



Annual Progress Report

2013

Responsible Actions: A Plan for Alberta's Oil Sands (Responsible Actions) was developed by the Government of Alberta in 2009 as a 20-year strategic plan. The plan balances oil sands development with social, environment, and economic considerations.

Responsible Actions aligns with other Government of Alberta-led initiatives, such as *the Land-use Framework* and the *Provincial Energy Strategy*, to demonstrate the province's commitment to being a world leader in developing our resources in a responsible and sustainable manner.

This Annual Progress Report highlights the work done in 2013 in support of Responsible Actions. Currently over 50 initiatives are in various stages of development, demonstrating the government's ongoing commitment to developing Alberta's oil sands in a responsible manner.

Progress Summary

Since Responsible Actions' release, a number of initiatives supporting the six strategies have been added, completed, or reassigned to a different ministry. The following provides the status of the initiatives in 2013:

	Total Number of Active Initiatives as of January 1, 2013	Number Completed in 2013	Number On Track as of December 31 st , 2013
Strategy One	10	0	10
Strategy Two	8	0	6*
Strategy Three	20	0	20
Strategy Four	3	0	3
Strategy Five	19	0	19
Strategy Six	4	0	4
Total:	64	0	62

*2 projects have been delayed

The 2013 Annual Progress Report provides a comprehensive list of all projects and initiatives under each of the Responsible Actions strategies. Initiatives are summarized with a brief description and achievements/status for 2013. Projects that have been discontinued or completed have been omitted from this report.

Alberta Energy would like to thank our cross-ministry project and implementation team contacts for their work in providing valuable input for this annual report.

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STRATEGY ONE

Develop Alberta’s oil sands in an environmentally responsible way.

1.1	Through implementation of the <i>Land-use Framework</i>, effectively manage the cumulative effects of oil sands development on the environment to protect air, land, water, biodiversity, and human health.
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Project/Initiative	Lead Ministry	Status Dec. 2013
Environmental Assessment Initiative	Environment and Sustainable Resource Development	On Track

- The Environmental Assessment Initiative identified strategies to support cumulative effects management at a regional scale and improve overall efficiency and effectiveness of project environmental impact assessment.
- Scenario analyses using a variety of models/other techniques are underway to assess potential impacts of development scenarios.

Project/Initiative	Lead Ministry	Status Dec. 2013
Regional Plan Progress	Land Use Secretariat	On Track

- The Lower Athabasca Regional Plan (LARP), Alberta's first land-use regional plan, sets strong environmental limits, conserves sensitive lands, provides certainty to industry, diversifies the economy and offers numerous recreational opportunities in the Lower Athabasca region. It is a comprehensive, forward-thinking and legally binding roadmap that enhances Alberta government's environmental management, addresses growth pressures and supports economic development. LARP established economic, environmental and social outcomes for the region as well as new environmental frameworks with limits to protect air and surface water quality and it increased the total conserved land within the region to more than two million hectares, approximately three times the size of Banff National Park.
- LARP became effective in September 2012. Since regional plans are legislative instruments, all land-use decision-makers in a given region are required to abide by the regulatory details within the regional plan. Further, they must ensure their land-use activities and decisions respect the provisions outlined in the regional plan’s strategic plan and implementation plan. In 2013, these requirements were addressed and actions were taken to fulfill the commitments set out in the plan. This work was done in conjunction with development of the South Saskatchewan Regional Plan for the southern portion of Alberta.

Project/Initiative	Lead Ministry	Status Dec. 2013
Industrial Heartland Cumulative Effects Management Project	Environment and Sustainable Resource Development	On Track

- The Industrial Heartland Cumulative Effects Management Project provides strategies and targets to sustain the quality of the capital region’s environment. The project outlines specific environmental outcomes for the region and provides baseline data, targets for sustainability, and regional strategies for the tracking and management of air, water, and land.
- Implementation of the air quality and water management frameworks in the Industrial Heartland and Capital Region continue to progress with the ongoing strategic advice of multi-stakeholder committees. In 2013, to support the management objective of maintaining or improving water quality in the Industrial Heartland Reach of the North Saskatchewan River, Environment and Sustainable Resource Development released site-specific water quality objectives and maximum allowable loads for a pilot suite of pollutants in this reach.

Project/Initiative	Lead Ministry	Status Dec. 2013
Thermal In Situ Water Allocation Clarification	Environment and Sustainable Resource Development	On Track

- Environment and Sustainable Resource Development is developing a guidance document as an addendum to the Conservation and Allocation Guideline for Oilfield Injection (2006) to provide consistent and coordinated guidance to proponents on what will be considered in making water allocation decisions with respect to applications under the *Water Act* for thermal in situ projects.
- The addendum to the Water Conservation and Allocation Guideline for Oilfield Injection (2006) to provide guidance on the Water Act licensing process and requirements for Thermal In Situ Oil Sands Projects is to become one of the sub-sector guidelines being developed for implementation of the Water Conservation Policy for Upstream Oil and Gas Operations. This new policy is being developed to replace the Water Conservation and Allocation Policy for Oilfield Injection (2006), and is currently in the midst of multi-stakeholder consultations.

Project/Initiative	Lead Ministry	Status Dec. 2013
Assessment and Management of Non-Saline Groundwater in Direct Contact with Bitumen for In Situ Oil Sands Operations	Environment and Sustainable Resource Development	On Track

- Tying into the water conservation and water management goals of *Water for Life: Alberta’s Strategy for Sustainability*, this guidance document provides requirements for the assessment and management of non-saline groundwater in direct contact with bitumen for in situ oil sands operations using enhanced bitumen recovery. The guidance document has been developed to

help identify and avoid potential impacts associated with enhanced bitumen recovery in areas where extensive non-saline aquifers are in direct contact with bitumen.

- In 2013, a cross-ministry team was formed with representatives from Alberta Environment and Sustainable Resource Development, the Alberta Energy Regulator and Alberta Energy. By February 2014, a draft document will be submitted to targeted stakeholders that may be affected by the implementation of this document or have good knowledge of non-saline groundwater in direct contact with bitumen situations. It is anticipated that this document will be finalized by the end of 2014.

1.2 Enhance reclamation and increase enforcement to minimize Crown liability and protect environmental health.

Project/Initiative	Lead Ministry	Status Dec. 2013
Tailings Management Framework	Environment and Sustainable Resource Development	On Track

- The Tailings Management Framework supports the progressive reclamation strategy in oil sands and was required under the Lower Athabasca Regional Plan. The objective of the framework is to ensure that tailings generated by oil sands mines are reclaimed as quickly as possible while balancing environmental, social and economic needs. It builds on the Alberta Energy Regulator’s Directive 074 which, since 2010, requires oil sands mines to reduce their fluid fine tailings.
- In late 2013, Environment and Sustainable Resource Development engaged with a number of stakeholders including environmental non-governmental organizations, First Nations, Metis and industry. The information collected during the engagement process is being used to develop the framework. The work is being completed with expert input from Alberta Innovates and the Alberta Energy Regulator. It is anticipated the Tailings Management Framework will be implemented in 2015.

Project/Initiative	Lead Ministry	Status Dec. 2013
Mineable Oil Sands Reclamation Policy – Acknowledgement of Progressive Reclamation	Environment and Sustainable Resource Development	On Track

- Enhanced tracking and reporting tools are in development for the reporting of annual activities, and for reporting on mine reclamation and closure plans. The program is required to better compare company plans with company progress, and to provide links to requirements associated with the Mine Financial Security Program (MFSP).
- In January 2013, the Cumulative Environmental Management Association (CEMA) recommended the Criteria and Indicators Framework for Oil Sands Mine Reclamation Certification (the Framework) to the Government of Alberta as part of the approach to reclamation certification. In March 2013, the Government of Alberta responded to CEMA indicating that the document will be considered as one of a suite of tools that will provide direction and guidance for reclamation planning and certification for the oil sands mines. The Framework will be posted on Environment and Sustainable Resource Development’s website in 2014. Environment and Sustainable Resource Development considers the Framework a preliminary step which will require further development before implementation.

1.3 Increase conservation and protected areas to maintain biodiversity in the oil sands regions.

Project/Initiative	Lead Ministry	Status Dec. 2013
Establish a Conservation Offset Program	Environment and Sustainable Resource Development	On Track

- The initiative aims to investigate and pursue potential implementation of conservation offset pilot projects in northeastern and southern Alberta. Conservation offsets actions are taken at one location to balance (fully or in part) negative impacts that are anticipated to occur at another location where project development is proposed.
- In 2013, discussions on developing a conservation offsets policy framework began. A policy framework is needed to support consistent implementation, provide regulatory certainty, and reduce duplication of implementation infrastructure. A work plan is anticipated to be completed by January 2015.

1.4 Meet or exceed Alberta’s greenhouse gas reduction objectives.

Project/Initiative	Lead Ministry	Status Dec. 2013
Carbon Capture and Storage (CCS)	Energy	On Track

- CCS balances the economic benefits Alberta receives from the development of its resources with the responsibility to reduce greenhouse gas emissions. The Government of Alberta maintains a CCS Funding Program to support demonstration projects that are undertaken to advance the broader adoption of CCS technologies in Alberta.
- Additionally, the Government of Alberta has passed legislation to remove barriers to CCS deployment, including the Carbon Capture and Storage Statutes Amendment Act and the Carbon Sequestration Tenure Regulation.
- To ensure CCS projects are designed and operated in a safe and responsible way, the Government of Alberta conducted a Regulatory Framework Assessment. As part of this process, CCS experts from Alberta and around the world examined in detail the technical, environmental, safety and monitoring requirements for CCS projects in Alberta. The assessment was led by a multi-disciplinary steering committee supported by an international panel of experts and several working groups. The committee compelled the following:
 - reviewed the current regulatory requirements in Alberta that apply to CCS.
 - examined CCS frameworks from other jurisdictions.
 - identified opportunities for improvement in Alberta’s regulatory framework.
- This review will result in the creation of a world-class regulatory system that will ensure CCS technology is used safely in Alberta. Final recommendations were submitted to the Minister of Energy on April 3, 2013. The Sustainable Energy Branch has begun implementing some of the assessment’s recommendations.
- On August 19, 2013, the Government of Alberta publically released the Summary Report of the Regulatory Framework Assessment. The report includes 71 recommendations and nine

conclusions that deal with the technical, regulatory and environmental aspects of CCS. The Government of Alberta sought public input on the recommendations through an online survey. The survey was open to the public until October 3, 2013.

- Knowledge sharing is a key component of the CCS Funding Program. As part of the public dissemination of the learnings and knowledge on carbon capture and storage developed through the two funding projects, the Knowledge Sharing reports for 2011, Project Funding Agreements and Knowledge Sharing Schedules have been posted on the Ministry of Energy’s website: <http://www.energy.alberta.ca/Initiatives/1438.asp>

Project/Initiative	Lead Ministry	Status Dec. 2013
Climate Change Adaptation Strategy (Provincial Scale Strategy)	Environment and Sustainable Resource Development	On Track

- The Government of Alberta continues work on a Climate Change Strategy which includes climate change risk assessments and a Provincial Climate Change Adaptation Strategy to reduce Alberta’s exposure to climate change risks. The Climate Change Adaptation Strategy will address priority risk areas, define leadership roles among sectors and government, and identify long-term research funding needs to increase Alberta’s adaptive capacity to deal with climate change risks.
- Climate change risk assessments were completed for the Government of Alberta in 2013. Assessments were completed for nine departments thought to be most directly affected by climate change (Energy, Agriculture and Rural Development, Environment and Sustainable Resource Development, Infrastructure, Transportation, Aboriginal Relations, Municipal Affairs, Health, Tourism Parks and Recreation) and more broadly for less directly affected departments. The scope of the assessments were limited to the mandate and responsibility of the Government of Alberta and a synthesis was done to identify the most significant climate change risks. Overall 19 priority risks were identified and subsequently a range of adaptation measures that could reduce these risks were described.

STRATEGY TWO

Promote healthy communities and a quality of life that attracts and retains individuals, families, and businesses.

2.1 Support further planning and development of healthy communities in the oil sands regions.

Project/Initiative	Lead Ministry	Status Dec. 2013
Comprehensive Regional Infrastructure Sustainability Plan (CRISP) for the Peace River Oil Sands Area	Energy	On Track

- The intent of CRISPs is to establish a long-term framework for future infrastructure development based on anticipated bitumen production rates and associated population growth.
- Initial planning for the Peace River Oil Sands Area CRISP commenced in 2012. A series of multi-stakeholder meetings were held in 2013 to develop the CRISP and a draft report was completed by year-end.

Project/Initiative	Lead Ministry	Status Dec. 2013
Cultural Policy Initiative	Culture	On Track

- The cultural needs of the oil sands regions are addressed through various initiatives undertaken by the Government of Alberta including those under *The Spirit of Alberta: Alberta's Cultural Policy*.
- In support of The Spirit of Alberta, the Alberta Foundation for the Arts (AFA) provides grants to artists and art organizations. In 2013, the AFA provided support to a number of organizations and educational institutions within the Oil Sands Region including:
 - Fort McMurray Potters (Guild) Society
 - Fort McMurray InterPlay Society
 - École Boreal, Fort McMurray
 - Keyano College Foundation
 - Cold Lake Visual Arts Society
 - Kinosoo Performing Arts Association
 - Peace River community Events Society
 - Underground Music Society, Peace River
- The AFA is also a proud sponsor of the Alberta's Future Leaders program which is a community and youth development program that uses sports, recreation, arts and leadership activities to provide First Nations and Métis youth with active, positive alternatives to unhealthy lifestyles. Community partners in 2013 in the Oil Sands Regions include Chipewyan Prairie First Nation, Fishing Lake Métis Settlement, Fort McKay First Nation, Fort McMurray First Nation #468, Mikisew Cree First Nation and Whitefish Lake First Nation.
- The Community Development Unit (CDU) of Alberta Culture provided facilitation and skill development services to a variety of community organizations, Metis Settlements, and First Nations throughout the oil sands regions. This included providing support in areas such as strategic planning and board governance, enabling these organizations to better meet the needs of their communities.

- The CDU also provided design and facilitation team support at an Oil Sands Multi-stakeholder Working Forum where 125 stakeholders developed recommendations to:
 - increase awareness of oil sands related occupations in demand,
 - increase supply of skilled trade professionals,
 - establish a framework for secondary and post-secondary information sharing.
- In 2013, Alberta Culture’s Community Initiatives Program and Community Facility Enhancement Program provided grants totalling just over \$388,000 to support non-profit and charitable organizations in Fort McMurray and surrounding areas.

2.2 Improve public safety and security in the oil sands regions.

Project/Initiative	Lead Ministry	Status Dec. 2013
Alberta’s Traffic Safety Plan: Saving Lives on Alberta’s Roads (TSP)	Transportation	On Track

- *Alberta’s Traffic Safety Plan: Saving Lives on Alberta’s Roads* was a comprehensive strategy designed to reduce traffic related deaths and injuries in the province. This plan was in effect from 2007-2011.
- The second iteration of this plan was developed through consultation with stakeholders and was consequently approved and released by the Minister of Transportation in 2013. *The Traffic Safety Plan – A Safer System Approach to Saving Lives on Alberta Roads 2011-2015 (TSP 2015)* can be found online at <http://www.transportation.alberta.ca/Content/docType48/Production/TSP2015.pdf>.
- In this plan, priorities being addressed use a number of core strategies including education and training, communication, community initiatives, enforcement, research, legislation, new technologies, road engineering and infrastructure improvements. Government’s traffic safety partners have been, and will continue to be, important to the success of Alberta’s efforts.
- In 2013, work began on strategizing the next generation traffic safety plan. *Alberta’s Traffic Safety Plan: Towards Zero Deaths 2015-2020 (TSP 2020)* will continue to be developed over the years to come.

2.3 Enhance timely investment in physical infrastructure in the oil sands regions.

Project/Initiative	Lead Ministry	Status Dec. 2013
Southlands (Fort McMurray Commercial Development)	Infrastructure	Delayed

- The Government of Alberta has outlined a comprehensive strategy for releasing Crown land around Fort McMurray to facilitate residential, industrial and commercial development.
- A 980 acre parcel of land (Southlands 1A) south of Fort McMurray south of Highway 69 and east of Highway 63 was sold in 2011 and expects to have its first lots available in 2015. Southlands 2 an 859 acre commercial/industrial parcel south of the Airport has been ready for sale for some time but has been deferred to date pending confirmation of the Regional Municipality of Wood Buffalo (RMWB) concurrence to the sale.

Project/Initiative	Lead Ministry	Status Dec. 2013
Fort McMurray Land Release Strategy	Infrastructure	Delayed

- In 2012, the Government of Alberta outlined a comprehensive strategy for releasing Crown land around Fort McMurray to facilitate residential, industrial and commercial development. The strategy has been partially successful to date due to real estate market, economic and development influences.

Project/Initiative	Lead Ministry	Status Dec. 2013
Urban Development Sub Region (UDSR)	Energy	On Track

- The UDSR is a 55,000 acre area of Crown land surrounding Fort McMurray that will be sold to the Regional Municipality of Wood Buffalo over time in order to provide enough land to accommodate urban expansion for at least 25 years.
- The UDSR was established in July 2013. A process to cancel oil sands leases affected by the UDSR is currently underway. A program to survey land in order to facilitate a future transfer of ownership is also underway.

Project/Initiative	Lead Ministry	Status Dec. 2013
Parsons Creek Land Development	Transportation	On Track

- An interchange on Highway 63 north of Confederation Way is required to provide access to the Parsons Creek subdivision, which has an estimated build-out population of 24,000 people.
- In 2013, construction began on Phase 1 of the interchange which is slated to open to traffic in fall 2015.

Project/Initiative	Lead Ministry	Status Dec. 2013
Fort McMurray Land Exchange Agreement	Infrastructure	On Track

- The Government of Alberta and the Regional Municipality of Wood Buffalo (RMWB) entered into negotiations for an innovative agreement that would see the RMWB undertake several highway construction projects valued at \$131.8 million over the next few years. The projects would be funded through the sale of Government of Alberta land transferred to the RMWB.
- The parties reached agreement in principle in 2013 and subsequently ratified and finalized the arrangements.

STRATEGY THREE

Maximize long-term value for all Albertans through economic growth, stability and resource optimization.

3.1	Ensure that Albertans continue to receive appropriate economic benefit from extraction of oil sands.
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Project/Initiative	Lead Ministry	Status Dec. 2013
Monitoring and Reporting on Oil Sands Economics and Competitiveness	Energy	On Track

- In order to ensure the oil sands royalty structure remains responsive to changing conditions, the Government of Alberta continues to monitor energy industry development and trends as well as run economic analysis using in-house models. The initiative is considered an ongoing process that is designed to inform policy recommendations.

Project/Initiative	Lead Ministry	Status Dec. 2013
Bitumen Royalty-In-Kind (BRIK) and Expand Market for Bitumen	Energy	On Track

- The Bitumen Royalty-In-Kind (BRIK) project aims to leverage bitumen royalties to develop value-added oil sands products and establish a government-led organization to promote integrated cluster development in the Industrial Heartland. The Government of Alberta will seek to have a portion of its BRIK volumes commercially upgraded to higher value products in the province. BRIK initiative policies will be put in place to establish a transparent market for bitumen and to facilitate its effective functioning.
- The plan for implementing the BRIK program has been finalized after consultation with industry via the Canadian Association of Petroleum Producers in 2011. The Alberta Petroleum Marketing Commission will acquire bitumen blend from a limited number of producers to meet its supply obligations to the North West Refinery or for other initiatives of a strategic nature. Development of the terms of the bitumen blend supply agreements will commence in 2015.
- The North West Redwater Partnership has received formal approval to develop the \$5.7 billion Sturgeon Refinery. There are currently 1,000 engineers working on the project, and some site construction commenced in the summer of 2013 with planned start-up 2016. In December the Partnership announced the estimated cost will be \$8.5 billion and the start-up has been delayed to mid-2017. The Processing Agreement with the Partnership was restructured as a result of this change.

Project/Initiative	Lead Ministry	Status Dec. 2013
Facilitate the Establishment of a Transparent Market for Bitumen	Energy	On Track

- Bitumen products vary considerably in quality depending upon the field from which they are produced. The product requires the addition of diluents or upgrading to a synthetic crude oil (SCO) for shipping through pipelines. The Bitumen Royalty-In-Kind (BRIK) project includes a market design to facilitate more buyers and sellers of bitumen in a transparent and liquid market, assisting Alberta in getting the full value for its royalties.
- The plan for implementing the BRIK program has been developed after consultation with industry via Canadian Association of Petroleum Producers (CAPP), and the mechanisms to implement the program will be put in place in 2014.

Project/Initiative	Lead Ministry	Status Dec. 2013
Crown Agent Established to Manage Alberta Bitumen Market	Energy	On Track

- The Alberta Petroleum Marketing Commission (APMC) has been designated as the Crown Agent to handle bitumen volumes.
- A proposed governance structure and staffing plan has been developed. Richard Masson has been hired as CEO, and Clay Campbell has been hired as Finance Director. The “Building New Petroleum Markets Act” was passed in the fall session of 2013, providing enhanced governance of APMC, clarity of its mandate and clearer controls on its financial tools. Limited activities have been undertaken to enhance the capabilities of the APMC Board with industry expertise.
- The Government of Alberta has developed a governance and organizational structure for the APMC Commission to market bitumen royalty-in-kind volumes and to process a portion of these volumes through the Sturgeon Refinery.

3.2 Optimize the economic benefit of the bitumen resource for Alberta through upgrading and value-added petrochemical development.

Project/Initiative	Lead Ministry	Status Dec. 2013
Leveraging Bitumen Royalty-In-Kind (BRIK)	Energy	On Track

- The BRIK project aims to stimulate value-added processing in the province and obtain the best value for the government from its bitumen and potential products by promoting upgrading, refining, and petrochemical cluster development in the Industrial Heartland. The Crown is assessing several opportunities to leverage Crown barrels of bitumen royalty-in-kind and conventional oil royalty barrels in support of strategic objectives including value-added processing and infrastructure and market development.
- With the approval of the development of the Sturgeon Refinery, the project is now ramping up engineering work and will be raising \$5 billion of debt financing over the course of the coming months.

- The Alberta Petroleum Marketing Commission (APMC) has been supporting work on the Oil Market Diversification Strategy, particularly regarding the potential for development of pipelines to the east coast as well as rail opportunities to reach tide water connected terminals.
- APMC is currently committed for up to 100,000 barrels per day of capacity on the TransCanada Pipeline Energy East pipeline.

3.3 Diversify Alberta’s oil sands-related products and services into other international markets.

Project/Initiative	Lead Ministry	Status Dec. 2013
Economic Analysis and Marketing Monitoring	Energy	On Track

- The Government of Alberta continues to monitor international energy industry developments and trends to link in with key global markets that offer attractive opportunities for Alberta’s oil sands products to achieve a more diverse and resilient customer base.
- Analyzing and monitoring global and North American energy market trends and issues and reporting implications are ongoing. Alberta supports market diversity and access to new markets.

Project/Initiative	Lead Ministry	Status Dec. 2013
Development of Outbound Pipeline Systems	Energy	On Track

- A key priority for the Government of Alberta is the need to access new overseas markets for Alberta’s oil sands products through the development of energy infrastructure (outbound pipeline systems). Alberta and Canada will see significant economic benefits to all areas of the economy by diversifying to Asia-Pacific markets.
- The Federal Joint Review Panel completed the Northern Gateway Pipeline review hearing and on December 19, 2013, recommended that the federal government approve the project, subject to 209 required conditions.

3.4 Maximize industrial infrastructure and address workforce needs to support economic development of the oil sands.

Project/Initiative	Lead Ministry	Status Dec. 2013
Invest in Demonstration Projects and Laboratory Facilities Targeted at Oil Sands Projects	Innovation and Advanced Education	On Track

- Alberta Innovates invests in number of energy technology projects with a goal of improving efficiency and environmental performance in the oil sands, develop new approaches to reclamation, and address climate change.
- In 2013, Alberta Innovates - Energy and Environment Solutions and Alberta Innovates - Technology Futures continued to invest in demonstration projects.

Project/Initiative	Lead Ministry	Status Dec. 2013
Development of a Multi-Use Corridor Plan for the Oil Sands Regions and Alberta’s Industrial Heartland	Transportation	On Track

- The development of a multi-use corridor strategy for Alberta, including the oil sands regions and Alberta’s Industrial Heartland, has potential to support regional growth and the future development of needed provincial transportation and energy infrastructure, while reducing environmental impacts. This project is part of a broader initiative under the *Land Use Framework*.
- A jurisdictional scan was completed in 2013. The scan gathered information about multi-use corridor (linear infrastructure corridor) planning and development in other provinces and countries.
- The Government of Alberta, through Alberta Transportation’s ongoing highway planning work, has placed a provisional reservation (RDS*) for a 300 metre wide corridor, from Highway 63 at Fort McMurray west to Peerless Lake, for future the development of Highway 686, and which could also provide space for possible future utilities.
* Provisional Roadway Designation applied through Environment and Sustainable Resource Development under the *Public Lands Act*.

Project/Initiative	Lead Ministry	Status Dec. 2013
Updating <i>Building and Educating Tomorrow’s Workforce (BETW)</i>	Innovation and Advanced Education	On Track

- *BETW* is Alberta’s provincial labour force strategy developed in 2006. The strategy is both a provincial framework and government action plan, bringing together employers, industry associations, educators and more, to find ways to help mitigate labour shortages and prepare for the future. The strategy builds on initiatives that have taken place, reflects changes in the labour market, and responds to global events that have affected Alberta’s economy and job market.
- In 2013, work continued as part of this strategic initiative.

Project/Initiative	Lead Ministry	Status Dec. 2013
First Nations, Métis, and Inuit (FNMI) Workforce Planning Initiative	Innovation and Advanced Education	On Track

- The MLA report *Connecting the Dots: Aboriginal Workforce and Economic Development in Alberta* and subsequent Government of Alberta Response were released in May 2011. These reports identified recommendations for increasing education and skill levels, labour force participation, and economic opportunities for Aboriginal people in Alberta. One of the recommendations in *Connecting the Dots*, and a strategic priority of the Government of Alberta, is the development of an Aboriginal Workforce Strategy.
- In 2013, work continued as part of this initiative.

Project/Initiative	Lead Ministry	Status Dec. 2013
Oilmap Project	Jobs, Skills, Training and Labour	On Track

- Developing the oil sands requires a considerable labour force to build everything from extraction facilities to refineries and pipelines. Government and industry both recognize the importance of understanding the sector's future labour needs.
- JSTL is leading the way on understanding those needs through the development of the Oil Sands Information Labour Market Analysis and Projection ("OILMAP") model.
- Utilizing data gathered in partnership with the Construction Owners Association of Alberta (COAA), the OILMAP model correlates a project's size with the numbers and timing of skilled trades needed.
- To date, more than 200 energy-related projects are being tracked using the OILMAP model. These range from SAGD projects planned to produce 500 barrels of oil per day up, to mining projects of over 200,000 barrels per day, to various upgrader and pipeline projects. Contact is being maintained with oil sands companies who validate the list of planned projects that are being tracked.
- When fully developed, OILMAP will provide insight into the mix of skilled trades needed to support oil sands development in future years. The OILMAP project will not only examine the demand side, but also include a supply side analysis, showing the potential impacts of various policies (e.g., post-secondary education, training, immigration, etc.) on potential labour shortages. In addition to supporting development of government policy, aggregate data from OILMAP will also support industry in understanding their challenges related to attracting and developing a skilled workforce for major projects.
- In 2013, the OILMAP model suggested the following top eight occupations projected to be in demand between 2013-2015: labourers, electricians, welders, pipefitters, scaffolders, heavy equipment operators, structural ironworkers, and boilermakers.

Project/Initiative	Lead Ministry	Status Dec. 2013
Northeast Alberta Apprenticeship Initiative	Jobs, Skills, Training and Labour, IAE, AR (Joint-Funded)	On Track

- On July 9, 2013, the Tribal Chiefs Employment and Training Services Association (TCETSA) launched the Northeast Alberta Apprenticeship Initiative (NEAAI).
- Government of Alberta representatives, post-secondary institutions and industry worked with TCETSA to design NEAAI. NEAAI aims to provide wrap around services to increase apprenticeship completion rates of Aboriginal people. Services would include:
 - Three offices in Northeast Alberta in Lac La Biche, Cold Lake and St. Paul.
 - Re-engagement of apprentices who have never progressed or completed their apprenticeship programs.
 - Support for individuals who are interested in entering the trades.
 - Focus on addressing the social and pre-employment issues, as well as working with industry and employers.
 - Work with the local colleges to complement apprenticeship training.
- NEAAI is a unique opportunity to collaborate on a project that is First Nations driven with engagement of post-secondary and industry. The project also aligns with government's priorities to address labour shortages and improve outcomes for Aboriginal people.
- In its first year, the NEAAI worked with more than 40 clients with potential to become apprentices in the oil and gas workforce.

Project/Initiative	Lead Ministry	Status Dec. 2013
Dual Credit Strategy	HS, IAE, Education (Joint)	On Track

- In May 2013, the provincial Dual Credit Strategy was launched. Alberta's dual credit program is strengthening learner pathways from high school to post-secondary education. The strategy is intended to increase student retention and high school completion, increase participation of youth in post-secondary programs, and help youth make earlier and meaningful connections to the labour market. Dual credit also allows for students to pursue vocational opportunities earlier in their educational career by engaging in training that has traditionally been delivered at the post-secondary level.
- Twenty-six applications were approved for funding reflecting learning opportunities in construction trades, pre-employment trades, oil and gas pathways and others.

Project/Initiative	Lead Ministry	Status Dec. 2013
Labour Mobility	Jobs, Skills, Training and Labour	On Track

- Under labour mobility provisions of the Agreement on Internal Trade (and similar agreements such as the New West Partnership Trade Agreement), persons who are certified and in good standing in one jurisdiction in Canada can apply to other Canadian jurisdictions that offer the same certification without having to retrain, retest or have their qualifications reassessed.
- Labour mobility of Canadians is an important approach to build a permanent labour force and address persistent labour and skills challenges in the province.
- In 2013, JSTL's support for the Agreement on Internal Trade, streamlined the certification of 9,045 out-of-province workers applying for licensing in a regulated occupation in Alberta.

Project/Initiative	Lead Ministry	Status Dec. 2013
Foreign Qualifications Recognition	Jobs, Skills, Training and Labour	On Track

- Since the launch of the Foreign Qualifications Recognition (FQR) Plan in 2008, the Government of Alberta has worked with stakeholders to streamline assessment processes, improve access to relevant and current information about qualification recognition processes and enhance the way Professional Regulatory Organizations (PROs) recognize internationally trained applicants.
- Alberta pioneered two key resources to improve understanding of foreign credentials.
 - International Education Guides: are a comprehensive information resource on international educational systems and credentials, and support professional licensing bodies and educational institutions in making accurate and efficient decisions about international credentials.
 - Education Overview Guides (EOGs): provide an understanding of foreign earned credentials for those who have no training or experience in credential assessment, and are targeted at employers.
- Alberta continues to support PROs and Alberta employers through project funding under the Foreign Qualification Recognition Innovation Fund. The Fund supports stakeholders in developing the tools and resources required to improve foreign qualification recognition processes. In 2013, Alberta funded the development of eight tools, resources and systems improvements by employers, professional licensing bodies and educational institutions that facilitated and streamlined the recognition of international qualifications for professional licensing and employment.
- In terms of credential assessments, in 2013, Alberta's International Qualifications Assessment Service (IQAS) issued 8,342 assessment certificates to immigrants. These certificates promoted the recognition of international academic credentials for entry into employment, professional licensing and post-secondary education

Project/Initiative	Lead Ministry	Status Dec. 2013
Registered Apprenticeship Program	IAE, Education (Joint)	On Track

- While in high school, students can become apprentices through the Registered Apprenticeship Program (RAP). In RAP, they obtain on-the-job training and work experience as credit toward both an apprenticeship program and a high school diploma while earning an income.
- More than 1,500 high school students were registered in RAP in 2013, and were employed at over 1,000 employer sites.
- In 2013, more than 2,700 apprentices who started RAP in high school were continuing in a regular apprenticeship program

Project/Initiative	Lead Ministry	Status Dec. 2013
First Nations Training to Employment and Aboriginal Training to Employment Programs	Human Services	On Track

- First Nations Training to Employment Program (FNTEP) is designed to offer training and work experience projects First Nations members living on reserves in Alberta. The Aboriginal Training to Employment Program (ATEP) training assists Aboriginal people and Metis who are unemployed or marginally employed gain skills and work experience in various local community development projects. The goal of both programs is to work in partnership with First Nations, Metis, Aboriginal organizations, and industry so that participants on and off-reserve have the opportunity to obtain long-term employment.
- In 2013, over 50 adult and youth focused contracts were established throughout the province. Examples include, housing construction training, pre-trades training, class 1 drivers training and heavy equipment operator training, career camps for youth as well as forest ranger programs.
- Over 1,000 participants completed the various training initiatives under FNTEP and ATEP.

Project/Initiative	Lead Ministry	Status Dec. 2013
Industry Champions Initiative	Innovation and Advanced Education	On Track

- Through the Industry Champions Initiative, the Apprenticeship and Industry Training board encouraged employers to hire and train more apprentices as a means to increase the skilled workforce supply.
- The Oil and Gas Industry Champions Committee: helped increase awareness of shared challenges and opportunities; increased minimum apprentice hiring in companies that direct hire; and developed Call to Action for Apprenticeship document.
- Overall, in 2013, there were:
 - more than 65,000 registered apprentices in Alberta
 - more than 22,000 new apprentices registered – an increase of almost 50% since 2010
- More than 8,500 individuals were certified in Alberta’s designated trades and occupations.

Project/Initiative	Lead Ministry	Status Dec. 2013
High School Credentialing (Improving High School Completion Rates)	Alberta Education	On Track

- Overall, high school completion rates are increasing. Both the three-year and five-year rates have increased by about three percent between 2008/2009 and 2012/2013.
- Three-year high school completion – increased to 77 per cent in 2013 from 71 per cent in 2009. The 2013 provincial 3-year high school completion rate was 74.9 per cent, and 5 – year high school completion was 81.7% (2013)
- In Alberta, the completion rates for First Nations, Métis and Inuit students have historically been about half that of the general student population. In the last five years, completion rate for FNMI students have increased by almost ten percent.
- The 2008 – 2013 High School Flexibility Enhancement Project focused on increasing learning options for high school students by eliminating the mandated requirement for 25 instruction hours per credit. The results of the project were encouraging, and school leaders across the province expressed support for increased flexibility and autonomy. They noted that the initiative should move ahead intentionally, encouraging both shared learning and accountability. As a result of the success of the pilot, and the call to move ahead with this initiative, the Deputy Minister extended an invitation in December 2012 to all Public, Separate, Francophone and Charter schools to participate in Phase 2 of this initiative - Moving Forward with High School Redesign. 69 schools chose to participate beginning in September 2013.

STRATEGY FOUR

Strengthen our proactive approach to Aboriginal consultation with a view to reconciling interests.

4.1 Promote clarity and consistency in consultation processes with First Nations.

Project/Initiative	Lead Ministry	Status Dec. 2013
First Nations Consultation Capacity Initiative Program (FNCCIP)	Aboriginal Relations	On Track

- The FNCCIP provides core investment funding to ensure First Nations are able to respond to and work effectively with industry and government by assisting in establishing the consultation capacity that is necessary to engage in resource development consultation.
- Under the program, all Alberta First Nations receive a core investment funding allocation of \$80,000. Additional supplementary funding allocations are provided based on known resource development pressures, traditional use data, mineral sales data and land access applications surrounding First Nations communities.
- The FNCCIP program ensures that there is a single point of contact for all First Nations that participate in the program for consultation purposes (95% of all First Nations in 2013) that is publicly provided to industry and Government departments to carry out their consultation activities.
- In 2013, the FNCCIP continued to provide an annual allocation to First Nations. The FNCCIP also provided funding to support First Nations impacted by the flood to ensure that consultation avenues were maintained and funding was also provided to support First Nations participation in the review of *The Government of Alberta's Policy on Consultation with First Nations on Land and Resource Management, 2013*.

Project/Initiative	Lead Ministry	Status Dec. 2013
First Nations Consultation Policy and Guidelines Review	Aboriginal Relations	On Track

- On August 16, 2013, *The Government of Alberta's Policy on Consultation with First Nations on Land and Natural Resource Management, 2013* (Policy) was released. The Policy was approved by Cabinet and publicly released following a formal First Nations and stakeholder comment period and is the product of a comprehensive multi-year review process. The Policy has not been implemented.
- The new Policy represents a major step in an ongoing process to improve First Nations consultation in Alberta and signals the province's commitment to continually engage with First Nations, industry and other stakeholders in strengthening the consultation process for all parties. The Policy includes concepts to improve process clarity, consistency and transparency. It will help ensure Alberta's legal duty to consult continues to be met in a way that respects First Nations' Treaty rights.

- Establishing a more active Crown role in Alberta's First Nations, as well as new structures and processes to improve the coordination and consistency of decisions and Policy application, the new Policy includes:
 - A centralized Aboriginal Consultation Office; and
 - A Consultation Process Matrix to classify resource activities according to their potential to impact Treaty rights and traditional uses and an industry levy, administered by the Crown, to support increased First Nations' capacity to participate in the consultation process. In October 2013, Aboriginal Relations held group engagement sessions with First Nations, industry and stakeholder representatives to inform the Policy's implementation. Feedback from these sessions helped inform development of Consultation Guidelines, designed to fully implement the Policy.
- A central component of the Policy - creation of a centralized, single-unit Aboriginal Consultation Office (ACO) – occurred in November 2013. Under the administration of Aboriginal Relations, the ACO merges consultation and advisory services formerly provided by the Stewardship Branch of Environment and Sustainable Resource Development with other services offered by Aboriginal Relations' Consultation and Land Claims Division. The ACO manages all aspects of Alberta's First Nations consultation process, including determining the adequacy of proponent-led consultation activities with First Nations.
- In conjunction with the Policy, the Consultation Guidelines will assist in creating strengthened consultation procedures and improved process clarity and consistency for all involved parties. In delegating procedural aspects of consultation to industry proponents, the ACO expects the activities undertaken on the Crown's behalf to meet the processes and standards established within both the Policy and Guidelines, which have been designed to include the following:
 - Strengthened pre-consultation assessment procedures;
 - The use of sector-specific matrices to classify projects according to their relative potential to adversely impact Treaty rights and traditional uses;
 - Application of three consultation levels to assess the scope and depth of First Nations consultation necessary in the circumstances;
 - Clearly defined timelines within the stages of the consultation process to provide all parties with greater predictability; and
 - Improved criteria and increased requirements to more effectively determine the adequacy of proponent-led consultation activities.
- The new Policy also enhances regulatory certainty in the resource development sector, as it aligns with the Alberta Energy Regulator and supports the province's Integrated Resource Management System. Once implemented through the finalization of the Consultation Guidelines, the Policy will be implemented and come into effect, expected in summer 2014.

4.2 Enhance collaborative government-to-government relationships.

Project/Initiative	Lead Ministry	Status Dec. 2013
GeoData Initiative	Aboriginal Relations	On Track

- GeoData maps will serve as a tool to allow the Government of Alberta to better define which First Nations it may need to consult with on resource development projects, based on geographical areas of interest.
- In 2013, Phase III of the GeoData Mapping initiative commenced. The Government of Alberta cross-ministry GeoData mapping committee began meeting with First Nations to acquire data and refine, produce, and distribute maps. As a result of these meetings and other data collection opportunities in 2013, the ministry developed GeoData maps for 16 out of 48 First Nations in Alberta. This means that 33 per cent of First Nations had a GeoData map developed. The ministry exceeded its 2013–14 target of 30 per cent. The ministry is pleased to continue working with First Nations willing to participate in the project.

STRATEGY FIVE

Maximize research and innovation to further support sustainable development and unlock the deposit's potential.

5.1 Further develop Alberta as a world-class centre of clean-energy research excellence.

Project/Initiative	Lead Ministry	Status Dec. 2013
Implementation of Alberta Innovates	Innovation and Advanced Education	On Track

- Alberta Innovates, the provincial research and innovation system, continues to deliver on Alberta research priorities in oil sands development and technologies. Alberta Innovates manages government investments in research and innovation in a way that creates the greatest benefit for Albertans and the Alberta economy, enhancing existing partnerships and establishing new partnerships with key stakeholders in industry, government, and universities.
- In 2013, Alberta Innovates – Energy and Environment Solutions and its partners delivered on research priorities in energy technologies, environmental management, and water resources. Alberta Innovates – Technology Futures and its partners delivered on capacity building programs and provided research and development support on the topics of bitumen and heavy oil, carbon capture and storage, and ecosystem management.

Project/Initiative	Lead Ministry	Status Dec. 2013
Alberta – Canada Collaboratory in Cleaner Oil Sands Development – Memorandum of Understanding (MOU) with Natural Resources Canada (NRCan)	Innovation and Advanced Education	On Track

- Advanced Education and Technology (now Innovation and Advanced Education) signed the Alberta-Canada Collaboratory in Cleaner Oil Sands Development MOU with NRCan in 2011 to ensure research efforts are co-ordinated and oil sands resources are developed in an environmentally responsible and sustainable manner.
- The Steering Committee, External Advisory Committee, and Implementation Team for the Collaboratory continue to meet to establish initiatives to implement the mandate of the MOU.

Project/Initiative	Lead Ministry	Status Dec. 2013
Recruit and Retain Highly Qualified Personnel in Areas of Strategic Priority	Innovation and Advanced Education	On Track

- The initiative to recruit and retain highly qualified personnel in areas of strategic priority is delivered through the Campus Alberta Innovates Plan (CAIP). Work continued in 2013 as part of the ongoing initiative. The CAIP chairs include:
 - Biotechnological Applications of the Deep Biosphere Metagenome
 - Interfacial Polymer Engineering for Oil sands Processing
 - Reservoir Biogeoscience.

Project/Initiative	Lead Ministry	Status Dec. 2013
Chemical Looping Combustion	Innovation and Advanced Education	On Track

- Alberta Innovates – Technology Futures (AITF) continues to advance technologies that will ultimately reduce the carbon footprint associated with oil sands production, and Steam Assisted Gravity Drainage (SAGD) projects in particular.
- In 2013, AITF continued advancing efforts to demonstrate Chemical Looping Combustion (CLC) technologies and working with Canadian universities and other government agencies to help “de-risk” this promising technology for producing steam for SAGD projects. The advantage of CLC is that it results in high purity carbon dioxide (CO₂) that can then be captured at a lower cost compared to other technologies.

Project/Initiative	Lead Ministry	Status Dec. 2013
Centre for Oil Sands Innovation (University of Alberta)	Innovation and Advanced Education	On Track

- The Centre for Oil Sands Innovation (COSI) is focused on research in bitumen and minerals fundamentals, bitumen separation and upgrading, environmental footprint reduction, and extraction.
- In 2013, Alberta Innovates – Energy and Environment Solutions continued to engage with COSI as an ongoing initiative.

Project/Initiative	Lead Ministry	Status Dec. 2013
AACI	Innovation and Advanced Education	On Track

- Initiated in 1983, the AACI is an in situ heavy oil research and development consortium that partners industry with government to advance field-focused technologies that significantly reduce energy consumption and environmental impacts.
- Work continued in 2013 as part of the ongoing initiative.

Project/Initiative	Lead Ministry	Status Dec. 2013
Materials and Reliability in Oil Sands Consortium (MARIOS)	Innovation and Advanced Education	On Track

- In 2009, Alberta Innovates – Technology Futures launched the (MARIOS) consortium to tackle industry-wide maintenance and reliability issues. The goal of MARIOS is to develop knowledge and validate technologies to significantly reduce downtime and improve reliability and productivity in the oil sands industry. The consortium links oil sands producers, materials and equipment suppliers, fabricators, and technology providers to collaboratively solve industry-wide problems.

- Work continued in 2013 as part of the ongoing initiative.

5.2 Develop policy and regulatory tools to encourage, motivate, or require industry to invest in sustainable development and use of technologies.

Project/Initiative	Lead Ministry	Status Dec. 2013
Reclamation Studies	Innovation and Advanced Education	On Track

- Alberta Innovates – Energy and Environment Solutions and Alberta Innovates – Technology Futures continue to invest in reclamation studies for the oil sands.
- Studies include projects such as:
 - Life Cycle Analysis of Oil Sands Systems,
 - In-Line Dewatering of Oil Sands Tailings,
 - Climate and soil data studies,
 - Seepage water quality study, and
 - Nutrient status and retention in reconstructed sandy soils.
- Work continued in 2013 as part of the ongoing initiative.

Project/Initiative (Summary of Seven Initiatives)	Lead Ministry	Status Dec. 2013
Alberta Innovates – Energy and Environment Solutions (AIEES) Research and Demonstration Projects	Innovation and Advanced Education	On Track

- AIEES is leading a number of research and demonstration projects related to oil sands development.
- Ongoing initiatives in 2013 included:
 - Demonstration Project for Producing Pure CO₂ for Carbon Capture;
 - Using Electromagnetic Heating for Bitumen Recovery; complete
 - Life Cycle Analysis on Energy Efficiency and Greenhouse Gas Mitigation; complete
 - Thermal In Situ Water Conservation Study to Find More Efficient Ways of Producing Oil Sands and Minimizing Water Usage;
 - Front End Engineering and Design for Carbon Capture and Storage from Steam Assisted Gravity Drainage Boilers;
 - Commercial demonstration of ET-DSP™ in Athabasca Oil Sands; and
 - Low intensity Bitumen Upgrading –field pilot

Project/Initiative	Lead Ministry	Status Dec. 2013
International Energy Agency (IEA) Weyburn CO₂ Monitoring	Innovation and Advanced Education	On Track

- Alberta Innovates – Technology Futures conducts monitoring and modelling work on the Weyburn IEA-GHG CO₂ Monitoring project in southeastern Saskatchewan.
- Work continued in 2013 as part of the ongoing initiative.

Project/Initiative	Lead Ministry	Status Dec. 2013
Alberta Innovates Energy and Environment Solutions (AIEES) Business Plan	Innovation and Advanced Education	On Track

- The AIEES Business Plan identifies four strategic areas of focus: energy technologies, renewable and emerging resources, environmental management, and water resources.

Project/Initiative	Lead Ministry	Status Dec. 2013
Energy Innovation Platform of Alberta (EIPA)	Innovation and Advanced Education	On Track

- EIPA is an online collection of research results, documents, and information resulting from investment by Alberta Innovates - Energy and Environment Solutions.
- Work continued in 2013 as part of the ongoing initiative.

Project/Initiative	Lead Ministry	Status Dec. 2013
Open Innovation	Innovation and Advanced Education	On Track

- Open Innovation is a policy for the management of intellectual property within Alberta Innovates Corporations. The guidelines of Open Innovation allow for an open and transparent process for sharing the results of government investments in research and innovation in a way that creates the greatest benefit for Albertans and the Alberta economy. The guidelines enhance existing partnerships and establish new partnerships with key stakeholders in industry, government, and research organizations.
- Work continued as part of the ongoing initiative.

Project/Initiative	Lead Ministry	Status Dec. 2013
Oil Sands Tailings Consortium (OSTC)	Innovation and Advanced Education	On Track

- The Oil Sands Tailings Consortium (OSTC) was founded in December, 2010 when seven of Canada's largest oil sands mining companies agreed to share tailings research and technology in a unified effort to advance tailings management. In March 2012, the OSTC became part of Canada's Oil Sands Innovation Alliance (COSIA).
- The OSTC is working with Alberta Innovates – Energy and Environment Solutions and Alberta Environment and Sustainable Resource Development on the End to End Tailings Management Framework that is investigating all processes in oil sands mining that may impact the water – from the time water leaves the river until it is returned.
- Work continued in 2013 as part of the ongoing initiative.

5.3 Facilitate long-term and responsive investment in a balanced research and innovation portfolio.

Project/Initiative	Lead Ministry	Status Dec. 2013
Alberta Innovates Energy and Environment Solutions (AIEES) Research Chairs	Innovation and Advanced Education	On Track

- The following research chairs are supported by AIEES:
 - Water Quality Management for Oil Sands Extraction, Dr. Subir Bhattacharjee, University of Alberta;
 - Tight Gas Chair, Dr. Roberto Aguilera, University of Calgary;
 - Petroleum Thermodynamics, Dr. John Shaw, University of Alberta;
 - Drilling, Dr. Geir Harland, University of Calgary;
 - Oil Sands Engineering Chair, Dr. Zhenghe Xu, University of Alberta;
 - Reservoir Simulation, Dr. John Chen, University of Calgary and;
- Work continued in 2013 as part of the ongoing initiative.

Project/Initiative	Lead Ministry	Status Dec. 2013
Alberta Innovates – Technology Futures (AITF) Monitoring Initiatives	Innovation and Advanced Education	On Track

- AITF researchers are focused on developing new technologies and approaches for monitoring the impacts of oil sands production on the environment. In the past, AITF researchers have developed novel approaches for using carbon isotopes and organic fingerprinting to assess whether groundwater is being impacted by oil sands production. AITF also continues to support the Alberta Biodiversity Monitoring Institute (ABMI) and is working with ABMI partners to monitor a wide range of species across the province and to test new approaches for monitoring wildlife. A significant focus is being placed on Northeast Alberta where there is a concerted effort to increase the frequency and scale of monitoring.
- Work continued in 2013 as part of the ongoing initiative.

Project/Initiative	Lead Ministry	Status Dec. 2013
Climate Change Emissions Management Corp. (CCEMC) – Research Projects	Innovation and Advanced Education	On Track

- CCEMC oil sands projects in 2013 fall into three categories:
 - Energy Efficiency
 - (i) Vent Gas Capture for Engine Fuel Use;
 - (ii) Energy Efficiency Program Leading to Significant Greenhouse Gas (GHG) Reductions in Alberta's Oil and Gas Industry; and
 - (iii) Alberta Oil Sands Energy Efficiency & GHG Mitigation Roadmap Program (complete).

- Carbon Sinks
 - (i) HTC Pureenergy/Devon CO₂ Capture Project;
 - (ii) Ceramic membrane-based technology for H₂ production with CO₂ Capture and Sequestration; and
 - (iii) Through Steam Generator Oxy-fuel Demonstration Project.
- Greening Fossil Fuels
 - (i) Effective Solvent Extraction Incorporating Electromagnetic Heating (ESEIEH);
 - (ii) Field Test of ET-DSP(TM) in the Mineable Athabasca Oil Sands.

Project/Initiative	Lead Ministry	Status Dec. 2013
Carbon Capture and Storage Projects	Innovation and Advanced Education	On Track

- Alberta Innovates – Energy and Environment Solutions (AIEES) and Alberta Innovates – Technology Futures (AITF) continue to advance carbon capture and storage research and technologies in Alberta.
- In 2013, AIEES continued work on carbon capture and storage related projects including:
 - CO₂ Sequestration in Saline Aquifers;
 - Potential and Possible Effects of CO₂ Storage in the Basal Aquifer Northern Plains; and
 - Advanced Hydrogen and CO₂ Capture Technology Air Products.
- AITF continued collaborating with General Electric and the University of Alberta to advance new membrane technologies that could be used to capture CO₂ associated with hydrogen separation at oil sands upgraders. This project, which is funded by the Government of Alberta and General Electric, brings together nano-scale technologies being developed at the University of Alberta with AITF’s materials experts and has the potential to result in significantly lower costs associated with CO₂ capture. AITF also investigated suitable locations for the storage of CO₂ associated with oil sands operations and built on efforts to characterize, model and monitor the Basal Cambrian deep saline aquifer, which is also a target formation for several oil sands producers.

Project/Initiative	Lead Ministry	Status Dec. 2013
Alberta Innovates – Energy and Environment Solutions (AIEES) Creating more value from Asphaltenes	Innovation and Advanced Education	On Track

STRATEGY SIX

Increase available information, develop measurement systems, and enhance accountability in the management of the oil sands

6.1	Develop transparent and effective performance measurement systems that foster continuous improvement to achieve outcomes.
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Project/Initiative	Lead Ministry	Status Dec. 2013
Oil Sands Sustainability Indicators	Energy	On Track

- Creating and publicly posting sustainability indicators for the three oil sand regions will provide a management tool for the Government of Alberta to gauge responsible and sustainable development and increase data accessibility for the public for a suite of economic, social, and environmental trends.
- In 2013, indicator data collection continued and opportunities were explored to leverage data from Alberta Official Statistics and the Oil Sands Information Portal. Public release of sustainability indicators on an Alberta Energy webpage is anticipated to start in the fiscal year 2014-15.

6.2	Create effective data-management systems to facilitate consistent and uniform planning in the oil sands regions.
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Project/Initiative	Lead Ministry	Status Dec. 2013
Alberta Official Statistics	Treasury Board and Finance	On Track

- Through the collaborative efforts of subject matter experts across the Government of Alberta, foundational reference data and key government information has been certified for quality and usage conditions. These are consolidated by the Office of Statistics and Information, the legislated statistics agency of the province and made publically available as *Alberta Official Statistics*. They provide relevant, impartial information to facilitate consistent and uniform policy, research and planning.
- The suite of [Alberta Official Statistics](#) includes more than 100 statistics produced by departments covering the four widely accepted pillars of statistical information: society, economy, demography and environment.
- An official population statistic for Alberta based on Statistics Canada's annual total population estimate for Alberta was introduced as an Alberta Official Statistic in fulfilment of the objective to strengthen processes that enable the Government of Alberta and its partners to use official government statistics particularly population metrics for planning forecasting and budgeting purposes.
- Environmental statistical concepts are still in varying stages of development by the Government of Alberta, Statistics Canada and other organizations. Efforts to develop these concepts and

indicators will be incorporated into the suite as they mature. There is a need to bridge developments at Statistics Canada regarding the Environmental Statistics Framework and the new Energy Statistics Framework with current Government of Alberta initiatives (e.g. Integrated Resource Management, Environmental Monitoring).

- Work continues on a strategic plan for *Advancing Alberta Official Statistics* for realizing the vision based on conceptual foundations accepted by leading official statistics agencies around the world. The outcomes will support policy capacity within the Government of Alberta, satisfy increasing demands for openness and transparency from the public, and improve data quality and accessibility for all types of users.

Project/Initiative	Lead Ministry	Status Dec. 2013
Information Sharing Framework Committee	Treasury Board and Finance	On track

- The guiding principles of the Government of Alberta’s Information Sharing Framework were designed to enable the sharing of information to improve service delivery outcome for clients and to support policy and research functions. The ultimate outcome is to inform Government of Alberta decision-making, but different approaches are required to meet these two objectives.
- The Office of Statistics and Information and the GOA Statistics Council are developing Government of Alberta enterprise data management strategies to unlock access to administrative data to optimize its use for statistical analysis and evidence informed policy.

Project/Initiative	Lead Ministry	Status Dec. 2013
Shadow Population Project	Treasury Board and Finance	On track

- As a result of the rapid growth in the oil sands industry over the last decade, Alberta has attracted a significant number of people who spend extensive amounts of time in the province but declare their residence elsewhere in Canada (i.e., shadow population). Since these people are not reflected in the official population counts, it creates a challenge for infrastructure planning and program service delivery.
- The first-ever research on the “[Inter-provincial Employees in Alberta](#)” was produced in partnership between Statistics Canada and the Government of Alberta’s Demography Working Group and the Office of Statistics and Information. The findings and data can be used as inputs for Government of Alberta initiatives such as the Comprehensive Regional Infrastructure Sustainability Plans which covers the oil sands regions, the *Land-use Framework*, and other work that have broad policy potential and implications. Some jurisdictions also used this information to analyze labour mobility and retention issues.

Appendix: Related Government of Alberta Strategies and Initiatives

<p>Responsible Actions: A Plan for Alberta's Oil Sands http://www.energy.alberta.ca/pdf/OSSgoaResponsibleActions_web.pdf</p>	<p>Responsible Actions: A Plan for Alberta's Oil Sands – Implementation Plan http://www.energy.alberta.ca/pdf/OSSResponsibleActionsImplementation.pdf</p>
<p>Alberta Innovates http://www.albertainnovates.ca</p>	<p>Alberta Municipal Affairs — Parsons Creek http://www.municipalaffairs.alberta.ca/community_development_advisory_board.cfm</p>
<p>Alberta Official Statistics https://osi.alberta.ca/osi-content/pages/catalogue.aspx</p>	<p>Alberta's Oil Sands http://www.oilsands.alberta.ca</p>
<p>Alberta's Traffic Safety Plan: Saving Lives on Alberta's Roads http://www.transportation.alberta.ca/3112.htm</p>	<p>Bitumen Royalty-In-Kind (BRIK) http://www.energy.alberta.ca/BRIK.asp</p>
<p>Building and Educating Tomorrow's Workforce http://eae.alberta.ca/labour-and-immigration/betw.aspx</p>	<p>Carbon Capture and Storage http://www.energy.alberta.ca/OurBusiness/3815.asp</p>
<p>Climate Change Strategy http://esrd.alberta.ca/focus/alberta-and-climate-change/climate-change-strategy/default.aspx</p>	<p>Comprehensive Regional Infrastructure Sustainability Plans (CRISPs) http://www.energy.alberta.ca/Initiatives/3224.asp</p>
<p>Cumulative Effects Management https://www.landuse.alberta.ca/CumulativeEffects/CumulativeEffectsManagement/Pages/default.aspx</p>	<p>First Nations Consultation Policy on Land Management and Resource Development http://www.aboriginal.alberta.ca/571.cfm</p>
<p>Land-use Framework and the Lower Athabasca Regional Plan https://landuse.alberta.ca/Pages/default.aspx</p>	<p>Oil Sands Information Portal http://environment.alberta.ca/apps/osip/</p>
<p>Provincial Energy Strategy http://www.energy.alberta.ca/Initiatives/3082.asp</p>	<p>Regulatory Enhancement http://www.energy.alberta.ca/Initiatives/RegulatoryEnhancement.asp</p>
<p>Spirit of Alberta: Alberta's Cultural Policy http://www.culture.alberta.ca/about/premiers-council/cultural-policy/</p>	<p>Urban Development Sub-Region (UDSR) for Fort McMurray http://www.energy.alberta.ca/Initiatives/3508.asp</p>