
CLIMATE CHANGE AND EMISSIONS MANAGEMENT (CCEMC) CORPORATION
GLOBAL CHALLENGES.
LOCAL SOLUTIONS.

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MESSAGE FROM THE CHAIR

OUR WORLD IS CHANGING. SCIENCE, RESEARCH AND MODELLING HAVE CONFIRMED THE RANGE OF IMPACTS THAT CLIMATE CHANGE WILL HAVE ON ALBERTA ECOSYSTEMS AND DETERMINED THAT ALBERTA WILL NEED TO LEARN TO ADAPT TO A CHANGING CLIMATE WHILE STILL BEING DILIGENT IN ITS EFFORTS TO REDUCE GREENHOUSE GAS EMISSIONS.

The challenge of reducing greenhouse gas emissions is not ours alone; all around the world people are working to find ways to address the energy demands of a growing population in more sustainable ways.

We know there is no silver bullet. The solutions are many and they all rest with the development of many different types of new technologies.

At the CCEMC, we see hundreds of bright ideas every year. Each project we support contributes to a growing body of knowledge and advances ideas that will help Alberta move toward its emissions reduction goals.

In the past year, we committed support to four new energy efficiency projects and eight renewable energy projects. Renewable energy became the largest part of our portfolio. Our new projects are diverse and include a family farm waste-to-energy project and a project from California that uses innovative solar collectors that generate power and increase greenhouse production at the same time. The renewable portfolio also includes the largest wind project in western Canada. The team developing the wind project is using innovative turbines to harness power in a low-wind area that was previously considered uneconomic.

We're learning about new opportunities through our biological program as well. The program has three projects in progress, and in 2014 the CCEMC will announce support for more biological projects that we'll identify through a request for proposals. We know that this clean tech sector has tremendous potential for Alberta.

In February 2013, we invited the world to provide us with bold ideas for using carbon through a $35-million Grand Challenge. We're looking forward to the results of the first phase of this five-year process in the spring of 2014.

While the challenges before us are significant, we're immersed in a world of bright ideas and there is growing potential for international collaboration. At the CCEMC, we're working harder to find the best ideas to help Alberta reduce emissions and in the process we're learning that the technologies we develop here can also be applied elsewhere, and help the world transition to a lower carbon future.

ERIC NEWELL

BOARD OF DIRECTORS

As an independent, not-for-profit corporation, the CCEMC is governed by a Board of Directors. The Board is responsible for providing leadership, policy development and the allocation of resources to achieve strategic results. The CCEMC Board represents the public at large and sectors of the economy that have large final emitters. Together, they provide the CCEMC access to tremendous expertise.

ERIC NEWELL
Chair

DOUG BEEVER
Fertilizer Industry

JIM CARTER
Mineral Manufacturing

PAUL CLARK
Chemical Producers

AARON FALKENBERG
Public at Large

CHARLES FISCHER
Conventional
Oil and Gas

DR. BRENDA KENNY
Pipeline Industry

DR. DAVID LEWIN
Electricity Generation

DR. DAVID LYNCH
Academic

ROY NEEHALL
Public at Large

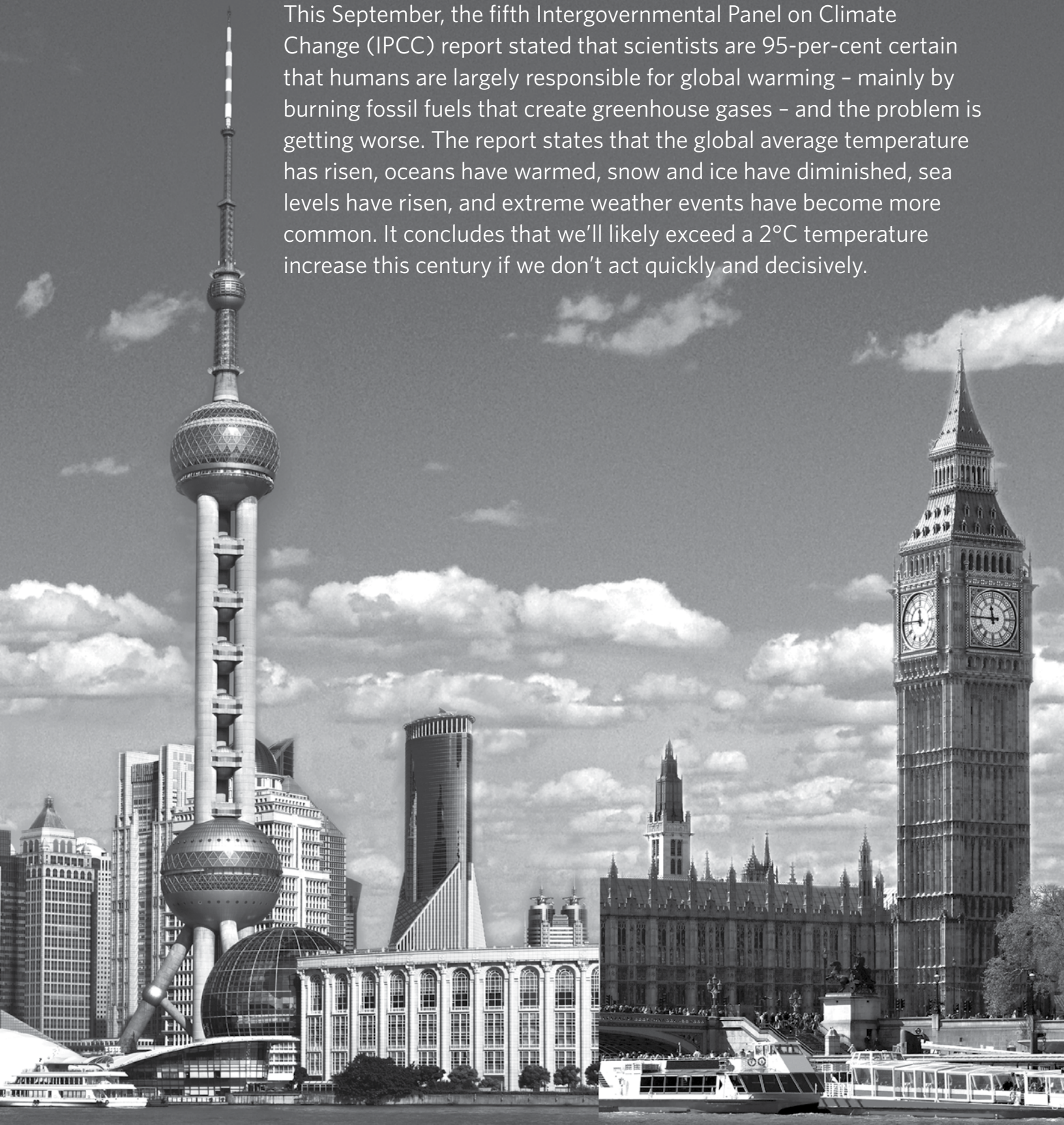
DR. ROBERT MANSELL
Public at Large

PATRICE MERRIN
Public at Large

ALEASA TASKER
Forest Industry

GLOBAL CHALLENGES

This September, the fifth Intergovernmental Panel on Climate Change (IPCC) report stated that scientists are 95-per-cent certain that humans are largely responsible for global warming – mainly by burning fossil fuels that create greenhouse gases – and the problem is getting worse. The report states that the global average temperature has risen, oceans have warmed, snow and ice have diminished, sea levels have risen, and extreme weather events have become more common. It concludes that we'll likely exceed a 2°C temperature increase this century if we don't act quickly and decisively.



This means a strong global effort to combat climate change is necessary to protect the health of our economies, communities, and future. Acting together to reach reduction targets is necessary; but how do we meet the targets while continuing to use fossil fuels to meet our energy needs? One of the ways is by supporting the development of cleaner and renewable energy solutions that allow us to use fossil fuel reserves responsibly.

The CCEMC is one of Alberta's important contributions to this effort.

OUR PROJECTS IN ALBERTA

MAP LEGEND

- CLEANER ENERGY PRODUCTION FROM FOSSIL FUELS
- CARBON CAPTURE AND STORAGE PROJECT
- RENEWABLE ENERGY PROJECT
- ENERGY EFFICIENCY PROJECT
- ADAPTATION PROJECT

OUT OF PROVINCE NOT SHOWN

4TH YEAR OF OPERATIONS

THE PROJECTS WE FUNDED THIS YEAR ARE PREDICTED TO REDUCE MORE GREENHOUSE GASES THAN ANY YEARS BEFORE.

This year, we made a concerted effort to fund projects with the largest potential to reduce greenhouse gases substantially and quickly. With a focus on renewable energy and energy efficiency projects, we funded 12 projects that are estimated to reduce nearly 5.635 million tonnes of CO_2e cumulative emissions by 2020.

THE MODEL

As the only fully functioning compliance carbon market in North America, Alberta is strongly situated to contribute to the world's greenhouse gas reduction efforts. For four years now, we have successfully managed the grants received through the Climate Change and Emissions Fund – one of the compliance options under Alberta's emission reduction regulations. Our model is the first provincial technology fund designed to aggressively reduce greenhouse gas emissions through the support of new, emerging and transformative technologies across the innovation chain. Taken together, these projects will help Alberta and the world transition to a lower-carbon economy.

The combination of Alberta's regulated carbon market and our technology funding model means we can have a strong influence in helping Canada and the world develop the tools to manage its greenhouse gases. This year, we continued to promote the development of technology funds and the role they should play in the regulatory system across Canada. We have shared our knowledge in Ottawa and with provincial jurisdictions that may be interested in establishing a similar system.

2012/2013 PERFORMANCE

This year, we funded energy efficiency and renewable energy projects. Supporting these areas made a significant contribution to our portfolio with the largest estimated reductions we have had since inception.

ENERGY EFFICIENCY FUNDING

4

COMMERCIALIZATION PROJECTS

$29,111,453

PROJECT VALUE

$9,611,043

CCEMC CONTRIBUTION

240,533

ESTIMATED EMISSION REDUCTION (TONNES CO_2E) BY 2020

RENEWABLE ENERGY FUNDING

6
COMMERCIALIZATION PROJECTS

1
PROJECT TECHNOLOGY DESIGN AND DEVELOPMENT

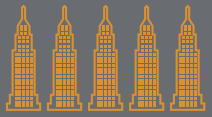
1
BASIC RESEARCH AND DEVELOPMENT

$688,038,476
PROJECT VALUE

$46,811,851
CCEMC CONTRIBUTION

5,395,399
ESTIMATED GHG EMISSION REDUCTION (TONNES CO_2E) BY 2020

1 TONNE WOULD BE ROUGHLY EQUAL TO:
39 BASKETBALLS FULL OF CO_2



1 MEGATONNE WOULD BE ROUGHLY EQUAL TO:
THE VOLUME OF FIVE EMPIRE STATE BUILDINGS MADE UP OF CO_2

BIOLOGICAL PARTNERSHIP

There is significant potential to reduce emissions from biological sources, such as those from crop and livestock production, the forest industry and municipal waste handling. This year we supported three projects through our partnership with Alberta Innovates Bio Solutions that will contribute to Alberta's efforts to reduce greenhouse gas emissions and add to a growing body of knowledge.

3 projects supported in 2012/13

$619,090 total value in projects

$594,090 in CCEMC contribution

Project topics: fertilizer application, biocarbon and farmers implementing greenhouse gas offsets

ADAPTATION PROGRAM

Part of our mandate is to improve Alberta's ability to adapt to climate change. Through our adaptation program, the following three ongoing projects have made significant progress in their studies of our changing climate.

FOOTHILLS RESEARCH INSTITUTE
TREE SPECIES ADAPTATION RISK MANAGEMENT PROJECT

In its first year, the project began laying the groundwork by initiating their testing of wild populations of trees. The central parkland climate change adaptation test site is in its early stages and the review of programs for risk to aid in climate change preparedness has begun. A team was formed to develop a template to aid in the reviews of the 24 controlled parentage programs (CPP) in Alberta. Dr. Sally John has started a review of the eleven conifer programs of three conifer species, Dr. Barb Thomas has started the review for the Balsam Poplar (deciduous) program, and Jean Brouard has started the review of the two aspen (deciduous) programs.

The project also initiated testing of tree populations for climate tolerance with emphasis on drought. Activities here include measuring existing trials, preliminary work on analyses, orchard management activities, orchard seed collection by family/clone, and the initiation of the mass propagation technology development for clonal aspen.

ALBERTA BIODIVERSITY MONITORING INSTITUTE
BIODIVERSITY MANAGEMENT AND CLIMATE CHANGE ADAPTATION

This year, the team of biodiversity scientists and policy analysts began its pursuit of understanding how our changing climate is affecting wild species of plants and animals across Alberta. Initial assessment of hundreds of wild species ranging from prairie flowers to backyard birds has started, while proactive strategies for preventing or reducing harm from climate change have been studied.

In August, the project released a notable report that addresses the potential impact of climate change on Alberta's ecoregions. The report, Alberta's Natural Subregions under a Changing Climate: Past, Present and Future, was prepared by Dr. Rick Schneider with collaborators from the University of Alberta. The report provides important information that will aid in our efforts to address the impact environmental changes will have on Alberta's plants and wildlife, and offers a solid basis for future adaptation planning in Alberta.

Notably, projections indicate that the province will generally see an earlier spring and an increase in degree growing days. There will likely be increased precipitation and warmer temperatures that will increase the rate of evaporation, resulting in a climate that will be drier overall.

ALBERTA INNOVATES – ENERGY AND ENVIRONMENT SOLUTIONS/WATERSMART SOLUTIONS LTD. SOUTH SASKATCHEWAN RIVER BASIN ADAPTATION TO CLIMATE VARIABILITY PROJECT

As an initiative that will assist communities in adapting to existing and future climate variability, this year the project began exploration into improvements in water storage and infrastructure.

The foundational blocks required to support adaptation and integrated water management over the long term were developed as a set of data, tools, capabilities, engagement processes, and frameworks. These foundational blocks will help identify opportunities for environmental improvement and economic growth.

LOOKING AHEAD

ENGAGING THE INNOVATION ECOSYSTEM

In our 2013/2014 operating year we will enhance our processes and capabilities to support project proponents through the commercialization process no matter where they are on the innovation chain. This transition to support commercialization is a way to achieve greenhouse gas reductions more efficiently and effectively by supporting the technology developers in their quest to be successful. To fulfill our mandate, successful projects must move smoothly to develop and commercialize their technology. It is through implementation and market penetration that the greatest reductions can be realized. We expect to do this through the engagement of Alberta's innovation ecosystem. This change is critical if Alberta is expected to achieve its reduction targets.

UPCOMING CALLS FOR PROPOSALS

In 2013/2014, we will issue two Calls for Proposals.

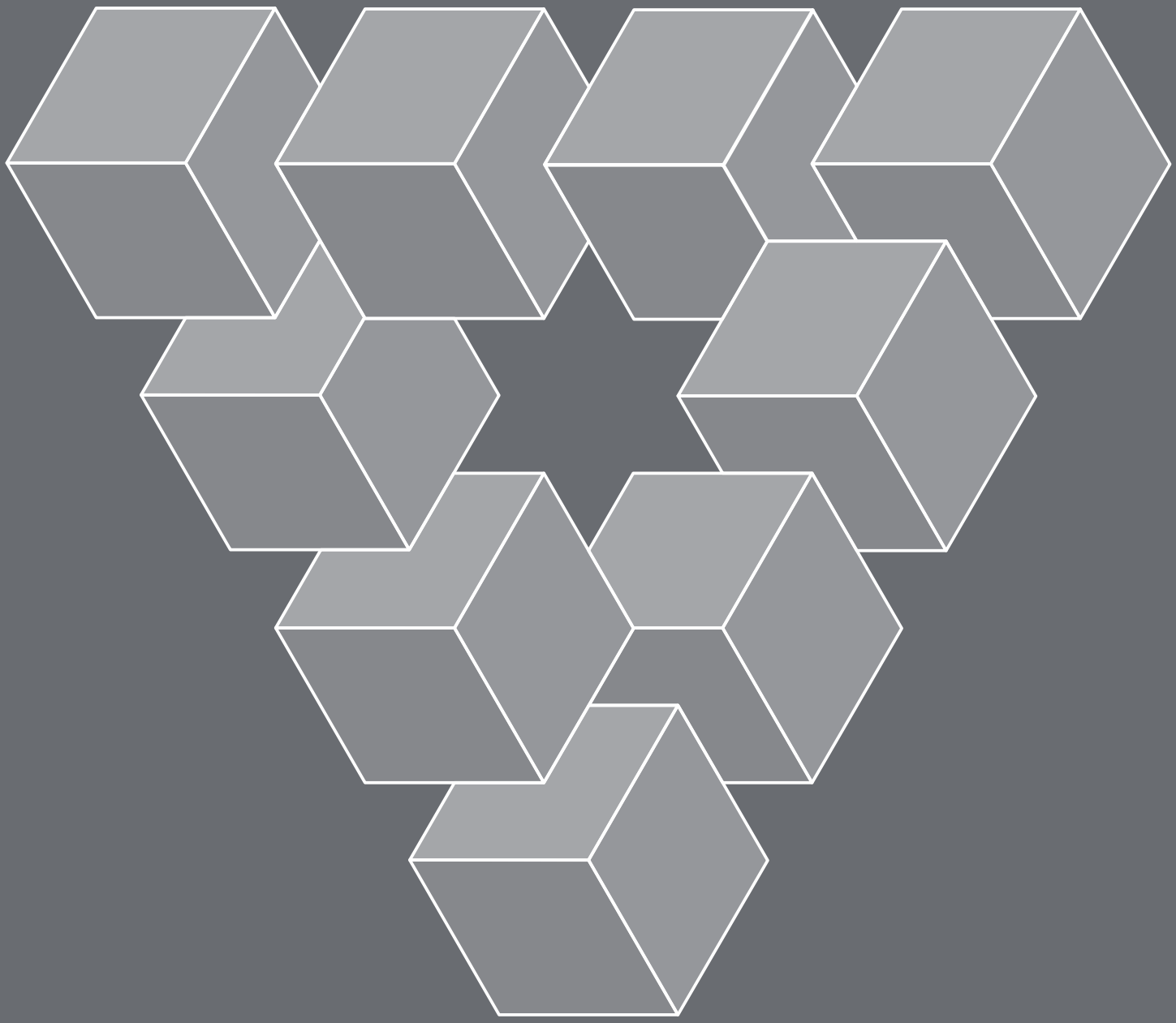
The first will focus on cleaner production of traditional forms of energy such as oil and gas, mining, coal conversion, and underground coal gasification.

The second will focus on biologically based opportunities that support the use of biological organisms (plants, animals, microbes) to avoid or reduce greenhouse gases or to enhance carbon sequestration. Opportunities are being identified in the development work currently underway with Alberta Innovates Bio Solutions.

GLOBAL ENGAGEMENT

To make significant greenhouse gas reductions on a global scale, we know our work has to reach beyond Alberta. We need to look for opportunities anywhere that will make a significant impact in Alberta and around the world.

That is why, in addition to our usual calls for proposals this year, we cast our net wider by engaging solution providers from across the globe with the CCEMC Grand Challenge: Innovative Carbon Uses. In addition, we began sharing our knowledge with other jurisdictions in North America.



CCEMC GRAND CHALLENGE: INNOVATIVE CARBON USES

On February 21, 2013, we launched an international $35-million Grand Challenge to find innovative uses for carbon. This five-year, three-round open innovation challenge is expected to identify multiple technologies that could provide significant reductions in greenhouse gas emissions by transforming carbon from a liability into an asset. Ultimately, the CCEMC Grand Challenge aims to develop carbon utilization technologies that have the capability of reducing at least 1 net megatonne of greenhouse gases annually when fully commercialized.

The first round surpassed our expectations. We received 344 proposals from organizations in 37 countries, with submissions from Africa, Europe, Australia, Asia, and North and South America. The bulk of submissions are from North America where there is some work underway to develop carbon-utilization technologies. Of the 344 submissions, the CCEMC received 151 submissions from the United States and 96 from Canada.

Submissions were received from businesses, inventors, consultants, research organizations, government laboratories, and not-for-profit corporations. The vast majority of submissions were from small- and medium-sized enterprises.

Up to 20 proponents will be selected in the first round to receive grants of up to $500,000 to support the development of their technologies. The second round launches in 2015 and will be open to both new entrants and winners from the first round. Up to five projects will receive grants of up to $3 million each to develop their technologies. The final winning solution will be announced in 2018, with the winner receiving a $10-million grant to support technology commercialization in Alberta.

KNOWLEDGE SHARING IN CANADA AND THE UNITED STATES

While we continue our important work in Alberta, we are also beginning to bring our knowledge to the global efforts to achieve greenhouse gas reductions. In Canada, we are helping to inform governments of the value and need for clean technology funds as legitimate and effective compliance tools. We are a founding member of the Low Carbon Innovation Alliance, a Canada-wide alliance of like-minded organizations focused on achieving greenhouse gas reductions through technology development and deployment. We share knowledge with American-based organizations and monitor initiatives in the United States that deal with their interest in transforming their economy to be less reliant on conventional energy sources through clean technologies.

LOCAL SOLUTIONS

As a major international producer of energy, Alberta has the people, the knowledge and the drive to take on the challenge of reducing greenhouse gases. The projects selected for funding this year demonstrate innovative thinking in the areas of renewable energy and energy efficiency, showing that Alberta is committed to world-class environmental management.

PROJECTS SELECTED FOR 2012/2013 FUNDING

RENEWABLE ENERGY PROJECT FUNDING

Renewable energy is pivotal to reducing greenhouse gas emissions and transitioning to a lower-carbon economy. Supporting renewable energy opportunities like the conversion of biomass and waste to energy, biofuels, geothermal, mini-hydro, solar and wind will enhance Alberta's competitiveness and generate more value from our energy resources.

This year, we provided more than $46 million to eight renewable energy projects that have a combined value of nearly $690 million. We received 99 submissions, mostly from North America, but also from Europe, Asia, India, Africa and the Middle East. Renewable energy is now the largest part of our portfolio, representing diverse and innovative renewable technologies in the commercialization stage.

CITY OF EDMONTON WASTE MANAGEMENT SERVICES

PROJECT:

Implementation of High Solids Anaerobic Digestion Technology at the Edmonton Waste Management Centre

PROJECT LOCATION:

Edmonton Waste Management Centre

PROJECT VALUE:

$30,695,174

CCEMC FUNDING:

$10,000,000

As North America's largest collection of modern and sustainable waste processing and research facilities, the Waste Management Services of the City of Edmonton is continually finding new ways to convert municipal solid waste into renewable resources. With the inception of the CCEMC funded High Solids Anaerobic Digestion Facility, Waste Management Services continues to be on the cutting edge of creating value-laden products and energy from what would otherwise be doomed for the landfill.

The first of its kind in Alberta, the facility will utilize micro-organisms to convert 40,000 tonnes per year of organic solid waste into biogas, a renewable energy source that can be harnessed to generate heat and green power. The process will also convert the digested organic matter into a nutrient-rich compost product that can be used as fertilizer replacement for Alberta soil. Waste Management Services is hoping the success of this technology will spread to other municipalities in Alberta and beyond, preventing the need for more greenhouse gas emitting landfills and reducing fossil fuel emissions as a whole.

"By using the biogas to generate electricity and heat, we cancel out the production of the same amount of power from fossil fuel sources and their respective emissions," explains Christian Felske, Technical Specialist at Waste Management Services.

With the anaerobic digestion facility, the CCEMC estimates that cumulative CO_2 emissions will be reduced by an impressive 198,570 tonnes by 2020. With the CCEMC funding roughly a third of the project, Waste Management Services has the support they need to continue further innovating enhanced waste diversion activities in the future. Felske claims Waste Management Service's goals don't stop at reducing CO_2 emissions:

"We want to arrive at a 90% residential waste landfill diversion rate. If only 10-percent needed to be landfilled, it would be the first time in Canada this was achieved."

By looking at Waste Management Service's current projects, one can see this goal is attainable – the anaerobic digestion facility will fit right in to the successful recycling program and existing composting facility, one of the largest of its kind. Felske believes the growing trend toward maximizing the value of what people throw away is just the beginning.

"Sometime in the future we might have to go back to landfills to get valuable materials when our natural resources are depleted," Felske hypothesizes. And with the anaerobic digestion facility being at the forefront of the move toward utilizing organic waste for green energy, one gets the impression he's not far off.


RIVER
131 AVE NE

TOWN OF DRAYTON VALLEY

It started as a search for a better way to deal with municipal waste, but now Drayton Valley is developing a waste management facility that will be the first of its kind in Canada. The Aspen Integrated Resource Recovery (AIRR) Facility in Drayton Valley will use an innovative technology to take the town's residual municipal waste and convert it into solid fuel pellets – a process that hasn't been seen in our country. The fuel pellets will then be used as an alternative fuel source to fire Alberta coal plants.

"The beautiful thing is that through this facility we'll have a 95-per-cent diversion of waste, meaning we can get closer to becoming a completely waste-free community," explains Moe Hamdon, Mayor of Drayton Valley. But that's not all the benefits. The facility is also estimating to reduce over 1 million tonnes of CO_2e – a gas emitted by large landfill sites.

With hopes of acting as a demonstration facility for other communities, Hamdon acknowledges the potential ripple effect this facility could have in global greenhouse gas reduction efforts: "Our original goal was to extend the life of our landfill, but now that we see the possibilities our goal has increased to become leaders in waste management. Once we're up and running, we'll invite communities to take a look and see how they can adopt it for their purposes. If others can copy our efforts, we can exponentially increase the reductions."

Communities around the world are trying to manage their waste issues, but smaller communities face bigger barriers when it comes to cost. Drayton Valley's novel approach may just be the answer. "Waste-to-energy projects come at a high cost, making the solution almost impossible for small communities. By producing fuel pellets like we will in our facility, the possibility becomes more economically viable so any community can make a meaningful impact," Hamdon explains.

"There are hurdles, challenges and costs that need to be addressed when dealing with a new technology. Without the funding from the CCEMC we could not have done this, but others can now follow our lead because they won't have the original costs we do. We're taking the risks now so it can be adopted elsewhere," Hamdon adds.

PROJECT:

Drayton Valley Aspen Integrated Resource Recovery (AIRR) Facility

PROJECT LOCATION:

Town of Drayton Valley's Aspen Waste Management Facility

PROJECT VALUE:

$ 22,000,000

CCEMC FUNDING:

$10,000,000

SUNCOR ENERGY & TECK

PROJECT:	PROJECT LOCATION:	PROJECT VALUE:	CCEMC FUNDING:
The Wintering Hills Battery Storage Pilot Project	The project will be located at the existing Wintering Hills Wind Power Project located 21 km southeast of Drumheller, Alberta	$18,414,126	$9,207,063

Suncor Energy, in conjunction with Teck, a mining and mineral development company, is proposing to install a 3-megawatt / 6.9-megawatt battery at their existing Wintering Hills Wind Power Project site. This project will test the feasibility of shifting power from off-peak periods to on-peak periods with the use of the battery. Wind power is an intermittent form of renewable energy and battery storage has the ability to make the power supply available as needed instead of as generated. A battery could also provide quick power ramp-up and ramp-down service, as well as help balance the electrical grid. In all of this, the project has the potential to reduce greenhouse gas emissions by using renewable energy to reliably interconnect to, and operate within, the grid and by displacing fossil fuel generation facilities. The potential greenhouse gas reductions are very significant if this "enabler" technology proves successful and is commercialized.

UNIVERSITY OF CALIFORNIA, SANTA CRUZ

PROJECT:	PROJECT LOCATION:	PROJECT VALUE:	CCEMC FUNDING:
Wavelength-Selective Solar Collectors (WSSCs) for Power Generating Greenhouses and Carbon Capture	Brooks, Alberta	$840,000	$420,000

The University of California, Santa Cruz has been developing a solar collection technology – Wavelength-Selective Solar Collectors (WSSCs) – over the last four years in collaboration with plant physiologists, microbiologists, engineers, and greenhouse growers. WSSCs are composed of a glowing red glass panel that absorbs a green light that is not used by the plants, while emitting a red light. The emitted red light is concentrated onto a low density of solar cell strips attached to the glass panel, enhancing their power generation by 50-per-cent and increasing the red light onto the plants, where it is most photosynthetically active and favourable for fruit and vegetable production.

This project will see the installation of 1,500 ft^2 of electricity-generating WSSC panels directly into the roof of a greenhouse facility in Brooks, Alberta. The panels will be monitored for electricity generation as well as the health and fruitfulness of the vegetable crops grown beneath the WSSCs. This technology will reduce greenhouse gas emissions by 80 to 100 kg CO_2-eq/year per m^2 by replacing fossil fuel-generated power with solar-generated power and by converting carbon dioxide into oxygen with the plants inside the greenhouses. The potential application of this technology in Alberta and throughout North America is significant and has the potential to significantly reduce greenhouse gas emissions once commercialized.

UNIVERSITY OF CALGARY

PROJECT:	PROJECT LOCATION:	PROJECT VALUE:	CCEMC FUNDING:
The Optimal Biocell	Calgary, Alberta	$3,198,100	$1,300,000

The decomposition of organic biomass in municipal solid waste landfills produces a potent biogas that results in significant amounts of methane and carbon dioxide emissions. But this biogas can be used to create clean, renewable power. The University of Calgary is developing a project that will use an Optimal Biocell to maximize biogas production and allow for the capture and use of the biogas to generate energy.

The Optimal Biocell technology has already been field tested in the award-winning Calgary Biocell Project – a fully operational landfilling site that processes materials in the biocell and leaves only 30-per-cent of the original mass for ultimate disposal.

LANDMARK GROUP OF BUILDERS

PROJECT:	PROJECT LOCATION:	PROJECT VALUE:	CCEMC FUNDING:
Large Scale Building Integrated Solar PV Demonstration in Production Housing	Edmonton, Red Deer and Calgary areas	$5,745,100	$2,311,800

As one of the largest homebuilders in Alberta since 1977, Landmark is beginning a new venture in its long history of sustainable development. With a vision to be a major North American housing solutions provider recognized for sustainability, the company is now looking to make solar energy a cost-effective solution for the average family home.

Micro-photovoltaic (PV) systems – or solar panelling – have been considered the most promising reusable energy solution for housing. However, high initial cost, impact on building aesthetics and lack of stakeholder participation has impeded its market diffusion. This project aims to develop, validate and demonstrate a cost effective solution and business model for integrating solar energy into production housing.

The success of the project aims to help the Alberta homebuilding industry break the existing barriers impeding the adoption of solar energy. The technical solutions and operation models developed in the project have the potential to significantly reduce solar panel installation costs to an affordable level, starting the adoption of solar technology in Alberta's new home market. The work under this project includes the installation of 200 8kW solar systems on NetZero Ready homes across the province. If this technology proves out, it could be built into new home purchases throughout Alberta, significantly reducing emissions that would otherwise occur.

BLACKSPRING RIDGE

PROJECT:

Blackspring Ridge I Wind Project

PROJECT LOCATION:

Vulcan County

PROJECT VALUE (APPOX.):

$600,000,000

CCEMC FUNDING:

$10,000,000

Alberta is a province rich in energy resources, and wind energy is no exception. Perhaps one of the province's best-kept secrets, wind is a renewable energy resource that has been used on a small scale for years but has remained relatively untapped – until now. In the county of Vulcan, a new project is in the works that will apply innovative technology to harness Alberta winds and create enough green energy to power over 100,000 homes. Once completed, in mid-summer 2014, the 300-MW Blackspring Ridge Wind Project will be the largest wind energy facility in Western Canada – a feat that will help put the province and Canada on the map when it comes to advancing green energy sources.

The innovation at Blackspring Ridge lies in the design of its Vestas V100-1.8MW turbines, which are designed specifically to capture energy at lower wind speeds. These turbines feature a 100-metre rotor diameter – the largest of any turbine currently installed in Alberta. The new technology represents another progression for a province that was at the forefront of wind development in Canada: Alberta became home to the first commercial-scale wind facility at Cowley Ridge 20 years ago. Today, there are enough installed wind turbines in Canada to power over two million homes– a number sure to increase once the project is completed.

"Alberta is the birthplace of commercial wind energy development in Canada and with increased investment in innovative technologies, the province is well-positioned to take strategic advantage of its significant wind resource, access to skilled trades, and interest by independent power producers," explains Stephane Desdunes, Director of Development for EDF EN Canada.

When Alberta opened its wholesale electricity market to competition in 1996, wind energy facilities were the first electricity generators built under the new regime, and more than 10 years later their relevance to renewable energy innovation is still obvious: the province is Canada's third-largest wind energy market with more than 1,100-MW of installed generation capacity.

With support from the CCEMC, Enbridge Inc., and EDF EN Canada, Blackspring Ridge is also committed to energizing Vulcan County's economy. The project has created more than 300 jobs during construction and is expected to create 20 permanent jobs once completed, providing a significant economic boost to the region.

Desdunes foresees that the project will also help keep Alberta at the forefront of sustainable energy innovation:

"Wind energy provides an unparalleled opportunity for Alberta to meet its growing power demands with a clean and cost-competitive source of energy. Additionally, it enhances the province's international reputation by demonstrating its leadership in renewable energy development."

And with Blackspring Ridge set to become the largest wind energy facility in Western Canada, the country's position as a global leader in clean energy innovation is only becoming stronger.


edf
STEPHANE DESDUNES

GROW THE ENERGY CIRCLE LTD.

As countries around the world try to reduce greenhouse gas emissions, a farm in the tiny hamlet of Chin, Alberta is proving you don't have to be big to play a big role. The 100-year-old potato farm is heading into the future with a bioenergy venture, GrowTEC, that will turn organic waste – including the farm's cull potatoes – into renewable energy to power the farm and feed energy back into the grid. With the help of an anaerobic digester, GrowTEC is set to lead the way in closing the circle between agriculture and energy.

"As agricultural producers, we are definitely conscious that we are large consumers of natural resources. We are using a lot of energy and to be responsible we need to look to renewable energy sources to balance our energy use. We saw a lot of options like sun and wind, but a bioenergy project seemed to fit the best," explains Chris Perry, President and CEO of GrowTEC.

The GrowTEC bioenergy facility will use a commercialized farm-scale anaerobic digestion technology that will degrade organic waste to create a biogas that will be turned into clean, renewable electricity. The facility will generate enough electricity to power the farm as well as feed it back into Alberta's electricity. It will also produce a nutrient-rich/pathogen-free bio-fertilizer to be used at the farm and neighbouring farms, reducing the use of synthetic fertilizers.

According to Perry, the venture is a great demonstration of even the smallest efforts making an impact: "Every little bit helps. This project will take our farm completely off the grid and completely balance our footprint. It's a big planet and there's a lot of bigger opportunities, but we can all contribute."

With the backing of the CCEMC, the initial stage of the venture should be operational by October 2014, setting an example for other farms that sustainable agriculture is economically viable, while demonstrating to the world that Alberta's agriculture industry is responsibly reducing its inputs. "Looking forward, we want to take a lead in the industry by offsetting what we do and further close the circle between agriculture and industry. We'd like to be the example for other farms and one day have projects like this become the norm in our province."

PROJECT:

GrowTEC On-Farm Waste to Energy Project

PROJECT LOCATION:

Chin, Alberta

PROJECT VALUE:

$7,145,976

CCEMC FUNDING:

$3,572,988

INDUSTRIAL ENERGY EFFICIENCY PROJECT FUNDING

Across Alberta, industries are looking for ways to make their operations more energy efficient but are often faced with the economic feasibility of introducing novel technologies. The CCEMC helps industry remove these barriers associated with energy efficient innovations. In round six of our funding, we committed nearly $10 million for four new projects that will improve energy efficiency and reduce carbon emissions by more than 240,000 tonnes of CO_2e by 2020. Not only will these projects reduce emissions at their facilities, they will also build broader awareness and spur adoption of energy-saving technologies.

DEVON CANADA I & II

PROJECT 1:	PROJECT LOCATION:	PROJECT VALUE:	CCEMC FUNDING:
Organic Rankine Cycle Waste Heat Recovery Project	Conklin, Alberta	$5,854,742	$1,951,581

The Organic Rankine Cycle Waste Heat Recovery Project involves the installation of an Organic Rankine Cycle (ORC) turbine to harness low-grade waste heat from the glycol cooling process in oil production. The ORC turbine will use the waste heat to generate electricity for an estimated 5-10-per-cent of the facility's power requirements, offsetting the requirement for grid electricity and reducing greenhouse gas emissions.

PROJECT 2:	PROJECT LOCATION:	PROJECT VALUE:	CCEMC FUNDING:
Pressure Letdown Project	Jackfish 1 Thermal Facility, Conklin, AB	$2,829,170	$943,057

The Pressure Letdown Project involves the installation of a turbo-expander to capture the energy that is released by a throttling valve on existing oil wells. The turbo-expander will generate electricity for an estimated 5-10-per-cent of the facility's power requirements, offsetting the requirement for grid electricity and reducing greenhouse emissions.

ATCO GAS

PROJECT:	PROJECT LOCATION:	PROJECT VALUE:	CCEMC FUNDING:
Combined Heat and Power for Commercial and Institutional Buildings	Province-wide	$5,559,521	$1,834,642

This project will see the incorporation of Combined Heat and Power (CHP) technology into commercial and institutional buildings. CHP is an energy efficient technology that uses clean-burning natural gas to do two jobs – provide electricity and heat. In standard production of electricity, some energy is discarded as waste heat. With CHP, thermal energy is put to use, reducing greenhouse gas emissions and overall energy costs for commercial customers.

The project aims to raise awareness of the benefits of CHP and how it can be best utilized in facilities with high space and/or hot water loads all year around. Examples of spaces that hold the most promise include office buildings, recreation centres, greenhouses, senior centres, and large apartment buildings. Working with various CHP suppliers and contractors, ATCO Gas plans to install, own and maintain up to 20 75-100 kilowatt CHP units across the province.


Train 2

GENALTA POWER

Around the world, a significant source of clean power is being overlooked. Waste heat – the heat discharged into the air from industrial processes – can be harnessed to produce clean energy, yet the costs have been too high to fully realize its potential. That is, until Alberta's Genalta Power discovered a process that can help mitigate the costs.

"This project isn't just new for Genalta, it's new, period. We're recovering waste heat and waste pressure in a sour gas plant and turning it into electricity – but what's unique is the small size of the recovery system to make it economical," explains Graham Illingworth, CEO of Genalta.

Genalta's MIST™ (multiple-input single-turbine™) waste energy recovery system will be used to capture the waste heat, then provide enough emission-free power to keep a solid gas plant in central Alberta running during grid interruptions, matching generation capacity with electrical demand. By offsetting grid-generated power, this project will reduce greenhouse emissions by over 400,000 tonnes over 20 years (2033) and employ over 50 people in engineering and construction. The project even has the potential to serve as a template for other industries and industrial processes across Alberta, furthering the potential reductions.

"Most of the power in Alberta is generated by coal fired power generating plants, which releases a significant amount of greenhouse gases into the atmosphere. Introducing our process into these facilities will mean that for every one megawatt of power our system produces, there will be one less megawatt of coal power being generated," Illingworth clarifies.

The five-year-old company is becoming a major player in the waste-heat-to-energy arena and this CCEMC funded project is one of its best yet, opening doors for a future of more energy efficient facilities around the world. "Right now our technology is in Alberta, Saskatchewan, British Columbia, Ontario and, just recently, Michigan, but our goal is to have assets on all continents. If that happens, we could significantly reduce coal-fired power production worldwide. That's huge," he says.

PROJECT:

Emission-free electrical power from multiple waste energy sources

PROJECT LOCATION:

North of Calgary

PROJECT VALUE:

$14,868,020

CCEMC FUNDING:

$4,881,763

BIOLOGICAL PROJECTS

After establishing a partnership with Alberta Innovates Bio Solutions last year, we are seeing the benefits this year with three projects being funded that aim to reduce emissions from biological sources – such as agriculture, forestry and landfills. These initiatives include optimizing small methane biofilters for controlling low-volume point-source emissions, creating "activated" biocarbon from wood-residue to support water remediation in the oilsands, and a program that will help Alberta farmers implement offset projects and improve sustainability practices.

CANADIAN FERTILIZER INSTITUTE (CFI)

PROJECT:	PROJECT LOCATION:	PROJECT VALUE:	CCEMC FUNDING:
Farming 4R Land	Various locations in Alberta	$224,860	$199,860

The Canadian Fertilizer Institute is developing implementation strategies for farmers to adopt the 4R Nutrient Stewardship system: Right fertilizer source at the Right rate, at the Right time and in the Right place; and the Nitrous Oxide Emission Reduction Protocol (NERP) to reduce on-farm emissions of nitrous oxide in a quantifiable, credible and verifiable way that would allow farmers to earn carbon credits.

The strategy will include developing criteria for farmer participation to select farmers and providing the tools and resources for evaluation of 4R and NERP activities at the field level. The project will also measure the social, economic and environmental impact of the adoption while promoting the successes of the participating farmers for recognition and advocacy in their community, within the regional watershed, amongst their peers and within the crop supply chain.

UNIVERSITY OF CALGARY – DR. DAVID LAYZELL

PROJECT:	PROJECT LOCATION:	PROJECT VALUE:	CCEMC FUNDING:
Developing an Adsorbing Biocarbon to Achieve Greenhouse Gas Benefits in the Remediation of Produced Water in Oilsands Operations	Various locations in Alberta	$57,500	$57,500

University of Calgary researchers are investigating the use of Alberta-grown biomass – agricultural and forest crop residues (straw and wood) – to clean up chemical contaminants in the water produced from oilsands operations. The researchers aim to develop an activated biocarbon (or biochar) from the residues that will adsorb naphthenic acids in tailings pond water, preventing the formation and release of methane greenhouse gases.

Led by Dr. Layzell, in collaboration with colleagues Dr. Josephine Hill and Dr. Andrei Veksha, the team has already successfully made small amounts of biochar from aspen residues using slow pyrolysis, a relatively low-temperature process that "burns" the biomass in the absence of oxygen. These researchers are working to develop a novel way of making an activated or adsorbing biocarbon that can be produced on a large scale from Alberta-grown biomass with much lower energy input and lower economic cost. In addition, the spent biochar could also be used as either a source of renewable energy to displace fossil fuels, or landfilled as a permanent carbon storage – further reducing greenhouse gas emissions.

THE PRASINO GROUP

PROJECT:	PROJECT LOCATION:	PROJECT VALUE:	CCEMC FUNDING:
Protocol Validation Studies	Various locations in Alberta	$336,730	$336,730

The Prasino Group is a network of leading advisors in carbon strategy, management, accounting and project development. Their team helps clients meet environmental, social and economic sustainability objectives in environmental policy, markets and economics by providing consulting, products and project-development services in the agriculture, energy and food sectors.

This project is fully funded by the CCEMC and will conduct Protocol Validation Studies (PVS) on two offset protocols:

1. Beef Reduced Age to Harvest
2. Nitrous Oxide Emissions Reduction

Currently, the Alberta agriculture sector has several offset protocols for avoiding greenhouse gas emissions. However, very few project developers have adopted the agricultural protocols. This project hopes to change that by using the Protocol Validation Studies to provide a learning tool to move early adopters, aggregators and verifiers past barriers that exist in implementation, and help them in designing scalable approaches to adopting these protocols.

PORTFOLIO OVERVIEW

4 years in operation

$316 million received

51 clean technology projects approved

$213 million in funding invested by the CCEMC

$1.56 billion total value in the projects

10.2 megatonnes of estimated GHG reductions by 2020

7 rounds of funding

5 funded projects have reached completion

6 strategic funding areas: Carbon Capture and Storage, Energy Efficiency, Greening Fossil Fuels, Renewable Energy and Biological and Adaptation.

3 biological projects are being funded in partnership with Alberta Innovates Bio Solutions

3 adaptation projects are being funded

1 $35-million Grand Challenge launched to fund innovative uses for CO_2

PORTFOLIO OVERVIEW

CCEMC FUNDING BY INNOVATION STEP

$4.7 million

BASIC RESEARCH AND DEVELOPMENT

$11.5 million

PROJECT TECHNOLOGY DESIGN AND DEVELOPMENT

$88.5 million

MARKET DEMONSTRATION

$108.2 million

COMMERCIALIZATION

CCEMC FUNDING BY STRATEGIC INVESTMENT AREA

$21.4 million

CARBON CAPTURE AND STORAGE

$38.7 million

ENERGY EFFICIENCY

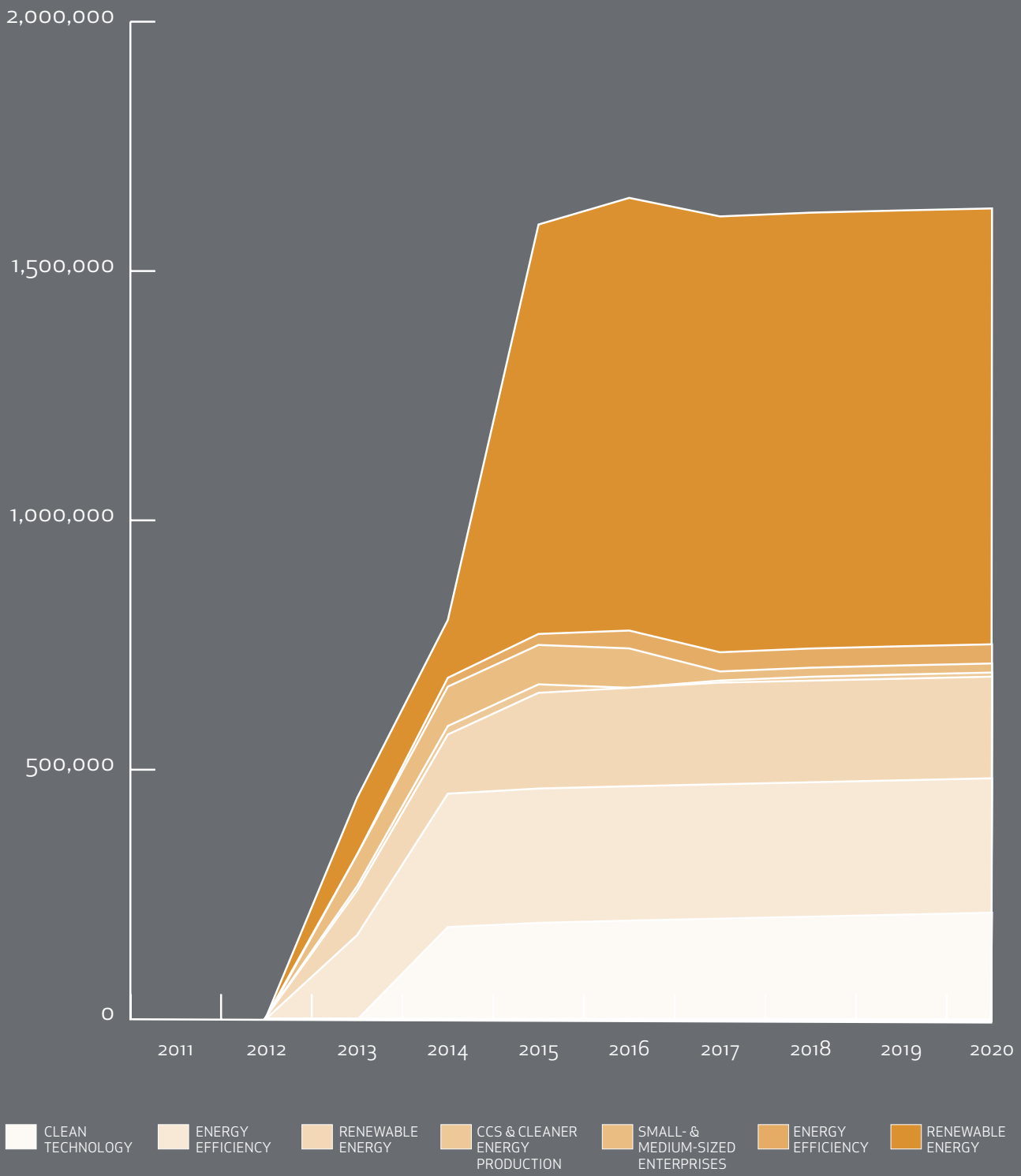
$54.7 million

GREENING FOSSIL FUELS

$98.0 million

RENEWABLES

CUMULATIVE EMISSION REDUCTIONS BY FUNDING ROUND (TONNES CO_2E)



INDEPENDENT AUDITOR'S REPORT

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To the Board of Directors of
Climate Change and Emissions Management Corporation

We have audited the accompanying financial statements of Climate Change and Emissions Management Corporation, which comprise the statements of financial position as at May 31, 2013, May 31, 2012, and June 1, 2011, and the statements of changes in net assets, operations and cash flows for the years ended May 31, 2013 and May 31, 2012, and a summary of significant accounting policies and other explanatory information.

Management's responsibility for the financial statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with Canadian accounting standards for not-for-profit organizations, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's responsibility

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with Canadian generally accepted auditing standards. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained in our audits is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements present fairly, in all material respects, the financial position of the Climate Change and Emissions Management Corporation as at May 31, 2013, May 31, 2012, and June 1, 2011, and the results of its operations and its cash flows for the years ended May 31, 2013 and May 31, 2012, in accordance with Canadian accounting standards for not-for-profit organizations.

Deloitte LLP

Chartered Accountants
September 24, 2013

Climate Change and Emissions Management (CCEMC) Corporation

STATEMENTS OF FINANCIAL POSITION

As at May 31, 2013, May 31, 2012 and June 1, 2011

	May 31, 2013 $	May 31, 2012 $	June 1, 2011 $
ASSETS			
Current assets			
Cash	262,087,651	234,769,119	13,868,011
Short-term investment	-	-	170,000,000
Accounts receivable	101,633	67,149	164,564
Interest receivable	313,780	278,900	634,589
Prepaid expenses	1,750	1,833	1,927
	262,504,814	235,117,001	184,669,091
LIABILITIES			
Current liabilities			
Accounts payable and accrued liabilities	2,308,064	3,640,311	1,082,556
Commitments and guarantees (note 7)			
NET ASSETS			
General fund – unrestricted	-	-	-
Restricted fund (note 4)	260,196,750	231,476,690	183,586,535
	260,196,750	231,476,690	183,586,535
	262,504,814	235,117,001	184,669,091

APPROVED BY THE BOARD OF DIRECTORS

Director

Eric Newell
Chair, Climate Change and Emissions Management (CCEMC) Corporation

Director

Aaron Falkenberg
Chair, Audit and Investment Committee, Climate Change and Emissions Management (CCEMC) Corporation

The accompanying notes are an integral part of these financial statements.

Climate Change and Emissions Management (CCEMC) Corporation

STATEMENTS OF CHANGES IN NET ASSETS

For the years ended May 31, 2013 and May 31, 2012

	General Fund $	Restricted Fund $	2013 $	2012 $
Balance – Beginning of year	-	231,476,690	231,476,690	183,586,535
Excess of revenue over expenses	-	28,720,060	28,720,060	47,890,155
Balance – End of year	-	260,196,750	260,196,750	231,476,690

Climate Change and Emissions Management (CCEMC) Corporation

STATEMENTS OF OPERATIONS

For the years ended May 31, 2013 and May 31, 2012

	General Fund $	Restricted Fund $	2013 $	2012 $
REVENUE				
Grant revenue (note 5)	-	54,628,905	54,628,905	72,821,928
Interest income	-	3,681,373	3,681,373	2,974,262
	-	58,310,278	58,310,278	75,796,190
Project expenses (note 7)	-	21,980,590	21,980,590	23,008,878
Excess of revenue over project expenses	-	36,329,688	36,329,688	52,787,312
OPERATING EXPENSES				
Program management (note 6)	-	7,065,379	7,065,379	4,308,607
Consulting contracted services	-	166,598	166,598	160,373
Corporate costs	-	218,908	218,908	167,790
Board remuneration and expenses (note 6)	-	94,467	94,467	116,242
Outreach	-	17,073	17,073	80,900
Professional fees	-	36,470	36,470	43,670
Insurance	-	10,733	10,733	11,094
Conference costs	-	-	-	8,481
	-	7,609,628	7,609,628	4,897,157
Excess of revenue over expenses for the year	-	28,720,060	28,720,060	47,890,155

The accompanying notes are an integral part of these financial statements.

Climate Change and Emissions Management (CCEMC) Corporation

STATEMENTS OF CASH FLOWS

For the years ended May 31, 2013 and May 31, 2012

	2013 $	2012 $
CASH PROVIDED BY (USED IN)		
Operating activities		
Excess of revenue over expenses for the year	28,720,060	47,890,155
Net change in non-cash working capital items		
Decrease in prepaid expenses	83	94
(Increase) decrease in accounts receivable	(34,484)	97,415
(Increase) decrease in interest receivable	(34,880)	355,689
(Decrease) increase in accounts payable and accrued liabilities	(1,332,247)	2,557,755
	27,318,532	50,901,108
Investing activities	-	170,000,000
Proceeds on disposal of investments	-	170,000,000
Increase in cash	27,318,532	220,901,108
Cash – Beginning of year	234,769,119	13,868,011
Cash – End of year	262,087,651	234,769,119

The accompanying notes are an integral part of these financial statements.

NOTES TO FINANCIAL STATEMENTS

For the years ended May 31, 2013 and May 31, 2012

1 Organization

The Climate Change and Emissions Management (CCEMC) Corporation (CCEMC) is an Alberta-based, independent, not-for-profit organization incorporated under the Canada Corporations Act on February 17, 2009, whose operations commenced on June 1, 2009. CCEMC's mandate is to reduce greenhouse gas emissions and adapt to climate change by supporting the discovery, development and deployment of clean technologies. The Climate Change and Emissions Management Fund (the Fund) was established under the *Climate Change and Emissions Management Act* by the Government of Alberta to support investment in innovation and clean technologies that will reduce Alberta's greenhouse gas emissions and improve its ability to adapt to climate change. The Fund provides the primary source of revenue for the CCEMC. As a not-for-profit organization, CCEMC is exempt from tax in accordance with Section 149(1)(l) of the Canadian Income Tax Act.

2 Change in accounting framework

Effective June 1, 2012, the CCEMC elected to adopt Canadian accounting standards for not-for-profit organizations (ASNPO) as issued by the Canadian Accounting Standards Board and set out in Part III of the CICA Handbook. The accounting policies selected under this framework have been applied consistently and retrospectively as if these policies had always been in effect and there were no adjustments resulting from the adoption of the new standards. There are certain optional and mandatory exemptions allowable under section 1501 of the CICA Handbook for first time adoption of ASNPO. The CCEMC has elected not to use any of these exemptions. The accounting policies as set out below have been applied in preparing the financial statements for the years ended May 31, 2013 and 2012 and in preparation of an opening balance sheet at June 1, 2011, CCEMC's date of transition.

3 Significant accounting policies

These financial statements have been prepared by management in accordance with ASNPO within the framework of the accounting policies summarized below.

a) Fund accounting

For financial reporting purposes, the accounts have been classified into the following funds:

i) General

The General Fund includes all resources available for immediate purposes and accounts for the Corporation's activities other than those directly attributable to funding innovation and clean technologies and adaptation to climate change.

The General Fund includes all unrestricted monies received that are available for use at the Corporation's discretion.

ii) Restricted

The Restricted Fund includes those funds whose resources are to be used to support investment in innovation and clean technologies and adaptation to climate change.

b) Revenue recognition

These financial statements have been prepared using the restricted fund method of accounting for contributions, the key elements of which are:

i) Unrestricted contributions are recognized as revenue in the General Fund when received or upon becoming receivable if the amount to be received can be estimated and collection is reasonably assured.

ii) Externally restricted contributions are recognized as revenue in the Restricted Fund when received or receivable if the amount to be received can be estimated and collection is reasonably assured. Externally restricted amounts can only be used for the purposes designated by external parties.

iii) Investment income earned on contributions subject to external restrictions is recorded as revenue in the Restricted Fund in the year it is earned.

c) Financial instruments

Financial assets and financial liabilities are initially recognized at fair value less transaction costs when CCEMC becomes a party to the contractual provisions of the financial instrument and subsequently measured at amortized cost with any changes recorded in the statements of operations. CCEMC currently does not hold any equity instruments that would be measured after initial recognition at fair value.

d) Cash

Cash consists of cash on deposit.

e) Short-term investment

The short-term investment is a redeemable flexible guaranteed investment contract with an annual interest rate of 1.25% that was redeemed on October 21, 2011 prior to the maturity date of February 10, 2012.

f) Project expenses and liabilities

Project expenses and the associated project liability (included in accounts payable and accrued liabilities) are recognized upon receipt of a valid project progress report and associated milestone invoices by CCEMC. A commitment for a project expense is disclosed as such when a contribution agreement is executed.

4 Restricted Fund

The Restricted Fund consists of funds that are externally restricted by the Government of Alberta for the purpose of investing in various initiatives and projects relating to one of the four strategic investment areas: conservation and efficiency, carbon capture and storage, greening energy production and adaptation and knowledge. The funds are also restricted for the purpose of administering CCEMC which includes fees, expenses, liabilities and other costs.

During the prior year, $8,481 was transferred from the Restricted Fund to the General Fund for the purpose of supporting the GHG Reduction Summit held in May 2011. This expenditure was approved in the annual CCEMC business plan. No amounts were transferred in the current year.

5 Grant revenue

Funds are granted from the Government of Alberta to CCEMC on an annual basis through the Grant Agreement dated March 31, 2009 (Grant Agreement), which is effective through to September 1, 2014. The Grant Agreement was amended on March 30, 2010. The Annual Grant amount is determined each provincial year-end and is based on the amount contributed to the Fund in the previous compliance year.

Annual Grant Amount	2013 $	2012 $
March 31, 2011	-	72,821,928
March 31, 2012	54,628,905	-
	54,628,905	72,821,928

NOTES TO FINANCIAL STATEMENTS

For the years ended May 31, 2013 and May 31, 2012

6 Board and management remuneration

Total honorariums and expenses related to the directors of the Board were $93,838 (2012 – $106,891) in the fiscal year. Remuneration paid to directors includes honorariums totalling $58,876 (2012 – $71,263) as follows:

	2013 $	2012 $
D. Beever	2,067	3,198
J. Carter	782	1,725
P. Clark	17,896	16,566
A. Falkenberg	3,471	4,816
C. Fischer	1,247	2,214
R. P. Galachiuk	-	1,971
B. Kenny	2,067	2,706
D. Lewin	8,776	8,311
D. Lynch	3,013	4,680
R. L. Mansell	2,094	4,431
P. Merrin	4,596	4,414
E. Newell	7,497	10,441
R. Neehall	2,029	2,094
A. Tasker	3,341	3,696
	58,876	71,263

Of these amounts, $2,693 (2012 – $7,147) is included in accounts payable and accrued liabilities. Expenses paid to directors of $34,962 (2012 – $35,671) relates to reimbursements for meals, travel and accommodations.

Program management expenses include remuneration to contract management who report directly to the Board, totalling fees of $7,065,379 (2012 – $4,308,607). Of this amount, $103,738 (2012 – $537,926) is included in accounts payable and accrued liabilities.

7 Commitments and guarantees

During the year, contribution agreements for CCEMC funding were executed for 22 projects (2012 – 9). Also during the year, 1 of the executed contribution agreements was cancelled. As at May 31, 2013, the CCEMC has 44 executed contribution agreements outstanding and has commenced or completed funding for 34 of these approved projects. Total committed funds for executed projects is the difference between the total funding approved for executed contribution agreements and project expenses incurred to date or contribution agreements cancelled. A summary of these amounts is outlined as follows:

	2013 $	2012 $
Total committed funds for executed projects – Beginning of the year	76,106,231	71,256,876
Total funds for executed projects approved during the year	58,189,434	39,428,233
Project expenses incurred during the year	(21,980,590)	(23,008,878)
Contribution agreements cancelled during the year	(2,225,000)	(11,570,000)
Total committed funds for executed projects – End of the year	110,090,075	76,106,231

As of May 31, 2013, funding for 10 of the 44 executed projects have not commenced. Funds allocated to the executed contribution agreements are subject to CCEMC's review and approval prior to disbursement to ensure full compliance with the terms of the contribution agreement. The actual financial commitment could therefore differ materially from $110,090,075, but will not exceed this amount.

There are also an additional 14 projects, totalling $70,278,804 (2012 – $73,047,441), that have been approved for funding by CCEMC's Board of Directors but for which contribution agreements have not yet been executed. Subsequent to year-end, one of the approved projects, totalling $3,799,810 has been cancelled and three of the approved projects, totalling $10,289,393, have executed their contribution agreements.

As of September 24, 2013, the CCEMC has 10 projects remaining, totalling $56,133,501, that have been approved for funding by CCEMC's Board of Directors but for which contribution agreements have not been executed.

CCEMC indemnifies its directors against claims reasonably incurred and resulting from the performance of their services to the CCEMC. No amounts are reflected in the financial statements related to these indemnifications.

8 Financial instruments

CCEMC's financial instruments are exposed to certain financial risks, including credit risk, market risk and liquidity risk.

Credit risk

Credit risk is the risk of financial loss to CCEMC if a party to a financial instrument fails to meet its contractual obligation and arises principally from the cash, short-term investments and accounts receivable. The maximum amount of credit risk exposure is limited to the carrying value of the balances disclosed in these financial statements.

Management monitors these accounts regularly and does not believe that CCEMC is exposed to significant credit risk at the statement of financial position date.

Market risk

Market risk is the risk that changes in market prices such as interest rates will affect the CCEMC's interest income or the value of the financial instruments held. CCEMC is subject to interest rate cash flow risk arising primarily from fluctuations in interest rates applied to its cash balance, which are subject to floating interest rates.

Liquidity risk

Liquidity risk is the risk that CCEMC will not be able to meet its financial obligations as they become due. Management mitigates liquidity risk by monitoring forecasted and actual cash flows to ensure sufficient liquidity to meet its liabilities. Accounts payable and accrued liabilities are due within the current operating period.

9 Economic dependence

100% of CCEMC's grant revenue is received from the Fund. The loss of this funding would have a material adverse impact on CCEMC's operations and financial position. Should a loss of funding occur, all approved project commitments would remain in effect.

Climate Change and Emissions Management (CCEMC) Corporation

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