



# POWER FORWARD

**Corporate Responsibility Report**  
2015



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The background of the slide features a photograph of an industrial facility, likely a power plant or refinery, situated on a grassy hill. Two tall, white smokestacks are prominent in the mid-ground. To the right, there are several large, blue industrial buildings with red roofs. The sky is a clear, bright blue. The foreground is a mix of green and yellow grass. The slide is decorated with large, abstract geometric shapes: a dark blue triangle in the top-left corner, a white triangle in the bottom-left corner, a teal triangle in the bottom-right corner, and a light green triangle in the middle-right area.

# HIGHLIGHTS & ACHIEVEMENTS

2015

# HIGHLIGHTS & ACHIEVEMENTS 2015

**405-megawatts** > Strengthened our contracted cash flow profile by adding 405-megawatts of owned generation to our fleet from three new facilities: the Shepard Energy Centre, K2 Wind, and Beaufort Solar.

**17% renewables** > Our renewable energy portfolio has increased from 4% in 2011 to 17% in 2015. We have added five new wind facilities and one solar facility over the past four years.

**A lower-carbon future** > Supported the Alberta government's action on climate change to reduce the province's greenhouse gas emissions and increase renewables. Invested approximately \$76 million in capital growth opportunities focused on natural gas, wind and solar—the power generation of the future as markets transition to a low-carbon economy.

**95% plant availability** > Our operations achieved 95% plant availability, exceeding our target of 94%, thanks to leaders and employees committed to operational excellence and high maintenance standards.

**7.4% dividend increase** > Delivering stable and growing returns to shareholders, we increased our dividend for a second consecutive year and approved a 7.4% dividend increase in 2015.

**Zero Means Everything** > Focused on our goal of zero injuries and zero environmental incidents, we delivered our best health, safety, and environmental-incidents performance to date. We earned the Canadian Electricity Association President's Award of Excellence for Employee Safety (silver level) at our Canadian operations, and in 2016, our Roxboro and Southport solid-fuels facilities received safe workplace gold awards from the North Carolina Department of Labor for 2015 performance.

**\$1.2 million** > Through our community investment program, we invested \$1.2 million in communities where we are located.

**6 consecutive years** > *Corporate Knights* magazine named Capital Power to its list of the *Best 50 Corporate Citizens in Canada*, for the sixth year in a row.

**\$10 million** > Invested nearly \$10 million in Alberta-based offset projects that reduce local greenhouse gas emissions. In 2015, we held one of the largest inventories of Alberta offsets.

**3 new Board Directors** > Three exceptional individuals, Patrick Daniel, Jill Gardiner and Kelly Huntington, were recruited based on an evaluation of the skills and experience the board of directors will require in the coming years, expanding our Board diversity.

# POWER FORWARD

**President & CEO Message**

BRIAN VAASJO



## MESSAGE FROM THE PRESIDENT AND CEO > BRIAN VAASJO

### Agility. Competence. Action.

In 2015, momentum increased toward global sustainability and decarbonization. We are committed to power forward to a lower-carbon future, while remaining a productive, profitable, integrated power generator. Success stems from working collectively and collaboratively to deliver results.

In 2015, Capital Power delivered on its corporate priorities, participated in climate change consultations in Alberta, and celebrated a number of accomplishments, including achieving our best health, safety and environmental incidents performance to-date, and being recognized as one of the *Best 50 Corporate Citizens in Canada* by *Corporate Knights* magazine for a sixth straight year.

On behalf of all of us at Capital Power, we are proud to share our 2015 Corporate Responsibility Report, *Power Forward*. This report reflects our performance, accomplishments, challenges, and passion for our business.

We are committed to power forward to a lower-carbon future, while remaining a productive, profitable, integrated power generator. Success stems from working collectively and collaboratively to deliver results.

### Transforming generation and producing cleaner power

We are responsible stewards of the environment, building our power generation capabilities with energy-efficient technology and low-carbon fuel sources. We look to transform generation and enable cleaner energy.

Production from our renewable energy portfolio has increased to 17% in 2015 from 4% in 2011, and our overall emissions have decreased by over 9% since 2011, reflecting our transition to a lower-emissions generation fleet.

In 2015, Capital Power added 505-megawatts of owned generation capacity by bringing three new projects online utilizing natural gas, wind, and solar generation. These facilities represent the generation supply of the future as markets transition to a mix of natural gas and renewables. Since 2012, we have added five wind facilities and a solar facility to our fleet. In 2016, we will begin construction of the 178-megawatt Bloom Wind facility in Kansas, U.S.

We were deeply engaged in climate change discussions in Alberta, and submitted a comprehensive plan to the government's Climate Leadership Panel. Elements of *Alberta's Climate Leadership Plan* to grow renewables and maintain Alberta's electricity market reflect the expert advice submitted by a cross-functional team at Capital Power.

We continue to optimize our facilities' performance to minimize emissions and support climate action while providing reliable power to homes and businesses where we operate. We exceeded our plant availability target, achieving 95% availability in 2015.

We remain committed to earning and sustaining your trust— not just by what we say we will do, but by our consistent actions and behaviour now, and for many years to come.

### People are the path to sustainability

Our power is our team. It's with their input that we are able to develop innovative solutions to move to a lower-carbon economy, run safe, reliable and competitive operations, and support our communities and engaged culture.

Nothing matters more to us than employee safety, and we achieved our best-ever results in 2015. Since the launch of *Zero Means Everything* in April 2013, we've continued to make significant progress on our goal of creating a culture of environmental responsibility and zero injuries and environmental incidents. For the second consecutive year, we earned national safety recognition from the Canadian Electricity Association for our safety performance.

To build a strong and engaged work culture, we invest in learning and development programs for employees. In 2015, we improved access to such programs and launched *Blueprint*, a new learning management system that is online, available 24/7, and contains essential and development courses all in one location.

Giving to the communities where we live and work, through corporate investment programs and the efforts of our exceptional people, is core to Capital Power. We launched *GENerosity*, our new matched giving program that allows employees to give to causes and organizations important to them and to have the company match their support. In its first year, more than 280 employees participated, which led to a \$297,150 investment in 134 charities throughout North America.

### Actions drive results

Based on our actions, we were finalists in *Alberta Venture* magazine's *Best Workplaces* awards program for Health and Safety and earned recognition as one of *Alberta's Top 70 Employers* by the editors of *Canada's Top 100 Employers*. This inspires us to work even harder.

We remain committed to earning and sustaining your trust and hope this report serves its purpose of helping you to judge us—not just by what we say we will do, but by our consistent actions and behaviour now, and for many years to come.

We are open to feedback and encourage you to let us know how you think we're doing and to provide your thoughts on how we can improve.

Thank you for your interest in Capital Power. We look forward to hearing from you.



BRIAN VAASJO



A photograph of two white wind turbines in a green field under a clear blue sky, framed by a diagonal split between a light blue and a light green background.

# POWER FORWARD >

## A FOCUS ON GROWTH

**About Capital Power**

# OUR COMPANY AT-A-GLANCE

We produce power in North America—reliably, competitively, and responsibly. Established in July 2009, Capital Power (TSX: CPX) is a growth-oriented North American power producer headquartered in Edmonton, Alberta, Canada. We have a foundation of operational excellence and financial strength with well-maintained assets, a strong balance sheet, and an investment-grade credit rating.

## our vision

is to be recognized as one of North America's most respected, reliable, and competitive power generators.

## our mission

is the development, acquisition, construction, operation, and optimization of large-scale, fuel-diverse, cost-effective power generation facilities in North America.

AS OF DEC. 31, 2015, WE:

- owned more than **3,200-MW** of power generation capacity at 18 facilities in Canada and the United States.
- planned to develop an additional **530-MW** of owned generation capacity in Alberta.
- held a suite of renewable development sites in Canada and the United States and added **105-MW** of new renewable generation as a result of the K2 Wind Power Project<sup>1</sup> completion (ON) and Beaufort Solar commercialization (NC).

IN THE FIRST HALF OF 2016, WE:

- terminated our Sundance C Power Purchase Arrangement (PPA), which provided the company 371-MW of generation capacity.
- announced a contract for the **178-MW Bloom Wind project** to proceed to construction in the third quarter of 2016.
- restructured the construction schedule for our Genesee 4 and 5 project by moving the decision point for proceeding to the fourth quarter of 2016. The proposed Genesee 4 and 5 combined-cycle natural gas generation facility is a joint venture project between Capital Power and ENMAX. The decision to proceed with construction will be based on our view of market conditions and the impact of government policy on our existing assets and the proposed units. The revised construction plan would achieve substantial completion of the first unit in early 2020.

### KEY FACTS

 **679**  
employees

 **18**  
facilities throughout  
North America

 **3,200+MW**  
of owned power  
generation capacity

 Completed **three** new  
projects including our first  
solar facility

<sup>1</sup> Joint arrangement with Samsung Renewable Energy Inc. and Pattern Energy Group Inc.

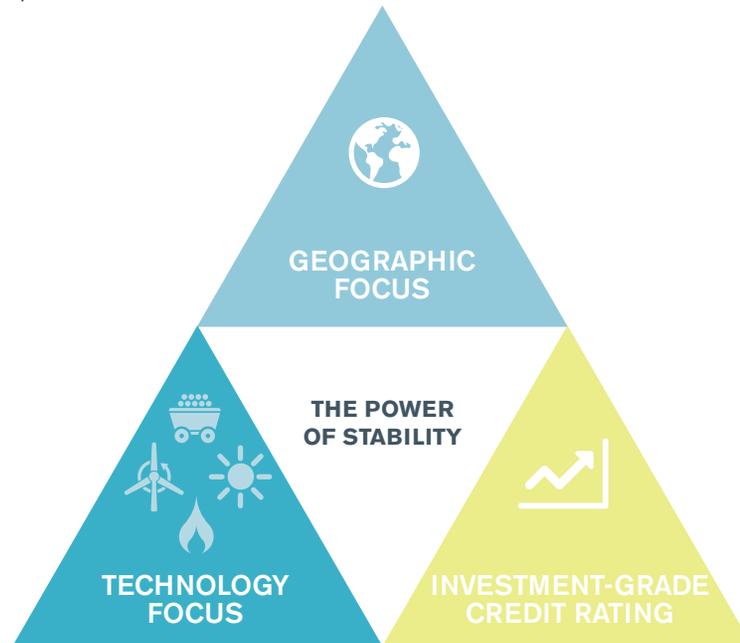
## OUR STRATEGY

Our corporate strategy is refined in consultation with management and is annually reaffirmed and approved by our Board of Directors.

Management submits an annual corporate plan to the Board of Directors for approval. The plan outlines management's corporate priorities and objectives to execute Capital Power's strategy. This plan serves as the foundation for departmental plans.

Climate change adaptation is integrated into the annual business strategy and planning process through the identification of risks, opportunities, and environmental and regulatory policy compliance.

We are future-focused on the development of cleaner technologies for our existing facilities and on the growth of our renewables portfolio.



OUR STRATEGY IS COMPOSED OF THREE KEY ELEMENTS TO MANAGE OVERALL PORTFOLIO RISK AND GENERATE GROWTH:

### 1 > Geographic focus:

Acquire and develop contracted opportunities across North America and consider merchant opportunities only in the Alberta market.

### 2 > Technology focus:

Focus on a limited number of power generation technologies to build expertise in operations, maintenance, and construction, foster strong supplier relationships, and generate savings through economies of scale.

### 3 > Investment-grade credit rating:

Maintain an investment-grade credit rating through stable, long-term cash flows derived from a mix of contracted and merchant assets and through a moderate business risk profile. The resulting access to low-cost capital provides shareholders with a competitive dividend.

## Risks to strategy

Key risks identified during the 2015 planning period include changes to environmental and regulatory policy and to power and natural gas prices in our key operational regions. Announced in late 2015, the Alberta government's *Climate Leadership Plan* calls for an accelerated phase-out of coal-fired power by 2030 and the build-out of renewable projects.

Capital Power remains the leading independent power producer (IPP) developer in the Alberta market and is well-positioned to develop and build renewables and natural gas facilities in alignment with the Government of Alberta's plan.

# DELIVERING ON STRATEGY

DELIVERING ON STRATEGY IN 2015, WE:

- maintained a modern power generating fleet exceeding efficiency targets with an average plant availability of 95%.
- delivered solid performance, meeting or exceeding our annual operating and financial targets.
- generated \$400 million in funds from operations and normalized earnings attributable to common shareholders of \$111 million, or \$1.15 per share.
- increased our annual dividend by 7.4% and provided dividend growth guidance of 7% per year between 2016-18.

- Continued to strengthen contracted cash flows with the addition of three new facilities:

**Shepard<sup>1</sup>:** The commercial arrangements with ENMAX include a 20-year tolling contract where 75% of Capital Power's capacity is contracted from 2015 to 2017 and 50% thereafter to 2035.

**K2 Wind<sup>2</sup>:** 100% of our owned 90-MW capacity is contracted under a 20-year PPA with Ontario's Independent Electricity System Operator (IESO).

**Beaufort Solar:** 100% of our owned 15-MW capacity is contracted through a 15-year PPA with Duke Energy LLC.



K2 Wind / Beaufort Solar

1 Joint arrangement with ENMAX Corporation.

2 Joint arrangement with Samsung Renewable Energy Inc. and Pattern Energy Group Inc.

## POWER FORWARD > A FOCUS ON GROWTH

■ In 2016, Capital Power will continue to analyze opportunities to acquire or develop natural gas and renewable power generation assets in Canadian and U.S. markets. In particular, the company is focused on the following development opportunities:

- The 178-MW Bloom Wind project proceeding to construction beginning in the third quarter of 2016.
- Transition from development to construction for Genesee 4 and 5, which is dependent upon market conditions, and the impact of government policy on our existing assets and the proposed units.
- The proposed development of Halkirk 2, a 150-MW wind farm located near our existing Halkirk Wind facility in east-central Alberta.



Halkirk Wind / Genesee Generating Station

# RESPONSIBLE GOVERNANCE

The Board of Directors is responsible for our stewardship by providing independent leadership and oversight to our business so we grow and sustain profits and deliver shareholder value.

The Board ensures that management's plans and activities are consistent with our values and support our vision. They are specifically responsible for:

- 1 > Management oversight and strategic planning
- 2 > Enterprise risk management
- 3 > Shareholder engagement.

Patrick Daniel, Jill Gardiner and Kelly Huntington, were recruited to our Board of Directors based on an evaluation of the skills and experience the Board of Directors will require in the coming years, expanding our board diversity.

We believe that effective governance is a major contributor to long-term performance and investor confidence. We maintain separate chair and CEO positions so the Board can function independently, monitor management's decisions and actions, and effectively oversee our affairs. The majority of our Board (8 out of 9) is independent. More governance details are available in our comprehensive [Corporate Governance Policy](#) and our [Management Proxy Circular](#).



## Board of Directors

### LEFT TO RIGHT

Albrecht Bellstedt  
Jill Gardiner  
Donald Lowry  
Brian Vaasjo  
Patrick Daniel  
Margaret Mulligan  
Doyle Beneby  
Kelly Huntington  
Allister McPherson  
Philip Lachambre

Allister McPherson did not stand for re-election in April 2016.



## Governance Highlights

- Voting is by individual director; we have a majority voting policy and we disclose the voting results on all items of business within five business days of a shareholder meeting.
- The Chair of the Board is independent .
- The Board has developed clear position descriptions for the Chair of the Board, each committee, and the CEO.
- Our Audit committee is 100% independent.
- Our Corporate Governance, Compensation and Nominating Committee is 100% independent.
- Directors must meet share ownership requirements within five years of joining the Board (three times their annual cash and equity retainer in Capital Power deferred share units and/or common shares). Capital Power's senior executive officers must also meet share ownership requirements.
- Our Board has a formal, written mandate.
- Directors meet regularly without management present (in-camera).
- We expect 100% attendance of our directors. The Corporate Governance, Compensation and Nominating Committee reviews the attendance record to ensure directors have attended at least 80% of Board meetings and their respective committee meetings.
- The Board has adopted a written code of business conduct and ethics and monitors our compliance with it.
- The Board oversees strategic planning, risk management, succession planning, and leadership development.
- We conduct an advisory vote on executive compensation, giving shareholders a say on pay.
- We adopted an incentive clawback policy and anti-hedging policy, further aligning the interests of executives and shareholders.
- We have orientation and continuing education programs for our directors.
- We maintain a skills matrix to assist in planning, developing, and managing the skills and competencies of the Board.
- Board and committee director self-assessments are conducted every year, with regular individual director and peer review. From 2016 and onward, Board evaluation will involve annual one-on-one meetings between each director and the Chair of the Board, biennial self-assessments, and biennial peer-to-peer assessments conducted by an independent third-party.
- The Board has adopted a *Board Diversity Policy*.
- The Board has adopted a *Director Tenure & Succession Policy*, which establishes term limits.

## POWER FORWARD > INVOLVED IN PUBLIC POLICY

In accordance with the *Federal Accountability Act*, we report all lobbying of Canadian federal and provincial Designated Public Office Holders (DPOHs) on a monthly basis. We comply with all state, provincial, and federal lobbying rules on registering and reporting meetings with elected officials and designated public office holders.

We contributed no monies to Canadian federal political parties from 2012 to 2015. Total expenditures on various political events and fundraisers across all provinces in Canada in 2015, were \$38,500 (compared to \$29,475 in 2014, \$46,133 in 2013, and \$32,319 in 2012). Details related to greenhouse gas regulation and climate change, including estimates of potential compliance costs, are included in our *2015 Annual Information Form*.



More details on Capital Power's involvement and impact of the *Alberta Climate Leadership Plan* are covered on page 74.



# POWER FORWARD > CAPITAL POWER EARNS NATIONAL, INTERNATIONAL RECOGNITION

Capital Power earned external recognition for our accomplishments and commitment to our people, sustainability, and safety.

RECOGNITION HIGHLIGHTS FOR 2015 INCLUDE:

**Best 50 Corporate Citizens in Canada:** For the sixth consecutive year, *Corporate Knights* magazine named Capital Power to its list of the *Best 50 Corporate Citizens* in Canada. Capital Power ranked in the top half of the list at 23rd and first in the Independent Power and Renewables Category.

**National safety recognition from Canadian Electricity Association (CEA):** Capital Power was awarded with the CEA President's Award of Excellence for Employee Safety (Silver Level) for our Canadian operations. This was the second consecutive year and third overall that Capital Power received the CEA's President's Award of Excellence for Employee Safety.

**Alberta's Top 70 Employers:** Capital Power earned a spot as one of *Alberta's Top 70 Employers* (2016) through the annual competition organized by the editors of *Canada's Top 100 Employers*. This designation recognizes the Alberta employers that lead their industries in offering exceptional places to work.

**Alberta Venture Best Workplace finalist for Health and Safety:** Capital Power was a finalist in *Alberta Venture* magazine's *Best Workplaces* awards program for Health and Safety.

**Participated in the Carbon Disclosure Project (CDP):** More than 5,500 of the world's largest companies reported to CDP in 2015. In 2015, we received a disclosure score of 80 versus a score of 76 in 2014, both in performance band C. A disclosure score of greater than 70 indicates that senior management understands the business issues related to climate change and builds climate-related risks and

opportunities into business strategy. The performance score of band C indicates that there is some activity on climate change with varied levels of integration of those initiatives into strategy.

**North Carolina Department of Labor's (NCDOL) Certificate of Safety Achievement for 2015:** In 2016, our North Carolina facilities both received first-year gold NCDOL awards for their outstanding safety record for their 2015 operations. The awards are presented to companies that have above-average worker safety and health programs.



Francis Bradley (L), Canadian Electricity Association (CEA), Chief Operating Officer and Vice President, Policy Development, presents Lori Nickifor (R), Capital Power, Vice President Health, Safety and Environment, with the CEA President's Award of Excellence for Employee Safety (Oct. 2015).



**POWER FORWARD >**  
OUR PEOPLE ARE OUR PATH  
TO SUSTAINABILITY

## SOCIAL RESPONSIBILITY AT-A-GLANCE

Our power is our team. Our employees are the reason we have been recognized as one of *Canada's Best 50 Corporate Citizens* by *Corporate Knights* magazine for six consecutive years. They are our path to sustainability. It's with their input that we are able to develop innovative programs to support engagement, diversity, ethical practice, and productivity.

TO ACHIEVE OUR VISION, WE RELY UPON OUR PEOPLE TO WORK IN ALIGNMENT WITH OUR VALUES:

- We are passionate about our business and safety.
- We act with integrity.
- We work together.
- We are accountable.
- We create and enhance shareholder value.

### KEY FACTS



Provided **\$1.2 million** to charitable organizations and programs in communities closest to our operations throughout North America.



Launched **Blueprint**, a new learning management system.



**99%** of employees completed **LIFE Safety Critical Rules (LSCR)** training intended to prevent actions that have the potential to result in a fatality or serious injury.



We achieved our best health and safety performance to date with a combined (employee and contractor) **Total Recordable Injury Frequency of 0.10**, exceeding our 0.75 target.



More than **185 employees** participated in courses offered by the **Capital Power School of Business**, enhancing the leadership skills that set them up for career success.



**134 charities** received funding through **GENerosity**, our new matched giving program. Nearly **12,000 hours in volunteer time** were reported by employees and their families.

# THE POWER OF EMPLOYEE ENGAGEMENT

We are continuing to develop Capital Power as an employer of choice in the markets where we compete for talent.

This means listening and being responsive to employee needs. We also work to understand our employees' perceptions of our policies, culture, work environment, employee development, and company vision.

To help us on our journey, every two years we conduct an Employee Engagement Survey to better understand how our employees feel about working at Capital Power. In 2014, we had a response rate of 89% (target participation rate was 80%), and our overall engagement score was 68% against a Talent Map engagement benchmark of 67%. Capital Power is targeting a top quartile engagement score by 2016.



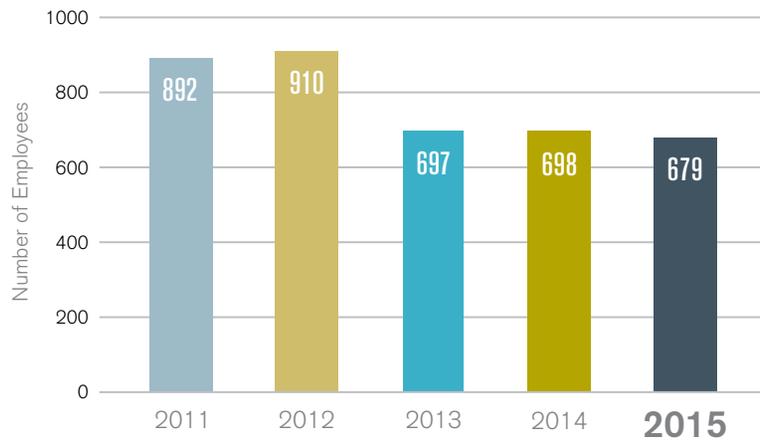
Capital Power is targeting a top quartile engagement score by 2016.

# OUR WORKFORCE

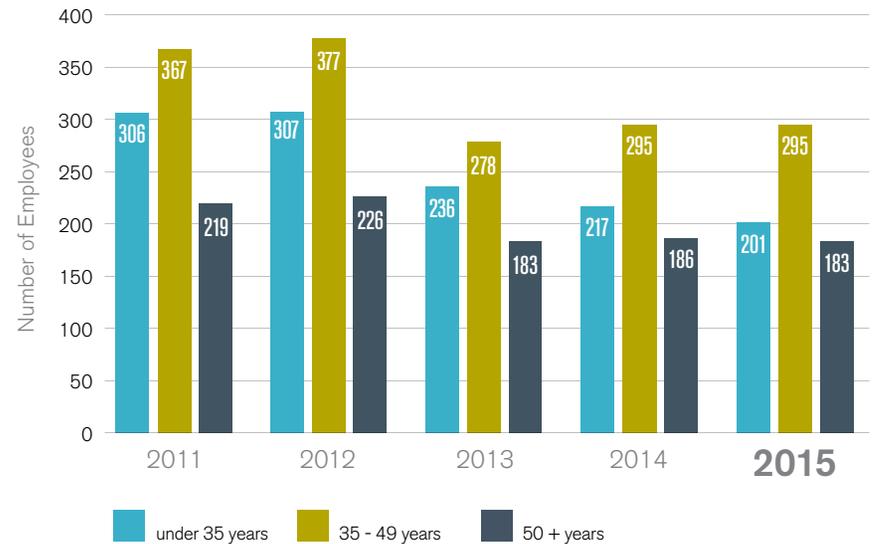
In 2015, we saw a modest reduction in the size of our workforce as we eliminated approximately 50 positions equally split between occupied roles and current and upcoming vacancies. This was a planned change in response to reduced growth expectations in our Canadian operations and in anticipation of economic changes over the next few years.



TOTAL NUMBER OF EMPLOYEES COMPANY-WIDE

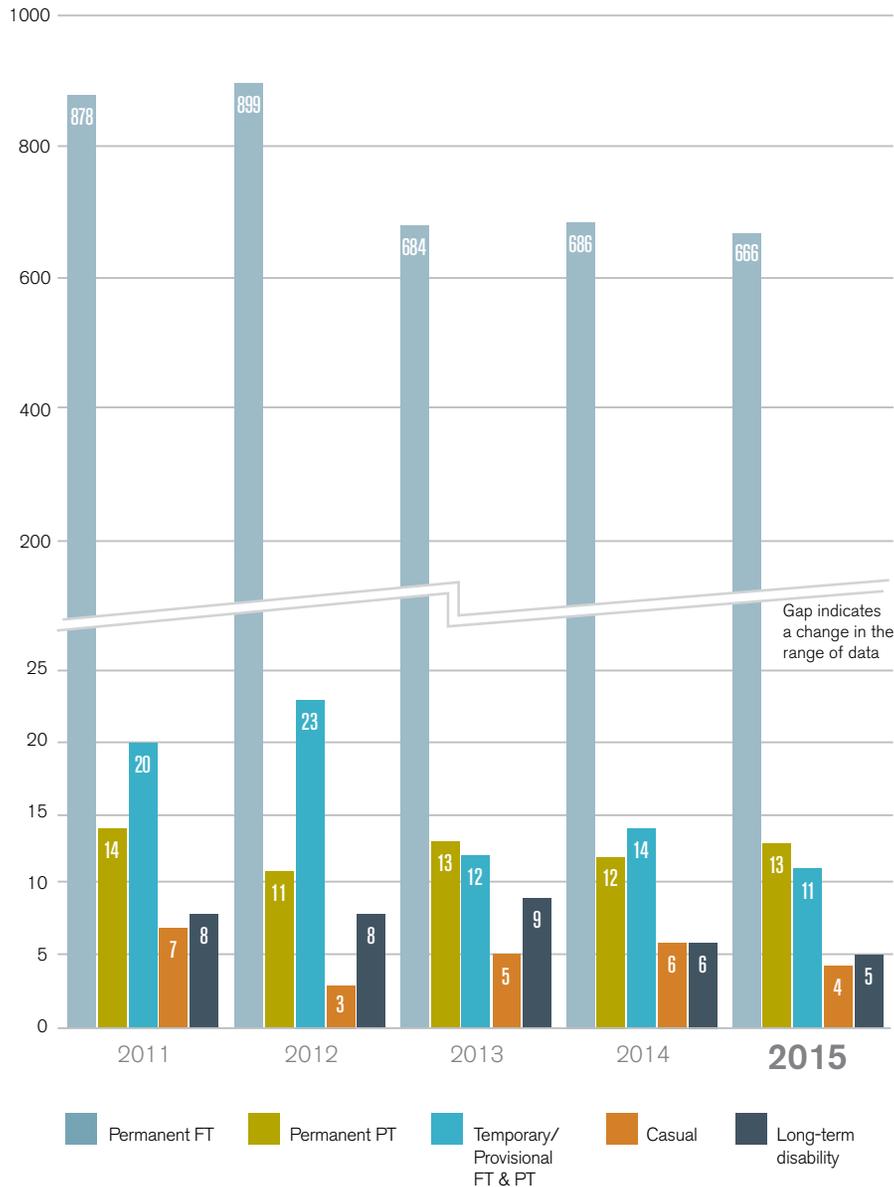


AGE

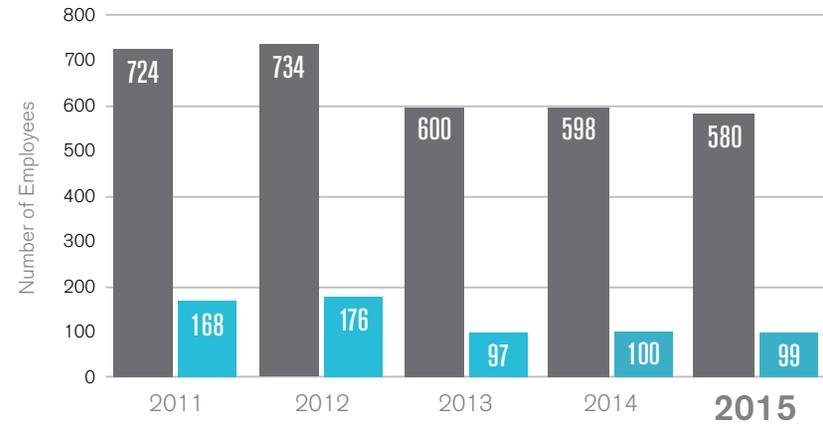


# OUR WORKFORCE / CONTINUED

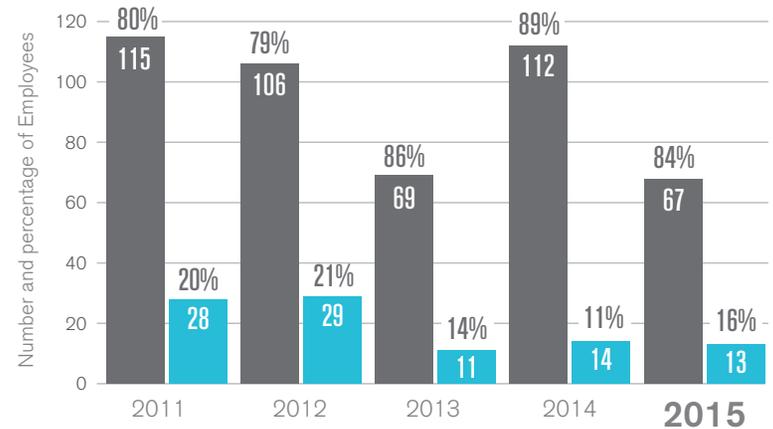
## STATUS



## TOTAL NUMBER OF EMPLOYEES IN CANADA AND IN THE U.S.

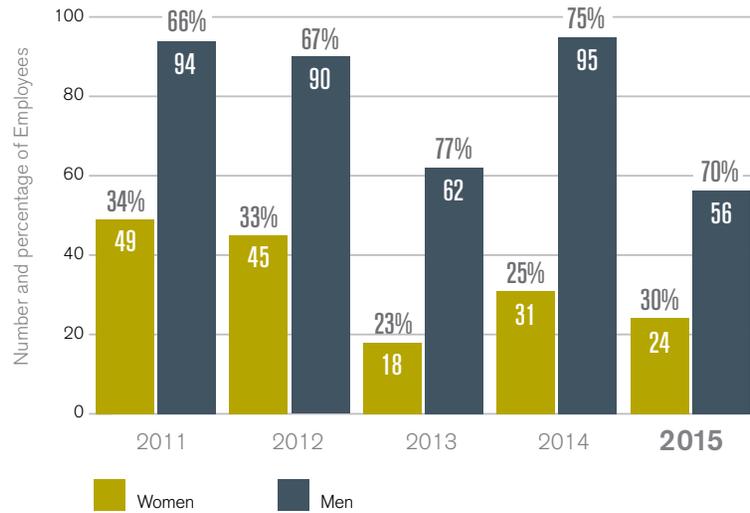


## EMPLOYEE NEW HIRES—LOCATION

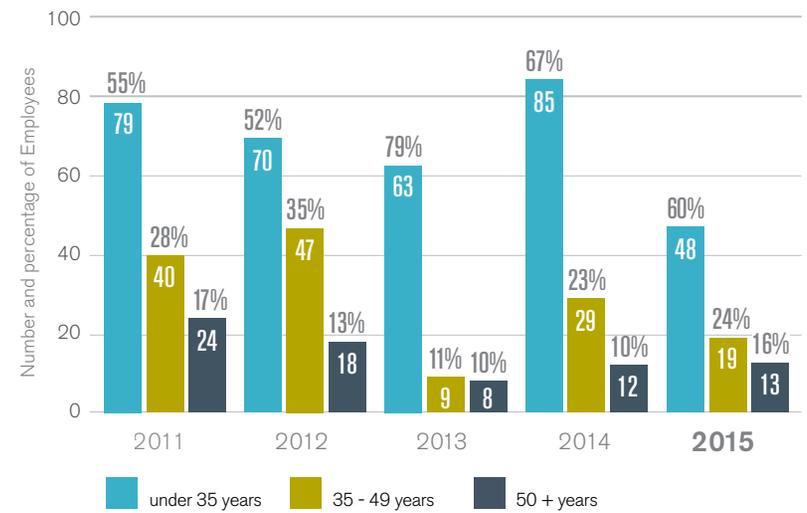


# OUR WORKFORCE / CONTINUED

EMPLOYEE NEW HIRES—GENDER



EMPLOYEE NEW HIRES—AGES



# OUR WORKFORCE / CONTINUED

We work hard to create an enjoyable and values-based work culture. We have introduced wellness initiatives, focused on development plans, and clarified role expectations with integrated role profiles, and are creating regular feedback loops between managers and direct reports. Since the launch of our Employee Engagement Survey in 2014, we have worked to improve communication across our organization. We believe these enhancements can be correlated with our improved employee turnover results—in five years, the average voluntary turnover (resignation) has shifted from 6.2% to 4.4%.

## Creating a culture of health and wellness

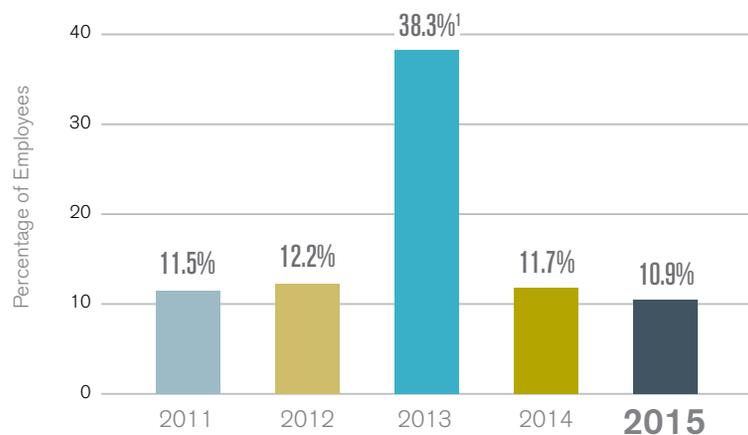
In 2015, an employee wellness strategy was introduced to Canadian employees. The strategy focused on creating an environment that encourages and supports healthy work-life habits and helps

employees and their family maintain and enhance their health. For us, wellness means living a healthy, balanced lifestyle, which includes maintaining and enhancing our health physically, mentally, financially, and socially.

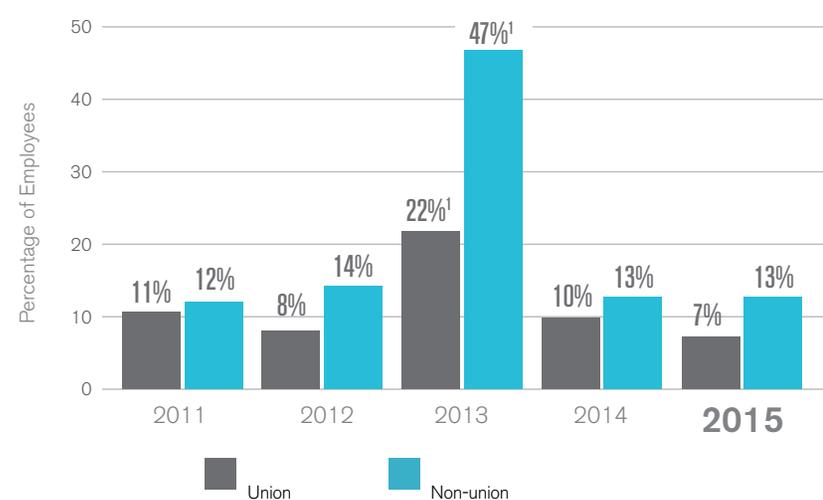
To assess employee awareness and customize programming that fits our organization, employees were first encouraged to complete a personal wellness assessment to learn how their lifestyle habits impact their physical health. More than 60% of employees participated in the assessment. From these results, key focus areas were identified for 2016.

We launched the program in Canada in the fall of 2015, with a focus on physical fitness and being active. Brian Vaasjo, President and CEO, invited everyone to join him in creating and participating in a culture of wellness. A U.S. roll-out of this program is planned for the fall of 2016.

COMPANY-WIDE TURNOVER RATE



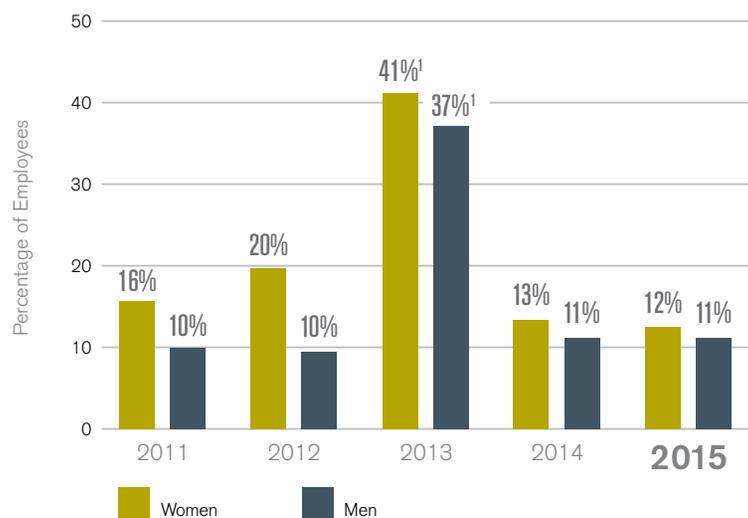
TURNOVER RATE—UNION VERSUS NON-UNION



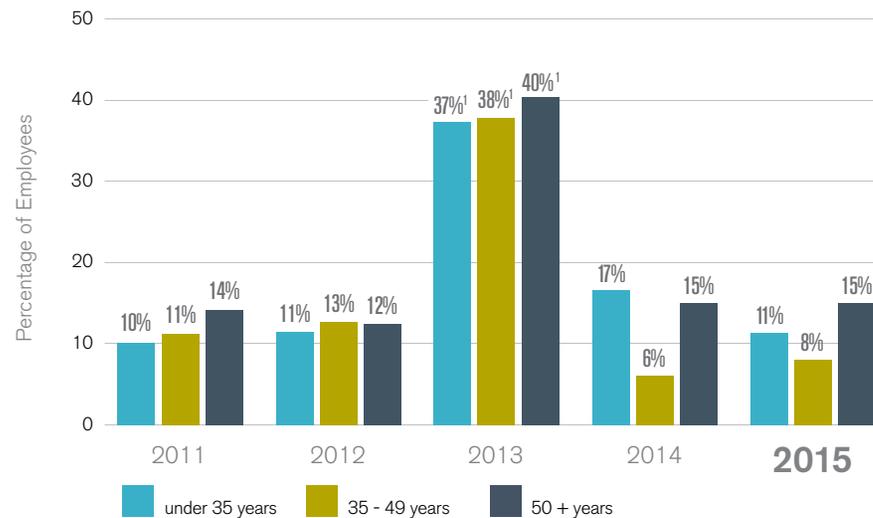
<sup>1</sup> Capital Power completed a company reorganization in 2013, which resulted in a higher turnover rate.

# OUR WORKFORCE / CONTINUED

TURNOVER RATE—GENDER



TURNOVER RATE—AGES



TURNOVER RATE—REASON

| REASON                     | 2011 | 2012 | 2013               | 2014 | 2015 |
|----------------------------|------|------|--------------------|------|------|
| Dismissal                  | 0.4% | 1.0% | 0.2% <sup>1</sup>  | 0.7% | 0.4% |
| Gross misconduct (%)       | —    | —    | 0.3% <sup>1</sup>  | 0%   | 0%   |
| Shortage of work (%)       | 0.0% | 0.0% | 0.1% <sup>1</sup>  | 0%   | 0.5% |
| Unsuccessful probation (%) | 0.2% | 0.1% | 0% <sup>1</sup>    | 0.1% | 0%   |
| Resignation (%)            | 6.2% | 5.6% | 9.6% <sup>1</sup>  | 5.9% | 4.4% |
| Retirement (%)             | 1.2% | 1.0% | 0.7% <sup>1</sup>  | 2.0% | 1.2% |
| Other (%)                  | 3.5% | 4.5% | 27.4% <sup>1</sup> | 3.0% | 4.4% |

Employee turnover reason shows the contribution of each cause of turnover to the overall turnover rate on an additive basis. The employee turnover rate shows turnover rates within different segments of employees.

<sup>1</sup> Capital Power completed a company reorganization in 2013, which resulted in a higher turnover rate.



# OUR WORKFORCE / CONTINUED

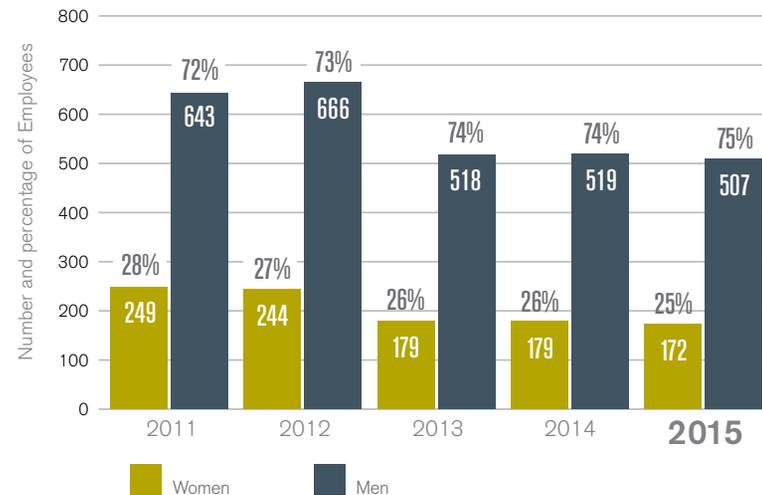
## Gender Diversity

### BOARD DIVERSITY

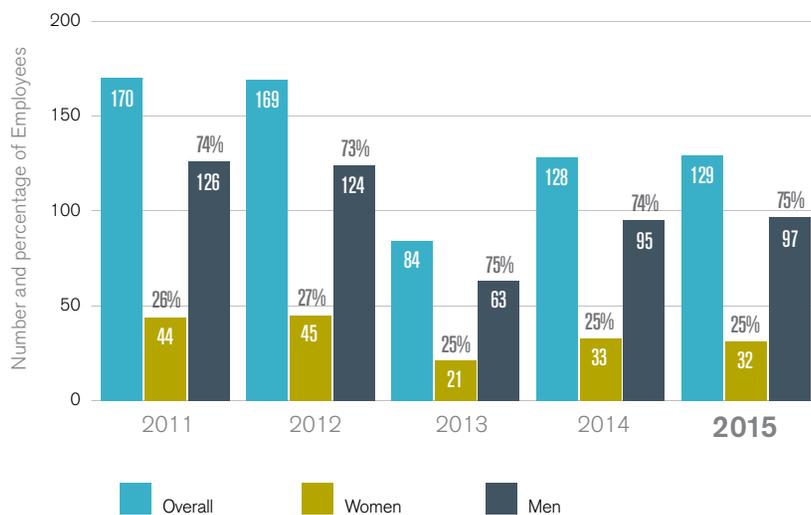
Capital Power recognizes and embraces the benefits of having a diverse Board of Directors and sees increasing diversity at the Board level as an essential element in maintaining our competitive advantage. Greater diversity offers us decision making inspired by a broad range in the skills, regional and industry experience, background, and gender of our directors. In 2015, we welcomed three new directors to the Board: Patrick Daniel, Jill Gardiner, and Kelly Huntington.

At the end of 2015, the Board consisted of 10 directors led by a non-executive chair and comprised seven men and three women.

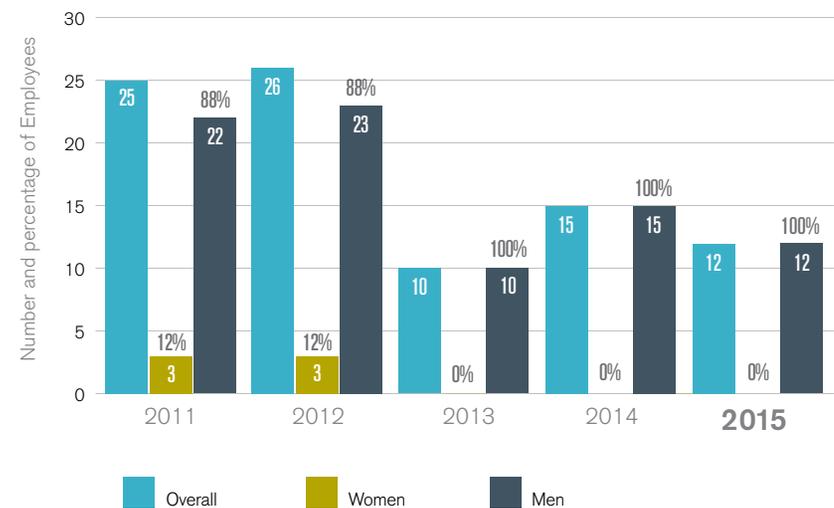
### NUMBER OF EMPLOYEES BY GENDER



### MANAGEMENT POSITIONS OVERALL IN CANADA



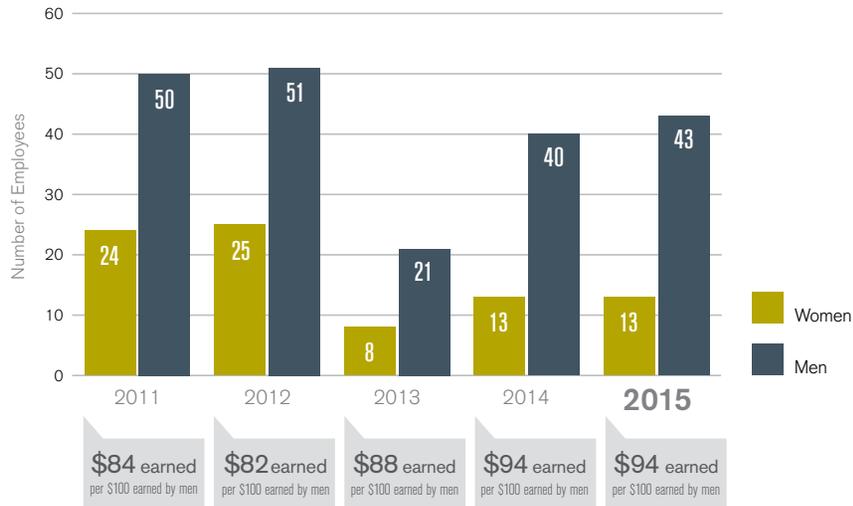
### MANAGEMENT POSITIONS OVERALL IN THE U.S.



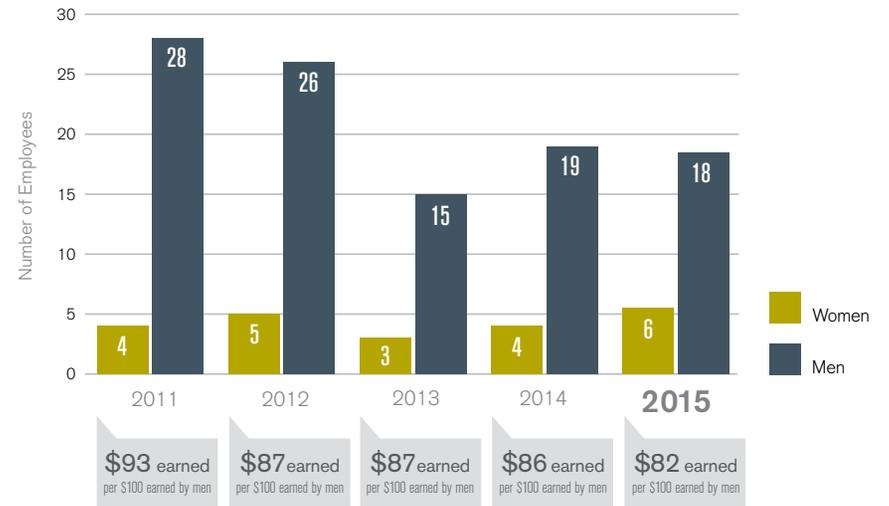
# WORKFORCE / CONTINUED

## Comparison—Wages

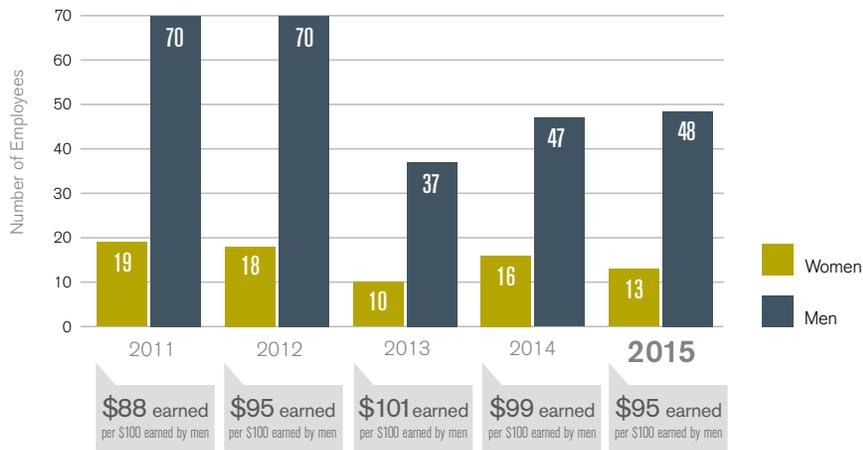
ENTRY-LEVEL MANAGEMENT



UPPER-LEVEL MANAGEMENT

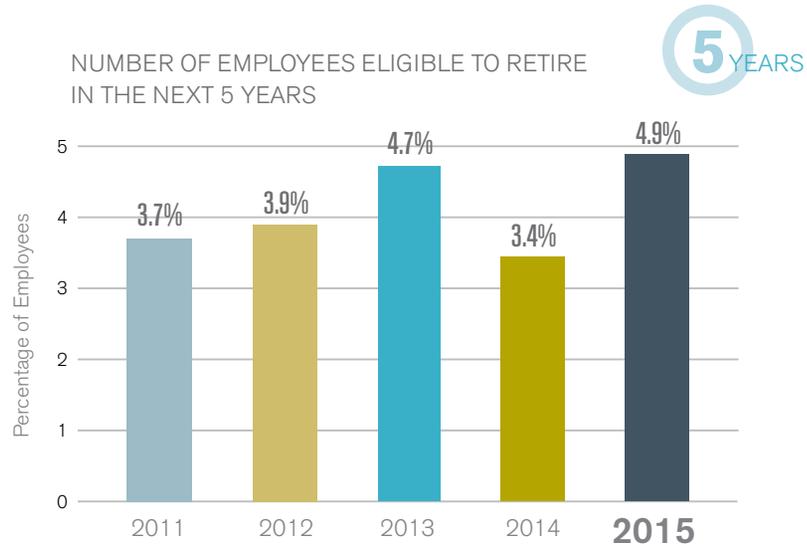


MID-LEVEL MANAGEMENT



# WORKFORCE / CONTINUED

## Retirement



## Collective Agreements



We have good working relationships with all of our labour unions. The labour unions we work with are in Canada (IBEW 1007, CSU 52, UNIFOR 829 and UNIFOR 1123) and, together, represent 39% of our labour force in Canada and 34% of our overall workforce.

We have had zero days lost to strikes at Capital Power<sup>1</sup>. In 2015, four individual grievances were filed and are still under review.

### CAPITAL POWER'S COLLECTIVE AGREEMENTS INCLUDE:

- UNIFOR 829: March 28, 2014 to Dec. 24, 2016
- CSU 52: Nov. 17, 2015 to Dec. 23, 2018
- IBEW 1007: Oct. 21, 2012 to Dec. 12, 2015 (negotiations began in Q1 2016)
- UNIFOR 1123: May 1, 2015 to April 30, 2021

The minimum notice period for operational changes varies among the collective agreements. On average, employees receive a minimum of 24 hours' notice for a change in shift.

 More information about our collective agreements can be found in our [2015 Annual Information Form](#).

<sup>1</sup> Does not take into account a lock out at Island Generation in 2012.

# COMPENSATION & BENEFITS

We compare our benefit package to the benefits provided by a group of peer organizations approved by our Board of Directors to make certain our employee offering is competitive. We want the best people, and we want our total compensation package to be attractive.

OUR COMPETITIVE BENEFITS PACKAGE INCLUDES:

- **EMPLOYEE ASSISTANCE:** formal support is available through supervisors, our HR department, and a confidential, third-party support service, which helps individuals, couples, and families access short-term counseling to assist with life challenges.
- **HEALTH AND WELLNESS FEATURES:** reviewed regularly and customized by region. Our benefits packages offer medical, dental, vision care, and a variety of health spending accounts for employees and their families, and income protection in the form of short- and long-term disability for employees. Basic and optional levels of life insurance and a corporate wellness program are also available.
- **RETIREMENT/SAVINGS PLANS:** depending on eligibility (i.e. permanent versus temporary or union versus non-union employees) and location, employees can participate in retirement and savings plans such as pension, 401(k), and voluntary company savings plans. Educational resources are also available to plan participants.
- **INCENTIVE PAY:** most employees are eligible for a short-term (annual) incentive award based on the achievement of corporate and individual performance objectives. The incentive target is a percentage of base salary and ranges from 7% to 25% or more, depending on the position. Union-member employees participating in the program have a target incentive identified in their collective agreement. For more information on our compensation philosophy and programs, see the [2016 Management Proxy Circular](#).



- **SCHEDULES THAT ALLOW FOR GREATER WORK/LIFE BALANCE:** employees receive, depending on their position and location, paid holidays, personal leave days, paid time off, vacation, and the My Time program, which all support employees toward work/life balance. Employees can also choose from three unique flexible work programs to assist them through temporary, short-term work/life challenges.
- **PART-TIME POLICY:** employees who need a longer-term solution can request a part-time arrangement, which provides for an extended period of time to manage work-life balance.
- **REWARDS AND RECOGNITION:** our Milestone Achievement Awards Program recognizes employees, for service ranging from five to more than 40 years. In 2015, 56 employees were recognized with pre-paid credit cards ranging in value from \$300 to \$3,000.
- **EDUCATIONAL SUPPORT:** we provide up to \$3,000 per year for full-time permanent employees and \$1,500 per year for part-time permanent employees looking to commit to lifelong learning that is aligned with current or future needs of the company.

# COMPENSATION & BENEFITS / CONTINUED

## WAGES & COMPENSATION

|   |   | 2011                                       | 2012                                       | 2013                                       | 2014                                       | 2015                                       |
|---|---|--|--|--|--|--|
| Employee wages and benefits (in \$)   |   | \$111.2 million CDN<br>\$11.0 million U.S. | \$117.5 million CDN<br>\$20.1 million U.S. | \$110.5 million CDN<br>\$19.6 million U.S. | \$104.6 million CDN<br>\$12.2 million U.S. | \$102.5 million CDN<br>\$11.5 million U.S. |
| Percentage of employees that accessed the Employee and Family Assistance Program (EFAP) in Canada                 |  | 13%  | 14%  | 14%  | 21%  | 21%  |
| Employees that are members of a registered defined contribution plan in Canada                                    |  | 273  | 317  | 254  | 322  | 321  |
| Employees that are members of a 401 (k) plan in the U.S.  |  | 136  | 145  | 78   | 112  | 93   |
| Canadian employees that are members of Local Authority Pension Plan (LAPP), a multi-employer defined benefit plan |  | 446  | 402  | 338  | 336  | 306  |

## COMPARISONS – WAGES

| WAGES & COMPENSATION  | 2011    | 2012    | 2013   | 2014   | 2015   |
|---|---------|---------|--------|--------|--------|
| <b>% workforce paid more than minimum wage (national)</b>                                       |         |         |        |        |        |
| Company-wide  | 100%    | 100%    | 100%   | 100%   | 100%   |
| Canada only   | 100%    | 100%    | 100%   | 100%   | 100%   |
| U.S. only   | 100%    | 100%    | 100%   | 100%   | 100%   |
| <b>Difference between Capital Power's lowest starting wage and local minimum wage (Alberta)</b> | \$11.01 | \$10.44 | \$7.99 | \$7.74 | \$7.36 |
| <b># of employees earning lowest starting wage (national)</b>                                   |         |         |        |        |        |
| Company-wide  | 3       | 6       | 3      | 4      | 6      |
| Canada only   | 2       | 3       | 2      | 3      | 3      |
| U.S. only   | 1       | 3       | 1      | 1      | 3      |

# TALENT MANAGEMENT

## Learning & Development

To inspire a learning culture, we offer a range of learning and development programs to all levels of our organization.

This includes a mix of mandatory training and optional training for employees to continue to enhance their leadership skills. All employees joining our company participate in our on-boarding, security, ethics, and health and safety training programs. For those looking to build on their business skills, we offer educational opportunities in areas ranging from public speaking and business writing to goal setting and change management.



WE ALIGN OUR LEARNING AND DEVELOPMENT PROGRAMS WITH OUR BUSINESS STRATEGIES, WHICH INCLUDE:

- attracting and developing a highly skilled talent pool.
- creating an engaged workforce.



### LEARNING MANAGEMENT SYSTEM: BLUEPRINT

In 2015, we implemented **Blueprint**, a new learning management system that gives employees easier access to programming that is essential for success at Capital Power. Employees can now access over 320 online courses where they can explore new ideas, enhance their soft skills, and learn how to use planning tools that can lead to increased efficiency and effectiveness.

In 2016, we will continue to develop learning programs that will address the needs of our employees and upcoming business initiatives.

## TALENT MANAGEMENT / CONTINUED



“Attracting talented employees and creating an engaging workplace are priorities for Capital Power and keys to our continued success.”

– Brian Vaasjo, President & CEO

### **CAPITAL POWER SCHOOL OF BUSINESS**

The Capital Power School of Business is designed to create a strong learning and development culture by providing an opportunity for employees to build and develop relationships with each other. Core programs and courses, such as leadership development and professional business skills, are offered to help set-up employees for personal success, which in turn, enhances shareholder value and increases employee retention. More than 185 employees participated in courses offered by the School of Business.

### **STRONG START ORIENTATION AND ON-BOARDING PROGRAM**

Our interactive Strong Start program is an on-boarding program that welcomes new employees and gives them a foot forward in their first 100 days on the job. The new employee participates in an online e-learning program and interactive classroom session that enhances their knowledge of the organization and provides an opportunity to network and interact with our CEO or a senior executive as they share their leadership journey and explain our vision, mission, and values. In 2015, 75% of permanent employee new hires completed Strong Start, compared to 84% in 2014. Due to organizational priorities, not all employees were able to complete this program as planned in 2015, so their training has been scheduled for 2016.

## TALENT MANAGEMENT / CONTINUED

### SUMMER WORK EXPERIENCE PROGRAM FOR STUDENTS

We believe every career deserves a strong start. In 2015, our Summer Work Experience Program was host to 21 post-secondary students who spent four months of their summer in various areas of our company. They networked with employees and participated in Learning Days, during which they practiced resume writing, interview skills, public speaking, and career planning.

All participating students reported the program met both personal and professional objectives, stating they had high or very high confidence that they could apply their new skills to their future workplace.

“Great work environment and I feel like there is unlimited room to grow your career at a place like Capital Power.”

“I learned so much! Very effective, inspirational and helped me be more comfortable with my people skills.”

– SWEPE employee comments

### SELF-DEVELOPMENT

Our After-Hours Personal Development Program helps employees fund their certificates, diplomas, degrees, and individual courses. We provide up to \$3,000 per year for full-time permanent employees and \$1,500 per year for part-time permanent employees looking to commit to lifelong learning.

In 2015, 54 employees took advantage of this program with the Capital Power investment totaling more than \$95,000—an average of \$1,770 per participant. In 2014, 51 employees took advantage of after-hours learning opportunities, with reimbursements totaling more than \$90,000—an average of \$1,780 per participant.



2015 SWEPE employees

## Talent Development

### TALENT DEVELOPMENT PROGRAM

Capital Power recognizes the importance of attracting and retaining a strong pool of talent to ensure the availability of skilled people for roles at all levels and functions across the organization. Ensuring effective succession planning and development of our people is critical in this process.

Leaders at all levels of the organization have an important accountability to identify, develop, and retain talent. The Talent Development Program was established to assist leaders in achieving this critical task. The program includes succession planning for leadership positions and career development plans for all employees. The program ensures core skills are developed and that people are provided with the opportunity to further enhance their knowledge to meet our ever-changing work environment. Having a diverse workforce that is able to manage complexity and ambiguity is what will ensure we are able to meet and exceed our strategic business objectives.

All employees are provided the opportunity to participate in a competency assessment. These assessments are one part of our Talent Review process. Assessments vary depending on position level and are formally done through a third-party consulting firm.

In 2015, 333 employees participated in these assessments.

“The mentoring relationships built through this program foster a unique and personable experience for everyone involved.”

– Elisa Hung, Senior Manager, Financial Reporting, Capital Power

### iLEAD LEADERSHIP DEVELOPMENT PROGRAM

Strong leadership benefits everyone at Capital Power. iLead is our customized leadership development program. It enhances our competitive advantage by establishing bench strength around the theory and practice of leadership within our company. Interactive learning opportunities allow our leaders to share learning and insights and to grow alongside colleagues in similar roles. Since iLead's inception in 2011:

- 114 new and emerging leaders have completed iLead Bootcamp.
- 103 people leaders have completed iLead Core.
- 75 senior people leaders have completed iLead Evolve.

### MORE (MENTORING, OPPORTUNITIES & REAL EXPERIENCES)

Our MORE (Mentoring, Opportunities & Real Experience) program inspires up-and-coming professional women in Edmonton by connecting them with some of the most successful women in the city's business community. In 2015, Capital Power joined with four other companies to support individual mentorship relationships and provide six interactive group sessions for participants to gather and learn together. Nearly 30 women participated in this program in 2015. In 2016, we will look for additional ways to provide mentorship opportunities for our employees.

“The MORE program provides a comfortable environment for a group of talented and professional women to network and express their diverse opinions. It also provides a meaningful avenue for developing leaders, such as myself, to learn from those who have successfully navigated through the corporate jungle and experienced the thick and thin. The mentoring relationships built through this program foster a unique and personable experience for everyone involved. Personally, I look forward to each meeting with my mentor. The advice that she has offered has been invaluable for addressing short-term career obstacles or achieving a long-term goal of becoming a successful leader.”

– Elisa Hung, Senior Manager, Financial Reporting, Capital Power

## ETHICS & INTEGRITY

We work with honesty and integrity. We stand behind our word. We treat each other and our neighbours with respect and openly report on our performance.

Ethics training within our company and monitoring—both internally and externally—provides an assurance we are operating consistently within our Capital Power values. Our commitment to ethical operations includes:

- investigating all ethical complaints thoroughly and promptly.
- protecting employees who report a violation or ethical concern.
- affirming, every two years, that our employees and full-time contractors have received, read, understand, and will comply with our *Ethics Policy*.
- completing an annual fraud risk assessment that considers all areas of the business and includes potential fraud scenarios. If gaps are identified in control structures, remedial action plans are developed.



### Respectful and ethical workplace

In 2015, Capital Power provided all employees with web-based training on our *Ethics Policy*. Employees are encouraged to raise potential violations of our ethics policies, laws, or regulations.

To report a concern, employees can:

- speak with their manager or any member of senior management.
- anonymously report a concern by contacting our Integrity Hotline, which operates 24 hours a day, seven days a week and is staffed by an independent third-party under strict confidentiality obligations.

IN 2015, WE REVIEWED:

- five complaints about respectful workplace and inappropriate behavior.
- two potential conflicts of interest.

In each instance, a thorough investigation was conducted by the Chief Compliance Officer who concluded that the concerns raised in 2015 were unsubstantiated.

In 2014, our Supply Chain Management team began to treat all suspected violations of the purchasing and expense policies as ethical violations and now records them in the corporate ethics non-compliance database as violation of other work rules, policies or procedures. In 2015, nine such cases were reported, eight of which resulted in employee coaching and one that was still outstanding as of year-end. In addition to these cases, there was one instance of falsified records that was substantiated. The employee involved in this case resigned before the investigation began.

Capital Power's Board of Directors also relies upon a written code of business conduct and ethics and monitors our company's compliance with this code. All Board members participate in the ethics training in conjunction with the Capital Power employee training.

## Human Rights

We value human rights and are committed to zero violations. Important human rights considerations for Capital Power include the following:

- Our operations are not at risk for incidents of child labour or forced labour.
- The right to free association and collective bargaining is not a significant risk at Capital Power.
- We have not been subject to human rights reviews or any impact assessments.
- All security personnel receive training in policies and procedures related to human rights.
- Our contractors must align with our policies, although they do not undergo a specific screening on human rights.
- We do not have significant investment agreements that include human rights clauses.

In 2015, no human rights violations, including the rights of Indigenous people, were identified.

## Our Commitment to Compliance

Capital Power has a dedicated Compliance and Ethics Team that operates as an independent function within Capital Power's Legal and External Relations division. Responsibilities include monitoring various regulations and developing internal procedures to ensure compliance with those regulations and policies within the context of Capital Power's *Ethics Policy*. The team conducts investigations on all potential non-compliant events in a fair, equitable, and objective manner and works to expediently develop resolutions. Training is a key element to ensure employees are educated on laws, regulations, and company policies that impact their daily job responsibilities.

Our energy-trading operations in Alberta are monitored by the Alberta Electric System Operator (AESO) and the Market Surveillance Administrator (MSA). All potential contraventions of market rules are reviewed by Capital Power's Compliance and Ethics Team to determine if they constitute a reportable event. Non-compliance or potential non-compliance incidents are taken very seriously. Potential market rule contraventions are brought to our attention internally and then filed with the AESO if determined to be non-compliant. The MSA will review suspected contraventions and will issue forbearance or a fine.

In 2015, there were four specified penalties for contraventions of AESO Independent System Operator Market Rules due to human error which resulted in \$3,500 in penalties. When those types of events occur, training is provided to employees to provide further guidance on the technical requirements of that particular market rule.

### Precautionary Principle

When any Canadian statutory decision maker, court or tribunal applies the *Precautionary Principle* in making its determination, we consider this principle in the conduct of our activities in like circumstances. The *Precautionary Principle* says that when an activity raises threats to human health or the environment, precautionary measures should be taken even if some cause and effect relationships are not fully established scientifically.



### Product Responsibility

Capital Power employees are required to be aware of and comply with all legal and regulatory requirements applicable to their jobs. In 2015, **we reported zero:**

- incidents of non-compliance with regulations and voluntary codes concerning the health and safety impacts of products and services.
- incidents of non-compliance with labelling requirements.
- customer satisfaction practices or survey results as we do not have a retail power business and, therefore, no retail customer accounts.
- legal actions for anti-competitive or monopolistic behavior.
- complaints to a Human Rights Commission.
- incidents of non-compliance with marketing and advertising codes.
- injuries or fatalities to members of the public due to incidents involving our facilities.
- substantiated complaints regarding breaches of customer privacy or losses of customer data.

## HEALTH & SAFETY AT-A-GLANCE

### KEY FACTS

 **0.10** Total Recordable Injury/Illness Frequency (93% reduction since 2011).

 Earned the Canadian Electricity Association (CEA) **President's Award of Excellence for Employee Safety** (silver level) for safety performance at our Canadian operations.

 Achieved our **best health, safety, and environmental performance to date.**

 Our North Carolina facilities both received first-year gold **North Carolina Department of Labor (NCDOL) Awards** for their outstanding safety record.



# HEALTH & SAFETY

## Zero Means Everything

We are passionate about health and safety and committed to building an environmentally-responsible and zero-injury culture. In 2015, we had our best health and safety performance and the fewest environmental incidents to date. We attribute this achievement to our Zero Means Everything strategy, which is driving this shift in the way our employees talk and think about health, safety, and environmental incidents.

OUR DAILY APPROACH TO HEALTH AND SAFETY INCLUDES:

- establishing clear goals and monitoring performance.
- working and living a zero-injury and incidents culture.
- promoting healthy and balanced lifestyles.
- proactively identifying and managing health, safety and environment-related risks within operations, maintenance, and construction activities.
- requiring and encouraging the reporting of hazards and near-miss events.
- complying with applicable laws and regulatory requirements.
- continuous review and improvement of the company policy.
- aligning our contractors with company policy.

In 2015, 10 Life Safety Critical Rules (LSCR) were introduced across our company. These rules will prevent actions that have the potential to result in a fatality or serious injury and help us achieve our goal of zero health and safety incidents. Employees participated in each of the monthly awareness training modules to understand the rules and how they impact behaviors. In its first year of adoption, our LSCR awareness training completion was 99% (6,960 courses completed).



## 2015 Health and Safety Performance

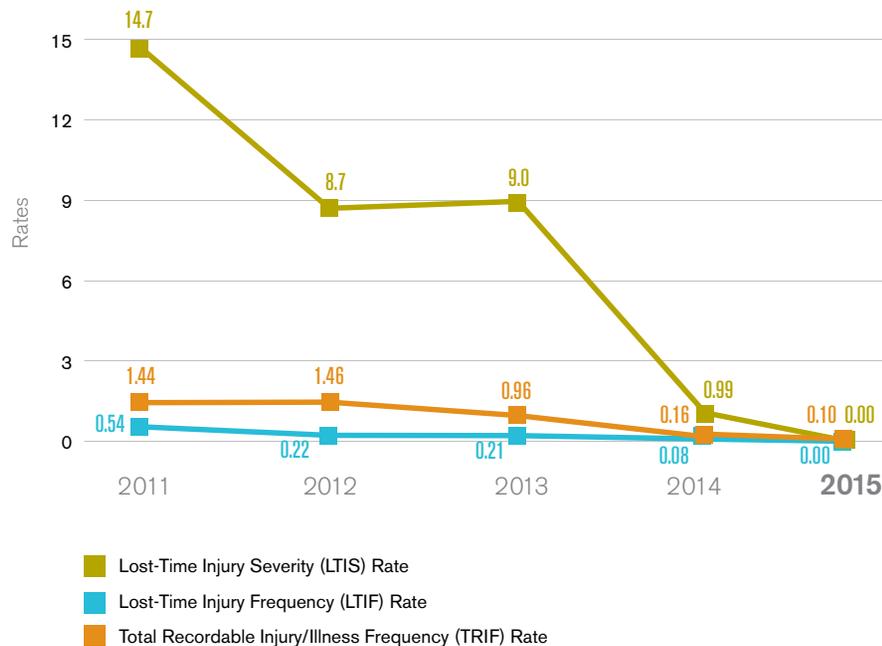
Capital Power utilizes Total Recordable Injury Frequency (TRIF) as one of the main measurement tools to evaluate the annual safety performance of our employees and contractors. TRIF includes the number of lost-time, restricted-work and medical-aid injuries that occur during a calendar year, for every 200,000 hours worked.

In 2015, Capital Power achieved a combined (employee and contractor) TRIF of 0.10, exceeding our target of 0.75. This is our best health and safety record to date and an indication that we are on the right path of achieving our target of zero major and critical health, safety, and environmental incidents. In 2016, Capital Power will continue to apply our Health, Safety and Environment (HSE) Index and associated performance indicators to meet our goal in this area.

## Health, Safety and Environment Performance Indicators

In 2015, our Health, Safety and Environment (HSE) Index and its underlying measures remained consistent with those established in 2014; however, targets were refined and enhanced. By continuing to focus on specific indicators in 2016, we believe our overall Health, Safety and Environmental performance should further improve and result in a healthier, safer workplace and greater environmental responsibility for all employees and contractors.

TOTAL RECORDABLE INJURY/ILLNESS FREQUENCY AND LOST TIME



## Health and Safety Committees in 2015

Our plants and offices have active health and safety committees that monitor and provide advice on occupational health and safety issues. Forty-eight employees served on five committees in 2015. Highlights resulting from the Office Health and Safety Committee's work included the following:

- Step ladders are now available in every file room.
- A new process was introduced to make certain AEDs (automated external defibrillators) in our office spaces are being tested monthly.
- A routine inventory check is now being done to ensure first aid kits are properly stocked.
- To avoid trip hazards, flashing between carpets and hard floors were replaced in all kitchens, file rooms and hallways.
- Calgary and Edmonton offices have been inspected for any hazards requiring Material Safety Data Sheet identification (printer toner, cleaning products in the kitchens etc.).

## Contractor Health and Safety Performance

All contractors must comply with our health and safety policies and procedures by managing their health, safety, and environment risks in a manner consistent with our company policy. We monitor health and safety performance as part of contractor selection and approval to perform or continue work.

We include both contractors and employees in our health, safety, and environment targets. More than 650,000 contractor hours were recorded in 2015, and we recorded one medical aid (contractor) incident. In previous years, contractors have accounted for more than half of our overall injuries. The reduction in contractor injuries can be partially attributed to improvements to our policies and procedures for working with contractors.

More than 650,000 contractor hours were recorded in 2015, with one medical aid.

## Zero Means Celebrating Health and Safety Success—*The President's Safety Award*

Our passion for health and safety is integrated into our company's values. Since 2012, Capital Power has annually recognized and celebrated the facilities, projects, and support services that achieve exceptional and sustained safety performance. All eligible offices and facilities were honored with an award in 2015.

President's Award criteria are based on the number of hours worked in the period and are intended to recognize the size and risk diversity across Capital Power operations. First-year achievements are bronze, second-year are silver, and gold is for three or more years of exceptional performance.

### 2015 AWARD RECIPIENTS

|  Gold |  Silver |  Bronze |
|--|--|--|
| Island Generation <sup>2</sup>   | Halkirk Wind <sup>1</sup>  | Southport <sup>2</sup>   |
| Clover Bar Energy Centre <sup>2</sup>  | Kingsbridge I <sup>1</sup>   | Beaufort Solar Project <sup>2</sup>  |
| Genesee Generating Station <sup>3</sup>  | Roxboro <sup>2</sup>   |  |
| Quality Wind <sup>2</sup>  |  |  |
| Corporate Offices <sup>3</sup>   |  |  |

### AWARDS CRITERIA

- Category A:** 25,000 hours or less worked per year. Recognized in the year in which 25,000 hours are achieved without a recordable injury. Hours are reset on Jan. 1, after an incident or award is received.
- Category B:** Between 25,001 and 500,000 hours worked per year and zero recordable injuries in the calendar year.
- Category C:** 500,001 hours and greater worked per year and a TRIF less than the Capital Power corporate stretch target.

## Living and Working Safely – Training for Employees

We worked throughout 2015 to maintain compliance with position-specific health, safety, and environment (HSE) training requirements for all positions at our operating facilities and achieved a 96% completion rate for the year. We will continue to maintain this level of training compliance throughout 2016. This ensures:

- we are meeting regulated HSE training requirements in all of our jurisdictions.
- employees are receiving the correct HSE training for their job/tasks.



### ISLAND GENERATION'S TARA ARBEAU PUTS HER FIRST AID TRAINING TO THE TEST

Tara is a part-time Capital Power contract employee, who has worked at Island Generation for five years.

One evening, Tara's husband, Kim, began to cough while eating his dinner. He got up and left the room, but quickly came back, grabbing at his throat and gesturing for help. He was red faced and unable to cough on his own. Tara told her 13-year-old son to call 9-1-1, and she began hitting Kim's back with all her force. After four or five hits from behind, some food came out, allowing him to regain his airway.

Her son was on the line with 9-1-1 and remained calm and helpful. The paramedics evaluated Kim and everything appeared fine.

Island Generation employees had recently completed their St. John Ambulance Level 1 First Aid training. Tara was a participant.

"The process flowed seamlessly and I felt confident and composed in spite of the

situation—two of my three children were in the room while this was all happening and were witness to their father's plight. It sounds strange, but for a bad situation, it went brilliantly and the best possible outcome was achieved," said Tara, thanks to her training.

"I came to work the following day and thanked Greg, the plant manager, for always including me in training provided by Capital Power. Many companies would not see the value in educating their temporary or part-time employees, but I am always included. It is this story of diversity and inclusion that I really want to share. I have always felt like a respected team member, I am always provided with training and educational opportunities, and the same genuine care and attention is extended to my family as well."

Tara says it is inspiring to work with such empowering and thoughtful people who are "brilliant at their jobs as well."

## EMERGENCY PREPAREDNESS

We rely upon company-wide and site-specific contingency planning to prepare our people, offices, and facilities for emergencies. By ensuring the safety of our team and surrounding communities, we contribute to our plants' ability to operate responsibly during and after an emergency.

### Emergency Management Program

■ **CRISIS MANAGEMENT:** engages our senior executive at times of crisis, when our operations, profitability, or reputation is at significant risk due to a real or perceived threat to our employees, the environment, the community, our contractors, assets (offices, facilities and systems), industry, or partners.



In 2015, we updated our *Crisis Management Plan*. Every three years, we complete a full-scale test of our emergency response plan with emergency service providers, and each year, we practice emergency training through tabletop exercises and drills. We test different scenarios at plants and offices to validate our contingency planning and emergency preparedness.

In Nov. 2015, a full-scale joint *Crisis Management Plan* and *Emergency Site Plan* exercise was conducted in conjunction with our Island Generation facility on Vancouver Island and in partnership with the Campbell River Fire Department.

■ **EMERGENCY RESPONSE:** includes activities, tasks, programs, and systems designed to preserve life and protect property and the environment. In 2015:

- we completed an audit of our Business Continuity Planning program.
- a new Disaster Recovery Plan was developed by Information Services to ensure that the recovery needs of the business were being met.
- we provided training to our regional Health, Safety and Environment representatives on *Emergency Site Plans* and *Hazard Risk Vulnerability Assessments*.



IN 2016, WE WILL FOCUS ON:

- updating our Emergency Response Program to include business continuity policies and objectives.
- program sustainability, by including business continuity responsibilities and accountabilities and training additional personnel with Security & Contingency Planning to assist with business continuity management.
- performing a business impact analysis to identify critical resources and priorities where updated or improved planning is required.
- a review of our notification options as well as contact information to ensure communication reaches all intended audiences in a timely manner.

# EMERGENCY PREPAREDNESS / CONTINUED

## HEAD OFFICE CLOSURE TESTS COMPANY'S PREPAREDNESS

In early Oct. 2015, the landlord at Capital Power's head office conducted a planned power outage to accommodate electrical and fire detection and suppression system maintenance and testing. This resulted in an unexpected two-day building closure.

As power was being restored, an electrical failure caused a water leak and subsequent flooding. Although there was no flooding or damage on floors occupied by Capital Power, electrical systems were damaged. The building was off-limits for two days until building systems could be restored.

Our Crisis Management Team quickly sprang into action, enacting Capital Power's Business Continuity Plan to cope with the temporary building closure.

"Having a solid plan, as well as procedures we've all practiced, helped us to keep

our business moving as usual," says Ross Johnson, Senior Manager, Security and Contingency Planning. "This could have been a very stressful time. Instead, we knew what to do and used this experience as an opportunity to spark continuous improvement."

Following this incident, Capital Power now asks employees to update their contact information on a regular basis throughout the year.

"We are also exploring unique communication methods to reach all employees if there's no email. I know it's hard to imagine a world without email, but in this situation, we realized we needed a way to text and call everyone too, so we'll be working on this in 2016," added Johnson.

## Practice is part of our plans

As part of our continual focus on safety at our facilities and offices, we have emergency response plans prepared and we practice them annually. These plans provide guidelines and structure at a time of potential crisis.

In 2015, we conducted 15 emergency exercises or drills at our Genesee Power Plant. They included:

- a high-angle emergency response training drill to test response time, command and control, and safe execution of a high-angle rescue.
- a medical drill to test internal notification process, response time, and patient care skills for the given scenario.
- a plant evacuation drill to test evacuation time and accuracy
- a tornado shelter-in-place drill to test our shelter-in-place mustering process, public announcement system notification, and remote hand held scanner that allows us to track and account for all personnel on site during an emergency
- an emergency response training drill at the Genesee Cooling Pond spillway to test response time and quality at an off-site location
- 10 fire drills, which occurred as part of annual fire training.

## First aid training at our facilities and offices

Legislation requires that we have employees trained in first aid. The number of employees trained each year depends on the total number of employees we have at each location. In 2015, we met these requirements by training:

- 27 people in first aid with specific CPR and automated external defibrillator.
- 146 people throughout the entire company.

# POWER FORWARD > STRENGTHENING THE COMMUNITIES WHERE WE OPERATE

## OUR GIVING AT-A-GLANCE

### KEY FACTS

 Approximately **\$1.2 million** contributed to charitable organizations and programs in communities throughout North America where we do business.

 **134** different charities received funding through GENerosity, our new matched giving program.

 Nearly **12,000 hours** in volunteer time were reported by employees and their families and **\$63,750** was contributed to non-profit organizations.



# OUR GIVING

## Strengthening our communities

We support the communities that are neighbours to our operations. In 2015, we provided approximately \$1.2 million toward initiatives that enhance community vibrancy, ecology, and cultural heritage.

We have a high level of employee engagement in initiatives that we support as a company. We make it a point to invest in areas that are the most meaningful to our employees and where they and their families already donate their time and money. Here are the highlights of our 2015 program:

**Employee GENerosity:** We launched *GENerosity*—our new matched giving program. With *GENerosity*, all Capital Power employees have access to their own online giving accounts and we will match their donations to any registered charity in North America up to \$500 each year.

Each fall, during our annual *Capitalize on your GENerosity* promotion, we match employee donations to the United Way over and above the \$500/employee annual match amount, with no maximum. In 2015, more than 280 employees participated in *GENerosity*, which led to a \$297,150 investment in 134 charities that matter most to them.

“As a non-profit organization serving the unique needs of military personnel and their families, the MFRC relies heavily on donations and the support of the community. We are thrilled to be a part of the Capital Power Military Appreciation Night with the Edmonton Eskimos and are very appreciative of the continued support we receive from Capital Power and the generosity of Eskimos’ fans.”

— Roza Parlin, Edmonton Garrison, MFRC Executive Director

Over the past five years, employee generosity and company-matched contributions have led to an investment of \$2.1 million in the United Way.

In 2016, our goal is to increase participation to 65% from our successful launch participation rate of 49% in 2015.

**Military Appreciation Night:** for the fifth year, our employees and their families, together with volunteers from the Edmonton Garrison Military Family Resource Centre (MFRC), accepted donations from Edmonton Eskimos fans in exchange for limited-edition *Support Our Troops* t-shirts during a home game. Capital Power matched the \$40,000 raised from fan donations, resulting in a record-breaking total contribution of \$80,000.



Military Appreciation Night: Employees and their families, together with volunteers from beneficiary, MFRC, collected \$40,000 from Eskimos’ fans in exchange for limited-edition *Support Our Troops* t-shirts.

## OUR GIVING / CONTINUED

**EmPowering Communities:** this program encourages employee volunteerism and recognizes the valuable gifts of time, skills, and knowledge that employees give to the community. Employees who, along with their families, volunteer a combined minimum of 35 hours in a calendar year can apply for a \$500 grant to be donated to a non-profit organization of the employee's choice. Employees can refer a colleague to the program to become eligible for an additional \$250 grant.

IN 2015:

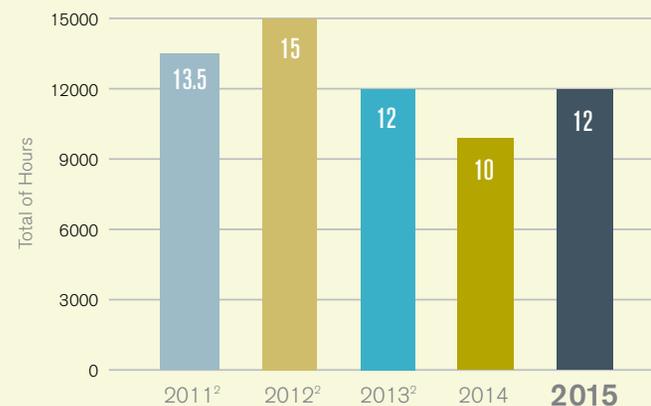
- 118 employees were involved in the program.
- there was a 14% increase in participation from 2014.
- 29 employees participated for the first time after being referred by a colleague.
- nearly 12,000 hours in volunteer time were reported by employees and their families.
- Capital Power contributed \$63,750 to non-profit organizations across North America to recognize the volunteer efforts of our employees.

**For the love of art:** the Art Gallery of Alberta (AGA), and Capital Power have been working together since 2009 to bring important works from around the world to Alberta. The Capital Powered Art Program has helped bring 20 exhibits to the AGA for the enjoyment of visitors and to raise Edmonton's national and international profile as a vibrant cultural centre.

**Capital Powered Art Acquisition Program:** this program allowed art lovers, enthusiasts, and visitors to donate to the AGA to help build the gallery's permanent collection. Since 2013, Capital Power has contributed \$50,000 through this program.



VOLUNTEER HOURS<sup>1</sup>



<sup>1</sup> Volunteers are only required to report the first 35 hours of volunteer time per year, which causes variances as not all employees recorded all of their completed volunteer hours. In 2015, volunteers averaged approximately 100 hours of volunteer work based on recorded hours, compared with 97 hours in 2014.

<sup>2</sup> These numbers include hours from our New England facilities. Capital Power's New England facilities were sold in Nov. 2013.

## OUR GIVING / CONTINUED

“Capital Power has been a fantastic supporter of the Citadel for several years. As our Season Sponsor, their interest, enthusiasm, engagement, and investment shows real passion and dedication for the Citadel and for the arts in our community. We are happy to be celebrating our 50th Anniversary and beginning a new 50 years with Capital Power by our side.”

– Penny Ritco, Executive Director, Citadel Theatre

**Citadel Theatre:** as the Citadel’s Season Sponsor for the third year, we supported their mandate to bring to life the art of performance, creativity, and limitless imagination in the heart of Edmonton. The Citadel’s 50th Anniversary Season kicked off in Sept. 2015, and Capital Power was proud to be a part of the celebrations.

**Engineering Safety and Risk Management Program at the University of Alberta:** offered through the newly formed David & Joan Lynch School of Engineering Safety and Risk Management (ESRM) at the University of Alberta, this program is the only one of its kind in Canada. We made a three-year commitment to supporting this vital program, with 200 students participating in 2015. The University is on target to increase participation to 1,100 students per year over the next two years.

**Stollery Children’s Hospital Foundation:** for the fourth consecutive year, we supported the Snowflake Gala, Edmonton’s only kid-friendly holiday gala. The 2015 event raised \$765,000 to fund leading-edge training and educational programs for the remarkable staff at the Stollery Children’s Hospital.

**McLeod Lake Indian Band, Saulteau First Nations and West Moberly First Nations:** we provide annual scholarships and financial support for community events. During the 2014/15 school year, the Capital Power Scholarship Fund assisted a student in completing her Wind Turbine Maintenance Technician Certificate through the Northern Lights College.



**Huron Multiculturalism Festival:** we supported this one-day community cultural event in Goderich, Ontario. The festival, which attracted 2,000 people, featured international music, food, and dances showcasing different ethno-cultural traditions.

**STARS:** we have supported the Alberta Shock Trauma Air Rescue Service Foundation (STARS) Critical Care & Transport Medicine Academy since 2010. Through this innovative education and training opportunity, vital healthcare education is delivered to rural and urban medical professionals. Between 2009 and 2015, the Academy graduated over 140 emergency-care professionals who now have a unique and highly-specialized skill set.

**Apprenticeship and Industry Trades:** we funded two key scholarships, the Capital Power Aboriginal Scholarship, and the Capital Power Genesee-Keephills Scholarship-Instrument Technician. These scholarships are offered to students aspiring to pursue post-secondary education in the skilled trades.

## CONSULTATION & ENGAGEMENT

We are committed to power forward, to become a more productive, profitable, integrated power generator.

Listening to and having meaningful conversations with our stakeholders is a critical aspect of the power forward vision, whether, that conversation is with an employee, local resident, facility neighbour, regulator, policy-maker or business partner. Our stakeholders provide input on running our operations safely, reliably, and efficiently while minimizing impacts to the environment and enhancing the community.

We draw on best practices in public engagement and actively consult with our stakeholders by providing multiple opportunities to learn about our new projects and provide input.



### Connecting directly with local residents

Capital Power has enjoyed a strong relationship with the Genesee community over the past 30 years, and we value the opportunity to connect face-to-face with residents. Community members expect to be able to access information, raise concerns, and get responses quickly, so we expanded the opportunities for direct face-to-face contact in 2015. We introduced drop-in coffee sessions on the last Wednesday of each month. The most common questions pertained to land management around the Genesee Station, construction related to the Genesee 4 and 5 project, and local community sponsorship. Sessions were held on a trial basis for six months and ended in Nov. Going forward, we will consider re-initiating these sessions based on public interest or as part of engagement activities related to future developments or initiatives at Genesee.

Over the last few years, we have seen a decline in participation in our Community Advisory Task Group (CATG), which included formal meetings. We have made the decision not to schedule additional meetings until there is renewed interest in re-establishing this forum for community interaction.

# CONSULTATION & ENGAGEMENT

## GENESEE LAND USE GUIDELINES

Capital Power recently updated our *Genesee Operations Land Use Guidelines* summarizing Capital Power's practices for managing the land around Genesee Generating Station.

The guidelines were developed to meet operational requirements, the needs of other land users, and specific regulatory requirements that govern Capital Power's land holdings in the Genesee area. The Guidelines cover land management, land access, environmental management, and reclamation management.

 The 2015 Genesee Land Use Guidelines are available online.



Genesee Generating Station

## LAND ACQUISITIONS

Our land acquisition program at the Genesee Generating Station was completed in 2014. In 2015, no land acquisitions or displacement occurred.

## Genesee Regulatory Updates

### LICENSE RENEWALS

As set out by the Government of Alberta, we renew our operating license every 10 years to demonstrate that our facilities comply with current environmental requirements. Capital Power submitted an application to Alberta Environment & Parks (AEP) to renew its current operating approval for the existing units, Genesee 1, 2, and 3, in Dec. 2013.

In Jan. 2015, AEP extended the current approval for our Genesee Generating Station for an additional year to allow the provincial department to continue its thorough review of the renewal application. In Jan. 2016, the AEP approval for the Genesee license renewal was received.

### GENESEE MINE EXTENSION

We were seeking a mine extension to secure continued fuel supply for the three generating units at the Genesee Generating Station. In 2015, we received the amended approval, which gives Capital Power the right to advance mining operations over an additional 14.5 sections (9,280 acres) of land.

## Indigenous relations

Capital Power regularly engages Indigenous communities in discussions about our operations. Where these operations may potentially impact Treaty Rights, Aboriginal Rights, or other Indigenous interests, we work closely to address impacts. In an ongoing effort to build and strengthen relationships with Indigenous communities, we proactively seek opportunities to nurture connections and support events and initiatives that are important to these communities.

Capital Power and its partners in K2 Wind, Samsung Renewable Energy and Pattern Energy Group, provided the Saugeen Ojibway Nation (SON) with financial support to conduct an environmental training program for its members. The *Building Environmental Aboriginal Human Resources* (BEAHR) program offers technical environmental skills that are culturally relevant and designed to provide practical field experience with qualified research monitors. Support for community events in other Indigenous communities was provided through funding provisions in Community Benefits Agreements (CBAs). Such funding was directed to Christmas and annual gatherings.

Relating to the Port Dover and Nanticoke (PDN) Wind facility, Capital Power has benefits agreements with the Six Nations of the Grand River (SNGR) and the Haudenosaunee Confederacy Chiefs' Council (HCCC). We continue to engage both SNGR and HCCC (through

the Haudenosaunee Development Institute) on a number of matters, including administrative requirements of the benefits agreements and the wildlife monitoring program for PDN. Such engagement includes information sharing, meetings, and field visits that will lead to greater understanding of this facility.

Capital Power may, from time to time, be involved in discussions regarding CBAs related to its projects. In 2015, Capital Power and its partners in K2 Wind continued discussions with the SON who represent the Saugeen First Nation and the Chippewas of Nawash Unceded First Nation. These discussions are expected to continue in 2016. K2 Wind also engaged the Historic Saugeen Métis in discussions regarding long-term benefits agreements related to the facility. Discussions are expected to continue in 2016.

### EXAMPLES OF OUR ONGOING INDIGENOUS ENGAGEMENT INCLUDE:

- information-sharing regarding operating facilities, including operational updates, environmental reports, and other information requested.
- direct meetings to discuss operational aspects.
- sponsorships and donations for community events.
- funding for scholarships administered by the Indigenous community.

## Wind project consultation

Renewable energy is an important part of our power mix. Areas with a proven wind regime have an enormous potential to harness the wind and turn it into a clean, sustainable source of power. As an experienced wind facility operator with operations in Alberta, British Columbia, Ontario, and the United States, we understand that stakeholder engagement—early on and throughout the wind development process—is key to addressing concerns and issues and to building and sustaining relationships throughout the lifetime of the project.

Throughout project development, we gather feedback from stakeholders to learn as much as possible about their interests and priorities for their community. Common questions and feedback we receive around wind development falls into these general categories:

- Health and safety
- Infrastructure location
- Noise and sound
- Wildlife, birds and bats
- Visual impacts and property values

Capital Power addresses these concerns by seeking out expert, independent, well-researched information on these topics. In our experience, it is best to provide stakeholders with easy access to third-party, independent and highly-credible scientific sources of information, and government regulations.

Capital Power is actively developing the Bloom Wind (KS) and Halkirk 2 (H2) Wind (AB) Projects and has engaged stakeholders in multiple ways. Based on discussions with area landowners regarding H2 throughout 2015 and early 2016, we have incorporated feedback into turbine layouts and lease option agreements in the areas of land use, construction, reclamation, and commercial terms.

In speaking directly with local landowners, we understood their expectations that Bloom Wind had to be designed with consideration of local farming practices. This meant moving certain roads to follow property boundaries, avoiding fence-lines, and ensuring most facility roads travel east-west to parallel farming activities instead of cutting through fields perpendicularly.

In 2014, a number of Ontario residents initiated legal action against K2 Wind and the Government of Ontario related to the Renewable Energy Approval for the project. This suit was dismissed by the Ontario Divisional Court in Dec. 2014. In May 2015, the individuals who initiated the lawsuit were denied leave to appeal to the Ontario Court of Appeal.

The 270-MW K2 Wind Power facility began commercial operation May 29, 2015. The Project is jointly owned by Capital Power, Pattern Energy Group, and Samsung Renewable Energy Inc. As part of K2 Wind's Renewable Energy Approval (REA), a Community Liaison Committee (CLC) was established as a forum to exchange ideas and to provide regular updates as the project progressed through construction and into operations. The CLC served as another means of communication between K2 Wind and community members with respect to construction, installation, use, operation, and maintenance of the facility.

During construction of K2 Wind, we heard concerns about incomplete land reclamation work, construction impacts to municipal rights of way, fence damage due to construction, equipment mistakenly placed on a resident's land, and garbage. K2 Wind worked to resolve these complaints through post-construction reclamation and restoration activities that occurred throughout late 2015.

## CONSULTATION & ENGAGEMENT / CONTINUED



K2 Wind

Upon the start of commercial operations of K2 Wind, Pattern assumed responsibility for the facility's operation, which included managing community relations. All complaints related to the operation of the facility were tracked. These included noise, aircraft navigation lights, and shadow flicker issues. K2 Wind's operations staff made personal contact with the individuals making these complaints, in most cases personally visiting homes or areas where effects were being experienced. K2 Wind discussed these complaints with the Ontario Ministry of the Environment (MOE) and undertook several technical assessments to confirm that the turbines were operating in compliance with manufacturers and regulatory specifications.

In 2016, K2 Wind will continue to track public concerns and complaints related to the facility, which are filed with the Ontario MOE.

The background of the slide features a photograph of two wind turbines silhouetted against a bright sunset sky. The sun is positioned at the top center, creating a lens flare effect. The sky transitions from a deep blue at the top to a lighter, hazy glow near the horizon. The foreground is dominated by large, overlapping geometric shapes: a white triangle on the left, a teal triangle at the bottom, and a yellow triangle on the right.

**POWER FORWARD >**  
POSITIONED FOR FINANCIAL  
SUCCESS

# POWER FORWARD > POSITIONED FOR FINANCIAL SUCCESS

## ECONOMIC RESPONSIBILITY AT-A-GLANCE

We are investing in the power generation our communities need to make the transition to a low-carbon future, while powering economic growth.

IN 2015, WE:

- completed the 270-MW **K2 Wind Power Project**<sup>1</sup> in Ontario, Canada. One of the largest wind projects in the country, K2 Wind is our fifth wind project since 2012, and adds 90-MW to our renewable capacity.
- fully commercialized our first solar facility with the opening of **Beaufort Solar**, adding 15-MW of capacity in North Carolina, U.S.
- opened the **Shepard Energy Centre** in a joint venture partnership with ENMAX. Shepard adds an additional 800-MW of natural gas generation in Alberta. Capital Power owns 400-MW of the combined-cycle facility's output.

We delivered all three facilities on time and under budget, with innovative commercial arrangements in place to optimize the value of each facility for shareholders, partners, and customers.

We want to contribute to the sustainability of the communities where we operate. We support community growth and put a priority on local hiring. In 2015, we spent \$180 million with our top 25 suppliers of goods and services. Of this amount, \$43 million (24%) was defined as local spending, in which the shipping destination and supplier site were both in the same jurisdiction.

### KEY FACTS

 Generated **\$400 million** in funds from operations in line with 2015 financial target of **\$365 to \$415 million**.

 Approved a **7.4%** increase in our annual dividend.

<sup>1</sup> In partnership with Pattern Energy Group and Samsung Renewable Energy Inc.

 Strengthened our contracted cash flow by adding **405-MW** of owned contracted generation capacity.

 Since November 2012, Capital Power has added investments in renewable energy totaling approximately **\$1.4 billion** and added five wind projects and a solar project.

## ECONOMIC RESPONSIBILITY AT-A-GLANCE / CONTINUED

Shareholder value was challenged in 2015 by market and economic conditions and the evolving public policy environment in power generation.

The *Alberta government's Climate Leadership Plan*, and its implementation, will have both a direct impact on the company's existing assets and a long-term impact on the Alberta electricity market.

Our operations exceeded our target of 94% availability, and hit 95%—a level of dependability that gives significant comfort to the customers and power markets we serve. We simplified Capital Power's organizational structure and reduced corporate reporting obligations to focus on our core business. Delivering stable and growing returns to shareholders, even in a time of low power prices and economic change, is evidence of our ability to power forward.

In 2016, we expect to benefit from a full year of operations at our three new facilities, which are well aligned with the future of North America's electricity supply. We will continue to capture value by hedging our commercial portfolio in Alberta and through our merchant facilities, should power prices increase. Capital Power will continue to be active working with the Alberta government on public policy development.



Beaufort Solar

# SETTING AND DELIVERING ON TARGETS

■ In a year marked by challenging market conditions, we met our funds from operations target for 2015. Full-year financial performance was on target, and funds from operations were in the upper end of our target range at \$400 million.

■ We achieved or exceeded our three targets for operational excellence in 2015. Our power generation fleet is well maintained, modern, and reliable.

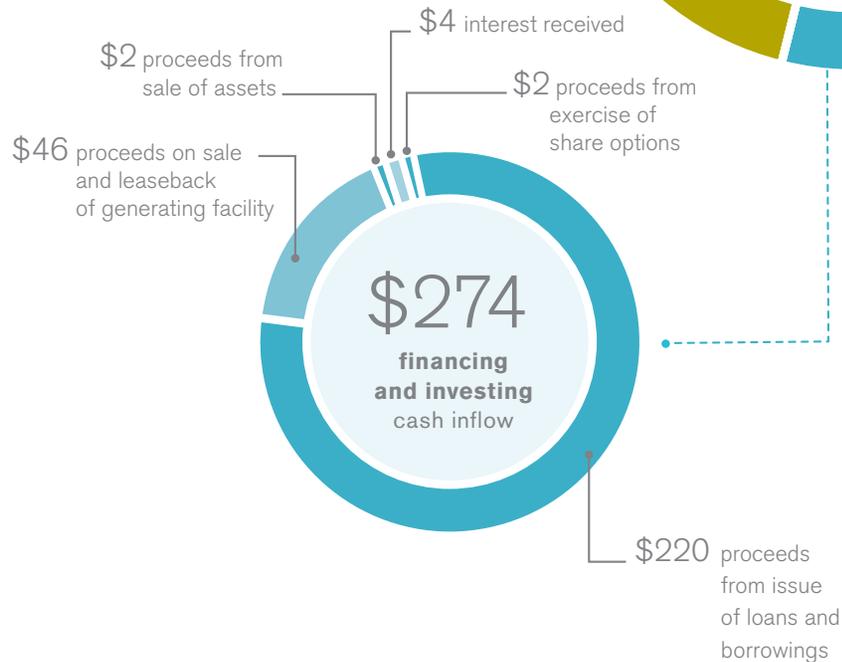
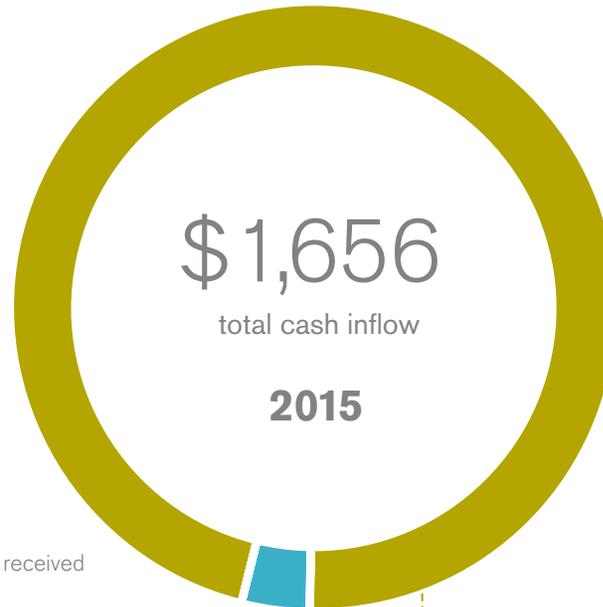
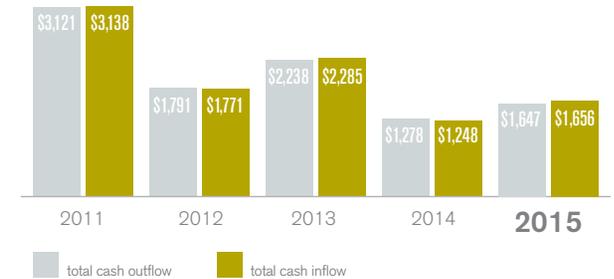
|  |  2015 TARGET |  2015 RESULTS   |  2016 TARGET  |
|--|---|--|--|
| <b>OPERATIONAL EXCELLENCE</b>            |   |  |  |
| Plant availability average               | 94% or greater  | 95%  | 94% or greater   |
| Sustaining capital expenditures          | \$65 million  | \$62 million   | \$65 million   |
| Plant operating and maintenance expenses | \$180 to \$200 million  | \$192 million  | \$200 to \$220 million   |
| <b>FINANCIAL STABILITY AND STRENGTH</b>  |   |  |  |
| Funds from operations                    | \$365 to \$415 million  | \$400 million  | \$380 to \$430 million   |
| <b>ENHANCING SHAREHOLDER VALUE</b>       |   |  |  |
| K2 Wind                                  | Complete construction with commercial operation date in mid-2015                              | Commercial operation commenced May 2015. Capital Power's share of final construction costs was \$297 million, compared with the forecasted amount of \$310 million.  | N/A  |
| Shepard Energy Centre                    | Commercial operations date early 2015   | Commercial operation commenced March 11, 2015.   | N/A  |
| Genesee 4 and 5                          | Transition from development to construction   | In 2015, limited construction activities took place, but full notice to proceed was deferred. Full notice to proceed is contingent on clarification regarding the Alberta Climate Leadership Plan (ACLP), including continuation of the current Alberta electricity market structure and appropriate price signals from the energy only market.<br><br>It is expected that the current Alberta electricity market structure will not be compromised by the ACLP. | Update construction timing based on clarification regarding the Alberta Climate Leadership Plan and price signals from the energy only market. |
| Advance New Developments                 |   |  | Execute a contract for output of a new development.  |
| Alberta Climate Leadership Plan          |   |  | Ensure fair compensation will be received for the proposed accelerated closure of our coal facilities. <sup>1</sup>                            |

<sup>1</sup> Target is confidential until facilitation process is complete.

# CONTRIBUTING TO THE ECONOMY

## CASH INFLOWS

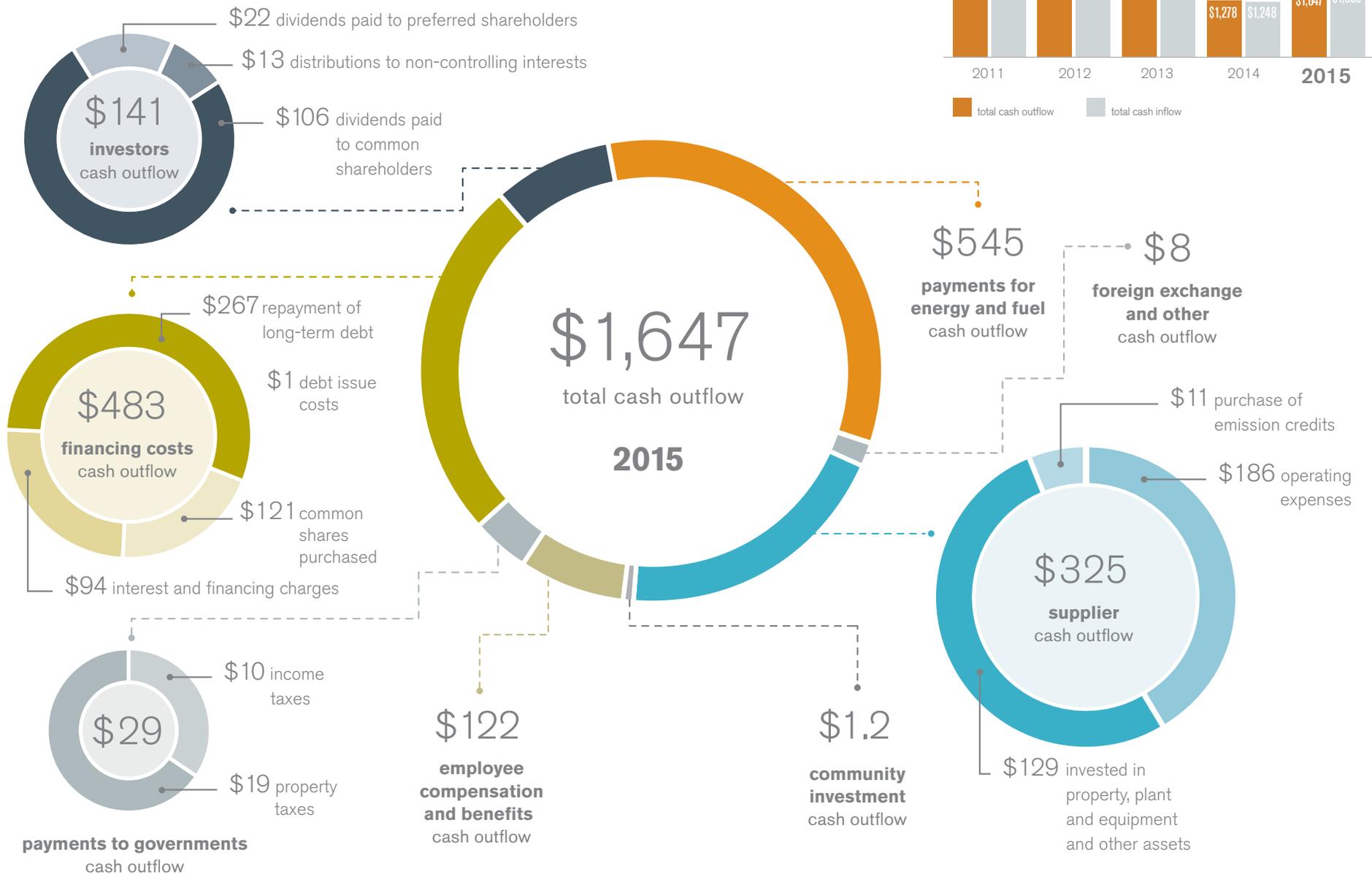
Economic benefits from our business touch thousands of individuals and companies across North America and beyond, including equity and debt holders, local suppliers, governments, employees, energy producers, and investment banks. In addition to employing 679 employees, Capital Power hired more than 350 contractors in 2015.



<sup>1</sup> We received approximately \$1 million per year from the Government of Canada through the Wind Power Production Incentive program, which was created to encourage the development of wind energy capacity. The incentive was approximately \$0.01 per kilowatt hour of production from our Kingsbridge Wind Power Project, which was commissioned in 2006. Eligible recipients can receive the incentive on the first 10 years of production. Capital Power received its last incentive payment as part of this program in March 2016.

# CONTRIBUTING TO THE ECONOMY

## CASH OUTFLOWS



## OPERATING PERFORMANCE AT-A-GLANCE

In response to continued market and economic challenges, we continued to optimize our operations.

This strategy has served as the foundation of Capital Power's competitiveness. In 2015, we achieved further improvements in both cost effectiveness and plant availability. We exceeded our plant availability target of 94%—reaching 95%—and achieved production increases at our thermal facilities as a result of improved reliability. We also reduced our fleet-wide operations and maintenance costs, as well as our corporate expenses.

Solomon, a global leader in benchmarking, completed third-party benchmarking, at our Genesee, Island Generation and Clover Bar Energy Centre facilities in 2015. The benchmarking has shown that our Genesee Generating Station has achieved both top quartile reliability performance in its class and substantial improvements in cost effectiveness since benchmarking was completed for the facility in 2012. Both the natural gas Island Generation facility and Clover Bar Energy Centre had first quartile performance for availability

and were in the second quartile for plant manageable expenditures. Since the study used data from 2014 for these facilities, we have already lowered their spending to closer to first quartile performance. At our solid fuel facilities in North Carolina, we continue to deliver year-over-year improvements in production. Capital Power is also developing its capacity and expertise in biomass and fuel blending—areas of increasing importance as North American markets transition away from coal-fired generation and toward low-carbon fuels.

In 2016, we will focus efforts on improving the already strong performance of our operations by reducing downtime from planned outages and improving wind turbine efficiencies.

### Operating performance

Plant availability represents the percentage of time in the period that the plant was available to generate power, regardless of whether or not it was running. Plant availability by plant category was:

YEAR ENDED DEC. 31

|  | 2011 | 2012 | 2013 | 2014 | 2015 |
|--|------|------|------|------|------|
| Alberta commercial plants                      | 87%  | 92%  | 95%  | 94%  | 94%  |
| Alberta contracted plants                      | 97%  | 94%  | 91%  | 93%  | 96%  |
| Ontario and British Columbia contracted plants | 98%  | 98%  | 99%  | 98%  | 98%  |
| U.S. commercial plants <sup>1</sup>            | 88%  | 85%  | 87%  | N/A  | N/A  |
| U.S. contracted plants                         | 100% | 93%  | 95%  | 93%  | 94%  |

<sup>1</sup> Includes New England plants, which were sold in November 2013.

# ENERGY PRODUCTION



K2 Wind

Our power generation facilities are well maintained, modern, and focused on three main energy sources. In 2015, the total net generation of our fleet consisted of:

2015 NET POWER GENERATION<sup>1</sup>



17%<sup>2</sup>

Renewables

(i.e. wind, biomass, tire-derived fuel, and landfill gas)



3%<sup>2</sup>

Natural Gas



80%<sup>2</sup>

Coal

As of Dec. 31, 2015, Capital Power became one of Canada's largest independent power producers. We own more than 3,200-MW of power generation capacity with 530-MW of owned capacity under construction or in advanced stages of development in Alberta.

On March 24, 2016, Capital Power announced a contract has been secured for the 178-MW Bloom Wind project located in Kansas, U.S., and construction will proceed in the third quarter of 2016. We also announced the restructuring of the Genesee 4 and 5 project and moved the decision point for proceeding to the fourth quarter of 2016, resulting in modestly higher cost and risk. The decision to proceed with construction will be based on our view of market conditions and the impact of government policy on our existing assets and the proposed units.

<sup>1</sup> Data from owned capacity at Keephills 3, K2 Wind, Joffre, Shepard Energy Centre and our Sundance Units 5 & 6 PPA are not included because we do not hold the operating permits for these facilities. Capital Power terminated the Sundance 5 & 6 PPA on March 24, 2016.

<sup>2</sup> Per cent calculated from MWh.

## ENERGY PRODUCTION / CONTINUED

IN 2015, WE CONTINUED TO BALANCE OUR RENEWABLE POWER PORTFOLIO. WE COMPLETED:

■ **Beaufort Solar** (100 jobs at peak construction): a 15-MW solar facility in North Carolina. Our first U.S. greenfield project, Beaufort was completed on time, under budget, and with zero lost-time safety incidents. The land for Beaufort Solar was acquired by Capital Power as part of the acquisition of Element Power in 2014.

■ **K2 Wind Power Project** (300 construction jobs with 500 at peak construction): one of the largest wind projects in Canada, K2 Wind is our fifth wind project since 2012, and adds 90-MW to our renewable capacity. This project, developed in partnership with Samsung and Pattern, is expected to power 100,000 Ontario homes with clean power annually.

Capital Power, in partnership with ENMAX, also opened the Shepard Energy Centre in Calgary. Capable of generating 800-MW of electricity for the Alberta grid, this is the largest natural gas generation facility in the province. The start-up of operations at this facility in 2015 marks an important step in Alberta's transition away from coal-fired generation facilities.

“Congratulations to everyone involved... a great team effort. Beaufort, our first solar project, is an excellent development for us. It was an opportunity to apply our construction and engineering expertise to solar technology. I trust this is just the start of many more renewable developments in the U.S. for Capital Power.”

— Darcy Trufyn, Senior Vice-President, Operations, Engineering and Construction



### THE DATA

The data in this section represents Capital Power's generation associated with its operating approvals rather than its financial share of the operation. This includes:

- **Genesee 3, co-owned with TransAlta:** capacity is sold through the Alberta Power Pool.
- **Genesee 1 & 2:** capacity and output is sold under an Alberta Power Purchase Arrangement (PPA) to the Alberta Balancing Pool.

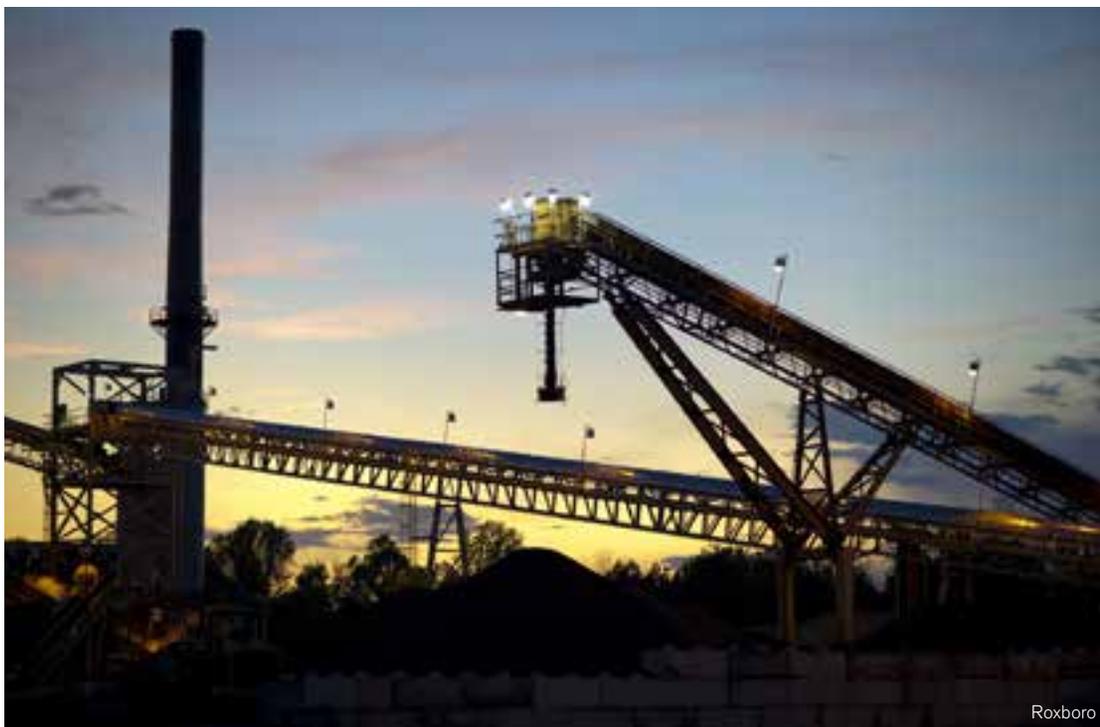
Data from owned capacity at Keephills 3, K2 Wind, Joffre, Shepard Energy Centre and our Sundance Units 5 & 6 PPA<sup>1</sup> are not included because we do not hold the operating permits for these facilities.

<sup>1</sup> Sundance Units 5&6 PPA was terminated on March 24, 2016

## ENERGY PRODUCTION / CONTINUED

### Fuel Consumption in 2015

Each year, we seek opportunities to deliver power in a sustainable way. This means we regularly schedule planned outages to keep our plants well maintained and in the operating condition required to achieve a high level of availability.



Roxboro

**Natural gas consumption decreased by 24% in 2015**, as a result of lower demand and fewer operating hours at our natural gas peaking facilities. These modern and highly-efficient peaking facilities allow Capital Power the flexibility to quickly respond to sudden changes in supply and demand.

**Biomass consumption decreased by 4% in 2015**, due to slight variations in fuel mixture and the number of operating hours at our Roxboro and Southport facilities.

**Coal consumption increased by 10% between 2014 and 2015.** This is largely due to an outage at Genesee 3 in 2014, which resulted in approximately 14% less generation for that year. Genesee Generating Station also had higher overall plant availability in 2015, due to continuous maintenance improvements that led to greater efficiency and reliability. Since 2011, the combined use of coal at our Southport and Roxboro facilities in North Carolina has decreased by more than 63%. In 2015, coal represented only 6% of the overall fuel mixture of these facilities.

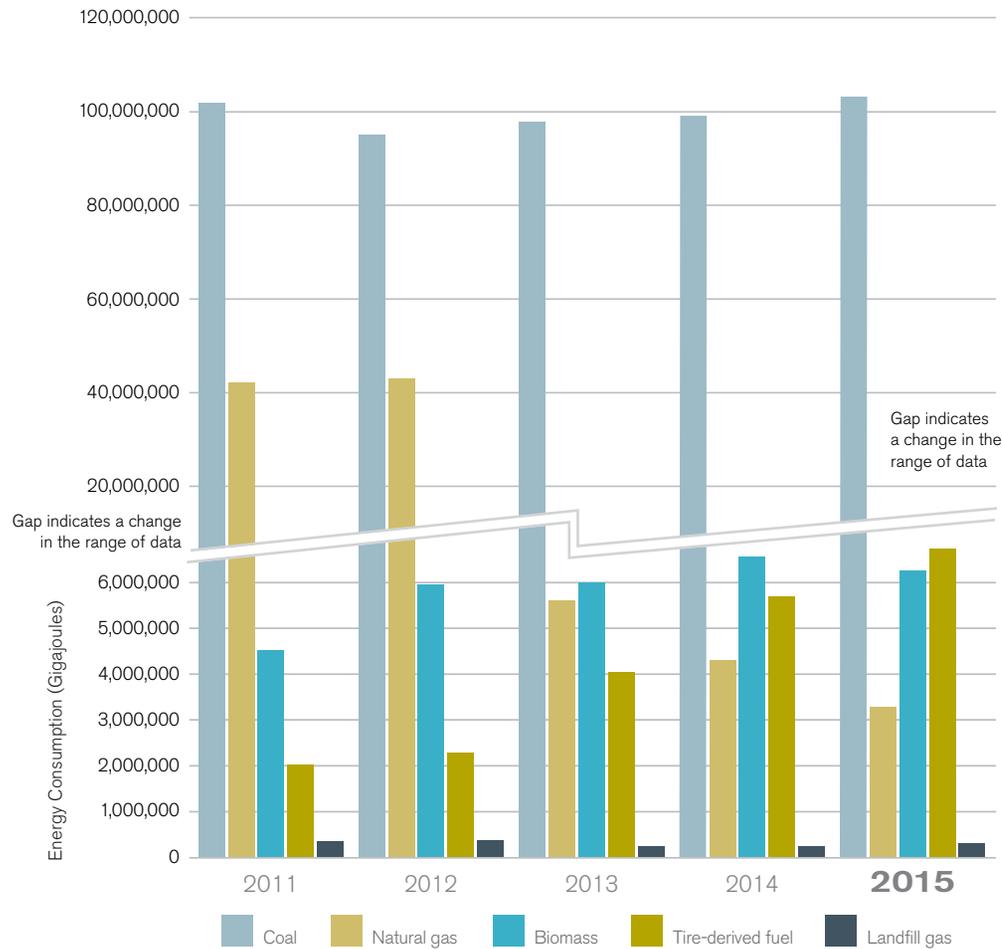
**Tire-derived fuel consumption increased by 20% in 2015**, due to optimization of our fuel mix at our Roxboro and Southport facilities. This increased consumption of tire-derived fuel resulted in less coal consumption at these facilities.

**Landfill gas consumption increased by 15% in 2015**, due to changes in production.

# ENERGY PRODUCTION / CONTINUED

## Energy Consumption (Gigajoules)

Year-over-year variance is primarily due to fuel mixture, the number of operating hours of each facility, acquisitions and developments, and the sale of the hydro facilities and the New England natural gas facilities in 2012 and 2013, respectively.



# ENERGY PRODUCTION / CONTINUED

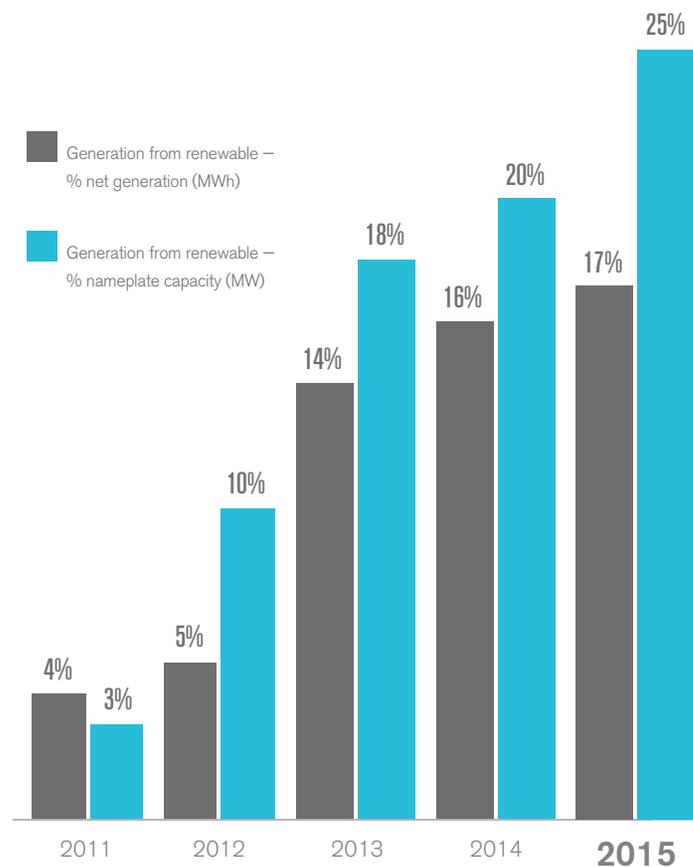
## Generation from Renewable Energy

Our renewable energy portfolio, which includes wind and solar, has been steadily increasing since 2011. This is largely related to the increase in net generation from our wind assets (13% increase from 2014 to 2015). Since Nov. 2012, Capital Power has added investments in renewable energy totaling approximately \$1.4 billion and added five wind projects and a solar facility. We have increased the share of production from our renewable energy portfolio from 4% in 2011 to 17% in 2015.



K2 Wind

Increased renewable generation from 4% in 2011 to 17% in 2015.



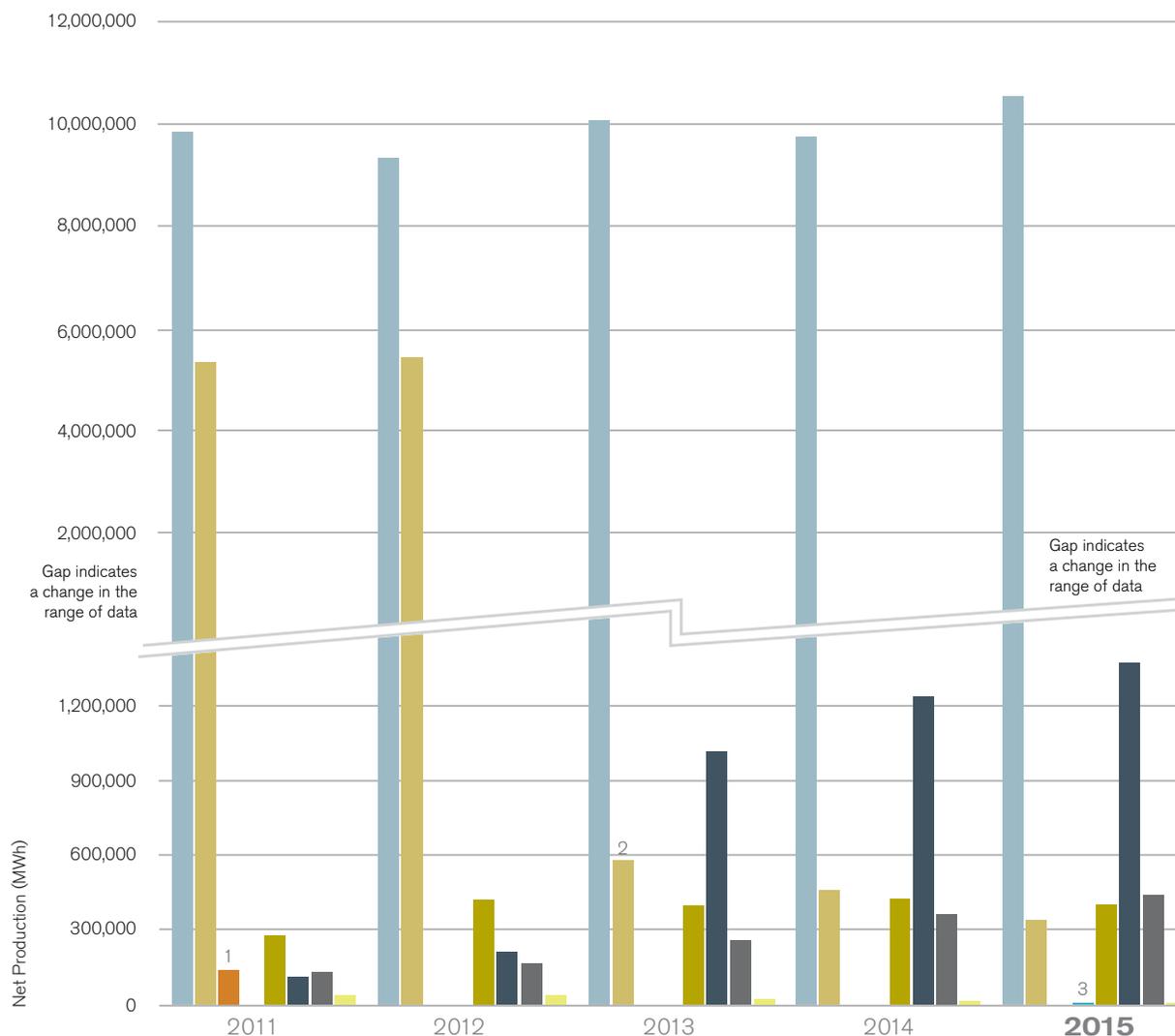
# ENERGY PRODUCTION / CONTINUED

## Net Production by Energy Source

■ Electricity generated from tire-derived fuel increased in 2015, due to optimization of our fuel mix at our Roxboro and Southport facilities in North Carolina.

Production (MWh) includes both electricity and exported steam. Steam production was converted from GJ to MWh using a conversion factor of 3.6 GJ/MWh to allow aggregation. Production statistics differ from other published statistics due to differences in reporting scope.

- 1 We no longer generate electricity from hydro since the sale of our two hydroelectric facilities in 2012.
- 2 Electricity generated from natural gas in 2013 decreased from 2012 due to the sale of our New England facilities in Nov. 2013.
- 3 In Dec. of 2015, Capital Power completed the construction of Beauport Solar, a 15-MW solar facility in North Carolina, therefore, solar production was recorded for the last week of the year.



|  | 2011              | 2012              | 2013              | 2014              | 2015              |
|--|-------------------|-------------------|-------------------|-------------------|-------------------|
| Gross production (MWh)                           | 16,949,000        | 16,610,000        | 13,461,000        | 13,146,000        | 14,062,000        |
| – Electricity consumed by station services (MWh) | 1,010,000         | 984,000           | 1,164,000         | 926,000           | 996,000           |
| <b>= Net production<sup>2</sup> (MWh)</b>        | <b>15,939,000</b> | <b>15,626,000</b> | <b>12,297,000</b> | <b>12,220,000</b> | <b>13,066,000</b> |

# ENERGY PRODUCTION / CONTINUED

## Materials Used

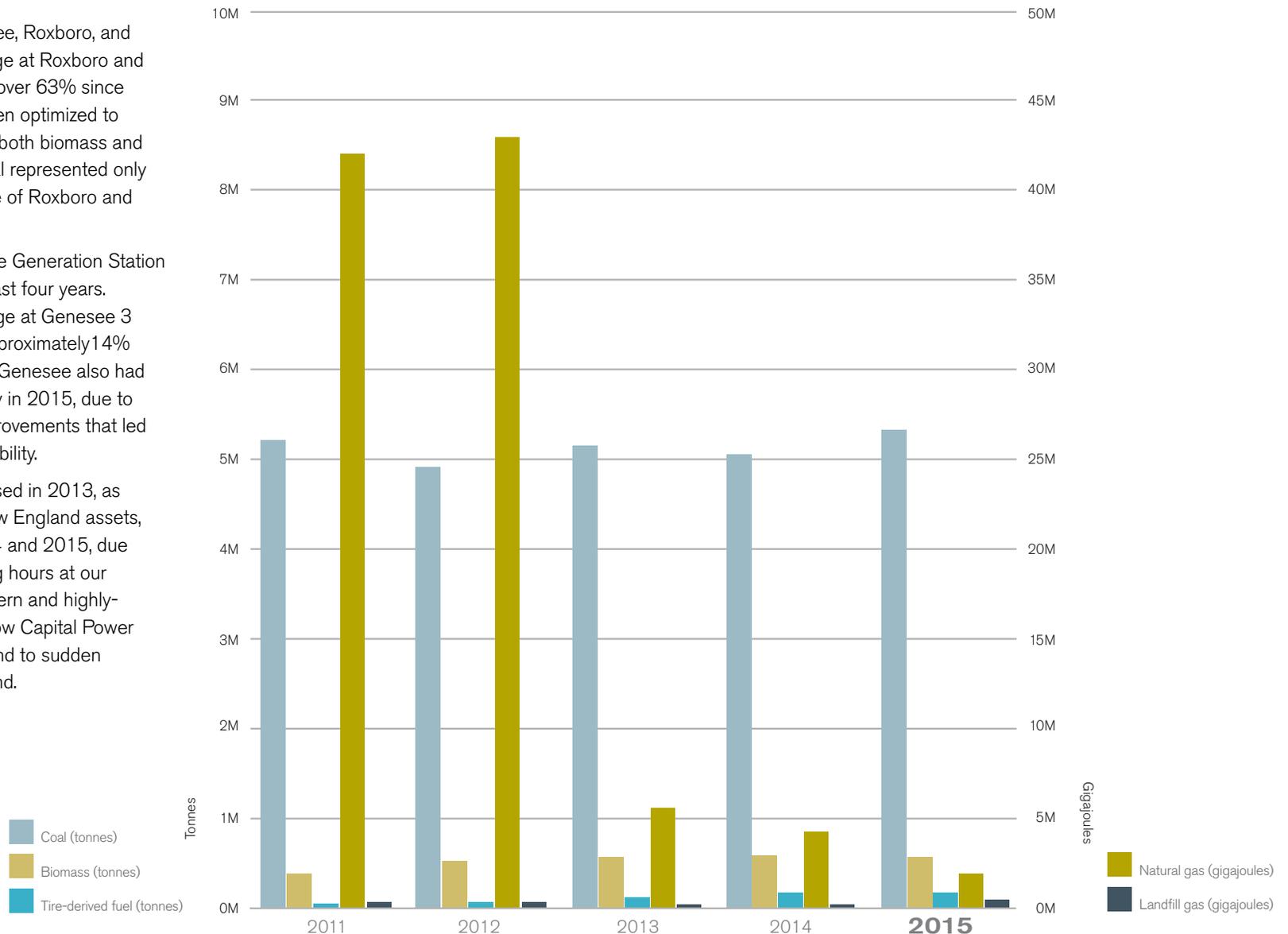
■ Coal is used at our Genesee, Roxboro, and Southport facilities. Coal usage at Roxboro and Southport has decreased by over 63% since 2011, as the fuel mix has been optimized to increase the consumption of both biomass and tire-derived fuel. In 2015, coal represented only 6% of the overall fuel mixture of Roxboro and Southport.

■ Coal usage at our Genesee Generation Station has varied slightly over the past four years. This is largely due to an outage at Genesee 3 in 2014, which resulted in approximately 14% less generation for that year. Genesee also had higher overall plant availability in 2015, due to continuous maintenance improvements that led to greater efficiency and reliability.

■ Natural gas usage decreased in 2013, as a result of the sale of the New England assets, and decreased again in 2014 and 2015, due to less demand and operating hours at our peaking facilities. These modern and highly-efficient peaking facilities allow Capital Power the flexibility to quickly respond to sudden changes in supply and demand.

Different units of measurement are used for different materials. Gas is measured in gigajoules and others in tonnes.

- 1 Refer to the left side of graph for measurement in tonnes.
- 2 Refer to the right-side of the graph for measurement in gigajoules.



# ENERGY PRODUCTION / CONTINUED

## Net Generation by Energy Source (%)

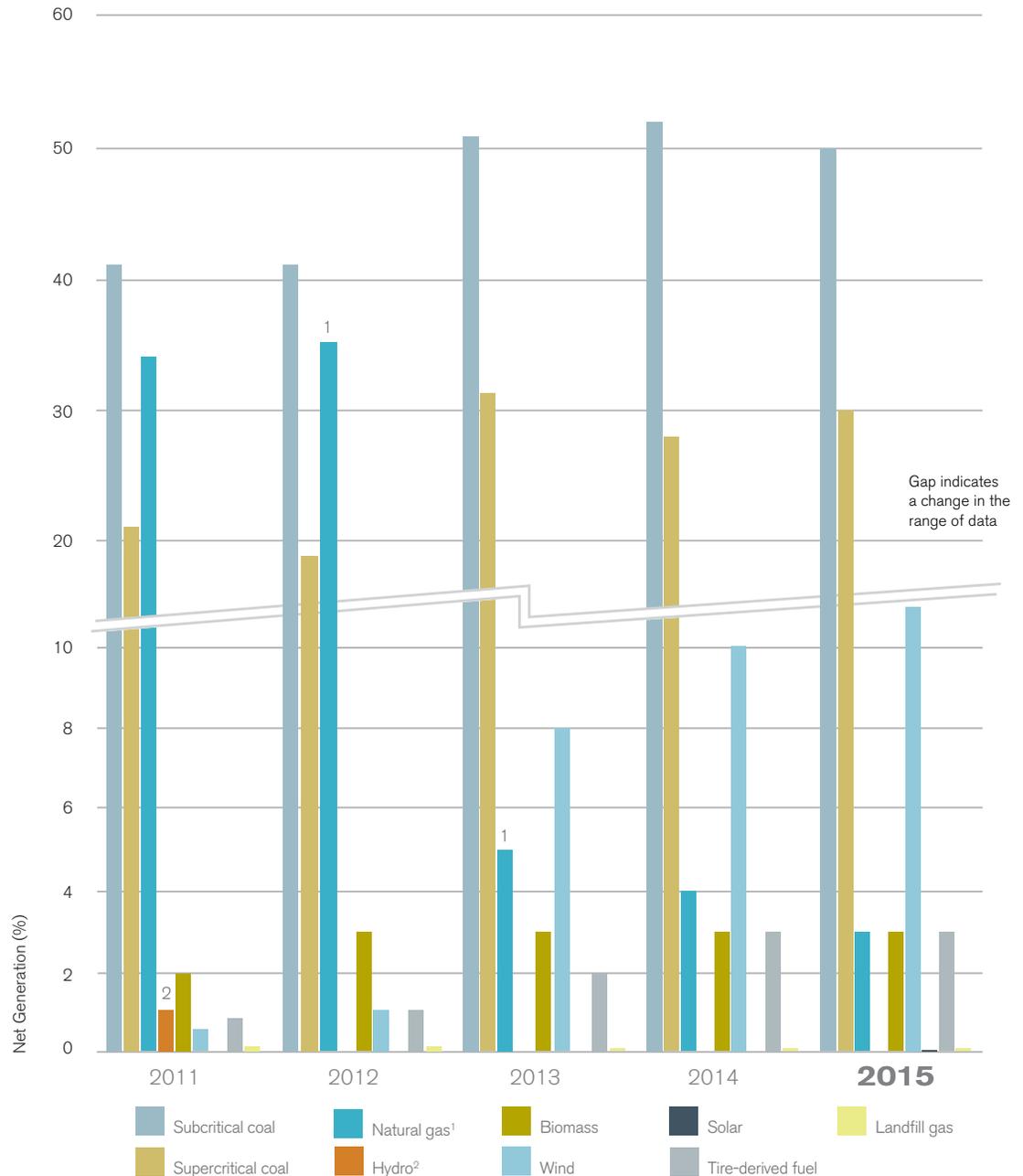
- In 2015, relative percentages for coal and natural gas remained similar to 2014.
- In Dec. 2015, Capital Power completed the construction of Beaufort Solar, a 15-MW solar facility in North Carolina. Solar production was recorded for the last week in 2015.
- Coal handling optimizations and other efficiency upgrades occurred at the Genesee Generating Station over the past several years.
- The use of biomass and tire-derived fuel has increased over the past four years. Our Roxboro and Southport facilities optimized their fuel mix for increased consumption of biomass and tire-derived fuel and decreased their consumption of coal.
- For information on the production capacity, energy source, location, and ownership interests for Capital Power's 18 facilities, see the tables provided in [Capital Power's 2015 Annual Information Form](#), and the [2015 Annual Report](#).



Production (MWh) includes both electricity and exported steam. Steam production was converted from GJ to MWh using a conversion factor of 3.6 GJ/MWh to allow aggregation. Production statistics differ from other published statistics due to differences in reporting scope.

1 Electricity generated from natural gas in 2013 decreased from 2012 due to the sale of our New England facilities in Nov. 2013.

2 We no longer generate electricity from hydro since the sale of our two hydroelectric facilities in 2012.



# ENERGY PRODUCTION / CONTINUED

## THERMAL EFFICIENCY

 **34%**  
Genesee 1 & 2  
(subcritical coal)

 **37%**  
Genesee 3  
(supercritical coal)

 **46%**  
Island Generation  
(combined-cycle  
natural gas)

 **36%**  
Clover Bar Energy  
Centre (simple-cycle  
natural gas)



Island Generation

## Thermal efficiency from fossil-fuel facilities

Measuring the thermal efficiency of a power plant provides a way to benchmark against other power plants.

Thermal efficiency compares how much energy an operator gets out of a plant versus how much energy was put in. The Clover Bar Energy Centre is a peaking facility, which means it has frequent startups and shutdowns and this leads to lower efficiency.



**POWER FORWARD >**  
TAKING ACTION  
ON CLIMATE CHANGE

## ENVIRONMENTAL RESPONSIBILITY AT-A-GLANCE

We are building power generation with energy-efficient technology and lower-carbon fuel sources.



K2 Wind

### KEY FACTS



Continued to own the **most efficient**, lowest-emitting, youngest, and most-reliable generation fleet in Alberta.



Worked with the Alberta Government to initiate meaningful action on the **Alberta Climate Leadership Plan**.



**Zero fines**

for environmental non-compliance in 2015.



Increased production from our renewable energy portfolio from **4%** in 2011 to **17%** in 2015.



Invested nearly **\$10 million** in Alberta-based offset projects that reduce local greenhouse gas emissions. In 2015, we held one of the largest inventories of Alberta offsets.

# ENVIRONMENTAL PERFORMANCE

As an independent power producer, Capital Power is focused on constructing, operating, and maintaining power generation and related facilities. This set of activities can present significant risk to the environment if not properly managed. As responsible stewards, we consistently operate with a philosophy that environmental compliance must be managed and that unplanned emissions and releases are preventable. Maintaining our environmentally-responsible culture is a key corporate goal.

We believe it is our duty as a corporation to comply with the laws, regulations, and guidelines set out for us and, by doing so, help achieve national, provincial, and state environmental objectives.

We take environmental action by meeting all requirements established by our regulators (see page 36, Precautionary Principle), and are building power generation with less carbon-intensive fuels.

## TO ACHIEVE THIS, CAPITAL POWER:

- expanded our renewable energy portfolio from 4% in 2011 to 17% in 2015 (by % net generation in MWh).
- invested over \$1.4 billion in renewable energy since 2012.
- added five new wind facilities and a solar facility to our fleet and acquired over the past four years a suite of renewable development sites located in the United States.
- continued to use the best-available practical technology to reduce emissions and impact on the environment.
- continued to run an award-winning land reclamation program.
- operated our facilities safely, efficiently, and with reliable maintenance practices.

Our operations are complex and heavily regulated with environmental compliance obligations associated with four key environmental impact areas: Air, Water, Land, and Waste.

Fully commercialized our first solar facility with the opening of Beaufort Solar, adding 15-MW of renewable capacity in North Carolina, U.S.

- In a commitment to lowering emissions, we invested in building Genesee 3 and Keephills 3 with TransAlta. The two modern facilities, located west of Edmonton are the cleanest coal-fired plants ever built in Canada and among the most advanced facilities of their kind in North America. They both utilize supercritical boiler technology, which allows for greater fuel efficiency and significantly lower emissions than traditional coal-fired plants.
- We have also offset CO<sub>2</sub> emissions from these units to the level of a modern natural gas combined-cycle plant since their inceptions, and equipped them with advanced technology that substantially reduces SO<sub>2</sub> and NO<sub>x</sub> emissions. The facilities also feature a mercury emission control system, using activated carbon injection technology and a high efficiency particulate collection system, using fabric filters (baghouse) to reduce particulate emissions.

# ENVIRONMENTAL MANAGEMENT



Through our Enterprise Risk Management (ERM) Program, we identify, evaluate, report and monitor key environmental risks (see *2015 Annual Report*). This Program aligns with the International Organization for Standardization's (ISO) standard for risk management, ISO 31000, and provides us with a globally-recognized framework to manage and report on environmental issues.



## Managing Environmental Risk

In our business, we consider environmental risk from many perspectives:

- Political
- Legislative and regulatory implications
- Technological
- Physical dimensions—such as impacts from weather
- The potential for environmental matters to give rise to litigation or changes in reputation

WE ALSO FOLLOW BEST PRACTICES SUCH AS:

- complying with all applicable laws, regulations, and guidelines, and monitoring performance by undertaking environmental compliance audits with corrective actions as necessary.
- consulting with all levels of government regarding policy development and current and potential legislation.
- proactively identifying environmental risks within operations, maintenance, and construction activities and promoting awareness of these risks and mitigation measures throughout the company.
- ensuring that employees and contractors align with our environmental policies and procedures.

# ENVIRONMENTAL COMPLIANCE

We are proud of our environmental performance and our transparency in reporting on our operations. In 2015, we achieved our best environmental performance record to date, with a 25% reduction of reportable environmental incidents as compared to 2014.

For the past three years, we had no fines for environmental non-compliance, compared with one in 2012. In 2015, we recorded three environmental incidents—a reduction of 93% from the 41 incidents reported in 2011. All three incidents were minor in nature, were reported to the regulators, and were closed with no further action required.

We attribute 2015 performance to the strong emphasis that our environmental management systems place on continuous improvement and learning from past incidents. Established in 2013, we use indicators to monitor the effectiveness of our management systems. Targets are set for improved performance, which are tied to employee performance incentives. Prompt and transparent reporting of all incidents (including to our Health, Safety and Environment Committee of our Board of Directors), regardless of their magnitude, has heightened employee awareness of issues, which is driving performance and environmental responsibility in our workplace.

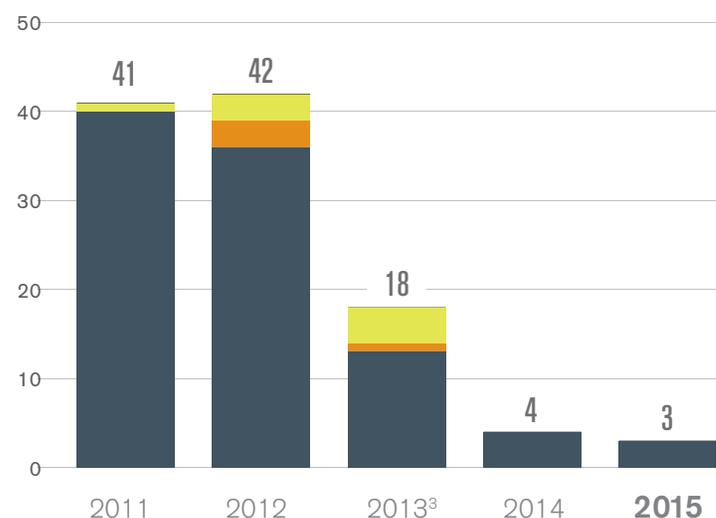
## OZONE-DEPLETING SUBSTANCES

A minor leak at our Clover Bar Landfill Gas facility in 2015 released approximately 20kg (equivalent to 36 tonnes of CO<sub>2</sub>e) of the refrigerant R22, due to a ruptured hose. The refrigerant is used in the gas dryer at this facility. The hose was replaced and, as a preventative step, other similar hoses on equipment of the same age and service were replaced. The incident was reported to the regulator and closed with no further action required.

## HAZARDOUS WASTE

We do not generate hazardous waste and use contracted waste distributors to remove hazardous recyclables, such as oil, from Capital Power sites.

## Reportable Environmental Incidents



- Regulatory Infraction<sup>1</sup>
- Public Complaint<sup>2</sup>
- Spill to land or water
- Fish and Wildlife Infraction

- <sup>1</sup> Regulatory Infraction: A Regulatory Infraction is defined as an incident which contravenes a regulation or other applicable law, a site permit/license (e.g., wastewater permit), or site operating approval. Regulatory Infractions also encompass administrative incidents such as late report submissions, lapsed certifications, or failure to report.
- <sup>2</sup> Public Complaints: These incidents are defined as public complaints, which can be verified as being attributable to Capital Power operations. A public complaint made to the facility is classified as a minor public complaint. Multiple public complaints made to the facility or a public complaint made to a regulator is a recordable incident.
- <sup>3</sup> Five incidents occurred at the New England facilities in 2013. Due to the divestiture of the New England facilities, these five incidents were removed from the incident total.

# CLIMATE CHANGE LEADERSHIP IN ALBERTA



Alberta Environment and Parks Minister, Shannon Phillips, and Capital Power President and CEO, Brian Vaasjo, deliver remarks at a news conference announcing changes to Alberta's greenhouse gas reduction program and a consultation process for a Climate Change Strategy in which Capital Power was an active participant.  
Photo Credit: Government of Alberta

As a company, we believe it is our role to engage on climate policy in the areas where we operate.

It was a milestone year for climate change policy development in Alberta, and Capital Power took a leadership role by:

- supporting immediate government action that increased the carbon price and emissions reductions required for large emitters.
- engaging in the Government of Alberta's comprehensive climate change policy consultations.
- advocating for policy proposals that would have seen Alberta's electricity sector reach Canada's 2030 emissions target six years early, in 2024.
- advancing new investments in cleaner sources of power generation.
- supporting successful implementation of Alberta's Climate Leadership Plan that launched in Nov. 2015.

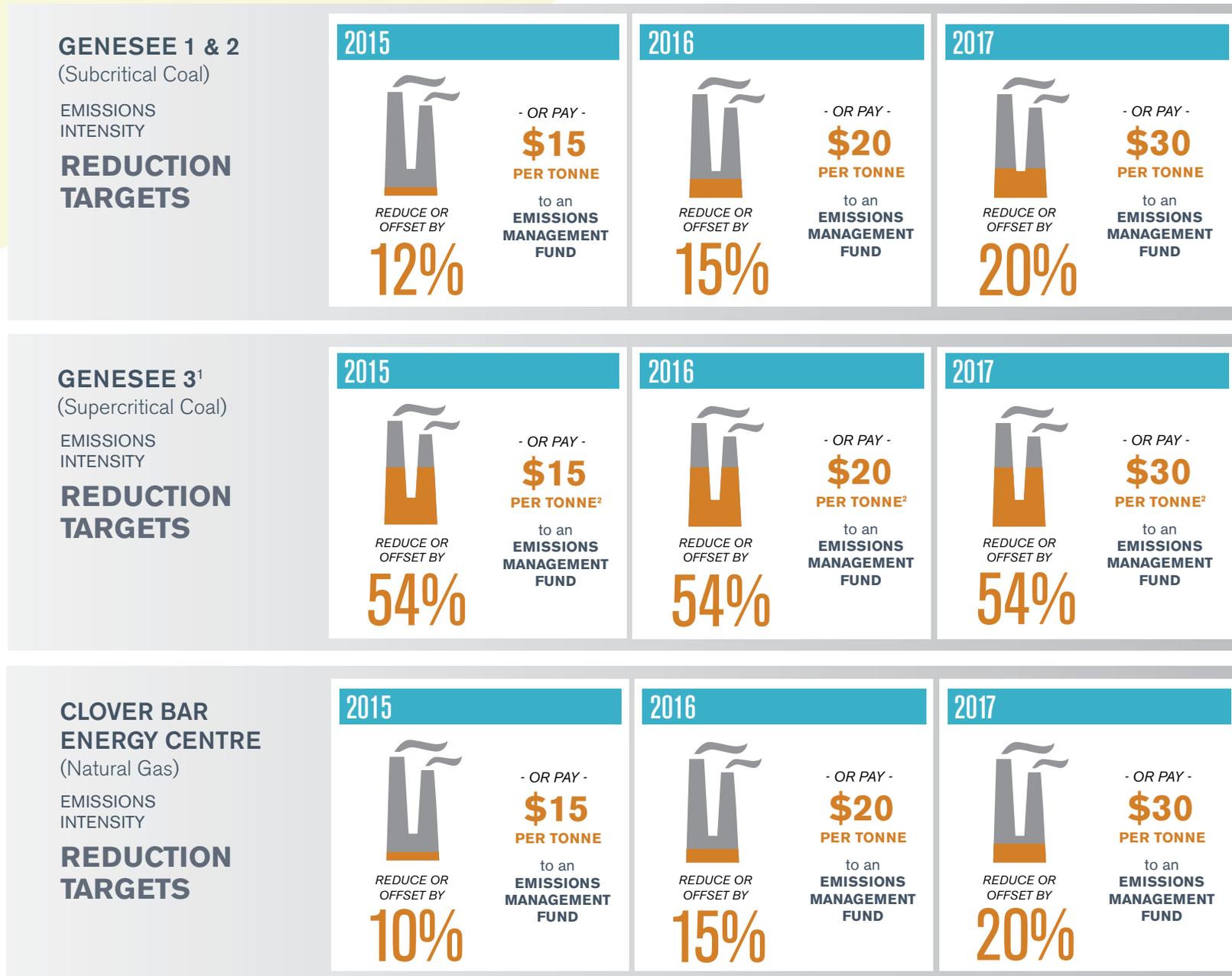
## Supporting immediate action

As a company, we believe it is our role to engage on climate policy in the areas where we operate. On June 25, 2015, Capital Power joined the Government of Alberta in support of additional action to reduce Alberta's greenhouse gas (GHG) emissions. The announcement included an increase in the price and stringency levels of the Specified Gas Emitters Regulations (SGER) and the beginning of a formal consultation process leading to a provincial Climate Change Strategy. Increasing the SGER program's cost and stringency will accelerate the transition to cleaner electricity sources, including renewables, and will ensure the continued delivery of reliable, affordable power to Alberta homes and businesses.

As a result of these changes, Capital Power has increasingly stringent greenhouse gas reduction targets to meet at our Alberta facilities.

# CLIMATE CHANGE LEADERSHIP IN ALBERTA / CONTINUED

## Capital Power's Alberta **Near-Term Greenhouse Gas Reduction Targets: 2015–2017**



1 From 2015 – 2017, Genesee 3 is required to meet two emission reduction targets. In aggregate, the two targets require Genesee 3 emissions to be reduced or offset 54% from the facility's original baseline emissions intensity. The Specified Gas Emitters Regulation requires 12%, 15% and 20% reductions from 2015 – 2017. These reductions must be achieved through improved facility performance, the retirement of qualifying Alberta-based offsets, the application of emission performance credits, and/or payment to an emissions management fund. The Genesee 3 facility license also requires that any remaining emissions be offset to the level of a combined cycle natural gas unit.

2 Payment to an emissions management fund is only available as a compliance option for the portion of the reduction required by the Specified Gas Emitters Regulation (reductions of 12%, 15% and 20% from 2015 – 2017). The remaining reduction requirement must be met through either improved facility performance or the retirement of qualifying offsets.

■ In 2015, 17% of Capital Power's generation was from renewables, including biomass at our North Carolina facilities. Biomass may play a growing role in Alberta's future generation mix.



# CLIMATE CHANGE LEADERSHIP IN ALBERTA / CONTINUED

## Provincial climate policy consultations

Capital Power was an active contributor in the Government of Alberta's Climate Change consultations and participated in numerous meetings and discussions with the Climate Change Advisory Panel. Capital Power leaders were co-conveners of the electricity industry technical sessions, participants in an executive roundtable organized by Corporate Knights, and participants in formal and information meetings with the Panel and government policymakers.

## Climate policy leadership

Throughout the process, Capital Power advocated for policies that would immediately, substantially, and permanently reduce electricity-sector greenhouse gas emissions while leveraging Alberta's competitive electricity market structure to minimize consumer price impacts and maintain reliability.

Capital Power submitted a formal policy proposal to the process: the Alberta Long Term Energy Shift, a market-based, ready-to-implement plan for achieving Alberta's climate change goals, to the Government of Alberta. It was among the most comprehensive of the approximately 500 submissions received by the Panel.

Capital Power's recommendations included an accelerated closure of Alberta's coal-fired power plants, with reasonable compensation to investors.

Greenhouse gas emissions from electricity would have dropped 17% in 2017, and Alberta's electricity sector would have reached Canada's 2030 target six years earlier, in 2024. Deeper cuts would have reduced electricity sector emissions: 44% by 2030 and 65% by 2040.

The proposal also included a transitional renewable approach tied to coal plant retirements that would have seen Alberta's supply of renewable power more than double, with another 1,500-MW of renewable power added to the grid over the next 10 years, and 2,900-MW added by 2030. The plan proposed market-based policies to accelerate the competitiveness of renewables with minimal market disruption.



Genesee Generating Station

# CLIMATE CHANGE LEADERSHIP IN ALBERTA / CONTINUED

## Alberta Climate Leadership Plan

On Nov. 22, 2015 the government announced its Alberta Climate Leadership Plan (ACLPL). In the electricity sector, Capital Power's proposed plan would have achieved greater cumulative greenhouse gas reductions than the ACLPL and greater immediate and pre-2030 emissions reductions. However, the ACLPL is more aggressive on the phase-out of coal-fired power generation than Capital Power's proposal and requires zero emissions from coal-fired generation by 2030.

In addition, the ACLPL includes a performance standard-based carbon tax on electricity production and a competitive process for the procurement of renewable power generation between now and 2030. Many of the Panel's recommendations and government policies on renewable procurement incorporated approaches that were consistent with Capital Power's policy recommendations.

Capital Power is well positioned to supply both new merchant natural gas generation and renewables in the Alberta market.

## Medium-term climate change targets

Capital Power continues to work with the Government's independent facilitator to ensure fair compensation is received for the accelerated closure of our coal-fired generating units. The company is also engaged with the Alberta Electric System Operator on the development of a renewable electricity incentive program to add additional renewable generation capacity by 2030 in concert with the retirement of current coal generating units, and is involved in consultations on the design of the Carbon Competitiveness Regulation.

Capital Power is well positioned to supply both new merchant natural gas generation and renewables in the Alberta market. Near-term opportunities include the Genesee 4 and 5 project, a fully-permitted, combined-cycle natural gas generation facility proposed to be developed through a joint venture with ENMAX. Capital Power has also applied to connect a proposed 150-MW wind farm to the grid near our existing Halkirk Wind facility.

We are also adapting our medium- and long-term corporate strategies to achieve our new greenhouse gas reduction targets for 2018 to 2030, and we will continue to pursue the development of new renewable power facilities both in Alberta, under the ACLPL, and across North America.



## DEVELOPING RENEWABLE ENERGY

We are transitioning to a low-carbon future by investing in renewable energy sources such as wind and solar. To reduce our environmental footprint, we are focused on developing power generation with renewable sources of energy as one way to reduce and proactively manage emissions.



K2 Wind

HIGHLIGHTS OF OUR CURRENT PRACTICES IN THIS AREA INCLUDE:

- 17% of Capital Power's generation was from renewables (wind, biomass, tire-derived fuel, and landfill gas).
- since 2012, Capital Power has added investments in renewable energy totaling more than \$1.4 billion.
- over the past four years, have added five new wind facilities and a solar facility to our fleet and acquired a suite of renewable development sites located in the United States.
- our facilities in Southport and Roxboro, North Carolina, have Renewable Energy Certificates. Both facilities blend a fuel made from recycled tires, biomass (wood waste), and coal.
- since 2011, the combined use of coal (in GJ) at our Southport and Roxboro facilities decreased by over 63%. In 2015, coal represented only 6% of the overall fuel mixture of these facilities.

In 2016, we will continue to work on development sites in North America, where we are expecting future competitive processes for new wind, solar, and peaking facilities.

# REDUCING AND OFFSETTING GREENHOUSE GAS EMISSIONS

Capital Power is an industry leader in the carbon offsets market. In 2015, Capital Power held one of the largest inventories of Alberta offsets. In the past decade, we have invested more than \$100 million in permanent offsets, which are registered, audited and verified by independent third-parties. Our existing inventory of offsets and forward purchase contracts are expected to be sufficient to satisfy the increased compliance obligation that resulted from the Alberta government's changes to the Specified Gas Emitters Regulations (SGER) that took effect at the start of 2016.

We have a significant inventory of low-cost carbon credits that have been developed over the past eight years and which are expected to offset the balance of the company's compliance costs through 2020.

## HOW WE REDUCED AND OFFSET GREENHOUSE GAS (GHG) EMISSIONS IN 2015:

- Invested nearly \$10 million in Alberta-based offset projects that reduce local GHG emissions.
- Actively invested in Alberta-based SGER eligible GHG offsets, while paying into the Technology Fund at \$15 for the 2015 compliance obligation.
- Retired 2,148 tonnes of Canadian renewable energy credits from green energy facilities to offset the 2015 power consumption of our Edmonton and Calgary offices. 611 tonnes of Canadian-based offsets were also retired against the 2015 natural gas consumption of these offices for a total of approximately 2,373 metric tonnes of CO<sub>2</sub>e.
- Invested in a broad portfolio of carbon offset projects, including biofuel production, wind generation, N<sub>2</sub>O abatement, acid gas injection, landfill gas, agricultural nitrous oxide emissions reduction, and conservation cropping to meet current and future requirements.

Since 2007, Capital Power has registered nearly 10 million tonnes of carbon offsets for the Alberta market.

## Partnering on Research

To lay the groundwork for a medium- and long-term transition to lower-emission and zero-emission technologies, we also pursue scientific and engineering research. Capital Power supports university scientists and engineers in both basic and applied research, including a partnership in the University of Alberta's Canadian Centre for Clean Coal/Carbon and Mineral Processing Technologies. In 2015, Capital Power also contributed to a University of Alberta computational study on the co-firing of biomass with coal in an industrial-scale furnace used for power generation.

In 2016, Capital Power intends to offset the 2015 power and natural gas consumption of our Alberta offices, once the volumes required have been finalized.

# AIR EMISSIONS

## Greenhouse Gas Emissions

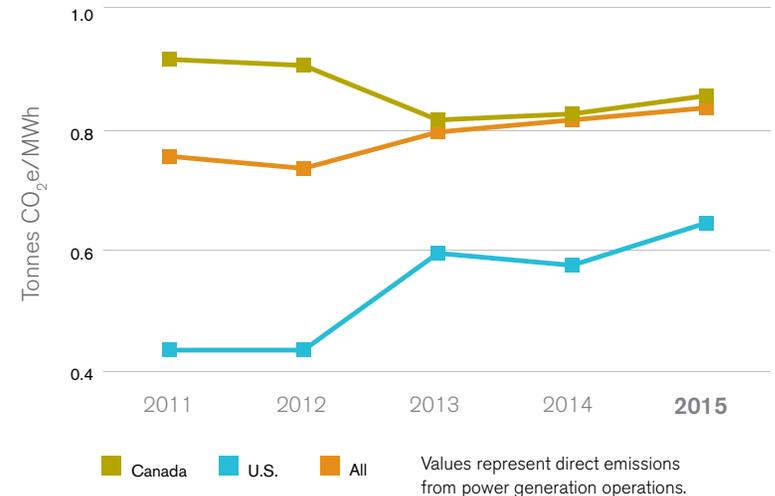
Across our North American operations, GHG emissions were 10.8 million tonnes carbon dioxide equivalent (tCO<sub>2</sub>e) in 2015, compared to 9.86 million tCO<sub>2</sub>e in 2014.

Year-over-year changes in GHG emissions, emission intensity, and offsets are generally caused by:

- changes in power production volume.
- the introduction of new technologies that increase efficiency or decrease emissions.
- changes in emission reduction or offset requirements.
- greater investments in renewable facilities, which decrease emission intensity overall.

- Since 2011, our overall emissions decreased by just under 9%. In 2015, we had higher overall emissions intensity as a result of increased generation at our coal facilities.
- Our U.S. emission intensity increased in 2013, as a result of the sale of the New England natural gas facilities. Variability in production, fuel mix, and coal is attributable to year-over-year emission and intensity fluctuations.
- Since 2011, our Canadian emission intensity decreased by almost 7%.

## EMISSIONS INTENSITIES<sup>1</sup>—GREENHOUSE GAS<sup>2,3</sup> EMISSIONS BY COUNTRY



1 Emissions intensities include only power generation operations. Emissions intensities do not include emissions from indirect sources, such as those resulting from electricity usage at our offices. Intensity is calculated using the net production (MWh) from all Capital Power facilities, including all renewable and fossil fuel facilities.

2 In accordance with the Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard [World Resources Institute and World Business Council for Sustainable Development (2004)], carbon dioxide released at facilities from combustion of biomass and landfill gas are not included in emissions totals and intensities.

3 GHG emissions intensities are stack emissions only, and do not reflect the impact of offsets.

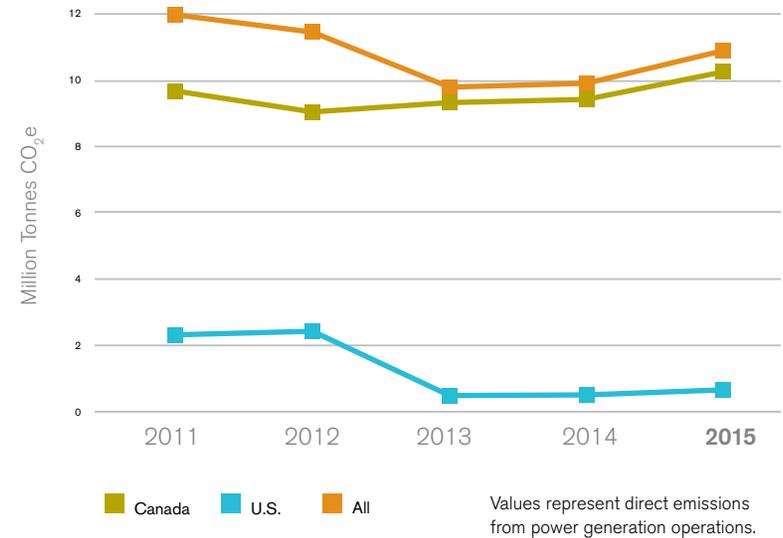
# AIR EMISSIONS / CONTINUED

Since 2011, our overall GHG emissions have decreased by just under 9%.



Genesee Generating Station

## TOTAL AIR EMISSIONS—GREENHOUSE GAS EMISSIONS BY COUNTRY

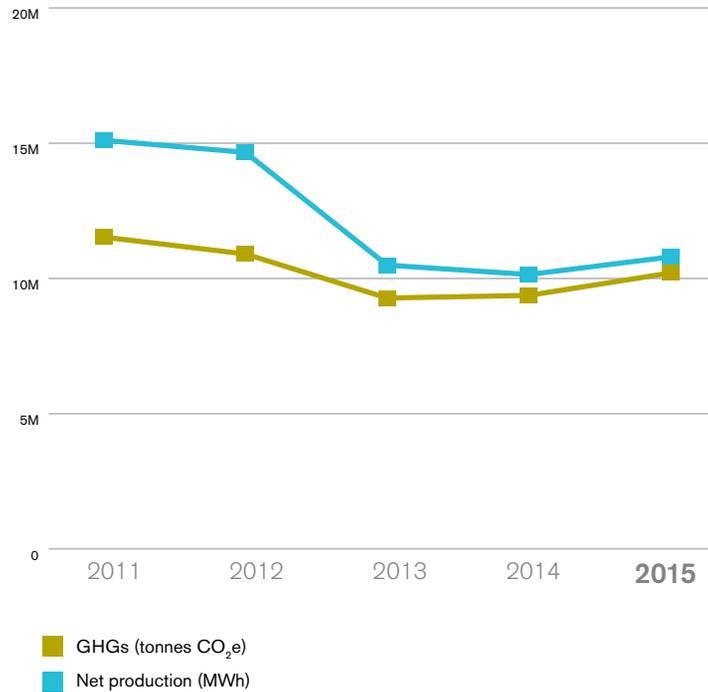


■ In 2015, our Canadian emissions intensity increased as a result of an outage at Genesee 3 in 2014, which resulted in approximately 14% less generation for that year and lower emissions. Genesee also had higher production and overall plant availability in 2015, due to efficiency and reliability continuous improvements, which increased overall emissions.

■ Since 2011, the combined use of coal (in GJ) at our North Carolina facilities has decreased by over 63%. In 2015, coal represented only 6% of the overall fuel mixture of these facilities.

# AIR EMISSIONS / CONTINUED

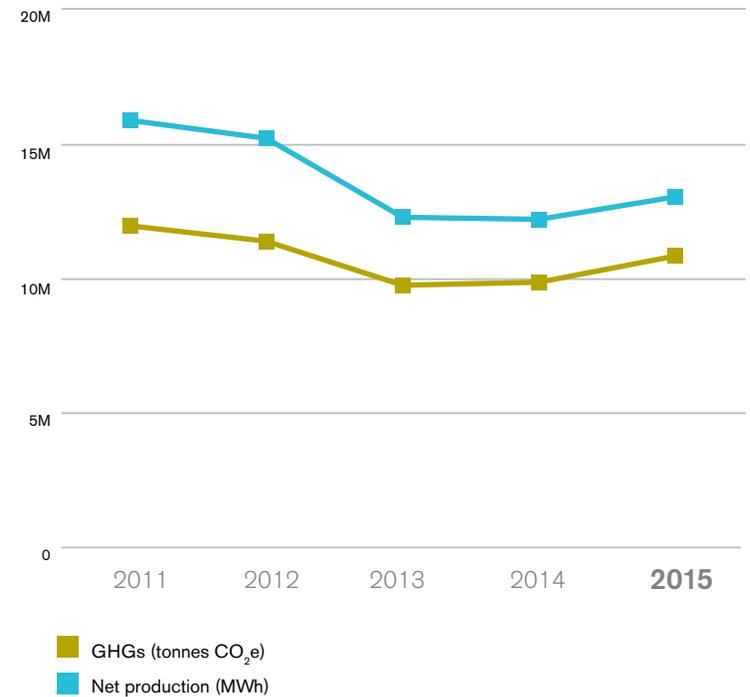
### GHGS AND NET PRODUCTION FROM FOSSIL FUEL FACILITIES



The above graph only includes the emissions and net production from Capital Power's fossil fuel facilities.

■ Since 2011, GHG emissions from fossil fuel facilities decreased by just under 12%.

### GHGS AND NET PRODUCTION FROM CANADIAN AND U.S. POWER GENERATION FACILITIES



■ Since 2011, our overall emissions decreased by just under 9%.

## Other Air Emissions

The fuel mix of our power generation facilities includes coal, solid fuel (tire-derived fuel and biomass), natural gas, wind, and solar. Coal and solid-fuel generation creates higher and more types of emissions than natural gas, whereas wind and solar have zero emissions. The most obvious determinant of emissions is the generation output, or how many hours per year our facilities operate.

The relative size of each generation facility makes it challenging to compare facilities across the fleet. Specifically, Genesee dominates both generation output and emissions.

We meet, or are better, than regulatory requirements in all jurisdictions, and all our air emissions that are part of any approval or permit are available publicly.

### EMISSIONS SUMMARY:

- In 2015, 80% of our net generation came from coal, 3% came from natural gas and 17% resulted from renewables (wind, solar, biomass, tire-derived fuel, and landfill gas).
- The combustion of any fuel emits GHGs and oxides of nitrogen (NO<sub>x</sub>).
- The combustion of coal, biomass, or tire-derived fuel (TDF) releases sulphur dioxide (SO<sub>2</sub>), metals and other compounds to the atmosphere.

### MERCURY EMISSIONS DECREASED

- In 2015, Genesee Generating Satation 1, 2 and 3 passed the five-year milestone operating with the Activated Carbon Injection (ACI) system, which is used to lower mercury concentration in flue-gas emissions.
- In 2015, Genesee 1 and 2 had a capture rate of 81% and Genesee 3 had a capture rate of 88%, which was better than the 2015 target requirement of 80% capture.

- Capital Power and the Mercury Deposition Network (MDN) of North America have established one of only two mercury wet deposition monitors at the Genesee Air Monitoring Station (AMS) in Alberta. Monitoring of wet deposition at this station has been ongoing since 2004.

- Monthly median mercury concentration in precipitation and wet deposition rates at Genesee AMS showed a decreasing trend in concentration and mercury wet deposition, respectively.

### OXIDES OF NITROGEN, SULPHUR DIOXIDE AND PARTICULATE MATTER

- Genesee 1 and 2 facilities are Capital Power's main contributors of NO<sub>x</sub>, SO<sub>2</sub> and particulate matter emissions. Genesee 3, co-owned with TransAlta, has much lower NO<sub>x</sub> and SO<sub>2</sub> emissions due to the addition of pollution control equipment such as low NO<sub>x</sub> burners and flue-gas desulphurization.

- Genesee 3, as a transitional unit, was required to meet the *Clean Air Strategic Alliance* (CASA) NO<sub>x</sub> (0.69kg/MWh) and SO<sub>2</sub> (0.80 kg/MWh) standards for new thermal generation units by Dec. 31, 2015. Capital Power already met, and has been consistently better than, the NO<sub>x</sub> standard.

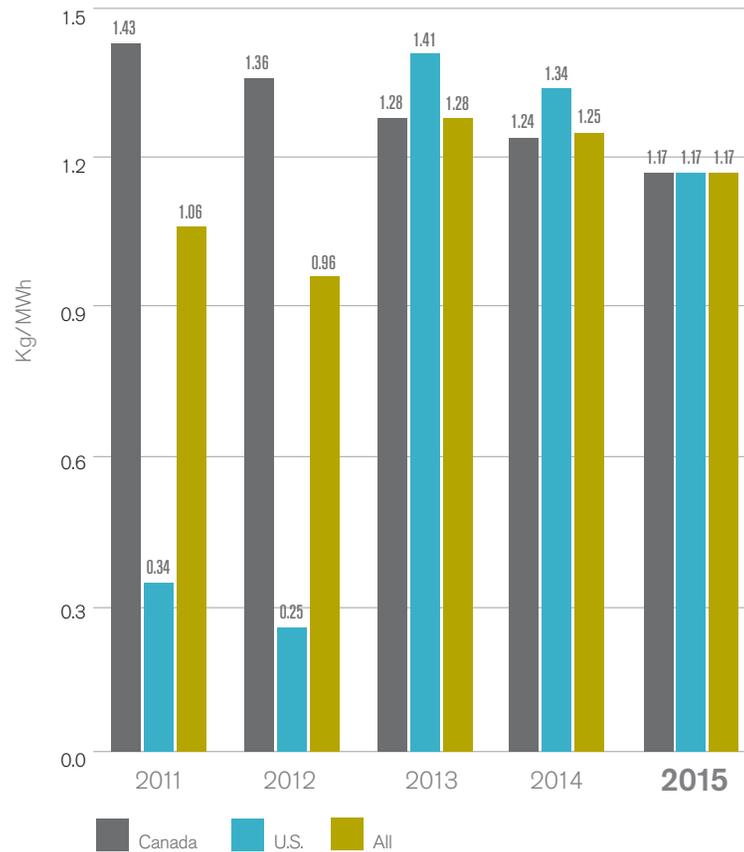
- In 2015, we installed and began operating a new Dry Sorbent Injection (DSI) system at Genesee 3. To enhance the capture rate of SO<sub>2</sub>, the DSI system injects hydrated lime into the flue gas stream. The system meets the requirements of the CASA. This innovative method of enhancing the capture rate of SO<sub>2</sub> has been proven to lower emissions, has a relatively low capital cost, and had a quick installation time.



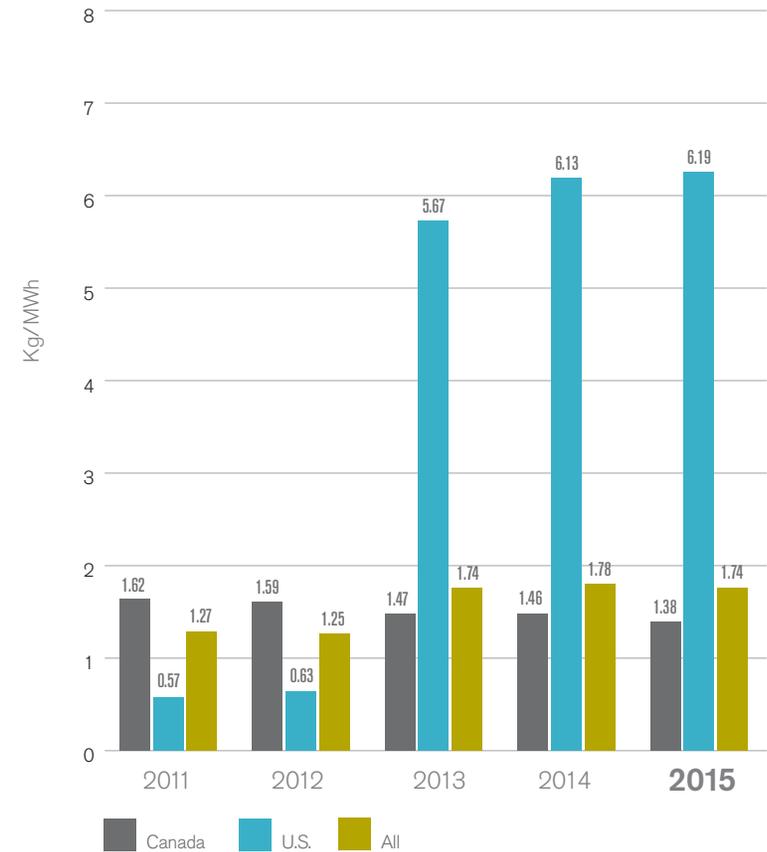
# AIR EMISSIONS / CONTINUED

## Emission Intensities<sup>1</sup>

### OXIDES OF NITROGEN



### SULFUR DIOXIDE

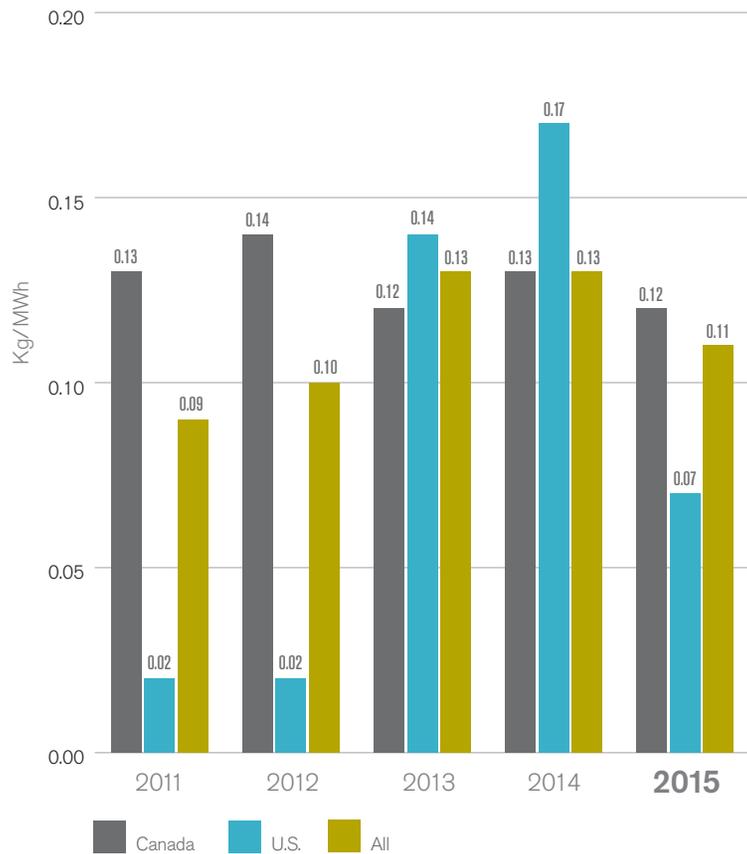


<sup>1</sup> Emissions intensities include only power generation operations. Emissions intensities do not include emissions from indirect sources, such as those resulting from electricity usage at our offices. Intensity is calculated using the net production (MWh) from all Capital Power facilities, including all renewable and fossil fuel facilities.

# AIR EMISSIONS / CONTINUED

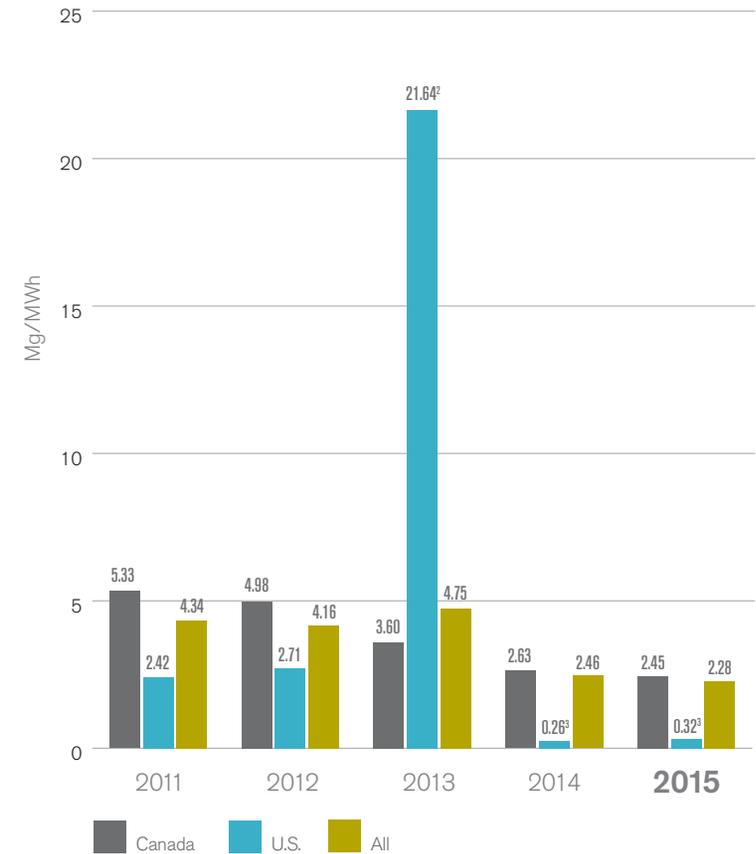
## Emission Intensities<sup>1</sup>

### TOTAL PARTICULATE MATTER



<sup>1</sup> Emissions intensities include only power generation operations. Emissions intensities do not include emissions from indirect sources, such as those resulting from electricity usage at our offices. Intensity is calculated using the net production (MWh) from all Capital Power facilities, including all renewable and fossil fuel facilities.

### MERCURY



<sup>2</sup> The sale of the New England natural-gas facilities in 2013, led to an increase in the U.S. specific emission intensity for mercury.

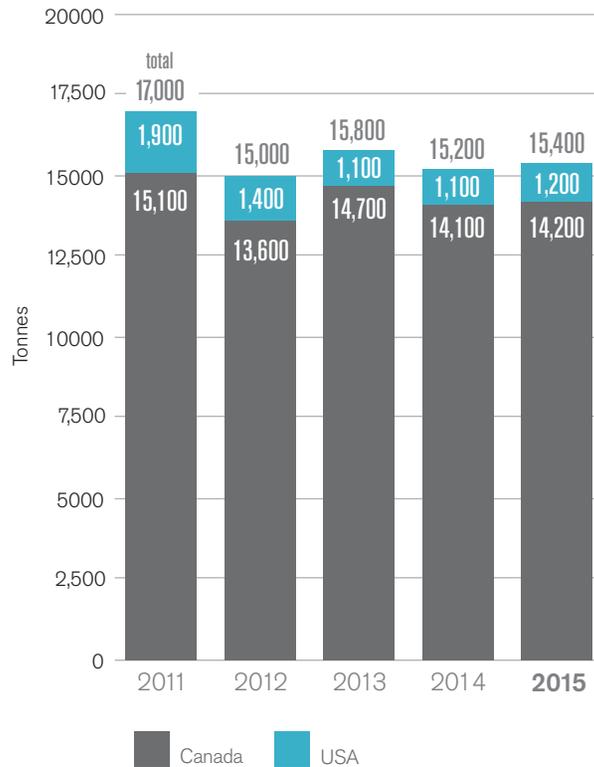
<sup>3</sup> U.S. mercury emissions decreased in 2014 and 2015 largely due to updated emission factors for our North Carolina facilities. Prior to this, the emission factors were over estimating mercury emissions.

Total Air Emissions<sup>1</sup>

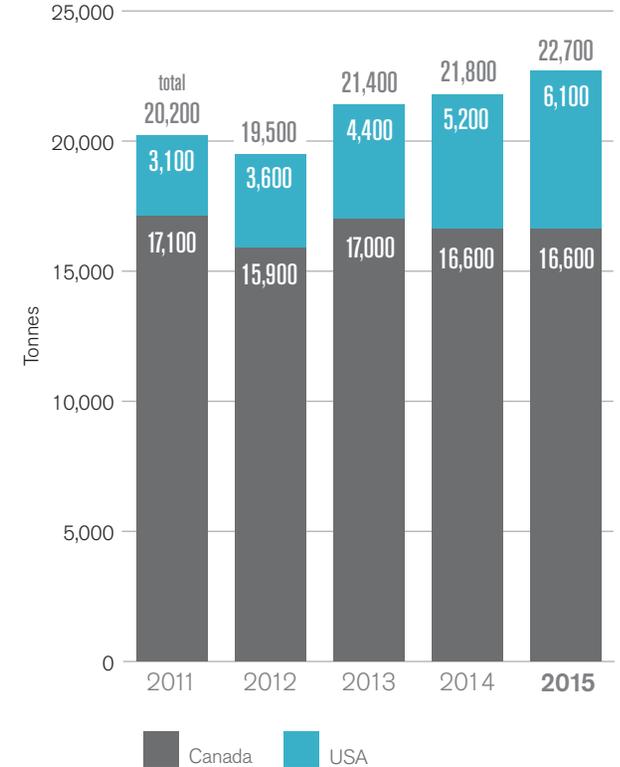
Year-over-year variance is primarily due to fuel mixture, the number of operating hours of each facility, acquisitions and developments, and the sale of our hydroelectric and the New England natural-gas facilities in 2012 and 2013, respectively.

Since 2011, the combined use of coal (in GJ) at our U.S. facilities has decreased by over 63%. In 2015, coal represented only 6% of the overall fuel mixture of these facilities. Tire-derived fuel consumption increased at Southport and Roxboro in 2015. Increased usage of tire-derived fuel displaced the burning of coal, which decreased U.S. particulate matter and increased SO<sub>2</sub> emissions.

OXIDES OF NITROGEN



SULFUR DIOXIDE

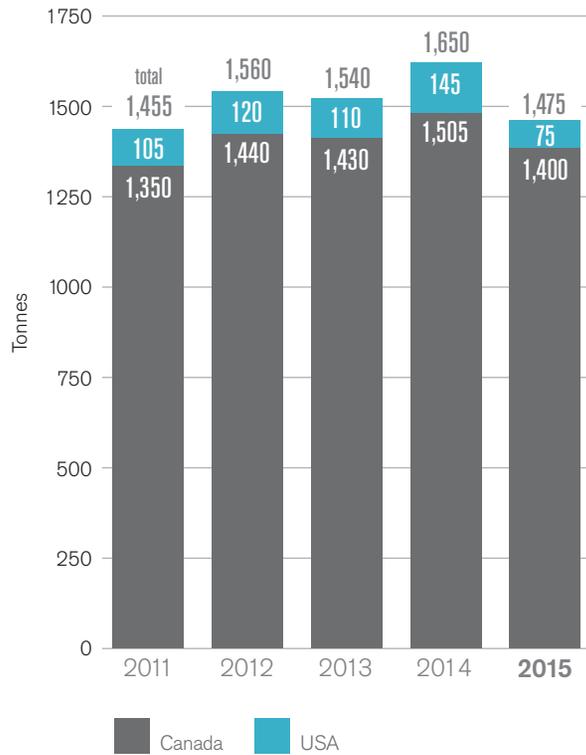


<sup>1</sup> Values represent direct emissions from power generation operations and all numbers are rounded to the nearest hundred.

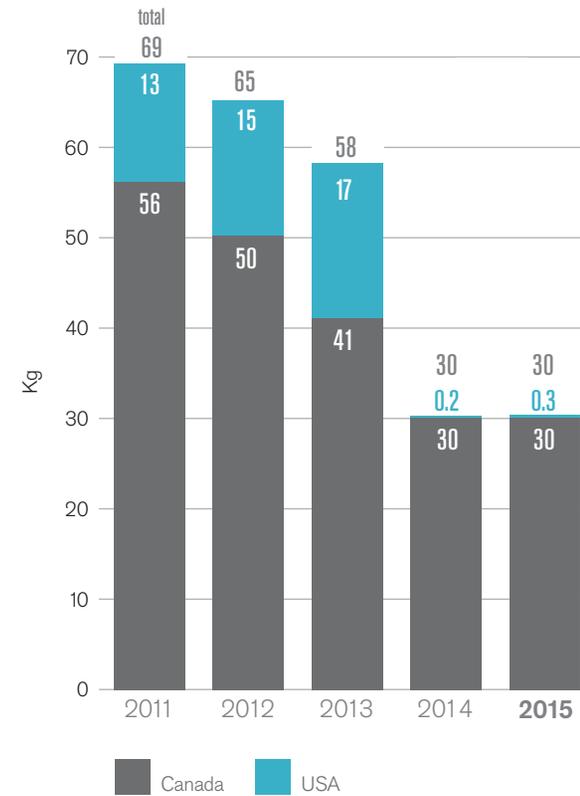
# AIR EMISSIONS / CONTINUED

## Total Air Emissions

### TOTAL PARTICULATE MATTER<sup>1</sup>



### MERCURY



<sup>1</sup> Values represent direct emissions from power generation operations and all numbers are rounded to the nearest five.

# RESPONSIBLE WATER USE

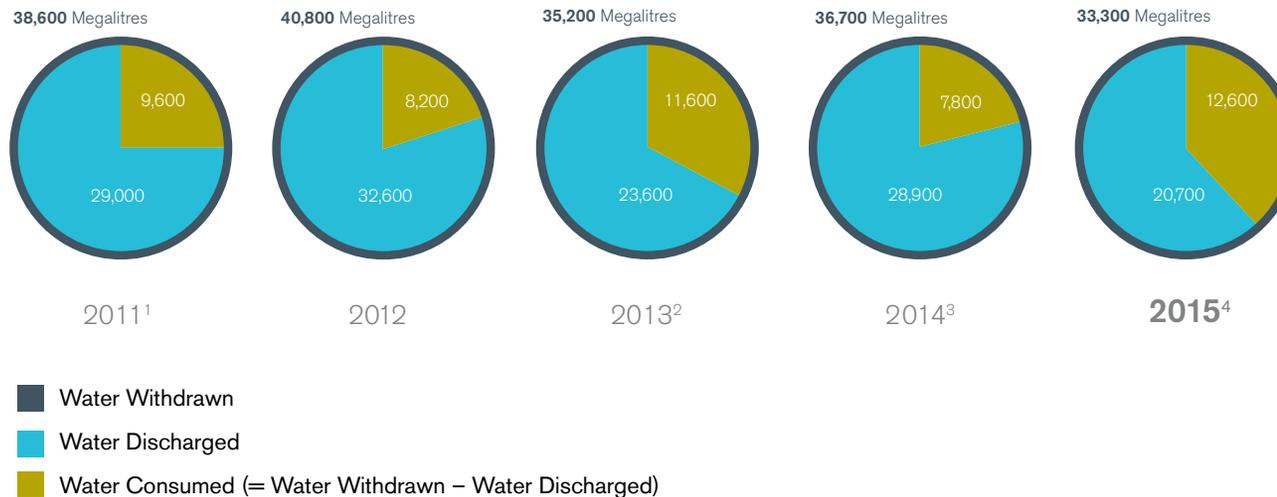
Water use at our generation facilities serves two major purposes: cooling and steam production. Steam is used to create electricity and is also used by industrial customers.

For the most part, our steam systems are close-looped, allowing us to conserve as much water as possible. This means water is heated into steam, condensed back into water, and reused. Cooling water systems are similar, yet may draw from an external water source and discharge back into that source where permitted.

The majority of Capital Power's water consumption originated from Alberta operations. Water sources include municipal, recycled and river water.

Between 2011 and 2014, water consumption decreased by just under 19%.

## APPROXIMATE WATER WITHDRAWALS AND DISCHARGES (MEGALITRES)



1. 2011 water withdrawal and discharge statistics do not include water displaced by hydroelectric facilities. As of Dec. 31, 2012, Capital Power did not own or operate any hydroelectric facilities.
2. In 2013, the water supply at the Genesee pumphouse located near the North Saskatchewan River was compromised as a result of flooding; water was retained in the cooling pond, which decreased the overall water discharged (to the North Saskatchewan River) and increased the overall water consumption.
3. 2014 performance returned to 2011 and 2012 levels, with the exception of a decrease in withdrawals due to the sale of the New England natural gas assets in Nov. 2013.
4. Discharge at Genesee was limited in 2015, which resulted in increased overall consumption for the year. Water was retained in the Genesee cooling pond due to operational needs.

# BIODIVERSITY

## Wabamun-Genesee Region Biomonitoring Program

The landscapes around our operations are integral to the biodiversity of the regions where we operate. We conduct extensive monitoring programs at our Genesee operations and the Wabamun-Genesee region to better understand the potential impacts of power generation on biodiversity.

Our biomonitoring program measures and assesses potential changes in environmental concentrations of several chemicals of potential concern (COPC) associated with aerial and water emissions from power generation, in addition to the monitoring of wildlife populations and habitats. The program uses nine designated terrestrial sampling locations across the geographic area, four air monitoring stations, and obtains surface water samples from three local lakes, the cooling ponds and three locations on the North Saskatchewan River. Expert environmental consultants complete routine monitoring of environmental media, including air, soil, vegetation, small mammals, fish, lake and river water, groundwater, sediment and benthic invertebrates.

Surface water quality monitoring at the Genesee cooling pond is conducted annually, as is the air monitoring program that is associated with the biomonitoring program. Air emissions from power generation, including nitrogen dioxide, sulphur dioxide, fine particulate matter (PM<sub>2.5</sub>), ozone and mercury, are monitored through Acid Deposition, Mercury Assessment and Ambient Air Monitoring Programs. All other environmental media are monitored on a five-year basis. The full biomonitoring program was conducted in 2015, and further analysis and reporting of the results of this sampling program will be completed in 2016.

Capital Power has invested approximately \$4 million in this \$13 million project and has been working with the TransAlta Generation Partnership (TGP) on this comprehensive biomonitoring and associated air monitoring program since 2004. No significant increasing trends have been detected either in water quality of the natural water bodies or ambient air quality within the region.

A statistically significant decreasing trend in potential acid input (acidifying species resulting from NO<sub>x</sub> and SO<sub>2</sub> emissions) was identified in the 2015 acid deposition study.

The results of all sampling and monitoring are submitted to Alberta Environment and Parks, and the results of the Ambient Air Monitoring Program are posted on the website of the [West Central Airshed Society \(WCAS\)](#). We also serve on the Board of the WCAS and support the Society as part of our approval requirements.

In 2016, we plan to continue working with regulators to ensure our biomonitoring program continues to fulfil the intent of assessing the cumulative impacts of power generation.

### STUDY SHOWS DECREASING TREND IN AIR EMISSIONS IN THE GENESEE REGION

For 10 years, Capital Power and TransAlta have been collecting data as part of an acid deposition assessment program. The study has identified a significant decreasing trend in the amount of acidifying species from NO<sub>x</sub> and SO<sub>2</sub> emissions deposited at the Genesee monitoring station. Even though the total capacity of coal-fired generation has increased in the region, this decreasing trend is attributable in part to a reduction of NO<sub>x</sub> and SO<sub>2</sub> emissions after the decommissioning of the remaining 398-MW of capacity of TransAlta's Wabamun Plant (between 2004 and 2010), and commissioning 923-MW of capacity in Capital Power's and TransAlta's Genesee 3 and Keephills 3 supercritical units in 2005 and 2011 respectively. These highly-efficient units incorporate state-of-the-art emission controls that reduce emissions to a fraction of that of the older units.



# WILDLIFE SURVEYS AND MONITORING

Wildlife surveys and monitoring help us understand the impact of power generation on the wildlife living nearest to our operations. Each year, wildlife biologists conduct local wildlife surveys on our behalf.

Our 2015 Annual Wildlife Report included a peregrine falcon study and overwintering water birds surveys to monitor the population of ducks and geese on the Genesee cooling pond. Highlights from this report show:

- the overwintering water birds program follows the trend first documented in 2001, with high numbers of water birds in fall and spring and relatively low numbers during the winters. Fewer than 2,000 water birds have overwintered on the cooling pond since 2007.
- nesting success has been monitored since 2005. The annual average fledging rate at Genesee (excluding 2007, when peregrines did not nest in the stack nesting box and 2008, when the monitoring system did not function and no data was collected) is 2.2 young per year. The Alberta Peregrine Falcon Recovery Team (2005) calculated that it requires 1.25 young per nesting pair of falcons per year to sustain or increase the Alberta peregrine falcon population.

In addition to the annual surveys, every five years we conduct surveys to monitor wildlife species composition and relative abundance, including species of management concern. This research assists us in the responsible management of lands. These surveys, conducted in 2015, include ungulates, raptors, birds, and amphibians. Our operations do not affect any wildlife on the International Union for Conservation of Nature and Natural Resources Red List species list.

## UNGULATE HIGHLIGHT:

There were fewer whitetail deer and more moose in 2015 vs 2010, which is possibly attributed to an increase in predators such as cougars and coyotes. The cougar population in Alberta, east of the foothills, has increased markedly since the last monitoring cycle in 2010.

## RAPTOR HIGHLIGHT:

For 20 years, the Genesee Generating Station's G3 stack has been the starter home to at least 45 peregrine falcons. The falcons return annually to breed following their fall migration from as far south as Venezuela, which is more than 6,500 km away from Genesee. What started as the construction of a safe nesting area has grown to include tracking and egg incubation. In 2015, three eggs were laid and hatched on our G3 stack. All three young fledged. Two raptor species, broad-winged hawk, and the northern goshawk, not observed in previous surveys, were detected in 2015.

## BREEDING BIRD HIGHLIGHT:

A total of 107 bird species were detected in the breeding bird survey, three of which were not previously detected: ring-billed gull, three-toed woodpecker, and Wilson's warbler.

## AMPHIBIAN HIGHLIGHT:

As in past monitoring cycles, boreal chorus frogs, wood frogs and western toads were detected within the Genesee survey area in 2015. All three species were detected in and have shown continuous use of engineered and non-natural wetlands even within the active mine area, demonstrating that these features are amphibian habitat.

## WILDLIFE SURVEYS AND MONITORING / CONTINUED

### WILDLIFE REHABILITATION SOCIETY OF EDMONTON

In 2015, we once again partnered with the Wildlife Rehabilitation Society of Edmonton (WRSE) to release rehabilitated birds onto the Genesee cooling pond. In Dec., two Mallard hens and three Canada Geese were released onto the pond.

The Genesee cooling pond serves as a great place to release rehabilitated water fowl because of its year-round open water, the pond's proximity to Edmonton, and its ease of access. To date, we have released 11 ducks, three geese, and one Bald Eagle in partnership with WRSE.



To date, we have released 11 ducks, three geese, and one Bald Eagle in partnership with the Wildlife Rehabilitation Society of Edmonton.

### Hunting at Genesee

For more than 10 years, we have partnered with Hunting for Tomorrow. The organization manages hunting access on Capital Power land at Genesee and permits the use of bows, crossbows, black powder guns, and shotguns. In 2015, there were 110 registered hunters who were successful in harvesting:

- **Elk:** one bull, one cow
- **Moose:** one cow
- **Mule Deer:** two doe
- **White Tail Deer:** one buck

### The importance of bees

Bees have been a vital part of the Genesee ecosystem for several decades, producing honey in hives located on more than 20 quarter sections of land. The hives are owned by Busy Bee Farm from New Sarepta, Alberta.

Each fall, we receive several dozen 1kg containers of honey from Busy Bee as thanks for hosting hives on our land. We sell these to employees for \$5/container, with the proceeds going to the Warburg Christmas Elves.

# LAND RECLAMATION AND USE AT GENESEE

Capital Power is committed to reclamation efforts that return land disturbed by our operations to its pre-mining state. We protect and enhance biodiversity by varying the natural landscapes around our facilities in ways that can sustain multiple land uses, such as wetlands, cattle, and farming.

In 2015, we reclaimed 115 acres at the Genesee Mine, bringing the 25-year total to 2,355 acres/953 hectares. This previously-mined area is now 100% productive farmland and wildlife habitat.

Our investment in reclamation led to 38 hectares reaching fully reclaimed status in 2015.



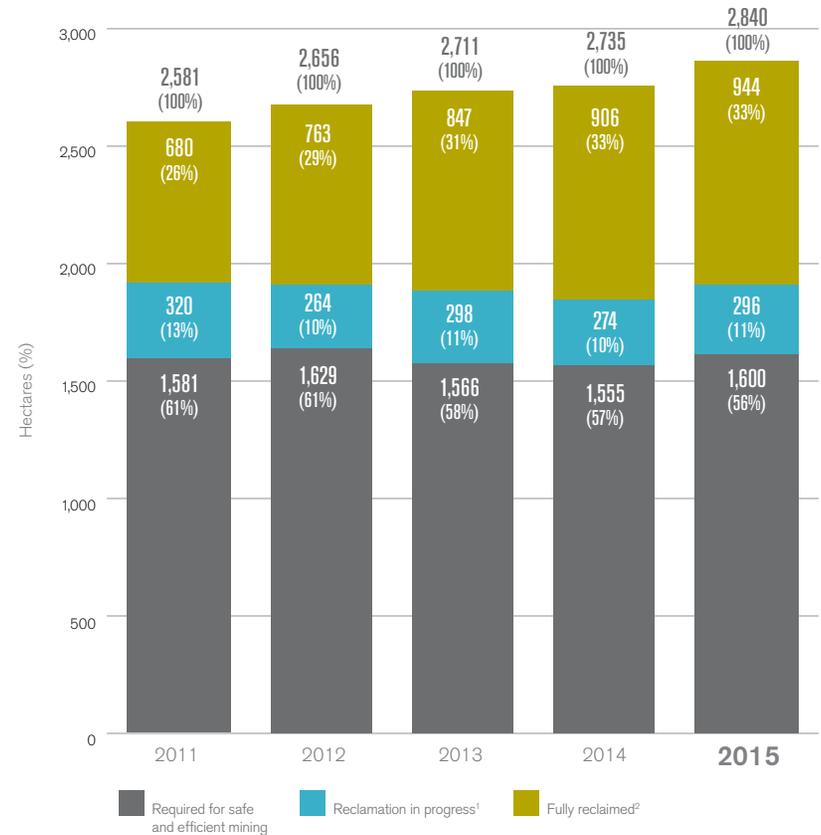
The Alberta Energy Regulator (AER) carried out field audits of Capital Power's Reclamation Certificate applications in the Genesee Mine in 2015. The audit process went well, and final reclamation certificates are expected in 2016.

## Local cattle grazing at Genesee

Company-owned land, not yet used for mining operations, is leased to local farmers to bring their cattle to a well-managed grassland operated by professional cowboys.

In 2015, 1,918 cattle belonging to 10 local farmers grazed at the 6,000 acre community pasture at Genesee. Cattle grazing will continue to be offered to the local community in 2016.

## GENESEE MINE FULLY RECLAIMED - AREA & RECLAMATION SUMMARY (HECTARES)



<sup>1</sup> Reclamation in progress means reclamation activities have begun but are incomplete, and no application for certification has been filed.

<sup>2</sup> Fully reclaimed refers to land that is fully certified and land parcels that have been applied for and awaiting final certification from Alberta Environment and Parks.

# WASTE MANAGEMENT KEY TO SUSTAINABILITY

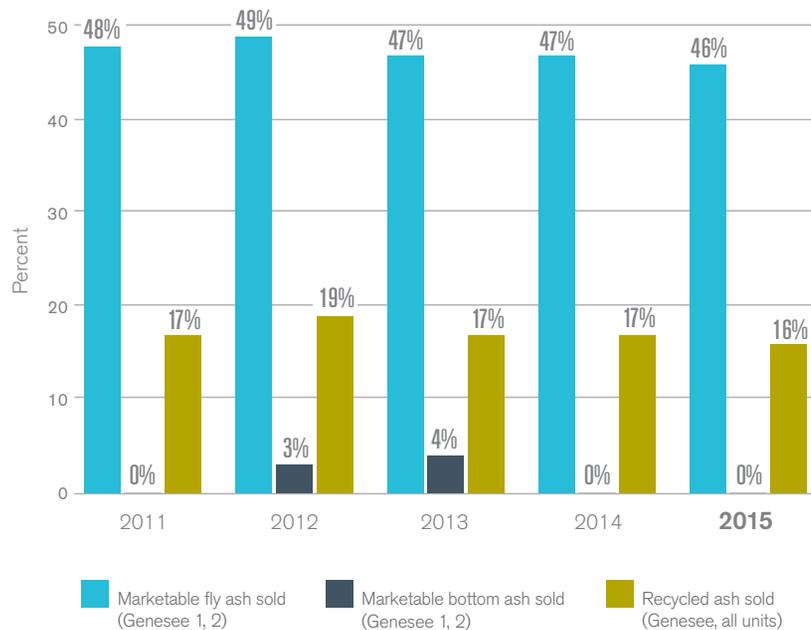
## Recycling fly ash at Genesee

We recycle fly ash (residual material from coal generation) at our Genesee Generating Station, reducing the amount of fly ash that goes to landfill. Using one tonne of fly ash from Genesee 1 and 2 as a substitute for one tonne of Portland Cement in concrete reduces carbon dioxide emissions (a greenhouse gas) by approximately one tonne in the manufacture of Portland Cement.

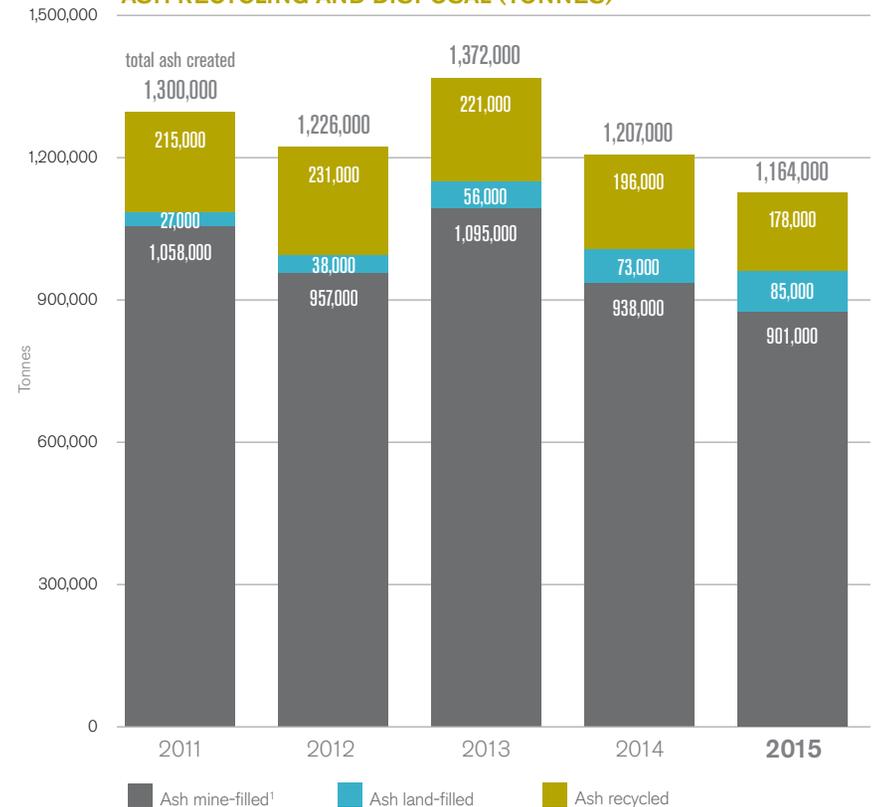
At Genesee in 2015, just under 50% of the fly ash produced from Units 1 and 2 was sold for use in concrete production across western North America.

Testing revealed Genesee 3 fly ash could also be suitable for use in cement and concrete products. In 2016, we aim to sell Genesee 3 fly ash.

### RECYCLED ASH (%)



### ASH RECYCLING AND DISPOSAL (TONNES)



<sup>1</sup> Ash mine-filled includes water for dust control when transporting to the mine.

Fly ash is produced as a byproduct from our facilities at Genesee, Roxboro and Southport. Coal is a small percentage of the overall fuel mix of our two North Carolina solid-fuels facilities. Ash from Southport and Roxboro are transported to certified landfills that are equipped to safely dispose of the material.

## Genesee Building Recycling Program

Following the 2015 *Genesee Land Purchase Program*, several landowners moved, but the buildings (e.g. houses, garages, and shops) remained. Capital Power makes an effort to sell unoccupied buildings to the public for reuse so the buildings are recycled rather than destroyed. In 2015, five houses and four garages were offered to the public.



As part of the *Genesee Land Purchase Program*, unoccupied buildings are recycled instead of destroyed. In spring 2015, this unoccupied house was moved from Genesee land to Warburg, AB, a community south of our facility, for use.



# ABOUT THIS REPORT

# ABOUT THIS REPORT

## COMMITTED TO TRANSPARENT AND BALANCED REPORTING

This report provides a detailed overview of Capital Power in 2015, including our successes and challenges. Keeping our commitment to producing an accurate annual record of how we have performed and where we fell short, drives us to work even harder to achieve our vision of being one of North America's most respected, reliable, and competitive power generators.

We aim to report about our business in a manner that presents a holistic view of our business and shows the linkages between our business strategy and our corporate responsibility program. Building on our past reports, we aim to be clear and concise in providing accurate and balanced information about our people, facilities and performance (including emissions), and our contributions to the communities where we do business. All dollar figures are in Canadian funds.

## GLOBAL REPORTING INITIATIVE

Our 2015 Corporate Responsibility Report follows guidelines defined in the Global Reporting Initiative (GRI 3.1), an international standard for corporate responsibility reporting. The GRI Guidelines set out the principles and indicators organizations can use to measure and report their environmental, economic, and social performance. GRI has launched its G4 Guidelines, which Capital Power is assessing for future reports.

### A rating

We believe we have achieved an A level of reporting under the GRI guidelines (G3.1). We make this self-declaration based on the GRI requirements to meet the A level, the highest level of disclosure. There are three levels in the GRI system—C, B, and A—with eligibility based on the comprehensiveness of the report.

## REPORT SCOPE

This report includes energy production and environmental performance data from power plants for which Capital Power held the operating permit in 2015, 2014, 2013, 2012, and 2011 respectively.

Data from each plant represents the entire plant – not only our financial share of the operation. This includes:

- Genesee 3: co-owned with TransAlta
- Genesee 1 and 2: plant capacity and output is sold under an Alberta Power Purchase Arrangement to the Alberta Balancing Pool.

Data from Keephills 3, Joffre, K2 Wind, Shepard Energy Centre, and power purchase arrangement (PPA) facilities are not included because we do not hold the operating permits. Capital Power terminated its Sundance C Power Purchase Arrangement on March 24, 2016.

One of the challenges of preparing this report is the need to synthesize data from numerous jurisdictions with unique reporting requirements, methods and standards. Where possible, information has been consolidated (e.g. greenhouse gas emission (GHG) data for our facilities in Canada and the United States). In other areas, information is presented separately or from a single jurisdiction.

Carbon dioxide emissions from our landfill gas and biomass facilities are not included in aggregate GHG emission totals or emission intensity calculations. This approach aligns with the *Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard*.

## REPORTING INTERVALS

We report annually on our corporate responsibility and sustainability.

## REPORTING PERIODS

This report provides data for the most recent five full years of operation – 2011, 2012, 2013, 2014, and 2015. Data for each year is for the 12-month period starting Jan. 1 and ending Dec. 31, respectively.

## PROCESS FOR DEFINING CONTENT

This report builds on an extensive process for defining content, including stakeholder consultation, which resulted in guidelines for determining priority topic areas and materiality. We also incorporated feedback received following the release of our previous reports.

## OTHER REPORTING

Other public disclosures, in particular the *2015 Annual Report*, *2015 Annual Information Form* and *2016 Management Proxy Circular* include detailed content that responds to certain GRI indicators.

The content is incorporated by cross-reference throughout the report. The documents are also available at [www.sedar.com](http://www.sedar.com) and [www.capitalpower.com](http://www.capitalpower.com).



Our Canadian power plants operating above a certain emission-level threshold publicly file annual reports with *Canada's National Pollutant Release Inventory*.

In 2015, residents living near the Genesee Generating Station received two issues of the *Genesee Station Connection* newsletter, which provides information about the facility's emission performance and other issues related to plant and mine operations.

We also distributed newsletters for residents living near the proposed Black Fork Wind (Ohio), Cardinal Point (Illinois) and Bloom Wind (Kansas) projects.

## FORWARD-LOOKING INFORMATION

Forward-looking information or statements included in this Corporate Responsibility Report (print and online) are provided to inform readers about management's assessment of Capital Power's future plans and operations. This information may not be appropriate for other purposes. The forward-looking information in this Corporate Responsibility Report is generally identified by words such as "will," "anticipate," "believe," "plan," "intend," "target" and "expect" or similar words that suggest future outcomes.

Forward-looking information in this Corporate Responsibility Report includes, among other things, information relating to:

- (i) expectations regarding the timing of funding of, generation capacity of, costs for, technology selected for or commercial arrangements regarding existing, planned and potential development projects and acquisitions.
- (ii) expectations regarding plant availability, power generation, operating performance, plant efficiency and outages.
- (iii) expectations related to future revenues, expenses, earnings, funds from operations, cash flow per share, dividends and dividend increases.
- (iv) expectations regarding capital expenditures for plant maintenance and other.
- (v) the expected impact of GHG and other environmental regulations on Capital Power's plants, including compliance targets and compliance costs and the future closure of coal-fired generation plants (including compensation therefor).
- (vi) expectations regarding proposed new environmental regulations, including the timing of such regulations coming into force, and the impact of current and new environmental regulations on Capital Power's business, including, but not limited to, Capital Power's compliance costs.

- (vii) expectations regarding the achievements of business objectives, including, but not limited to, the achievement of health, safety and environment targets.
- (viii) expectations regarding environmental outcomes, including but not limited to, reductions in GHG emissions.
- (ix) expectations regarding land leases and acquisitions and community relations.
- (x) expectations regarding sales of fly ash.
- (xi) expectations regarding environmental credits and offsets, and their impact on compliance costs.
- (xii) the impact of the *Alberta Climate Leadership Plan* on Capital Power's future growth projects, including the Genesee 4 and 5 project.

These statements are based on certain assumptions and analyses made by the Company in light of its experience and perception of historical trends, current conditions, and expected future developments and other factors it believes are appropriate. The material factors and assumptions used to develop these forward-looking statements relate to:

- (i) electricity and other energy prices.
- (ii) performance.
- (iii) business prospects and opportunities including expected growth and capital projects.
- (iv) status of, and impact of policy, legislation, and regulations (including, but not limited to, environmental legislation).
- (v) effective tax rates.

Whether actual results, performance or achievements will conform to the Company's expectations and predictions is subject to a number of known and unknown risks and uncertainties, which could cause actual results and experience to differ materially from the Company's expectations. Such material risks and uncertainties are:

- (i) power plant availability and performance including maintenance expenditures.
- (ii) changes in electricity prices in markets in which the Company operates.
- (iii) regulatory and political environments including changes to environmental, financial reporting and tax legislation.
- (iv) acquisitions and developments including timing and costs of regulatory approvals and construction.
- (v) ability to fund current and future capital and working capital needs.
- (vi) changes in energy commodity market prices and use of derivatives.
- (vii) changes in market prices and availability of fuel.
- (viii) changes in general economic and competitive conditions.

See "Risks and Risk Management" in the Company's MD&A dated Feb. 18, 2016 for the year ended Dec. 31, 2015.

Readers are cautioned not to place undue reliance on any such forward-looking statements. The Company does not undertake or accept any obligation or undertaking to release publicly any updates or revisions to any forward-looking statements to reflect any change in the Company's expectations or any change in events, conditions, or circumstances on which any such statement is based, except as required by law.

# GLOBAL REPORTING INITIATIVE

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| <b>EU19</b> | Stakeholder participation in the decision-making process related to energy planning and infrastructure – 48, 49, 50, 51, 52                               |
| <b>EU20</b> | Approach to managing the impacts of displacement – 49, 96   |
| <b>EU21</b> | Contingency planning measures, disaster/emergency management plan and training programs, and recovery/restoration plans – 42, 43                          |
| <b>EU22</b> | Number of people physically or economically displaced, and compensation, broken down by types of project – 49   |
| <b>EU25</b> | Number of injuries and fatalities to the public involving company assets, including legal judgments, settlements and pending legal cases of diseases – 36 |

- SO2** Risks related to corruption – 35, 36
- SO3** Employee training for anti-corruption – 34, 35
- SO4** Actions taken in response to corruption incidents – 34, 35
- SO5** Public policy positions and lobbying – 15, 74, 77, 78
- SO6** Financial/in-kind contributions to political parties & politicians – 15
- SO7** Legal actions for anti-competitive behaviour – 35
- SO8** Fines and sanctions for non-compliance with laws/regulations – 14, 34, 35, 36

#### PRODUCT RESPONSIBILITY

- PR2** Incidents of non-compliance – health & safety – 36
- PR3** Type of product and service information – 36
- PR4** Incidents of non-compliance – labelling – 36
- PR5** Customer satisfaction – 36
- PR6** Marketing communications – laws – 36
- PR7** Marketing communications – compliance – 36
- PR8** Customer privacy – 36
- PR9** Fines for non-compliance – 35, 36

#### ECONOMIC

- EC1** Economic value generated and distributed, including donations – 57, 58
- EC2** Financial implications & risks for activities related to climate change – 9, 56, 57, 58, 60, 71, 72, 77, 78
- EC3** Coverage of defined benefit plan obligations – 29
- EC4** Financial assistance received from government – 57
- EC5** Range of ratios of entry-level wage compared to local minimum wage – 26
- EC6** Policy, practices & proportion of spending on locally-based suppliers – 54, 57
- EC7** Procedures for local hiring and proportion of senior management hired from local communities – 54
- EC8** Impact of infrastructure investments and services for public benefit – 11, 12, 44, 45, 46, 47
- EU 8** R&D expenditures aimed at providing reliable electricity and promoting sustainable development – 80, 90
- EC9** Indirect economic impacts – 45, 46, 47, 57, 58
- EU30** Average plant availability factor by energy source and by regulatory regime – 56, 59

## Exclusions

### GRI Indicators not reported

*There are a number of GRI Indicators for which Capital Power does not report data. This section lists each indicator that is excluded from the report, and the reason for the exclusion.*

#### INDICATOR # / INDICATOR TITLE AND REASON FOR NOT REPORTING

- 3.10** **Effect of any restatements of information in previous report**  
No restatements occurred.
- 3.13** **Assurance – Financial and emissions data are externally audited annually**  
No additional assurance was completed on this year's report.
- EU3** **Number of customer accounts**  
Capital Power has no retail power business, and therefore no retail customer accounts.
- EN4** **Indirect energy consumption**  
Capital Power does not track this information, and emissions from indirect energy consumption are not material compared to direct emissions from operations.
- EU4** **Length of transmission lines**  
Capital Power does not operate transmission and distribution lines.
- EU6** **Management approach to ensure short and long-term electricity availability and reliability**  
Capital Power is an independent producer and operates in markets where it does not have overall market responsibility for managing short- or long-term electricity availability or reliability.
- EU7** **Demand side management programs**  
Capital Power has no retail power business, and therefore no customer-facing demand management programs.
- EN7** **Initiatives to reduce indirect energy consumption**  
Capital Power does not currently collect this data.
- EU9** **Provisions for decommissioning nuclear power sites**  
Not applicable. Capital Power does not operate or own any nuclear power generation.

**EU10** **Planned capacity against projected electricity demand over long-term**

Capital Power is an independent producer and operates in markets where it does not have overall market responsibility for managing short or long-term electricity availability or reliability.

**EU12** **Transmission and distribution losses**

Capital Power does not operate transmission and distribution lines.

**EN17** **Other greenhouse gas emissions by weight**

Not material.

**EU23** **Programs to improve or maintain access to electricity and customer support**

Capital Power has no retail power business and, therefore, no retail customer accounts.

**EU24** **Practices to address barriers to accessing and safely using electricity and customer support services**

Capital Power has no retail business and, therefore no retail customer accounts.

**EU26, 27** **Population unserved in licensed distribution or service areas**

Not applicable. Capital Power does not provide transmission and distribution services and has no retail business.

**EU27** **Number of residential disconnections**

Not applicable. Capital Power has no retail power business and, therefore, no retail customer accounts.

**EU 28, 29** **Power outage frequency and duration**

Not applicable. Capital Power does not provide transmission and distribution services.

**EN27** **Percentage of products sold and package materials reclaimed.**

Not applicable.

**EN29** **Significant environmental impact of transporting products**

Not applicable. Capital Power does not transport products.

**EN30** **Total environmental protection expenditures**

Capital Power reports on specific projects. However, no total dollar value is reported for research and development activities as this data is not aggregated within the company.

**LA7** **Rates of employee absenteeism**

With information system upgrades completed in 2013, we no longer track employee absenteeism.

**LA10** **Average hours of training per year per employee**

Capital Power does not currently collect this data.

**LA12** **Percentage of employees receiving regular performance and career development reviews**

Managers are responsible for providing regular (at least annual) performance reviews for their employees, however Capital Power's systems do not currently collect aggregated data on the completion of reviews.

**LA15** **Return to work and retention rates after parental leave by gender.**

Capital Power does not currently collect this data.

**PR1** **Life cycle stages in which health and safety impacts of products and services are assessed for improvement**

As a power producer, Capital Power does not have products and services.

**SO9** **Operations with significant potential or actual negative impacts on local communities.**

Capital Power continually monitors its environmental impact and works closely with the community. No reports to date have attributed negative impacts specific to Capital Power operations.

**SO10** **Prevention and mitigation measures for negative impacts on local communities.**

Capital Power continually monitors its environmental impact and works closely with the community. No reports to date have attributed negative impacts specific to Capital Power operations.

# AFFILIATIONS

Alberta Chamber of Resources

American Public Power Association

Association of Power Producers of Ontario

Arizona Competitive Power Alliance

Association of General Counsel of Alberta

American Wind Energy Association

Building Owners & Management Association Edmonton

Calgary Chamber of Commerce

Canadian Clean Power Coalition

Canadian Electricity Association

Canadian Wind Energy Association

Catalyst Canada Inc

CEATI International

Clean Energy BC

Clean Energy Group

Conference Board of Canada

Construction Owners Association of Alberta

Decentralised Energy Canada

Edison Electric Institute

Edmonton Chamber of Commerce

Energy Marketing Credit Group

EXCEL Partnership Group

Excellence in Corporate Environmental Leadership

Huron Chamber of Commerce

Huron Manufacturing Association Inc

Independent Power Producers Society of Alberta

International Emissions Trading Association

International Association of Business Communicators

Law Society of Alberta

Leduc Regional Chamber of Commerce

Macomb Area Economic Development Corporation

Northern Alberta Risk and Insurance Management Society

NIULPE of North Carolina

Rocky Mountain Institute

Southport-Oak Island Area Chamber of Commerce Inc

Strathcona Industrial Association

Tax Executives Institute

The New England Council

Western Power Trading Forum



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