

ENERGY EFFICIENCY ALBERTA BUSINESS PLAN 2018/19

MARCH 31, 2018

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1. MESSAGE FROM THE CHAIR OF THE BOARD

It has been one whirlwind of a year. We established our Board, set up the agency, delivered the first half-dozen programs and hired an amazing complement of staff in less than 12 months. The biggest reward has been seeing Albertans embracing energy efficiency and renewable energy — and reaping the benefits.

More than 150,000 Albertans signed up for our Residential No-Charge Energy Savings Program, more than twice as many as predicted. Energy efficiency makes so much sense, and there's no better way to introduce people to the concept of energy efficiency than one-on-one in their own homes. We are returning more in savings to Albertans than the money we are investing, even in this first program where we are kick-starting efforts by providing thousands of light bulbs, low-flow water devices and smart thermostats.

Our second offering, the Residential Retail Products Program, delighted retailers with sales of more than nine million energy-efficiency products in under a year. Yes, most of the products were LED light bulbs; however, Albertans also purchased thousands of smart thermostats, tankless hot water heaters, windows, insulation and other high-efficiency products.

This verifies something we already knew: that energy efficiency is a terrific investment. It makes Albertans and Alberta businesses more competitive, creates jobs and reduces emissions — and, at our first year-end, it had supported the purchase of more than nine million energy-efficient products.

And this is only the beginning.

In the coming months we will be expanding and launching new programs to reach businesses, commercial, small industry and underserved groups.

An expert panel did extensive research into the best energy-efficiency programs in North America, and consulted widely with Albertans about what they would like to see this new organization do. The Alberta Government accepted the panel's final report and the Agency began to implement the recommendations on how to set up a best-in-class new energy-efficiency agency.

Energy Efficiency Alberta was set up as an arm's-length Crown corporation. This is important because it means that our Board and staff wake up every day focused on delivering the best possible energy-efficiency and renewable energy programs. They are never seconded to work on anything else.

It's not often that the right experts are consulted and their advice is fully taken, but I am proud to say that is exactly what happened. Now we search every day for ways to deliver even better programs — that provide even more energy savings — and better returns on investment for Albertans.

We are amazed by the quality of our entrepreneurs and contractor networks across Alberta, and we look forward to learning from them and leveraging their expertise. I know from my work outside of Energy Efficiency Alberta that Albertans understand energy efficiency and renewable energy, and that they are keen to see these industries mature. We already have some of the best private energy-efficiency expertise, and some of our builders are already building some of the best energy-efficient buildings in the country, getting ready for the day when all new buildings will be net-zero.

My thanks go to our superb Board: Vittoria Bellissimo, Joseph Jobin, Peter Love, Helen Rice and Kyla Sandwith. And one of our finest internal achievements was securing Monica Curtis as our Chief Executive Officer. She has created a team that is talented and keen to create the best possible suite of energy-efficiency programs in Alberta, for Albertans.

Original signed

David Dodge
Board Chair, Energy Efficiency Alberta

2. MESSAGE FROM THE CHIEF EXECUTIVE OFFICER

On behalf of the entire team at Energy Efficiency Alberta, I am pleased to provide our 2018/19 Business Plan. The plan outlines our strategic context, priorities and goals for the next year, and how we will measure success as an important component of Alberta's Climate Leadership Plan.

I am fortunate to work with passionate people who care deeply about energy management and the advancement of renewable energy. They come to work every day to deliver on our mandate: to raise awareness about energy efficiency, to design and deliver programs to help Albertans save money and energy, and to grow the province's energy-efficiency sector to help create jobs and diversify our economy.

I joined the agency in April 2017 as the first employee. Since then, we've grown our team and settled into offices in Calgary and Edmonton. We've talked to people across the province about how they think about energy use and how we can help them be more energy efficient and install solar energy — in their homes, businesses, institutions and community facilities. We've taken what we've learned to refine our initial suite of programs and launch new ones, building on best practices from other jurisdictions in North America while also addressing the unique needs of Albertans.

We have set goals for the next year and beyond. We will:

- Increase awareness of the value of energy efficiency and renewable energy to Alberta's energy system through targeted education and awareness outreach
- Align program investment to the emission reduction potential of each sector, maintaining investments in residential and business markets; expanding in municipal, large commercial and industrial markets; and introducing targeted services that give limited-income households and non-profit organizations the opportunity to participate
- Launch a trade ally network to further engage with providers of energy efficiency and small-scale renewable energy products and services, and build the capacity to design, implement, manage and maintain highly efficient buildings
- Conduct market research and program evaluation that supports the development of targets
- Continue to build internal systems and capacity, with a focus on data collection, management and reporting

This Business Plan includes details on these goals and how we will work to achieve them. This includes being transparent about our results and progress, and being responsible stewards of our funding from the Government of Alberta's carbon revenues and the Government of Canada's Low Carbon Economy Leadership Fund.

Our 2017/18 Annual Report will provide more detailed information on our progress, financials and program evaluation results. We have set preliminary key performance indicators for greenhouse gas reductions, and for energy and cost savings. We are currently conducting a potential study that includes engineering and market research. Informed by this data, we intend to include performance targets in our 2019/20 Business Plan.

Over the past year, Albertans have embraced energy efficiency and renewable energy beyond our expectations. We look forward to building on this momentum over the coming year and beyond.

Original signed

Monica Curtis
CEO, Energy Efficiency Alberta

3. STRATEGIC CONTEXT

In May 2016, the Government of Alberta introduced the Climate Leadership Plan to lower greenhouse gas (GHG) emissions, ensure Alberta's resources are developed responsibly, and create new opportunities to diversify the economy through investment in low-carbon technology, renewable energy and energy efficiency. Key aspects of the Climate Leadership Plan include:

- Implementing an economy-wide price on carbon
- Phasing out pollution from coal-generated electricity by 2030
- Tripling renewable energy to supply 30 per cent of generation by 2030
- Reducing emissions from the oil and gas sector
- **Creating Energy Efficiency Alberta**

In June 2016, an Energy Efficiency Advisory Panel was established to provide advice to the Minister of Environment and Parks on the establishment of an energy-efficiency agency. Engagement sessions were held online and in person with the public, Indigenous communities, utilities, business, and technical experts. The panel's report was provided to the Minister in fall 2016.

Energy Efficiency Alberta was established in late 2016 to deliver energy-efficiency awareness, programming and industry development for Albertans as part of Alberta's Climate Leadership Plan. Five programs were launched in 2017 to help Alberta homes, businesses and non-profits save money, reduce their energy consumption, install renewable energy systems and create jobs in the province's growing energy-efficiency sector. Energy Efficiency Alberta's first programs were:



Initial funding for Energy Efficiency Alberta has come exclusively from the provincial government, which has committed \$227 million over the next three years. Through the Government of Alberta, Energy Efficiency Alberta has been successful in securing funding from the Government of Canada to complement provincial funding. Available funding is designed to support provinces and territories — as a part of the Pan-Canadian Framework on Clean Growth and Climate Change — to work towards transitioning Canada to more sustainable economic growth, and to support meeting or exceeding the Government of Canada’s target under the Paris Agreement. Energy Efficiency Alberta has secured \$93 million over three years from the Government of Canada through the Low Carbon Economy Leadership Fund (LCELF).

3.1 MARKET CONTEXT

Alberta’s stock of buildings and industrial facilities provides a mix of opportunities and challenges for energy-efficiency programming. As with all jurisdictions, older buildings and facilities present a prime opportunity for upgrades. Alberta also has a lot of newly constructed buildings, but most were built before new energy standards came into force in 2016, leaving significant energy-efficiency potential, even in newer buildings and facilities. Conversely, Alberta is an acknowledged leader in the emergence of Leadership in Energy & Environmental Design (LEED) and net-zero-energy home construction in Canada. Leading practices in energy-efficiency technology deployment have been proven in the Alberta climate and market through investments in innovation and demonstration projects. This combination of factors provides cost-effective upgrade opportunities in older and newer buildings as well as the industry knowledge needed to take advantage of the opportunities available. Based on the popularity of Energy Efficiency Alberta’s first programs, a pent-up demand for even basic energy-efficient upgrades is evident.

Since Alberta’s electricity and natural gas markets are deregulated, a competitive mix of both suppliers and producers delivers energy to the province’s residents and businesses. The electricity mix in Alberta is fundamentally changing, through policies to phase out coal-fired generation, to increase renewable electricity generation to 30 per cent of Alberta’s total electricity generation by 2030, and to grow community and small-scale renewable energy. The new electricity capacity market in Alberta will value the reliable provision of electricity capacity as a key component of the long-term electricity market transformation. The Alberta Electric System Operator (AESO) is examining the possibility of including energy efficiency within this market, as this has been done successfully within other markets across North America. The activity of Energy Efficiency Alberta contributes to these changes as it works to reduce energy demand and increase renewable energy generation.

The transportation sector provides another opportunity to reduce emissions and save Albertans money, in fleets and in personal vehicles.

3.2 POLICY CONTEXT

Within this market context, there is also a changing policy framework. Around the world and across Canada, governments and businesses are recognizing the financial and business risks resulting from climate change. This is increasing the demand to value emissions reductions, including putting a price on carbon emissions. Jurisdictions across the world are leveraging this price signal to increase efficiency of their homes, businesses and industrial facilities. Alberta has the opportunity to build on the knowledge and experience from these other jurisdictions to deliver best-in-class energy-efficiency programming, generating the resulting environmental, economic and social benefits.

At the heart of Alberta's Climate Leadership Plan is carbon pricing: providing funding for climate policy, including Energy Efficiency Alberta's programs, from a charge on carbon pollution in the province. The Climate Leadership Plan reflects the wider strategy of the Pan-Canadian Framework on Clean Growth and Climate Change at the federal level.

Alberta also continues to evolve its distributed generation regulations as a way to support local generation of electricity. The growth of distributed energy provides an opportunity to increase awareness and engagement of consumers about the energy they consume, as well as to reduce emissions.

Higher building-efficiency standards also continue to be adopted, and developers continue to advance net-zero and passive-building practices in the province. By increasing baseline efficiency standards while incentivizing high-efficiency products and practices, market transformation can occur, leading to the efficient and productive use of Alberta's energy resources, and lasting greenhouse gas savings.

The work of Energy Efficiency Alberta helps to contribute to this changing policy context by raising awareness and by demonstrating how emission reductions and economic benefits can both be accomplished through the increased adoption of energy-efficient products and practices.

3.3 LONG-TERM INTEGRATION OF ENERGY EFFICIENCY INTO THE UTILITY SYSTEM

Across the world, energy efficiency has been proven as a resource that can be deployed in the same way as other energy sources. This recognition can allow the integration of energy efficiency into the utility system, and the realization of the benefits that energy efficiency can provide: reducing energy bills, lowering infrastructure requirements, reducing emissions, and stimulating economic development. Steps can be taken in Alberta to support this integration, as has happened in many other jurisdictions. Inclusion in the nascent capacity market and the utility system more broadly offers ways to help consumers better manage their energy costs. Efficiency is generally the lowest-cost energy source and the least labour-intensive, providing one of the best economic drivers for job creation of any energy resource.

Energy Efficiency Alberta is a part of the Climate Leadership Plan, and its mandate is focused on carbon reduction. As the energy market in Alberta is transformed by the above factors, the agency will in turn evolve its goals and objectives to match changing market conditions. Valuing energy efficiency to include its capacity, network deferral and non-energy benefits — as well as its carbon savings — will be an important step in embedding energy efficiency into the Alberta marketplace, and ensuring that all Albertans reap the full benefits of the improved use of energy in buildings.

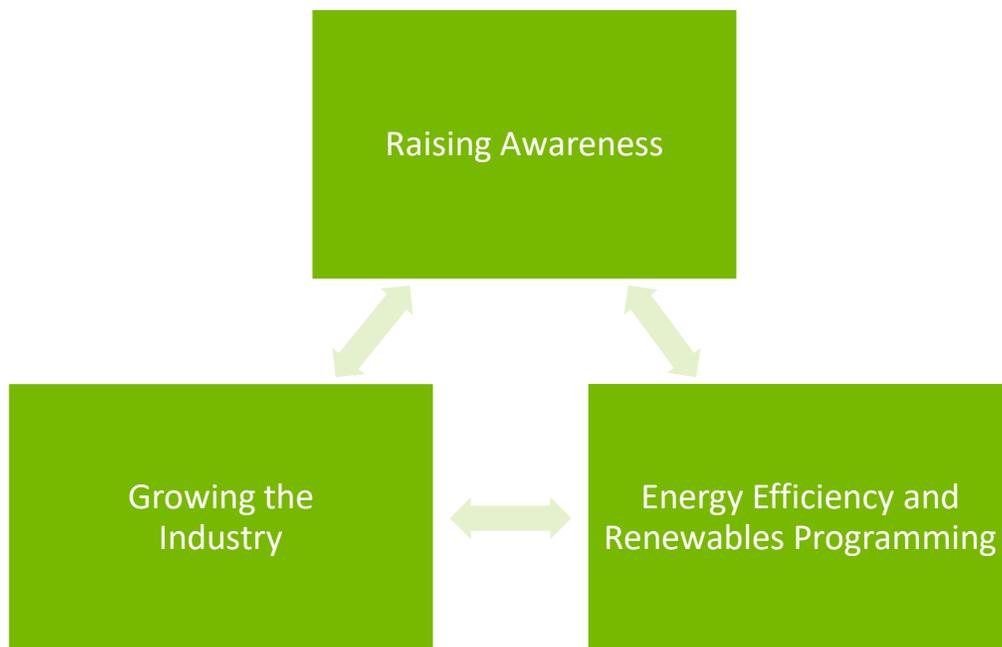
4. ABOUT ENERGY EFFICIENCY ALBERTA

Energy Efficiency Alberta's three-point mandate is the product of extensive stakeholder engagement, direction from an expert panel, and benchmarking against similar agencies across North America. It provides focus and alignment for the agency's strategies, plans and activities. It also provides clarity to Albertans — many of whom are unfamiliar with energy efficiency as a resource — on the purpose of the agency and how they, and the province's economy, can benefit.

4.1 MANDATE

1. To raise awareness among energy consumers of energy use and the associated economic and environmental consequences.
2. To promote, design and deliver programs and carry out other activities related to energy efficiency, energy conservation, and the development of micro-generation and small-scale energy systems in Alberta.
3. To promote the development of an energy-efficiency services industry.

The three components of our mandate are interrelated and mutually supporting. Raising awareness in the market allows deeper participation in programming, as well as understanding of specific market opportunities within the energy-efficiency industry. Participation in programs can lead to greater consumer awareness, while contractors and implementers delivering energy efficiency and renewable energy upgrades provide jobs, skills and experience in the industry. Growth in the industry provides more opportunities for cost-efficient and effective program delivery, and those jobs provide awareness and education to the market.



4.2 2018/19 GOALS

The following goals have been developed by Energy Efficiency Alberta for 2018/19, in alignment with our mandate. These goals build on our 2017/18 work, which was largely focused on building out the Agency and launching an initial set of programs.

Energy Efficiency Alberta Goals for 2018/19

1. Increase the awareness of the value of energy efficiency and renewable energy to Alberta's energy system through targeted education and awareness outreach.
2. Align program investment to the emission reduction potential of each sector, maintaining investments in residential and business markets; expanding in municipal, large commercial and industrial markets; and introducing targeted services that give limited-income households and non-profit organizations the opportunity to participate.
 - a. Expand program support for measurement, tracking and assessment of energy use and energy management in facilities.
 - b. Maintain support for low-cost and single-system retrofits, as an entry point for energy-efficiency and renewable energy retrofits.
 - c. Introduce programming that encourages integrated whole-building retrofits, producing deep and lasting energy savings and carbon emission reductions.
 - d. Explore efficiency financing as an additional mechanism to enable private-sector investment in energy efficiency and renewable energy.
3. Launch a trade ally network to further engage with providers of energy efficiency and small-scale renewable energy products and services, and build the capacity to design, implement, manage and maintain highly efficient buildings.
4. Conduct market research and program evaluation that supports the development of targets.
5. Continue to build internal systems and capacity, with a focus on data collection, management and reporting.

The approach to delivering on these goals is outlined in the next section.

5. PROGRAM PORTFOLIO

Over the past year, progress has been made on all three components of Energy Efficiency Alberta's mandate. This has come through the launch of five initial programs; growing awareness about energy efficiency for homes, businesses and institutions; and an expanding energy-efficiency sector that is employing Albertans and driving economic growth.

After one year of rapid growth, Energy Efficiency Alberta is in a strong position to continue advancing the mandate of the agency, with enhanced and new programs planned for 2018/19, innovative education initiatives, and increased capacity to build an energy-efficiency sector for the province. The sections below describe the program portfolio based on its alignment to our mandate. The Raising Awareness and Growing the Industry sections illustrate the work of the agency to raise awareness and

understanding, and to support the development of an energy-efficiency services industry. The Accelerating Adoption of Energy Efficiency and Renewable Energy section focuses on program delivery.

RAISING AWARENESS	
<ul style="list-style-type: none"> Engaging energy consumers (Education Program) 	
GROWING THE INDUSTRY	
<ul style="list-style-type: none"> Further developing the energy-efficiency services industry (Capacity Building Program) 	<ul style="list-style-type: none"> Build a robust foundation to engage with stakeholders
ACCELERATING ADOPTION OF ENERGY EFFICIENCY AND RENEWABLE ENERGY	
<ul style="list-style-type: none"> Residential Energy Efficiency Non-Residential Energy Efficiency <ul style="list-style-type: none"> Industrial Non-Profit Commercial Institutional Municipal 	<ul style="list-style-type: none"> Renewables Financing

5.1 RAISING AWARENESS

5.1.1 Engaging energy consumers (Education Program)

Providing incentive programming is critical to helping Albertans become more energy efficient; however, it must be offered in conjunction with an investment in initiatives that educate and inspire Albertans to embrace energy efficiency as a new way of thinking and acting.

Educational initiatives are considered an enabling strategy to assist in developing and supporting other energy-efficiency programs. They are an important offering because they help to create a culture of awareness about energy efficiency and help increase participation in other programs. They can include strategies that offer lasting benefits through market transformation by changing behaviour and adopting energy-efficiency market knowledge, services and practices as the standard.

5.1.1.1 Start with the basics

- As a new agency in a province relatively unfamiliar with energy-efficiency technologies, practices, programs and services, awareness and education initiatives are critically important.
- For 2018/19, we will continue to focus on increasing awareness about what the agency does, including program details and information explaining how to save energy and money. As the agency’s portfolio of programs expands and evolves, education will become less about specific

program details, and more about holistic sector benefits, particularly for commercial and industrial customers.

- Based on the results of market research — which established Alberta’s current awareness levels and the barriers to taking action on energy efficiency — we will implement robust awareness and education campaigns targeted at key market segments, including residential, commercial and industrial customers.
- We will leverage the experience of marketing and media agencies that understand the Alberta market, how Albertans consume information, and how best to reach our target audiences as cost-effectively as possible. This could include the use of more digital technologies and apps, more direct contact at community and industry events, and paid advertising campaigns and earned media across print, digital and broadcast channels. We will rely on research and analytics to refine our approach.
- Our goal is to position Energy Efficiency Alberta as the province’s most trusted source of energy-efficiency information and programs, and as the agency responsible for promoting and driving energy-efficiency efforts.

5.1.1.2 Pilot education approaches in different markets

Our peers in other jurisdictions have advised us to start modestly by piloting education approaches in a few specific markets, rather than trying to cover all audiences right away. We are taking their advice and will be targeting three markets for initial education initiatives:

1. *Youth*: We will partner with established educational organizations to increase the capacity of educators to deliver compelling educational content to more K-12 students, resulting in increased action to reduce energy use and greenhouse gas emissions, employing tracking and evaluation measures wherever possible.
2. *Underserved markets*: This includes residential energy customers who have difficulty accessing current programs due to cultural, geographic or socio-economic factors. These markets include newcomers, seniors and urban Indigenous Albertans, as well as Albertans with limited incomes. We will partner with existing organizations to provide targeted educational programming for these markets to identify and address barriers to program access and the adoption of conservation behaviours in the home. Initiatives will be rooted in community-based social marketing methods that emphasize direct personal contact with community members.
3. *Facility owners, managers and operators*: This includes strategic decision-makers who are involved in large capital purchases, as well as those responsible for day-to-day operations, processes and routine maintenance. This group is directly responsible for the consumption of energy and energy-efficiency programming, so their engagement and education is critical to successful market transformation. We will provide technical training to build a deep understanding of the value of energy efficiency, and engage with them through program implementers, associations and a formal trade ally network.

5.1.1.3 Build and leverage the knowledge of Energy Efficiency Alberta staff

We will continue to invest in the education and professional development of agency staff so they become knowledgeable ambassadors in the community.

Direct communication with Energy Efficiency Alberta employees is a proven way to increase awareness and engagement. Best practices from our peers in other jurisdictions cite direct communications from employees as a top source of useful information about the organization. As our education and engagement efforts ramp up, our employees will be meeting with people from across the province at industry and community events, home shows and trade shows throughout the year, in addition to speaking at conferences, business and industry associations, community groups, etc. Peer evaluations have repeatedly shown that these activities positively impact attitudes towards energy efficiency as well as participation in energy-efficiency actions.

5.1.1.4 Increase understanding with provincial and municipal decision-makers

Provincial and municipal outreach is another key component of most leading jurisdictions' education and engagement strategies. In 2018/19 we will implement a schedule of presentations to key Government of Alberta ministries and committees whose interests align with energy efficiency (e.g., Agriculture and Forestry, Energy, Economic Development and Trade, Seniors and Housing, Education, and Indigenous Relations). We will also establish an approach and schedule to meet with members of the legislative assembly, members of Parliament, mayors and reeves to provide an overview of our programs and services. We will maintain regular communications through newsletters and caucus presentations to ensure that decision-makers understand the benefits of energy efficiency and that they have the relevant program information to share with their constituents. We will partner with organizations such as the Alberta Urban Municipalities Association (AUMA) and the (newly re-named) Rural Municipalities of Alberta (RMA) to increase communication with elected municipal officials and administrators, as well as directly with municipalities where relevant.

5.2 GROWING THE INDUSTRY

5.2.1 Further developing the energy-efficiency services industry (Capacity Building Program)

The agency is developing a technical capacity-building program with the aim of fostering a high-quality energy-efficiency and renewable energy industry, a skilled and professional workforce, and energy-efficiency expertise and capacity across Alberta. By partnering with training organizations and industry associations, we will offer a range of technical training opportunities to the Alberta market in 2018/19 while continuing to develop our market transformation strategy.

The key target market for the Capacity Building Program includes energy professionals, building inspectors and trade allies. The suite of courses to be offered to the market is intended to align with the opportunities available through our programming. Courses are being developed with a range of delivery structure, level of detail and specialty to provide options for the Alberta marketplace. Initial course offerings have been very popular.

CAPACITY BUILDING PROGRAM: KEY TARGET MARKETS

Energy professionals, including engineers, energy managers, building operators, auditors and other trained experts in the built environment. As the advisors and responsible parties for buildings and facilities, it is key that they understand the benefits of energy efficiency and renewable energy.

Municipal building inspectors, who are government employees responsible for regulatory oversight of building code and safety, and who are tasked with the on-site inspection and approval of permitted retrofit and new construction activities. Inspectors would be involved in verifying and approving energy-efficient installations; it is therefore critical that Energy Efficiency Alberta partner with them to ensure they have a deep understanding of these technologies.

A **trade ally** is defined as any person or company that can influence an energy efficient buying decision by the end user. This could include, but is not limited to, a distributor, architect, engineer/consultant, contractor, manufacturer, retailer or financial institution. The Trade Ally Network (TAN) is a pre-qualified partner network that works with Energy Efficiency Alberta to achieve our goals. Energy-service contractors with a direct connection to individual Albertans and Alberta organizations are our front-line interface, and they gather knowledge and provide quality experiences for our stakeholders. Currently, our direct connections are primarily managed by third-party program implementers.

5.2.2 Building a robust foundation to engage with stakeholders

In its first year in operation, with limited staffing, Energy Efficiency Alberta implemented initial outreach with key stakeholder groups, including trade allies, provincial government officials, municipal leaders, utilities, community groups, financial institutions and industry associations.

Throughout 2018/19, we will develop and implement a comprehensive stakeholder engagement strategy to:

- Identify key stakeholders, assessing their needs, preferred communication channels, and current and potential engagement opportunities
- Establish a cost-effective infrastructure of engagement programs, which could include technical information sessions, forums, conference speakers, information booths, workshops, etc.
- Embed a cycle of stakeholder engagement in program design and delivery, ensuring stakeholder feedback is regularly collected, analyzed and addressed
- Assign and train agency staff for outreach activities
- Track and analyze stakeholder data for more coordinated engagement and better decision-making

Building a trade ally network will be a key component of our stakeholder engagement strategy. This will involve:

- Understanding the unique needs of Alberta’s current and potential trade allies, from manufacturers and distributors, to architects and engineers, to a wide range of home improvement contractors operating in rural and urban centres
- Offering education and training opportunities to increase knowledge, proficiency and use of agency programs
- Provide tools and access to technology to streamline interactions with the agency
- Articulate and share the unique value statement of “what’s in it for them”
- Qualification and certification programs
- Trade Ally Network participation benefits, including marketing, media and social/digital promotion for their businesses
- An awards program to recognize excellence and innovation in energy efficiency and renewable energy across the province

5.3 ACCELERATING ADOPTION OF ENERGY EFFICIENCY AND RENEWABLE ENERGY

5.3.1 Residential Energy Efficiency

The Residential sector in Alberta presents opportunities to involve all Albertans in saving energy. Programs offered by Energy Efficiency Alberta have a direct impact on Alberta households and families. Residents see reduced energy costs, and can experience improved comfort in their homes. Further, the energy-efficiency savings of the residential sector contributes to the reduction of greenhouse gases, and the programs stimulate local job creation. The residential sector accounts for 22 per cent of the total emissions from buildings and (non-oil and gas) manufacturing facilities in the province.

In 2017/18, we invested 75 per cent of total program funding into residential energy efficiency, with the majority (\$77 million) allocated to the broad distribution of low-cost energy-efficiency technologies through local retailers in the Residential Retail Products Program (Instant Savings and Online Rebates) and the Residential No-Charge Energy Savings Program (in-home direct install). Budget values are displayed in Section 8: Budget. These programs met their objective of reaching many Albertans, as an early entry point to energy efficiency and as a springboard to other programs. More than 150,000 households registered for the Residential No-Charge Program; 600 retail locations representing 200 retailers sold over nine million low-cost, high-efficient lighting, control and water-saving devices through the Residential Retail Products Program. In particular, the high level of participation in lighting has nearly transformed the lighting retail supply and the LED options in Alberta. A successful contractor-based Home Improvement Program was also launched, with over 900 contractors currently registered and over 7,000 applications to date, contributing to Alberta’s employment and economic growth. Alberta’s Home Improvement Program is seen to be a best practice compared with other jurisdictions’ programs; Alberta’s incentives are performance-based, rather being prescriptive based on the measure.

In 2018/19, we will begin to shift towards deeper energy and greenhouse gas savings in the residential sector, with 38 per cent of program funding delivered to this sector. The Instant Savings and Online Rebate components of the Residential Retail Products Program will be maintained at a lower investment

level, shifting to offering ongoing rebate options. Registration for the mass-market direct-install program closed in November 2017, and all installations are slated to be completed by summer 2018. The Home Improvement Program will anchor a shift to deeper savings and a whole-building approach.

We will also launch programming specifically targeting limited-income and other hard-to-reach markets. The Affordable Housing Program will install low-cost energy-saving measures in provincially owned and/or supported affordable housing units at no cost to the homeowners or tenants. The program is focused on measures that can be installed in interior tenant living spaces and in common areas.

RESIDENTIAL ENERGY EFFICIENCY PROGRAMMING EVOLUTION

In 2018/19, we will:

- Expand the Home Improvement Program and explore whole-home approaches
- Launch targeted programs for affordable-housing and limited-income households
- Complete installations of registered direct-install customers

5.3.2 Non-Residential Energy Efficiency

Our objectives with the business, not-for-profit, institutional and industrial sector include improving energy savings, reducing greenhouse gas emissions, reducing operational costs, bringing awareness, and integrating energy efficiency throughout organizations. In 2017/18, the agency invested \$16.1 million in the non-residential sector, which represented 16 per cent of the program portfolio. As of December 2017, the agency saw gains in program acceptance, with more than 1,200 participants in the Business, Non-Profit and Institutional (BNI) Program. The non-residential sector presents a large opportunity for energy-efficiency improvements in Alberta, with 78 per cent of total buildings and manufacturing emissions stemming from this market sector. In 2018/19, the portfolio will expand with greater offerings for the non-residential sector, with an overall budget of \$62.9 million, 43 per cent of the total 2018/19 programming budget.

NON-RESIDENTIAL ENERGY EFFICIENCY PROGRAMMING EVOLUTION

In 2018/19, we will:

- Launch a custom program alongside support for energy management systems and services
- Continue to deliver expanded programming to the commercial and institutional sector
- Expand and evolve programming specifically for the non-profit sector
- Explore alignment of municipal programming with programming offered by Energy Efficiency Alberta

5.3.2.1 Industrial

The industrial sector including the Large General rate class represents the greatest opportunity for built-environment energy efficiency in Alberta through energy savings and greenhouse gas reductions, as this sector is the biggest energy user. While industrial customers — excluding large final emitters (LFEs) — were always eligible to participate in the BNI Program, in February 2018, additional products were launched that are tailored to industrial facilities. This program will support rapid implementation of common equipment upgrades. We are also launching a new Custom Program to serve customers through a whole-facility approach that enables the implementation of a broad range of site-specific energy-saving opportunities. The program provides support to accelerate the adoption of processes, systems and technologies that increase energy efficiency, reduce operating costs, decrease greenhouse gas emissions and improve competitiveness.

The Industrial sector includes two new components, to be launched in the spring of 2018:

- Custom: To support a wide range of customer needs, this component will provide access to funding for energy-efficiency projects that are customized to the specific sites and operations of each participant. To facilitate the development of these projects, the program will provide access to both technical and financial support in order to target the large energy-saving opportunities within industrial energy users and greenhouse gas emitters.
- Energy Management: The overall goal of this component is to help customers improve the energy performance of their facilities through a suite of energy management tools that embed a culture of energy management within their organization. Energy managers will be responsible for baselining their facilities, and for identifying and promoting energy-efficiency opportunities within their organizations. This will be achieved through a variety of new initiatives: financial incentives and training for an embedded energy manager, funding for engineering studies and scoping audits, support for proactive facility retro- and re-commissioning, and strategic energy management training and facilitation for industry.

These programs will service industrial, commercial and Large General Service participants facilities that are not LFEs; in the future, these programs may be expanded to serve LFE sites. Our suite of programs offered for the industrial sector has been purposefully designed to reflect Alberta's industrial market, and to align with other programs offered by Emissions Reduction Alberta, Economic Development and Trade, Agriculture and Forestry, Energy, and other Government of Alberta ministries.

5.3.2.2 Commercial

We currently offer incentives to encourage commercial businesses and institutions (BNI customers) to install high-efficiency products. The program offers rebates for a variety of efficient lighting, HVAC and water heating equipment. An original set of 58 measures were offered at the onset of the program; in January 2018, an additional set of 23 new measures were added to enhance the general offering and to expand selection specifically to the hospitality and food service sector.

By December 31, 2017, more than 1,200 organizations participated in the Business, Non-Profit and Institutional Energy Savings Program. The rebates delivered by that date total \$3.5 million, or an average of \$2,600 per project. This amounts to more than \$11 million in investments by Alberta organizations. The expected energy savings associated with this program are 40,000 gigajoules per year.

With the recent inclusion of new measures, commercial and institutional organizations will continue to benefit in 2018/19 from a similar level of incentive support as in 2017/18. Measures will continue to be added as market engagement of distributors and manufacturers continues to identify cost-effective energy-saving measures that have limited market uptake.

5.3.2.3 Non-Profit

The non-profit sector has a unique set of needs when it comes to capturing energy-efficiency opportunities. The Non-Profit Energy Efficiency Transition (NEET) program was introduced in 2017/18. NEET provides funding to help non-profit and volunteer-based organizations in Alberta obtain detailed energy audits and create energy management plans (EMPs). The program helps set the stage for non-profit organizations to take early action to plan for energy-efficiency improvements, and positions them to participate effectively in existing and future Energy Efficiency Alberta programs. With most or all of the direct costs covered for energy-efficiency audits and energy management plans, there was a high interest in the NEET program.

For non-profit and volunteer-based organizations moving to the next step of implementing energy-efficiency upgrades, the BNI Program offers incentives for a wide range of energy-efficiency product upgrades. However, as the BNI Program was designed as a broad market program, in some cases it does not address the specific barriers of non-profit organizations, including lack of staff capacity and expertise required to coordinate efficiency retrofit projects, and difficulty accessing capital to fund the non-rebated portion of equipment costs.

To support those organizations less suited to the broader BNI Program, in 2018/19 we will build upon the NEET program and will pilot targeted incentives for some of the retrofits identified by the audits and EMPs. The program may be expanded with enhanced incentives and services to ensure the opportunities identified are converted to realize greenhouse gas savings.

5.3.2.4 Municipal

Prior to the creation of Energy Efficiency Alberta, municipal energy-efficiency and solar programs on a provincial scale — such as Taking Action on Managing Energy (TAME+, TAME Express), and the Alberta Municipal Solar Program — were offered by the Municipal Climate Change Action Centre (MCCAC), a partnership between the Government of Alberta, AUMA and RMA. The MCCAC and Energy Efficiency Alberta have similar mandates; as such, in 2018/19, there will be an assessment of the alignment of all provincial-scale municipal programs with Energy Efficiency Alberta programming. Further, innovative municipal financial tools such as Property Assessed Clean Energy (PACE) are being explored and will be a first entry into innovative approaches to energy efficiency and renewables financing, including expanding to private-sector partnerships.

5.3.3 Renewables

Energy Efficiency Alberta is also responsible for advancing the growth of distributed renewable energy systems across Alberta. Our existing solar program offers a \$0.75 per watt rebate for the installation of solar photovoltaic micro-generation for residential as well as commercial customers in Alberta. The program encourages faster solar adoption in the market, over and above what would naturally occur in the absence of incentives. We work in conjunction with the Alberta Municipal Solar Program (AMSP), the Alberta Indigenous Solar Program, and Alberta Agriculture and Forestry's Growing Forward program to provide options for various individuals and groups interested in the development of solar.

As of December 2017, over 500 households and businesses have applied to participate in the Residential and Commercial Solar Program. When all approved installations are complete, this will represent 16 megawatts of new generation capacity — enough to power 2,700 homes.

We also offer funding to build the capacity of a community organization to design, build and manage community-based generation that would contribute towards the eventual development of a specific small or micro-scale renewable energy system. The program funds two types of capacity-building proposals: capacity-building for a specific community energy project, and capacity-building for community energy projects as a whole in the province.

In 2018/19 we will continue to provide incentives for solar rebates and support the growth of community energy development. The budget for these two programs is \$19 million, 13 per cent of the 2018/19 program budget.

RENEWABLES PROGRAMMING EVOLUTION

In 2018/19, we will:

- Continue to offer solar incentives to grow the industry
- Explore options for community energy development

5.3.4 Financing

Financing is an effective tool for delivering energy efficiency. By reducing the upfront cost of energy-efficiency measures, barriers to uptake can be overcome. Financing has been shown in other jurisdictions to be a successful and cost-effective way of delivering energy efficiency to the market. In the 2018/19 program year, we plan to launch two financing programs — PACE and Guaranteed Green Loans — as part of our energy-efficiency and renewable energy portfolio.

Property Assessed Clean Energy (PACE)

In 2018/19, we will seek to create and administer Alberta's first province-wide Property Assessed Clean Energy (PACE) financing program to support the deployment of energy efficiency, renewable energy and water conservation improvements in Alberta's residential, commercial, industrial and agricultural building stock. PACE is an innovative market-based approach to energy finance and economic development. It allows property owners to finance eligible upgrades via a property tax special assessment, ensuring that loan repayments are amortized over the full life of the installed improvement, thereby overcoming the traditional cost barrier typically faced when considering energy-related upgrades. PACE is a proven private-public partnership that enables municipal governments to support private-sector investment in local building stock, thereby reducing local pollution and fostering economic development.

Green Loan Guarantees

On behalf of the Government of Alberta, pending final approvals, Energy Efficiency Alberta will administer Green Loan Guarantees, a tool for providing incremental capital to businesses that otherwise would not have the necessary access to capital or leverage capacity for energy-efficient products/services. Green Loan Guarantees will encourage investments in energy-efficient products/services while reducing the lending risks for financial institutions.

FINANCING PROGRAMMING EVOLUTION

Pending final government approval, in 2018/19, we will:

- Launch a Green Loan Guarantee program
- Launch a PACE program, when appropriate legislation is in place

6. OPERATIONAL EXCELLENCE



In order to deliver programs, bring awareness to energy efficiency and renewables, and support the energy services industry, we made dedicated operational excellence efforts in our first year. We focused on building the right team and creating organizational processes and systems. We are strategically building out a team of 34 full-time employees, overseeing and working directly with third-party program implementers who operate as an extension of our workforce, and building organizational systems, including the creation of IT, HR and financial systems, to enable work. The administration budget in 2018/19 is \$4 million, three per cent of the total agency budget.

2018/19 will provide the agency with an opportunity to further develop our capacity and capabilities in a number of areas:

- As the agency continues to develop, **cross-program services** will begin to shift in-house, resulting in improved cost-effectiveness and more centralized quality control. There will be additional focus on areas such as reporting, contract management, **data management** and customer satisfaction.
- Enhancements to our programming will be informed by **market research**, centred on an Alberta-specific energy-efficiency **potential study**, which will provide engineering and economic analysis of savings opportunities. **Stakeholder engagement** — throughout program development life cycles — will also contribute to effective program planning to ensure lasting change in the marketplace.
- In Alberta, there are existing entities that provide energy-efficiency-related programs and services to key segments in the market. There is an opportunity to grow **partnerships** with government departments including Agriculture and Forestry, Economic Development and Trade, Seniors and Housing, and Municipal Affairs; with municipalities in the province; and with agencies such as Emissions Reduction Alberta and Alberta Innovates.
- By providing clear and evidence-based guidance to government and regulators, we can demonstrate the benefits that energy efficiency and renewable energy could deliver within specific **policy and regulatory** frameworks. Specific areas of interest in 2018/19 include the capacity market, community-distributed generation, energy-efficiency financing and the role of energy efficiency in managing costs within the utility system.
- In 2018/19, we will increase capacity, both internally and through the use of external agencies, to ramp up our **marketing and communications** efforts. We will focus on market research, on

establishing a unique and compelling brand, and on building the infrastructure for innovative marketing, proactive media relations, targeted social and digital media, and enhanced employee communications.

- In 2018/19, Energy Efficiency Alberta's Board will lead a **strategic planning** process to guide the future direction of the organization. A three-year strategic plan will be developed that will guide business planning and the work of the organization going forward.
- As both a large market and the last jurisdiction in North America to establish a dedicated energy efficiency and small-scale renewable energy program, Alberta is uniquely positioned to leverage the expertise and experience of neighbouring jurisdictions, accelerating innovation and reducing cost. Through active participation in national organizations such as the roundtable of Canadian Energy Efficiency Agency leaders, we will participate in joint market and policy research, as well as in the shared development of education tools (such as online apps) and programming. These efforts will help **build a national network**.

7. MEASURING SUCCESS

Most energy-efficiency organizations are primarily evaluated against energy and cost savings. With the origins of Energy Efficiency Alberta from the Climate Leadership Plan, we will, among other metrics, be evaluated against greenhouse gas emission reductions, which represents an innovative (and emerging) way to guide program design and to align efforts with the government's overall climate goals.

The Climate Leadership Plan's ultimate objective is reduced greenhouse gas emissions while also working towards a lower carbon diversified economy, and increased community health and well-being.

Our objectives within the plan are:

- Improving the energy efficiency of homes, businesses, institutions, industries and communities
- Reducing/avoiding greenhouse gas emissions through decreased energy consumption and increased energy conservation
- Improving Albertans' quality of life through cost savings, and through increased comfort and efficiencies
- Fostering the growth of an energy-efficiency industry

Preliminary performance measures and indicators are:

1. Greenhouse gas emissions
 - Greenhouse gas emissions reduced/avoided
2. Energy savings
 - Lifetime energy savings
 - Lifetime water savings
 - Renewable energy capacity installed
3. Improved quality of life

- Consumer savings
 - Program customer satisfaction
 - Portfolio cost-effectiveness
 - Economic impact, including job creation
4. Market Transformation
- Outreach and awareness proxy, for example
 - Number and growth in trade ally participation by program
 - Growth in certified energy professionals

Tracking key performance indicators helps assess the performance of the organization against set targets. Targets are in the process of being developed as part of the potential study and the development of the related organizational evaluation framework. After a full year in market, our initial set of programs will start to be evaluated in 2018.

8. BUDGET

Revenue: In 2018/19, provincial funding to the agency totals \$124.2 million, which is being supplemented by an additional \$25 million from Environment and Climate Change Canada's Low Carbon Economy Leadership Fund (LCELF). The total funding for the program year is \$149.2 million, as described in Table 1.

Expense: In 2018/19, we are expending funds on programs and services that reach all major market sectors in the province, including, at a high level, residential, non-residential, renewables, financing and education, as displayed in Figure 1.

As shown in Figure 2, the majority of the budget (83 per cent) is expended on program implementation (including incentives and rebates), with the remainder spent on market development and education, market research and program evaluation, and administration.

Table 1: Energy Efficiency Alberta Budget – April 1, 2018 to March 31, 2019

STATEMENT OF OPERATIONS						
(thousands of dollars)						
	Comparable			2018–19 Estimate	2019–20 Target	2020–21 Target
	2016–17 Actual ¹	2017–18 Budget	2017–18 Actual ²			
REVENUE						
Carbon Levy	10,000	185,000	107,431	124,200	54,500	48,320
Transfers from Government of Canada				25,000	40,000	28,000
Other Revenue						
Total Revenue	10,000	185,000	107,431	149,200	94,500	76,320
EXPENSE						
Energy Efficiency Education			4,769	800		
Residential Energy Efficiency	945	93,500	76,640	55,000	27,000	6,760
Non-Residential Energy Efficiency	141	28,900	17,957	62,900	41,700	31,000
Renewables		8,400	4,086	19,000	18,800	6,000
Financing program delivery ³				7,500	3,000	
Future Energy Efficiency Alberta Programming		50,200				28,560
Administration	344	4,000	3,979	4,000	4,000	4,000
Total Expense	1,430	185,000	107,431	149,200	94,500	76,320
Annual Operating Surplus or Deficit	8,570 ⁴					

Note: The above rounded figures are approved by the Energy Efficiency Alberta Board. Exact amounts will be reflected in Alberta Environment and Parks – Energy Efficiency Alberta grant agreement.

¹ 2016/17 revenue and expenses represent a partial fiscal year, beginning in October 2016 when the agency was established through the Energy Efficiency Act. The partial year represents an early start-up period for the agency.

² Based on March 31, 2018 Audited Financial Statements

³ Pending approval.

⁴ The 2016/17 surplus was retained by the Government of Alberta.

Figure 1: 2018/19 Market Sector Allocation

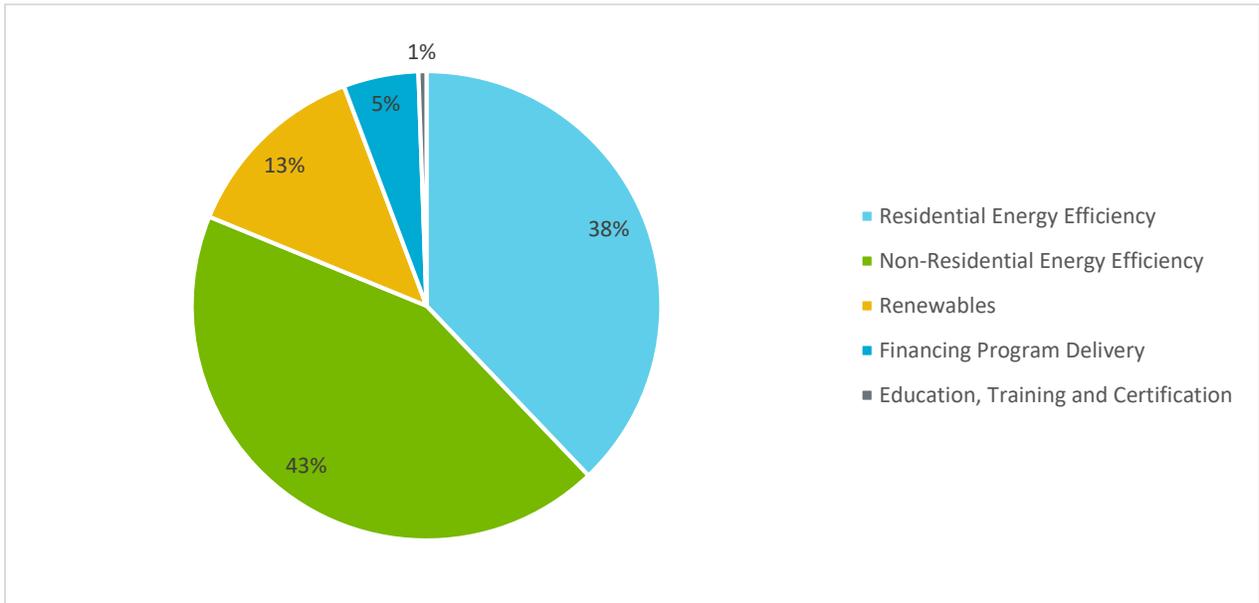


Figure 2: 2018/19 Category Allocation

