

Human Capital

Engaging our workforce, developing our employees, and minimizing safety incidents are the keys to human capital value creation at TransAlta. The most material impacts on our human capital performance are an engaged workforce and keeping our employees safe.

As at Dec. 31, 2016, we had 2,341 active employees. This number has decreased by two per cent since the previous year, following various restructuring initiatives to reduce costs and increase efficiency. A number of unfilled positions have also been eliminated.

With approximately 53 per cent of our employees being unionized, we strive to maintain open and positive relationships with union representatives and regularly meet to exchange information, listen to concerns, and share ideas that further our mutual objectives. Collective bargaining is conducted in good faith, and we respect the rights of all employees to participate in collective bargaining.

Organizational Culture and Structure

Our employees are central to our value creation. Our corporate culture is one that has been cultivated throughout our more than 100-year heritage of pioneering innovative ways to safely and responsibly generate reliable and affordable electricity. In 2016 we formalized our core values to help provide strategic clarity for our employees. We want our people to align with and live our core values, which are: innovation, respect, loyalty, accountability, integrity, and safety. TransAlta has a stimulating work environment and we seek to challenge our employees to maximize their potential. We encourage alignment with our values and work ethic, while providing a foundation for leadership, collaboration, community support, growth, and work life balance.

During 2015 we initiated the Powering Performance organizational design program, with the primary objective of accelerating decision-making within our organization. The program has had us transition more fully to a decentralized, business-centric model, with Coal & Mining, Gas & Renewables, Australia, and Energy Marketing defined as our four primary businesses. As part of the design work, we have transferred accountability for shared services to the businesses and removed a layer of management. As part of this process, employees also have clearer accountabilities and authority.

Employee Benefits

TransAlta is an attractive employer in all three countries in which we operate. We provide compensation to our employees at levels that are competitive in relation to their respective location. We strive to be an employer of choice through our total rewards program, which includes various incentive plans designed to align performance with our annual and mid-term targets, as determined annually by the Board.

Also included in compensation are various future benefit plans. We have registered pension plans in Canada and the U.S. covering substantially all employees of the Corporation, its domestic subsidiaries, and specific named employees working internationally. These plans have defined benefit and defined contribution options, and in Canada there is an additional supplemental defined benefit plan for members whose annual earnings exceed the Canadian income tax limit. Except for the Highvale pension plans acquired in 2013, the Canadian and U.S. defined benefit pension plans are closed to new entrants. The U.S. defined benefit pension plan was frozen effective Dec. 31, 2010, resulting in no future benefits being earned. The defined benefit plans are funded by the Corporation in accordance with governing regulations. We provide other health and dental benefits for disabled members and retired members, typically up to the age of 65. The supplemental pension plan is an obligation of the Corporation. We are not obligated to fund the supplemental pension plan but are obligated to pay benefits under the terms of the plan as they come due. We have posted a letter of credit in the amount of \$73 million to secure the obligations under the supplemental pension plan.

Safety

At TransAlta we operate large and complex facilities. The environments in which we work – including Canadian winters and the Australian outback, often add an additional challenge to keep our employees safe. The safety of our staff, contractors, and visitors is one of the top priorities, if not the top priority, of our social performance. Our safety culture is further embedded into TransAlta culture each year. Every meeting of more than four people starts with a “safety moment,” which helps share key safety learnings across our company. Our Operational Integrity program is focused on reducing safety hazards. Our core values include the safety of our people.

In 2016 our IFR was 0.85. IFR is defined as the number of lost-time and medical injuries for every 200,000 hours worked. Our ultimate goal is to achieve zero injury incidents, but annually we seek improvement over the prior year. We have experienced no fatalities during the last three years.

Year ended Dec. 31	2016	2015	2014
IFR	0.85	0.75	0.86

During 2015, we designed a new total safety management policy as a two-pronged approach. The policy builds on our occupational safety program, Target Zero, which is focused on protecting our workers on site, through means of personal protection equipment, inspections, safety controls, job safety analyses, field-level hazard assessments, and safety communications. The policy is supplemented by our newly launched Operational Integrity program, which is focused on preventing all hazards from equipment, through definition and measurement of safety-critical performance measures and operating limits.

Intellectual Capital

Intellectual capital at TransAlta is another key to our value creation. We have developed innovative solutions to optimize and maximize value from our fleet. We are constantly exploring use of applied or new technologies to find solutions to expand or adapt our fleet in an ever-changing world, which helps protect our shareholder value and maintain delivery of reliable and affordable electricity.

Operations Diagnostic Centre

TransAlta has maintained its Operations Diagnostic Centre ("ODC") since 2008. The ODC monitors coal-fired, gas-fired, and wind-generating assets across Canada, the United States, and Australia. A centralized team of engineers and operations specialists remotely monitors our power plants for emerging equipment reliability and performance issues. ODC staff are trained in the development and use of specialized equipment monitoring software and can apply their experience in power plant operations. If an equipment issue is detected, the ODC notifies plant operations to investigate and remedy the issue before there is an impact to operations. The monitoring, analysis, and diagnostics completed by the ODC are focused on early identification of equipment issues based on longer-term trend analysis and complements day-to-day plant operations.

Operational Integrity Program

During 2015, we set the foundation for our Operational Integrity program. The program is designed to achieve process and equipment safety through understanding and monitoring of key risks and implementing of mitigation measures. In 2015, we completed our risk assessment at all facilities except Australia and Mining. We have also developed operator checks, maintenance tasks, and proof tests for various safety-critical elements at coal plants. Key performance indicators have been identified and are being integrated in a dashboard for ongoing monitoring. During 2016, we finalized developing the balance of safety-critical maintenance strategies and related engineering standards. We seek to optimize cost and reliability of our assets and maintain or increase their capacity. Our decentralized organization allows the sharing and deployment of technology-specific innovative practices within the respective businesses. Productivity projects are evaluated against criteria that include a two- to three- year financial payback. We also incurred \$3 million in 2016 on a productivity improvement blade enhancement technology at our Wolfe Island wind project. This investment is expected to increase the annual energy production of the Wolfe Island wind project by approximately three per cent. In 2017 we are planning to put into place our Total Safety Management System where we integrate our work in Process Safety with our existing Occupational Safety programs. We continue to observe a positive increase in self-reporting and addressing process safety hazards as awareness and new tools are being introduced.

Energy Trading and Marketing

Our energy trading and marketing operations optimize the financial returns of our facilities in real time. The group purchases fuels to feed plants, bids the electricity we generate at our facilities into energy markets, and mitigates the associated risks associated with those purchases and sales. In addition, they buy, sell, schedule, and negotiate all of the electricity transmission for each facility. They do so while applying an overlay of complex, real-time information about weather, facility capacity, transmission congestion, and market pricing. Quantitative analysis, forecasting, mathematical models, and forward curves are key tools used to execute this responsibility. In addition, the application of these skills for proprietary trading allows us to generate positive margins.