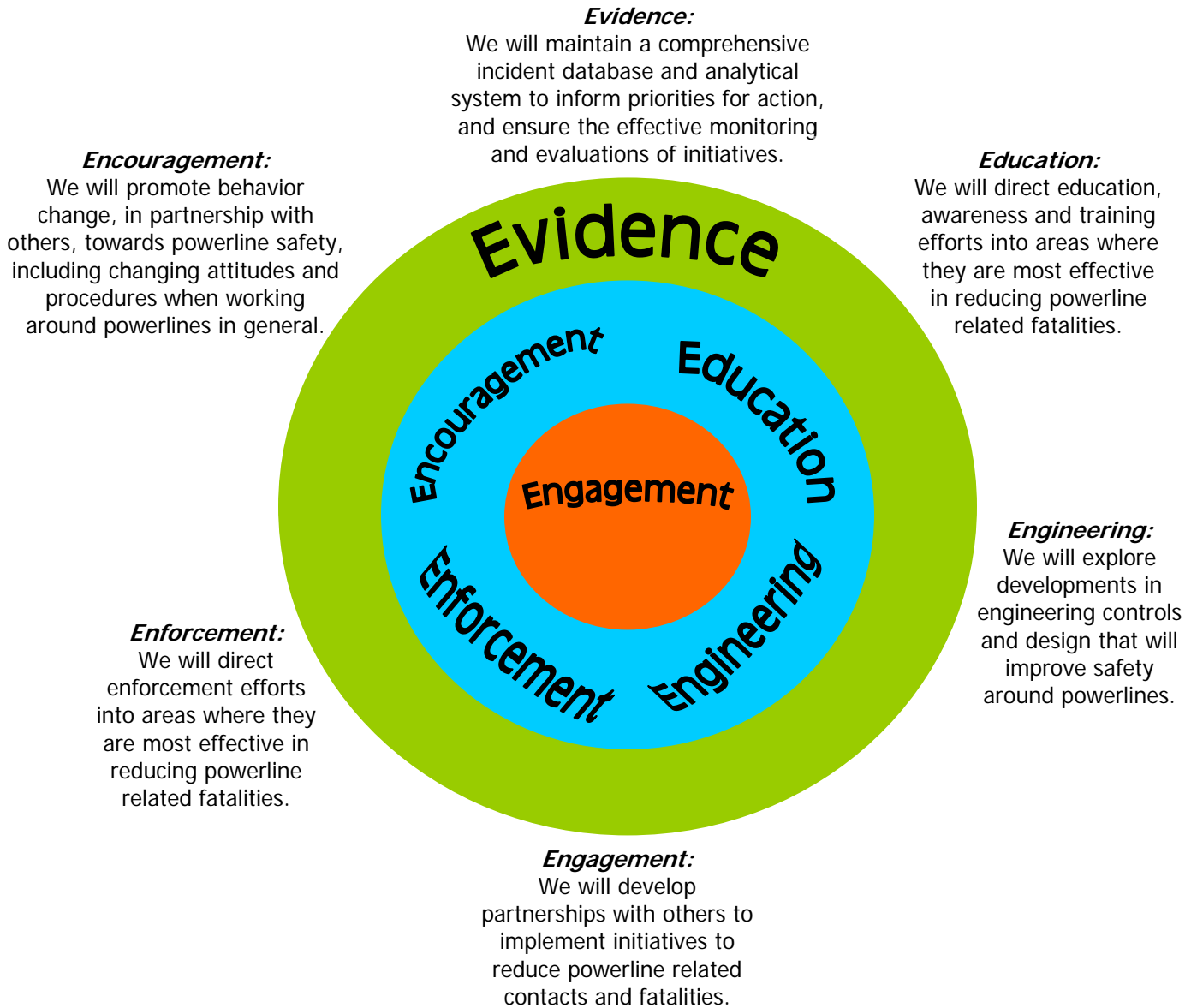


Figure 4 – Strategy Management Model

STRATEGIC OBJECTIVES

The strategy statements noted below are a distillation of ideas identified in the strategy workshop. These six (6) strategy statements summarize the overall direction of the strategy.

Engagement Strategy Statement

We will develop partnerships with others to implement initiatives to reduce powerline related contacts and fatalities.

Engagement is the core strategy of the model which involves the development of a shared and unified strategic approach to powerline safety with partners from many different sectors of the electrical distribution industry.

Objectives:

- Develop closer links with the following partners to develop a shared and unified approach to enhance the impact of powerline safety in Ontario.
 - Safety Organizations
 - CSAO

- MHSAO
- OFSA
- EUSA
- Insurers
 - WSIB
 - MEARIE Group
- Health Care Organizations
- Standards Development Organizations
 - CSA
- Municipalities
 - Planning Departments
 - Works Departments
 - Maintenance Departments
- Government & Regulatory Bodies
- Local Distribution Companies
- Trade Associations
 - Ontario Road Builders Association
 - Ontario Sewer & Watermain Construction Association
- Unions
 - International Union of Operating Engineers
- Education & Training Organizations
 - Ministry of Education
 - Colleges & Universities
 - Skilled Trade Organizations

Encouragement Strategy Statement

We will promote behavior change, in partnership with others, towards powerline safety, including changing attitudes and procedures when working around powerlines in general.

Encouragement is a strategy to promote changed behaviors, in partnership with others, towards powerline safety, including changing attitudes and work procedures when working around powerlines in general.

Objectives:

- Develop a “Best Practice” guide for high reach equipment operators and owners with particular emphasis on dump trucks, cement trucks, boom trucks and cranes.
- Develop a “Best Practice” guide for small contractors and businesses with particular emphasis on roofers, aluminum siding & eavestrough installers, sign installers, flag pole installers, chimney cleaners and antenna & satellite installers.
- Develop with the Ministry of Transport the inclusion or expansion of powerline hazard knowledge for driver licensing of large trucks.

- Partner with the municipalities and LDCs to create a powerline hazard information package and LDC involvement prior to a permit being issued for buildings, structures or signs.
- Partner with the LDC's to educate their local municipalities on recommended species and planting of trees under powerlines.

Education Strategy Statement

We will direct education, awareness and training efforts into areas where they are most effective in reducing powerline related fatalities.

Education is a strategy to direct awareness & training efforts into areas where they are most effective in reducing powerline fatalities in the construction and do-it-yourself public sectors.

Objectives:

- Continue current ESA campaigns, i.e. Look Up! Look Out!, Dump Trucks, Farmers.
- Partner with LDCs to deliver awareness to schools K-12.
- Investigate the use of a promotional figure or a “Face” of powerline safety.
- Educate the Do-It-Yourself public with awareness campaigns targeted at Home Depot, Rona, Lowes, lumber yards and tool rental shops.
- Develop a campaign for the small contractor or business with particular emphasis on roofers, aluminum siding & eavestrough installers, sign installers, flag pole installers, chimney cleaners and antenna & satellite installers.

- Develop impactful messages similar to what WSIB has done with their recent TV ads.
- Integrate into existing OHS training, the requirement for mandatory training of powerline hazards for the non-electrical construction trade targeting high-reach equipment operators, tree trimmers, roofers, aluminum siding & eavestrough installers, sign installers, flag pole installers, antenna & satellite installers.

Engineering Strategy Statement

We will explore developments in engineering controls and design that will improve safety around powerlines.

Engineering is a strategy to explore developments in engineering controls and design that will improve safety around powerlines with emphasis on the construction and do-it-yourself public sectors.

This strategy involves the review of current CSA equipment standards and the Canadian Electrical Code part III. Proposals for change will be managed through CSA's standards development process which is open and transparent.

Objectives:

- Review existing CSA standards to determine if current clearances around powerlines are appropriate.
- Explore the feasibility of insulated overhead powerlines.
- Research undergrounding vs. overhead powerlines in high-risk environments.
- Explore the feasibility (cost vs. nuisance) for the improved design of proximity sensors or warning devices used on vehicles with high-reach equipment.

- Research the use of remote control boxes for vehicles that are equipped with high reach equipment.

Enforcement Strategy Statement

We will direct enforcement efforts into areas where they are most effective in reducing powerline related fatalities.

Enforcement is a strategy to direct enforcement efforts into areas where they are most effective in reducing fatalities in the construction and do-it-yourself public sectors.

Objectives:

- Explore the introduction of mandatory licensing for all operators of vehicles with high-reach equipment, currently only large cranes require license.
- Review the use of heavy fines and penalties for both the public and workers for contacting powerlines.
- Explore changes in standards and regulations to have mandatory overhead locates much like how underground locates are performed.
- Explore the changes in standards and legislation for communities with zero set-back, to have mandatory undergrounding of powerlines.
- Develop a website or newsletter to publish infringements, convictions and details of serious powerline related incidents.

Evidence Strategy Statement

We will maintain a comprehensive incident database and analytical system to inform priorities for action, and ensure the effective monitoring and evaluations of initiatives.

Evidence is a strategy to help support any adjustments in initiatives by monitoring & evaluating ongoing initiatives.

Objectives:

- The monitoring and analysis of incidents shall be ongoing with update/trending reports issued on a quarterly basis.
- Continue to monitor and benchmark against other jurisdictions related to powerlines.
- Performance indicators will continue to be developed and published to help monitor the success of the powerline safety initiated with this strategy. These will be produced throughout the life of this strategy and will be enhanced to provide more comprehensive data on powerline safety performance.
- Develop an enhanced web-based powerline incident reporting tool.

SUMMARY & NEXT STEPS

This strategy which targets a 30% reduction in powerline related fatalities over the next five (5) years, will be an important step towards the ultimate ESA long-term target of zero (0) powerline related fatalities.

The plan is built around the core strategy of Engagement, where collaborative partnerships are key with stakeholders. These closer links will be required for the main set of strategies to be successful:

- *Education* – strategy built around awareness campaigns and worker training.
- Encouragement – strategy to promote changes in public/worker behaviour, procedures and practices.
- Engineering – strategy to explore new technologies, improved safety controls or changes in technical standards.
- Enforcement – strategy to promote compliance through punishments.

The performance of the plan is monitored by a strategy called Evidence. This is a rigorous component that will ensure that the initiatives will be evaluated on an ongoing basis to help understand what is working (and what is not working) and what needs to be changed or enhanced to meet the target.

The next steps would involve resourcing and coordination of efforts. All stakeholders will need to be actively involved in finding funds to make this strategy happen. Possible sources of funding would be from those who benefit from this strategy.

If we are to share the benefits, we need to share the costs.

FISCAL YEAR ROLLOUT PLANS

This strategy is very comprehensive and yet attainable. As with any strategy of this size that is to be implemented over a five (5) year period, early planning is very important.

The following tables list the objectives and priority action steps to be accomplished for each fiscal year. The last table shows the five (5) year timelines and budget for the proposed strategy plan.

Powerline Safety Strategy Plan FY2009

30% Reduction in Powerline Related Fatalities

Target
Strategies

Objectives

Action
Plans

Engagement	Encouragement	Education	Engineering	Enforcement	Evidence
<ul style="list-style-type: none"> Develop closer links & shared approach with industry partners (E101) 	<ul style="list-style-type: none"> Partner with Municipalities on info kit when issuing permits (E204) Partner LDCs & Municipalities on tree species and planting under overhead powerlines (E205) Partner LDCs to develop info kit for known hazardous areas for DIY homeowners (E206) 	<ul style="list-style-type: none"> ESA's Dump Truck & Farm campaign (E301) Investigate the use of a "Face" for powerline safety (E303) Partner with Home Improvement outlets and HGTV to target DIY homeowners (E304) Develop awareness campaign for small contractors & business (E305) 	<ul style="list-style-type: none"> Research Overhead vs. Underground (E403) Explore warning sensors on vehicles with high reach equipment (E404) Research remote controls for vehicles with high reach equipment (E405) 	<ul style="list-style-type: none"> Develop changes in regulations on fines & penalties for contact of powerlines (E502) Explore changes to regulation for requirement of overhead locates (E503) 	<ul style="list-style-type: none"> Committed to issuing quarterly update & trending reports on powerline incidents (E601) Monitor and benchmark against other jurisdictions (E602) Develop performance indicators for monitoring success (E603) Develop web-based incident reporting tool (E604)
<p>E101:</p> <ul style="list-style-type: none"> Identify and contact key industry partners to organize steering committees. Continue to explore the possibility of shared funding of initiatives with the partners. 	<p>E204:</p> <ul style="list-style-type: none"> Identify ways to contact municipalities Contact Municipal Affairs & Housing Contact Association of Municipalities Attend AMO conferences Develop material for AMO conferences to engage municipalities Develop material to be handed out by the municipalities <p>E205:</p> <ul style="list-style-type: none"> Identify key tree experts to help develop practices Engage LDCs & municipalities to develop a practice guideline. Develop plan to help LDCs distribute to their local municipalities <p>E206:</p> <ul style="list-style-type: none"> Identify & develop with LDCs key messages & practices to DIY homeowners who perform: <ul style="list-style-type: none"> Tree Trimming/cutting Clean chimney/eavestrough Exterior painting of home Install antenna/flag poles Develop safe practice & guidelines Work with LDCs to develop communication channels for such customers. 	<p>E301:</p> <ul style="list-style-type: none"> Continue with ESA's Dump Truck & Farm campaign while exploring other sectors with similar campaigns. <p>E303:</p> <ul style="list-style-type: none"> Identify possible options (celebrity, ESA person, animated character) Identify if this should be only Powerline safety Face or Electrical safety Face. <p>E304:</p> <ul style="list-style-type: none"> Engage home improvement & media outlets: <ul style="list-style-type: none"> Home Depot Rona Lowes Lumber Yards Tool Rental Shops HGTV Develop plan for type of messages and material. <p>E305:</p> <ul style="list-style-type: none"> Target small contractors: <ul style="list-style-type: none"> Roofing Aluminum siding/eavestrough Painters Antenna, Satellite & Flag Pole Installers Develop similar to the Dump Truck campaign. 	<p>E403:</p> <ul style="list-style-type: none"> Identify if studies in this area have already been done. Explore the possibility of funding a study. <p>E404:</p> <ul style="list-style-type: none"> Identify if studies in this area have already been done. Explore the possibility of funding a study. <p>E405:</p> <ul style="list-style-type: none"> Identify if studies in this area have already been done. Explore the possibility of funding a study. 	<p>E502:</p> <ul style="list-style-type: none"> Partner with TSSA to understand their experiences and how it all works. Identify the required government approvals to implement administrative fees or fines based on investigation work or penalty assessment. Need to draw out how this would overlap with the Ministry of Labour? Need to draw out how this would overlap with costs recovered by LDCs for repairs? <p>E503:</p> <ul style="list-style-type: none"> Partner with ORCGA if something they can expand on. Research if this is done in any other jurisdiction? Monitor & influence legislation revisions in the construction sector (OHS sections 188-189). 	<p>E601:</p> <ul style="list-style-type: none"> Enhance partnership with MOL for incident data sharing. Develop plan on how & who the reports will be sent to. <p>E602:</p> <ul style="list-style-type: none"> Develop partnership with other jurisdictions on sharing of powerline incident data. <p>E603:</p> <ul style="list-style-type: none"> Develop and evaluate the use of different performance monitors. <p>E604:</p> <ul style="list-style-type: none"> Develop web-based incident reporting tool. Engage LDCs on reporting requirements Develop training program to be delivered to the LDCs.

Powerline Safety Strategy Plan FY2010

30% Reduction in Powerline Related Fatalities

Target

Strategies

Objectives

Action Plans

Engagement	Encouragement	Education	Engineering	Enforcement	Evidence
<ul style="list-style-type: none"> Develop closer links & shared approach with industry partners (E101) 	<ul style="list-style-type: none"> Develop best practice guide for small contractors (E202) Partner with municipalities on info kit when issuing permits (E204) Partner LDCs & Municipalities on tree species and planting under overhead powerlines (E205) 	<ul style="list-style-type: none"> ESA's Dump Truck & Farm campaign (E301) Partner with Home Improvement outlets and HGTV to target DIY homeowners (E304) Develop impactful messages similar to WSIB (E306) 	<ul style="list-style-type: none"> Review National Standards for powerline clearances (E401) Explore the feasibility of insulated overhead powerlines (E402) 	<ul style="list-style-type: none"> Develop changes in regulations on fines & penalties for contact of powerlines (E502) Explore legislation for requirement of underground powerlines for zero set-back locations (E504) Expand website/bulletins to publish incidents & convictions (E505) 	<ul style="list-style-type: none"> Committed to issuing quarterly update & trending reports on powerline incidents (E601) Monitor and benchmark against other jurisdictions (E602) Develop performance indicators for monitoring success (E603) Develop web-based incident reporting tool (E604)
<p>E101:</p> <ul style="list-style-type: none"> Continue (see FY2009) 	<p>E202:</p> <ul style="list-style-type: none"> Target small contractors: <ul style="list-style-type: none"> Roofing Aluminum siding/eavestrough Painters Antenna, Satellite & Flag Pole Installers Develop safe work practice guide in cooperation with the small contractors. Explore opportunities to distribute best practice guide & training through industry leaders. <p>E204:</p> <ul style="list-style-type: none"> Continue (see FY2009) <p>E205:</p> <ul style="list-style-type: none"> Continue (see FY2009) 	<p>E301:</p> <ul style="list-style-type: none"> Continue with ESA's Dump Truck & Farm campaign while exploring other sectors with similar campaigns. <p>E304:</p> <ul style="list-style-type: none"> Continue (see FY2009) <p>E306:</p> <ul style="list-style-type: none"> Identify possible media outlets Identify partners for possible shared funding. Develop plan & budget Develop type of message (political sensitivity?) 	<p>E401:</p> <ul style="list-style-type: none"> Identify current LDC standards for powerline clearances & compare to the national standard. Identify powerline clearance stands from other jurisdictions & compare. <p>E402:</p> <ul style="list-style-type: none"> Identify if studies in this area have already been done. Explore the possibility of funding a study. 	<p>E502:</p> <ul style="list-style-type: none"> Continue to develop (see FY2009) <p>E504:</p> <ul style="list-style-type: none"> Explore whether this will be supported by LDCs and municipalities. <p>E505:</p> <ul style="list-style-type: none"> Currently underway Need to develop a policy on what & how information will be published. 	<p>E601:</p> <ul style="list-style-type: none"> Continue (see FY2009) <p>E602:</p> <ul style="list-style-type: none"> Continue (see FY2009) <p>E603:</p> <ul style="list-style-type: none"> Continue (see FY2009) <p>E604:</p> <ul style="list-style-type: none"> Continue (see FY2009)

Powerline Safety Strategy Plan FY2011

30% Reduction in Powerline Related Fatalities

Target

Strategies

Objectives

Engagement	Encouragement	Education	Engineering	Enforcement	Evidence
<ul style="list-style-type: none"> Develop closer links & shared approach with industry partners (E101) 	<ul style="list-style-type: none"> Develop best practice guide for owners and operators of vehicles with high reach equipment (E201) Partner with the MTO to expand knowledge of powerline hazards in driver licensing (E203) 	<ul style="list-style-type: none"> ESA's Dump Truck & Farm campaign (E301) Partner with LDCs to deliver awareness to K-12 schools (E302) Partner with Home Improvement outlets and HGTV to target DIY homeowners (E304) Continue awareness campaign for small contractors & business (E305) 	<ul style="list-style-type: none"> Explore warning sensors on vehicles with high reach equipment (E404) Research remote controls for vehicles with high reach equipment (E405) 	<ul style="list-style-type: none"> Develop changes in regulations on fines & penalties for contact of powerlines (E502) 	<ul style="list-style-type: none"> Committed to issuing quarterly update & trending reports on powerline incidents (E601) Monitor and benchmark against other jurisdictions (E602)
<p>E101:</p> <ul style="list-style-type: none"> Continue (see FY2009) 	<p>E201:</p> <ul style="list-style-type: none"> Target owners/operators of vehicles: <ul style="list-style-type: none"> Dump Trucks Cement/Concrete Pump Trucks Boom Trucks Cranes Identify & contact manufactures, distributors of vehicles with high reach equipment to engage in discussions. Develop safe work practice guide in cooperation with owners/operators & manufacturers. Explore opportunities to distribute guide & training through industry leaders such as CSA. <p>E203:</p> <ul style="list-style-type: none"> Target owners/operators of vehicles: <ul style="list-style-type: none"> Dump Trucks Cement/Concrete Pump Trucks Boom Trucks Vehicles with Cranes Bucket Trucks Research requirements for licensing of drivers. Identify other government agencies that may be or need to be involved (i.e. Ministry of Training & Colleges) 	<p>E301:</p> <ul style="list-style-type: none"> Continue with ESA's Dump Truck & Farm campaign while exploring other sectors with similar campaigns. <p>E302:</p> <ul style="list-style-type: none"> Create a working group to develop information kit. Develop training material Identify possible presenters of material. Develop handout material to be included in presentations. Develop plan to keep material current and recurring. Develop multiple phase of the Kit – Primary & Secondary Integrate with WSIB initiative on targeting students who are about to enter the workforce involving high risk activities. Explore alternate delivery channels – i.e. YouTube. <p>E304:</p> <ul style="list-style-type: none"> Continue (see FY2009) <p>E305:</p> <ul style="list-style-type: none"> Continue ESA's Small Contractor's campaign. 	<p>E404:</p> <ul style="list-style-type: none"> Re-explore warning sensors on vehicles with high reach equipment (see FY2009) <p>E405:</p> <ul style="list-style-type: none"> Re-explore remote controls for vehicles with high reach equipment (see FY2009) 	<p>E502:</p> <ul style="list-style-type: none"> Continue to develop (see FY2009) 	<p>E601:</p> <ul style="list-style-type: none"> Continue (see FY2009) <p>E602:</p> <ul style="list-style-type: none"> Continue (see FY2009)

Action Plans

Powerline Safety Strategy Plan FY2012

30% Reduction in Powerline Related Fatalities

Target	30% Reduction in Powerline Related Fatalities					
Strategies	Engagement	Encouragement	Education	Engineering	Enforcement	Evidence
Objectives	<ul style="list-style-type: none"> Develop closer links & shared approach with industry partners (E101) 	<ul style="list-style-type: none"> Partner with the MTO to expand knowledge of powerline hazards in driver licensing (E203) 	<ul style="list-style-type: none"> ESA's Dump Truck & Farm campaign (E301) Partner with LDCs to deliver awareness to K-12 schools (E302) Develop impactful messages similar to WSIB (E306) Mandatory training for non-electrical construction trades (E307) 	<ul style="list-style-type: none"> Explore the feasibility of insulated overhead powerlines (E402) 	<ul style="list-style-type: none"> Mandatory licensing of operators of vehicles with high reach equipment (E501) Develop changes in regulations on fines & penalties for contact of powerlines (E502) 	<ul style="list-style-type: none"> Committed to issuing quarterly update & trending reports on powerline incidents (E601) Monitor and benchmark against other jurisdictions (E602)
Action Plans	<p>E101:</p> <ul style="list-style-type: none"> Continue (see FY2009) 	<p>E203:</p> <ul style="list-style-type: none"> Continue (see FY2011) 	<p>E301:</p> <ul style="list-style-type: none"> Continue with ESA's Dump Truck & Farm campaign while exploring other sectors with similar campaigns. <p>E302:</p> <ul style="list-style-type: none"> Continue (see FY 2011) <p>E306:</p> <ul style="list-style-type: none"> Continue (see FY2010) <p>E307:</p> <ul style="list-style-type: none"> Identify what trades to target Identify type of training (maybe different for each trade) Identify who will develop the training material. Identify how to integrate into existing OHS training. Identify who will deliver the training. Determine when refresher or renewal training required. 	<p>E402:</p> <ul style="list-style-type: none"> Re-explore the feasibility of insulated overhead powerlines (see FY2010) 	<p>E501:</p> <ul style="list-style-type: none"> Target owners/operators of vehicles: <ul style="list-style-type: none"> Dump Trucks Cement/Concrete Pump Trucks Boom Trucks Vehicles with Cranes Bucket Trucks Research requirements for licensing. Identify other government agencies that may be or need to be involved. <p>E502:</p> <ul style="list-style-type: none"> Continue to develop (see FY2009) 	<p>E601:</p> <ul style="list-style-type: none"> Continue (see FY2009) <p>E602:</p> <ul style="list-style-type: none"> Continue (see FY2009)

Powerline Safety Strategy Plan FY2013

30% Reduction in Powerline Related Fatalities

Target

Strategies

Objectives

Engagement	Encouragement	Education	Engineering	Enforcement	Evidence
<ul style="list-style-type: none"> Develop closer links & shared approach with industry partners (E101) 	<ul style="list-style-type: none"> Partner with the MTO to expand knowledge of powerline hazards in driver licensing (E203) 	<ul style="list-style-type: none"> ESA's Dump Truck & Farm campaign (E301) Partner with LDCs to deliver awareness to K-12 schools (E302) Continue awareness campaign for small contractors & business (E305) Mandatory training for non-electrical construction trades (E307) 	<ul style="list-style-type: none"> Explore warning sensors on vehicles with high reach equipment (E404) Research remote controls for vehicles with high reach equipment (E405) 	<ul style="list-style-type: none"> Mandatory licensing of operators of vehicles with high reach equipment (E501) 	<ul style="list-style-type: none"> Committed to issuing quarterly update & trending reports on powerline incidents (E601) Monitor and benchmark against other jurisdictions (E602)
<p>E101:</p> <ul style="list-style-type: none"> Continue (see FY2009) 	<p>E203:</p> <ul style="list-style-type: none"> Continue (see FY2011) 	<p>E301:</p> <ul style="list-style-type: none"> Continue with ESA's Dump Truck & Farm campaign while exploring other sectors with similar campaigns. <p>E302:</p> <ul style="list-style-type: none"> Continue (see FY 2011) <p>E305:</p> <ul style="list-style-type: none"> Continue ESA's Small Contractor's campaign. <p>E307:</p> <ul style="list-style-type: none"> Continue (see FY2012) 	<p>E404:</p> <ul style="list-style-type: none"> Re-explore warning sensors on vehicles with high reach equipment (see FY2009) <p>E405:</p> <ul style="list-style-type: none"> Re-explore remote controls for vehicles with high reach equipment (see FY2009) 	<p>E501:</p> <ul style="list-style-type: none"> Continue (see FY2012) 	<p>E601:</p> <ul style="list-style-type: none"> Continue (see FY2009) <p>E602:</p> <ul style="list-style-type: none"> Continue (see FY2009)

Action
Plans

Strategy Timeline & Budgets FY2009-FY2013																					
Strategy	Objectives	FY2009				FY2010				FY2011				FY2012				FY2013			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Engagement (E1)	E101	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Encouragement (E2)	E201									20	20	20									
	E202					20	20	20													
	E203											20	20	20	20	20	20	20	20	20	20
	E204	7	7	7	7	7	7	7	7												
	E205	7	7	7	7	7	7	7	7												
	E206			10	10																
Education (E3)	E301	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
	E302									10	10	10	10	10	10	10	10	10	10	10	10
	E303		7	7	7																
	E304			10	10	10	10	10	10	10	10	10	10								
	E305	40	40	40	40	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
	E306					65	65	65	65					65	65	65	65				
	E307													25	25	25	25	25	25	25	25
Engineering (E4)	E401					5	5														
	E402						10	10						10	10						
	E403			10	10																
	E404			5	5							5	5							5	5
	E405			5	5							5	5							5	5
Enforcement (E5)	E501													25	25	25	25	25	25	25	25
	E502			15	15	15	15	15	15	15	15	15	15	15	15						
	E503			5	5																
	E504					20	20	20													
	E505					5	5														
Evidence (E6)	E601	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	E602				0				0				0				0				0
	E603	0	0	0	0	0	0	0	0												
	E604	25	25	25	25	15	15	15	15												
Totals (\$ 000's)		\$537				\$796				\$420				\$790				\$510			