

Harm Reduction Strategy 2.0

April 2015 – March 2020



Vision:

An Ontario where people can live, work and play safe from electrical harm.

Mission:

To improve electrical safety for the well-being of the people of Ontario.

Mandate:

To promote and undertake activities which enhance public electrical safety including training, inspection, authorization, investigation, registration, enforcement, audit, and other regulatory and non-regulatory public electric safety quality assurance services.

- ESA Objects of Corporation, 1999

Values:

SAFETY

We can and will make Ontario a safer place for all citizens.

ACCOUNTABILITY

We hold ourselves to the highest standards of responsibility and ethical behaviour.

LEADERSHIP

We will always strive to do better, challenge assumptions, and welcome new ideas.

COLLABORATION

We work best when we work together.

INTEGRITY AND TRUST

We will take the high road.

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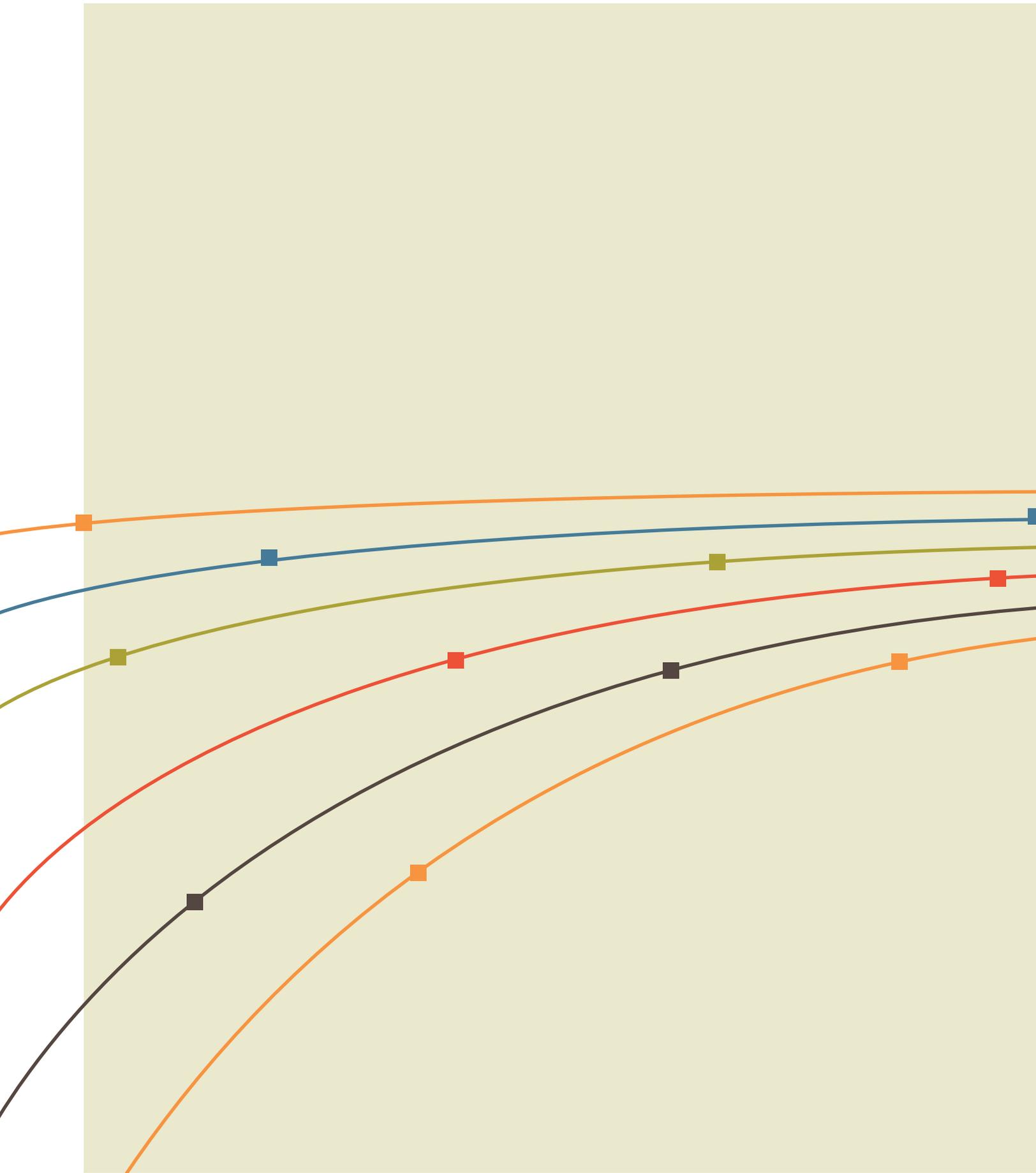
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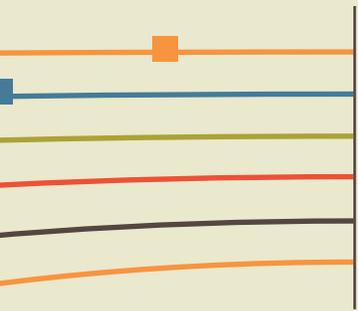
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INTRODUCTION

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Role

The Electrical Safety Authority (ESA) is mandated by the Government of Ontario to enhance public electrical safety in the province. We are both a safety regulator and advocate.

Our powers and duties derive from The Electricity Act and The Safety and Consumer Statutes Administration Act including responsibility for four regulations:

- The Ontario Electrical Safety Code (Regulation 164/99) which defines how electrical work will be done;
- Licensing of Electrical Contractors and Master Electricians (Regulation 570/05) which sets requirements for those doing electrical work;
- Electrical Distribution Safety (Regulation 22/04) which defines safety accountabilities for Ontario's Licensed Distribution Companies (LDCs); and
- Electrical Product Safety (Regulation 438/07) which addresses approval of electrical products before their sale, and response to unsafe industrial and commercial products in the marketplace.

ESA's primary activities are: identifying and targeting leading causes of electrical safety risk; ensuring compliance with regulations; promoting awareness, education and training; and collaborating with stakeholders to improve the state of electrical safety in Ontario.

ESA is a private, not-for-profit corporation headquartered in Mississauga, Ontario with staff deployed across the province.

Relationship to Government

ESA is an administrative authority of the Government of Ontario. We are mandated to administer its designated legislation and regulation with the purpose of public safety, consumer protection, and advancing the principle of a fair, safe and informed marketplace that supports a competitive economy.

The Ministry of Government and Consumer Services retains responsibility for legislation and regulations. ESA is responsible for ensuring that the legislation and regulations are implemented and enforced.

The roles and obligations of ESA and the Ministry are detailed in an Administrative Agreement.

Governance

ESA is governed by a 12-member Board of Directors which is responsible for corporate governance, regulatory oversight, and guiding the corporate strategy.

The Board's membership reflects the public, electricity distribution, electrical contracting, engineering, manufacturing and other stakeholder sectors.

ESA's Board and management are committed to progressive, leading-edge corporate governance and regulatory oversight practices.

INTRODUCTION

Strategic Plan, Business Plan, & Annual Report

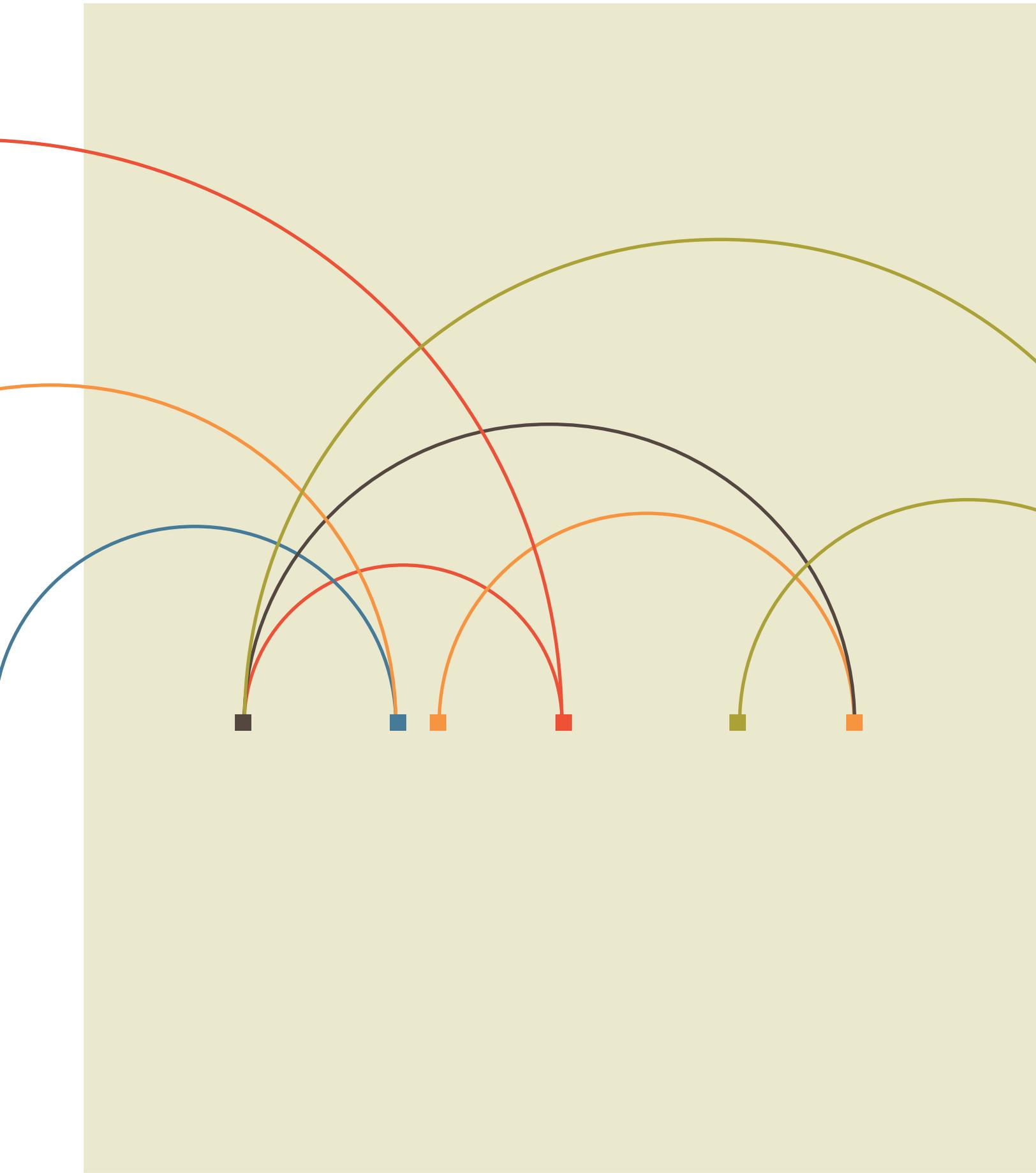
ESA's Strategic Plan, Business Plan and Annual Report are its three major public reporting products.

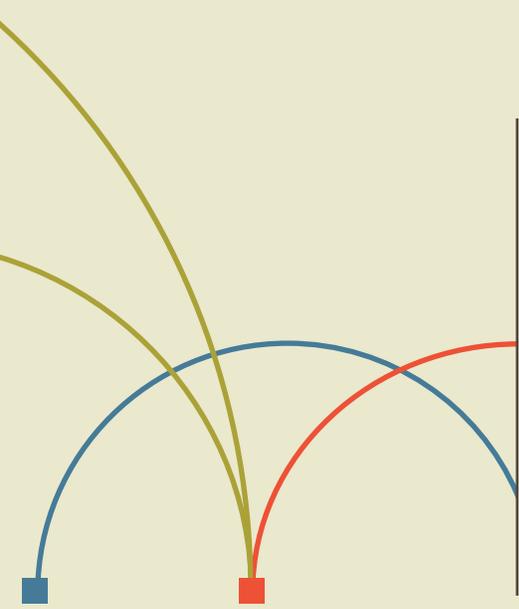
This Strategic Plan (The Harm Reduction Strategy 2.0) defines the major corporate goals for five years and the leading strategies that will be used to address them. It also includes the measures that ESA will use across the period to track progress.

The Strategic Plan is supported by a Business Plan that defines the various activities that will be implemented to support each goal.

The Business Plan also addresses the essential corporate capabilities that are needed to fulfill everyday business needs as well as the goals of the strategic plan. It includes a five-year final plan and forecast for the year ahead. The Business Plan is up-dated annually as required to reflect progress made and new insights generated.

ESA's Annual Report describes progress made against the commitments of the Strategic Plan and Business Plan.



An abstract graphic on the left side of the page. It features a vertical black line. To its left, there are several curved lines in blue, red, and olive green. Two small squares, one blue and one red, are positioned at the base of the curves. The curves appear to be arcs of a circle or ellipse, with some overlapping each other.

STRATEGIC PLAN 2015-2020

STRATEGIC PLAN 2015-2020

Approach

The Electrical Safety Authority will use its insights, expertise and passion for safety to achieve our vision of an Ontario where people can live, work and play safe from electrical harm.

We recognize that achieving electrical safety requires both safe environments and safe behaviours.

ESA will act directly where we can make meaningful positive impact on safety. Where we need others to act, we will be a catalyst to encourage them to do so. And we will act as part of Ontario's safety system.

We will foster among the public and industry accountability for their own electrical safety and those they impact.

We will apply risk-based approaches; that is, applying greatest effort to areas of greatest potential harm. To do that we will have a thorough understanding of the causes of electrical injuries, deaths and fires in Ontario.

We will judiciously apply the scope of tools and resources at our disposal – training, inspection, authorization, investigation, registration, enforcement, audit, and other services – to make maximum positive impact on safety.

We will use regulation where needed and where the benefit of regulation outweighs the cost.

We will earn and retain the trust and confidence of our stakeholders.

We will be fiscally responsible.

We will act with the public benefit foremost in mind.

Strategic Goals

ESA's will deliver public value by generating a meaningful benefit to the people of Ontario, while using our powers and resources in effective and efficient ways.

To ensure we deliver that public value, ESA has established three strategic goals for the Harm Reduction Strategy 2.0:

SAFETY

ESA will seek to improve the state of electrical safety in Ontario by accelerating the reduction in the combined rate of electrical fatalities and critical injuries over the next five years.

COMPLIANCE

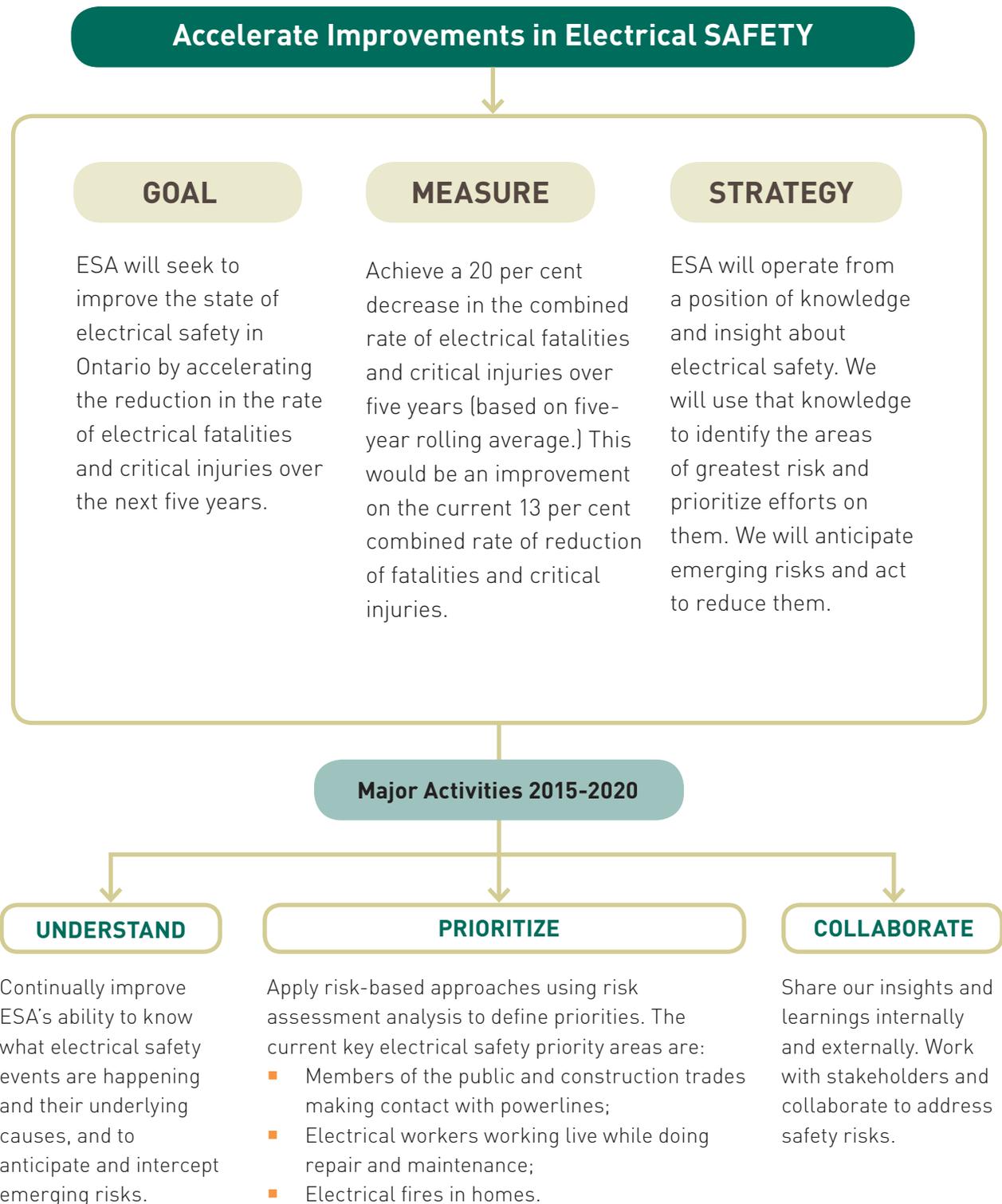
ESA will seek to increase the rate of compliance with electrical safety regulations over the next five years, where required.

PUBLIC ACCOUNTABILITY

ESA will ensure stakeholders recognize us as an effective, publicly accountable organization.

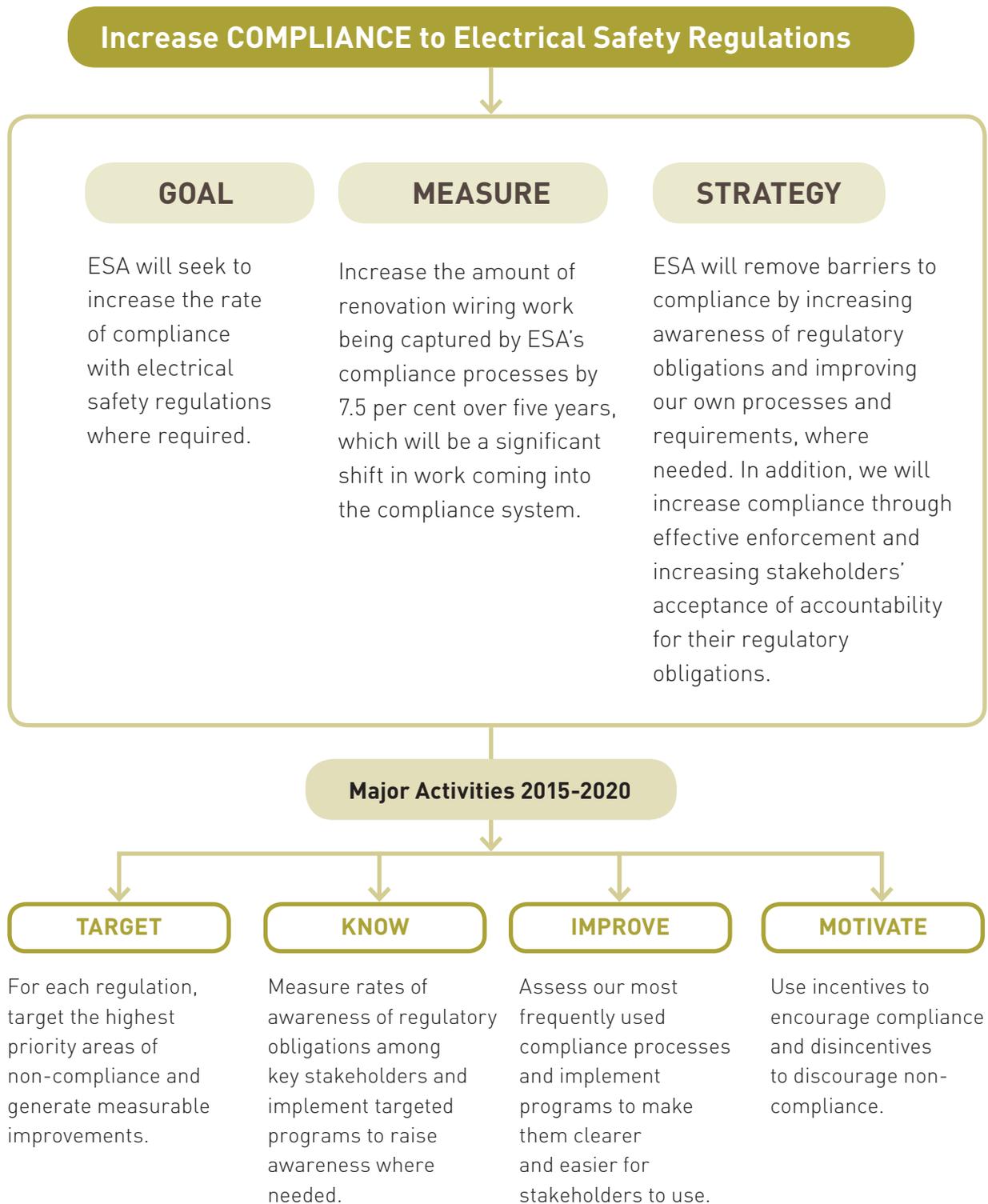
Successfully executing against these goals will mean that by 2020 Ontario is a significantly safer place to live and work, more individuals and companies will operate inside the electrical safety compliance system – including many that had not done so before, and ESA will be seen as an effective, responsive and accountable steward of its mandate delivering excellent value to the people of the province.

OVERVIEW OF GOALS, MEASURES, STRATEGIES & ACTIVITIES



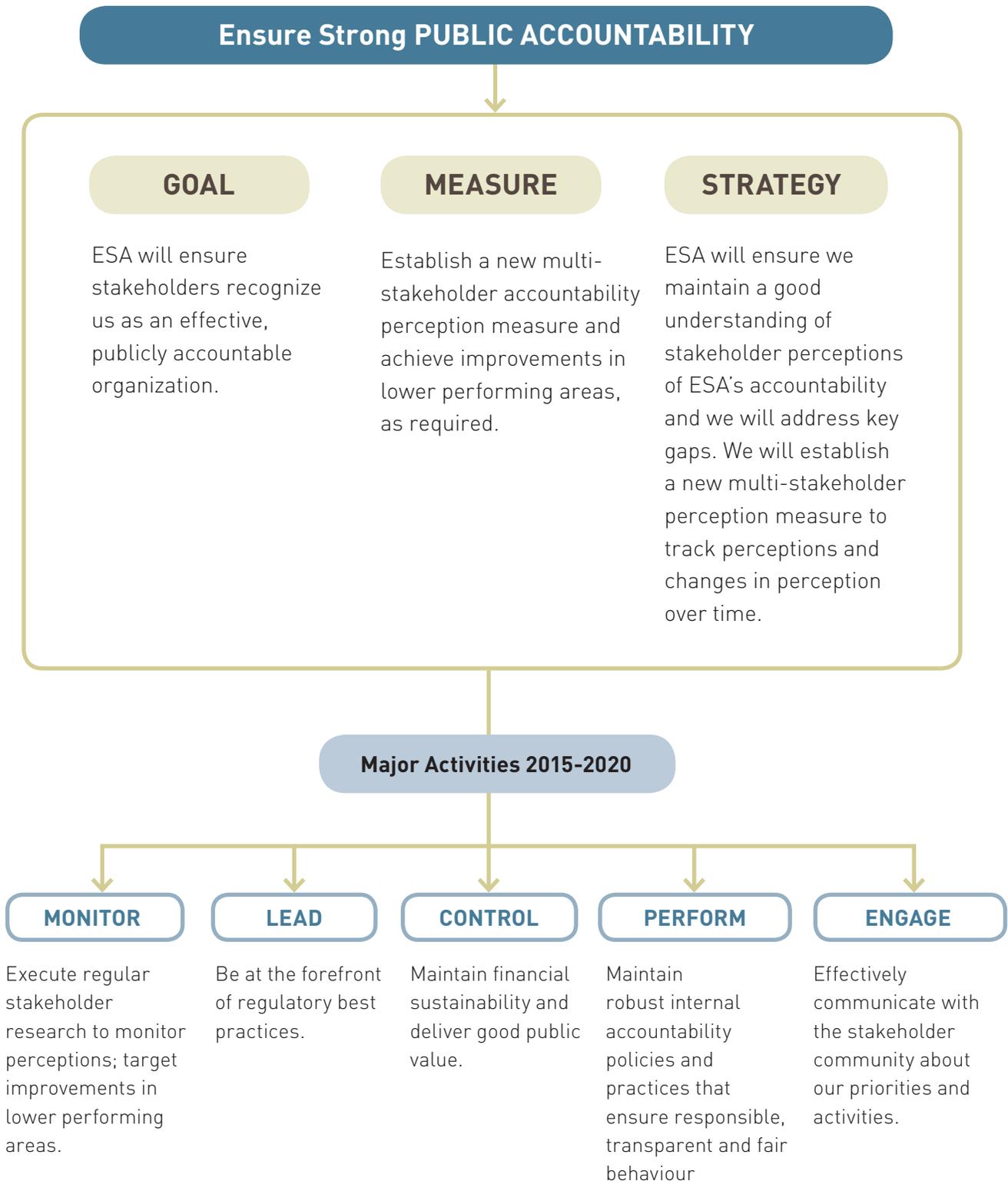
For more detail, see page 15.

OVERVIEW OF GOALS, MEASURES, STRATEGIES & ACTIVITIES



For more detail, see page 17.

OVERVIEW OF GOALS, MEASURES, STRATEGIES & ACTIVITIES



For more detail, see page 19.

GOAL: SAFETY

ESA will seek to improve the state of electrical safety in Ontario by accelerating the reduction in the combined rate of electrical fatalities and critical injuries over the next five years.

ESA's ultimate vision is the elimination of all deaths, injuries, fires and loss from electricity. Getting there requires achieving milestones along the way.

For the first Harm Reduction Strategy (2010-2015), ESA set a five-year milestone goal of a 30 per cent reduction in electrical fatalities in Ontario, measured by the rolling five-year average of electrical fatalities per million population. This was the first time ESA had set a corporate outcome goal directly linked to a rate of safety events. It provided a clarity of purpose and a compelling benchmark by which to assess progress.

For the Harm Reduction Strategy 2.0, we want to have an equally compelling and ambitious safety goal. We also want to build on progress already made and seek a further significant improvement in the state of electrical safety in Ontario. Therefore, the new safety goal adds the measure of critical injuries to that of fatalities.

Our goal is to achieve a 20 per cent decrease in electrical fatalities and critical injuries (based on the five-year rolling average).

For every electrical death in Ontario, there are multiple critical injuries, injuries and near misses. As the number of fatalities falls, it is logical to extend our efforts and also seek to reduce the rates of these other events; particularly, the next most serious type of incidents: critical injuries.

A 20 per cent reduction in the combined rate of fatalities and critical injuries is greater than the current 13 per cent rate of reduction and therefore sets an ambitious target for ESA and stakeholders.

The 20 per cent reduction will be based on the baseline of the combined 2014 fatality and critical injury data, which will be available in 2015.

Critical injuries will be tracked based on those injuries classified on Levels I-III on the Canadian Triage and Acuity Scale (CTAS.) This is a standard recording system used by emergency departments (ERs.) Levels I-III cover urgent, emergent and resuscitation conditions. The CTAS is a reliable and consistent source of critical injury data. As the CTAS information is captured in ERs, it will include both occupational and non-occupational injuries.

Electrical fatalities will continue to be tracked using ESA's current data sources: the Coroner's Office, and the Office of the Fire Marshal and Emergency Management.

While ESA will use the combined fatality and critical injuries rate as its top line measure, we will continue to review and report fatality, critical injury, injury, fire rates and other safety data individually so as to ensure we monitor the nuances of change. ESA compiles and reports key findings annually in the Ontario Electrical Safety Report.

To achieve the safety goal ESA has defined the strategy it will apply and major activities to be executed across the scope of the five year plan.

GOAL: SAFETY

Strategy:

ESA will operate from a position of knowledge and insight about electrical safety. We will use that knowledge to identify the areas of greatest risk and prioritize efforts on them. We will anticipate emerging risks and act to reduce them.

Major Activities 2015-2020:

UNDERSTAND

We will continually improve ESA's understanding of what electrical safety events are happening and their underlying causes, and our ability to anticipate and intercept emerging risks.

This requires collecting, analyzing and reporting safety incident data, and reviewing events to understand how they could have been prevented.

It also means staying abreast of new technologies and other developments in the marketplace and other jurisdictions that may have implications for Ontario.

PRIORITIZE

To best serve the cause of safety, ESA needs to focus its efforts and that of stakeholders where the safety need is greatest.

To do so, ESA will use risk-based management to define priorities. We have invested in systems and processes to assess relative risk and assist with this decision-making.

Based on analysis of where electrical safety incidents most frequently occur, ESA has identified the current three areas of priority electrical safety harm:

1. Members of the public and construction trades making contact with powerlines,
2. Electrical workers working live while doing repair and maintenance, and
3. Electrical fires in homes.

As ESA monitors electrical fatalities and critical injuries, we will continue to assess the areas of priority and introduce or change priorities if required based on new patterns of events.

COLLABORATE

ESA will share our insights and learnings internally and externally and collaborate to address safety risks.

ESA will continue to produce its annual Ontario Electrical Safety Report, share information and insights, and participate in forums throughout the safety system and energy sector.

GOAL: COMPLIANCE

ESA will seek to improve the rate of compliance with electrical safety regulations over the next five years where required.

ESA is the regulatory authority for four electrical safety regulations:

- The Ontario Electrical Safety Code (Regulation 164/99) which defines how electrical work will be done;
- Licensing of Electrical Contractors and Master Electricians (Regulation 570/05) which sets requirements for those doing electrical work;
- Electrical Distribution Safety (Regulation 22/04) which defines safety accountabilities for Ontario's Licensed Distribution Companies (LDCs); and
- Electrical Product Safety (Regulation 438/07) which addresses approval of electrical products before their sale, and response to unsafe industrial and commercial products in the marketplace.

ESA's regulatory compliance and enforcement activities comprise the largest portion of our activities. In Fiscal Year 2014 (FY14), ESA:

- executed more than 425,000 wiring inspections;
- handled more than 490,000 customer service calls;
- licensed more than 19,000 organizations and people;
- and undertook hundreds of investigations, laid charges and undertook other disciplinary action.

ESA will pursue strong rates of compliance in our four areas of regulatory responsibility. However we have set the five-year target focused on our top priority which is compliance to the Ontario Electrical Safety Code and contractor licensing regulations for residential, commercial and industrial renovations.

Industry sources estimate that as much as 50 per cent of residential renovations and 13 per cent of commercial/ industrial renovations are done in the underground economy.

Our goal is to **increase the amount of renovation wiring work being captured by ESA's compliance processes by 7.5 per cent over five years**, which will be a significant shift in work coming into the compliance system.

The improvement will be measured via individual wiring work items as captured within renovation-related notifications/ permits being processed by ESA. This will include residential, commercial and industrial renovation work, standard and Authorized Contractor Program notifications, and Continuous Safety Services-covered renovation work.

Our analysis of patterns in these work items finds that a 7.5 per cent increase would signal a significant improvement in non-compliant work coming into compliance.

ESA must achieve this higher rate of compliance without creating a proportional increase in resourcing or burdening those who are already in compliance. This will require using improvements in efficiency, and applying risk-based management.

GOAL: COMPLIANCE

Strategy:

ESA recognizes that sometimes the compliance system itself can be a deterrent to participation. We will remove barriers to compliance by increasing awareness of regulatory obligations where it is lacking, and improving our own processes and requirements where needed.

We will also improve compliance through effective enforcement and increasing acceptance by stakeholders of their accountability for regulatory obligations.

Major Activities 2015-2020:

TARGET

ESA will target the highest priority areas of non-compliance within its regulatory responsibilities and generate measurable improvements where needed.

KNOW

We will measure rates of awareness of regulatory obligations among our key stakeholders and execute targeted programs to improve awareness and understanding where needed to improve compliance.

IMPROVE

ESA will assess our most frequently used compliance processes and execute programs to make them clearer and easier for stakeholders to use.

MOTIVATE

We will use a range of tools including incentives that encourage compliance and disincentives that discourage non-compliance.

GOAL: PUBLIC ACCOUNTABILITY

The Government of Ontario has delegated significant powers to ESA such as the ability to inspect work, audit activities, collect fees, license trades, order disconnections of power, and more.

ESA must use these powers responsibly and be accountable to the public for the execution of our mandate.

The best way to measure our accountability performance is through the eyes of stakeholders.

Therefore our third goal is ESA will ensure stakeholders recognize us as an effective, publicly accountable organization.

To measure performance, ESA will establish a new multi-stakeholder accountability perception measure in FY16.

It will measure against multiple dimensions of public accountability including responsibility, transparency, fairness and quality of service delivery. The FY16 research will establish a baseline and allow for cross-audience comparison annually. We will use the research to direct improvement efforts where required.

Strategy:

ESA will ensure we maintain a good understanding of stakeholder perceptions of ESA's accountability and address any gaps.

Based on that feedback, we will target areas of real and perceived weakness in accountability and generate improvements in stakeholder perceptions.

Major Activities 2015-2020:

MONITOR

ESA will execute regular stakeholder research to monitor perceptions and identify areas to target improvements.

LEAD

ESA will be at the forefront of regulatory best practices.

CONTROL

As a key element of our accountability requirements, ESA will maintain financial sustainability and deliver public value.

PERFORM

We will have robust internal accountability policies and practices that ensure responsible, transparent and fair behaviour, in keeping with our Regulatory Governance Principles (see Appendix 2.)

ENGAGE

We will effectively communicate with the stakeholder community about our priorities and activities.

PLANNING CONTEXT

ESA executes its mandate within a continually evolving environment.

This dynamic context requires ESA to actively assess external changes, demands, needs, and expectations. This assessment is done through our annual planning process.

The following are the major contextual considerations identified in the development of this corporate strategy.

Regulatory

Progressive regulatory organizations and governments are seeking to make regulation more accessible, less complex and better aligned with marketplace needs. Emphasis is on first seeking non-regulatory solutions to achieve goals.

Regulatory best practices emphasize risk-based approaches where areas of greatest potential harm are identified and prioritized for improvement. ESA formally adopted this approach when launching the Harm Reduction Strategy in 2010 and continues it in this 2.0 strategy.

Modern regulatory practice also recognizes that inspection and enforcement efforts must be combined with education, training, collaboration, and other approaches to increase compliance. To achieve maximum compliance, stakeholders have to accept accountability and not rely solely on the regulator to ensure their compliance e.g., catching and correcting. Evolving to that acceptance of internal accountability takes time.

ESA maintains a set of Regulatory Principles which capture its commitment to effective regulatory management (see Appendix 2.)

Marketplace

ESA's mandate and activities are significantly impacted by the dynamics of the Ontario marketplace. New housing starts, pace of renovation work and commercial industrial expansion are among the factors that impact demand for electrical safety oversight.

ESA looks at these and other factors when forecasting future business needs and financial requirements.

ESA in turn impacts the marketplace as our compliance requirements can add costs and/or steps to work activities. Therefore ESA monitors the impact of our efforts to minimize marketplace disruption while still ensuring delivery on our safety mandate.

Also, ESA draws staff from certain employment pools including engineering, electrical contracting, policy and regulation, customer service, finance, IT, communications, legal, human resources, and others. Availability of such resources in the Ontario marketplace and ESA's ability to compete in the hiring market affects our ability to execute our mandate.

PLANNING CONTEXT

Financial

Due to the nature of its work, ESA's operational expenses are dominated by labour costs – our assets are not facilities, but people with expertise. Consequently ESA's cost infrastructure is shaped by labour and associated costs including the management of pension and benefit obligations.

The economic environment – particularly labour compensation, interest rates, investment performance, and pension and health cost projections – directly impact our financial performance (see page 20)

New Technology

The electrical sector environment continues to evolve and ESA must keep pace with that change. New technologies, products, processes and applications come into the market on an ongoing basis. Examples from recent years include major expansion of photovoltaic system installation, and electric vehicles and their fuelling infrastructure.

Currently ESA expects that smart grid-related developments (distributed generation, storage, etc.) will be the most significant technological shift impacting us in the five years ahead.

With significant new developments ESA may need to initiate code and standard changes and update oversight practices to ensure staff has the required expertise. ESA anticipates such developments by monitoring other jurisdictions, tracking industry developments, and participating in multi-jurisdictional forums.

Electrical Safety System

ESA operates within a complex electrical safety system which includes organizations and individuals operating at the regional, provincial, national and international level. All have impact on electrical safety and all have the potential to assist or impede ESA with our mission.

Within the electrical system are generators, transmitters, distributors, and end-users – owners and operators of homes, businesses, commercial and industrial facilities, farms and institutions. There are also regulators in this space such as the Ontario Energy Board.

This system is undergoing significant change including consolidation among some utilities, and regulators (e.g. the OPA and IESO), as well as changes in roles and expectations of industry players as the electricity system evolves. ESA must move with this evolution to ensure we continue to be an effective regulator.

The electrical product system includes designers, standards, certification and testing organizations, manufacturers, wholesalers and importers, retailers/sellers, and the consumer, commercial and industrial purchasers.

The electrical product sector is increasingly dominated by national and international players. ESA's role as a provincial regulator must acknowledge this reality.

PLANNING CONTEXT

The occupational safety system includes educators and trainers, the Ontario College of Trades, the Ministry of Training, Colleges & Universities, the Ministry of Labour, the Chief Prevention Officer and his council, WSIB, the four Health & Safety Associations (WSPS, IHSA, PHSA, and Workplace Safety North), other safety advocacy groups, labour organizations, and industry and trade associations, among others. There is a robust system of organizations focused on occupational safety, for example. ESA must reconcile our specific concerns about electrical safety into this larger context.

Other government and regulatory bodies also shape the safety system including municipalities and their building codes, the Office of the Fire Marshal and Emergency Management, and the Technical Standards and Safety Authority, among others.

This safety system offers opportunities for collaboration and sharing of insights. At the same time, only ESA has the specific focus on electrical safety in the province while others have broader mandates and/or different priorities. Therefore we have to find common ground for collaborations which deliver mutual benefit.

ENTERPRISE RISK MANAGEMENT

ESA's Enterprise Risk Management (ERM) system monitors strategic risk to the organization. Risk is assessed continuously and assessments and mitigation efforts change as events and circumstances evolve. The relationship between ERM and achievement of the corporate strategy are closely linked and managed together.

ESA has had a formal ERM system for a number of years. But in conjunction with the development of this new corporate strategy, ESA reviewed its ERM program and determined it should be evolved from a top-down approach to a more risk mature and integrated approach where monitoring is done on a continuous basis and risk awareness permeates the organization.

Based on best practices, the new ESA ERM system now features real-time reporting through a risk intelligence system which clearly defines monitoring and reporting responsibilities in various parts of the organization.

It uses 54 tracking tools which roll up into 12 risk event segments which in turn fall into four major risk event categories: financial, organizational, operational, and reputational.

Risks are assessed based on potential impact, likelihood, clock speed (i.e. pace at which information becomes available to manage the risk), and our mitigation capacity.

The ERM system is used by management and the Board to identify and mitigate strategic risks on an ongoing basis.

FIVE-YEAR FINANCIAL OUTLOOK 2015-2020

ESA is a not-for-profit corporation. Its revenues are generated by licensing fees, fees for safety oversight services in regulated and non-regulated areas, and from investment income. ESA receives no tax revenue and is expected to be financially self-sustaining.

In planning for the five years ahead, we take into account ESA's commitments and obligations as defined in our mandate and regulatory responsibilities. We also monitor a variety of external economic factors which can impact both revenues and costs.

We fully expect financial circumstances to change over time and thus we will annually up-date the financial outlook as part of the yearly Business Plan review. Therefore, forecasts, particular for the later years of the strategy, will change.

ESA's key financial objectives are to:

1. achieve recovery of direct and indirect costs associated with each line of business;
2. achieve break-even overall; and
3. address long-term future financial obligations.

ESA is projecting to achieve break-even in FY16 and each year to FY20.

In the prior years, the combined impact of falling long-term bond yields and increasing projections of health costs for an aging population drove up ESA's pension and benefit obligations sharply, causing expenses to exceed revenues.

ESA absorbed the impact of those increased costs into its operating budgets. We undertook cost cuts and containment efforts and elected to run deficits while working to recover to break-even.

The organization is expecting to restore to a better financial position for the next five years achieving cost recovery in the first year of the new strategy.

To address future financial obligations, the Board of Directors has restricted specific reserve assets for OPEB (other post-employment benefit) and pension deficit obligations.

Economic Outlook

ESA monitors major economic indicators to assist in projecting future financial performance.

The outlook for the next five years is based on a set of economic assumptions including:

- Ontario GDP stable at 2.0% to 2.2%;
- Inflation stable at 2%;
- Housing starts, condominium building and home renovation rates beginning to soften in the outlying years.

This relatively soft economic performance outlook means ESA must be prudent in balancing revenues and costs.

A five year financial outlook (see page 29) is based on these assumptions.

FIVE YEAR FINANCIAL OUTLOOK: 2015 – 2020

Revenue Outlook

ESA is projecting modest growth in all revenue categories for the next five years with the exception of FIT/MicroFIT installations. There was a significant volume of work in this category over the last few years in response to government programs encouraging installations.

As uptake on those programs tails off, this category of revenue is expected to decline year-over-year.

Otherwise ESA is basing its outlook on expectations that residential electrical work demand will remain stable with some softening in condominium builds, housing prices and pace of home renovations.

Commercial activity will mirror economic growth in the province and volume for ESA is expected to be stable over the next five years.

Expense Outlook

ESA experiences ongoing increases in the cost of doing business and also needs to be able to invest in new capabilities, programs or functions required to serve its mandate or strategic plan.

Key expected areas of investment over the next five years include:

- Research and data analysis capacity;
- Information technology including ongoing implementation of a multi-year IT strategy begun in FY14;
- Service delivery improvements and innovation;
- Communications and stakeholder engagement; and
- Business continuity planning to mitigate risk from major disruptive events.

In addition, due to the demographics of the ESA staff, we expect to experience significant rates of retirement which will result in investment in hiring and training of new staff.

As a result of all these factors, expense management will require careful planning and ongoing monitoring.

SCOPE OF POWERS & RESPONSIBILITIES

ESA's mandate is detailed in the corporation's Letters Patent. Those objects or purposes are stated as:

- to promote and undertake activities which enhance public electrical safety including:
 - training;
 - inspection;
 - authorization;
 - investigation;
 - registration;
 - enforcement;
 - audit;
 - and other public electrical safety quality assurance services;
- to act in any capacity under all legislation and regulations designated and delegated to the Corporation under the Safety and Consumers Statutes Administration Act, 1996, S.O. 1996, C.19 as amended from time to time and any other legislation or regulations under which responsibilities are delegated to the Corporation in the future;
- to inform, educate and work with industry, government and the public;
- to promote and undertake activities that enhance the competitiveness of the Ontario and the Canadian economy;
- to promote and undertake activities that encourage the harmonization of electric safety standards and compliance practices;
- to encourage industry to responsibly enhance electric safety.

The objects establish a broad scope of tools that can be applied to enhance electrical safety ranging from inspection to training and registration and others. Plus, ESA has the ability to use "other...safety quality assurance services..." which gives the organization significant flexibility.

At the same time, the Letters Patent also oblige ESA to:

- work collaboratively with industry, government and the public;
- support competitiveness;
- support harmonized standards and practices;
- and ultimately encourage industry to take accountability for the improvement of electrical safety.

RESULTS OF THE HARM REDUCTION STRATEGY 2010-2015

In 2010 ESA established a five-year strategy called *Harm Reduction Strategy: Getting to Zero – A Commitment to Safety*.

The Harm Reduction Strategy reflected a mission-driven approach, recognition of the needs and challenges of a mature marketplace, and adoption of regulatory best practices including: problem solving approaches; investment in collaborative partnerships; focusing clearly on results; and the application of risk-based management.

The Harm Reduction Strategy accounted for ESA's evolving safety mandate and expanded regulatory responsibilities. Originally focused solely on electrical installations in buildings, ESA's scope over time has been expanded to include roadway and street lighting, electricity distribution, contractor and master electrician licensing, electrical product safety, trade shows and carnivals, and more. Today no other electrical safety jurisdiction in North America has as large a safety footprint in the residential, commercial and industrial market.

The key feature of the Harm Reduction Strategy was the setting of the goal of a 30 per cent reduction in electrical fatalities

To support that goal, ESA identified the harms that represented the majority of electrical safety events happening in Ontario. Safety incident data analysis showed that 70 percent of all electrical contact and fire fatalities were associated with:

- powerline contact by non-electrical workers and the public;
- workers doing high-risk electrical work;
- electrical wiring in older homes;
- electrical products.

These four contexts, combined with ESA's traditional focus on the safe installation of new wiring, formed the 'five harms' focus of the Harm Reduction Strategy.

The Strategy also identified organizational capabilities ESA needed to ensure thorough strategy execution and sustainable outcomes:

- **Effective communications and stakeholder relations:** ensuring ESA is a trusted source for electrical safety information, and building stakeholder awareness and support to act to address key safety issues;
- **Business processes:** ensuring resources and processes are managed and allocated optimally to improve safety; includes implementing risk-based approaches, and expanding the use of business analytics and tools;
- **People and growth:** ensuring employees are aligned and engaged in strategy, aligning human resources and business strategies, and increasing the organization's capability to thrive in a changing environment;
- **Financial sustainability:** ensuring financial stability, and a robust and flexible financial framework that supports strategy; includes ensuring Enterprise Risk Management is well-integrated into the fabric of operations.

RESULTS OVERVIEW

The central goal of the Harm Reduction Strategy was a 30 percent reduction in electrical fatalities between 2010 and 2015. That 30 percent reduction goal equals 1.09 fatalities per million population based on a five-year rolling average. By the end of 2013 (the most recent data at the time of this plan), the electrical fatality rate in Ontario was 1.02 per million, surpassing the 1.09 target.

This means there has been a 35 per cent decrease in electrical fatalities in only a few years. This is a great improvement and moves us closer to the ultimate vision of eliminating fatalities altogether.

Within the priority harm areas, we have also seen good progress:

- **Powerline contact incidents** have decreased from 160 to 126 (based on the five-year rolling average and 2013 data.) Contacts most frequently occur in specific trades – construction, farming, transportation – and with the general public;
- **Worker-related fatalities and critical injuries** have decreased from 25 to 13 (based on the five-year rolling average and 2013 data.) The subset of electrical workers, however, have not seen a corresponding decrease and therefore are an area of focus for continuing effort;
- **Electrical fires in older homes** (built pre-1975) in which electrical distribution equipment is the ignition source have decreased from 788 to 665 (based on the five-year rolling average and the most recent data, 2012 Office of the Fire Marshal);
- **Electrical-related product fires** have decreased from 1,952 to 1,404 (based on the five-year rolling average and on the most recent data, 2012 Office of the Fire Marshal.) Electric stovetops are an area of priority;

- ESA has achieved a 13.8 per cent increase in Electrical Safety Impact of **new wiring** inspection (a measure of prioritization of effort against safety risk) to the end of fiscal year 2014 (March 2014.)

Similar advancements have been made in corporate capabilities:

- Communications and stakeholder relations efforts have significantly increased the reach and impact of ESA's electrical safety awareness efforts. Key collaborations have been established with industry, other regulators and safety organizations;
- ESA has invested significant effort in business process improvements. A major achievement was the development of a tool that can rank wiring installations by relative risk based on multiple variables, thus helping us to allocate prevention and mitigation efforts proportionally. In addition, there have been concerted efforts to improve efficiencies and reduce administrative complexity in operations, and to establish a multi-year Information Technology strategy;
- In the area of people and growth, development training programs have been established for new Inspectors and emerging leaders in the inspection and corporate functions. Talent reviews and succession planning programs have been created, and major efforts have been directed at fostering employee engagement in corporate strategy and change management capacity.

RESULTS OVERVIEW

- Financial sustainability efforts meant ESA was able to navigate through a challenging period where pension and OPEB (other post employment benefits) obligations increased significantly and put pressure on annual operating budgets. ESA's costs in this area increased from \$6 million in FY2008 to a projected \$15.5 million in FY16. Efforts included improvements in financial forecasting and tracking systems, improved investment management, growth in key revenue areas, and strategies for managing short and long-term pension and OPEB obligations.

Detailed progress is provided in ESA's Annual Reports.

KEY LEARNINGS

The inaugural Harm Reduction Strategy demonstrated the power of a mission-driven approach. By organizing the priorities and efforts of ESA around explicit goals and a compelling safety mission, we were able to focus efforts, make choices between competing demands, and ultimately improve the state of electrical safety in Ontario.

Our experience also proved the importance of prioritizing safety risks based on facts and insights about incidents and events. This information is the basis for applying risk-based approaches. Inherent in this approach, however, is the need for excellent data collection and analysis capacity. ESA has invested in this capacity and will continue to do so.

The first Harm Reduction Strategy represented a significant shift in approach for ESA and that had impact internally and externally. Learnings include the importance of engaging employees while the strategy is under development, and supporting staff with the impacts of any significant changes that arise from its implementation.

ESA staff has a deep passion for the safety mission of the organization. Any corporate plan must tap into and recognize that commitment.

Externally it is important to build stakeholder understanding of ESA's approach and priorities. The fact is that the majority of external stakeholders' primary interest is how ESA impacts them on a day-to-day basis. But being clear on our strategy is an important backdrop.

We have seen the critical value of effective collaborations – understanding what ESA can do itself vs. what we can do with others. Collaboration will continue to be critical to our success.

Finally, as ESA's scope is broad – electrical safety across Ontario – we must set priorities. We can't do everything that could be done so we must make smart and clear decisions about where to focus effort.

These learnings and other insights led ESA to determine that the approach of the inaugural Harm Reduction Strategy continues to be relevant and effective. Thus, this next five-year strategy is titled Harm Reduction Strategy 2.0.

APPENDIX 1: FIVE-YEAR FINANCIAL OUTLOOK

The following is a financial outlook based on current forecasts of performance and external economic factors. This outlook is reviewed annually and up-dated as required. In addition, ESA establishes detailed operating budgets in advance of each fiscal year.

(\$000's)	2016 Projection	2017 Projection	2018 Projection	2019 Projection	2020 Projection
Revenue	102,203	104,884	107,018	111,438	113,863
Expenses	99,495	102,064	104,275	108,701	111,156
Surplus (deficiency) before depreciation	2,708	2,820	2,743	2,737	2,707
Depreciation	3,500	3,600	3,600	3,600	3,600
Surplus (deficiency) from operations	(792)	(780)	(857)	(863)	(893)
Other Income (loss)	2,543	2,765	2,996	3,235	3,485
Surplus/(deficiency) for the year	1,752	1,985	2,139	2,372	2,592

APPENDIX 2: REGULATORY GOVERNANCE PRINCIPLES

Electrical Safety Authority's Regulatory Governance Principles

The Electrical Safety Authority (ESA) operates as a delegated authority on behalf of the provincial government in accordance with Part VIII, section 113 of the Electricity Act, 1998, S.O. 1998, c.15, Sched. A, and the Safety and Consumer Statutes Administration Act, 1996, S.O. 1996, c.19. Within its mandate the ESA is responsible for electrical safety in Ontario as designated by Ontario Regulation 89/99, 570/05 and Regulation 22/04. The matters arising from these regulations include administration, inspection and enforcement in regard to electrical installations, electricity distribution systems and the licensing of Electrical Contractors and Master Electricians within the province. In 2007 the Government of Ontario established Ontario Regulation 438/07 Electrical Product Safety and ESA is the delegated authority for the administration of this new regulation.

Specifically ESA is charged with carrying out its delegation with the law, the Administrative Agreement, the Electricity Act and the Safety and Consumer Statutes Administration Act with the purpose of protecting public safety, and the environment and advancing the principle of ensuring a fair, safe and informed marketplace that supports a competitive economy.

Simply put:

ESA has a duty to the public electrical safety interest

Is accountable to the Ministry of Government and Consumer Services,

And is informed by stakeholders' advice, knowledge and experience.

Adhering to good practices in Regulatory Governance is a precondition to establishing and maintaining credibility and the moral authority to inspire and instill excellent electrical safety practices within ESA's regulated community and stakeholders.

The Board of Directors of ESA is committed to continuous improvement in meeting best practices in Regulatory Governance which includes:

- Board oversight of the Electrical Safety Authority's regulatory policies, practices, programs and procedures to ensure that we effectively implement our regulatory responsibilities which includes, communication of rules, monitoring, enforcement adjudication, sanctions and evaluation.
- Best practices in regulation development, strategies, assessment and the formulation of policy advice to the province.

In fulfillment of this commitment we aspire towards the following principles.

APPROACH TO REGULATION

- Regulatory Policy and Advice
- Innovation
- Internationally Informed
- Continuous Improvement

FRAMEWORK FOR REGULATION

- Outcome Based Regulatory Impact
- Minimize Duplication
- Proportionality
- Risk Management Approaches
- Supporting electrical safety within a fair and competitive market

STAKEHOLDER ENGAGEMENT IN REGULATION

- Stakeholder Engagement
- Clarity and Accessibility
- Transparency and Communication

APPROACH TO ADMINISTERING REGULATION

- Capacity and Capability
- Fairness
- Independence
- Administrative justice and accountability

Each of the principles is described more fully on the following pages.

Approach to Regulation

REGULATORY POLICY AND ADVICE

ESA recognizes the role of the Province in establishing the electrical safety policy that is reflected in legislation and regulations established by the provincial government.

The Board is committed to its obligation under the Safety and Consumer Statutes Administration Act to suggest to the Minister amendments to Acts and regulations and to inform and advise the Minister with respect to matters that are of an urgent or critical nature.

As subject matter experts in Electrical Safety, ESA will maintain awareness of best practices in electrical safety management, technology, codes and standards ESA, education and awareness, research, safety and regulatory approaches within Canada, North America and internationally assimilating this information to provide relevant policy advice to the Government.

We will strive to create conditions where ESA's Board and Executives have the capacity to listen, understand and communicate: to see, hear and speak the risk.

We will seek a relationship with government, our employees and stakeholders that foster the ability and willingness to inform senior decision-makers of anticipated electrical safety harms which require engagement at the executive, bureaucratic or political levels ("speak truth to power").

We will also strive to be informed about broader government policy and to be reflective of this policy.

INNOVATION

ESA is committed to innovation in safety management and regulatory practice. Regulation will be recommended as the policy instrument of choice when it is demonstrated that government intervention is warranted and other options fail to demonstrate an ability to address the issue.

We will strive to explore the use of alternatives to direct regulation to address safety harms, through non-regulatory options, market-based approaches or "partnerships" or stakeholder cooperation. When regulation is recommended, it will be designed to produce maximum effectiveness while minimizing to the extent possible negative impacts on stakeholders.

INTERNATIONALLY INFORMED

We seek a regulatory system that is nationally and internationally informed, forward looking and as anticipatory as possible. Our recommendations and decisions will reflect a broader national and international perspective.

We also believe in contributing to electrical safety improvement beyond Ontario through sharing and participation at the national and international level.

CONTINUOUS IMPROVEMENT

We recognize that needs and conditions change over time. We are committed to establishing review processes to ensure that regulation and ESA's implementation are meeting the intended harm reduction objectives, and ensure they're remain in the public interest.

Framework for Regulation

OUTCOME BASED REGULATORY IMPACT

ESA is committed to outcome based assessment and measurement of its regulatory impact.

When developing and proposing new regulation we are committed to applying best practices in Regulatory Impact Analysis to ensure the most efficient and effective regulatory options are chosen. We recognize that design of regulations needs to focus on the outcomes, making them results based and this should be reflected in the performance measures chosen.

MINIMIZE DUPLICATION

Duplication or overlap of regulatory programs can cause excessive burden on people and organizations and ESA is committed to minimize duplication. Where there are complimentary regulations or roles ESA is committed to working with other regulators to establish formal mechanism for collaborative partnerships, interagency coordination among regulatory bodies, and clear accountability for decision making in areas of overlap.

PROPORTIONALITY

ESA is committed to ensuring that the regulatory system is performance-oriented, efficient and effective, and strives for timely decision-making and implementation. We strive for proportionality between benefits and costs of regulating.

The proportionality principle will also guide the implementation regulation. We believe that most people and organizations within the regulated community are committed to ensuring electrical safety and acting or trying to act in accordance with the requirements. In these situations our approach as a regulator can include partnerships to promote and share best practices, activities to facilitate and ease the administrative aspects

of compliance and fostering training, education and awareness to help those who want to comply. We also recognize that a smaller segment within the regulated community will choose not to comply. In these cases ESA is committed to proportional response that includes the use of appropriate compliance and enforcement tools and authorities.

RISK MANAGEMENT APPROACHES

ESA is committed to adopting best practice risk management principles when developing strategies and regulations to address electrical safety harms and implementation of our current regulatory responsibilities. Risk management approaches have been designed with the importance of scope and timing horizons in mind and strive to be comprehensive by incorporating a systems perspective and life cycle analysis.

SUPPORTING ELECTRICAL SAFETY WITHIN A FAIR AND COMPETITIVE MARKET

ESA is committed first and foremost to ensuring the protection of Ontarian's from electrical safety harms. However we recognize that there are numerous choices available when recommending and administering regulations and we will strive to do so in a way that provides the greatest public benefit, but does not impose unnecessary or unreasonable burden on a fair and competitive market within the province, nationally and internationally.

Stakeholder Engagement in Regulation

STAKEHOLDER ENGAGEMENT

ESA is committed to a regulatory process that is transparent and engages stakeholders appropriately and is informed by stakeholder views. We are committed to seeking and listening to the views of all stakeholders to obtain a balanced perspective that helps guide the consideration, development and implementation of regulation.

TRANSPARENCY AND COMMUNICATION

Those subject to regulation must be aware of the regulation and understand what is required of them. ESA is committed to being accountable and transparent about its standards, processes and decisions and will strive to communicate this information to the regulated community and other stakeholders.

CLARITY AND ACCESSIBILITY

Regulation is most effective if the regulated community understand its purpose and how they can comply. We will strive towards a regulatory function is clear in its role, objectives and its legal and policy authorities.

ESA will provide a range of plain language complimentary materials (brochures, bulletins, guidelines, websites) and make these accessible to the public, the regulated community and anyone else who is interested.

Approach to Administering Regulation

CAPACITY AND CAPABILITY

ESA's Board is committed to ensuring that ESA has the capacity and capability to fulfill its regulatory responsibilities and that it has the budget, facilities and people needed to do the job of evidence-based regulatory decision-making.

FAIRNESS

We are committed to ensuring that regulatory standards and processes are reasonably consistent and predictable. Flexibility may be needed when new situations arise which are not specifically addressed by regulation (outlier information, new technology). In these cases, we will strive for consistency in the application of the values and spirit of the underlying policies.

ETHICS

ESA is committed to a regulatory culture based on a strong ethical foundation and mindful of the importance of both knowledge and judgment in the regulatory process. We will ensure that a formal system (including code of conduct that applies to the ESA Board, management and staff) exists to maintain the highest standards of ethics in the fulfillment of our regulatory duties. This system will be transparent to the regulated community.

We will strive to ensure that our leaders foster fair and competent decision-making and the maintenance of the diverse required capacities (including scientific and technical knowledge, science literacy, analytic capacity, communication, shared values, cooperation, openness, foresight, international perspective and other desirable elements of a regulatory body).

Adequate regulatory disclosure exists of information on the governance structure of the ESA and its policies, performance, regulatory objectives, and disclosure of internal policies relating to internal audit and control mechanisms through which frauds and conflict of interest situations are avoided.

We strive to do a good job of balancing organizational risks and public electrical safety harms, erring on the side of protecting the public interest and maintaining the highest ethical standards.

INDEPENDENCE

ESA's Board is committed to ensuring the independence of its statutorily appointed Directors and Inspectors in the exercise of their statutory roles. We will support these statutorily appointed Directors and Inspectors by ensuring

- they understand Government and ESA policies that apply to them; they understand the law, codes and standards; and have the training, tools and information required to administer and enforce the regulations
- mechanisms are in place to provide protection from industry capture and other interference in statutory decision making.

ADMINISTRATIVE JUSTICE AND ACCOUNTABILITY

Just as we seek to hold the regulated community accountable for maintaining high standards and performance related to electrical safety, ESA itself must be accountable.

ESA is committed to treating the regulatory community with fairness, dignity, consistency and with access to due process. To achieve this, the regulated community should have access to clear open and effective appeals procedures. We are committed to ensuring that mechanisms are in place for the regulated community and consumers to seek redress in cases where they feel their rights have been violated.



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