



17  
/18

annual report  
EXECUTIVE SUMMARY

OUR MANDATE

The Alberta Energy Regulator ensures the safe, efficient, orderly, and environmentally responsible development of hydrocarbon resources over their entire life cycle. This includes allocating and conserving water resources, managing public lands, and protecting the environment while providing economic benefits for all Albertans.

OUR MISSION

Through regulatory excellence, the AER ensures the safe and sustainable development of Alberta's energy resources.

OUR VISION

Alberta is recognized for excellence in sustainable energy development.

WHAT WE REGULATE

Dec. 31, 2017



OVER 426 000<sup>†</sup>  
KILOMETRES OF PIPELINES



OVER 167 000  
OPERATING NATURAL GAS & OIL WELLS



CLOSE TO 21 000  
OIL FACILITIES



AND OVER 30 000  
GAS FACILITIES

OVER 210

PRIMARY RECOVERY  
IN SITU PROJECTS

AND

16

EXPERIMENTAL  
IN SITU PROJECTS



OVER 60

THERMAL/ENHANCED  
IN SITU PROJECTS



8<sup>‡</sup>

OIL SANDS  
MINES



4

BITUMEN  
UPGRADERS



2

COAL  
PROCESSING PLANTS



7

PRODUCING  
COAL MINES

<sup>†</sup>In addition to inspection and incident response support for 12 000 kilometres of pipelines regulated by the Alberta Utilities Commission.

<sup>‡</sup>As of January 2018.

# ABOUT the AER

Alberta's energy sector is vast and complex. It includes crude oil, natural gas, oil sands, and coal resources, and an extensive pipeline network that moves product to market. Ensuring that it operates in a safe, efficient, orderly, and environmentally responsible manner is no simple task. Enter the AER, Alberta's sole regulator that energy companies must deal with as they carry out their activities.

Few organizations on the planet regulate as large and varied a mix of energy resources as we do. We oversee some very large established reserves:

- 1.6 billion barrels of conventional oil
- 165 billion barrels of bitumen
- 28.2 trillion cubic feet of natural gas
- 36.6 billion tons of coal

That's a lot of energy, and it requires a lot of infrastructure to produce, mine, process, and move it to market. We're responsible for regulating this infrastructure, including pipelines, wells, processing facilities, in situ projects, bitumen upgraders, coal mines, and coal-processing plants.

The Government of Alberta gives the AER authority to ensure that companies develop the province's massive energy resources in a safe and environmentally responsible fashion, without waste:

- We review applications and make decisions on tens of thousands of proposed energy developments each year.
- We oversee all aspects of energy resource activities in accordance with government policies.
- We regularly inspect energy activities to ensure that all applicable requirements are met.
- We penalize companies that fail to comply with AER requirements.
- We hold hearings on proposed energy developments.

To make it happen, the AER employs 1200 staff, including inspectors, technical staff, engineers, geologists, scientists, investigators, stakeholder engagement specialists, mediators, lawyers, regulatory experts, and other employees in 15 offices and field centres around Alberta.

The AER also offers two unique and world-class services: the Core Research Centre, which collects, preserves, and displays core samples and drill cuttings dating back decades; and the Alberta Geological Survey (AGS), which studies the world that lies beneath Alberta.

## ALBERTA'S SOLE ENERGY REGULATOR

The Government of Alberta created the AER in 2013 when it proclaimed the *Responsible Energy Development Act*. We took on regulatory functions that are related to energy development and that were held by Alberta Environment and Parks (previously Alberta Environment and Sustainable Resource Development), and we combined them with the regulatory functions of the AER's predecessor, the Energy Resources Conservation Board.

The AER's role is to develop and enforce rules and regulations around energy development, taking direction from government policy. The AER is a key partner in the government's Integrated Resource Management System, a collaborative and coordinated approach to managing Alberta's environment and natural resources. Other partners are the government departments of Environment and Parks, Indigenous Relations, Energy, Agriculture and Forestry, and Health.

## WHAT WE DON'T REGULATE

The AER's authority is limited to activities related to oil, bitumen, natural gas, and coal development. We have no authority over any of the following:

- Gasoline or other refined petroleum products
- Oil and gas pipelines that cross provincial or international borders (these are regulated by the National Energy Board)
- Any aspect of electricity generation or distribution, including renewable energies
- The regulated rate for natural gas, which is the responsibility of the Alberta Utilities Commission (AUC)
- Gas utility pipelines (again, this falls to the AUC, although the AER does inspect these pipelines and provide incident response on the AUC's behalf).

# H I G H L

Created **OneStop**, a digital system that is revolutionizing the way we regulate by allowing companies to submit one application for one review with one decision for a project rather than multiple processes.

Working with the Orphan Well Association, ensured that **two critical sour gas wells** in south Calgary belonging to defunct operator Lexin Resources Inc. were properly abandoned.

Released an **interactive map** to disclose oil and gas related pond locations in Alberta.

Hosted about 90 international delegates at the inaugural **Regulatory Excellence Global Summit** to share information and to inspire collaboration and innovation among energy regulators the world over.

Officially released ***Voices of Understanding***, a book intended to help AER staff and indigenous communities draw parallels between western and indigenous decision-making.

83 per cent of Albertans and 72 per cent of stakeholders **expressed confidence** in the AER.

# I G H T S

Issued the **Alberta Energy Industry Water Use Performance** report, which shows the amount of water used in oil sands, hydraulic fracturing, and other types of energy development in order to help improve industry performance.

Using feedback from AER stakeholders, released a new **strategic plan** that enhances our ability to protect the public and the environment while continuing to improve Alberta's energy regulatory system.

**Implemented four recommendations** requested by an advisory committee to improve air quality and air-monitoring systems at Fort McKay.

**Generated \$143 million** in annual savings for industry by finding efficiencies in our system while still ensuring public safety and environmental protection.

Replaced **Turtle Mountain's** 3600 kilograms of aging monitoring equipment.

Argued before the **Supreme Court of Canada** to overturn a lower-court decision in the Redwater Energy case, which would allow creditors and trustees of bankrupt energy companies to walk away from their obligations to clean up oil and gas sites.



# 2018–23 strategic plan

Few set out on a long journey or begin a major project without doing some planning first. And quite often, circumstances change and so too must the plan.

In 2013, the AER was created and we soon got to work developing a strategic plan that focused on four priorities: being protective, effective, efficient, and credible. It was underpinned by a vision of becoming an excellent regulator.

But just as energy development has continued to evolve to adapt to new challenges, the way we regulate must also evolve. For this reason, the AER has created a new strategic plan—one that continues to integrate the attributes of regulatory excellence (utmost integrity, empathic engagement, and stellar competence) into all our work, sets clear outcomes and measures, and ensures that we continue to protect what matters to Albertans.

This strategy will help us prioritize the work we need to do to continue to improve Alberta's energy regulatory system. The new strategic plan is built on an updated vision:

**“Alberta is recognized for excellence in sustainable energy development.”**

Every day, and in everything we do, we deliver on five key outcomes for Alberta.

- 1. The environment is protected.**
- 2. The public is safe from harm.**
- 3. The public is confident about how energy is developed within the province.**
- 4. The regulatory system enables economic benefit for all Albertans.**
- 5. Energy development in Alberta is well planned.**

For the AER, sustainable energy development means our decisions will integrate environmental, economic, and social outcomes throughout the regulatory process. We have made great strides in incorporating these factors into our decisions, and this new plan will ensure that the AER continues this work with heightened focus.

After discussions with key stakeholders, our senior leaders created five new strategic goals for the organization.

**1. The development of energy resources is managed throughout the life cycle by integrating economic, environmental, and social factors, and considering industry performance.** This means that we base decisions on these factors and take into account how companies are performing.

**2. The regulatory system enables the energy transition.** We enable the use of clean technologies to reduce the impacts of energy development. Drawing on our expertise and experience, we contribute to policy development surrounding the regulation of hydrocarbons and renewable energy sources.

**3. As a modern, responsive, efficient, and effective regulator, the AER contributes to Alberta's competitiveness.** We help make Alberta more competitive by ensuring that our regulatory requirements are necessary and easy to understand in order to achieve outcomes at the lowest possible cost. We also adopt best practices to protect the environment and the public, setting an example of regulatory excellence for other regulators in Alberta and beyond.

**4. Regulation of Alberta's energy resources is improved by actively engaging indigenous peoples, stakeholders, and the public.** We listen to indigenous peoples, our stakeholders, and Albertans, and carefully consider their values, interests, and concerns when carrying out our work. Sharing best practices with our peers from around the world helps us improve our regulatory system.

**5. The AER mitigates the magnitude and likelihood of potential liability exposure to Alberta.** Companies (or their receivers) fulfil obligations to properly close inactive infrastructure and clean up the land. Industry remains liable for orphaned assets.

These new goals are designed to ensure that we are excellent and that we continue as a protective, effective, efficient, and credible regulator into the future.

Our new strategic plan will help everyone at the AER do a better job at resourcing and prioritizing our work, allowing us to focus on what absolutely needs to get done. It will also help AER staff recognize how their everyday work supports our overall vision and delivers outcomes for Alberta.



*\*The overall goal of sustainable development is the long-term stability of the environment and economy; this is only achievable through the integration and acknowledgement of environmental, economic, and social concerns throughout the regulatory process.*

# REPORTING on our results

Since the AER's launch in 2013, we have promised that we will be transparent and accountable. Keeping that promise means reporting on our results and showing where we have made progress over the last year, where we are meeting the goals we have set, and where we need to improve.

When we developed the 2017–20 Strategic Plan, we examined the work we needed to focus on based on our four pillars: protective, effective, efficient, and credible. The plan included our strategic priorities, outcomes, and performance measures to ensure that we stay on track and demonstrate our results.

What follows is just that—our performance report to Albertans, indigenous peoples, and our stakeholders.



PROTECTIVE

## Develop an integrated whole-system regulatory approach

### STRATEGIC OUTCOME

Effective management of public safety and of cumulative environmental risks and impacts

FOCUSED OUTCOMES	MEASURE	TARGET	STATUS	
Sustainable water use	Volume of all water used (by source) for hydraulic fracturing, enhanced oil recovery, in situ oil sands, and mineable oil sands	Public reporting of water use by industry	The Alberta Energy Industry Water Use Performance Report, released in May 2017, shows how water is allocated and used to recover oil, gas, and oil sands resources.	 <b>TARGET MET</b>
Reduce fluid tailings accumulation over the mine life	Total annual volume of fluid tailings, treated fluid tailings, and fines captures	Ensure industry complies with established performance standards	Tailings management plan applications, which establish performance requirements, are reviewed upon receipt.	 <b>ONGOING</b>
Climate change—reduce methane emissions	Volume of methane emissions	Support multistakeholder engagement	The Government of Alberta is leading the multistakeholder engagement through the Methane Reduction Oversight Committee. The AER provides support.	 <b>ONGOING</b>
		Ensure that industry complies with established performance standards	A requirements and associated compliance assurance plan and reporting system is being developed.	 <b>ONGOING</b>
Climate change—oil sands emissions	Volume of oil sands emissions	Establish a tracking and reporting system for oil sands emissions	This is a Government of Alberta initiative, which the AER supported by providing input.	 <b>ONGOING</b>
Cumulative effects management	Cumulative effects are managed	Develop a framework to manage cumulative effects	A framework has been developed, and an implementation plan is being executed by the AER.	 <b>TARGET MET</b>

## Strengthen risk-based regulation

### STRATEGIC OUTCOME

Effective management of resource conservation and minimize financial liability on Albertans

FOCUSED OUTCOMES	MEASURE	TARGET	STATUS
Reduce aging inventory	Complete a risk assessment of energy-related infrastructure by March 2018	Address high-risk items as they are identified	93% of wells deemed high risk through <i>Directive 013</i> are compliant.  The Inactive Well Compliance Program achieved 67% compliance (an 11% increase from the previous year).
Pipeline safety	Number of high-consequence pipeline incidents	2% reduction in high-consequence pipeline incidents from the previous two-year average	26% reduction in high-consequence pipeline incidents.



ONGOING



TARGET MET

## Transform Alberta's energy regulatory system to improve efficiency

### STRATEGIC OUTCOME

The regulatory system is efficient, minimizing duplication, with highly efficient processes, and only intervening to the level necessary

FOCUSED OUTCOMES	MEASURE	TARGET	STATUS
Regulatory efficiency	Stakeholder savings resulting from reduced regulatory burden that does not negatively impact the environment or public safety	\$100 million in incremental savings to stakeholders in fiscal 2017/18	\$143 million in industry-verified savings in the 2017/18 fiscal year.
	Improve efficiency of AER application decisions	Single decision-making framework for wells, facilities, and pipelines available for use by external parties not later than December 31, 2018	Pipeline licensing was transitioned into OneStop in 2017. Decision timelines were reduced by 67-99% based on the amount of review required.



TARGET MET



ONGOING

CREDIBLE

## Transform Alberta’s energy regulatory system to improve efficiency

### STRATEGIC OUTCOME

Stakeholders are confident about how energy is developed in Alberta

FOCUSED OUTCOMES	MEASURE	TARGET	STATUS
Effective engagement of Albertans, indigenous peoples, and stakeholders	Percentage of Albertans aware of the AER who express confidence in the organization’s ability to fulfil its mandate	Maintain a confidence score above 80% annually	81% of Albertans are confident that the regulator is delivering on its mandate, while 72% of stakeholders express confidence, with varied rankings among specific groups (e.g., landowners, industry, and indigenous peoples).  *As the AER moves to a new strategic plan, we will continue to track “overall confidence” but will focus on earning “strong confidence” scores (i.e., a rating of 7-10), where we will work to ensure that a majority of Albertans express strong confidence in the regulator.
Achieve regulatory excellence	Levels of skill and competency	Close high-priority skill and capability gaps through the implementation of the Enterprise Learning Branch in 2017/18	Enterprise Learning transferred to People, Culture & Learning. Priority training program implemented.
	Employee engagement	Achieve 83% engagement in 2017/18	Engagement survey score 78.3%.  Leadership is addressing areas with low scores with their teams. The executive leadership team has identified initiatives to focus on that will improve employee engagement.
The AER is an integral in the Integrated Resource Management System (IRMS)	Percentage of IRMS strategic priorities supported by the AER	100% of IRMS strategic priorities supported by the AER	The AER actively participates in IRMS leadership committees and continues to provide dedicated support to deliver on all IRMS strategic common priorities.



## BUNDLING our mandate

We tend to think of a mandate as a string of words—a linear idea, maybe one that’s a little vowel-heavy. The Alberta Energy Regulator has something like that: our mandate is to ensure the efficient, orderly, and environmentally responsible development of energy resources in the province.

But it takes another form, too. Our mandate is also represented in a Blackfoot bundle: a rawhide-wrapped cylinder painted with symbols and perched on three birch poles.

The bundle is an important recognition of the AER’s growing awareness and of our commitment to better involve indigenous people in our decisions. Western systems recognize us as an authority through legislation and policy, but the bundle bridges our connection to the oral system that is used traditionally by indigenous communities.

Elder Dr. Reg Crow Shoe transferred the rights to us through this bundle in 2017 after guiding us on our journey to write *Voices of Understanding: Looking Through the Window*, a book that illustrates the parallels between indigenous and western decision-making and worldviews.

“The concept of a bundle came out of some of our discussions with the elders,” says Elder Dr. Crow Shoe. “Elders were trying to interpret the concept of a western vision statement, and they started talking about how visions and missions were reflected in an oral system.”

In whatever form it takes, a mandate speaks to relationship, authority, and commitment. It’s important that the AER recognize both systems of decision making: the one described in the *Responsible Energy Development Act*, and the bundle that protects our mandate in the oral system.

### WHAT’S INSIDE?

Inside the AER’s bundle is a copy of *Voices of Understanding*, an audio file of staff reading the book, and video from the information sessions held with the AER and Elder Dr. Crow Shoe and elders from the regions of Treaty 6 and Treaty 8.

“A bundle is cultural material, collected,” explains Elder Dr. Crow Shoe. “When you look at western documentation, you have chapters. When we look at the items in a bundle, each item is a chapter.”

The materials inside of the AER’s bundle capture what we’ve learned from Elder Dr. Crow Shoe and protect our mandate in an oral system. They will also serve as points of reference, not dissimilar to the way that an indigenous community might use a bundle, where items are removed from a bundle when needed, and their stories and songs are recalled to help communities make decisions.

### ARE WE READY FOR IT?

The bundle may be new, but our efforts to make written and oral systems parallel are not.

“If I think about it,” says Elder Dr. Crow Shoe, “we’re more than 15 years into it.”

Elder Dr. Crow Shoe has worked with us before. In 2000, the regulator and Elder Dr. Crow Shoe collaborated to write a facilitators’ guide to help indigenous youth understand how their traditional ways of learning and decision making relate to western processes.





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In September 2017, *Voices of Understanding* was released publicly. Although the book's purpose and audience are vastly different from the 2000 document, the intent is unchanged: we are on a shared journey to understand both systems and to work together.

On the day *Voices of Understanding* was launched, the project team and AER executives met with Elder Dr. Crow Shoe and Rose Crow Shoe. There, our bundle was forever changed. In a circle ceremony, the bundle was rubbed with red ochre—a naturally occurring paint sacred to the Blackfoot people. This protected the knowledge and processes behind the book.

But not only was the bundle protected that day. Elder Dr. Crow Shoe and elders from Siksika Nation also painted members of the project team with ochre to protect them as they move forward to spread the knowledge contained in the bundle.

"Although our CEO Jim Ellis is the bundle holder, everyone who was involved in the project is still a helper and considered integral in helping the organization meet its objectives," says Jason Veness, a senior advisor with AER's Indigenous Engagement Group. For his work through the *Voices of Understanding* process, Veness was given a Blackfoot name—Pitaa Maakaa, which means "eagle traveler"—for his role helping the organization understand both indigenous oral and western systems.

"It is important that the AER staff are protected under the same process as the bundle. We strive to reciprocate the protection given to us to indigenous peoples in Alberta in our own way: through documents and processes," Veness said.

### WHAT'S NEXT?

In indigenous communities, bundles are transferred to individuals who earn the right to hold that mandate by gaining knowledge and experience. In the AER's case, the bundle will be passed on along the line of CEOs, meaning the successors to AER president and CEO Jim Ellis will study the knowledge we gained on this journey in order to continue to lead the AER on its path. Only when they understand our bundle may they participate in a traditional Blackfoot ceremony that transfers the rights to the AER's bundle from their predecessor to them.

Now that the AER has received this bundle and protection, it is important to take it to communities in other parts of the province—to validate our knowledge and bundle with groups across the province.

Elder Dr. Crow Shoe explains his vision: "The bundle is paying respect to the written and oral systems, and putting together trust so the two systems can speak to each other. That's how the AER is going to move ahead."



# APPEALING to the highest power

In May 2016, the Court of Queen's Bench of Alberta decided against the AER and the Orphan Well Association (OWA) in a case that has had widespread implications on our energy industry.

The Redwater decision, as it's come to be known, allowed the receiver that was managing the insolvent company's affairs to walk away from oil and gas wells, pipelines, and facilities that were no longer productive. This despite Alberta legislation that forbids leaving a mess behind for others to clean up.

According to the AER, the decision hinders Alberta's constitutional right to properly regulate its own resources. It also affects all industries and regulators in all provinces.

After losing in the Alberta Court of Appeal in a 2-1 decision, the AER and the OWA continued their fight at the Supreme Court of Canada in February 2018. Leading the charge for the AER were lawyers Patricia Johnston and Keely Cameron. Keely described for us just how important the day was both for her and for Albertans.

## What was the Supreme Court experience like for you?

*KC: The Supreme Court of Canada experience was incredible. The building was amazing. I had an opportunity to be in front of brilliant judges. It was a once-in-a-lifetime experience.*

*I was extremely nervous preparing for the hearing and leading up to the day before. The day of the hearing I was actually really excited. It was such an incredible opportunity and it was great to get some finality on the matter because it's been going on for so long. But I wanted to ensure I was doing a good job as this was our one big chance to share our story with the public and our final chance to explain our position to the court.*

## So what is the AER's story regarding the Redwater issue?

*KC: The Redwater file started with having a receiver wanting to be able to sell only the good assets and being permitted to renounce the bad assets in order to avoid the AER's liability management requirements under legislation.*

*This file was extremely important to us, not only to ensure we can actually enforce our requirements, but to also ensure that sites aren't being left for the Orphan Well Association or the public to ultimately bear the costs to clean up.*

## Why should this issue matter to Albertans?

*KC: This file goes to the core of the Alberta Energy Regulator's role in ensuring that development occurs in a manner that is responsible and protects both the environment and the public. Part of the issue with the decision is that it potentially breaks the foundational promise upon which licences are granted in the first place. It's a promise to ensure that at the end of the day, when the sites are no longer required for production, they'll ultimately be cleaned up and returned to the landowners or the public for use.*

## This issue is so important to Albertans, why does it matter to you personally?

*KC: Personally, for me, having a young daughter and being a second generation Calgarian let alone Albertan, this matter is important not only for this generation but for future generations to ensure that the public doesn't end up bearing the cost to clean up energy development activities. Especially when we have rules in place that are there to ensure that companies comply with those rules.*





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## CORE RESEARCH CENTRE

Facility tours  
in demand  
in 2017



from over  
**20**  
countries

close to  
**300**  
people

Any  
given  
day



**10 000**

geologists, students, and even  
landowners use the space

## MUCH more than core

Doug Hayden has spent much of his 30-plus-year career in cubical number 153 at the Core Research Centre (CRC), noting with pride that “it’s like I just moved in and never moved out.”

The geological consultant occupies two cubicles filled with a high-powered microscope, trays of drill cuttings, a fluoroscope, and his computer. Off to the side lies a FedEx box that contains rocks from South America that Hayden points to while he talks about the reputation of Canadian geologists.

“Companies in places like South America know that Canada has expertise that can be applied to their oil exploration.”

So, in addition to being known for its love of hockey and all things maple, Canada is also known for its geologists. That is in part due to the impressive collection of core samples and drill cuttings that are stored for anyone to study at the AER’s CRC.

### ENABLING INNOVATION

Located near the University of Calgary, the facility holds one of the largest, most complete drilling histories in the world. And anyone can go see this collection of almost two million metres of core and more than 20 million vials of drill cuttings, which is great news for rock buffs, but also for Alberta’s oil and gas industry.

The 200 000-square-foot space is a hub of activity. On any given day, more than 10 000 geologists, students, and even landowners can be found spritzing water onto columns of core pulled from the earth decades earlier or peering into microscopes to study cuttings to help determine whether a location will yield oil-and-gas riches. This saves both time and money.

“The access to the physical data at the CRC is a significant competitive advantage for companies wanting to explore for hydrocarbons in Alberta,” explains the CRC’s director, Ray Kuntz. “Investors can come here and test their hypotheses without actually having to drill themselves.”

This explains the high demand for facility tours. In addition to the regular patrons, close to 300 people from over 20 countries—most of whom work for oil and gas companies or energy regulators—passed through the CRC’s doors in 2017. Kuntz says the facility appeals to other jurisdictions in part due to the “forward-thinking regulations” that are the rationale behind the CRC’s existence.

“We are enablers of innovation; we are not doing the research ourselves, but we are enabling it to happen,” says Kuntz.

### A COMMUNITY OF KNOWLEDGE

Enabling this research is what keeps consultants like Hayden working. He is quick to point out another advantage of the CRC that isn’t immediately obvious: the collaboration that happens within the building’s brick walls—an effortless and organic phenomenon that often takes place over coffee in the lounge.

“This isn’t just a storage facility,” Hayden says. “Learning happens here every day by people exchanging ideas and theories, and it’s based on the material and data that is right here.”



# DROP BY DROP: how much water are companies using?

If you tracked your water use every time you turned the tap—and the results were posted for the world to see—would you change your habits?

The AER is betting that energy companies will, which was one reason we released the Alberta Energy Industry Water Use Report. And the results might surprise some.

Despite being one of Alberta's biggest industries, oil and gas development accounts for a small part of the province's water use. In 2016, the energy industry accounted for 10 per cent of all water that was made available for use, but it used only a fifth of that amount.

## A FEW FACTS ABOUT H<sub>2</sub>O USE IN ENERGY DEVELOPMENT

1. One is not like the other. Measuring water-use performance involves more than examining which company uses the least amount and which company recycles the most. It's also important to look at how each company operates (i.e., mining or in situ) and at the size and age of their projects, because each factor affects their water use.
2. Less is more. Over time and through new technologies and innovation, companies have reduced the amount of water they need. For example, in 2016, about 80 per cent of water used for oil sands mining was recycled from tailings ponds, while in situ recycled 86 per cent by separating and treating water from producing wells.
3. A drop in the bucket. While recycling plays a large role in the industry, companies can also find ways to use less water by improving their operations over time, as noted in our 2017 industry water-use report.

“While companies are using far less water than what they're allocated, making this data available to the public encourages companies to measure themselves against their peers and motivates them to use water more efficiently,” says Aruna Bissonauth, the AER's manager of Industry Performance – Mining.

The AER rolled out the report in two parts. In spring 2017, we showed a provincial water-use summary for hydraulic fracturing, oil sands mining, in situ, and enhanced oil recovery. We then updated the report in February 2018 to show company-specific data for oil sands mining and in situ. Future updates will show company-specific data for hydraulic fracturing and enhanced oil recovery.

About 10 per cent of all water allocated by Alberta Environment and Parks in 2016 was allocated to the energy industry. The rest was allocated to other users such as agriculture and irrigation (44 per cent), commercial and cooling (28 per cent), and municipalities (11 per cent).

Shannon Chmelyk, manager of Industry Performance, noted that energy companies often use less water than the amount they request in their applications.

“Once companies finish planning for a project, they explore the site to gain a better understanding of where the oil, gas, or bitumen is,” said Chmelyk. “As projects become operational, companies can find ways to use less water by improving their operations over time, recycling more, and knowing exactly how much they need to get these resources out of the ground.”

The report is part of the AER's industry performance program, which measures, evaluates, and reports on energy development activities we regulate. In addition to water, the AER has also reported on industry's pipeline performance.

AROUND THE PROVINCE



**1200**  
EMPLOYEES

inspectors, technical staff, scientists,  
investigators, stakeholder engagement  
specialists, mediators, lawyers, regulatory  
experts, & others

**15**  
LOCATIONS

**800+**  
COMPANIES REGULATED

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