

MANAGEMENT INFORMATION CIRCULAR

FEBRUARY 28, 2019

Notice of Annual and Special Meeting of Shareholders
to be held May 3, 2019

With more than 65 years' experience, TransCanada is a leader in the responsible development and reliable operation of North American energy infrastructure including natural gas and liquids pipelines, power generation and gas storage facilities.

TransCanada's common shares trade on the Toronto and New York stock exchanges under the symbol TRP.

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We encourage you to sign up for electronic delivery of all future proxy materials.

Registered shareholders can go to www.investorcentre.com/transcanada, and click on "Sign up for eDelivery" at the bottom of the page. Enter your Holder Account Number from your form of proxy, and enter your postal code (if you are a Canadian resident), or your Family or Company Name (if you are not a resident of Canada), and click "Sign In."

Non-registered shareholders can go to www.investordelivery.com using the control number found on your voting instruction form or at www.proxyvote.com where you can click on "Go Paperless" link and follow the instructions.

Letter to shareholders

February 28, 2019

Dear Shareholder:

TransCanada Corporation (TransCanada) is pleased to invite you to the annual and special meeting of common shareholders on May 3, 2019. The meeting will be held at 10:00 a.m. (Mountain Daylight Time) in the Markin MacPhail Centre at Canada Olympic Park, 88 Canada Olympic Road S.W., Calgary, Alberta.

Attending the meeting is your opportunity to meet the Board of Directors (Board) and management, learn more about our performance in 2018 and our strategy for the future, and vote in person on the items of business. If you are unable to attend the meeting in person, you can vote by proxy and listen to the live webcast on our website (www.transcanada.com).

The attached Management information circular includes important information about the meeting and how to vote. Please take some time to read the document and remember to vote. You can find more information about TransCanada in our 2018 Annual report and on our website.

We would like to extend our sincere thanks to Mr. Kevin Benson and Ms. Paula Reynolds who are retiring from the Board on May 3, 2019, for their many years of dedicated service to TransCanada and our shareholders. Mr. Benson has been a director for 14 years during which time he has made significant contributions to the Board and its committees, including chairing each of the Audit committee and Governance committee. His integrity, business acumen and leadership provided invaluable perspective to the company. Ms. Reynolds has been a director for eight years, serving as chair of the Human Resources committee for five of those years. TransCanada benefited from her industry experience and her leadership of the Human Resources committee was instrumental in developing strong human resources policies and plans, talent management and overseeing the compensation programs, with shareholder value at top of mind.

In June 2018, TransCanada was pleased to announce the appointment of Mr. Randy Limbacher to the Board. Mr. Limbacher's extensive experience in the energy industry, leadership skills and strong business acumen have already proven to be a useful addition to the Board. In addition, after an extensive search effort, the Board is nominating Ms. Una Power and Mr. Steven Williams for appointment to the Board, both of whom have many years of industry experience. Ms. Power brings considerable expertise in accounting and finance, risk management, strategy and leadership. Mr. Williams has extensive skills in the areas of leadership, governance, strategy and human resources.

Thank you for your continued confidence in TransCanada. Russ Girling, our CEO, and I look forward to seeing you at the meeting on May 3rd.

Sincerely,



Siim A. Vanaselja
Chair of the Board of Directors

Notice of 2019 annual and special meeting

You are invited to our 2019 annual and special meeting of common shareholders:

WHEN

Friday, May 3, 2019 at 10:00 a.m.
Mountain Daylight Time (MDT)

WHERE

Markin MacPhail Centre
Canada Olympic Park
88 Canada Olympic Road S.W.
Calgary, Alberta

YOUR VOTE IS IMPORTANT

If you are a shareholder of record of TransCanada Corporation common shares on March 18, 2019, you are entitled to receive notice of, attend and vote at this meeting.

Please take some time to read the attached Management information circular. It contains important information about the meeting and explains who can vote and how to vote.

By order of the Board of Directors,



Christine R. Johnston
Vice-President, Law and Corporate Secretary
TransCanada Corporation
Calgary, Alberta

February 28, 2019

Eight items of business

1. Receive our audited consolidated financial statements for the year ended December 31, 2018, and the auditors' report.
2. Elect the directors.
3. Appoint the auditors and authorize the directors to set their compensation.
4. Participate in the advisory vote on our approach to executive compensation (say on pay).
5. Approve amendment to our Articles of Incorporation to change name to TC Energy Corporation.
6. Continue and approve minor amendments to our shareholder rights plan.
7. Consider a shareholder proposal as set out in Schedule A of this circular.
8. Consider other business that is properly brought before the meeting or any meeting that is reconvened if the meeting is adjourned.

Management information circular

We are sending you this Management information circular (circular) because you are a shareholder of record of TransCanada shares on March 18, 2019. You have the right to attend our 2019 annual and special meeting of common shareholders and to vote your shares in person or by proxy. If you are unable to attend the meeting, you can listen to the webcast in English on our website (www.transcanada.com).

Management is soliciting your proxy for the meeting, and we pay all costs for doing so. We will start mailing the proxy materials on March 26, 2019, and will also provide the materials to brokers, custodians, nominees and other fiduciaries to forward them to shareholders. A TransCanada employee or an employee of Shorecrest Group may also contact you by phone or email to encourage you to vote.

The Board of Directors (Board) has approved the contents of this circular and has authorized us to send it to you. We have also sent a copy to each member of our Board and to our auditors, and will file copies with the appropriate government agencies.

Unless stated otherwise, information in this document is as of February 28, 2019, and all dollar amounts are in Canadian dollars.

By order of the Board of Directors,



Christine R. Johnston
Vice-President, Law and Corporate Secretary
TransCanada Corporation
Calgary, Alberta

February 28, 2019

In this document,

- **you, your** and **shareholder** mean a holder of common shares of TransCanada Corporation,
- **we, us, our** and **TransCanada** mean TransCanada Corporation, and
- **TransCanada shares** and **shares** mean common shares of TransCanada Corporation, unless stated otherwise.

Our principal corporate and executive offices are located at 450 - 1 Street S.W., Calgary, Alberta T2P 5H1

About shareholder mailings

In March 2018, we asked all registered and beneficial shareholders to advise us in writing if they did not want to receive our Annual reports when they became available.

If you are a registered shareholder who replied that you no longer want to receive the report, or a beneficial shareholder who did not reply, you will not receive a copy. If you purchased TransCanada shares after March 18, 2019, you also may not receive a copy of our 2018 Annual report. We are using notice-and-access to deliver the circular and 2018 Annual report

Our 2018 Annual report is available on our website (www.transcanada.com) and on SEDAR (www.sedar.com), or you can request a free copy from our transfer agent:

Computershare Trust Company of Canada

Tel: 1.800.340.5024 (toll-free within North America)
1.514.982.7959 (outside North America)

Email: transcanada@computershare.com

Summary

The following pages are key points of information you will find in this circular. You should read the entire circular before voting.

Voting

You will be asked to vote on six items at the meeting:

| Item | Board recommendation | More information (pages) |
|--|----------------------|--------------------------|
| Elect 12 directors | For | 17-29 |
| Appoint KPMG LLP, Chartered Professional Accountants as auditors | For | 11 |
| Advisory vote on executive compensation (say on pay) | For | 58-63, 72-111 |
| Approve amendment to our Articles of Incorporation to change name to TC Energy Corporation | For | 12 |
| Continue and approve minor amendments to our shareholder rights plan | For | 13-16 |
| Consider a shareholder proposal as set out in Schedule A of this circular | Against | 113-114 |

Nominated Directors

| Name | Occupation | Age | Independent | Director since | % Votes in favour at 2018 AGM | 2018 Committees | 2018 Board attendance | Number of other public boards |
|--------------------------------------|--|-----|-------------|----------------|-------------------------------|--|-----------------------|-------------------------------|
| Stéphan Crétier Dubai, UAE | Chairman, President and Chief Executive Officer, GardaWorld Security Corporation | 55 | Yes | 2017 | 99.82 | Audit Health, Safety & Environment | 100% | 0 |
| Russell K. Girling Calgary, AB | President and Chief Executive Officer, TransCanada | 56 | No | 2010 | 99.83 | – | 100% | 1 |
| S. Barry Jackson Calgary, AB | Corporate Director | 66 | Yes | 2002 | 98.83 | Audit Human Resources | 100% | 1 |
| Randy Limbacher Houston, TX | Chief Executive Officer Meridian Energy, LLC | 60 | Yes | 2018 | – | Audit Health, Safety & Environment | 100% | 1 |
| John E. Lowe Houston, TX | Senior Executive Advisor, Tudor, Pickering, Holt & Co., LLC | 60 | Yes | 2015 | 99.50 | Audit (Chair) Health, Safety & Environment | 100% | 2 |
| Una Power Vancouver, BC | Corporate Director | 54 | Yes | – | – | – | – | 3 |
| Mary Pat Salomone Naples, FL | Corporate Director | 58 | Yes | 2013 | 99.61 | Governance Health, Safety & Environment | 100% | 2 |
| Indira Samarasekera Vancouver, BC | Senior Advisor, Bennett Jones LLP | 66 | Yes | 2016 | 99.67 | Audit Human Resources | 100% | 3 |
| D. Michael G. Stewart Calgary, AB | Corporate Director | 67 | Yes | 2006 | 99.80 | Governance Health, Safety & Environment (Chair) | 100% | 2 |
| Siim A. Vanaselja Toronto, ON | Corporate Director | 62 | Yes | 2014 | 99.51 | Board Chair Governance Human Resources | 100% | 3 |
| Thierry Vandal Mamaroneck, NY | President, Axium Infrastructure US, Inc. | 58 | Yes | 2017 | 99.81 | Audit Health, Safety & Environment | 100% | 1 |
| Steven W. Williams Calgary, AB | Chief Executive Officer and Director, Suncor Energy Inc. | 63 | Yes | – | – | – | – | 2 |

Note

- In late 2018, the Health, Safety and Environment committee was renamed the Health, Safety, Sustainability and Environment committee.

Compensation

TransCanada's compensation programs are designed to 'pay for performance' by rewarding employees, including our executives, for delivering results that meet or exceed our corporate objectives and support our overall strategy.

In order to attract, engage and retain high-performing employees, we review our programs each year to ensure we offer compensation that is market competitive. Our target compensation levels are determined with reference to median levels in our peer group. Actual performance that exceeds expectations can result in compensation above market median levels.

Our compensation programs are intended to align the executives' interests with those of our various stakeholders. The Human Resources committee and the Board place a significant emphasis on variable compensation, particularly long-term incentives, when determining the total direct compensation for our executives. Both our executive share unit and stock option plans encourage value creation over the long-term.

Our best practices include:

- benchmarking director and executive compensation against size appropriate peer groups to assess competitiveness and fairness,
- maximums on variable compensation payments,
- share ownership requirements for our directors and executives,
- incentive compensation reimbursement ('clawback') policy and anti-hedging policy, and
- annual say on pay vote, averaging 96 per cent approval for the last three years.

Governance

We believe that strong corporate governance improves corporate performance and benefits all stakeholders. Based on the current directorship our governance highlights are noted below.

| | |
|---|---|
| Size of Board | 12 |
| Percentage of independent directors | 92% |
| Percentage of women on Board | 25% |
| Board Diversity policy | Yes + target of 30% by end of 2020 |
| Number of board interlocks | 0 |
| External board service limits for independent directors | 4 public company boards in total |
| Average director age | 62 |
| All committees independent | Yes |
| Annual director elections | Yes |
| Individual director elections | Yes |
| Majority voting policy | Yes |
| Independent executive compensation consultant | Yes |
| Clawback policy | Yes |
| Double-trigger vesting on change of control | Yes |
| Separate chair and CEO | Yes |
| Director retirement age | 70 |
| Director share ownership requirements | 4x retainer |
| Executive share ownership requirements | 5x (CEO), 3x (executive vice-presidents), 2x (senior vice-presidents), 1x (vice-presidents) |
| CEO share ownership post-retirement hold period | 1 year |
| In-camera sessions at every Board and committee meeting | Yes |
| Annual say on pay | Yes |
| Code of business ethics | Yes |
| Board, committee and director evaluations annually | Yes |
| Board orientation and education program | Yes |

Notes

- Dr. Samarasekera and Ms. Power both serve on the board of The Bank of Nova Scotia. If each is elected at the annual and special meeting of shareholders, there will be one board interlock. It has been determined that this relationship will not impair the exercise of their independent judgment.
- The Board may waive the director retirement policy in special circumstances or if a director has not yet served seven years on the Board by age 70.

About the shareholder meeting

As a shareholder of record, you are entitled to vote your TransCanada shares at the annual and special meeting. The meeting will cover eight items of business, which are discussed in more detail starting on page 10.

This next section discusses delivery of the meeting materials and the voting process.

Delivery of meeting materials

We are using notice and access to deliver the circular and 2018 Annual report to both our registered and beneficial shareholders.

This means that TransCanada will post the circular and 2018 Annual report online for our shareholders to access electronically. You will receive a package in the mail with a notice (Notice) explaining how to access and review the circular and/or 2018 Annual report electronically and how to request a paper copy of either at no charge. You will also receive a form of proxy or a voting instruction form in the mail so you can vote your shares.

Notice and access is an environmentally friendly and cost effective way to distribute the circular and the 2018 Annual report because it reduces printing, paper and postage.

The following beneficial shareholders will receive a paper copy of the circular:

- those who have already provided instructions that they prefer to receive a paper copy,
- employees of our U.S. affiliate who own TransCanada shares through our U.S. affiliate's 401(k) retirement plans, and
- those whose brokers receive materials through Computershare.

This circular is available on SEDAR (www.sedar.com) and on our website (www.Transcanada.com/Notice-And-Access).

How to request a paper copy of the circular

Starting March 26, 2019, shareholders can request a paper copy of the circular and/or 2018 Annual report for up to one year. The circular and/or 2018 Annual report will be sent to you at no charge.

If you would like to receive a paper copy of the circular and/or 2018 Annual report, please follow the instructions provided in the Notice.

Requests by shareholders must be made by **5:00 p.m. Eastern Daylight Time (EDT), Wednesday, April 17, 2019** in order for you to receive a paper copy of the circular and/or 2018 Annual report before the annual and special meeting on May 3, 2019.

If you request a paper copy of the circular and/or 2018 Annual report you will not receive a new form of proxy (for registered shareholders) or voting instruction form (for beneficial shareholders), so you should keep the original form sent to you in order to vote.

If you have questions about notice and access, you can call our Investor Relations line at 403.920.7911 or 1.800.361.6522.

Voting

WHO CAN VOTE

Shareholders of record on March 18, 2019 are entitled to receive Notice of our 2019 annual and special meeting of common shareholders and vote their shares. Our Board set this date to allow enough time for shareholders to receive and review the materials, make their voting decisions and send in their voting instructions before the deadline.

As of February 28, 2019, we had 923,184,766 shares outstanding. Each share carries the right to one vote on any item of business that properly comes before the meeting and any meeting that is reconvened if the meeting is adjourned. Subject to our majority voting policy for director elections (see *Governance Philosophy – Majority Voting*), we need a simple majority of votes (50 per cent plus one vote) for all items to be approved by shareholders, except for the item relating to re-naming TransCanada, which requires a special resolution, or two-thirds of votes in favour (66.66 per cent) to approve the change.

As of February 28, 2019, we had the following preferred shares outstanding:

| First Preferred Shares | Number of shares outstanding |
|------------------------|------------------------------|
| Series 1 | 9,498,423 |
| Series 2 | 12,501,577 |
| Series 3 | 8,533,405 |
| Series 4 | 5,466,595 |
| Series 5 | 12,714,261 |
| Series 6 | 1,285,739 |
| Series 7 | 24,000,000 |
| Series 9 | 18,000,000 |
| Series 11 | 10,000,000 |
| Series 13 | 20,000,000 |
| Series 15 | 40,000,000 |

The holders of these shares do not have voting rights at the meeting.

Registered shareholders

You are a registered shareholder if you have a share certificate in your name.

We will prepare a list of the registered shareholders as of March 18, 2019, showing the names of all shareholders who are entitled to vote at the meeting and the number of shares each owns. Our transfer agent, Computershare Trust Company of Canada (Computershare), will have a copy of the list at their Calgary office if you want to check it during regular business hours. Computershare is located at Suite 600, 530 8th Avenue S.W., Calgary, Alberta T2P 3S8. Tel: 403.267.6800.

You can also check the list when you arrive at the meeting.

Non-registered (beneficial) shareholders

You are a non-registered or beneficial shareholder if your securities broker, financial institution, clearing agency, trustee or custodian (your nominee) holds the shares for you in a nominee account.

Principal shareholders

Our directors and executives are not aware of any person or corporation that beneficially owns, directly or indirectly, or exercises control or direction over, more than 10 per cent of our outstanding shares.

HOW TO VOTE

You have two ways to vote:

- by proxy, or
- by attending the meeting and voting in person.

Voting by proxy

Voting by proxy means you are giving someone else the authority to attend the meeting and vote for you (your proxyholder).

You must return your signed proxy form in order to vote by proxy.

If you appoint the TransCanada proxyholders and specify your voting instructions, your shares will be voted accordingly. If you do not specify how you want to vote your shares, your shares will be voted for you as follows:

- **for** the nominated directors listed on the proxy form and in this circular,
- **for** the appointment of KPMG LLP, Chartered Professional Accountants (KPMG) as TransCanada's auditors and authorizing the directors to set their compensation,
- **for** our approach to executive compensation, as described in this circular,

- **for** the approving the amendment to our Articles of Incorporation to change our name to:
TC Energy Corporation
Corporation TC Énergie
- **for** continuing and approving minor amendments to the shareholder rights plan, and
- **against** the shareholder proposal, as set forth in *Schedule A* of this circular.

If you appoint someone else as your proxyholder, but do not specify how you want to vote your shares, the person can vote as they see fit.

If there are any amendments to the items of business or any other matters that properly come before the meeting (including where the meeting will be reconvened if it was adjourned), your proxyholder has the discretion to vote as they see fit, in each instance, to the extent permitted by law whether the amendment or other matter of business that comes before the meeting is routine or contested.

Late proxies may be accepted or rejected by the chair of the meeting at his or her discretion and the chair of the meeting is under no obligation to accept or reject any particular late proxy. The chair of the meeting may waive or extend the proxy cut-off without notice.

You can choose anyone to be your proxyholder – the person does not need to be a TransCanada shareholder or the TransCanada representatives named in the proxy form. You must write the person's name on your proxy form, and return the signed proxy form to Computershare to appoint someone as your proxyholder.

You should tell this person that you have appointed him or her as your proxyholder and that they need to attend the meeting in person and vote on your behalf. Your proxyholder must vote your shares according to your instructions. Your shares will not be voted if your proxyholder does not attend the meeting to vote for you.

If you have returned your signed proxy form and you do not appoint anyone to be your proxyholder, Siim A. Vanaselja, Chair of the Board, Russell K. Girling, President and Chief Executive Officer or Christine R. Johnston, Vice-President, Law and Corporate Secretary (TransCanada proxyholders) will be appointed to act as your proxyholder to vote or withhold from voting your shares at the meeting according to your instructions.

Registered shareholders

We mail the Notice directly to you, and your package includes a proxy form.

You may request a paper copy of the circular or Annual report by following the instructions in the Notice that was mailed to you.

Appointing a proxyholder

You can appoint the TransCanada proxyholders named on the proxy form to vote your shares at the meeting according to your instructions. If you appoint them, but do not indicate your voting instructions on the form, your shares will be voted **for** each item of business.

You can decide to appoint someone else to represent you and vote your shares at the meeting. Print the name of that person in the blank space on the proxy form. If you do not specify how to vote your shares, your proxyholder can vote as they see fit.

Take some time to read about the items of business (see page 10), then complete the proxy form mailed to you, sign and date it, and mail it in the envelope provided. Computershare must receive the completed form **by 12:00 p.m. EDT on Wednesday, May 1, 2019.**

If your package is missing an envelope, use a blank one and address it to:

Computershare Trust Company of Canada
Stock Transfer Services
100 University Avenue, 8th Floor
Toronto, Ontario M5J 2Y1

If you want to submit your voting instructions by phone or on the internet, you must do so **by 12:00 p.m. EDT on Wednesday, May 1, 2019.** See the instructions on your proxy form.

Attending the meeting and voting in person

If you want to attend the meeting and vote in person, do not complete the proxy form. Just register with Computershare when you arrive at the meeting.

You can still attend the meeting if you have already submitted your voting instructions, but you cannot vote again at the meeting unless you revoke your proxy as described on the next page.

Non-registered (beneficial) shareholders

Your broker, its agent or its nominee can only vote your TransCanada shares if they have received proper voting instructions from you. If you are a beneficial shareholder, your package includes a voting instruction form. Complete the form and follow the return instructions on the form.

The voting instruction form is similar to a proxy form, however it can only instruct the registered shareholder how to vote your shares. You cannot use the form to vote your shares directly.

Your broker is required by law to receive voting instructions from you before voting your shares. Every broker has their own mailing procedures and instructions for returning the completed voting instruction form, so be sure to follow the instructions provided on the form.

Most brokers delegate responsibility for obtaining instructions from their clients to Broadridge Investor Communications Corporation (Broadridge). Broadridge, or any other intermediary as applicable, mails the proxy materials and voting instruction form to beneficial shareholders, at our expense.

The voting instruction form will name the same TransCanada representatives listed on page 7 to act as TransCanada proxyholders.

You may request a paper copy of the circular or Annual report by following the instructions in the Notice that was mailed to you.

Attending the meeting and voting in person

You can attend the meeting and vote in person, or you can appoint someone else to attend the meeting and give your voting instructions. Print your name, or the name of the person you are appointing, in the blank space provided on the voting instruction form. Complete the rest of the form and then mail it to Broadridge (or to your broker, as instructed on your voting instruction form) as soon as possible. Your package also includes instructions for submitting your voting instructions by phone or on the internet if you prefer either of these methods. You can still attend the meeting if you have already submitted your voting instructions, but you cannot vote again at the meeting unless you revoke your proxy as described below.

Broadridge tabulates the results of all the instructions it receives from beneficial shareholders, and provides appropriate voting instructions to our transfer agent.

CHANGING YOUR VOTE

Registered shareholders

If you change your mind and want to revoke your proxy, you need to notify us in writing. Sign a written statement (or have your attorney sign a statement with your written authorization) and send it to:

Corporate Secretary
TransCanada Corporation
450 - 1 Street S.W.
Calgary, Alberta T2P 5H1
Fax: 403.920.2467

We must receive the notice **by 12:00 p.m. EDT on Wednesday, May 1, 2019**, or the last business day prior to the day the meeting is reconvened if it was adjourned. You can also give the notice to the chair of the meeting in person at the meeting.

If you submitted your voting instructions by phone or on the internet, you can revoke or change your vote by sending your new instructions again, as long as they are received **by 12:00 p.m. EDT on Wednesday, May 1, 2019**, or the last business day prior to the day the meeting is reconvened if it was adjourned. A vote that is cast with a later date and time will supersede an earlier vote.

Non-registered (beneficial) shareholders

If you change your mind, contact your broker or nominee.

HOW THE VOTES ARE COUNTED

As transfer agent, Computershare counts and tabulates the votes on our behalf to ensure the votes are kept confidential. They only show us the ballot or proxy form if:

- it is required by law,
- there is a proxy contest, or
- there are written comments on the proxy form.

ADDITIONAL INFORMATION

Proxy Solicitation

Management of TransCanada is soliciting your proxy. The cost of this solicitation will be paid by TransCanada. Proxies will be solicited by mail, in person, by telephone or by electronic communications. TransCanada has retained and will pay for the services of Shorecrest Group (Shorecrest), to assist with our communications with shareholders and for the solicitation of proxies in Canada and the U.S. at an aggregate cost estimated to be approximately \$40,000, plus additional costs related to out-of-pocket expenses. Shorecrest is located at 67 Yonge St, Suite 901, Toronto, Ontario, M5E 1J8.

Unable to attend the meeting?

We will have a live webcast of our meeting in English on our website – go to www.transcanada.com for details.

Business of the meeting

Our annual and special meeting will cover eight items of business:

FINANCIAL STATEMENTS – see our 2018 Annual report (available at www.transcanada.com). You will receive our consolidated financial statements for the year ended December 31, 2018, and the auditors' report. These documents have been filed with the appropriate government regulatory agencies and are included in our 2018 Annual report. We deliver the Annual report using notice-and-access (see page 6). We mail you a paper copy the Annual report if you have provided instructions that you prefer to receive a paper copy, or you may request a paper copy as described in the Notice (see page 6). Our 2018 Annual report is also available in English and French on our website (www.transcanada.com), or you can request a copy from our Corporate Secretary or Investor Relations.

DIRECTORS – see page 17

You will vote on electing 12 directors to the Board. The director profiles starting on page 18 give important information about each nominated director, including his or her background, experience and memberships on other public company boards he or she serves on. Except for Ms. Power and Mr. Williams, all of the nominated directors currently serve on our Board, and we have included their 2018 attendance, the value of TransCanada shares or Deferred Share Units (DSUs) they currently hold (their *at-risk investment*) and their election results from the 2018 annual meeting. You can find more information about their at-risk investment on pages 69 and 70.

All directors are elected for a one-year term.

- | | | |
|-----------------------|------------------------|--------------------------|
| 1. Stéphan Crétier | 5. John E. Lowe | 9. D. Michael G. Stewart |
| 2. Russell K. Girling | 6. Una Power | 10. Siim A. Vanaselja |
| 3. S. Barry Jackson | 7. Mary Pat Salomone | 11. Thierry Vandal |
| 4. Randy Limbacher | 8. Indira Samarasekera | 12. Steven W. Williams |

The Board recommends you vote **for** the nominated directors:

RESOLVE to elect the directors listed in TransCanada's circular dated February 28, 2019 to hold office until the next annual meeting of shareholders or until their successors are earlier elected or appointed.

About quorum

We must have a *quorum* for the meeting to proceed.

Quorum constitutes two people present, in person, at the meeting, who are entitled to vote at the meeting and represent at least 25 per cent of the issued and outstanding TransCanada shares. The two people are entitled to vote in their own right, by proxy, or as a duly authorized representative of a shareholder.

AUDITORS

You will vote on appointing the auditors. The auditors will hold office until the close of our next annual meeting of shareholders.

The Board recommends that KPMG be appointed as auditors. Representatives of KPMG will attend the meeting, have an opportunity to make a statement and respond to any questions.

KPMG has been our external auditors since 1956, and have confirmed they are **independent** with respect to TransCanada within the meaning of the relevant rules and related interpretations prescribed by the relevant professional bodies in Canada and applicable legal requirements.

The table below shows the services KPMG provided during the last two fiscal years and the fees we paid them:

| (\$ millions) | 2018 | 2017 |
|---|-------------|-------------|
| Audit fees | 10.3 | 9.7 |
| <ul style="list-style-type: none">• audit of the annual consolidated financial statements• services related to statutory and regulatory filings or engagements• review of interim consolidated financial statements and information contained in various prospectuses and other securities offering documents | | |
| Audit-related fees | 0.1 | 0.1 |
| <ul style="list-style-type: none">• services related to the audit of the financial statements of TransCanada pipeline abandonment trusts and certain post-retirement plans | | |
| Tax fees | 1.2 | 0.8 |
| <ul style="list-style-type: none">• Canadian and international tax planning and tax compliance matters, including the review of income tax returns and other tax filings | | |
| All other fees | 0.2 | 0.2 |
| <ul style="list-style-type: none">• French translation services | | |
| Total fees | 11.8 | 10.8 |

You will also vote on authorizing the directors to set the auditors' compensation.

The Board recommends you vote **for** appointing KPMG as our auditors to hold office until the close of our next annual meeting of shareholders:

RESOLVE to appoint KPMG as auditors of TransCanada until the close of our next annual meeting of shareholders, and authorize the directors to fix their remuneration.

ADVISORY VOTE ON OUR APPROACH TO EXECUTIVE COMPENSATION

You will have an opportunity to have a say on pay by participating in the advisory vote on our approach to executive compensation. The Board believes the vote is beneficial because it holds directors accountable to shareholders for their decisions on executive compensation and provides valuable feedback.

While the vote is non-binding, the Board will take the results into consideration when it considers compensation policies, procedures and decisions in the future. We will disclose the results of the advisory vote in our report on voting results for the meeting, which will be posted on our website (www.transcanada.com) and on SEDAR (www.sedar.com).

Since 2010, we have held annual say on pay votes at our annual shareholder meetings. Over the last three years, these advisory votes were approved by 97.47 per cent in 2016, 97.39 per cent in 2017 and 94.02 per cent in 2018. The voting results confirm that a significant majority of shareholders have accepted our approach to executive compensation.

The Board recommends you vote **for** our approach to executive compensation:

RESOLVE on an advisory basis, without diminishing the role and responsibilities of TransCanada's Board, that the shareholders accept the approach to executive compensation disclosed in TransCanada's circular dated February 28, 2019.

AMEND ARTICLES TO CHANGE CORPORATE NAME

This is a special resolution. At least two-thirds (66.66 per cent) of votes cast by shareholders, in person or by proxy, must approve the resolution in order to change our name.

You will vote on a special resolution approving an amendment to the articles of TransCanada to change our name from "TransCanada Corporation" to:

TC Energy Corporation
Corporation TC Énergie

This new name more clearly articulates our complete business activities, which includes pipelines, power generation and energy storage operations, and reflects our continental growth into an enterprise with critical assets and employees across Canada, the United States and Mexico. It demonstrates the breadth of our business and acknowledges our proud history of safety and responsibly delivering energy to millions of people every day. We also believe that the new name will further unify employees and enable us to better connect with our diverse stakeholders.

We intend to continue trading under the stock symbol TRP on both the Toronto Stock Exchange (TSX) and New York Stock Exchange (NYSE). TC Energía will be used in Mexico, but is not required to be included in the amendment to the articles.

If approved, the effective date of the change of our name will be the date of issuance of a certificate of amendment by the Director under the *Canada Business Corporations Act*. We expect to receive the certificate of amendment shortly following the annual and special meeting of shareholders.

The change will not affect the validity of currently outstanding share certificates of TransCanada, and shareholders will not be required to surrender or exchange any existing share certificates that they hold. After the effective date, shareholders may exchange their share certificates with Computershare, our transfer agent. Each existing share certificate reflecting the current name of the Corporation shall continue to be a valid share certificate, until such certificate is transferred, re-registered or otherwise exchanged.

Our current articles can be found on our website (www.transcanada.com) or on SEDAR.

The Board recommends you vote *for* the special resolution to amend the articles.

RESOLVE that:

- 1. Subject to acceptance by Corporations Canada, the Toronto Stock Exchange and the New York Stock Exchange, the articles of TransCanada Corporation be amended to change TransCanada's name to:***

***TC Energy Corporation
Corporation TC Énergie***

and to provide that the Corporation may use its name in either the English form, the French form or a combination of the English form and the French form in any jurisdiction.

- 2. The directors of the Corporation are authorized, in their sole discretion and without further approval from shareholders to revoke, postpone and/or abandon this resolution at any time prior to the filing of the articles of amendment, and are further authorized to make consequential amendments as needed to any other documents or instrument of the Corporation to reflect the change of name, without further approval from shareholders.***

SHAREHOLDER RIGHTS PLAN

You will vote on continuing our shareholders rights plan and approving the amendments to the plan as described in this circular and posted on our website (www.transcanada.com). Minor amendments to the shareholder rights plan are being proposed.

The Board recommends you vote **for** the shareholder rights plan.

RESOLVE to approve TransCanada's shareholder rights plan as follows:

- **continue and approve the amended and restated shareholder rights plan agreement dated as of May 3, 2019 between TransCanada and Computershare, as rights agent, and**
- **authorize TransCanada's officers or directors to carry out the activities to execute the necessary documents or instruments for approval of the shareholder rights plan.**

The Board believes that the continuation and amendment and restatement of the shareholder rights plan is in the best interests of TransCanada and its shareholders. If shareholders approve to continue and amend the plan, it will expire at the end of our 2022 annual meeting (unless they vote to extend it at that time). If majority of shareholders who vote on the resolution do not approve it, the shareholder rights plan will terminate and the rights will cease to have effect.

| History of the shareholder rights plan | |
|--|--|
| 1994 | TransCanada PipeLines Limited (TCPL) implements the TCPL shareholder rights plan in December (amended in 1995, 1998 and 2001 with the approval of TCPL shareholders). |
| 2003 | As part of our arrangement with TCPL, on May 15 we adopt the plan as our new shareholder rights plan, keeping substantially the same terms and conditions, as amended. |
| 2004 | Shareholders continue and approve the shareholders rights plan on April 23. |
| 2007 | Shareholders approve minor amendments to the shareholders rights plan to ensure consistency with the new generation of rights plans in Canada on April 27. |
| 2010 | Shareholders continue and approve the shareholder rights plan on April 30. |
| 2013 | Shareholders continue and approve the shareholder rights plan with minor amendments to the preamble to clarify the purpose of the shareholder rights plan on April 26. |
| 2016 | Shareholders continue and approve the shareholder rights plan on April 29. |

Background

Our shareholder rights plan is designed to protect the rights of our shareholders, ensure they are treated fairly and maximize value if there is a take-over bid for TransCanada.

We are required to have shareholders approve the plan every three years.

When reviewing our shareholder rights plan this year, the Board considered the terms and objectives of our plan and whether there had been any legislative changes or other developments since the shareholder rights plan was last approved.

Proposed changes

On February 25, 2016, the Canadian Securities Administrators (CSA) announced amendments, effective May 9, 2016, to the take-over bid regime. The CSA amendments modified the minimum period a take-over bid must remain open for deposits of securities thereunder, extending the minimum period from 35 to 105 days, with the ability of the target issuer to voluntarily reduce the period to not less than 35 days. Additionally, the minimum period may be reduced due to the existence of certain competing take-over bids or alternative change in control transactions.

As a result, the only proposed substantive amendment to the shareholder rights plan is to extend the period of time a permitted bid must remain open solely to reflect changes to the take-over bid regime by the CSA. To ensure the permitted bid definition in the plan remains aligned with the minimum period a take-over bid must remain open under applicable Canadian securities laws, the proposed changes to the shareholder rights plan include:

- amending the definition of “permitted bid” to be outstanding for a minimum period of 105 days or such shorter period that a take-over bid must remain open for deposits of securities, in the applicable circumstances, pursuant to Canadian securities laws, and
- certain additional non-substantive, technical and administrative amendments, including to align the requirements as to how long a “competing permitted bid” must remain outstanding the minimum number of days as required under Canadian securities laws, permit book entry form registration of rights and provide an exception for certain exempt acquisitions.

A blackline copy of our shareholder rights plan showing the proposed changes is located on our website (www.transcanada.com).

Plan summary

The following is only a summary of our shareholder rights plan as such is proposed to be amended (as described above). The full shareholder rights plan is located on our website (www.transcanada.com). You can also contact our Corporate Secretary to receive a copy.

Permitted bids

A take-over bid that involves buying 20 per cent or more of our shares is considered a permitted bid when it meets the following requirements that make it fair to all shareholders:

- a circular is issued, informing all shareholders of the bid,
- the bid is made available to all shareholders,
- the bid is available for a minimum period of 105 days or such shorter period that a take-over bid must remain open for deposits of securities, in the applicable circumstances, pursuant to Canadian securities laws,
- shares tendered to the take-over bid can be taken up only after such minimum period, and only if more than 50 per cent of our total shares outstanding and held by independent shareholders, (shareholders other than the bidder, its affiliates and anyone acting jointly or together with others) have been tendered and not withdrawn, and
- as soon as more than 50 per cent of the shares held by independent shareholders have been tendered to the take-over bid, the bidder must publicly disclose this and keep the bid open for another 10 business days to allow any additional deposits of shares.

The shareholder rights plan allows competing permitted bids to be made while there is an outstanding permitted bid, as long as the competing bids are available for acceptance for at least the minimum number of days as required under Canadian Securities laws.

The Board continues to have the power to carry out its responsibilities and make recommendations to shareholders as appropriate while there are permitted bids outstanding.

Flip-in events

The acquisition of 20 per cent or more of our shares by any person (an acquiring person) is considered a flip-in event when it does not meet the requirements for a permitted bid.

There are certain exceptions in our shareholder rights plan where the acquisition of 20 per cent or more of our shares will not result in the creation of an acquiring person and will not trigger a flip-in event, including where institutional investors acquire 20 per cent or more of our shares as long as they are not making, or are not part of a group that is making, a take-over bid. Institutional investors include investment managers, trust companies, statutory bodies, crown agents and managers or trustees of pension plans or mutual funds.

TransCanada rights

On May 15, 2003, we issued and attached one TransCanada right to each common share outstanding, and to each common share we issued after that date.

These rights separate from our shares and shareholders can then exercise their rights and transfer or trade them separately 10 trading days after the earlier of: (i) the date of commencement or public announcement of a take-over bid for our shares (which is not a permitted bid), (ii) the date that a permitted bid or competing permitted bid ceases to be that, and (iii) the date that a public announcement or disclosure is made that a person has become an acquiring person (the separation time).

After the separation time and prior to a flip-in event, each right allows shareholders to buy one TransCanada share at three times the market price (the exercise price), after adjusting for anti-dilution provisions.

After a flip-in event, each right allows shareholders, other than an acquiring person, to buy that number of shares with a total market price that is double the exercise price (effectively, the price of each share will be half the market price).

The issue of rights is not initially dilutive, but our reported earnings per share on a fully diluted or non-diluted basis may be affected after a flip-in event occurs. You may experience substantial dilution if you do not exercise your TransCanada rights when a flip-in event occurs.

Rights held by an acquiring person are void on a flip in event. Rights cannot be exercised if the shares are acquired through a permitted bid.

About rights and shares

TransCanada rights are imprinted on share certificates and they cannot be transferred separately from the shares before the separation time.

As of the separation time, however, the rights holders receive TransCanada rights certificates that can be transferred, and rights are traded separately from our shares.

Waiving the shareholder rights plan

The Board, acting in good faith can, until the occurrence of a flip-in event, waive the shareholder rights plan for a particular flip-in event (called an exempt acquisition) if a circular for a take-over bid is distributed to all holders of our shares. The waiver will also apply to any other take-over bid and circular that is distributed to holders of our shares before the original bid expires.

The Board can also waive the shareholder rights plan if the acquiring person reduces their beneficial ownership to less than 20 per cent of all outstanding shares.

Redeeming rights

The Board can redeem each right at \$0.00001 per right, as long as it receives approval from a majority of shareholders (or rights holders after the separation time has passed) at a meeting called for this purpose.

The Board will also redeem the rights once a permitted bid, competing permitted bid or exempt acquisition is complete, and does not need shareholder approval to do so.

Lock-up agreements

You and other TransCanada shareholders can enter into a lock-up agreement with a bidder. You become a locked-up person because you agree to tender your shares to the take-over bid (subject bid) without triggering a flip-in event.

Any lock-up agreement must allow you to withdraw your shares so you can tender them to another take-over bid or transaction that provides greater value if:

- the offering price for each share is greater than the subject bid,
- the offering price exceeds the offering price in the subject bid by a specified amount, as long as the specified amount is not greater than seven per cent higher than in the subject bid, or
- the number of shares you can tender exceeds the number of shares in the subject bid by a specified amount, as long as the specified amount is seven per cent or less, and the offering price is not less than the offering price in the subject bid.

The lock-up agreement must meet two other requirements:

- a copy of the lock-up agreement must be made available to TransCanada and the public for review, and
- the locked-up person does not agree to pay break-up or top-up fees, penalties, reimbursement of expenses, or other amounts that total more than the sum of: a) 2.5 per cent of the value to be paid to the locked-up person under the subject bid, and b) 50 per cent of the difference between the amount the locked-up person would receive under another take-over bid or transaction and what they would have received under the subject bid, if they do not tender their shares to the subject bid or withdraw them to deposit with another bid or transaction.

A lock-up agreement can also include a right of first refusal, or a delay period or other limitation, to give the bidder an opportunity to match terms like a higher price or number of securities, as long as the shareholder can accept another bid or tender their shares to another transaction.

Making changes to the shareholder rights plan

The Board can make changes to the shareholder rights plan if a majority of votes by shareholders (or rights holders if the separation time has occurred) cast at a meeting called for that purpose vote for the changes.

The Board can correct clerical and typographical errors and make other housekeeping changes or make changes that are required by law, in each case, without shareholder approval.

SHAREHOLDER PROPOSAL

We received one shareholder proposal. Please refer to *Schedule A* for the shareholder proposal, supporting statement and our response.

The Board recommends you vote **against** the shareholder proposal.

OTHER BUSINESS

We did not receive any shareholder proposals for the meeting, except for the one included above. The Board and management are not aware of any other items to be properly brought before the meeting.

THE NOMINATED DIRECTORS

Our articles currently state that the Board must have a minimum of eight and a maximum of 15 directors. The Board has determined that 12 directors will be elected this year.

The Board believes this size is appropriate based on the scope of our business, the skills and experience of the nominated directors and the four standing committees, and to achieve effective decision-making. It believes that all of the nominated directors are well qualified to serve on the Board.

Two of the nominated directors are being nominated to the Board for the first time. Both Ms. Power and Mr. Williams bring extensive experience in leadership, governance and midstream energy infrastructure.

Eleven of the 12 nominated directors (92 per cent) are *independent* within the meaning of Canadian and applicable U.S. securities law, regulation and policy, and the applicable rules of the TSX and NYSE, the two stock exchanges TransCanada shares are listed on. The only exception is Russell K. Girling because of his role as President and Chief Executive Officer (CEO).

The profiles on the following pages show each director's holdings in TransCanada shares at February 20, 2018, and as of the date of this circular. DSUs are calculated on the basis of retainer fees paid in 2018 and dividend equivalents credited up to January 31, 2018 and January 31, 2019. The profiles also indicate the year he or she joined the Board and has continually served as a director of TransCanada (or TCPL, prior to 2003 when it became a wholly-owned subsidiary of TransCanada). All of the nominated directors are Canadian residents except for Mr. Limbacher, Mr. Lowe, Ms. Salomone and Mr. Vandal who are U.S. residents, and Mr. Crétier, who is a resident of the United Arab Emirates. Mr. Crétier and Mr. Vandal also hold Canadian citizenship.

We have share ownership requirements for our directors and executives to align their interests with those of our shareholders.

As of February 28, 2019, all of our directors are in compliance with our director share ownership policy (see page 65 for more information). Mr. Girling meets the share ownership requirements for the CEO (see page 82 for details).

The at-risk investment reflects the total market value of the director's TransCanada shares and DSUs based on the closing share price on the TSX of \$58.85 on February 28, 2019. See *At-risk investment* on pages 69 and 70 for more information.

Each nominated director has expressed his or her willingness to serve on our Board until our next annual meeting of shareholders.

If elected, they will also serve on the Board of TCPL, our main operating subsidiary.



Stéphan Crétier

AGE 55, DUBAI, UNITED ARAB EMIRATES | DIRECTOR SINCE 2017

Mr. Crétier is the Chairman, President and Chief Executive Officer of GardaWorld Security Corporation (GardaWorld) (private security services). He is also a director of a number of GardaWorld's direct and indirect subsidiaries.

Mr. Crétier has previously served as a director of ORTHOsoft Inc. (medical software technology) (formerly ORTHOsoft Holdings Inc.) from August 2004 to November 2004, a director of BioEnvelop Technologies Corp. (manufacturing) from 2001 to 2003 and as a director, President and Chief Executive Officer of Rafale Capital Corp. (manufacturing) from 1999 to 2001. He plays an active role as a board member of several organizations, including the Montréal Economic Institute, a leading free market thinktank, and the International Security Lique. He also serves on the Board of Trustees of the Hirshhorn Museum, a Smithsonian Institution in Washington D.C.

In 2007, Mr. Crétier was honoured by the Canadian Cancer Society for his exceptional contribution to its mission and in 1998 he was named Young Entrepreneur of the Year by the Québec Young Chamber of Commerce.

Mr. Crétier holds a Master of Business Administration degree from the University of California (Pacific).

Independent

Skills and experience

- CEO
- Mergers & acquisitions
- Operations/health, safety & environment
- Risk management
- Strategy & leading growth

At-risk investment

\$2,102,769

TransCanada Board/committees 2018 meeting attendance

- Board of Directors
6/6 meetings
(100%)
- Audit committee
5/5 meetings
(100%)
- Health, Safety & Environment committee
3/3 meetings
(100%)

| Annual general meeting voting results | Votes in favour | Votes withheld | |
|---------------------------------------|----------------------|-------------------|------------------------------------|
| 2018 | 556,188,656 (99.82%) | 1,023,983 (0.18%) | |
| 2017 | 491,105,654 (99.75%) | 1,235,741 (0.25%) | |
| 2016 | – | – | |
| Other public company boards and date | Stock exchange | Board committees | |
| – | – | – | |
| TransCanada securities held | 2019 | 2018 | Meets share ownership requirements |
| Shares | 27,271 | 18,500 | Yes |
| DSUs | 8,460 | 3,525 | |

Effective, November 27, 2018 the Health, Safety & Environment committee was renamed to the Health, Safety, Sustainability & Environment committee.



Russell K. Girling

AGE 56, CALGARY, AB, CANADA | CHIEF EXECUTIVE OFFICER | DIRECTOR SINCE 2010

Mr. Girling has been President and Chief Executive Officer (CEO) since July 1, 2010. He has led TransCanada through a period of unprecedented growth, including the development of its Liquids Pipelines business, expansion of its power generation portfolio and the successful US\$13 billion acquisition of Columbia Pipeline Group in July 2016.

Previously, Mr. Girling held the positions of Chief Operating Officer; President, Pipelines; Executive Vice-President, Corporate Development; Chief Financial Officer; and Executive Vice-President, Power. Prior to joining TransCanada in 1994, Mr. Girling held several marketing and management positions at Suncor Inc., Northridge Petroleum Marketing and Dome Petroleum.

Mr. Girling is currently a director of Nutrien Ltd. (formed by the merger of Potash Corporation of Saskatchewan and Agrium Inc.). Mr. Girling was a director of the American Petroleum Institute and the Business Council of Canada and is a member of the U.S. National Petroleum Council and U.S. Business Roundtable. Mr. Girling is the former Chairman of the Interstate Natural Gas Association of America, former Chairman of the Natural Gas Council and former director of the Canadian Energy Pipeline Association. He has also served as Chairman and CEO of TC PipeLines GP, Inc. (general partner of TC PipeLines, LP), Chairman of TransCanada Power, L.P. and director of Bruce Power Inc.

Mr. Girling co-chaired the 2012 United Way of Calgary Campaign and is a director of the Willow Park Charity Golf Classic. He was a 1998/1999 recipient of Canada's Top 40 Under 40 Award for leadership excellence for Canadians under the age of 40. In 2008, he was the recipient of the Haskayne School of Business Management Alumni Excellence (MAX) Award.

Mr. Girling holds a Bachelor of Commerce degree and a Master of Business Administration in Finance from the University of Calgary.

Not Independent

(President and Chief Executive Officer of TransCanada)

Skills and experience

- Accounting/audit
- Capital markets
- Electric power
- Energy, midstream & transportation
- Strategy & leading growth

At-risk investment

\$16,746,827

TransCanada Board/committees 2018 meeting attendance

- Board of Directors
6/6 meetings
(100%)

| Annual general meeting voting results | Votes in favour | Votes withheld | |
|--|----------------------|---------------------|------------------------------------|
| 2018 | 556,280,425 (99.83%) | 937,576 (0.17%) | |
| 2017 | 491,216,793 (99.77%) | 1,125,652 (0.23%) | |
| 2016 | 376,856,536 (99.83%) | 646,477 (0.17%) | |
| Other public company boards and date | Stock exchange | Board committees | |
| Nutrien Ltd. (agricultural) (since May 2006) | TSX, NYSE | Audit Governance | |
| TransCanada securities held | 2019 | 2018 | Meets share ownership requirements |
| Shares | 284,568 | 248,516 | Yes (for CEO) |
| DSUs | – | – | |

As President and CEO of TransCanada, Mr. Girling is not a member of any of our committees, but is invited to attend committee meetings as required.



S. Barry Jackson

AGE 66, CALGARY, AB, CANADA | DIRECTOR SINCE 2002

Mr. Jackson is a corporate director. He currently serves on the board of WestJet Airlines Ltd.

Mr. Jackson has previously served as a director of Laricina Energy Ltd. (oil and gas, exploration and production) from 2005 to November 2017, Nexen Inc. (oil and gas, exploration and production) from 2001 to June 2013, serving as Chair from 2012, a director of Cordero Energy Inc. from 2005 to 2008, the Chair of Resolute Energy Inc. from 2002 to 2005, the Chair of Deer Creek Energy Limited from 2001 to 2005 and director of ENMAX Corporation from 1999 to 2002, Westcoast Energy Inc. from 2001 to 2002, and Gulf Canada Resources Ltd. from 2000 to 2001.

Mr. Jackson has also been the President and Chief Executive Officer of Crestar Energy Inc. from 1993 to 2000 and was the Chair of the Canadian Association of Petroleum Producers in 1997. Prior to that, he held a number of senior management positions in the oil and gas industry since 1974.

Mr. Jackson has a Bachelor of Science in Engineering from the University of Calgary.

Independent

Skills and experience

- CEO
- Human resources & compensation
- Operations/health, safety & environment
- Strategy & leading growth
- Upstream oil & gas

At-risk investment

\$12,089,556

TransCanada Board/committees 2018 meeting attendance

- Board of Directors
6/6 meetings
(100%)
- Audit committee
3/3 meetings
(100%)
- Governance committee
2/2 meetings
(100%)
- Human Resources committee
5/5 meetings
(100%)

| Annual general meeting voting results | Votes in favour | Votes withheld | |
|--|----------------------|--|------------------------------------|
| 2018 | 550,699,101 (98.83%) | 6,517,588 (1.17%) | |
| 2017 | 488,982,397 (99.32%) | 3,357,679 (0.68%) | |
| 2016 | 368,817,294 (97.70%) | 8,685,719 (2.30%) | |
| Other public company boards and date | Stock exchange | Board committees | |
| WestJet Airlines Ltd. (airline) (since February 2009) | TSX | People & Compensation Safety Health and Environment (Chair) | |
| TransCanada securities held | 2019 | 2018 | Meets share ownership requirements |
| Shares | 39,000 | 39,000 | Yes |
| DSUs | 166,430 | 155,920 | |

Laricina Energy (Laricina), a private company, voluntarily entered into the Companies' Creditors Arrangement Act (CCAA) and obtained an order from the Court of Queen's Bench of Alberta, Judicial Centre of Calgary for creditor protection and stay of proceedings effective March 26, 2015. A final court order was granted on January 28, 2016, allowing Laricina to exit from protection under the CCAA and concluding the stay of proceedings against Laricina and subsidiaries.



Randy Limbacher

AGE 60, HOUSTON, TX, U.S.A. | DIRECTOR SINCE 2018

Mr. Limbacher is the Chief Executive Officer of Meridian Energy, LLC (oil and gas, exploration and production). He also serves on the board of directors for CARBO Ceramics Inc.

Mr. Limbacher was the President and Chief Executive Officer of Samson Resources Corporation (oil and gas, exploration and production) from April 2013 to December 2015, where he then served as Vice Chairman of Samson Resources Corporation until March 2017. He has also served as Chairman, President and Chief Executive Officer of Rosetta Resources, Inc. (oil and gas) from November 2007 to February 2013.

Prior to that, Mr. Limbacher held the position of Executive Vice-President, Western Hemisphere for ConocoPhillips (oil and gas) from 2006 to 2007. He has also spent over 20 years with Burlington Resources, Inc. (oil and gas) where he served as Executive Vice-President and Chief Operating Officer from 2002 until it was acquired by ConocoPhillips in 2006. He was elected to the Board of Burlington Resources in 2004.

Mr. Limbacher holds a Bachelor of Science degree from Louisiana State University. He is a general partner of R&C Hidden Springs Ranch LTD (farm management services) and is a member of the Society of Petroleum Engineers.

Independent

Skills and experience

- CEO
- Human resources & compensation
- Operations/health, safety & environment
- Strategy & leading growth
- Upstream oil & gas

At-risk investment

\$107,578

TransCanada Board/committees 2018 meeting attendance

- Board of Directors
4/4 meetings
(100%)
- Audit committee (Chair)
3/3 meetings
(100%)
- Health, Safety & Environment committee
1/1 meetings
(100%)

| Annual general meeting voting results | Votes in favour | | Votes withheld |
|--|-----------------|------|---|
| 2018 | – | – | – |
| 2017 | – | – | – |
| 2016 | – | – | – |
| Other public company boards and date | Stock exchange | | Board committees |
| CARBO Ceramics Inc. (manufacturing) (since July 2007) | NYSE | | Audit Compensation Nominating and Corporate Governance |
| TransCanada securities held | 2019 | 2018 | Meets share ownership requirements |
| Shares | – | – | Mr. Limbacher has until June 13, 2023 to meet the requirements. |
| DSUs | 1,828 | – | |

Effective November 27, 2018, the Health, Safety & Environment committee was renamed the Health, Safety, Sustainability & Environment committee.



John E. Lowe
AGE 60, HOUSTON, TX, U.S.A. | DIRECTOR SINCE 2015

Mr. Lowe is the non-executive Chair of Apache Corporation's board of directors. He also currently serves on the board of directors for Phillips 66 and has been a Senior Executive Adviser at Tudor, Pickering, Holt & Co. LLC (energy investment and merchant banking) since September 2012.

Independent

Skills and experience

- Accounting/audit
- Capital markets
- Energy, midstream & transportation
- Mergers & acquisitions
- Upstream oil & gas

At-risk investment

\$2,045,155

TransCanada Board/committees 2018 meeting attendance

- Board of Directors
6/6 meetings (100%)
- Audit committee (Chair)
5/5 meetings (100%)
- Health, Safety & Environment committee
3/3 meetings (100%)

Mr. Lowe has previously served as a director of Agrium Inc. (agricultural) from May 2010 to August 2015, DCP Midstream LLC (oil and gas, exploration and production) and its wholly owned subsidiary, DCP Midstream GP, LLC, the general partner of DCP Midstream Partners, LP from October 2008 to April 2012 and Chevron Phillips Chemical Co. LLC from October 2008 to January 2011. He has also held various executive and management positions with ConocoPhillips Co. for more than 25 years, including Assistant to the Chief Executive Officer of ConocoPhillips Co., Executive Vice-President of Exploration & Production and Executive Vice-President of Commercial.

Mr. Lowe is on the Board of Advisors of Kelce School at Pittsburg State University. He has also previously served on the Texas Children's Hospital West Campus Advisory Council and is a former director of the National Association of Manufacturers.

Mr. Lowe holds a Bachelor of Science degree in Finance and Accounting from Pittsburg State University in Pittsburg, Kansas and is a Certified Public Accountant (inactive).

| Annual general meeting voting results | Votes in favour | Votes withheld | |
|--|----------------------|--------------------------------|------------------------------------|
| 2018 | 554,450,991 (99.50%) | 2,767,011 (0.50%) | |
| 2017 | 491,289,678 (99.79%) | 1,044,280 (0.21%) | |
| 2016 | 376,651,391 (99.77%) | 851,418 (0.23%) | |
| Other public company boards and date | Stock exchange | Board committees | |
| Apache Corporation (oil and gas) (since July 2013) | NYSE | Non-executive Chairman | |
| Phillips 66 Company (oil and gas) (since May 2012) | NYSE | Public Policy (Chair) Audit | |
| TransCanada securities held | 2019 | 2018 | Meets share ownership requirements |
| Shares | 20,000 | 15,000 | Yes |
| DSUs | 14,752 | 10,959 | |

Effective November 27, 2018, the Health, Safety & Environment committee was renamed the Health, Safety, Sustainability & Environment committee.



Una Power

AGE 54, VANCOUVER, BC, CANADA

Ms. Power is a corporate director and currently serves on the boards of the Bank of Nova Scotia, Kinross Gold Corporation and Teck Resources Limited.

Ms. Power was the Chief Financial Officer of Nexen Energy ULC (Nexen) from February 2013 to March 2016, a former publicly traded energy company that is now a wholly-owned subsidiary of CNOOC Limited. During her 24-year career with Nexen, Ms. Power held various executive positions with responsibility for financial and risk management, strategic planning and budgeting, business development, energy marketing and trading, information technology and capital investment.

Ms. Power holds a Bachelor of Commerce (Honours) Degree from Memorial University and holds Chartered Professional Accountant, Chartered Accountant and Chartered Financial Analyst designations. She has completed executive development programs at Wharton Business School and INSEAD.

Independent

Skills and experience

- Electric power
- Governance
- Human resources & compensation
- Major projects
- Operations/health, safety & environment

At-risk investment

\$0

| Annual general meeting voting results | Votes in favour | | Votes withheld |
|--|-----------------|------|--|
| 2018 | – | – | – |
| 2017 | – | – | – |
| 2016 | – | – | – |
| Other public company boards and date | Stock exchange | | Board committees |
| Kinross Gold Corporation (gold producer) (since April 2013) | TSX, NYSE | | Audit, and Risk Corporate Responsibility and Technical |
| The Bank of Nova Scotia (chartered bank) (since April 2016) | TSX, NYSE | | Audit (chair) Human Resources |
| Teck Resources Limited (diversified mining company) (since April 2017) | TSX, NYSE | | Audit Reserves |
| TransCanada securities held | 2019 | 2018 | Meets share ownership requirements |
| Shares | – | – | If appointed, Ms. Power will have until May 3, 2024 to meet the requirements |
| DSUs | – | – | |



Mary Pat Salomone

AGE 58, NAPLES, FL, U.S.A. | DIRECTOR SINCE 2013

Independent

Skills and experience

- Electric power
- Governance
- Human resources & compensation
- Major projects
- Operations/health, safety & environment

At-risk investment

\$1,267,452

TransCanada Board/committees 2018 meeting attendance

- Board of Directors
6/6 meetings
(100%)
- Governance committee
2/2 meetings
(100%)
- Health, Safety & Environment committee
3/3 meetings
(100%)
- Human Resources committee
2/2 meetings
(100%)

Ms. Salomone is a corporate director. She currently serves on the board of directors of Herc Rentals and Intertape Polymer Group. She also serves as a trustee of the Youngstown State University Foundation. Ms. Salomone was the Senior Vice-President and Chief Operating Officer of The Babcock & Wilcox Company (B&W) (energy infrastructure) from January 2010 to June 30, 2013. Prior to that, she served as Manager of Business Development from 2009 to 2010 and Manager of Strategic Acquisitions from 2008 to 2009 for Babcock & Wilcox Nuclear Operations Group, Inc. From 1998 through December 2007, Ms. Salomone served as an officer of Marine Mechanical Corporation, which B&W acquired in 2007, including her term as President and Chief Executive Officer from 2001 through 2007.

Ms. Salomone previously served on the board of directors of United States Enrichment Corporation (basic materials, nuclear) from December 2011 to October 2012 and on the Naval Submarine League from 2007 to 2013. She was formerly a member of the Governor's Workforce Policy Advisory Board in Ohio and the Ohio Employee Ownership Center, and served on the board of Cleveland's Manufacturing Advocacy & Growth Network.

Ms. Salomone has a Bachelor of Engineering in Civil Engineering from Youngstown State University and a Master of Business Administration from Baldwin Wallace College. She completed the Advanced Management Program at Duke University's Fuqua School of Business in 2011.

| Annual general meeting voting results | Votes in favour | Votes withheld | |
|--|----------------------|---|------------------------------------|
| 2018 | 555,059,177 (99.61%) | 2,158,825 (0.39%) | |
| 2017 | 490,611,527 (99.65%) | 1,730,918 (0.35%) | |
| 2016 | 376,547,744 (99.75%) | 955,268 (0.25%) | |
| Other public company boards and date | Stock exchange | Board committees | |
| Herc Rentals (rental equipment) (since July 2016) | NYSE | Compensation Nominating & Governance | |
| Intertape Polymer Group (manufacturing) (since November 2015) | TSX | Audit Compensation | |
| TransCanada securities held | 2019 | 2018 | Meets share ownership requirements |
| Shares | 3,000 | 3,000 | Yes |
| DSUs | 18,537 | 14,558 | |

Effective November 27, 2018, the Health, Safety & Environment committee was renamed the Health, Safety, Sustainability & Environment committee.

Ms. Salomone was a director of Crucible Materials Corp. (Crucible) from May 2008 to May 1, 2009. On May 6, 2009, Crucible and one of its affiliates filed voluntary petitions for relief under Chapter 11 of the United States Bankruptcy Code in the U.S. Bankruptcy Court for the District of Delaware (the Bankruptcy Court). On August 26, 2010, the Bankruptcy Court entered an Order confirming Crucible's Second Amended Chapter 11 Plan of Liquidation.



Indira V. Samarasekera

AGE 66, VANCOUVER, BC, CANADA | DIRECTOR SINCE 2016

Dr. Samarasekera is currently a senior advisor for Bennett Jones LLP (law firm) and serves on the boards of The Bank of Nova Scotia, Magna International Inc., Stelco Holdings Inc. and York House School. She also currently serves on the selection panel for Canada's outstanding chief executive officer of the year, is a member of the TriLateral Commission and is a Fellow of the Royal Society of Canada.

Dr. Samarasekera is internationally recognized as one of Canada's leading metallurgical engineers for her groundbreaking work on steel process engineering and she was the first incumbent of the Dofasco Chair in Advanced Steel Processing at the University of British Columbia. From 2005 to 2015, she served as President of the University of Alberta. Prior to that, she was elected to the National Academy of Engineering in the U.S. She has also served as the chair of the Worldwide Universities Network and has served on several boards and committees including the Asia-Pacific Foundation, Rideau Hall Foundation, Prime Minister's Advisory Committee for Renewal of the Public Service, a Presidential Visiting Committee at the Massachusetts Institute of Technology and Canada's Science, Technology, Innovation Council.

Dr. Samarasekera has received honorary degrees from the Universities of Alberta, British Columbia, Toronto, Waterloo, Montréal and Western in Canada, and Queen's University in Belfast, Ireland. She received the Peter Lougheed Leadership Award from the Public Policy Forum in Canada in 2012 and was awarded the Order of Canada in 2002. Dr. Samarasekera was also granted a PhD in metallurgical engineering from the University of British Columbia in 1980 and, as a Hays Fulbright Scholar, she earned a Master of Science from the University of California in 1976.

Independent

Skills and experience

- CEO
- Governance
- Government & regulatory
- Human resources & compensation
- Strategy & leading growth

At-risk investment

\$704,376

TransCanada Board/committees 2018 meeting attendance

- Board of Directors
6/6 meetings
(100%)
- Audit committee
5/5 meetings
(100%)
- Governance committee
2/2 meetings
(100%)
- Human Resources committee
3/3 meetings
(100%)

| Annual general meeting voting results | Votes in favour | Votes withheld |
|---------------------------------------|----------------------|-------------------|
| 2018 | 555,355,807 (99.67%) | 1,860,882 (0.33%) |
| 2017 | 491,121,319 (99.75%) | 1,218,760 (0.25%) |
| 2016 | 376,140,498 (99.64%) | 1,362,311 (0.36%) |

| Other public company boards and date | Stock exchange | Board committees |
|---|----------------|---|
| The Bank of Nova Scotia (chartered bank) (since May 2008) | TSX, NYSE | Corporate Governance Human Resources |
| Magna International Inc. (manufacturing, automotive parts) (since May 2014) | TSX, NYSE | Corporate Governance and Nominating |
| Stelco Holdings Inc. (manufacturing) (since May 2018) | TSX | Environment, Health & Safety |

| TransCanada securities held | 2019 | 2018 | Meets share ownership requirements |
|-----------------------------|--------|-------|---|
| Shares | – | – | Dr. Samarasekera has until April 29, 2021 to meet the requirements. |
| DSUs | 11,969 | 6,833 | |



D. Michael G. Stewart

AGE 67, CALGARY, AB, CANADA | DIRECTOR SINCE 2006

Independent

Skills and experience

- Energy, midstream & transportation
- Major projects
- Operations/health, safety & environment
- Risk management
- Upstream oil & gas

At-risk investment

\$3,337,384

TransCanada Board/committees 2018 meeting attendance

- Board of Directors
6/6 meetings
(100%)
- Audit committee
2/2 meetings
(100%)
- Governance committee
2/2 meetings
(100%)
- Health, Safety & Environment committee (Chair)
3/3 meetings
(100%)

Mr. Stewart is a corporate director. He serves as a director of Pengrowth Energy Corporation and CES Energy Solutions Corp. He was a director of Northpoint Resources Ltd. (oil and gas, exploration and production) from July 2013 to February 2015, a director of C&C Energia Ltd. (oil and gas) from May 2010 to December 2012, a director of Orleans Energy Ltd. from October 2008 to December 2010, a director of Pengrowth Corporation (administrator of Pengrowth Energy Trust) from October 2006 to December 2010, a director of Canadian Energy Services Inc. (general partner of Canadian Energy Services L.P.) from January 2006 to December 2009, Chairman and trustee of Esprit Energy Trust from August 2004 to October 2006, and a director of Creststreet Power & Income General Partner Limited (general partner of Creststreet Power & Income Fund L.P.) from December 2003 to February 2006.

Mr. Stewart held a number of senior executive positions with Westcoast Energy Inc. from September 1993 to March 2002, including Executive Vice-President, Business Development.

He has been active in the Canadian energy industry for over 40 years, and is a member of the Institute of Corporate Directors and the Association of Professional Engineers and Geoscientists of Alberta (non-practicing).

Mr. Stewart holds a Bachelor of Science (Geological Sciences) with First Class Honours from Queen's University.

| Annual general meeting voting results | Votes in favour | Votes withheld | |
|--|----------------------|---|------------------------------------|
| 2018 | 556,082,270 (99.80%) | 1,135,731 (0.20%) | |
| 2017 | 490,975,180 (99.72%) | 1,358,778 (0.28%) | |
| 2016 | 376,770,778 (99.81%) | 732,173 (0.19%) | |
| Other public company boards and date | Stock exchange | Board committees | |
| CES Energy Solutions Corp. (oilfield services) (since January 2010) | TSX | Audit Corporate Governance and Nominating (Chair) | |
| Pengrowth Energy Corporation (oil and gas, exploration and production) (since December 2010) | TSX, NYSE | Compensation Corporate Governance & Nominating (Chair) | |
| TransCanada securities held | 2019 | 2018 | Meets share ownership requirements |
| Shares | 18,188 | 17,310 | Yes |
| DSUs | 38,522 | 34,299 | |

Effective November 27, 2018, the Health, Safety & Environment committee was renamed the Health, Safety, Sustainability & Environment committee.



Siim A. Vanaselja

AGE 62, TORONTO, ON, CANADA | BOARD CHAIR | DIRECTOR SINCE 2014

Mr. Vanaselja is a corporate director. He is currently the Chair of the Board of TransCanada. He also serves on the board of directors of Great-West Lifeco Inc., Power Financial Corporation and RioCan Real Estate Investment Trust.

Mr. Vanaselja was the Executive Vice-President & Chief Financial Officer of BCE Inc. and Bell Canada (telecommunications and media) from January 2001 to June 2015. Prior to joining BCE Inc., he was a partner at the accounting firm KPMG Canada in Toronto.

Mr. Vanaselja previously served as a member of the Conference Board of Canada's National Council of Financial Executives, the Corporate Executive Board's working council for Chief Financial Officers and Moody's Council of Chief Financial Officers. During the period of the 2008 global financial crisis, he was a member of the Minister of Finance's Special Advisory Committee to address the continued functioning of financial and credit markets in Canada.

He is a member of the Institute of Corporate Directors and a fellow of the Chartered Professional Accountants of Ontario. He holds an Honours Bachelor of Business degree from the Schulich School of Business. His community involvement has included work with Big Brothers Big Sisters of Toronto, St. Mary's Hospital, the Heart and Stroke Foundation of Québec and the annual Walk for Kids Help Phone.

Independent

Skills and experience

- Accounting/audit
- Capital markets
- Mergers & acquisitions
- Risk management
- Strategy & leading growth

At-risk investment

\$2,536,906

TransCanada

Board/committees 2018 meeting attendance

- Board of Directors (Chair)
6/6 meetings
(100%)
- Governance committee
4/4 meetings
(100%)
- Human Resources committee
5/5 meetings
(100%)

| Annual general meeting voting results | Votes in favour | Votes withheld |
|---------------------------------------|----------------------|--------------------|
| 2018 | 554,477,504 (99.51%) | 2,740,498 (0.49%) |
| 2017 | 460,603,007 (93.55%) | 31,739,438 (6.45%) |
| 2016 | 376,082,537 (99.62%) | 732,173 (0.19%) |

| Other public company boards and date | Stock exchange | Board committees |
|---|----------------|--|
| Great-West Lifeco Inc. (financial services) (since May 2014) | TSX | Audit Risk Investment Executive |
| Power Financial Corporation (financial services) (since May 2018) | TSX | Audit |
| RioCan Real Estate Investment Trust (real estate) (since May 2017) | TSX | Audit Human Resources |

| TransCanada securities held | 2019 | 2018 | Meets share ownership requirements |
|-----------------------------|--------|--------|------------------------------------|
| Shares | 12,000 | 12,000 | Yes |
| DSUs | 31,108 | 20,232 | |



Thierry Vandal

AGE 58, MAMARONECK, NY, U.S.A | DIRECTOR SINCE 2017

Mr. Vandal is the President of Axiom Infrastructure U.S., Inc. (independent infrastructure fund management firm) and currently serves on the board of directors for Axiom Infrastructure Inc. (infrastructure fund management) and The Royal Bank of Canada. He also serves on the international advisory board of École des Hautes Etudes Commerciales (HEC) Montréal.

Mr. Vandal previously served as President and Chief Executive Officer for Hydro-Québec (electric utility) from 2005 to May 2015. He has also served as a director for HEC Montréal from 2006 to October 2017, director for Veresen Inc. (energy infrastructure) from 2015 to July 2017, Chairman of BioFuelNet Canada (biofuels industry) from 2013 to 2015, Chairman of the Conference Board of Canada from 2009 to 2010 and was a McGill University Governor from 2006 to 2017 as well as Chair of its Finance Committee from 2010 to 2017.

Mr. Vandal holds a Bachelor of Engineering degree from École Polytechnique de Montréal and a Master of Business Administration in finance from HEC Montréal. In 2012, he was named Canadian Energy Person of the Year by the Canadian Energy Council. He was also awarded an honorary doctorate by the Université de Montréal in 2007.

Independent

Skills and experience

- CEO
- Electric power
- Energy, midstream & transportation
- Government & regulatory
- Major projects

At-risk investment

\$431,547

TransCanada Board/committees 2018 meeting attendance

- Board of Directors
6/6 meetings
(100%)
- Audit committee
4/5 meetings
(80%)
- Health, Safety & Environment committee
2/3 meetings
(67%)

| Annual general meeting voting results | Votes in favour | Votes withheld | |
|---|----------------------|--------------------------|---|
| 2018 | 556,161,094 (99.81%) | 1,056,908 (0.19%) | |
| 2017 | – | – | |
| 2016 | – | – | |
| Other public company boards and date | Stock exchange | Board committees | |
| The Royal Bank of Canada (chartered bank) (since August 2015) | TSX, NYSE | Audit Human Resources | |
| TransCanada securities held | 2019 | 2018 | Meets share ownership requirements |
| Shares | 269 | 261 | Mr. Vandal has until November 6, 2022 to meet the requirements. |
| DSUs | 7,064 | 804 | |

Effective November 27, 2018, the Health, Safety & Environment committee was renamed the Health, Safety, Sustainability & Environment committee.



Steven W. Williams

AGE 63, CALGARY, AB, CANADA

Independent

Skills and experience

- CEO
- Major projects
- Operations/health, safety & environment
- Strategy & leading growth
- Upstream oil & gas

At-risk investment

\$0

Mr. Williams has been the Chief Executive Officer and Director of Suncor Energy Inc. since November 2018, having previously held the position of President and Chief Executive Officer and Director since May 2012. He also serves on the board of directors for Alcoa Corporation and is a member of The Business Council of Canada. Mr. Williams will be retiring from Suncor Energy Inc. on May 2, 2019.

Previously, Mr. Williams has held the positions of President and Chief Operating Officer from December 2011 to April 2012, Chief Operating Officer from April 2007 to November 2011, Executive Vice-President Oilsands from July 2003 to March 2007 and Executive Vice-President, Corporate Development and Chief Financial Officer from May 2002 to June 2003 with Suncor Energy Inc.

Mr. Williams has more than 40 years of international energy industry experience and is an active supporter of not-for-profit organizations. In 2005 he was appointed to the National Roundtable on the Environment and the Economy by the Prime Minister of Canada. He has also been a member of the advisory board of Canada's Ecofiscal Commission since its inception. In addition, he is one of 12 founding Chief Executive Officers of Canada's Oil Sands Innovation Alliance and attended the 2015 United Nations Climate Change Conference in Paris, France as an official member of the Government of Canada.

Mr. Williams holds a Bachelor of Science degree (Honours) in chemical engineering from Exeter University and is a Fellow of the Institution of Chemical Engineers. He is also a graduate of the business economics program at Oxford University and the advanced management program at Harvard Business School.

| Annual general meeting voting results | Votes in favour | | Votes withheld |
|--|-----------------|------|---|
| 2018 | – | | – |
| 2017 | – | | – |
| 2016 | – | | – |
| Other public company boards and date | Stock exchange | | Board committees |
| Suncor Energy Inc. (oil & gas) (since May 2012) | TSX, NYSE | | |
| Alcoa Corporation (aluminum) (since May 2016) | NYSE | | Governance & Nomination Compensation & Benefits Executive Committee |
| TransCanada securities held | 2019 | 2018 | Meets share ownership requirements |
| Shares | – | – | If appointed, Mr. Williams will have until May 3, 2024 to meet the requirements |
| DSUs | – | – | |

SERVING TOGETHER ON OTHER BOARDS

While the Board does not prohibit directors having common membership on other boards, the Board reviews potential common membership on other boards as they arise to determine whether it affects the ability of those directors to exercise independent judgment as members of TransCanada's Board.

Currently, none of our directors serve together on another board. If both Ms. Power and Dr. Samarasekera are elected at the 2019 annual and special meeting of shareholders, there will be one interlock as both are directors of the Bank of Nova Scotia. The Board has determined that this will not affect the ability of either Ms. Power or Dr. Samarasekera to exercise independent judgement.

We also place limits on the number of public company boards that our directors may serve on. See **Governance – Serving on other boards**.

MEETING ATTENDANCE

We expect our directors to demonstrate a strong commitment to their roles and responsibilities while serving on our Board. The table below shows the directors' 2018 attendance record, which averaged 98 per cent for all Board and committee meetings. The Board also held three strategic issues sessions and a strategic planning meeting over two days in 2018.

| | Board committees | | | | | | | | | | |
|-----------------------|--------------------|-----|-------|-----|------------|-----|------------------------------|-----|-----------------|-----|--------------------|
| | Board of directors | | Audit | | Governance | | Health, Safety & Environment | | Human Resources | | Overall attendance |
| | # | % | # | % | # | % | # | % | # | % | % |
| Kevin E. Benson | 6/6 | 100 | 2/2 | 100 | 4/4 | 100 | – | – | 3/3 | 100 | 100 |
| Derek H. Burney | 2/2 | 100 | 2/2 | 100 | 2/2 | 100 | – | – | – | – | 100 |
| Stéphan Crétier | 6/6 | 100 | 5/5 | 100 | – | – | 3/3 | 100 | – | – | 100 |
| Russell K. Girling | 6/6 | 100 | – | – | 4/4 | 100 | – | – | 5/5 | 100 | 100 |
| S. Barry Jackson | 6/6 | 100 | 3/3 | 100 | 2/2 | 100 | – | – | 5/5 | 100 | 100 |
| Randy Limbacher | 4/4 | 100 | 3/3 | 100 | – | – | 1/1 | 100 | – | – | 100 |
| John E. Lowe | 6/6 | 100 | 5/5 | 100 | – | – | 3/3 | 100 | – | – | 100 |
| Paula Rosput Reynolds | 6/6 | 100 | – | – | 4/4 | 100 | – | – | 5/5 | 100 | 100 |
| Mary Pat Salomone | 6/6 | 100 | – | – | 2/2 | 100 | 3/3 | 100 | 2/2 | 100 | 100 |
| Indira Samarasekera | 6/6 | 100 | 5/5 | 100 | 2/2 | 100 | – | – | 3/3 | 100 | 100 |
| D. Michael G. Stewart | 6/6 | 100 | 2/2 | 100 | 2/2 | 100 | 3/3 | 100 | – | – | 100 |
| Siim A. Vanaselja | 6/6 | 100 | – | – | 4/4 | 100 | – | – | 5/5 | 100 | 100 |
| Thierry Vandal | 6/6 | 100 | 4/5 | 80 | – | – | 2/3 | 67 | – | – | 86 |
| Richard E. Waugh | 2/2 | 100 | – | – | – | – | 1/2 | 50 | 2/2 | 100 | 83 |

Notes

- Mr. Girling is not a member of any committees, but is invited to attend committee meetings as required.
- Mr. Benson was a member of the Audit committee until April 27, 2018 when he became a member of the Human Resources committee.
- Mr. Jackson was a member of the Governance committee until April 27, 2018 when he became a member of the Audit committee.
- Ms. Salomone was a member of the Human Resources committee until April 27, 2018 when she became a member of the Governance committee.
- Dr. Samarasekera was a member of the Governance committee until April 27, 2018 when she became a member of the Human Resources committee.
- Mr. Stewart was a member of the Audit committee until April 27, 2018 when he became a member of the Governance committee.
- On June 13, 2018, Mr. Limbacher was appointed as a director and became a member of the Audit and Health, Safety & Environment committees.
- Mr. Burney and Mr. Waugh retired from the Board on April 27, 2018.
- In late 2018, the Health, Safety and Environment committee was renamed the Health, Safety, Sustainability and Environment committee.

Governance

We believe that strong governance improves corporate performance and benefits all stakeholders.

This section discusses our approach to governance and describes our Board and how it works.

About our governance practices

Our Board and management are committed to the highest standards of ethical conduct and corporate governance.

TransCanada is a public company listed on the TSX and the NYSE, and we recognize and respect rules and regulations in both Canada and the U.S.

Our corporate governance practices comply with the Canadian governance guidelines, which include the governance rules of the TSX and Canadian Securities Administrators (CSA):

- National Instrument 52-110, *Audit Committees* (NI 52-110)
- National Policy 58-201, *Corporate Governance Guidelines*
- National Instrument 58-101, *Disclosure of Corporate Governance Practice* (NI 58-101).

We also comply with the governance listing standards of the NYSE and the governance rules of the U.S. Securities and Exchange Commission (SEC) that apply, in each case, to foreign private issuers.

Our governance practices comply with the NYSE standards for U.S. companies in all significant respects, except as summarized on our website (www.transcanada.com). As a non-U.S. company, we are not required to comply with most of the governance listing standards of the NYSE. As a foreign private issuer, however, we must disclose how our governance practices differ from those followed by U.S. companies that are subject to the NYSE standards.

We benchmark our policies and procedures against major North American companies to assess our standards and we adopt best practices as appropriate. Some of our best practices are derived from the NYSE rules and comply with applicable rules adopted by the SEC to meet the requirements of the *Sarbanes-Oxley Act of 2002* and the *Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank)*.

WHERE TO FIND IT

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BOARD CHARACTERISTICS

Our Board and its members exemplify strong principles of corporate governance:

- an independent, non-executive Chair,
- all directors except our CEO are independent,
- knowledgeable, diverse and experienced directors who ensure that we promote ethical behaviour throughout TransCanada,
- qualified directors who can make a meaningful contribution to the Board, the development of our strategy and business, and oversight of our risk management processes,
- significant share ownership requirements to align the directors' interests with those of our shareholders,
- annual assessments of Board, Chair, committee and director effectiveness, and
- an effective board size.

Size and composition

TransCanada's articles state that the Board must have between eight and 15 directors. The Board has determined that 12 directors will be elected this year at the annual and special meeting. The Board believes this size is appropriate based on the scope of our business, the skills and experience of the nominated directors and the four standing committees, and to achieve effective decision making. It believes that all of the nominated directors are well qualified to serve on the Board.

We believe our Board must consist of qualified, diverse and knowledgeable directors, and include directors with direct experience in the oil and gas, pipelines and energy sectors.

Board diversity

We have been committed to a diverse Board since 1999, when our Corporate governance guidelines were revised to include a variety of diversity criteria, which bring a range of perspectives to the Board that are not limited to gender diversity. TransCanada does not have term limits for directors, but does have a retirement policy to encourage Board renewal, as discussed under *Director tenure*, on page 50.

In February 2018, the Board adopted and endorsed a Board Diversity policy relating to the identification and nomination of directors. The objective of the policy is to increase Board diversity by seeking qualified director nominees, while considering diversity criteria. Diversity criteria includes skills, expertise, industry experience and personal characteristics such as age, gender, ethnicity and other distinctions of potential director nominees.

More specifically, in seeking suitable candidates, the Governance committee will:

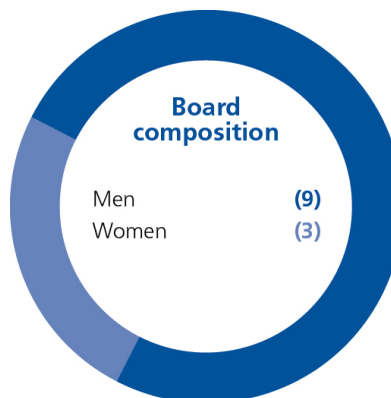
- consider all aspects of diversity,
- assess the skills and backgrounds collectively represented on the Board to ensure that they reflect the diverse nature of the business environment in which we operate,
- consider candidates on merit against objective criteria having due regard to the benefits of diversity on the Board, and
- at their discretion, engage qualified independent external advisors to identify and assess candidates that meet the Board's skills and diversity criteria.

The Board has committed to an aspirational target for the Board to be comprised of at least 30 per cent women by the end of 2020.

Each year, the Governance committee will:

- assess the effectiveness of the Board Diversity policy,
- monitor and review our progress in achieving the aspirational target for gender diversity,
- monitor the implementation of the Board Diversity policy, and
- report to the Board and recommend any revisions that may be necessary.

Currently, 25 per cent of the Board is composed of women, an increase of two per cent from February 20, 2018, due to the size of the Board decreasing from 13 directors to 12 directors. After the annual and special meeting, if all the nominated directors are elected, there will be no change to the percentage of women directors as Ms. Power is being nominated to the Board, but Ms. Reynolds is retiring. While there is no change to the number of women on the Board, the Governance committee remains committed to meeting or exceeding the previously-mentioned 30 per cent target. The committee has set 2020 as the deadline to achieve this level of gender diversity but intends to act sooner, as it identifies female candidates who are available to serve as directors.



Independence

An independent board is a fundamental principle of governance. We believe that the majority of our directors must be *independent* in accordance with applicable Canadian legal requirements and guidelines, and consistent with the applicable independence criteria of the regulations of the SEC and rules of the NYSE.

The Governance committee and the Board review the independence of each Board member and nominated director against these criteria once a year. The Governance committee also reviews family relationships and associations with companies that have relationships with TransCanada when it reviews director independence.

The Board has determined that all of the nominated directors are independent, except for Mr. Girling because of his role as President and CEO. Other than Mr. Girling, none of the directors have a direct or indirect material relationship with TransCanada that could reasonably be expected to interfere with the exercise of his or her independent judgment.

Independent Chair

The Chair is appointed by the Board, and serves in a non-executive capacity. We have had separate Chair and CEO positions since our incorporation in 2003 and at our predecessor company since 1994. Mr. Vanaselja has served as the independent non-executive Chair since May 5, 2017.

Independent advice

The Board and each of its four standing committees can retain independent advisors to assist in carrying out their duties and responsibilities.

Serving on other boards

To ensure we do not have overboarding or interlocking relationships that would conflict with a director's independence or interfere with fulfilling their Board duties and responsibilities, we have the following policy:

- outside directors may not serve on more than four public company boards in total,
- the CEO may not serve on more than two public company boards in total (including TransCanada), and
- Audit committee members may not serve on more than three audit committees in total.

Currently, all of our directors meet our overboarding policy requirements, except for Ms. Reynolds who is retiring at the 2019 annual and special meeting of shareholders.

We discuss the time commitment and duties and responsibilities with every candidate so they have a full understanding of the role and our expectations of directors. The Governance committee monitors director relationships to ensure their business associations do not hinder their role as a TransCanada director or Board performance overall.

The Board believes that it is important for it to be composed of qualified and knowledgeable directors. As a result, due to the specialized nature of the energy infrastructure business, some of the nominated directors are associated with or sit on the boards of companies that ship natural gas or liquids through our pipeline systems. Transmission services on most of TransCanada's pipeline systems in Canada and the U.S. are subject to regulation and, accordingly, we generally cannot deny transportation services to a creditworthy shipper. As discussed in ***Conflicts of interest***, the Governance committee monitors relationships among directors to ensure that business associations do not affect the Board's performance.

See the director profiles starting on page 18 for the other public company boards each nominated director serves on.

Independent of management

Our Corporate governance guidelines stipulate that the Board must meet at the end of each Board meeting, *in-camera*, without management present. In 2018, the independent directors met separately before and at the end of every regularly scheduled Board meeting.

Our Board has adopted the policy of holding *in-camera* sessions at each meeting of its committees without management. Members of management meet with the independent directors upon request.

GOVERNANCE PHILOSOPHY

We believe that effective corporate governance improves corporate performance and benefits all shareholders and that honesty and integrity are vital to ensuring good corporate governance.

The Board has formally adopted the Corporate governance guidelines recommended by the Governance committee. These guidelines address the structure and composition of the Board and its committees, and clarify the responsibilities of the Board and management.

Ethical business conduct

Our Code of business ethics (the Code) incorporates principles of good conduct and ethical and responsible behaviour to guide our decisions and actions and the way we conduct business.

The Code applies to all employees, officers and directors as well as contract workers of TransCanada and its wholly-owned subsidiaries and operated entities in countries where we conduct business. All employees (including executive officers) and directors must certify their compliance with the Code.

Any unusual behaviour or suspected violations of the Code must be reported immediately. Employees can report a concern to their supervisor, Corporate compliance, Internal audit, their Compliance coordinator, or to our Ethics help-line. The help-line allows anyone – employees, contractors, consultants, other stakeholders and the general public – to report a concern, confidentially and anonymously, about any perceived accounting irregularities, legal or ethical violations or other suspected breaches of the Code. The telephone number is published on our website and employee intranet, in other employee communications and in our Annual report. Our policy strictly prohibits reprisals or retaliation against anyone who files an ethics concern or complaint in good faith.

Internal audit handles most investigations, including any concerns about directors and senior management. Human resources professionals handle any concerns relating to human resource matters such as harassment.

The Audit committee monitors compliance with the Code and reports any significant violations to the Board. The Audit committee oversees the procedures for receiving and reviewing complaints and determining a course of action. It also oversees the operation of the ethics help-line as part of its responsibilities.

Any waiver of the Code for our executives and directors must be approved by the Board, or the appropriate committee. There were no material departures from the Code in 2018.

The Code is posted on our website (www.transcanada.com).

Conflicts of interest

The Code covers potential conflicts of interest.

Serving on other boards

The Board considers whether directors serving on the boards of, or acting as officers or in another similar capacity, for other entities including public and private companies, Crown corporations and other state-owned entities, and non-profit organizations pose any potential conflict. The Board reviews these relationships annually to determine that they do not interfere with any of our director's ability to act in our best interests. If a director declares a material interest in any material contract or material transaction being considered at a meeting, the director is not present during the discussion and does not vote on the matter.

Our Code requires employees to receive consent before accepting a directorship with an entity that is not an affiliate. The CEO and executive vice-presidents must receive the consent of the Governance committee. All other employees must receive the consent of the Corporate Secretary or her delegate.

Affiliates

The Board oversees relationships between TransCanada and any affiliates to avoid any potential conflicts of interest. This includes our relationship with TC PipeLines, LP, a master limited partnership listed on the NYSE.

Auditor independence

Pursuant to the Audit committee charter, the Audit committee reviews, approves and monitors adherence to our hiring policies for partners, employees and former partners and employees of our current and former external auditors to ensure auditor independence is maintained. The committee also has a pre-approval policy with respect to permitted non-audit services.

Our Annual information form (AIF) includes more information about the Audit committee, including the committee charter, starting on page 33 of the AIF. The 2018 AIF is available on our website (www.transcanada.com) and on SEDAR (www.sedar.com).

Majority voting

Our majority voting policy applies to electing a new Board when the number of nominated directors is the same as the number of director positions available. If, prior to a meeting, a nominated director receives more "withheld" proxy votes than five per cent of the total votes cast by proxy, we will hold a vote by ballot for all directors. If a director does not receive a majority of "for" votes cast by ballot, the director must resign from the Board. The Board will accept the resignation if there are no exceptional circumstances. We expect the Board to announce its decision to either accept or reject the director's resignation in a press release within 90 days after the annual meeting, and include its reasons for rejecting the resignation, if applicable.

This policy does not apply if there is a proxy contest over the election of directors.

Share ownership

We have share ownership requirements for our directors and executives to align their interests with those of our shareholders. Ownership levels are significant, and directors and executives must meet the requirements within five years of assuming their position.

As of February 28, 2019, all of our directors are in compliance with our director share ownership policy.

See *Aligning the interests of directors and shareholders* on page 65 and *Aligning the interests of executives and shareholders* on page 82 for more information.

ROLE AND RESPONSIBILITIES OF THE BOARD

The Board's primary responsibilities are to foster TransCanada's long-term success and sustainability, oversee our business and affairs and management, and to act honestly, in good faith and in the best interests of TransCanada.

The Board's main objective is to promote our best interests, to maximize long-term shareholder value and to enhance shareholder returns.

The Board has key duties and responsibilities, delegates some duties to its four standing committees, and discharges others to management for managing the day-to-day affairs of the business.

The Chair of the Board is responsible for ensuring that the Board is organized properly, functions effectively and meets its obligations and responsibilities. The Chair's role includes coordinating the affairs of the Board, working with management (primarily the CEO), and ensuring effective relations with Board members, shareholders, other stakeholders and the public.

Charters and position descriptions

The Board and each committee have adopted a charter that outlines its principal responsibilities.

The charters are reviewed every year to ensure that they reflect current developments in corporate governance and corporate best practices, and the Board approves any necessary changes.

The Board charter describes the:

- composition and organization of the Board,
- duties and responsibilities for managing the affairs of the Board, and
- oversight responsibilities for:
 - management and human resources
 - strategy and planning
 - financial and corporate issues
 - business and risk management, including compensation risk
 - policies and procedures
 - compliance reporting and corporate communications, and
 - general legal obligations, including its ability to use independent advisors as necessary.

The Board has also developed position descriptions for the Chair of the Board, each committee Chair and the CEO. The position descriptions for the Chair of the Board and the CEO are part of their terms of reference. The position descriptions for the Chair of each committee are contained in the committee charters.

See **Schedule B** for a copy of the Board charter. The Board charter, committee charters and position descriptions for the Chair of the Board and the CEO are posted on our website (www.transcanada.com).

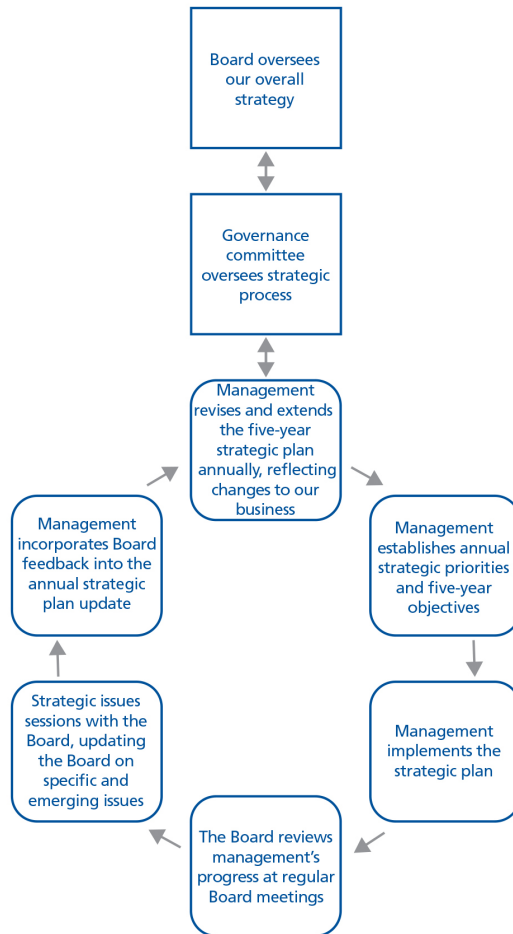
Strategic planning

We have a multi-year strategic plan that balances risk and reward.

The Board provides oversight and direction in the strategic planning process to ensure we have a robust strategy that supports our vision of becoming North America's leading energy infrastructure company. To achieve this, we have a five-year strategic plan which we update and extend annually and hold strategic issues sessions with the Board throughout the year to consider specific and emerging issues. The Governance committee has accountability for overseeing the strategy development process and works with management to identify and discuss emerging issues, elevating topics for discussion with the entire Board as necessary. It also guides management in planning the annual strategy session.

We update our five-year strategic plan annually during a two-day strategic planning session in which the Board reviews, discusses and approves the revised and extended strategic plan. As part of this, management includes an assessment of energy fundamentals, the competitive environment and the stakeholder landscape to identify opportunities and threats to our business strategy. This session informs our annual strategic priorities and performance measures.

Throughout the year, the Board monitors management's progress toward achieving strategic goals. At each regularly scheduled Board meeting, management provides updates on the human, technological and capital resources required to implement our strategy and relevant regulatory, environmental and social issues that may impact the execution of our strategy.



See *Meeting attendance* on page 30 for more information about the meetings held in 2018 and *Orientation and education* on pages 45 and 46 for more information about the strategic issues and planning sessions attended by Board members in 2018.

Risk oversight and enterprise risk management

In early 2018, management commenced a comprehensive review of the risk management process as part of our commitment to continuous improvement, to reflect the recent acquisition of Columbia Pipeline Group (Columbia) and organizational changes.

Upon management's completion of the review with the Governance committee and the Board, a new Enterprise risk management (ERM) program and framework was approved by the Board in late 2018, including:

- an enterprise risk heat map
- an enterprise risk register, and
- a board risk report, providing a prioritized list of enterprise risks, an assessment of those risks, and current mitigation activities, along with management and Board accountabilities for each risk.

These revisions to our risk program align with best practices in risk oversight and management. The purpose of the ERM program is to address risks to, or yielding from, the execution of our strategy, as well as enabling practices that allow us to identify and monitor emerging risks. Specifically, the ERM program provides a framework and an end-to-end process for risk identification, analysis, evaluation and mitigation, and the ongoing monitoring and reporting to the Board, CEO and executive vice-presidents

The ERM program aims to establish a risk culture with clear roles and understanding of how individual decisions could impact our ability to achieve our strategic objectives, a common language to determine and assess risks, a framework to organize risk management activities and reinforce risk culture, and to provide clearly defined accountability and ownership of risks.

Process

The Board and its committees are responsible for risk oversight including overseeing management systems and processes for identification, evaluation, prioritization, mitigation and monitoring of risk. Our directors have a broad range of experience and skills in risk management and, as a result, the Board is highly engaged and qualified to participate in a meaningful discussion of key business risks with management at Board and committee meetings.

A key business risk is generally defined as an exposure that has the potential to materially impact TransCanada's ability to meet or support its business, operational or strategic objectives.

TransCanada maintains an enterprise risk register which identifies risks associated with our business and seeks input across the organization to ensure it reflects any new key business risks as our business grows and our environment evolves. In addition, emerging risk information is solicited from our senior executives and presented to the Governance committee and the Board. This process recognizes the dynamic and evolving business environment in which we operate and allows management to keep the Board informed of existing and emerging risks and how those risks are managed or mitigated in accordance with TransCanada's risk parameters and risk tolerance.

The enterprise risk register establishes clear accountabilities of the Board, committees and executives responsible for specific oversight of each risk.

Our risks are categorized according to these main areas:

Enterprise wide

- corporate governance and reputation
- financial management
- general corporate risk
- information systems
- organizational
- political and regulatory
- strategy and development

Business unit

- business opportunity
- commercial risk
- commodity and basin supply
- physical operations
- project execution

The Governance committee oversees our risk management process. The committee reviews emerging risks with management at each committee meeting and the enterprise risk register with management annually to ensure there is proper Board and committee oversight according to the terms of their charters, and that we have management programs in place to mitigate those risks. It also recommends, along with the respective committee (or executive) assigned responsibility for specific risks, any enhancements to our risk management program and policies to the Board.

In addition, all projects and opportunities recommended by management to the Board for approval include specific descriptions on the associated risks. The risk discussion associated with each project forms a part of the Board's determination of whether to approve projects or pursue opportunities.

Our process ensures that the Board is fully informed of the interrelationship between the business environment and risks, and is intended to facilitate and stimulate discussion of our key business risks.

Our AIF and Annual report include more information about the risks applicable to TransCanada. The 2018 AIF and the 2018 Annual report are available on our website (www.transcanada.com) and on SEDAR (www.sedar.com).

Committee responsibilities

The various Board committees are also involved in risk oversight in their respective areas to ensure a robust risk management process with appropriate expertise, attention and diligence given to each key business risk. The chart below includes the risk focus area of each committee, and information on each risk focus area. The committees receive updates regularly from management on their risk focus areas, and update the Board on their risk oversight activities regularly. In addition to its specific focus area, each committee maintains an overall awareness of risk management for TransCanada, and includes other issues in its reports to the Board as appropriate.

| Committee | Risk focus | Description |
|--|--|--|
| Audit | Financial risk | <ul style="list-style-type: none"> Oversees management's role in monitoring compliance with financial risk management policies and procedures and reviewing the adequacy of our financial risk management. Ensures that: <ul style="list-style-type: none"> our financial risk management strategies, policies and limits are designed to ensure our risks and related exposures are in line with our business objectives and risk tolerance, and risks are managed within limits that are ultimately established by the Board, implemented by senior management and monitored by our risk management and internal audit groups. Oversees cyber security and its related risks to TransCanada. |
| Governance | Risk management process and management allocation of risks | <ul style="list-style-type: none"> Reviews TransCanada's emerging risks with management at each committee meeting. Oversees the enterprise risk register and mapping of enterprise risks with management annually to ensure there is proper Board and committee oversight according to the terms of their charters. Ensures that we have management programs in place to mitigate those risks. Recommends, along with the respective committee (or executive) assigned responsibility for specific risks, any enhancements to our risk management program and policies to the Board. |
| Health, Safety, Sustainability & Environment | Operational risk, people and process safety, sustainability, security and environmental risk | <ul style="list-style-type: none"> Monitors compliance with our health, safety and environment (HSE) corporate policies through regular reporting from management, within the framework of our integrated HSE management system that is used to capture, organize and document our related policies, programs and procedures. See the next page for more details. Monitors risk management for risks related to health, safety, sustainability and environment, including climate change-related risks. |
| Human Resources | Human resources and compensation risk | <ul style="list-style-type: none"> Oversees the compensation policies and practices to effectively identify and mitigate compensation risks and discourage the CEO, executive vice-presidents or others from taking inappropriate or excessive risks and to ensure our compensation policies are not reasonably likely to have a material adverse effect on TransCanada. See Compensation governance starting on page 58 for more information about how we manage our compensation risk. |

HSSE risk management system

The Health, Safety, Sustainability and Environment (HSSE) committee of TransCanada's Board oversees operational risk, people and process safety, security of personnel, environmental and climate-change related risks, and monitors development and the implementation of systems, programs and policies related to HSSE matters through regular reporting from management. We use an integrated management system that establishes a framework for managing these risks, and which is used to capture, organize, document, monitor and improve our related policies, programs and procedures. In 2019, management will assess and implement consideration of sustainability issues and trends when reporting to the committee.

Our management system is modeled after international standards, conforms to external industry consensus standards and voluntary programs, and complies with applicable legislative requirements. It follows a continuous improvement cycle organized into four key areas:

- **Planning:** risk and regulatory assessment, objective and target setting, defining roles and responsibilities.
- **Implementing:** development and implementation of programs, procedures and standards to manage operational risk.
- **Reporting:** incident reporting and investigation, and performance monitoring.
- **Action:** assurance activities and review of performance by management.

The committee reviews HSSE performance and operational risk management. It receives detailed reports on:

- overall HSSE corporate governance,
- operational performance and preventive maintenance metrics,
- asset integrity programs,
- emergency preparedness, incident response and evaluation,
- people and process safety performance metrics,
- our Environment Program,
- developments in and compliance with applicable legislation and regulations, including those related to the environment,
- prevention, mitigation and management of risks related to HSSE matters, including climate-change related risks which may adversely impact TransCanada,
- sustainability matters, including social, environmental and climate-change related matters, and
- management's approach to voluntary public disclosure on HSSE matters.

The committee also receives updates on any specific areas of operational and construction risk management review being conducted by management and the results and corrective action plans flowing from internal and third party audits. Beginning in 2019, the committee will receive regular updates on sustainability issues and trends.

Generally, each year the committee or the committee Chair tours one of our existing assets or projects under development as part of its responsibility to monitor and review our HSE practices. Additionally, the Health, Safety, Sustainability and Environment committee conducts a site visit annually, which all Board members are invited to attend.

The safety of our employees, contractors and the public, as well as the integrity of our energy and pipeline infrastructure is a top priority.

Succession planning

The Board is responsible for succession planning at the executive level including the development of the CEO succession plan. Succession planning for the CEO position is an ongoing process that includes analysis of each potential candidate's performance, skills and experience, assessment of the personal attributes and characteristics that the Board believes are necessary for the role, and assessment of developmental opportunities to increase senior executive bench strength.

The CEO prepares an overview of the executive vice-president roles, noting the required skills and expertise for each position and the current executive's areas of strength. He also prepares development plans for each executive and presents them to the Board. The CEO meets formally with each executive at least twice a year, and more frequently as necessary, to discuss progress on his or her development plan.

The CEO identifies potential future candidates for the executive vice-president positions and presents them to the Board for discussion. Each candidate is assessed based on their skills and experience and the competencies that are required for promotion to the senior executive level. Development opportunities are also identified so each candidate can receive additional or varied management experience, training, development and educational opportunities. The Board reviews each position and the performance assessment and competencies of potential successors at least once a year and makes decisions as appropriate.

Access to management

The Board has complete access to management, but gives reasonable advance notice to avoid disrupting the business and operations. The Board Chair and committee Chairs also connect with the CEO and relevant executive vice-president as needed.

The Board encourages the CEO and executive vice-presidents to include key managers in Board and committee meetings so they can share their expertise on specific matters. This approach gives the Board an opportunity to meet individuals who have the potential to assume more senior positions in the future, and for these individuals to gain exposure to the Board.

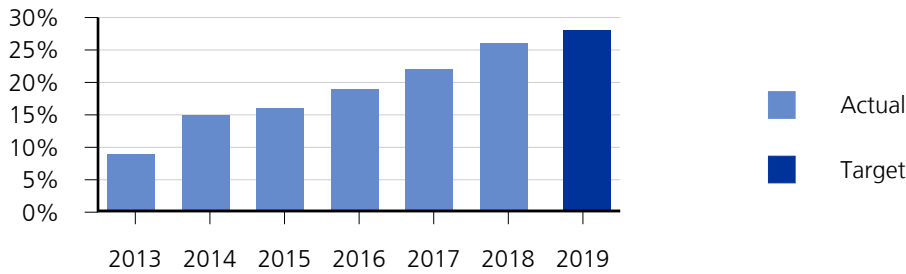
Management diversity

Our executive leadership team includes our CEO and our executive vice-presidents. Senior management includes our executive leadership team, as well as all of our senior vice-presidents and vice-presidents.

Management has set and the Board has reviewed goals to increase the number of women in senior management. Women currently hold 26 per cent of senior leadership positions, which exceeds our goal of 25 per cent by the end of 2018.

Going forward, our target is for the percentage of women in senior leadership positions to be equal or greater than the percentage of women in our overall employee population, which is currently 28 per cent.

Women in senior management



Setting these goals supports our long-term commitment to ensuring TransCanada has a capable and diverse senior management team. In addition, more women at the senior-vice president and vice-president levels provides a larger group of women that can be considered for promotion to executive vice-president positions.

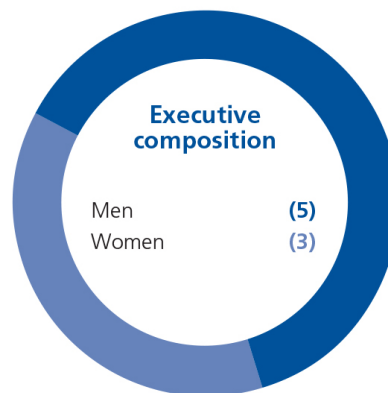
In order to achieve these goals we have focused on identifying, assessing and developing high potential candidates from our existing talent pool as well as strategic hires. High potential candidates are each assigned a sponsor executive vice-president who, together with their leader, works with them to increase their exposure within the organization and to the Board.

The CEO and executive vice-presidents review and discuss this talent pool regularly and approve all senior management appointments. The Board approves appointments to the position of CEO or executive vice-president.

Progress towards these goals is reviewed and assessed by the Human Resources committee, the CEO and executive vice-presidents at least annually to ensure that we have a qualified pool of women, and that the women in senior management are being adequately supported and developed. The Board receives progress reports on our goals annually. In addition, the Human Resources committee annually reviews the company's initiatives to provide development opportunities for high potential and diverse candidates below the executive level.

The Board encourages the inclusion of women candidates for consideration for all executive vice-president positions.

We do not have specific diversity goals for the executive leadership team. As of February 28, 2019, three of eight, or 38 per cent, of our executive leadership team members were women. This is an increase from February 20, 2018, when three of our 10, or 30 per cent of our executive leadership team members were women.



ORIENTATION AND EDUCATION

New directors participate in an orientation program featuring sessions on corporate strategy, our main business issues and historical and financial information about TransCanada. They also have an opportunity to visit and tour our facilities and project sites and meet with the CEO, executive vice-presidents and other directors.

We tailor the sessions for each director based on individual needs and their specific areas of interest. New directors also meet one-on-one with the CEO and each executive vice-president for an overview of the different areas of our business and operations and a discussion of key areas of interest. Briefing sessions are also held for new committee members.

Directors receive a reference manual with:

- details about their duties and obligations as a member of the Board,
- information about our business, strategy and operations,
- copies of the Board and committee charters,
- copies of recent public disclosure filings, and
- documents from recent Board meetings.

The Governance committee reviews the orientation program and reference manual every year so they continue to meet our needs and those of new directors.

The committee also develops the continuing education program every year based on current and emerging issues, our corporate objectives and input from other directors. Our 2018 education program included three in-depth focus sessions covering energy fundamentals, the competitive environment and stakeholder landscape, which help to provide context for strategy discussions.

Continuing education helps strengthen a director's knowledge and understanding of the business, industry, governance and other issues. Senior management and external experts make presentations to the Board and committees from time to time on various topics related to the business, including changes to legal, regulatory and industry requirements. Continuing education is also conducted on an informal basis and our directors are provided with articles and publications of interest.

We suggest seminars and education programs for our directors that may be relevant, and pay the registration fee and travel expenses as appropriate. We also offer to pay annual fees for memberships with organizations that are appropriate and provide relevant publications and educational opportunities to our directors.

2018 Director education program

| Date | Topic | Presented/hosted by | Attended by |
|------------------------------|---|--|-----------------------|
| February 28 | Board impact on culture | NACD | Mary Pat Salomone |
| April 26 | Strategic issues session - Communications and engagement strategy | CEO and executive vice-presidents | All directors |
| June | Women in Governance | Joele Frank | Indira Samarasekera |
| June 13 | Strategic issues session - <ul style="list-style-type: none"> • Various internal and external strategic reviews and discussions • Cyber security • Enterprise risk management | <ul style="list-style-type: none"> • CEO, executive vice-presidents and management representatives • Joram Borenstein, Microsoft | All directors |
| September 17 | Focus session - Natural gas | IHS Markit | All directors |
| September 19 | Focus session - Global oil market | IHS Markit | All directors |
| October 3 | Site visit - Corporate oil exercise, Regina SK | Emergency management team (Canadian Liquids Pipelines) | D. Michael G. Stewart |
| October 10 | Focus session - Energy | IHS Markit | All directors |
| October 31 and November 1 | Strategic planning sessions - <ul style="list-style-type: none"> • Environmental, social and governance integration and responsible investment overview • Global energy and its relevance to North American energy • Business environment, market fundamentals and asset allocation | <ul style="list-style-type: none"> • Judy Cotte and Sarah Neilson, RBC Global Asset Management • Colin Fenton, Blacklight Research, LLC • CEO and executive vice-presidents | All directors |
| November 28 | Strategic issues session - Liquids pipelines business strategy | CEO and executive vice-presidents | All directors |

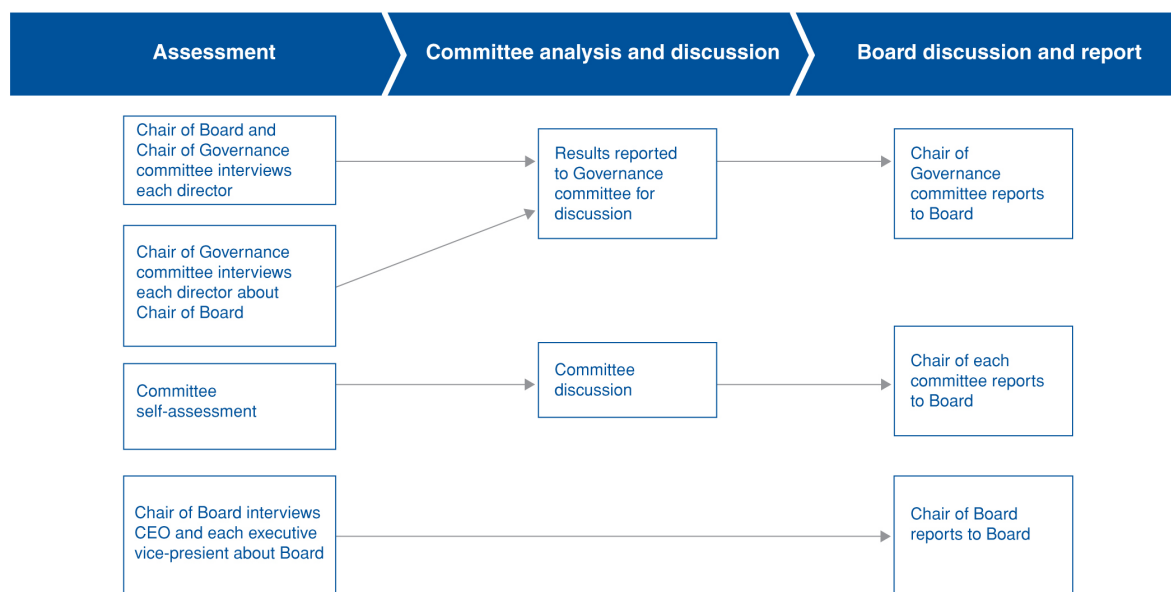
BOARD EFFECTIVENESS AND DIRECTOR ASSESSMENT

The Governance committee oversees an assessment of the performance of the Board, the Chair, committees and individual directors annually and reports the results to the Board.

The assessment process involves both the Chair of the Board and Chair of the Governance committee meeting separately with each director individually for the individual director assessment. The individual director assessment also includes a discussion of expectations for directors serving on our Board, and providing specific feedback to each director on their performance as a member of the Board.

Interviews include questions about effectiveness, communication and personal and individual peer performance and solicit input from directors about areas for potential improvement. The interviews are open-ended to encourage discussion and seek specific input on topics such as risk, strategy and governance.

The Governance committee believes the interview process is the most effective way for directors to give feedback that can be reviewed by the entire Board. The committee also monitors developments in board governance and evolving best practices in corporate governance.



In 2018, the assessment process showed that the Chair of the Board, each director, and all committees are functioning effectively and fulfilling the mandates set out in the Board and committee charters.

Financial literacy

The Board has determined that all members of the Audit committee are *financially literate*, which means each member can read and understand a set of financial statements that are generally comparable to ours in terms of breadth and complexity of accounting issues. You can find more information about their education and financial experience in the director profiles starting on page 18, in the Audit committee report on page 54 and in the AIF which is available on our website (www.transcanada.com) and on SEDAR (www.sedar.com).

Board renewal

The Governance committee regularly assesses the skill set of each director, and reviews it against the director retirement schedule, their ages and the composition of each committee. The review also takes into account the desirability of maintaining a reasonable diversity of backgrounds, and character and behavioural qualities such as integrity.

The Governance committee, with input from the Chair of the Board and the CEO, is responsible for identifying suitable director candidates and canvasses the entire Board for potential nominees. From time to time, the committee uses a third party recruitment specialist to identify potential director candidates. The committee is responsible for assessing the individuals and proposing the strongest candidates for nomination. An evolving roster of suitable director candidates is maintained by the committee.

The committee looks for a mix of skills and experience required for overseeing our business and affairs. The Board considers personal characteristics such as gender, ethnic background and geographic residence when looking at diversity. While candidates are nominated as directors based on their background and ability to contribute to the Board and committee meetings, the Board also specifically considers gender diversity. Board gender diversity is discussed under the section ***Governance - Board Characteristics - Board Diversity***.

Candidates who are being nominated for the first time must have experience in industries similar to ours or experience in general business management or with corporations or organizations that are similar in size and scope. Candidates must also be willing to serve on the Board, able to devote the necessary time to fulfill their duties and responsibilities and be under 70 years old.

The committee recommends potential candidates based on their qualifications and independence and how these qualities balance with the skill set of the current Board, the structure and composition of the committees and the director retirement schedule. This assessment helps the Board determine the best mix of skills and experience to guide our business operations and our long-term strategy.

While all of our directors possess an extensive list of skills and experience, the Governance committee has determined that focusing on each director's top five key expertise areas is a more effective way to assess director candidates and to ensure that our Board has a deep knowledge base available in each key expertise area.

The committee ensures that the Board seeks expertise in the following key areas:

- Accounting/audit
- Capital markets
- CEO
- Electric power
- Energy, midstream & transportation
- Governance
- Government & regulatory
- Human resources & compensation
- Major projects
- Mergers & acquisitions
- Operations/health, safety & environment
- Risk management
- Strategy & leading growth
- Upstream oil & gas

Skills analysis

The image below shows the top five key expertise areas of each of the current directors. The substantial majority of the directors have been assessed by an independent third party recruitment specialist to determine their top five key expertise areas. The Governance committee considers these factors and others when discussing Board renewal.

Skills analysis

Area of expertise

Accounting/audit



- Kevin E. Benson
- Russell K. Girling
- John E. Lowe
- Siim A. Vanaselja

Capital markets



- Kevin E. Benson
- Russell K. Girling
- John E. Lowe
- Siim A. Vanaselja

CEO



- Kevin E. Benson
- Stéphan Crétier
- S. Barry Jackson
- Randy Limbacher

- Paula Rosput Reynolds
- Indira Samarasekera
- Thierry Vandal

Electric power



- Russell K. Girling
- Mary Pat Salomone
- Thierry Vandal

Energy, midstream & transportation



- Russell K. Girling
- John E. Lowe
- Paula Rosput Reynolds
- D. Michael G. Stewart

- Thierry Vandal

Governance



- Kevin E. Benson
- Mary Pat Salomone
- Indira Samarasekera

Government & regulatory



- Paula Rosput Reynolds
- Indira Samarasekera
- Thierry Vandal

Human resources & compensation



- S. Barry Jackson
- Randy Limbacher
- Paula Rosput Reynolds
- Mary Pat Salomone

- Indira Samarasekera

Major projects



- Paula Rosput Reynolds
- Mary Pat Salomone
- D. Michael G. Stewart
- Thierry Vandal

Mergers & acquisitions



- Stéphan Crétier
- John E. Lowe
- Siim A. Vanaselja

Operations/health, safety & environment



- Kevin E. Benson
- Stéphan Crétier
- S. Barry Jackson
- Randy Limbacher

- Mary Pat Salomone
- D. Michael G. Stewart

Risk management



- Stéphan Crétier
- D. Michael G. Stewart
- Siim A. Vanaselja

Strategy & leading growth



- Stéphan Crétier
- Russell K. Girling
- S. Barry Jackson
- Randy Limbacher

- Indira Samarasekera
- Siim A. Vanaselja

Upstream oil & gas



- S. Barry Jackson
- Randy Limbacher
- John E. Lowe
- D. Michael G. Stewart

Legend

Director with expertise



Director with expertise + retiring within three years



Expected retirement years

This table provides the expected retirement year for each of the current non-executive directors, based on current age.

| Year director(s) expected to retire | | | |
|-------------------------------------|--|------|-------------------|
| 2019 | Kevin E. Benson, Paula Rosput Reynolds | 2029 | John E. Lowe |
| 2022 | D. Michael G. Stewart, Indira Samarasekera | 2030 | Mary Pat Salomone |
| 2023 | S. Barry Jackson | 2031 | Thierry Vandal |
| 2027 | Siim A. Vanaselja | 2033 | Stéphan Crétier |
| 2028 | Randy Limbacher | | |

Director tenure

Once a director turns 70, he or she will not stand for re-election at the next annual meeting. The Board may waive the retirement age for a director if:

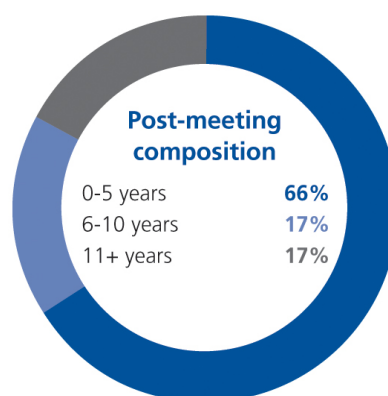
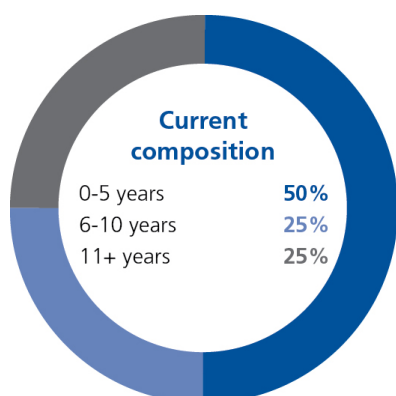
- they have not served seven consecutive years by age 70, or
- their continued service is in the best interests of the company, because of their specific skills and experience.

The Governance committee reviews factors like age, changes in principal occupation, consistently poor attendance, poor performance and other relevant circumstances that may trigger the resignation or retirement of a director.

TransCanada does not use term limits for our directors. We do not believe term limits are an effective mechanism to promote board renewal. In addition to the annual director assessment, which ensures that each of our Board members, committees and the Board is functioning effectively, the committee reviews director succession planning at least annually. This review provides the opportunity for the committee to focus on creating a board with an appropriate mix of experience and skills to guide the long-term strategy and ongoing business operations of the company. Our flexible retirement policy promotes effective Board turnover without limiting the mix of skills and experience on the Board.

The graphs below show the composition of our Board by years of service as of the date of this circular and after the annual meeting, assuming all of the nominated directors are elected.

There has been substantial Board refreshment over the past five years, with a new director joining the Board every year since 2013.



ENGAGEMENT

We believe it is important to engage with our stakeholders.

Members of our Board engage with governance organizations and shareholder advocacy groups to discuss emerging best practices and provide commentary on how we maintain our high standard of corporate governance.

TransCanada has a comprehensive program to regularly engage with our shareholders and other stakeholders. Our annual meeting offers shareholders the opportunity to receive an update on our business and interact with the Board, CEO, executive vice-presidents and senior management. We issue press releases to announce material company developments and to report our quarterly financial results. Our CEO and executive vice-presidents host teleconferences to discuss our quarterly financial and operating results, as well as significant company developments. Our CEO and executive vice-presidents also host an annual investor day to discuss the company's strategy, recent developments and the longer-term outlook for the business. The teleconferences and investor day are webcast and available to analysts, shareholders, media and the general public on our website. Our CEO, executive vice-presidents and senior management speak at investor and industry conferences and meet in person or by phone with investors one-on-one as part of our regular shareholder engagement. Our investor relations department is also available for meetings and calls to address shareholder questions and concerns and to provide public information on TransCanada.

Press releases, corporate information, frequently asked questions and details of past and upcoming investor events and presentations can be found online at www.transcanada.com.

Investor relations welcomes opportunities to engage with our shareholders, potential investors and other stakeholders. You may contact our investor relations department directly by phone, email, or regular mail at:

Investor Relations
TransCanada Corporation
450 - 1 Street S.W.
Calgary, Alberta
Canada T2P 5H1
investor_relations@transcanada.com
1.800.361.6522

COMMUNICATING WITH THE BOARD

Shareholder engagement allows us to hear directly from shareholders and other important stakeholders about any issues or concerns.

Shareholders, employees and others can contact the Board directly by writing to:

Chair of the Board of Directors
c/o Corporate Secretary
TransCanada Corporation
450 - 1 Street S.W.
Calgary, Alberta T2P 5H1

The Board, including committee Chairs, will also be available at the annual and special meeting to receive questions from shareholders.

SHAREHOLDER PROPOSALS

According to Canadian law, shareholder proposals can only be considered for the annual meeting of common shareholders if they are submitted by a specific date.

Our Corporate Secretary must receive any shareholder proposals **before 5:00 p.m. MDT on December 2, 2019** to be considered for the circular for our 2020 annual meeting of common shareholders.

ADVANCE NOTICE BYLAW

Shareholders who wish to nominate a director for the 2019 annual and special meeting of common shareholders, other than by a shareholder proposal, must:

- notify the Corporate Secretary in writing, and
- provide the information required in our By-law Number 1, which can be found on our website (www.transcanada.com) or on SEDAR (www.sedar.com).

Any notices of director nominees must be received by our Corporate Secretary **before 5:00 p.m. MDT on April 3, 2019** for an individual to be included in our list of director nominees for our 2019 annual and special meeting of common shareholders.

The chart below explains when advance notice of director nominations is required for annual meetings and special meetings:

| Type of meeting | Announcement timing | Advance notice deadline |
|------------------------------------|--|--|
| Annual meeting | Public announcement more than 50 days before meeting | Not less than 30 days before meeting |
| | Public announcement 50 days or less before meeting | Not less than 10 days following the first public announcement of the meeting |
| Special meeting to elect directors | Public announcement more than 50 days before meeting | Not less than 15 days before meeting |
| | Public announcement 50 days or less before meeting | Not less than 15 days following the first public announcement of the meeting |

BOARD COMMITTEES

The Board has four standing committees:

- Audit committee,
- Governance committee,
- Health, Safety, Sustainability and Environment committee, and
- Human Resources committee.

Each of the committees is comprised entirely of independent directors.

The Governance committee is responsible for reviewing the composition of each committee and recommending any changes once new directors are appointed or elected to the Board. Each committee must consist entirely of independent directors, except for the Health, Safety, Sustainability and Environment committee, which must have a majority of independent directors. Currently, all members of the Health, Safety, Sustainability and Environment committee are independent. Each committee has the authority to retain advisors to help it carry out its responsibilities. The Board does not have an executive committee.

Each committee reviews its charter at least once a year, and recommends any changes to the Governance committee and the Board. You can find the committee charters on our website (www.transcanada.com).

The Audit and the Governance committees hold simultaneous meetings, as do the Human Resources and Health, Safety, Sustainability and Environment committees, so each committee has sufficient time to focus on its responsibilities. As a result, Mr. Vanaselja, the independent non-executive Chair of the Board, is a voting member of the Governance committee and the Human Resources committee, and is not a member of the Audit committee or the Health, Safety, Sustainability and Environment committee.

The committees will be reconstituted after the annual and special meeting.

Each meeting has time set aside for members to discuss the committee operations and responsibilities without management present.

2018 Committee changes - sustainability and climate change

In late 2018, the Health, Safety and Environment committee was renamed the Health, Safety, Sustainability and Environment committee, to reflect Board oversight of climate change-related risk and environmental and social issues, as well as to demonstrate TransCanada's commitment to sustainability.

The Board also reviewed management's internal sustainability governance framework, including the role of a Chief Sustainability Officer, development of a management-level sustainability committee and the approach to reporting on climate change-related risks and opportunities.

In addition to its existing activities, the Health, Safety, Sustainability and Environment committee will also:

- review reports on climate change-related laws and regulations and their potential impact on TransCanada,
- review reports on climate-related risks and opportunities (physical, technological, regulatory and social),
- receive information on stakeholder engagement on sustainability issues,
- oversee management's approach to voluntary reporting on sustainability matters, and
- report and update on initiatives with operations, research and development, and projects that support sustainability.

Audit committee

Current members

John E. Lowe (Chair)
Stéphan Crétier
S. Barry Jackson (as of April 27, 2018)
Randy Limbacher (as of June 13, 2018)
Indira Samarasekera
Thierry Vandal

Other members that served during the year

Kevin E. Benson (until April 27, 2018)
Derek H. Burney (retired April 27, 2018)
D. Michael G. Stewart (until April 27, 2018)

Meetings

5 regularly scheduled meetings (February, April, August, October, November)

Independence

6 independent directors, 100 per cent independent and financially literate. Mr. Lowe and Mr. Vandal are "audit committee financial experts" as defined by the SEC in the U.S., and each have the accounting or related financial management experience required under the NYSE rules.

Mandate

The Audit committee is responsible for assisting the Board in overseeing the integrity of our financial statements and our compliance with legal and regulatory requirements. It is also responsible for overseeing and monitoring the accounting and reporting process and the process, performance and independence of our internal and external auditors.

The Audit committee meets *in-camera* with the Chief Financial Officer (CFO) at the beginning of each meeting, and also meets separately with the external auditors and Vice-President, Corporate Compliance and Internal Audit. The committee also meets in-camera at the end of each meeting.

2018 highlights

- **Reviewed** our 2018 interim and annual disclosure documents including the unaudited interim and audited annual consolidated financial statements and related management's discussion and analysis, AIF and circular and recommended them for approval.
- **Oversaw** our financial reporting risks including issues relating to materiality and risk assessment.
- **Received** the external auditor's formal written statement of independence (which sets out all of its relationships with TransCanada) and its comments to management about our internal controls and procedures.
- **Reviewed** the appointment of the external auditor and estimated fees and recommended them to the Board for approval.
- **Reviewed** the audit plans of the internal and external auditors and pre-approved the non-audit services performed by KPMG relating primarily to tax, regulatory pipeline trust audits, compliance and benefit plans.
- **Approved** appointment of the external auditor for 401(k) employee retirement plans.
- **Recommended** the funding of the registered pension plan and supplemental pension plan.
- **Reviewed** the major accounting policies and estimates.
- **Received** reports from management on our cyber security plans and initiatives.
- **Oversaw** the corporate compliance program requirements, structure and results, including foreign corrupt practices and anti-bribery statutes and policies.
- **Monitored** Canadian and U.S. financial reporting and legal and regulatory developments affecting our financial reporting process, controls and disclosure.
- **Reviewed and recommended** changes to the suite of risk management policies, and reviewed developments and reports relating to counterparty, insurance and market risks.
- **Reviewed and recommended** prospectuses relating to the issuance of securities, including the replenishment of the "At-the-Market" common share issuance program.
- **Reviewed and recommended** renewal of equity and Canadian debt shelf prospectuses and renewal and changes to credit facilities and commercial paper programs.
- **Recommended** amendments to the Canadian trust indentures.
- **Approved** annual election to enter into uncleared swaps as permitted under U.S. legislation and monitored compliance.
- **Received** regular reports from management on risk management, finance and liquidity, treasury, pensions, tax, compliance, material litigation and information services security controls (cyber security).
- **Approved** the Internal audit charter.
- **Received** regular reports from Internal audit.
- **Reviewed** adequacy of staff complements in accounting and tax.
- **Renewed** Code of business ethics and Public disclosure policies.
- **Reviewed** the Audit committee charter.

Our AIF includes more information about the Audit committee, including the committee charter, oversight responsibilities, each member's education and experience, and policies and procedures for pre-approving permitted non-audit services. The 2018 AIF is available on our website (www.transcanada.com) and on SEDAR (www.sedar.com).

Governance committee

Current members

Kevin E. Benson (Chair, retiring May 3, 2019)
 Paula Rospot Reynolds (retiring May 3, 2019)
 Mary Pat Salomone (as of April 27, 2018)
 D. Michael G. Stewart (as of April 27, 2018)
 Siim A. Vanaselja

Other members that served during the year

Derek H. Burney (retired April 27, 2018)
 S. Barry Jackson (until April 27, 2018)
 Indira Samarasekera (until April 27, 2018)

Meetings

4 regularly scheduled meetings (February, April, September, November)

Independence

5 independent directors, 100 per cent independent

Mandate

The Governance committee is responsible for assisting the Board with maintaining strong governance policies and practices at TransCanada, reviewing the independence and financial literacy of directors, managing director compensation and the Board assessment process, and overseeing our strategic planning process and risk management activities.

It monitors the relationship between management and the Board, directors' share ownership levels, governance developments and emerging best practices. It is also responsible for identifying qualified candidates for the Board to consider as potential directors.

It also recommends the meeting schedule for Board and committee meetings, site visits, and oversees matters related to the timing of our annual meeting.

The Governance committee meets *in-camera* at the beginning and end of each meeting.

2018 highlights

- **Recommended** Board support for a shareholder proposal related to climate change-related disclosure.
- **Recommended** a Board diversity policy to the Board for approval, including an aspirational target for the Board to be comprised of 30 per cent women directors by the end of 2020.
- **Oversaw** the development of an ERM framework, including reviewing the enterprise risk register, and approving the mapping of enterprise risks.
- **Reviewed** the independence of each director according to our written criteria to give the Board guidance in its annual assessment of independence and the structure and composition of each committee, and the other directorships held by Board members (including public and private companies, Crown corporations and non-profit organizations).
- **Oversaw** our strategic planning process, including strategic issues to be considered and planning of our strategic issues and planning sessions.
- **Oversaw** our risk management activities, including receiving updates on 'top of mind' business risks and making recommendations to the Board as appropriate.
- **Reviewed** the identified principal risks with management to ensure we have proper Board and committee oversight and management programs in place to mitigate risks.
- **Approved** market increases to committee chair retainers and formally aligned the director compensation peer group with the executive compensation peer group.
- **Monitored** director share ownership requirements.
- **Reviewed** say on pay updates and voting trends.
- **Reviewed** our lobbying policies, activities and expenditures.
- **Reviewed** our Corporate governance guidelines and committee charters and recommended appropriate changes to the Board for approval. The changes included revisions to the Governance committee charter to reflect the ERM framework, and revisions to the Board and Health, Safety and Environment committee charters to embed sustainability in governance documents.
- **Oversaw** the annual assessment of the Board, committees and Chair.
- **Monitored** updates to securities regulations (regulation and legal updates affecting our policies, procedures and disclosure practices) and matters relating to the financial markets. The committee continues to monitor legal developments and emerging best practices in Canada, the U.S. and internationally.
- **Oversaw** the Board's retirement policy, Board renewal, and the selection of new director candidates.
- **Reviewed** external governance assessments and made recommendations for revisions to governance practices to the Board as appropriate.
- **Received** information on proxy access.

Health, Safety, Sustainability and Environment committee

Current members

D. Michael G. Stewart (Chair)
Stéphan Crétier
John Lowe
Randy Limbacher (as of June 13, 2018)
Mary Pat Salomone
Thierry Vandal

Other members that served during the year

Richard E. Waugh (retired April 27, 2018)

Meetings

3 regularly scheduled meetings (February, April and November)

Independence

6 independent directors, 100 per cent independent

Mandate

The Health, Safety, Sustainability and Environment committee is responsible of oversight for health, safety, sustainability, security and environmental matters (HSSE matters).

The committee reviews and monitors:

- the performance and activities of TransCanada on HSSE matters including compliance with applicable and proposed legislation, regulations and orders; conformance with industry standards and best practices; people, health, safety, sustainability and security; process safety; asset reliability; operational risk management and asset integrity plans and programs; and emergency response plans and programs,
- the systems, programs and policies relating to HSSE matters and whether they are being appropriately developed and effectively implemented,
- actions and initiatives undertaken by TransCanada to prevent, mitigate and manage risks related to HSSE matters, including climate change-related risks, which may have the potential to adversely impact our assets, operations, activities, plans, strategies or reputation; or prevent loss or injury to our employees and assets or operations from malicious acts, natural disasters or other crisis situations,
- any critical incidents respecting our assets or operations involving: the fatality of or a life threatening injury to a person; any pipeline ruptures resulting in significant property damage or loss of product; any whistleblower events relating to HSSE matters; or any incidents involving personnel and public safety, property damage, environmental damage or physical security that have the potential to severely and adversely impact our reputation and or business continuity,
- significant regulatory audits, findings, orders, reports and/or recommendations issued by or to TransCanada related to HSSE matters, incidents or issues, together with management's response thereto, and
- oversight of our voluntary public disclosure on HSSE matters.

The Health, Safety, Sustainability and Environment committee met separately with the Executive Vice-President, Stakeholder Relations and Technical Services and General Counsel and with representatives from senior management at the end of each meeting. The committee also meets *in-camera* at the end of each meeting.

2018 highlights

- **Received and reviewed** regular reports on HSE related activities, performance and compliance.
- **Received** regular reports on operational risk management, people and process safety and regulatory compliance matters related to asset integrity.
- **Reviewed** the status of critical incidents, root cause analysis and incident follow-up.
- **Monitored** management's response and the status of corrective action plans to significant audits from the National Energy Board, Pipeline and Hazardous Materials Safety Administration and other regulatory agencies.
- **Oversaw** our risk management activities related to health, safety, security and environment, and reported to the Board as appropriate.
- **Monitored** the effectiveness of HSE policies, management systems, programs, procedures and practices through the receipt of reports on four levels of governance activities related to internal and external audit findings.
- **Monitored** updates to Canadian and U.S. air emissions and greenhouse gas legislation, climate change initiatives and related compliance matters.
- **Received** the Health and Industrial Hygiene annual review.
- **Adoption** of the oversight of the Company's voluntary public disclosure on sustainability matters.
- The committee Chair **observed** the Liquids operations corporate exercise in Regina, SK, including a demonstration of the company's emergency response plan.
- **Received** and reviewed regular reports on the operational and HSE performance at Bruce Power.
- **Received** a presentation from external consultants relating to root cause analysis for historical environmental disasters.
- **Recommended** changes to its charter to include oversight of sustainability matters, including climate-change related risk.

Human Resources committee

Current members

Paula Rosput Reynolds (Chair, retiring May 3, 2019)

Kevin Benson (as of April 27, 2018, retiring May 3, 2019)

S. Barry Jackson

Indira Samarasekera (as of April 27, 2018)

Siim A. Vanaselja

Other members that served during the year

Mary Pat Salomone (until April 27, 2018)

Richard E. Waugh (retired April 27, 2018)

Meetings

5 regularly scheduled meetings (January, February, September, and two in November)

Independence

5 independent directors, 100 per cent independent

Mandate

The Human Resources committee is responsible for assisting the Board with developing strong human resources policies and plans, overseeing the compensation programs, and assessing the performance of the CEO and each executive vice-president against pre-established objectives and recommending their compensation to the Board.

It approves and, as applicable, recommends to the Board executive incentive awards, and any major changes to the compensation programs and benefits plans for employees. It also reviews the benefits under our Canadian pension plans and share ownership requirements for executives.

The Human Resources committee meets *in-camera* at the beginning and end of each meeting.

2018 highlights

- **Assessed** the performance of the CEO and each executive vice-president and recommended the 2018 executive compensation awards to the Board for approval.
- **Reappointed** Meridian Compensation Partners (Meridian) as the independent compensation advisor to the committee after determining that Meridian is independent based on the factors enumerated by the NYSE.
- **Reviewed** and approved changes to the Canadian pension and benefits programs to better align with market practices.
- **Reviewed** the risks associated with its compensation programs.
- **Reviewed** and approved the named executive officer compensation peer group.
- **Reviewed** the stock option plan and recommended changes to granting and valuation provisions to align with best practices.
- **Reviewed** the long-term incentive mix and current market trends.
- **Reviewed** the alignment of actual compensation earned with performance over the applicable measurement periods.
- **While** the committee typically receives an update on talent management on an annual basis, in 2018 this update was provided to all the directors at a Board meeting.

The committee also undertook a number of activities during the year, and these go into effect in 2019:

- **Approved** a change in the long-term incentive mix for the CEO and executive vice-presidents.
- **Approved** increases in the share ownership requirements for the executive vice-president and senior vice-president roles and introduced a holding requirement at the vice-president level.
- **Implemented** a post-retirement share ownership requirement for the CEO.
- **Reviewed** our performance measures under the Executive Share Unit plan and modified the S&P/TSX 60 index peer group to include a high dividend yield subset only.

Compensation

We are committed to high standards of corporate governance, including compensation governance.

This section tells you how the Board makes director and executive compensation decisions at TransCanada, and explains its decisions for 2018.

Compensation governance

The Board, the Human Resources committee and the Governance committee are responsible for the integrity of our compensation governance practices.

Human Resources committee

Paula Rospud Reynolds (Chair, retiring May 3, 2019)

Kevin E. Benson (retiring May 3, 2019)

S. Barry Jackson

Mary Pat Salomone (until April 27, 2018)

Indira Samarasekera (as of April 27, 2018)

Siim A. Vanaselja

Richard E. Waugh (retired April 27, 2018)

Governance committee

Kevin E. Benson (Chair, retiring May 3, 2019)

Derek H. Burney (retired April 27, 2018)

S. Barry Jackson (until April 27, 2018)

Paula Rospud Reynolds (retiring May 3, 2019)

Mary Pat Salomone (as of April 27, 2018)

Indira Samarasekera (until April 27, 2018)

D. Michael G. Stewart (as of April 27, 2018)

Siim A. Vanaselja

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The Board approves all matters related to executive and director compensation. The committees are responsible for reviewing compensation matters and making any recommendations. Both committees are entirely independent. Each Human Resources committee member is independent under the NYSE compensation committee independence requirements.

EXPERTISE

Human resources and executive compensation

The Human Resources committee is responsible for executive compensation. It consists of five independent directors who have an appropriate mix of skills and experience in management, business, industry, human resources, executive compensation and public accountability for carrying out their responsibilities.

| Name | Human resources/compensation experience | Accounting/audit | Capital markets | CEO experience | Governance | Risk management |
|---|---|------------------|-----------------|----------------|------------|-----------------|
| Paula Rospud Reynolds (Chair, retiring May 3, 2019) | X | X | | X | X | X |
| Kevin E. Benson (as of April 27, 2018, retiring May 3, 2019) | X | X | X | X | X | |
| S. Barry Jackson | X | | X | X | X | |
| Indira Samarasekera (as of April 27, 2018) | X | | | X | X | |
| Siim A. Vanaselja | X | X | X | | X | X |

All of the members have experience as members of human resources or compensation committees of other public companies.

Ms. Reynolds, the committee Chair, currently serves as a member of the compensation committee for one other publicly traded company. As a former CEO of two U.S. public companies, she was responsible for overseeing compensation plans and their implementation, and has experience in designing and assessing performance-based goals for executives. She has worked closely with compensation consultants, and has been involved in all aspects of the design, implementation and administration of compensation programs.

Mr. Benson was the former President and CEO of three publicly-traded companies. He was also a director of six public companies, serving on the compensation committee of three of those companies, and has experience overseeing and administering executive compensation programs and plans.

Mr. Jackson has served as the chair or been a member of the compensation committee for several public companies. As a former CEO of a public oil and gas company, he has experience in overseeing executive compensation programs and working closely with compensation consultants, and has been involved in all aspects of the design, implementation and administration of compensation programs as a senior executive and director.

Dr. Samarasekera serves on the selection panel for Canada's Outstanding CEO of the Year and is a director of three public companies, serving on the human resources committee of two of those public companies. She also serves as a director of various not-for-profit organizations and has extensive experience in overseeing and administering compensation programs.

Mr. Vanaselja was the Executive Vice-President and CFO of a publicly traded company. He has also served on the management resources and compensation committees of one publicly traded company and various private corporations, and has experience in the implementation, administration and management of executive compensation programs and plans.

In addition to the committee's collective experience in compensation matters, all of the members stay actively informed of trends and developments in compensation matters and the applicable legal and regulatory frameworks.

Governance

You can find specific details about each director's background and experience in the director profiles starting on page 18, and more information about the committees starting on page 53.

The Governance committee is responsible for director compensation and risk oversight. It consists of five independent directors who have a mix of skills and experience in business, risk, governance, human resources and compensation. Five of the members are currently or have been members of human resources or compensation committees of other public companies. Two of the members also have experience as a CEO of one or more public companies, which has provided each of them with experience in oversight of and direct involvement in compensation matters.

COMPENSATION OVERSIGHT

The purpose of the Board's compensation oversight is to ensure that executives and directors are compensated fairly with respect to market in a way that does not lead to undue risk in TransCanada's business and operations.

The Board reviews our compensation policies and practices every year, considers the possibility of risks, and makes any adjustments it deems necessary to ensure that our compensation policies are not reasonably likely to have a material adverse effect on TransCanada. It carries out this work directly or through the Human Resources committee and the Governance committee.

The Board has approved various compensation policies and practices to effectively identify and mitigate compensation risks and discourage the CEO, executive vice-presidents or others from taking inappropriate or excessive risks.

Multi-year strategic plan

We have a multi-year strategic plan that identifies our core strategies to achieve our vision of being the leading energy infrastructure company in North America. Our core strategies include:

- maximizing the full-life value of our infrastructure assets and commercial positions,
- commercially developing and building new asset investment programs,
- cultivating a focused portfolio of high quality development options, and
- maximizing our competitive strengths.

Executive compensation is closely linked to the strategic plan. Our annual corporate objectives support the strategic plan and are integrated into our compensation decision-making process. At the end of each year, the Board assesses our performance against the corporate objectives to determine the Corporate factor that is used in calculating short-term incentive awards for the CEO, executive vice-presidents and all other employees. The Board also ensures that the annual individual performance objectives for the CEO and each executive vice-president align with our corporate objectives and reflect performance areas that are specific to each role when it determines total direct compensation for each executive.

Compensation philosophy

Our compensation philosophy guides all compensation program design and decisions. Our approach to compensation is structured to meet four key objectives: pay for performance, be market competitive, align executives' interests with those of our various stakeholders, and attract, engage and retain our executives. In setting compensation levels, each component – base salary, short-term and long-term incentives – as well as total direct compensation are determined with reference to median levels in our peer group (see pages 79 through 90 for details).

Executive compensation is designed to pay for performance, as a significant portion of total direct compensation is variable or at-risk compensation. See pages 95 through 99 for the pay mix for each named executive.

Executive compensation structured to manage risk

The Human Resources committee and the Board have structured the executive compensation program to ensure that executives are compensated fairly and in a way that does not present undue risk to TransCanada or encourage executives to take inappropriate risks. The committee is committed to continuous improvement of executive compensation practices, and reviews prevalent best practices on a regular basis.

- **Structured process:** The committee has implemented a formal decision-making process that involves management, the committee and the Board. The committee uses a multi-step review process for all compensation matters, first adopting goals and metrics of performance, reviewing how performance compares to the pre-established metrics and then seeking Board input as to the reasonableness of the results.
- **Benchmarking to ensure fairness:** Executive compensation is reviewed every year. Director compensation is reviewed every two years by the Governance committee and the Board. Both director and executive compensation are benchmarked against size appropriate peer groups to assess competitiveness and fairness, and the appropriateness of the composition of the applicable peer groups is reviewed.
- **Modelling and stress testing:** The committee uses modelling to stress test different compensation scenarios and potential future executive compensation. This includes an analysis of the potential effect of different corporate performance scenarios on previously awarded and outstanding compensation to assess whether the results are reasonable. The committee also uses modelling to assess the payments under the terms of the executives' employment agreements for severance and change of control situations.
- **Independent advice:** The committee uses an independent external compensation consultant to provide advice in connection with executive pay benchmarking, incentive plan design, compensation governance and pay for performance.
- **Alignment with shareholders:** The committee and the Board place a significant emphasis on long-term incentives when determining the total direct compensation for the CEO and each executive vice-president. Our long-term incentives include stock options and performance vesting executive share units (ESUs) – both of which encourage value creation over the long-term and align executives' interests with our shareholders.
- **Pre-established objectives:** Each year the Board approves corporate, business unit and individual objectives that are aligned with the overall business plan for the CEO and each executive vice-president. These objectives are used to assess performance and determine compensation.
- **Multi-year performance-based compensation:** Awards under the ESU plan are paid out based on our performance against objectives set for the three-year vesting period.
- **Limits on variable compensation payments:** Short-term incentive awards are subject to a minimum of a zero payout up to a maximum payout of two times target. Long-term incentive awards under the ESU plan are subject to a minimum of a zero payout up to a maximum payout of two times the final number of units accrued at the end of the vesting period.
- **Discretion:** The Board completes a formal assessment annually, and can then use its discretion to increase or decrease any compensation awards if it deems it appropriate based on market factors or other extenuating circumstances. However, to maintain the integrity of the metrics-based framework, the Board exercises its discretion sparingly.

Policies and guidelines to manage risk

The Governance committee, the Human Resources committee and the Board have instituted several policies to ensure that compensation risk is appropriately managed and that the interests of both directors and executives are aligned with those of our shareholders. These policies are derived from best practices in governance and legal requirements.

- **Corporate objectives:** We adopt corporate objectives consistent with our approved strategic plan so that the Board can monitor how compensation influences business decisions.
- **Share ownership requirements:** We have share ownership requirements for both directors and executives, reflecting the Board's view that directors and executives can represent the interests of shareholders more effectively if they have a significant investment in TransCanada.
- **Post retirement share ownership requirement:** Starting in 2019, the CEO role is required to maintain his/her required ownership level for one year post-retirement.
- **Prohibition on hedging:** Our trading policy includes an Anti-hedging policy preventing directors and officers from using derivatives or other instruments to insulate them from movements in our share price. This includes prepaid variable forward contracts, equity swaps, collars, units of exchange funds, and other hedging vehicles.
- **Reimbursement:** We have an Incentive compensation reimbursement policy which requires employees at the vice-president level and above to repay vested and unvested short and long-term incentive compensation (including proceeds realized from the exercise of stock options) granted in the three-year period preceding a restatement of financial results or a material error in financial reporting if the restatement or error resulted from the employee's intentional misconduct. We continue to monitor best practices for reimbursement policies and will update the policy as these practices change. In addition, if there is an incidence of misconduct with our financial reporting and we must restate our financial statements because of material non-compliance with a financial reporting requirement, our CEO and CFO are required by law to reimburse TransCanada for incentive-based compensation related to the period the misconduct occurred. They must also reimburse us for any profits they realized from trading TransCanada securities during the 12 months following the issue of the misstated financial statements.
- **Say on pay:** We implemented a non-binding advisory shareholder vote on our approach to executive compensation starting in 2010. The results shown in the table below confirm that a significant majority of shareholders have accepted our approach to executive compensation. The approval vote as a percentage of shares voted in favour of our approach to executive compensation for the last three years are as follows:

| Year | Approval vote (%) |
|------|-------------------|
| 2018 | 94.02 |
| 2017 | 97.39 |
| 2016 | 97.47 |

- **Code of business ethics:** Our Code applies to employees, contract workers, independent consultants and directors. The Code incorporates principles of good conduct and ethical and responsible behaviour to guide our decisions and actions and the way we conduct business.

After considering the implications associated with our compensation policies and practices, completing a review of our policies and practices described above, and with advice from the independent consultant to the Human Resources committee, the Board believes that:

- we have the proper practices in place to effectively identify and mitigate potential risk, and
- TransCanada's compensation policies and practices do not encourage the CEO, executive vice-presidents, or any employee to take inappropriate or excessive risks, and are not reasonably likely to have a material adverse effect on our company.

In addition to our compensation policies and practices, our corporate values – Safety, Responsibility, Integrity, and Collaboration – also guide director, officer and employee behaviour, underpin our company culture and define the character of the organization we share and work in every day.

INDEPENDENT CONSULTANT

The Human Resources committee retains an independent compensation consultant to provide advice on compensation-related matters.

The committee created a mandate for the consultant that includes:

- advising on compensation levels for the CEO and named executives,
- assessing the CEO's recommendations on the compensation of the other named executives,
- attending all of its committee meetings (unless otherwise requested by the committee Chair),
- providing data, analysis or opinion on compensation-related matters requested by the committee or its Chair, and
- reporting to the committee on any matters that may arise related to executive compensation.

Meridian has been the independent compensation consultant since September 2014. The committee obtains independent advice from the consultant who provides a neutral source of data and information on compensation practices and trends. While the consultant's advice is an important tool in the committee's processes, the committee remains wholly responsible for making its own decisions and recommendations to the Board.

Meridian provides advice to the committee on matters relating to executive compensation. It does not provide consulting or other services to TransCanada, and is not permitted to provide services to management. Before engaging Meridian, and each year after considering all factors bearing on the consultant's independence, including those factors enumerated by the NYSE, the committee determined that Meridian is independent.

In 2018, Meridian provided a market analysis of director's compensation to the Governance committee.

The table below shows the executive compensation-related fees paid in 2017 and 2018:

Executive compensation-related fees

(\$ in millions)

| Meridian | 2018 | 2017 |
|---|---------------|---------------|
| Consulting to the Human Resources committee | 0.20 | 0.22 |
| Consulting to the Governance committee | 0.01 | — |
| All other fees | — | — |
| Total fees | \$0.21 | \$0.22 |

Director compensation discussion and analysis

APPROACH

Our director compensation program reflects our size and complexity, and reinforces the importance we place on delivering shareholder value. Director compensation includes annual retainers and travel fees that are paid in cash and DSUs to link a significant portion of their compensation to the value of our shares (see *Deferred share units*, below for more information about the DSU plan).

The Board follows a formal performance assessment process to ensure directors are engaged and make meaningful contributions to the Board and committees they serve on.

The Governance committee reviews director compensation every two years, and makes compensation recommendations to the Board for its review and approval. Recommendations take into consideration the directors' time commitment, duties and responsibilities, and director compensation practices at comparable companies.

Directors of TransCanada also serve as directors of TCPL. Board and committee meetings of TransCanada and TCPL run concurrently, and the director compensation described below is for serving on both Boards. TransCanada does not hold any material assets directly, other than TCPL common shares and receivables from some of our subsidiaries. As a result, TCPL assumes all directors' costs according to a management services agreement between the two companies.

Benchmarking

Director compensation is benchmarked against two peer groups. The companies in the custom peer group are relatively consistent with the group of Canadian publicly-traded companies included in the executive compensation peer group and this group provides an industry specific market reference point. Since directors tend to be recruited from a variety of industries, the general industry peer group provides an additional market reference point of publicly-traded companies that are similar in size and scope to TransCanada. Total compensation is determined with reference to median levels in our peer groups, so we can attract and retain qualified directors. The Governance committee reviews director compensation every two years, based on independent advice respecting compensation paid by our peer companies. The Governance committee refers to the report when conducting its compensation review.

In 2018, the Governance committee determined that it is appropriate for the custom peer group to mirror the executive compensation peer group.

2018 peer groups

Custom peer group

| | |
|-----------------------------------|----------------------------------|
| American Electric Power Co. Inc. | NextEra Energy Inc. |
| BCE Inc. | Occidental Petroleum Corporation |
| Canadian National Railway Company | PG&E Corporation |
| Canadian Natural Resources Ltd. | Sempra Energy |
| Cenovus Energy Inc. | Southern Company |
| Dominion Energy Inc. | Suncor Energy Inc. |
| Duke Energy Corporation | Teck Resources Ltd. |
| Enbridge Inc. | Williams Companies Inc. |
| Exelon Corporation | |
| Fortis Inc. | |
| Husky Energy Inc. | |
| Imperial Oil Ltd. | |
| Kinder Morgan Inc. | |

General industry peer group

| |
|---|
| Agrium Inc. |
| Canadian National Railway Company |
| Canadian Pacific Railway Limited |
| Cenovus Energy Inc. |
| Enbridge Inc. |
| Encana Corporation |
| Maple Leaf Foods Inc. |
| Metro Inc. |
| National Bank of Canada |
| Potash Corporation of Saskatchewan Inc. |
| Resolute Forest Products Inc. |
| Suncor Energy Inc. |
| TELUS Corporation |

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Aligning the interests of directors and shareholders

The Board believes that directors can represent the interests of shareholders more effectively if they have a significant investment in TransCanada. Directors must hold at least four times their annual retainer in shares or DSUs within five years of joining the Board.

Directors can meet the requirements by purchasing TransCanada shares, participating in our dividend reinvestment plan or by directing all or a portion of their compensation to be paid in DSUs. We recalibrate the required ownership values if the retainer is increased.

If their holdings fall below the minimum level because of fluctuations in our share price, we expect directors to attain the minimum threshold within a reasonable amount of time set by the Governance committee.

As President and CEO, Mr. Girling must instead meet our CEO share ownership requirement which is five times his base salary. Mr. Girling meets these ownership requirements (see page 82 for details).

As of February 28, 2019, all of our directors are in compliance with our director share ownership policy. Mr. Limbacher, Dr. Samarasekera and Mr. Vandal each have five years from the date they were appointed to meet the director share ownership requirements.

| Director | Date appointed | Share ownership date |
|------------------|------------------|----------------------|
| Mr. Limbacher | June 13, 2018 | June 13, 2023 |
| Dr. Samarasekera | April 29, 2016 | April 29, 2021 |
| Mr. Vandal | November 6, 2017 | November 6, 2022 |

Deferred share units

DSUs are notional shares that have the same value as TransCanada shares. DSUs earn dividend equivalents as additional units at the same rate as dividends paid on our shares.

Our DSU plan allows directors to choose to receive a portion of their retainers and travel fees in DSUs instead of cash. The plan also allows the Governance committee to use discretion to grant DSUs to directors as additional compensation (excluding employee directors such as our President and CEO). No discretionary grants of DSUs were made to directors in 2018.

Directors redeem their DSUs when they leave the Board. Directors can redeem their DSUs for cash or shares purchased on the open market.

COMPONENTS

Directors receive annual retainers and travel fees when applicable. They are also reimbursed for out-of-pocket expenses they incur while attending meetings and other Board activities. Directors who are U.S. residents receive the same amounts in U.S. dollars. Mr. Girling is compensated in his role as President and CEO, and does not receive any director compensation. Both the annual Board retainer and the separate retainer for the Chair of the Board are paid in cash and DSUs according to the fee schedule below:

| 2018 compensation | | |
|--|---|---|
| Retainers paid quarterly from the date the director is appointed to the Board and committees | | |
| Board paid to each director except the Chair of the Board flat fee (no meeting fees paid) | \$235,000 per year (\$110,000 cash + \$125,000 in DSUs) | represented 2,374 DSUs for Canadian directors and 3,128 DSUs for U.S. directors in 2018 |
| Chair of the Board receives a higher retainer because of his level of responsibility flat fee (no meeting fees paid) | \$491,000 per year (\$201,000 in cash + \$290,000 in DSUs) | represented 5,509 DSUs in 2018 |
| Committee Chairs receive a higher committee retainer for additional duties and responsibilities | \$24,000 per year | Audit |
| | \$18,000 per year | Human Resources |
| | \$12,000 per year | Governance and Health, Safety & Environment |
| Travel fees if round trip travel is more than three hours | \$1,500 per round trip | |

DSUs are credited quarterly, in arrears, using the closing price of TransCanada shares on the TSX at the end of each quarter.

Starting January 1, 2019, the Audit committee Chair retainer was increased by \$1,000, from \$24,000 to \$25,000, the Governance committee and Health, Safety, Sustainability & Environment committee Chair retainers were increased by \$8,000, from \$12,000 to \$20,000, and the Human Resources committee Chair retainer was increased by \$2,000, from \$18,000 to \$20,000. These increases reflect the workload of chairing committees, and better align our differentiated committee Chair retainer practices to the median of our peer groups.

Director compensation – 2018 details

The table below shows total director compensation awarded, credited or paid in 2018.

DIRECTOR COMPENSATION TABLE

| Name | Fees earned (\$) | Share-based awards (\$) | Option-based awards (\$) | Non-equity incentive plan compensation (\$) | Pension value (\$) | All other compensation (\$) | Total (\$) |
|--|------------------|-------------------------|--------------------------|---|--------------------|-----------------------------|------------|
| Kevin E. Benson | 123,500 | 125,000 | — | — | — | 4,237 | 248,500 |
| Derek H. Burney (retired April 27, 2018) | 38,659 | 40,522 | — | — | — | — | 79,181 |
| Stéphan Crétier | 117,500 | 125,000 | — | — | — | — | 242,500 |
| S. Barry Jackson | 111,500 | 125,000 | — | — | — | 6,220 | 236,500 |
| Randy Limbacher (joined June 13, 2018) | 86,311 | 91,224 | — | — | — | — | 177,535 |
| John Lowe | 186,318 | 164,528 | — | — | — | — | 350,846 |
| Paula Rospot Reynolds | 182,337 | 164,528 | — | — | — | — | 346,866 |
| Mary Pat Salomone | 154,762 | 164,528 | — | — | — | — | 319,290 |
| Indira Samarasekera | 119,000 | 125,000 | — | — | — | — | 244,000 |
| D. Michael G. Stewart | 123,500 | 125,000 | — | — | — | — | 248,500 |
| Siim A. Vanaselja | 211,500 | 290,000 | — | — | — | — | 501,500 |
| Thierry Vandal | 152,716 | 164,528 | — | — | — | — | 317,244 |
| Richard E. Waugh (retired April 27, 2018) | 38,659 | 40,522 | — | — | — | — | 79,181 |

Notes

- Mr. Limbacher, Mr. Lowe, Ms. Reynolds, Ms. Salomone and Mr. Vandal received their share-based awards, retainers and travel in U.S. dollars. The values presented in this table are in Canadian dollars, and reflect a U.S./Canadian foreign exchange rate of 1.2894 as at March 29, 2018, 1.3168 as at June 29, 2018, 1.2945 as at September 28, 2018 and 1.3642 as at December 31, 2018.
- Mr. Girling is compensated in his role as President and CEO, and does not receive any director compensation.
- Fees earned includes Board and committee chair retainers and travel fees paid in cash, including the portion they chose to receive as DSUs.
- Share-based awards include the portion of the Board retainer (\$125,000) and the Board Chair retainer (\$290,000) that we automatically pay in DSUs. There were no additional grants of DSUs in 2018.
- Mr. Benson received unreserved parking valued at \$4,237 and Mr. Jackson received reserved parking valued at \$6,220.

The table below is a breakdown of director compensation by component. It includes the total fees paid in cash and the DSUs credited as at the grant date, unless stated otherwise. *DSUs credited* includes the minimum portion of the Board retainer paid in DSUs and the retainers, meeting and travel fees that directors chose to receive as DSUs in 2018.

| Name | Retainers | | Travel | Fees paid in cash (\$) | DSUs credited (\$) | Totals |
|--|------------|----------------------|-----------------|------------------------|--------------------|---------------------------------|
| | Board (\$) | Committee Chair (\$) | Travel fee (\$) | | | Total cash & DSUs credited (\$) |
| Kevin E. Benson | 110,000 | 12,000 | 1,500 | 123,500 | 125,000 | 248,500 |
| Derek H. Burney (retired April 27, 2018) | 35,659 | — | 3,000 | 38,659 | 40,522 | 79,181 |
| Stéphan Crétier | 110,000 | — | 7,500 | — | 242,500 | 242,500 |
| S. Barry Jackson | 110,000 | — | 1,500 | 111,500 | 125,000 | 236,500 |
| Randy Limbacher (joined June 13, 2018) | 80,277 | — | 6,034 | 86,311 | 91,224 | 177,535 |
| John Lowe | 144,785 | 31,589 | 9,943 | 186,318 | 164,528 | 350,846 |
| Paula Rospud Reynolds | 144,785 | 23,692 | 13,860 | 86,253 | 260,613 | 346,866 |
| Mary Pat Salomone | 144,785 | — | 9,977 | 154,762 | 164,528 | 319,290 |
| Indira Samarasekera | 110,000 | — | 9,000 | — | 244,000 | 244,000 |
| D. Michael G. Stewart | 110,000 | 12,000 | 1,500 | 123,500 | 125,000 | 248,500 |
| Siim A. Vanaselja | 201,000 | — | 10,500 | — | 501,500 | 501,500 |
| Thierry Vandal | 144,785 | — | 7,930 | — | 317,244 | 317,244 |
| Richard E. Waugh (retired April 27, 2018) | 35,659 | — | 3,000 | — | 79,181 | 79,181 |

Notes

- Mr. Limbacher, Mr. Lowe, Ms. Reynolds, Ms. Salomone and Mr. Vandal received their share-based awards, retainers and travel fees in U.S. dollars. The values presented in this table are in Canadian dollars, and reflect a U.S./Canada foreign exchange rate of 1.2894 as at March 29, 2018, 1.3168 as at June 29, 2018, 1.2945 as at September 28, 2018 and 1.3642 as at December 31, 2018.
- DSUs credited include all share-based awards vested or earned by the directors in 2018. The minimum portion of the Board retainer paid in DSUs in 2018 was \$290,000 for the Chair and \$125,000 for the other directors. DSUs credited also includes the portion of the retainers and travel fees directors chose to receive in DSUs in 2018.
- Total cash and DSUs credited is the total dollar amount paid for duties performed on the TransCanada and TCPL Boards.
- DSUs were paid quarterly based on share prices of \$53.28, \$56.88, \$52.26 and \$48.75, the closing prices of TransCanada shares on the TSX at the end of each quarter in 2018, respectively. Directors are able to redeem their DSUs when they leave the Board.

AT-RISK INVESTMENT

The table on the following page shows:

- the total value of each director's shares and DSUs or shares of our affiliates, including the DSUs credited as dividend equivalents up to January 31, 2019
- their holdings as a percentage of their 2018 annual retainer
- the minimum equity investment required, as a multiple of their annual retainer.

The change in value represents the value of DSUs received in 2018, including dividend equivalents credited up to January 31, 2019, plus any additional shares acquired in 2018. The change in value also includes increases and decreases in market value.

As of the date of this circular, all of our directors are in compliance with our director share ownership policy. See pages 65 and 82 for more information about our share ownership requirements for directors and executives.

None of the nominated directors (or all of our directors and executives as a group) own more than one per cent of TransCanada shares, or any class of shares of its subsidiaries and affiliates.

In the table:

- *DSUs* include DSUs credited as dividend equivalents up to January 31, 2019.
- *Total market value* is the market value of TransCanada shares and DSUs, calculated using a closing share price on the TSX of \$56.89 on February 20, 2018 and \$58.85 on February 28, 2019. It includes DSUs credited as dividend equivalents up to January 31, 2019.
- Mr. Crétier's holdings include 3,120 shares held by his wife.
- Mr. Stewart's holdings include 2,210 shares held beneficially by his wife.

At-risk investment

| Name | Date | Common shares | DSUs | Total common shares and DSUs | At-risk investment | | Minimum investment required | |
|---|--------|---------------|---------|------------------------------|-------------------------|----------------------------------|--|----------------------|
| | | | | | Total market value (\$) | As a multiple of annual retainer | Total value of minimum investment (\$) | Multiple of retainer |
| Kevin E. Benson | 2019 | 3,000 | 81,665 | 84,665 | 4,982,535 | 21.20 | 940,000 | 4x |
| | 2018 | 3,000 | 75,322 | 78,322 | 4,455,739 | 18.96 | 940,000 | 4x |
| | Change | — | 6,343 | 6,343 | 526,797 | 2.24 | | |
| Stéphan Crétier | 2019 | 27,271 | 8,460 | 35,731 | 2,102,769 | 8.95 | 940,000 | 4x |
| | 2018 | 18,500 | 3,525 | 22,025 | 1,253,002 | 5.33 | 940,000 | 4x |
| | Change | 8,771 | 4,935 | 13,706 | 849,767 | 3.62 | | |
| S. Barry Jackson | 2019 | 39,000 | 166,430 | 205,430 | 12,089,556 | 51.44 | 940,000 | 4x |
| | 2018 | 39,000 | 155,920 | 194,920 | 11,088,999 | 47.19 | 940,000 | 4x |
| | Change | — | 10,510 | 10,510 | 1,000,557 | 4.26 | | |
| Randy Limbacher (joined June 13, 2018) | 2019 | — | 1,828 | 1,828 | 107,578 | 0.46 | 940,000 | 4x |
| | 2018 | — | — | — | — | — | | |
| | Change | — | 1,828 | 1,828 | 107,578 | 0.46 | | |
| John E. Lowe | 2019 | 20,000 | 14,752 | 34,752 | 2,045,155 | 8.70 | 940,000 | 4x |
| | 2018 | 15,000 | 10,959 | 25,959 | 1,476,808 | 6.28 | 940,000 | 4x |
| | Change | 5,000 | 3,793 | 8,793 | 568,348 | 2.42 | | |
| Paula Rosput Reynolds | 2019 | 6,000 | 33,244 | 39,244 | 2,309,509 | 9.83 | 940,000 | 4x |
| | 2018 | 6,000 | 26,751 | 32,751 | 1,863,204 | 7.93 | 940,000 | 4x |
| | Change | — | 6,493 | 6,493 | 446,305 | 1.90 | | |
| Mary Pat Salomone | 2019 | 3,000 | 18,537 | 21,537 | 1,267,452 | 5.39 | 940,000 | 4x |
| | 2018 | 3,000 | 14,558 | 17,558 | 998,875 | 4.25 | 940,000 | 4x |
| | Change | — | 3,979 | 3,979 | 268,578 | 1.14 | | |
| Indira Samarasekera | 2019 | — | 11,969 | 11,969 | 704,376 | 3.00 | 940,000 | 4x |
| | 2018 | — | 6,833 | 6,833 | 388,729 | 1.65 | 940,000 | 4x |
| | Change | — | 5,136 | 5,136 | 315,646 | 1.34 | | |
| D. Michael G. Stewart | 2019 | 18,188 | 38,522 | 56,710 | 3,337,384 | 14.20 | 940,000 | 4x |
| | 2018 | 17,310 | 34,299 | 51,609 | 2,936,036 | 12.49 | 940,000 | 4x |
| | Change | 878 | 4,223 | 5,101 | 401,347 | 1.71 | | |
| Siim A. Vanaselja | 2019 | 12,000 | 31,108 | 43,108 | 2,536,906 | 5.17 | 1,964,000 | |
| | 2018 | 12,000 | 20,232 | 32,232 | 1,833,678 | 3.73 | 1,964,000 | 4x |
| | Change | — | 10,876 | 10,876 | 703,227 | 1.43 | | |
| Thierry Vandal | 2019 | 269 | 7,064 | 7,333 | 431,547 | 1.84 | 940,000 | |
| | 2018 | 261 | 804 | 1,065 | 60,588 | 0.26 | 940,000 | 4x |
| | Change | 8 | 6,260 | 6,268 | 370,959 | 1.58 | | |
| Total | 2019 | 128,728 | 413,579 | 542,307 | 31,914,767 | | | |
| | 2018 | 114,071 | 349,203 | 463,274 | 26,355,658 | | | |
| | Change | 14,657 | 64,376 | 79,033 | 5,559,109 | | | |

INCENTIVE PLAN AWARDS

Outstanding option-based and share-based awards

The table below shows all outstanding share-based awards previously granted to the directors that were outstanding at the end of 2018. Year-end values are based on \$48.75 being the closing price of TransCanada shares on the TSX at December 31, 2018. Non-executive directors are not eligible to participate in our stock option plan and, accordingly, none of our non-executive directors have outstanding option-based awards.

| Name | Number of shares or units of share-based awards that have not vested (#) | Market or payout value of share-based awards that have not vested (\$) | Number of shares or units of vested share-based awards not paid out or distributed (#) | Market or payout value of vested share-based awards not paid out or distributed (\$) | Number of share-based awards vested during 2018 | Share-base awards- value vested during 2018 (\$) |
|---|--|--|--|--|---|--|
| Kevin E. Benson | 996 | 48,560 | 80,669 | 3,932,623 | 6,169 | 300,758 |
| Derek H. Burney | 803 | 39,149 | 65,036 | 3,170,540 | 4,055 | 197,681 |
| Stéphan Crétier | 103 | 5,030 | 8,356 | 407,393 | 4,870 | 237,431 |
| S. Barry Jackson | 2,029 | 98,962 | 164,399 | 8,014,478 | 10,181 | 496,333 |
| Randy Limbacher (joined June 13, 2018) | 22 | 1,087 | 1,806 | 88,048 | 1,806 | 88,048 |
| John Lowe | 179 | 8,772 | 14,572 | 710,399 | 3,732 | 181,965 |
| Paula Rosput Reynolds | 405 | 19,768 | 32,838 | 1,600,885 | 6,379 | 311,022 |
| Mary Pat Salomone | 226 | 11,022 | 18,310 | 892,639 | 3,911 | 190,697 |
| Indira Samarasekera | 145 | 7,117 | 11,822 | 576,363 | 5,064 | 246,877 |
| D. Michael Stewart | 469 | 22,906 | 38,051 | 1,855,020 | 4,127 | 201,213 |
| Siim A. Vanaselja | 379 | 18,497 | 30,728 | 1,498,002 | 10,716 | 522,445 |
| Thierry Vandal | 86 | 4,200 | 6,977 | 340,155 | 6,182 | 301,408 |
| Richard E. Waugh | 384 | 18,755 | 31,156 | 1,518,885 | 4,055 | 197,681 |

Notes

- All share-based awards in this chart are DSUs.
- The total *Market or payout value of share-based awards that have not vested* is \$303,825 at December 31, 2018.
- *Shares or units not vested* are dividends declared at December 31, 2018, but not payable until January 31, 2019.
Number of shares or units of share based awards that have not vested is calculated using the closing price of TransCanada shares on the TSX at January 31, 2019 \$55.88.
- Mr. Burney and Mr. Waugh retired on April 27, 2018 and both have until April 27, 2019 to fully redeem their DSUs.

Human Resources committee letter to shareholders

Dear Shareholder:

The Board is holding its tenth consecutive say on pay advisory vote regarding our approach to executive compensation. We appreciate the strong shareholder support we have received in years past and hope you will similarly support our deliberations this year. We are providing this letter and the accompanying compensation discussion and analysis (CD&A) to explain how the Human Resources committee and the Board have assessed the performance of the company, the CEO and the executive vice-presidents in 2018, and the basis on which we reached various compensation decisions for each of our named executive officers.

TransCanada's approach to compensation

TransCanada's vision – to be the leading energy infrastructure company in North America, focusing on pipeline and power generation opportunities in regions where the company has or can develop a significant competitive advantage – has remained constant for more than a decade. Our business features long-lived, capital intensive assets, most of which are subject to regulated returns or other long-term contractual arrangements. Our compensation plans are intended to foster disciplined decision-making by management, properly balancing the exigencies of near-term financial performance with responsible long-term facilities development.

Over the last several years, TransCanada has become one of Canada's largest companies by asset size and is also one of the most significant energy infrastructure companies in North America. The company has been able to sustain sequential growth in earnings and a progressive dividend. We believe that the ongoing renewal of the management team, talent development and a compensation policy aligned directly to the multi-year planning process all contribute to the ability to sustain high performance. In 2018 the Human Resources committee undertook a comprehensive review of our incentive compensation program design. The review, conducted by our independent advisor, Meridian, confirmed that our program continues to align well with market practices within our compensation peer group and there is a strong link between performance achieved and compensation delivered. Based on that review, the one change the committee made was to reduce the reliance on options and increase the weighting of performance share units in our long term incentive program, consistent with trends seen across industry. We also have enhanced our minimum shareholding requirements for executives and, for the chief executive officer, added a post-retirement holding requirement. These changes are part of our effort to remain current with emerging governance best practices.

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2018 performance and compensation

As has been our practice, early in 2018, the Board approved the annual corporate scorecard for 2018. Goals were adopted in the following areas: safety (always our first priority) and sustainability, financial performance, optimization of TransCanada's existing asset base, excellence in project management, and the development of new asset opportunities. After year-end, we reviewed the accomplishments relative to the 2018 scorecard and carefully assessed the impact of each of these components to determine the appropriate level of annual incentive compensation for executives. We also evaluated executive compensation for market competitiveness at this time.

For the year 2018, the company had varied performance in different safety categories, but overall scored well against targets designed to meet or exceed the very best standards relative to the industry. The Board and management are committed to continuous improvement in process and personal safety and continue to drive toward making zero incidents a reality. We also focus on sustainability in our operating practices.

In 2018, we achieved record comparable earnings per share (EPS), reflecting an increase of 25 per cent compared to 2017. The increase largely resulted from strong performance of our existing asset base, contributions from growth projects that have entered service over the past twelve months, and the positive impact of U.S. tax reform (earnings per share targets were adjusted to exclude the latter for incentive purposes). The company also executed on new opportunities, adding almost \$5 billion in new, commercially secured projects to our capital program, resulting in a \$36 billion portfolio of secured growth projects underway. Approximately \$4 billion of assets were placed in service during the year. While most projects were delivered largely on-time and on-budget, delays and cost overruns on others resulted in an overall below target project execution rating. This remains an area of challenge, particularly during a period where there is significant activity in the energy industry across North America. The Board approved a Corporate factor (CF) for 2018 of 1.4 which was used in determining annual incentive awards for all non-union employees.

As part of our longer term compensation program, the 2016 ESU award that vested in 2018 included a cumulative three-year EPS target underpinned by a requirement that sufficient free cash be generated to support dividend growth. Achievement of the three-year cumulative earnings per share target is part of a formula that includes relative total shareholder return (TSR) and which we use to determine ESU payouts. The Board approved a performance multiplier of 1.86 for the 2016 ESU award which reflected strong company performance compared to cumulative comparable EPS and relative TSR targets.

While the Board applies a disciplined approach of assessing performance on a quantitative basis, we also apply our business judgment to assess the reasonableness of the results. We concluded that 2018 was a year of solid success overall and that the rewards being conferred are appropriate in light of performance.

Independent consultant

The Human Resources committee is advised by Meridian as its independent consultant on all executive compensation matters. The consultant's mandate includes providing advice on compensation for the named executives, incentive design, compensation governance and pay for performance, attending all committee meetings, and providing data, analysis or opinions on compensation-related matters as requested. While the committee is ultimately responsible for making its own decisions and recommendations to the Board, the consultant brings expertise, experience, independence and objectivity to the committee's deliberations. The committee meets routinely in-camera and with the consultant, thereby ensuring that the discussions regarding compensation are substantive and unconstrained. You can find additional information on the independent consultant on page 63.

Conclusion

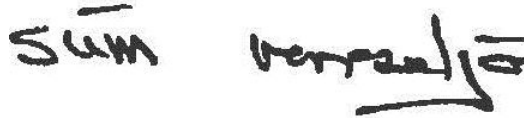
The Board is keenly aware of our responsibility to ensure that our approach to executive compensation supports our strategy and aligns with the interests of our shareholders. The Board and committee are also aware that our decisions must be logical and understandable to our employees, shareholders, and other stakeholders. To this end, the circular includes significant detail in the CD&A section starting on the next page. We respond to shareholder questions on an individual basis, take input from stakeholders, and continue to revisit our approach to ensure that our program remains appropriate.

We thank you for your continued confidence in our company and welcome your comments or questions. You can contact the committee or the Board through the Corporate Secretary, TransCanada Corporation, 450-1 Street S.W., Calgary, Alberta T2P 5H1.

Sincerely,



Paula Rosput Reynolds
Chair, Human Resources Committee



Siim A. Vanaselja
Chair of the Board of Directors

Executive compensation discussion and analysis

EXECUTIVE SUMMARY

This CD&A explains our executive compensation program, our 2018 performance, the performance assessment by the Human Resources committee and the Board, and their compensation decisions for our named executives:

- Russell Girling, President and Chief Executive Officer
- Donald Marchand, Executive Vice-President and Chief Financial Officer
- Stanley Chapman III, Executive Vice-President and President, U.S. Natural Gas Pipelines
- Karl Johannson, Executive Vice-President and President, Canada and Mexico Natural Gas Pipelines and Energy
- Paul Miller, Executive Vice-President and President, Liquids Pipelines.

The named executives and four other executive vice-presidents make up our executive leadership team.

Mr. Johannson retired from TransCanada on February 28, 2019. Mr. Miller was appointed Executive Vice-President Technical Centre and President, Liquids Pipelines on February 1, 2019.

Performance results

To evaluate corporate performance for 2018, the committee and the Board reviewed the results associated with the approved scorecard. The goals involve quantitative and qualitative factors associated with the following: safety, financial performance, execution of ongoing projects and transactions, maximizing the overall performance of existing assets and progress on key growth initiatives.

| Program component | Highlight |
|--------------------------|---|
| Safety | Safety is our highest priority. While there was varied performance in different safety categories, we performed well overall against the industry leading safety standards that we set for the company in 2018. |
| Financial performance | The company achieved record comparable EPS of \$3.86, an increase of 25 per cent over 2017 and above the target for the year. The committee evaluated non-comparable items recorded by the company and concluded that the use of comparable earnings was the appropriate basis for determining EPS for scorecard purposes as well as for evaluating the 2016 ESU results. |
| Project execution | We progressed development and construction of our \$36 billion portfolio of secured projects and placed approximately \$4 billion of assets in service during 2018. Most of our projects were delivered largely on-time and on-budget, but others experienced delays and cost overruns. |
| Optimize existing assets | We secured new contracts and regulatory settlements in 2018 that will enhance revenues in future years. Key to our success in maximizing the value of existing assets were new contracts on Marketlink and our U.S. Gas pipelines. We also reduced future risk on our Canadian Mainline with contracts under our North Bay Junction Long Term Fixed Price service which provides security of volumes for years to come. |
| Grow asset base | TransCanada captured almost \$5 billion of new, commercially-backed energy infrastructure projects, including expansions to the NGTL System and additional U.S. Natural Gas Pipeline projects to grow our asset base. |

Despite the ten per cent increase in our dividend during the calendar year, our total shareholder return for the year was -11 per cent, reflecting the challenging environment for companies in the energy infrastructure industry in 2018. The Board believes that over time, the scope of our portfolio, which prominently includes projects within our current geographic footprint, combined with the ability to generate future distributable cash flow and our progressive dividend policy, will provide superior returns which will be recognized by investors.

You can read more about 2018 performance starting on page 91.

Compensation highlights

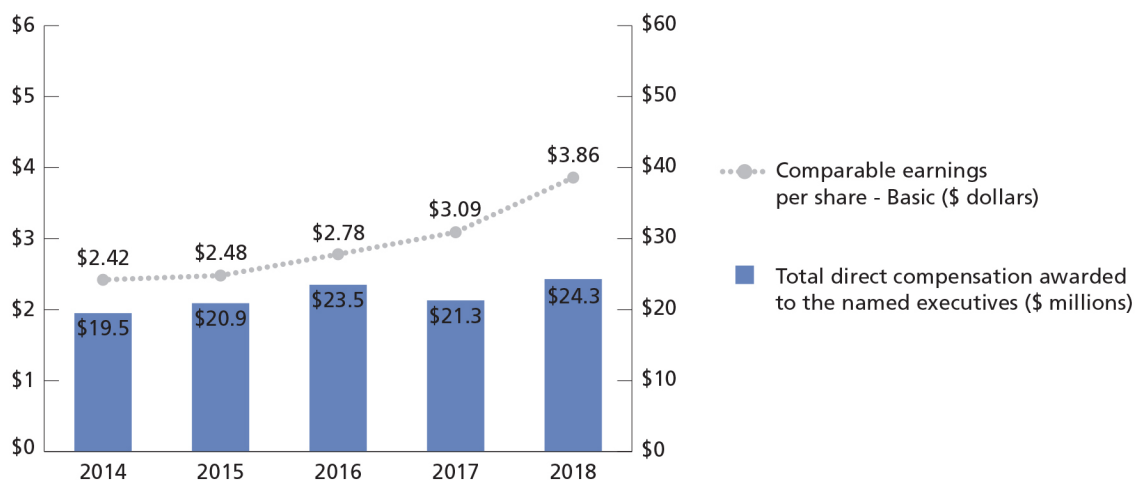
The Human Resources committee and Board made the following executive compensation decisions in 2019:

| Program component | Decision/rationale |
|--|---|
| Base salary adjustments | <ul style="list-style-type: none"> To maintain competitiveness with our peer group, recognize proficiency in their roles, and reflect increases in scope of responsibility. Increases are effective March 1, 2019. |
| Short-term incentive payments | <ul style="list-style-type: none"> Reflects a Corporate factor of 1.4, business unit factors ranging from 1.0 to 1.5, and personal factors ranging from 1.2 to 1.3. |
| 2016 ESU award | <ul style="list-style-type: none"> Approved a performance multiplier for the 2016 ESU award of 1.86, reflecting relative TSR performance at the 61st percentile of the S&P/TSX 60 Index and at the 77th percentile of the ESU peer group, and comparable EPS above target over the three-year period ended December 31, 2018. The performance multiplier, combined with the increase in share price from \$44.90 to \$52.26, and dividend reinvestment results in a payout that is 247 per cent of the original award value. See pages 92 and 93. |
| 2019 ESU award | <ul style="list-style-type: none"> The Board approved three-year targets for comparable EPS and relative TSR. The S&P/TSX 60 Index peer group was modified to capture a high dividend yield subset of companies that are more closely aligned with TransCanada. See page 94. |
| 2019 Corporate scorecard and 2019 business unit scorecards | <ul style="list-style-type: none"> The committee recommended and the Board approved the 2019 corporate scorecard, as well as the business unit scorecards and individual objectives for the named executives. |
| Other programmatic changes | <ul style="list-style-type: none"> The long-term incentive mix for the CEO and executive vice-presidents was changed from 50 per cent each to ESUs and stock options to 60 per cent ESUs and 40 per cent stock options. This change increases the weighting given to performance-vested equity compensation and aligns with market practice. The share ownership requirements were increased starting April 1, 2019 for executive vice-president and senior vice-president roles and a share ownership requirement was introduced at the vice-president level. Executives must now also buy and hold shares with a value equal to 50 per cent of any net proceeds of a payment under the ESU plan until they meet their share ownership requirement. See page 82. As of April 1, 2019 the CEO is required to maintain the full required share ownership level for one year post-retirement. See page 82. |

In addition, the TransCanada USA Services Inc. Board approved the creation of the TransCanada USA Services Inc. Non-Qualified Plan, effective January 1, 2019. The purpose of the Plan is to provide additional retirement benefits to U.S. employees who are expected to earn more than the IRS compensation limit (\$280,000 in 2019). The Plan allows eligible employees to make deferral contributions above IRS limits, as well as receive additional matching and company contributions. Mr. Chapman will be eligible to accrue benefits under this Plan in 2019.

Compensation vs. financial performance

The chart below compares our key financial results for the last five fiscal years to total direct compensation awarded to the named executives for the same period. Total direct compensation includes base salary, the short-term incentive award (paid in the first quarter following the performance year) and the grant value of ESU and stock option awards.



The table below shows total direct compensation awarded to our named executives as a percentage of our comparable earnings for the last five fiscal years:

| | 2014 | 2015 | 2016 | 2017 | 2018 |
|---|------|------|------|------|------|
| Total direct compensation awarded to the named executives (as a % of comparable earnings) | 1.1% | 1.2% | 1.1% | 0.8% | 0.7% |

Note

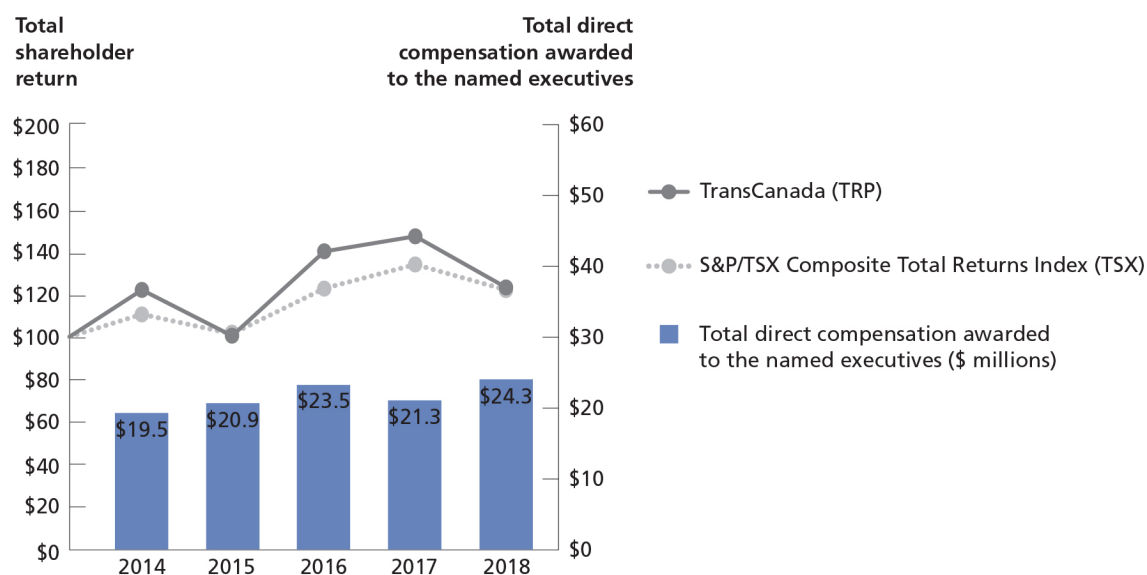
- *Comparable earnings per share* and *Comparable earnings* are non-GAAP measures and do not have any standardized meanings prescribed by U.S. GAAP (see *Schedule C* on page 118 for more information).

Compensation vs. total shareholder return

Our TSR, the change in value of TransCanada shares plus reinvestment of dividends, has delivered an annual compound return of 4.2 per cent over the last five years compared to 4.1 per cent for the S&P/TSX Composite Total Returns Index.

The chart below illustrates TSR, assuming an initial investment of \$100 in TransCanada shares as of year end 2013, and compares it to the return of the S&P/TSX Composite Total Returns Index and the trend in total direct compensation awarded to our named executives over the same period.

TSR is only one of the performance measures the Board considers when assessing performance and determining compensation for our named executives. Consequently, we do not necessarily expect there to be a direct correlation between TSR and total direct compensation awarded in any given period. However, the realized value of long-term compensation awarded in any given year is not guaranteed, it is equity-based, and its value is directly affected by changes in our share price.



| At year end | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | Compound annual return |
|-------------|----------|----------|----------|----------|----------|----------|------------------------|
| TRP | \$100.00 | \$121.97 | \$100.43 | \$140.03 | \$147.12 | \$123.13 | 4.2% |
| TSX | \$100.00 | \$110.55 | \$101.36 | \$122.73 | \$133.89 | \$121.99 | 4.1% |

APPROACH

TransCanada's executive compensation program is designed to meet four key objectives:

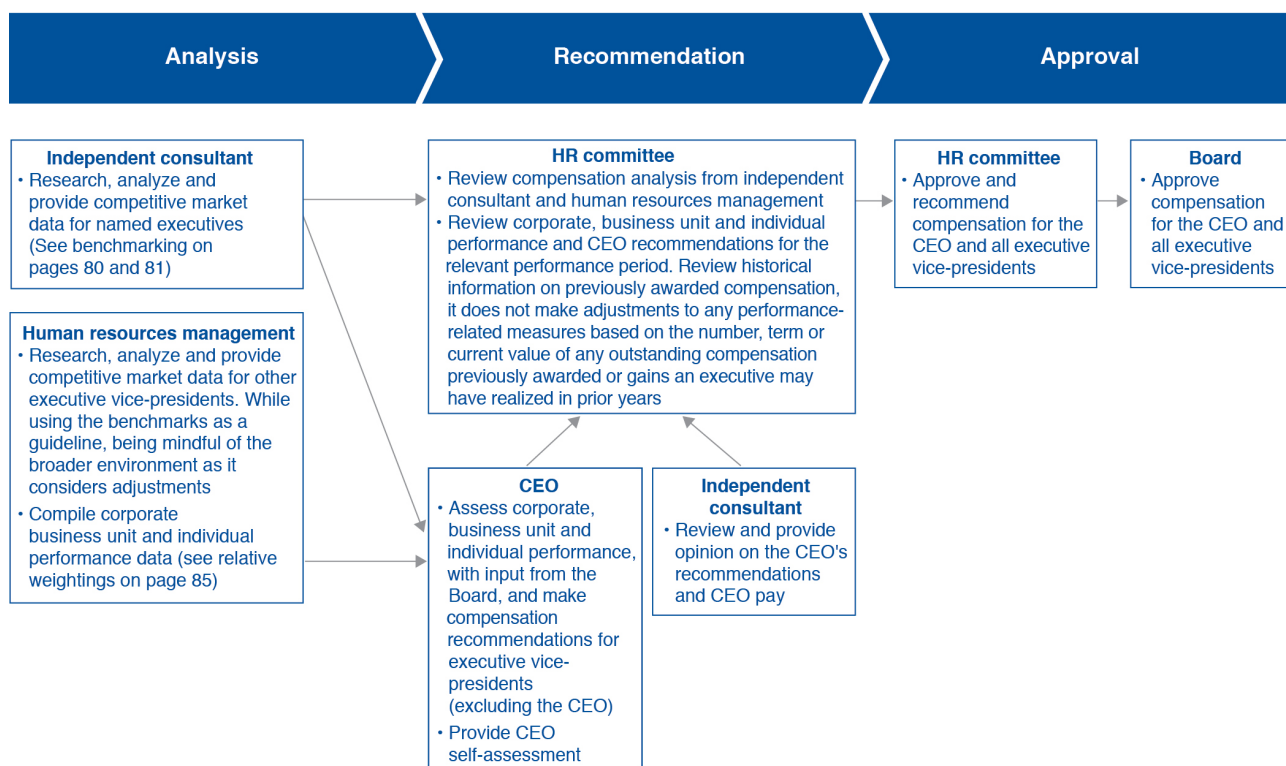
- provide a compensation package that 'pays for performance' by rewarding executives for delivering on our corporate objectives and achieving our overall strategy
- offer levels and types of compensation that are competitive with the market
- align executives' interests with those of our various stakeholders
- attract, engage and retain our executives.

Compensation is also aligned with our risk management processes to ensure there is an appropriate balance between risk and reward. See pages 61 and 62 for more information.

Decision-making process

We follow a comprehensive decision-making process that involves management, the Human Resources committee and the Board, and takes into account market data, input from the CEO and advice from the committee's independent consultant.

The Board makes all decisions affecting CEO and executive vice-president compensation based on the committee's recommendations.



Benchmarking

We benchmark our executive compensation against a peer group of companies to assess the competitive market. Each year, the committee reviews the companies with its independent consultant, makes adjustments as it deems appropriate, and approves the peer group.

The peer group for the named executives reflects:

- the size of TransCanada relative to the peer companies
- a broad sample size which reduces potential volatility in the data
- the scope of TransCanada's North American business activities
- the broad market from which TransCanada competes for executive talent.

The 2018 peer group for our named executives is listed below. The committee made minor adjustments to the peer group from 2017 including adding Duke Energy Corporation and Sempra Energy as large U.S. energy/utility companies. BCE Inc. was also added as it is another large capitalization Canadian company with similar organizational complexity. The committee preserved the balance between Canadian and U.S. companies. No adjustments were made to the peer group for 2019.

Named executive peer group

| | |
|-----------------------------------|----------------------------------|
| American Electric Power Co. Inc. | Imperial Oil Ltd. |
| BCE Inc. | Kinder Morgan Inc. |
| Canadian National Railway Company | NextEra Energy Inc. |
| Canadian Natural Resources Ltd. | Occidental Petroleum Corporation |
| Cenovus Energy Inc. | PG&E Corporation |
| Dominion Energy Inc. | Sempra Energy |
| Duke Energy Corporation | Southern Company |
| Enbridge Inc. | Suncor Energy Inc. |
| Exelon Corporation | Teck Resources Ltd. |
| Fortis Inc. | Williams Companies Inc. |
| Husky Energy Inc. | |

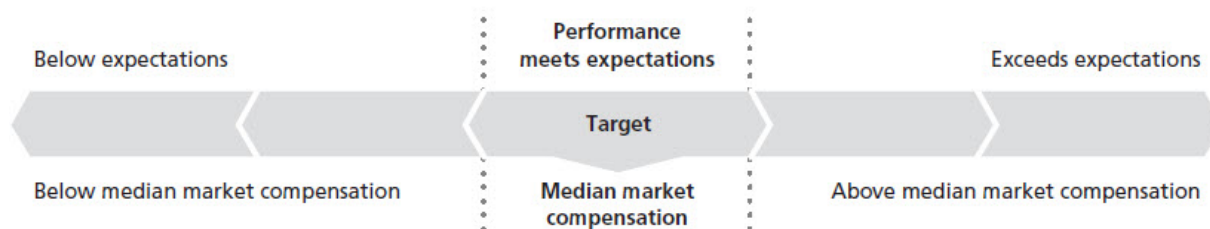
We benchmark each named executive position against similar positions in the peer group and direct compensation is generally set within a competitive range of the market median. The committee recognizes that even with a relatively large peer group, the results can be skewed by changes in the underlying market data. As a result, the committee exercises judgment in the interpretation of the data and is guided by the independent consultant in this regard. Competitive market data for the peer group provides an initial reference point for determining executive compensation.

| Profiles At December 31, 2017 | TransCanada | Named executive peer group | |
|---|----------------|----------------------------|-----------------|
| | | Median | 75th percentile |
| Assets | \$86.1 billion | \$73.9 billion | \$102.7 billion |
| Revenue | \$13.4 billion | \$18.6 billion | \$27.5 billion |
| Market capitalization at December 31, 2018 (Monthly closing price of shares × shares outstanding for the most recent quarter) | \$44.8 billion | \$47.8 billion | \$60.8 billion |
| Employees | 6,778 | 12,700 | 23,000 |

Notes

- **Named executive peer group** scope information reflects 2017 data, unless otherwise noted, as this was the most current information available at the time the analysis was performed. For comparability, the **TransCanada** scope information also reflects 2017 data.
- Values reflect a U.S./Canada foreign exchange rate of 1.2957 for 2018 and 1.2986 for 2017.

Total direct compensation is generally set within a competitive range of the market median.



See **Components** on page 83 for more information about total direct and indirect compensation.

Aligning the interests of executives and shareholders

We have share ownership requirements to align the interests of our executives and shareholders. The minimum requirements are significant and vary by executive level. As at December 31, 2018 the ownership requirements were:

| Executive level | Required ownership (multiple of base salary) |
|--------------------------|---|
| CEO | 5x |
| Executive vice-president | 2x |
| Senior vice-president | 1x |

Starting April 1, 2019 the Board increased the share ownership requirements for executive vice-presidents to 3 times base salary, for senior vice-presidents to 2 times base salary, and added a share ownership requirement for vice-presidents of 1 time base salary.

The Board also introduced in 2019 the requirement for the CEO to maintain his/her required ownership level for one year after retirement.

Executives have five years to meet the requirement and must buy and hold 50 per cent of all stock options they exercise until they meet their share ownership requirement. Starting April 1, 2019 executives must also buy and hold shares equal to 50 per cent of any net payment under the ESU plan until their ownership requirement is met.

The committee reviews share ownership levels for each executive annually and would use its discretion when assessing compliance if ownership levels fall below the minimum because of fluctuations in share price.

All of the named executives met their share ownership requirements in 2018 except Mr. Chapman, who has until the end of 2022 to meet his requirements.

See the *Executive profiles* starting on page 94 for share ownership levels.

COMPONENTS

Total direct compensation includes fixed and variable pay. Base salary is the only form of fixed compensation. Variable compensation includes our short and long-term incentive plans. We also offer indirect compensation which includes retirement benefits, other benefits and perquisites.

| Element | Form | Performance period | Objective |
|---|--|--|--|
| Base salary (fixed) | Cash | <ul style="list-style-type: none"> One year | <ul style="list-style-type: none"> Provide base compensation commensurate with the role Attract and retain executives |
| Short-term incentive (variable) | Cash | <ul style="list-style-type: none"> One year | <ul style="list-style-type: none"> Motivate executives to achieve key annual business objectives Reward executives for relative contribution to TransCanada Align interests of executives and shareholders Attract and retain executives |
| Long-term incentive (variable) | ESUs | <ul style="list-style-type: none"> Three-year term Vesting at the end of the term Awards subject to a performance multiplier based on pre-established targets | <ul style="list-style-type: none"> Motivate executives to achieve medium-term business objectives Align interests of executives and shareholders Attract and retain executives |
| | Stock options | <ul style="list-style-type: none"> Seven-year term One third vest each year beginning on the first anniversary of the grant date | <ul style="list-style-type: none"> Motivate executives to achieve long-term shareholder value creation Align interests of executives and shareholders Attract and retain executives |
| Retirement benefits | Defined Benefit Pension Plan and Supplemental Pension Plan for Canadian executives | <ul style="list-style-type: none"> To be realized during retirement | <ul style="list-style-type: none"> Provide a source of income at retirement Attract and retain executives |
| | 401(k) Plan for U.S. executives | | |
| Traditional health and welfare programs | Benefit plans | <ul style="list-style-type: none"> One year | <ul style="list-style-type: none"> Support the health and well-being of executives Attract and retain executives |
| Perquisites | Flexible perquisite allowance, club memberships, reserved parking space, and a car allowance | <ul style="list-style-type: none"> One year | <ul style="list-style-type: none"> Attract and retain executives |

Fixed compensation

Base salary

Base salaries for executive positions are generally aligned within a competitive range of median base salary levels in our peer group. The independent consultant to the committee analyzes and provides relevant market data to the committee and the Board. TransCanada is now one of Canada's largest corporations by asset size. Thus in assessing current competitive compensation, the committee takes into account the broader scope of some roles at TransCanada.

Increases in base salary for the named executives are based on their performance, competitive market data, experience in and scope of the role and compensation relative to other executives at TransCanada. Base salary adjustments are typically effective March 1.

Variable or at-risk compensation

Variable compensation accounts for a significant portion of executive pay, and increases in proportion by executive level.

Short-term incentive

The short-term incentive plan is principally designed to motivate employees to achieve key annual business objectives. It rewards individuals for their contributions to TransCanada, and aligns the interests of employees and shareholders. In doing so, it offers the opportunity for supplemental compensation which is a factor in attracting and retaining highly-qualified and motivated talent. Short-term incentive awards are paid as a lump sum cash payment in March following the performance year.

Annual cash awards are made to the named executives based on a formula that takes into account:



Awards are based on the following target levels and performance measure relative weightings.

| | Short-term incentive target (% of base salary) | Payout range (% of target) | 2018 performance measure relative weighting | | |
|---|--|----------------------------|---|---------------|------------|
| | | | Corporate | Business unit | Individual |
| President & CEO (Russell Girling) | 125% | 0 - 200% | 100% | — | — |
| Executive Vice-President & CFO (Donald Marchand) | 75% | 0 - 200% | 80% | — | 20% |
| Executive Vice-President and President, U.S. Natural Gas Pipelines (Stanley Chapman III) | 75% | 0 - 200% | 60% | 40% | — |
| Executive Vice-President & President, Canada & Mexico Natural Gas Pipelines & Energy (Karl Johannson) | 75% | 0 - 200% | 60% | 40% | — |
| Executive Vice-President & President, Liquids Pipelines (Paul Miller) | 75% | 0 - 200% | 60% | 40% | — |

While targets are reviewed annually against the competitive market data, they are not expected to change every year unless the role changes or is reassessed relative to market conditions. As with base pay, median targets are a reference but may not reflect the appropriate competitive level given TransCanada's size and complexity compared to other peers as well as the scope and experience of the executive in the role.

Effective January 1, 2019 the target annual incentive for Mr. Girling was increased from 125 per cent to 135 per cent.

Long-term incentive

Each year, the committee and the Board grant long-term incentive awards to the named executives considering median market levels and potential to contribute to TransCanada's future success.

For 2018, the allocation of long-term incentive awards for our CEO and executive vice-presidents was 50 per cent each to ESUs and stock options. Starting in 2019, the allocation was changed to 60 per cent ESUs and 40 per cent stock options. This change increases the weighting given to performance-vested equity compensation and aligns with market practice.

Executive share units

These are notional share units awarded under the ESU plan. ESUs accrue dividend equivalents and vest on December 31 at the end of the three-year performance period. The payout depends on how well we perform against targets established at the beginning of the period.

ESU awards are paid out in a lump sum cash payment in the first quarter following the end of the performance period.

$$\begin{array}{|c|} \hline \text{Number of ESUs vesting} \\ \hline \end{array} \times \begin{array}{|c|} \hline \text{Valuation price on the vesting date} \\ \hline \end{array} \times \begin{array}{|c|} \hline \text{Performance multiplier} \\ \hline \end{array} = \begin{array}{|c|} \hline \text{ESU payout (\$)} \\ \hline \end{array}$$

Notes

- **Number of ESUs vesting** is the number of ESUs originally granted plus ESUs earned as dividend equivalents during the three-year performance period. Dividends and ESUs vest at the same time and only to the same extent that the underlying ESUs vest.
- **Valuation price on the vesting date** is the volume-weighted average closing price of TransCanada shares for the 20 trading days immediately prior to and including the vesting date (December 31).

"Off-cycle" grants may be made to newly hired executives and to executives promoted part way through the year. These grants will vest on the same schedule as the standard grants that year and will be subject to the same valuation and performance multiplier; however, depending when the off-cycle grant was made it will accrue fewer dividends than the standard grant.

Stock options

Shareholders first approved our stock option plan in 1995, and the most recent version of the plan was last approved by shareholders in 2016. The plan is administered by the Human Resources committee, which is composed entirely of independent directors. The total number of shares that can be reserved for issuance to insiders, or issued to insiders at any time and within any one-year period, under any of our security based compensation arrangements (as defined in the TSX Company Manual), is limited to 10 per cent or less of our issued and outstanding shares. Non-executive directors are not eligible to participate in the plan. Under the terms of the plan, the committee determines which employees are eligible to participate. Only employees at the vice-president level or above are currently eligible to receive stock options. The committee does not take into account the value of long-term incentive awards it grants in a given year to offset less-than-expected returns from awards granted in prior years. The committee believes that increasing, reducing or limiting grants based on prior gains could detract from the integrity of the performance-based framework or undermine the incentives for executives to deliver strong performance.

Vesting

Stock options vest one third each year, beginning on the first anniversary of the grant date and have a seven-year term.

Executives are limited to trading TransCanada shares in four windows (known as ***open trading windows***), which are designated quarterly. The open trading windows relate to the completion and disclosure of quarterly and annual financial reports.

Executives are not permitted to trade when they are in possession of material, non-public information. If the expiry date of a stock option does not fall during an open trading window, or falls within the first five days of an open trading window, the expiry date is extended to 10 business days after the next window opens. Similar extensions apply when there is a special trading blackout imposed during one of the four open trading windows and stock options expire during the trading blackout.

Exercise price

The exercise price of an option is the closing market price of TransCanada shares on the TSX on the last trading day immediately preceding the grant date. Option holders only benefit if the market value of our shares exceeds the exercise price at the time they exercise the options. We do not provide financial assistance to plan participants in connection with the exercise of options.

Adjustments

The number of shares subject to an option will be adjusted under the terms of the plan when exercised if, before the exercise of any option:

- the shares are consolidated, subdivided, converted, exchanged, reclassified or in any way substituted, or
- a stock dividend that is not in place of an ordinary course cash dividend is paid on the shares.

More about the stock option plan

Options cannot be transferred or assigned to another person. A personal representative can exercise options on behalf of the holder if he or she dies or is incapacitated.

The committee has the authority to suspend or discontinue the plan at any time without shareholder approval. Management does not have this right, and cannot make changes to the plan. The committee can recommend to the Board for approval certain amendments to the plan, or any stock option grant without shareholder approval, provided they are to:

- clarify an item
- correct an error or omission
- change the vesting date of an existing grant, or
- change the expiry date of an outstanding option to an earlier date.

The committee cannot make any amendments to the plan that adversely affect the holders' rights relating to any previously granted options without their consent.

The plan requires certain amendments to be approved by shareholders, including:

- increasing the number of shares available for issue under the plan
- lowering the exercise price of a previously granted option
- canceling and reissuing an option
- permitting options to be transferable or assignable other than for normal estate settlement purposes
- changing the categories of individuals eligible to participate in the plan
- providing financial assistance to a participant in connection with the exercise of options
- extending the expiry date of an option
- changing the types of amendments that require shareholder approval.

For more details on stock options, see ***Equity compensation plan information*** on page 105.

See the ***Compensation on termination*** table on pages 108 and 109 for the effect of certain employment events on participants' entitlements under the plan.

Retirement benefits

Defined benefit plan

Our Canadian defined benefit (DB) plan includes a registered pension plan and a supplemental pension plan for eligible employees.

Participation in the DB plan is mandatory once a Canadian employee has 10 years of continuous service. All of the Canadian named executives participate in the DB plan. Mr. Chapman, our U.S. named executive, participates in the 401(k) Plan as a U.S. employee.

Normal retirement for participants is when they turn 60, or between 55 and 60 if their age and years of continuous service add up to 85 points. The retirement benefit at normal retirement age is calculated as follows:

$$\left(\begin{array}{l} 1.25\% \text{ of employee's highest} \\ \text{average earnings (up to the final} \\ \text{average YMPE)} \end{array} + \begin{array}{l} 1.75\% \text{ of employee's highest} \\ \text{average earnings (above the final} \\ \text{average YMPE)} \end{array} \right) \times \begin{array}{l} \text{Credited} \\ \text{service} \end{array} = \begin{array}{l} \text{Annual retirement} \\ \text{benefit (\$)} \end{array}$$

Notes

- **Highest average earnings** is the average of an employee's best 36 consecutive months of pensionable earnings in their last 15 years of employment. **Pensionable earnings** means an employee's base salary plus the annual short-term incentive award up to a pre-established maximum, expressed as a percentage of base salary. For 2018, this is 100 per cent for the CEO, and 60 per cent for the other named executives. Pensionable earnings do not include any other forms of compensation.
- **YMPE** is the Year's Maximum Pensionable Earnings under the Canada/Québec Pension Plan.
- **Final average YMPE** is the average of the YMPE in effect for the latest calendar year from which earnings are included in **Employees' highest average earnings** calculation plus the two previous years.
- **Credited service** is the employee's years of credited pensionable service in the plan. Registered DB plans are subject to a maximum annual benefit accrual under the **Income Tax Act** (Canada) which is currently \$2,944 for each year of credited service. Participants therefore cannot earn benefits in the registered plan on any compensation that is higher than approximately \$184,000 per year.

Participants can retire between 55 and 60, but the benefit is reduced by 4.8 per cent per year for each year until they reach age 60 or 85 points, whichever is earlier. They can retire 10 years prior to normal retirement age, however the benefit is reduced by an actuarial equivalence from age 55.

Although our DB plan is non-contributory, participants can decide to make pension contributions to an enhancement account for buying ancillary or "add on" benefits within the registered pension plan. The DB plan is integrated with the Canada/Québec Pension Plan benefits.

Supplemental pension plan

The DB pension plan uses a hold harmless approach, where the maximum amount allowed under the *Income Tax Act* (Canada) is paid from the registered pension plan and the remainder is paid from the supplemental pension plan. The supplemental pension plan is funded through a retirement compensation arrangement under the *Income Tax Act* (Canada). Currently there are approximately 978 participants in the supplemental pension plan (with pensionable earnings exceeding approximately \$184,000 per year) including the Canadian named executives. All DB pension plan participants with pensionable earnings exceeding approximately \$184,000 per year are eligible to participate in the supplemental pension plan.

Contributions to the fund are subject to Board approval, and are based on an actuarial valuation of the supplemental pension plan obligations each year.

Effective 2012, solely at the discretion of the Board, our funding practice for the supplemental pension plan was revised to align it generally with the registered pension plan wherein annual funding approximates current year service cost accruals and the five-year amortization of deficits.

The DB pension plan does not generally recognize past service, but the committee has used its discretion in the past to grant additional years of credited service to senior executives under the supplemental pension plan. See the *Defined benefit pension plan* table and footnotes on page 106 for details.

All DB pension plan participants, including our Canadian named executives, receive the normal form of pension when they retire:

- monthly pension for life, and 60 per cent is paid to the spouse after the employee dies, or
- if the employee is not married, the monthly pension is paid to the employee's beneficiary or estate for the balance of the 10 years, if the employee dies within 10 years of retirement.

Participants can choose a different form of payment, but must complete waivers, as required by law. Options include:

- increasing the percentage of the pension value that continues after they die
- adding a guarantee period to the pension, or
- transferring the lump sum commuted value of the registered pension plan to a locked-in retirement account up to certain tax limits and the excess is paid in cash. Subject to company discretion, the supplemental pension plan commuted value may also be transferred and paid in cash.

TransCanada 401(k) and Savings Plan

The TransCanada 401(k) and Savings Plan (401(k) Plan) provides a company contribution in addition to a voluntary employee contribution with a company match.

Participation in the 401(k) Plan is mandatory for U.S. new hires. Mr. Chapman participates in the 401(k) Plan.

The company contributes seven per cent of each participants' base salary (up to IRS contribution limits) to a 401(k) account. Participants can also make voluntary contributions and receive a company match equal to 100 per cent up to the first five per cent of eligible earnings. All company contributions vest immediately. For 2019, the IRS annual compensation limit is \$280,000 while the annual employee 401(k) contribution limit is \$19,000 with an additional \$6,000 of contribution room for employees age 50 and older.

The 401(k) Plan offers a number of investment options to help participants meet their saving goals. TransCanada's Investment Committee monitors and measures the performance of the investment funds offered in the 401(k) Plan in relation to established performance guidelines and occasionally makes changes to the choice of investment funds where necessary.

Other benefits

All employees, including the named executives, receive other benefits such as traditional health and welfare programs that are based on competitive market practices in the country in which they work. These benefits help to attract and retain talent.

Perquisites

Named executives receive a limited number of perquisites, including:

- a flexible perquisite allowance to use at their discretion
- club memberships
- a reserved parking space
- an annual car allowance.

CORPORATE PERFORMANCE

The following summarizes our 2018 corporate performance against annual objectives.

You can find definitions of these terms and more information about our financial and business performance in our 2018 Management's discussion and analysis (MD&A) on our website (www.transcanada.com) and on SEDAR (www.sedar.com).

The Board approved a Corporate factor of 1.4, which is above target level performance. The Corporate factor was used in determining the 2018 annual incentive awards for all non-union employees.

| | 2018 target | 2018 result | Rating (0-2.0) | Weighting | Factor |
|--------------------------------------|---|------------------|----------------|-------------|------------|
| 1. Safety and asset integrity | Various targets | Exceeded overall | 1.2 | 20% | 0.2 |
| 2. Financial | | | | | |
| Comparable earnings per share | \$3.30 | \$3.86 | 2.0 | 20% | 0.4 |
| 3. Optimize existing assets | \$100 million of incremental annual long-term value | Exceeded | 1.5 | 20% | 0.3 |
| 4. Project execution | Various targets | Partially met | 0.5 | 20% | 0.1 |
| 5. Grow asset base | \$3 billion | \$4.9 billion | 1.9 | 20% | 0.4 |
| Overall Corporate factor | | | | 100% | 1.4 |

Notes

- The *Financial* objective will score a maximum of 1.0 if the ratio of dividends per share/comparable funds generated from operations per share is greater than 50 per cent. The ratio for 2018 was 38 per cent.
- The committee evaluated all non-comparable adjustments to 2018 EPS and concluded that they are non-recurring items or unrealized gains/losses and it is therefore appropriate to exclude them in evaluating performance against the scorecard target.
- *Comparable earnings per share* as reported by the company was \$3.86, calculated as follows:

| | |
|--|--------|
| Net income per common share | \$3.92 |
| Gain on sale of Cartier Wind power facilities | (0.16) |
| MLP regulatory liability write-off | (0.13) |
| U.S. Tax Reform | (0.06) |
| Net gain on sale of U.S. Northeast power generation assets | (0.03) |
| Bison contract terminations | (0.03) |
| Bison asset impairment | 0.16 |
| Tuscarora goodwill impairment | 0.02 |
| U.S. Northeast power marketing contracts | 0.01 |
| Risk management activities | 0.16 |
| Comparable earnings per share | \$3.86 |

- We calculate both *Net income per common share* and *Comparable earnings per share* based on the weighted average number of our shares outstanding (902 million in 2018).
- *Comparable earnings per share* and *Comparable funds generated from operations per share* are non-GAAP measures and do not have any standardized meaning as prescribed by U.S. GAAP (see *Schedule C* for more information).

See *Performance results* on page 75 for more information about 2018 corporate performance.

BUSINESS UNIT PERFORMANCE

Business unit performance is assessed relative to a scorecard of metrics and targets established at the start of the year and approved by the Board. The CEO reviews and assesses business unit results, which are then recommended to the Board for approval.

While the specific metrics vary by business unit, the makeup of each scorecard consists of the same five categories as the corporate scorecard, and similar key metrics, as illustrated on the previous page, are used within each business unit scorecard. Each business unit also allocates 20 per cent of their performance to safety and asset integrity to highlight its importance.

PAYOUT OF 2016 EXECUTIVE SHARE UNIT AWARD

Performance multiplier

The ESU award granted in 2016 vested on December 31, 2018, and will be paid in March 2019. The performance multiplier for this award was determined based on the guidelines in the table below.

| If TransCanada's performance is | Then the performance multiplier is | |
|---------------------------------|------------------------------------|---|
| Below threshold | 0 | We calculate the performance multiplier using a straight-line interpolation if performance is: <ul style="list-style-type: none"> • between threshold and target, or • between target and maximum |
| At threshold | 0.50 | |
| At target | 1.00 | |
| At or above maximum | 2.00 | |

This award provided for a performance multiplier from 0 to 2.0 based on the Board's assessment of how the company performed in terms of relative total shareholder return and comparable EPS targets over the course of the three-year period. ESU payouts were calculated using a performance multiplier of 1.86, based on the following result:

| Measure | Period | Performance level targets for 2016 ESU award | | | Actual performance | Multiplier | Weighting | Weighted multiplier |
|---|-------------------------------|--|------------------------------|------------------------------|--------------------|------------|-----------|---------------------|
| | | Threshold | Target | Maximum | | | | |
| Relative TSR against the S&P/TSX 60 Index | January 2016 to December 2018 | at least the 25th percentile | at least the 50th percentile | at least the 75th percentile | P61 | 1.44 | 25% | 0.36 |
| Relative TSR against the ESU peer group (see page 93) | | at least the 25th percentile | at least the 50th percentile | at least the 75th percentile | P77 | 2.00 | 25% | 0.50 |
| Comparable earnings per share | | \$7.63 | \$8.08 | \$8.81 | \$9.73 | 2.00 | 50% | 1.00 |
| Performance multiplier | | | | | | | | 1.86 |

Note

- **Relative TSR** is calculated using \$52.26, the twenty-day volume weighted average closing price of TransCanada shares on the TSX at December 31, 2018. Our absolute TSR performance was 32.3 per cent.
- The ratio of cumulative dividends per share/cumulative funds generated from operations (FGFO) per share for the three-year period was less than 50 per cent (37 per cent), and so satisfied the additional modifier for the comparable earnings per share multiplier.

Our peer group for relative TSR for the 2016 ESU award consisted of a group of publicly-traded companies that represented investment opportunities for equity investors seeking exposure to the North American pipeline, power and utility sector.

2016 ESU award peer group for relative TSR

| | |
|-----------------------------------|-------------------------|
| AltaGas Ltd. | Fortis Inc. |
| Canadian Utilities Ltd. | Inter Pipeline Ltd. |
| CenterPoint Energy Inc. | Kinder Morgan Inc. |
| Dominion Energy Inc. | Pembina Pipeline Corp. |
| Emera Inc. | Sempra Energy |
| Enbridge Inc. | Williams Companies Inc. |
| Enterprise Products Partners L.P. | |

Note

- Spectra Energy Corp. and Veresen Inc. were initially approved as part of the 2016 ESU award peer group, but were removed due to their respective acquisition by Enbridge Inc. and Pembina Pipeline Corp.

Awards to named executives

The table below is a summary of the details of the original 2016 ESU award and the amount paid to each named executive when the award vested at the end of 2018.

| | 2016 ESU award | | 2016 ESU payout | | | |
|---------------------|------------------------|-------------------------|--|------------------------|--------------------------|---------------------|
| | Number of ESUs awarded | Value of ESU award (\$) | Number of ESUs vesting (includes dividend equivalents to December 31, 2018) | Performance multiplier | Value of ESU payout (\$) | % of original award |
| Russell Girling | 66,815.145 | 3,000,000 | 76,297.226 | | 7,416,365 | 247% |
| Donald Marchand | 22,410.913 | 1,006,250 | 25,591.357 | | 2,487,572 | 247% |
| Stanley Chapman III | 18,930.958 | 1,126,080 | 21,170.193 | 1.86 | 2,666,316 | 242% |
| Karl Johannson | 20,044.543 | 900,000 | 22,889.163 | | 2,224,909 | 247% |
| Paul Miller | 15,033.408 | 675,000 | 17,166.874 | | 1,668,682 | 247% |

Notes

- **Number of ESUs awarded** is the value of the ESU award divided by the valuation price of \$44.90 (the volume-weighted average closing price of TransCanada shares on the TSX for the twenty trading days immediately prior to and including the grant date (January 1, 2016)).
- **Number of ESUs vesting** includes an equivalent number of units for the final dividend that is declared as of December 31, 2018 but which has not been paid at the vesting date. The final dividend value is awarded in cash and has been converted to units and is reflected under **Number of ESUs vesting**.
- **Value of ESU payout** is calculated using the valuation price of \$52.26 (the volume-weighted average closing price of TransCanada shares on the TSX for the twenty trading days immediately prior to and including the vesting date (December 31, 2018)).
- The **Value of ESU award** for Mr. Chapman is expressed here in Canadian dollars based on a U.S./Canada foreign exchange rate of 1.3248 for 2016. The **Value of ESU payout** for Mr. Chapman reflects a U.S./Canada foreign exchange rate of 1.2957 for 2018.
- Mr. Chapman joined TransCanada on July 1, 2016 and received a special 2016 ESU award on this date to recognize his appointment. The **% of original award** for Mr. Chapman is lower than the per cent for the other named executives because this award did not accrue dividends on March 30, 2016 and June 30, 2016.

GRANT OF 2019 EXECUTIVE SHARE UNIT AWARD

The committee and the Board approved a 2019 ESU award as follows:

| Performance measure | Weighting | Measurement period |
|---|-----------|--------------------------------------|
| Relative TSR against a high dividend yield subset of the S&P/TSX 60 Index | 25% | January 1, 2019 to December 31, 2021 |
| Relative TSR against the ESU peer group | 25% | |
| Comparable earnings per share | 50% | |

The cumulative *Comparable earnings per share* multiplier will be a maximum of 1.0 if the ratio of cumulative dividends per share to cumulative comparable funds generated from operations per share for the three-year period is greater than 50 per cent.

We have two peer groups for assessing relative TSR. The first group is a high dividend yield subset of the S&P/TSX 60 Index. This group includes publicly-traded peer companies that represent high dividend yield competitors for shareholder investment.

| 2019 ESU award - high dividend yield subset of the TSX 60 Index for relative TSR | | |
|--|--------------------------------------|---------------------------|
| ARC Resources Ltd. | Inter Pipeline Ltd. | Royal Bank of Canada |
| Bank of Montreal | Magna International Inc. | Shaw Communications Inc. |
| BCE Inc. | Manulife Financial Corp. | Sun Life Financial Inc. |
| Canadian Imperial Bank of Commerce | National Bank of Canada | Suncor Energy Inc. |
| Canadian Natural Resources Ltd. | Nutrien Ltd. | TELUS Corporation |
| Crescent Point Energy Corp. | Pembina Pipeline Corp. | The Bank of Nova Scotia |
| Emera Inc. | Power Corporation of Canada | The Toronto-Dominion Bank |
| Enbridge Inc. | Restaurant Brands International Inc. | Thomson Reuters Corp. |
| Fortis Inc. | Rogers Communications Inc. | |

The second group is the ESU peer group, consisting of specific business competitors as shown below.

| 2019 ESU award - peer group for relative TSR | | |
|--|-----------------------------------|-------------------------|
| AltaGas Ltd. | Enbridge Inc. | ONEOK, Inc. |
| Canadian Utilities Ltd. | Enterprise Products Partners L.P. | Pembina Pipeline Corp. |
| CenterPoint Energy Inc. | Fortis Inc. | Sempra Energy |
| Dominion Energy Inc. | Inter Pipeline Ltd. | Williams Companies Inc. |
| Emera Inc. | Kinder Morgan Inc. | |

EXECUTIVE PROFILES

This next section profiles each of the named executives, including their key results in 2018, details of their compensation for 2018 and the two previous fiscal years, and their share ownership as at December 31, 2018.



Russell Girling

PRESIDENT AND CHIEF EXECUTIVE OFFICER

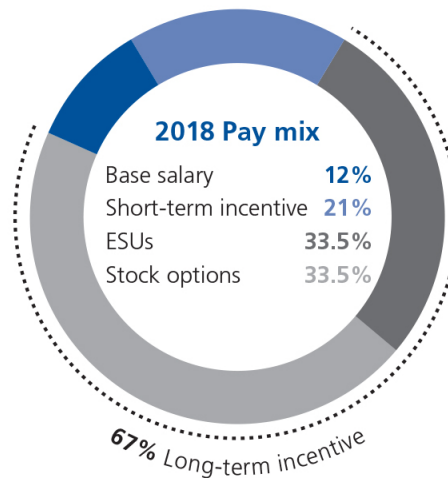
Mr. Girling is responsible for our overall leadership and vision in developing with our Board our strategic direction, values and business plans. This includes overall responsibility for operating and growing our business while managing risk to create long-term sustainable value for our shareholders.

2018 key results

- Generated record financial results
- Advanced \$36 billion secured capital program and progressed over \$20 billion of projects under development
- Navigated through U.S. Tax Reform and 2018 FERC actions
- Delivered financial plan that supports 8 - 10 per cent dividend growth through 2021
- Advanced succession planning and high performance culture

- Mr. Girling's short-term incentive award was based 100 per cent on corporate performance.
- The short-term incentive award for 2018 performance was based on Mr. Girling's target of 125 per cent of base salary.
- Mr. Girling's 2018 short-term and long-term incentive awards as a percentage of 2018 base salary were 175 per cent and 553 per cent, respectively.

| Compensation (as at December 31) | 2018 | 2017 | 2016 |
|----------------------------------|---------------------|--------------------|--------------------|
| Fixed | | | |
| Base salary | \$1,375,008 | \$1,300,008 | \$1,300,008 |
| Variable | | | |
| Short-term incentive | 2,406,264 | 1,872,012 | 2,210,014 |
| Long-term incentive | | | |
| ESUs | 3,800,000 | 3,150,000 | 3,000,000 |
| Stock options | 3,800,000 | 3,150,000 | 3,000,000 |
| Total direct compensation | \$11,381,272 | \$9,472,020 | \$9,510,022 |
| Change from last year | 20% | -0.4% | — |



Short-term incentive is attributed to the noted financial year, and is paid by March 15 of the following year.

Share ownership is based on the 20-day volume-weighted average closing price on the TSX of \$52.26 for TransCanada shares at December 31, 2018.

Share ownership

| Minimum level of ownership | Minimum value | Ownership under the guidelines | |
|----------------------------|---------------|--------------------------------|--|
| | | TransCanada shares | Total ownership as a multiple of base salary |
| 5x | \$6,875,040 | \$14,845,028 | 10.8x |



Donald Marchand

EXECUTIVE VICE-PRESIDENT AND CHIEF FINANCIAL OFFICER

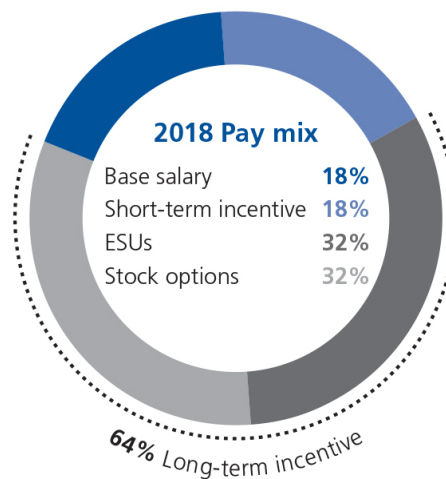
Mr. Marchand is responsible for all corporate financial affairs of the company including financial reporting, taxation, finance, treasury, risk management and investor relations.

2018 key results

- 2018 growth program funded on competitive terms
- Successfully navigated through U.S. Tax Reform
- Adept monitoring and management of consolidated market and counterparty exposures
- High level of engagement with investment community including increasing focus on environmental, social and governance matters

- Mr. Marchand's short-term incentive award was based on a combination of corporate performance (80 per cent) and individual performance (20 per cent).
- The short-term incentive award for 2018 performance was based on Mr. Marchand's target of 75 per cent of base salary.
- Mr. Marchand's 2018 short-term and long-term incentive awards as a percentage of 2018 base salary were 103 per cent and 365 per cent, respectively.

| Compensation (as at December 31) | 2018 | 2017 | 2016 |
|----------------------------------|--------------------|--------------------|--------------------|
| Fixed | | | |
| Base salary | \$625,008 | \$625,008 | \$575,004 |
| Variable | | | |
| Short-term incentive | 646,883 | 495,631 | 650,330 |
| Long-term incentive | | | |
| ESUs | 1,140,625 | 1,140,625 | 1,006,250 |
| Stock options | 1,140,625 | 1,140,625 | 1,006,250 |
| Total direct compensation | \$3,553,141 | \$3,401,889 | \$3,237,834 |
| Change from last year | 4% | 5% | — |



Short-term incentive is attributed to the noted financial year, and is paid by March 15 of the following year.

Share ownership is based on the 20-day volume-weighted average closing price on the TSX of \$52.26 for TransCanada shares at December 31, 2018.

Share ownership

| Minimum level of ownership | Ownership under the guidelines | | |
|----------------------------|--------------------------------|--------------------|--|
| | Minimum value | TransCanada shares | Total ownership as a multiple of base salary |
| 2x | \$1,250,016 | \$1,252,359 | 2.0x |



Stanley Chapman III

EXECUTIVE VICE-PRESIDENT AND PRESIDENT, U.S. NATURAL GAS PIPELINES

Mr. Chapman is responsible for all pipeline operations and commercial activities across our FERC-regulated transmission and storage assets as well as the unregulated midstream business.

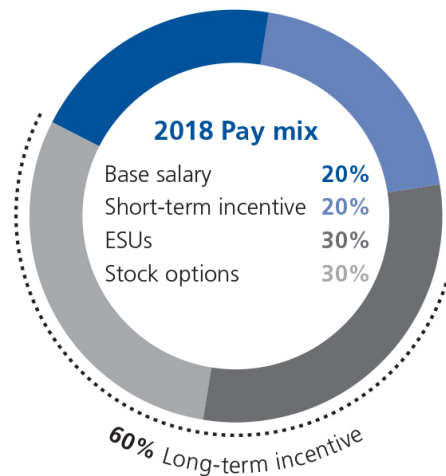
2018 key results

- Delivered strong financial results
- Navigated FERC actions related to U.S. Tax Reform
- Advanced significant portfolio of near-term growth projects and placed U.S.\$2.8 billion of projects in-service
- Originated U.S.\$0.4 billion in new growth projects

- Mr. Chapman's short-term incentive award was based on a combination of corporate performance (60 per cent) and business unit performance (40 per cent).
- The short-term incentive award for 2018 performance was based on Mr. Chapman's target of 75 per cent of base salary.
- Mr. Chapman's 2018 short-term and long-term incentive awards as a percentage of 2018 base salary were 99 per cent and 300 per cent, respectively.

| Compensation (as at December 31) | 2018 | 2017 | 2016 |
|----------------------------------|--------------------|--------------------|--------------------|
| Fixed | | | |
| Base salary | \$680,243 | \$616,845 | \$563,040 |
| Variable | | | |
| Short-term incentive | 673,440 | 481,139 | 484,976 |
| Long-term incentive | | | |
| ESUs | 1,020,364 | 551,910 | 1,126,080 |
| Stock options | 1,020,364 | 1,236,919 | — |
| Total direct compensation | \$3,394,411 | \$2,886,813 | \$2,174,096 |
| Change from last year | 18% | 33% | — |

The 2016 amount shown in *Short-term incentive* includes compensation earned for the period July 1 to December 31 in his new position and a pre-closing award earned for the period January 1 to June 30 related to the Columbia acquisition.



Short-term incentive is attributed to the noted financial year, and is paid by March 15 of the following year.

Share ownership is based on the 20-day volume-weighted average closing price on the TSX of \$52.26 for TransCanada shares at December 31, 2018.

Share ownership

| Minimum level of ownership | Minimum value | Ownership under the guidelines | |
|----------------------------|---------------|--------------------------------|--|
| | | TransCanada shares | Total ownership as a multiple of base salary |
| 2x | \$1,360,486 | \$348,940 | 0.5x |

Mr. Chapman has until the end of 2022 to meet his holding requirements.

Values reflect a U.S./Canada foreign exchange rate of 1.2957 for 2018, 1.2986 for 2017, and 1.3248 for 2016.



Karl Johansson

EXECUTIVE VICE-PRESIDENT AND PRESIDENT, CANADA AND MEXICO NATURAL GAS PIPELINES AND ENERGY

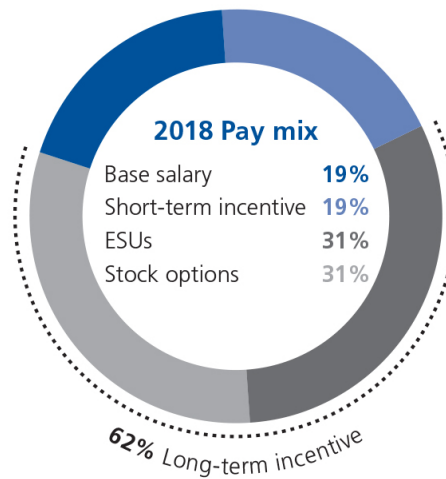
In 2018, Mr. Johansson was responsible for our natural gas pipelines and regulated natural gas storage business in Canada and Mexico. He was also responsible for profitability and growth of the energy business. Mr. Johansson retired from TransCanada on February 28, 2019.

2018 key results

- Delivered strong financial results
- Placed approximately \$0.6 billion of NGTL and Canadian Mainline facilities in service
- Secured an additional \$4.0 billion of NGTL expansion projects
- Advanced construction of the \$3.0 billion capital program in Mexico
- Closed sale of Cartier Wind power facilities for \$630 million and entered agreement to sell Coolidge generating station

- Mr. Johansson's short-term incentive award was based on a combination of corporate performance (60 per cent) and business unit performance (40 per cent).
- The short-term incentive award for 2018 performance was based on Mr. Johansson's target of 75 per cent of base salary.
- Mr. Johansson's 2018 short-term and long-term incentive awards as a percentage of 2018 base salary were 99 per cent and 330 per cent, respectively.

| Compensation (as at December 31) | 2018 | 2017 | 2016 |
|----------------------------------|--------------------|--------------------|--------------------|
| Fixed | | | |
| Base salary | \$620,004 | \$620,004 | \$575,004 |
| Variable | | | |
| Short-term incentive | 613,804 | 499,723 | 635,380 |
| Long-term incentive | | | |
| ESUs | 1,023,000 | 1,023,000 | 900,000 |
| Stock options | 1,023,000 | 1,023,000 | 900,000 |
| Total direct compensation | \$3,279,808 | \$3,165,727 | \$3,010,384 |
| Change from last year | 4% | 5% | — |



Short-term incentive is attributed to the noted financial year, and is paid by March 15 of the following year.

Share ownership is based on the 20-day volume-weighted average closing price on the TSX of \$52.26 for TransCanada shares at December 31, 2018.

Share ownership

| Minimum level of ownership | Ownership under the guidelines | | |
|----------------------------|--------------------------------|--------------------|--|
| | Minimum value | TransCanada shares | Total ownership as a multiple of base salary |
| 2x | \$1,240,008 | \$1,767,120 | 2.9x |



Paul Miller

EXECUTIVE VICE-PRESIDENT AND PRESIDENT, LIQUIDS PIPELINES

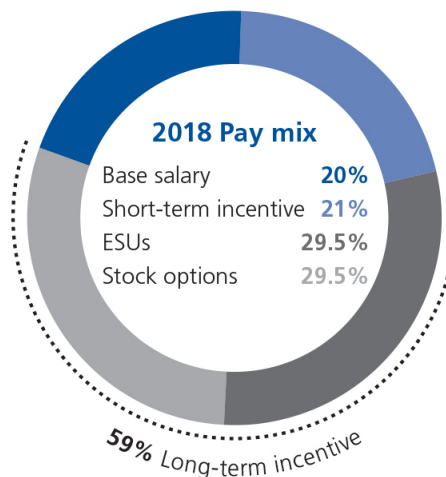
Mr. Miller is responsible for the profitability and growth of our liquids transportation business. Mr. Miller was appointed Executive Vice-President Technical Center and President, Liquids Pipelines on February 1, 2019.

2018 key results

- Delivered strong financial results
- Increased throughput capacity on Marketlink Pipeline and secured additional shipping contracts
- Added one million barrels of storage capacity at Cushing, OK tank terminal
- Advanced the Keystone XL project by securing commercial support for all available capacity and commencing certain pre-construction activities

- Mr. Miller's short-term incentive award was based on a combination of corporate performance (60 per cent) and business unit performance (40 per cent).
- The short-term incentive award for 2018 performance was based on Mr. Miller's target of 75 per cent of base salary.
- Mr. Miller's 2018 short-term and long-term incentive awards as a percentage of 2018 base salary were 108 per cent and 300 per cent, respectively.

| Compensation (as at December 31) | 2018 | 2017 | 2016 |
|----------------------------------|--------------------|--------------------|--------------------|
| Fixed | | | |
| Base salary | \$525,000 | \$500,004 | \$475,008 |
| Variable | | | |
| Short-term incentive | 567,000 | 390,003 | 426,083 |
| Long-term incentive | | | |
| ESUs | 787,500 | 750,000 | 675,000 |
| Stock options | 787,500 | 750,000 | 675,000 |
| Total direct compensation | \$2,667,000 | \$2,390,007 | \$2,251,091 |
| Change from last year | 12% | 6% | — |



Short-term incentive is attributed to the noted financial year, and is paid by March 15 of the following year.

Share ownership is based on the 20-day volume-weighted average closing price on the TSX of \$52.26 for TransCanada shares at December 31, 2018.

Share ownership

| Minimum level of ownership | Ownership under the guidelines | | |
|----------------------------|--------------------------------|--------------------|--|
| | Minimum value | TransCanada shares | Total ownership as a multiple of base salary |
| 2x | \$1,050,000 | \$2,184,991 | 4.2x |

Executive compensation – 2018 details

All amounts are in Canadian dollars, unless otherwise indicated.

SUMMARY COMPENSATION TABLE

The table below is a summary of the compensation awarded to our named executives for the last three fiscal years ended December 31, 2018, 2017 and 2016.

| Name and principal position | Year | Salary (\$) | Share-based awards (\$) | Option-based awards (\$) | Non-equity incentive plan compensation | | | All other compensation (\$) | Total compensation (\$) |
|--|------|-------------|-------------------------|--------------------------|--|--------------------------------|--------------------|-----------------------------|-------------------------|
| | | | | | Annual incentive plans (\$) | Long-term incentive plans (\$) | Pension value (\$) | | |
| Russell Girling President & CEO | 2018 | 1,362,508 | 3,800,000 | 3,800,000 | 2,406,264 | — | 1,120,000 | 13,625 | 12,502,397 |
| | 2017 | 1,300,008 | 3,150,000 | 3,150,000 | 1,872,012 | — | 556,000 | 13,000 | 10,041,020 |
| | 2016 | 1,300,008 | 3,000,000 | 3,000,000 | 2,210,014 | — | 615,000 | 13,000 | 10,138,022 |
| Donald Marchand Executive Vice-President & CFO | 2018 | 625,008 | 1,140,625 | 1,140,625 | 646,883 | — | 46,000 | 21,875 | 3,621,016 |
| | 2017 | 616,674 | 1,140,625 | 1,140,625 | 495,631 | — | 617,000 | 34,918 | 4,045,473 |
| | 2016 | 575,004 | 1,006,250 | 1,006,250 | 650,330 | — | 209,000 | 19,020 | 3,465,854 |
| Stanley Chapman III Executive Vice-President & President, U.S. Natural Gas Pipelines | 2018 | 669,530 | 1,020,364 | 1,020,364 | 673,440 | — | 46,256 | 19,010 | 3,448,964 |
| | 2017 | 595,350 | 551,910 | 1,236,919 | 481,139 | — | 27,169 | 174,039 | 3,066,526 |
| | 2016 | 281,520 | 1,126,080 | — | 484,976 | — | 7,590 | 132,480 | 2,032,646 |
| Karl Johansson Executive Vice-President & President, Canada & Mexico Natural Gas Pipelines & Energy | 2018 | 620,004 | 1,023,000 | 1,023,000 | 613,804 | — | 89,000 | 95,316 | 3,464,124 |
| | 2017 | 612,504 | 1,023,000 | 1,023,000 | 499,723 | — | 556,000 | 26,972 | 3,741,199 |
| | 2016 | 575,004 | 900,000 | 900,000 | 635,380 | — | 226,000 | 23,443 | 3,259,827 |
| Paul Miller Executive Vice-President & President, Liquids Pipelines | 2018 | 520,834 | 787,500 | 787,500 | 567,000 | — | 321,000 | 30,209 | 3,014,043 |
| | 2017 | 495,838 | 750,000 | 750,000 | 390,003 | — | 392,000 | 6,785 | 2,784,626 |
| | 2016 | 475,008 | 675,000 | 675,000 | 426,083 | — | 178,000 | 4,750 | 2,433,841 |

Notes

- **Salary** is the actual base salary earned during each of the three years. For Mr. Chapman, the 2016 amount shown in **Salary** includes compensation earned for the period July 1 to December 31, as prior to such date he was employed by Columbia.
- **Share-based awards** is the long-term incentive compensation that was awarded as ESUs. The number of ESUs granted is the value of the ESU award divided by the volume-weighted average closing price of TransCanada shares for the twenty trading days immediately prior to and including the grant date: \$61.95 in 2018, \$60.48 in 2017 and \$44.90 in 2016.
- **Option-based awards** is the long-term incentive compensation that was awarded as stock options. The exercise price is the closing market price of TransCanada shares on the TSX on the trading day immediately prior to the grant date: \$56.89 in 2018, \$62.14 in 2017 and \$48.44 in 2016. See **Stock option valuation** below for more information.
- **Annual incentive plans** is the short-term incentive award, paid as an annual cash bonus and attributable to the noted financial year. Payments are made in the first quarter of the following year.
- There are no long-term non-equity incentive plans.
- **Pension value** for all of the Canadian named executives includes the annual compensatory value from the DB pension plan. The annual compensatory value is the compensatory change in the accrued obligation and includes the service cost to TransCanada in 2018, plus compensation changes that were higher or lower than the base salary assumptions, and plan changes. **Pension value** for the U.S. named executive is the value of the annual employer contribution to the 401(k) Plan. See **Retirement benefits** below for more information.
- Values provided to Mr. Chapman reflect a U.S./Canada foreign exchange rate of 1.2957 for 2018, 1.2986 for 2017, and 1.3248 for 2016.
- Mr. Marchand was appointed Executive Vice-President and Chief Financial Officer on February 1, 2017. Amounts shown for 2016 and 2017 prior to his appointment include compensation in his previous position as Executive Vice-President, Corporate Development and Chief Financial Officer.
- Mr. Chapman joined TransCanada and was appointed Senior Vice-President and General Manager, U.S. Natural Gas Pipelines on July 1, 2016. The amount shown in 2016 under **Annual incentive plans** includes compensation earned for the period July 1 to December 31 in his new position and a pre-closing award earned for the period January 1 to June 30.
- To recognize Mr. Chapman's appointment to Senior Vice-President and General Manager, U.S. Natural Gas Pipelines, the Board awarded him a special ESU award on July 1, 2016, valued at \$1,126,080 shown in 2016 under **Share-based awards**.

- Mr. Chapman was appointed Executive Vice-President and President, U.S. Natural Gas Pipelines on April 28, 2017. Amounts shown in 2017 include compensation earned for the period April 28 to December 31 in his new position and for the period January 1 to April 27 in his previous position as Senior Vice-President and General Manager, U.S. Natural Gas Pipelines.
- To recognize Mr. Chapman's appointment to Executive Vice-President and President, U.S. Natural Gas Pipelines, the Board awarded him a special grant of 100,000 stock options on May 10, 2017, valued at \$960,964 with an exercise price of \$63.83 shown in 2017 under **Option-based awards**. This special grant is in addition to the long-term incentive grant Mr. Chapman received in normal course.
- Mr. Johansson was appointed Executive Vice-President and President, Canada and Mexico Natural Gas Pipelines and Energy on April 28, 2017. Amounts shown in 2017 include compensation earned for the period April 28 to December 31 in his new position and for the period January 1 to April 27 in his previous position as Executive Vice-President and President, Natural Gas Pipelines.
- **All other compensation** includes other compensation not reported in any other column for each named executive and includes:
 - payments to the named executives by any of our subsidiaries and affiliates (including directors' fees paid by affiliates and amounts paid for serving on management committees of entities that we hold an interest in):

| | 2018 | 2017 | 2016 |
|---------------|----------|----------|------|
| Mr. Johansson | \$45,000 | \$12,000 | \$ — |

- matching contributions we made on behalf of the named executives under the Canadian employee stock savings plan:

| | 2018 | 2017 | 2016 |
|---------------|----------|----------|----------|
| Mr. Girling | \$13,625 | \$13,000 | \$13,000 |
| Mr. Marchand | 6,250 | 6,167 | 5,750 |
| Mr. Johansson | 6,200 | 6,125 | 5,750 |
| Mr. Miller | 5,208 | 4,958 | 4,750 |

- cash payments if the named executive elected to receive payment in lieu of vacation entitlement from the previous year:

| | 2018 | 2017 | 2016 |
|---------------|----------|----------|----------|
| Mr. Marchand | \$15,625 | \$28,751 | \$13,270 |
| Mr. Chapman | 16,570 | 44,179 | — |
| Mr. Johansson | 44,116 | 8,846 | 17,693 |
| Mr. Miller | 25,001 | 1,827 | — |

- retention award payments made to a named executive in relation to the acquisition of Columbia:

| | 2018 | 2017 | 2016 |
|-------------|------|-----------|-----------|
| Mr. Chapman | \$ — | \$129,860 | \$132,480 |

- Profit sharing contribution above the IRS compensation limit made to a named executive in relation to the legacy Columbia 401(k) plan provisions:

| | 2018 | 2017 | 2016 |
|-------------|---------|------|------|
| Mr. Chapman | \$2,440 | \$ — | \$ — |

- Perquisites in 2018, 2017 and 2016 are not included because they are less than \$50,000 and 10 per cent of each named executive's total base salary.

Additional notes to the summary compensation table

Stock option valuation

The amount under *Option-based awards* is calculated using the grant date fair value of the stock option award, as determined by the committee.

The committee and Board have approved the Binomial valuation model as the methodology to determine stock option awards. The Binomial valuation model is a generally accepted valuation method for stock options. The Binomial valuation model is used to calculate TransCanada's compensation value. Each year, the committee and Board review the valuation as prepared by management's independent consultant. The value takes into account the volatility of the underlying shares, dividend yield, risk-free interest rate, option term, and vesting period.

For stock option grants beginning in 2018, inputs to the Binomial valuation model used for compensation purposes were adjusted as follows:

| | Methodology prior to 2018 | Methodology beginning in 2018 |
|---------------|---|-------------------------------|
| Volatility | historic and implied | historic |
| Expected life | historical stock option exercise activity | stock option term |

These changes were implemented to better reflect the view of the Board as to the appropriate compensation value of TransCanada's stock options.

The table below is a summary of the final compensation value using the Binomial valuation model for the stock option awards granted in 2018, 2017 and 2016:

| Grant date | Exercise price (\$) | Compensation value of each stock option (\$) |
|-------------------|---------------------|--|
| February 21, 2018 | 56.89 | 6.66 |
| May 10, 2017 | 63.83 | 7.40 |
| February 22, 2017 | 62.14 | 7.21 |
| March 22, 2016 | 48.44 | 5.67 |

Total stock option exercises in 2018 (supplemental table)

The table below shows for each named executive:

- the number of stock options exercised in 2018
- the total value they realized when the options were exercised.

| Name | Total stock options exercised (#) | Total value realized (\$) |
|---------------------|-----------------------------------|---------------------------|
| Russell Girling | 158,172 | 2,923,511 |
| Donald Marchand | 30,756 | 577,241 |
| Stanley Chapman III | — | — |
| Karl Johannson | — | — |
| Paul Miller | 13,181 | 249,912 |

INCENTIVE PLAN AWARDS

Outstanding option-based and share-based awards

The table below shows all outstanding option-based and share-based awards previously granted to the named executives that were still outstanding at the end of 2018. Year-end values are based on \$48.75, the closing price of TransCanada shares on the TSX at December 31, 2018.

| Name | Option-based awards | | | | Share-based awards | | |
|---------------------|---|----------------------------|------------------------|--|--|--|--|
| | Number of securities underlying unexercised options (#) | Option exercise price (\$) | Option expiration date | Value of unexercised in-the-money options (\$) | Number of shares or units of shares that have not vested (#) | Market or payout value of share-based awards that have not vested (\$) | Market or payout value of vested share-based awards not paid out or distributed (\$) |
| Russell Girling | 385,475 | 41.95 | 17-Feb-2019 | 2,621,230 | 121,733 | 2,967,242 | — |
| | 383,275 | 47.09 | 15-Feb-2020 | 636,236 | | | |
| | 439,982 | 49.03 | 25-Feb-2021 | — | | | |
| | 434,109 | 56.58 | 19-Feb-2022 | — | | | |
| | 529,101 | 48.44 | 22-Mar-2023 | 164,021 | | | |
| | 436,893 | 62.14 | 22-Feb-2024 | — | | | |
| | 570,571 | 56.89 | 21-Feb-2025 | — | | | |
| Donald Marchand | 96,369 | 41.95 | 17-Feb-2019 | 655,309 | 40,080 | 976,950 | — |
| | 123,368 | 47.09 | 15-Feb-2020 | 204,791 | | | |
| | 155,460 | 49.03 | 25-Feb-2021 | — | | | |
| | 144,864 | 56.58 | 19-Feb-2022 | — | | | |
| | 177,469 | 48.44 | 22-Mar-2023 | 55,015 | | | |
| | 158,200 | 62.14 | 22-Feb-2024 | — | | | |
| Stanley Chapman III | 29,473 | 62.14 | 22-Feb-2024 | — | 21,094 | 666,205 | — |
| | 100,000 | 63.83 | 10-May-2024 | — | | | |
| | 149,247 | 56.89 | 21-Feb-2025 | — | | | |
| Karl Johannson | 32,899 | 41.95 | 17-Feb-2019 | 223,713 | 35,947 | 876,208 | — |
| | 48,450 | 45.29 | 02-Nov-2019 | 167,637 | | | |
| | 97,236 | 47.09 | 15-Feb-2020 | 161,412 | | | |
| | 136,507 | 49.03 | 25-Feb-2021 | — | | | |
| | 133,721 | 56.58 | 19-Feb-2022 | — | | | |
| | 158,730 | 48.44 | 22-Mar-2023 | 49,206 | | | |
| | 141,886 | 62.14 | 22-Feb-2024 | — | | | |
| 153,604 | 56.89 | 21-Feb-2025 | — | | | | |
| Paul Miller | 24,829 | 41.95 | 17-Feb-2019 | 168,837 | 26,991 | 657,906 | — |
| | 24,100 | 47.09 | 15-Feb-2020 | 40,006 | | | |
| | 72,202 | 49.03 | 25-Feb-2021 | — | | | |
| | 95,736 | 56.58 | 19-Feb-2022 | — | | | |
| | 119,048 | 48.44 | 22-Mar-2023 | 36,905 | | | |
| | 104,022 | 62.14 | 22-Feb-2024 | — | | | |
| 118,243 | 56.89 | 21-Feb-2025 | — | | | | |

Notes

- **Value of unexercised in-the-money options** is based on outstanding vested and unvested stock options and the difference between the option exercise price and year-end closing price of our shares.
- **Number of shares or units of shares that have not vested** includes the amount of the grant, plus reinvested units earned as dividend equivalents of all outstanding ESUs as at December 31, 2018.
- **Market or payout value of share-based awards that have not vested** is the minimum payout value of all outstanding ESUs as at December 31, 2018. The value is calculated by multiplying 50 per cent of the number of units that have not vested by the year-end closing price of our shares. The value for Mr. Chapman reflects a U.S./Canada foreign exchange rate of 1.2957 for 2018.
- No value is shown for **Market or payout value of vested share-based awards not paid out or distributed**. The ESU award granted in 2016 vested on December 31, 2018, and will be paid in March 2019. These awards are shown in the next table.

Incentive plan awards – value vested during the year

The table below shows the total value of all option-based and share-based awards previously granted to the named executives that vested in 2018. It also shows the total amount they earned from non-equity incentive plan awards in 2018.

| Name | Option-based awards – value vested during the year (\$) | Share-based awards – value vested during the year (\$) | Non-equity incentive plan compensation – value earned during the year (\$) |
|---------------------|---|--|--|
| Russell Girling | 827,927 | 7,416,365 | 2,406,264 |
| Donald Marchand | 277,622 | 2,487,572 | 646,883 |
| Stanley Chapman III | — | 2,666,316 | 673,440 |
| Karl Johannson | 248,738 | 2,224,909 | 613,804 |
| Paul Miller | 186,085 | 1,668,682 | 567,000 |

Notes

- **Option-based awards** is the total value the named executives would have realized if they had exercised the stock options on the vesting date.
- **Share-based awards** is the payout value of the 2016 ESU awards for the named executives. See the **Payout of 2016 executive share unit award** section for more information.
- The **Share-based awards** value for Mr. Chapman reflects a U.S./Canada foreign exchange rate of 1.2957 for 2018.
- **Non-equity incentive plan compensation** is the short-term incentive award for 2018. This amount is shown under **Annual incentive plans** in the **Summary compensation table** on page 100.

EQUITY COMPENSATION PLAN INFORMATION

Securities authorized for issue under equity compensation plans

The table below shows the:

- number of shares to be issued under the stock option plan when outstanding options are exercised
- weighted average exercise price of the outstanding options
- number of shares available for future issue under the option plan.

| | Number of securities to be issued upon exercise of outstanding options (#) | Weighted-average exercise price of outstanding options (\$) | Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in the first column) (#) |
|--|--|---|---|
| Equity compensation plans approved by security holders | 12,403,851 | 52.83 | 9,790,373 |
| Equity compensation plans not approved by security holders | N/A | N/A | N/A |
| Total | 12,403,851 | 52.83 | 9,790,373 |

Stock option grants as a percentage of outstanding shares

| Effective date | Total number of shares outstanding (A) | Total number of options outstanding (B) | Total reserve (C) | Total options granted during year (D) | Dilution | Overhang | Burn rate |
|----------------|--|---|-------------------|---------------------------------------|--|---|--|
| | | | | | Options outstanding as a % of shares outstanding (B / A) | % of stock options outstanding plus total reserve divided by total shares outstanding ((B + C) / A) | Grant as a % of shares outstanding (D / A) |
| Dec 31, 2016 | 863,759,075 | 10,629,958 | 13,630,114 | 2,479,654 | 1.23 | 2.81 | 0.29 |
| Dec 31, 2017 | 881,375,600 | 11,026,004 | 11,902,759 | 2,065,653 | 1.25 | 2.60 | 0.23 |
| Dec 31, 2018 | 918,096,439 | 12,403,851 | 9,790,373 | 2,250,256 | 1.35 | 2.42 | 0.25 |

RETIREMENT BENEFITS

All of the Canadian named executives participate in our DB plan. Our U.S. named executive participates in the 401(k) Plan. The tables below show their benefits under the respective plans.

Defined benefit pension plan

| at December 31, 2018 | | | | | | | |
|----------------------|-------------------------------------|------------------|----------------|--|--------------------------|------------------------------|--|
| Name | Number of years of credited service | Annual benefits | | Opening present value of defined benefit obligation (\$) | Compensatory change (\$) | Non-compensatory change (\$) | Closing present value of defined benefit obligation (\$) |
| | | At year end (\$) | At age 65 (\$) | | | | |
| Russell Girling | 23.00 | 1,040,000 | 1,427,000 | 18,690,000 | 1,120,000 | 319,000 | 20,129,000 |
| Donald Marchand | 24.92 | 412,000 | 552,000 | 7,800,000 | 46,000 | 228,000 | 8,074,000 |
| Karl Johannson | 23.00 | 370,000 | 488,000 | 7,407,000 | 89,000 | 55,000 | 7,551,000 |
| Paul Miller | 28.33 | 382,000 | 445,000 | 7,326,000 | 321,000 | 153,000 | 7,800,000 |

Notes

- In 2004, the committee approved arrangements for Mr. Girling and Mr. Johannson to receive additional credited service to recognize their high potential and to retain them as employees. The credited service was received for years when they were not formally enrolled in the pension plan, but were employees of TransCanada. Messrs. Girling and Johannson each received an additional three years of credited service on September 8, 2007 after maintaining continuous employment with us of the same duration. The additional credited service is recognized only in the supplemental pension plan for earnings exceeding the maximum set under the *Income Tax Act* (Canada).
- **Annual benefits at year end** is the annual lifetime benefit payable at age 60, based on the years of credited service and the actual pensionable earnings history, as of December 31, 2018.
- **Annual benefits at age 65** is the annual lifetime benefit payable at age 65, based on the years of credited service at age 65 and the actual pensionable earnings history, as of December 31, 2018.
- **Opening and closing present value of defined benefit obligation** is at December 31, 2017 and December 31, 2018, respectively. It represents actuarial assumptions and methods that are consistent with those used for calculating the pension obligations disclosed in our 2017 and 2018 consolidated financial statements. These assumptions reflect our best estimate of future events, and the values in the above table may not be directly comparable to similar estimates of pension obligations that may be disclosed by other corporations.
- **Compensatory change** includes the service cost to TransCanada in 2018, plus the impact on the obligation due to actual compensation changes that were higher or lower than assumed, and plan changes.
- **Non-compensatory change** includes the interest on the accrued obligation at the start of the year and changes in assumptions in the year.

401(k) Plan

| at December 31, 2018 | | | |
|----------------------|---|-------------------------|------------------------------------|
| Name | Accumulated value at start of year (\$) | Compensatory value (\$) | Accumulated value at year end (\$) |
| Stanley Chapman III | 259,318 | 46,256 | 284,676 |

Notes

- **Accumulated value at start of year** is the beginning of year value of the 401(k) account funded by employer contributions.
- **Compensatory value** is the annual employer contribution to the 401(k) Plan.
- **Accumulated value at year end** is the end of year value of the 401(k) account funded by employer contributions and includes investment earnings.
- Values reflect a U.S./Canada foreign exchange rate of 1.2957 for 2018.

TERMINATION AND CHANGE OF CONTROL

Termination

We have an employment agreement with each named executive that outlines the terms and conditions that apply if the executive leaves TransCanada. The table on the following page is a summary of the material terms and provisions if the executive resigns, is terminated, retires or dies. These do not apply when there is a change of control.

The general terms and provisions of ESUs are discussed under each event, however, the committee can use its discretion to decide how to treat unvested ESUs upon termination for executives who have an employment agreement. Each employment agreement includes a non-competition provision that applies for 12 months following the executive's separation date.

Like all other Canadian employees, all of the Canadian named executives are eligible for retiree benefits if they are 55 or older with 10 or more years of continuous service on the separation date. Canadian retiree benefits include:

- a health spending account that can be used to pay for eligible health and dental expenses and/or to purchase private health insurance
- a security plan that provides a safety net if there are significant medical expenses
- life insurance that provides a death benefit of \$10,000 to a designated beneficiary.

Our U.S. named executive is eligible for retiree benefits under the U.S. retiree benefit program. U.S. retiree benefits include:

- access to medical plans that provide a wide range of coverage
- life insurance that provides a death benefit of \$10,000 to a designated beneficiary.

The Canadian employee stock savings plan, 401(k) Plan, spousal and dependent life insurance, accident insurance and disability insurance end at the separation date.

Compensation on termination

The table below shows how each named executive's compensation is treated if he leaves TransCanada.

| | | |
|----------------------|---------------------------|---|
| Base salary | Resignation | Payments end. |
| | Termination without cause | Severance allowance includes a lump-sum payment of the base salary equal to 2x their annual compensation as of the separation date. |
| | Termination with cause | |
| | Retirement | Payments end. |
| | Death | |
| Short-term incentive | Resignation | Year of separation: Not paid. Year prior to separation: Board discretion. |
| | Termination without cause | Year of separation: Equals the average bonus pro-rated by the number of months in the current year prior to the separation date. Years after separation: Equals the average bonus multiplied by the notice period. |
| | Termination with cause | Not paid. |
| | Retirement | Year of separation: Equals the average bonus pro-rated by the number of months in the current year prior to the separation date. |
| | Death | |
| ESUs | Resignation | Vested units are paid out; unvested units are forfeited. |
| | Termination without cause | Vested units are paid out. Unvested units are forfeited, however the original grant value is generally paid out on a pro rata basis. |
| | Termination with cause | Vested units are paid out, unvested units are forfeited. |
| | Retirement | Vested units are paid out. Unvested units continue to vest and the value is assessed at the end of the term. The award is pro-rated for the period of employment up to the retirement date. |
| | Death | Vested units are paid out. Unvested units are forfeited, however, the original grant value is generally paid out on a pro rata basis. |
| Stock options | Resignation | Vested stock options must be exercised by their expiry date or six months from the separation date (whichever is earlier). No stock options vest after the last day of employment. |
| | Termination without cause | Vested stock options must be exercised by the earlier of i) their expiry date or ii) the later of a) the end of the notice period, and b) six months following the separation date. No stock options vest after the separation date. |
| | Termination with cause | Vested stock options must be exercised by their expiry date or six months from the separation date (whichever is earlier). No stock options vest after the last day of employment. |
| | Retirement | Outstanding stock options continue to vest and must be exercised by their expiry date or three years from the separation date (whichever is earlier). If there is less than six months between the vesting date and the expiry date, the expiry date is extended for six months from the final vesting date of the options. |
| | Death | Outstanding stock options vest immediately and must be exercised by their expiry date or the first anniversary of death (whichever is earlier). |

| | | |
|------------------|---------------------------|---|
| Canadian pension | Resignation | |
| | Termination without cause | Paid as a commuted value or monthly benefit according to the applicable DB plan provisions. |
| | Termination with cause | |
| | Retirement | For termination without cause , credited service is provided for the applicable notice period. |
| | Death | |
| 401(k) Plan | Resignation | Account balance is available to take as a lump sum, partial, or periodic distribution. |
| | Termination without cause | |
| | Termination with cause | |
| | Retirement | |
| | Death | |
| Benefits | Resignation | Coverage ends, or retiree benefits begin if eligible. |
| | Termination without cause | Coverage continues during the notice period (or an equivalent lump-sum payout is made). Retiree benefits eligibility is determined at the end of the notice period. |
| | Termination with cause | Coverage ends, or retiree benefits begin if eligible. |
| | Retirement | Coverage ends, or retiree benefits begin if eligible. |
| | Death | Coverage continues to eligible dependents for a specified period of time after death. |
| Perquisites | Resignation | Payments end. |
| | Termination without cause | A lump-sum cash payment equal to the corporate cost of the perquisite package in the one-year period preceding the separation date multiplied by the notice period. |
| | Termination with cause | |
| | Retirement | Payments end. |
| | Death | |
| Other | Resignation | — |
| | Termination without cause | Outplacement services. |
| | Termination with cause | — |
| | Retirement | — |
| | Death | — |

Notes

- **Resignation** includes voluntary resignation but not resignation as a result of constructive dismissal. If a named executive resigns because of constructive dismissal, it is treated as **termination without cause**.
- The **short-term incentive** award is not paid on resignation unless the Board uses its discretion.
- **Average bonus** equals the average short-term incentive award paid to the named executive for the three years preceding the separation date.
- The **notice period** is currently two years for each named executive.
- **Benefits on termination without cause** is paid as an equivalent lump-sum for Mr. Chapman, and retiree benefits eligibility would be determined on the termination date.
- For Mr. Chapman, there are certain differences due to U.S. tax law. These differences are:
 - to the extent any of Mr. Chapman's payments are subject to section 409A of the U.S. Internal Revenue Code of 1986, they may be deferred for a period of six months following the date of termination
 - certain payments will be reduced in a specific order to the extent excise tax applies
 - Mr. Chapman will receive two times seven per cent of his annual salary in lieu of 401(k) participation.

Change of control

Under the terms of the employment agreements, the stock option plan and ESU plan, a *change of control* includes an event where another entity becomes the beneficial owner of:

- more than 50 per cent of the voting shares of TransCanada, or
- more than 50 per cent of the voting shares of TCPL (not including the voting shares held by TransCanada).

Other events can also constitute a change of control including a merger where TransCanada is not the surviving entity, a sale of all or substantially all of TCPL's assets or if the incumbent board ceases to be a majority of the Board.

The following is a summary of the terms and provisions that apply to the compensation of all of the Canadian named executives if there is a change of control and there has been a termination without cause or a constructive dismissal within two years of the change of control ("double trigger"). Upon a double trigger for the named executives, a two-year notice period applies which provides for:

- payment of a severance allowance equal to the annual compensation during the notice period where annual compensation is composed of base salary and the three-year average of annual incentive compensation
- a pensionable service credit of two years under the supplemental pension plans
- continuation of health, dental, life and accident insurance benefits during the notice period or cash payment in lieu of such benefits
- a cash payment in lieu of perquisites during the notice period
- professional outplacement services to a maximum of \$25,000
- accelerated vesting and payment of ESUs
- accelerated vesting of stock options.

If, for any reason, we are unable to implement accelerated vesting (for example, our shares stop trading), we will pay the named executive a cash amount. This would be equal to the net amount of the compensation the named executive would have received if, on the date of a change of control, he had exercised all vested options and unvested options that would have had accelerated vesting.

For our U.S. named executive the same terms and provisions apply, with the following differences:

- to the extent any of Mr. Chapman's payments are subject to section 409A of the U.S. Internal Revenue Code of 1986, they may be deferred for a period of six months following the date of termination
- certain payments will be reduced in a specific order to the extent excise tax applies
- Mr. Chapman will receive a lump sum cash payment with respect to benefits; he does not have the option to continue benefits during the notice period
- Mr. Chapman will receive lump sum cash payment equal to two times seven per cent of his annual salary in lieu of 401(k) Plan participation.

Separation and other payments

The table below is a summary of the incremental payments that would be made to each named executive under the different separation events, with and without a deemed change of control. All payments have been calculated using December 31, 2018 as the separation date and the date of a change of control as if it applies. These amounts would be paid under the terms of the employment agreements.

They do not include certain amounts that would be provided under normal course, such as the value of:

- any stock options or ESUs vesting as part of normal employment
- pension benefits that would normally be provided following resignation, or
- retiree benefits.

| Name | | | Without a change of control | | With a change of control |
|---------------------|-----------------------------|--------------------------------|-----------------------------|------------|--------------------------------|
| | Termination with cause (\$) | Termination without cause (\$) | Retirement (\$) | Death (\$) | Termination without cause (\$) |
| Russell Girling | — | 11,633,872 | 1,880,675 | 5,302,016 | 16,707,332 |
| Donald Marchand | — | 4,271,141 | 531,504 | 1,690,467 | 5,716,066 |
| Stanley Chapman III | — | 3,701,899 | — | 1,171,040 | 4,423,037 |
| Karl Johannson | — | 3,021,251 | 540,334 | 1,579,736 | 5,618,239 |
| Paul Miller | — | 2,378,673 | 395,545 | 1,170,347 | 4,352,542 |

Notes

- **Termination without cause following a change of control** also applies if the named executive resigns because of constructive dismissal and the separation date is within two years of the date of a change of control.
- There are no incremental payments that would be made to each named executive in the event of a change of control without termination.
- ESUs and stock options continue to vest under the **Retirement** scenario provided the named executive is age 55 or over.
- Mr. Chapman was not eligible for retirement as of December 31, 2018.
- Values provided to Mr. Chapman reflect a U.S./Canada foreign exchange rate of 1.2957 for 2018, 1.2986 for 2017, and 1.3248 for 2016.

Every year the committee reviews the severance amounts calculated for each named executive under his employment agreement. The data represents the total value to be paid to the executive if he is terminated without cause and with and without a deemed change of control.

Other information

LOANS TO DIRECTORS AND EXECUTIVES

As of the date of this circular, none of our directors or executives had any loans from TransCanada or any of our subsidiaries. This is also true for:

- former executives or directors of TransCanada or any of our subsidiaries,
- this year's nominated directors, and
- any associate of a director, executive officer or nominated director.

None of the above owe money to another entity that is the subject of a guarantee, support agreement, letter of credit or other similar arrangement or understanding provided by TransCanada or any of our subsidiaries.

DIRECTORS' AND OFFICERS' LIABILITY INSURANCE

TransCanada has purchased liability insurance to protect its directors and officers (or their heirs and legal representatives) against liabilities they may incur while performing their duties as directors and officers of TransCanada and/or its subsidiaries, subject to the limitations set out in the *Canada Business Corporations Act*.

ADDITIONAL INFORMATION

Shareholders can request a free copy of this circular, and the 2018 AIF and 2018 Annual report from our Corporate Secretary:

TransCanada Corporation
450 - 1 Street S.W.
Calgary, Alberta
Canada T2P 5H1
Tel: 1.800.661.3805

For financial information about TransCanada, see our most recent annual audited consolidated financial statements and MD&A. Copies of these documents and materials related to corporate governance are available on our website (www.transcanada.com).

You can find more information about TransCanada on our website (www.transcanada.com) and on SEDAR (www.sedar.com).

Schedule A - Shareholder proposal

Shareholder Proposal and Supporting Statement

The following proposal and supporting statement was submitted by the Pension Plan of the United Church of Canada (PPUCC). PPUCC was represented by the Shareholder Association for Research and Education (SHARE).

Resolved that the Board of Directors provide a report to shareholders, within six months following the 2019 Annual General Meeting and annually thereafter, prepared at reasonable cost and omitting proprietary and confidential information, outlining how TransCanada respects internationally recognized standards for Indigenous Peoples rights in its business activities. Such report should describe the company's policies, practices and performance indicators related to respecting internationally recognized standards for Indigenous Peoples' rights in existing and proposed wholly-owned projects, joint ventures, investments and acquisitions. Internationally-recognized standards for Indigenous Peoples' rights are the UN Declaration on the Rights of Indigenous Peoples (UN DRIP) and International Labour Organization Convention 169 concerning Indigenous and Tribal Peoples in Independent Countries (ILO 169).

Shareholder Supporting Statement

TransCanada shareholders require clear and comprehensive information about their company's policies, practices and performance on Indigenous rights and relations in order to assess risk and stability, and analyze future performance.

UNDRIP sets out the internationally accepted minimum standard with respect to Indigenous Peoples' rights including the right to free, prior, and informed consent before the approval of any projects affecting their lands or territories and resources. ILO 169 provides an international labour standard of similar effect and is a binding instrument of international law in countries where it has been ratified.

TransCanada's approach to Indigenous relations varies across jurisdictions making it difficult for investors to understand whether, and to what extent, it aligns with international standards. In Canada TransCanada has an Aboriginal Peoples Policy, in the US it applies a Native American Policy, and in Mexico it has no clear policy.

In the countries where TransCanada operates, the risks to companies that fail to uphold Indigenous rights are well documented, including reputational damage, regulatory intervention, litigation, project delays and disruptions, shut downs and financial loss.

In Canada and the US failure to adequately address Indigenous rights and relations has contributed to the delay or cancellation of Trans Mountain Pipeline Expansion, Northern Gateway Pipeline, Dakota Access Pipeline, TransCanada Energy East Pipeline, and TransCanada Keystone XL Pipeline among others. In Mexico Indigenous Peoples have raised concern that they will face displacement and impacts to their land and cultural rights due to development of TransCanada Tuxpan-Tula Pipeline.

Poor Indigenous rights practices may affect access to project finance. In response to the concerns about inadequate Indigenous rights protections in North America, the Equator Principles Association Banks have initiated a review of the application of the Equator Principles in designated countries and the approach to Indigenous Peoples rights in the Equator Principles. The outcome of this review could influence the availability of bank finance for future projects.

To avoid conflict, align with international legal principles, and meet societal, shareholder and lender expectations, companies need to integrate international standards of Indigenous Peoples rights into their policies, procedures and operations, and provide shareholders comprehensive disclosure on how this is being done.

TransCanada's Board and Management Response and Voting Recommendation:

The Board of Directors and management recommend that shareholders vote **against** the Proposal for the reasons set out below.

Our current Corporate Responsibility Report, the public availability of our Indigenous Relations Policy, as well as regular, digital updates to the Indigenous Relations sections of our website (www.transcanada.com), together, are an effective manner to communicate our approach and commitment to Indigenous groups. This commitment has been informed by decades of experience and learnings and we will continue to report, and enhance such reporting, for the years to come as part of our commitment to continuous improvement.

TransCanada recognizes Indigenous groups as rights holders who have a distinct relationship to the land. We understand that TransCanada's business activities have the potential to affect Indigenous groups in tangible ways and we engage early and regularly with potentially affected Indigenous groups to understand their interests, identify opportunities, respond to concerns, and facilitate participation in our projects.

Although our infrastructure does not result in permanent impacts to or loss of the use of land, and does not require the relocation of Indigenous communities, we mitigate even temporary impacts and always strive to achieve consent amongst the Indigenous groups potentially affected by our work. While we recognize that long, linear infrastructure projects may never receive unanimous, unequivocal support across every jurisdiction and community they touch, we work toward consensus on all project concerns and to fully address each issue raised, through collaboration and open communication. We continue to work on continuously improving our engagement practices to build respectful relationships, manage risk, and to create opportunities.

The principles embedded in our Indigenous Relations Program guide our activities across all of our projects and operations in each of Canada, the United States and Mexico. Specifically, this Program and its principles commit us to:

- Recognizing the unique connection Indigenous people have to the land and their community governance
- Ensuring meaningful and respectful engagement with Indigenous groups, as early as possible, using a principled approach
- Achieving regulatory certainty using a pragmatic approach in the jurisdiction where we are building or operating
- Building innovative project strategies, reflecting engagement and regulatory outcomes that are defensible and commercially reasonable, and community led.

We take very seriously our obligation to work collaboratively with Indigenous groups, and we provide project information as early as possible and monitor, record and follow-up on all project specific concerns.

In late 2018, we completed the integration of our Aboriginal Relations and Native American Relations policies into an overarching Indigenous Relations policy. This policy is informed by our values, conforms with or exceeds all applicable laws and regulations, and respects the spirit and intent of the United Nations Declaration on the Rights of Indigenous Peoples ("UNDRIP") and its guiding principles.

We are proud of our work with Indigenous groups, and we regularly report on our approach and commitment in our corporate responsibility reporting. We are committed to providing on-going reporting throughout the year as our initiatives and approaches are supplemented or updated. In 2018, we began including Environmental, Social and Governance (ESG) information on our website, including a specific focus area on our work with Indigenous groups. We commit to keeping this information up-to-date, and this page will provide the latest information on our Indigenous Relations program, strategy, practices, and our work on specific projects and operations. We demonstrate our commitment to building respectful, mutually beneficial and lasting relationships every day, and look forward to sharing more of our stories.

Additional reporting would impose significant administrative burden without providing material new information to our shareholders.

Therefore, the Board and management recommend shareholders vote **against** this proposal.

Schedule B – Charter of the Board of Directors

I. INTRODUCTION

- A. The Board's primary responsibility is to foster the long-term success and sustainability of the Company consistent with the Board's responsibility to act honestly and in good faith with a view to the best interests of the Company.
- B. The Board of Directors has plenary power. Any responsibility not delegated to management or a committee of the Board remains with the Board. This Charter is prepared to assist the Board and management in clarifying responsibilities and ensuring effective communication between the Board and management.

II. COMPOSITION AND BOARD ORGANIZATION

- A. Nominees for directors are initially considered and recommended by the Governance committee of the Board, approved by the entire Board and elected annually by the shareholders of the Company.
- B. The Board must be comprised of a majority of members who have been determined by the Board to be independent. A member is independent if the member has no direct or indirect relationship which could, in the view of the Board, be reasonably expected to interfere with the exercise of a member's independent judgment.
- C. Directors who are not members of management will meet on a regular basis to discuss matters of interest independent of any influence from management.
- D. Certain of the responsibilities of the Board referred to herein may be delegated to committees of the Board. The responsibilities of those committees will be as set forth in their Charter, as amended from time to time.

III. DUTIES AND RESPONSIBILITIES

A. Managing the Affairs of the Board

The Board operates by delegating certain of its authorities, including spending authorizations, to management and by reserving certain powers to itself. Certain of the legal obligations of the Board are described in detail in Section IV. Subject to these legal obligations and to the Articles and By-laws of the Company, the Board retains the responsibility for managing its own affairs, including:

- i) planning its composition and size;
- ii) selecting its Chair;
- iii) nominating candidates for election to the Board;
- iv) determining independence of Board members;
- v) approving committees of the Board and membership of directors thereon;
- vi) determining director compensation; and
- vii) assessing the effectiveness of the Board, committees and directors in fulfilling their responsibilities.

B. Management and Human Resources

The Board has the responsibility for:

- i) the appointment and succession of the Chief Executive Officer (CEO) and monitoring CEO performance, approving CEO compensation and providing advice and counsel to the CEO in the execution of the CEO's duties;
- ii) approving a position description for the CEO;
- iii) reviewing CEO performance at least annually, against agreed-upon written objectives;
- iv) approving decisions relating to senior management, including the:
 - a) appointment and discharge of officers of the Company and members of the senior executive leadership team;
 - b) compensation and benefits for members of the senior executive leadership team;
 - c) annual corporate and business unit performance objectives utilized in determining incentive compensation or other awards to officers; and
 - d) employment contracts, termination and other special arrangements with senior executive officers, or other employee groups if such action is likely to have a subsequent material⁽¹⁾ impact on the Company or its basic human resource and compensation policies.
- v) taking all reasonable steps to ensure succession planning programs are in place, including programs to train and develop management;
- vi) the overall oversight of the Company sponsored Canadian pension plans and ensuring that processes are in place to properly oversee the administration and management of such pension plans either directly or through delegation of the duties and responsibilities to one or more Board Committees;
- vii) approving certain matters relating to all employees, including:
 - a) the annual salary policy/program for employees;
 - b) new benefit programs or changes to existing programs that would create a change in cost to the Company in excess of \$10,000,000 annually; and
 - c) material benefits granted to retiring employees outside of benefits received under approved pension and other benefit programs.

(1) For purposes of this Charter, the term "material" includes a transaction or a series of related transactions that would, using reasonable business judgment and assumptions, have a meaningful impact on the Corporation. The impact could be relative to the Corporation's financial performance and liabilities as well as its reputation.

C. Strategy and Plans

The Board has the responsibility to:

- i) participate in strategic planning sessions to ensure that management develops corporate strategic priorities and objectives and approve the resulting strategic plan;
- ii) approve capital commitment and expenditure budgets and related operating plans;
- iii) approve financial and operating objectives used in determining compensation;
- iv) approve the entering into, or withdrawing from, lines of business that are, or are likely to be, material to the Company;
- v) approve material divestitures and acquisitions; and
- vi) monitor management's achievements in implementing major corporate strategies and objectives, in light of changing circumstances.

D. Financial and Corporate Issues

The Board has the responsibility to:

- i) take reasonable steps to ensure the implementation and integrity of the Company's internal control and management information systems;
- ii) monitor operational and financial results;
- iii) approve annual financial statements and related Management's Discussion and Analysis, review quarterly financial results and approve the release thereof by management;
- iv) approve the Management Information Circular, Annual Information Form and documents incorporated by reference therein;
- v) declare dividends;
- vi) approve financings, changes in authorized capital, issue and repurchase of shares, issue and redemption of debt securities, listing of shares and other securities, issue of commercial paper, and related prospectuses and trust indentures;
- vii) recommend appointment of external auditors and approve auditors' fees;
- viii) approve banking resolutions and significant changes in banking relationships;
- ix) approve appointments, or material changes in relationships with corporate trustees;
- x) approve contracts, leases and other arrangements or commitments that may have a material impact on the Company;
- xi) approve spending authority guidelines; and
- xii) approve the commencement or settlement of litigation that may have a material impact on the Company.

E. Business and Risk Management

The Board has the responsibility to:

- i) take reasonable steps to ensure that management has identified the principal risks of the Company's businesses and implemented appropriate strategies to manage these risks, understands the principal risks and achieves a proper balance between risks and benefits;
- ii) review reports on capital commitments and expenditures relative to approved budgets;
- iii) review operating and financial performance relative to budgets or objectives;
- iv) oversee environmental and social issues and receive, on a regular basis, reports on matters relating to, among others, ethical conduct, environmental management, employee and contractor health and safety, human rights, relationships with Indigenous communities and related party transactions; and
- v) assess and monitor management control systems by evaluating and assessing information provided by management and others (e.g. internal and external auditors) about the effectiveness of management control systems.

F. Policies and Procedures

The Board has responsibility to:

- i) monitor compliance with all significant policies and procedures by which the Company is operated;
- ii) direct management to ensure the Company operates at all times within applicable laws and regulations and to the highest ethical and moral standards;
- iii) provide policy direction to management while respecting its responsibility for day-to-day management of the Company's businesses; and
- iv) review significant new corporate policies or material amendments to existing policies (including, for example, policies regarding business conduct, conflict of interest and the environment).

G. Compliance Reporting and Corporate Communications

The Board has the responsibility to:

- i) take all reasonable steps to ensure the Company has in place effective disclosure and communication processes with shareholders and other stakeholders and financial, regulatory and other recipients;
- ii) approve interaction with shareholders on all items requiring shareholder response or approval;
- iii) take all reasonable steps to ensure that the financial performance of the Company is adequately reported to shareholders, other security holders and regulators on a timely and regular basis;

- iv) take all reasonable steps to ensure that financial results are reported fairly and in accordance with generally accepted accounting principles;
- v) take all reasonable steps to ensure the timely reporting of any other developments that have significant and material impact on the Company; and
- vi) report annually to shareholders on the Board's stewardship for the preceding year (the Annual Report).

IV. GENERAL LEGAL OBLIGATIONS OF THE BOARD OF DIRECTORS

A. The Board is responsible for:

- i) directing management to ensure legal requirements have been met and documents and records have been properly prepared, approved and maintained;
- ii) approving changes in the By-laws and Articles of Incorporation, matters requiring shareholder approval, and agendas for shareholder meetings;
- iii) approving the Company's legal structure, name, logo, mission statement and vision statement; and
- iv) performing such functions as it reserves to itself or which cannot, by law, be delegated to Committees of the Board or to management.

Schedule C – Non-GAAP measures

In our disclosure, we use the following non-GAAP measures:

- comparable EBITDA
- comparable EBIT
- comparable earnings
- comparable earnings per share
- funds generated from operations
- comparable funds generated from operations
- comparable distributable cash flow
- comparable distributable cash flow per common share.

These measures do not have any standardized meaning as prescribed by GAAP and therefore may not be similar to measures presented by other entities.

Comparable measures

We calculate comparable measures by adjusting certain GAAP and non-GAAP measures for specific items we believe are significant but not reflective of our underlying operations in the period. Except as otherwise described herein, these comparable measures are calculated on a consistent basis from period to period and are adjusted for specific items in each period, as applicable.

Our decision not to adjust for a specific item is subjective and made after careful consideration. Specific items may include:

- certain fair value adjustments relating to risk management activities
- income tax refunds and adjustments and changes to enacted tax rates
- gains or losses on sales of assets or assets held for sale
- legal, contractual and bankruptcy settlements
- impact of regulatory or arbitration decisions relating to prior year earnings
- restructuring costs
- impairment of goodwill, investments and other assets including certain ongoing maintenance and liquidation costs
- acquisition and integration costs.

We exclude the unrealized gains and losses from changes in the fair value of derivatives used to reduce our exposure to certain financial and commodity price risks. These derivatives generally provide effective economic hedges, but do not meet the criteria for hedge accounting. As a result, the changes in fair value are recorded in net income. As these amounts do not accurately reflect the gains and losses that will be realized at settlement, we do not consider them reflective of our underlying operations.

The following table identifies our non-GAAP comparable measures and their equivalent GAAP measures.

| Comparable measure | Original measure |
|--|--|
| comparable EBITDA | segmented earnings |
| comparable EBIT | segmented earnings |
| comparable earnings | net income attributable to common shares |
| comparable earnings per common share | net income per common share |
| comparable funds generated from operations | net cash provided by operations |
| comparable distributable cash flow | net cash provided by operations flow |

Comparable EBITA and comparable EBIT

Comparable EBITA represents segmented earnings adjusted for certain specific items, excluding non-cash charges for depreciation and amortization. We use comparable EBITA as a measure of our earnings from ongoing operations as it is a useful indicator of our performance and is also presented on a consolidated basis. Comparable EBIT represents segmented earnings adjusted for specific items. Comparable EBIT is an effective tool for evaluating trends in each segment. See the 2018 Annual report for a reconciliation to segmented earnings.

Comparable earnings and comparable earnings per share

Comparable earnings represents earnings or losses attributable to common shareholders on a consolidated basis adjusted for specific items. Comparable earnings is comprised of segmented earnings, interest expense, AFUDC, interest income and other, income taxes, non-controlling interests and preferred share dividends adjusted for specific items. See the 2018 Annual report for a reconciliation to net income attributable to common shares and net income per common share.

Funds generated from operations and comparable funds generated from operations

Funds generated from operations reflects net cash provided by operations before changes in operating working capital. We believe it is a useful measure of our consolidated operating cash flow because it does not include fluctuations from working capital balances, which do not necessarily reflect underlying operations in the same period, and is used to provide a consistent measure of the cash generating performance of our assets. Comparable funds generated from operations is adjusted for the cash impact of specific items noted above. See the 2018 Annual report for a reconciliation to net cash provided by operations.

Comparable distributable cash flow and comparable distributable cash flow per share

We believe comparable distributable cash flow is a useful supplemental measure of performance that defines cash available to common shareholders before capital allocation. Comparable distributable cash flow is defined as comparable funds generated from operations less preferred share dividends, distributions to non-controlling interests and non-recoverable maintenance capital expenditures. See the 2018 Annual report for a reconciliation to net cash provided by operations.

Maintenance capital expenditures are expenditures incurred to maintain our operating capacity, asset integrity and reliability, and include amounts attributable to our proportionate share of maintenance capital expenditures on our equity investments. We have the opportunity to recover effectively all of our pipeline maintenance capital expenditures in Canadian Natural Gas Pipelines, U.S. Natural Gas Pipelines and Liquids Pipelines through tolls. Canadian natural gas pipelines maintenance capital expenditures are included in rate bases, on which we earn a regulated return and subsequently recover in tolls. Our U.S. natural gas pipelines can recover maintenance capital expenditures through tolls under current rate settlements, or have the ability to recover such expenditures through tolls established in future rate cases or settlements. Tolling arrangements in our liquids pipelines provide for the recovery of maintenance capital expenditures. As such, in 2018 our presentation of comparable distributable cash flow and comparable distributable cash flow per common share only includes a reduction for non-recoverable maintenance capital expenditures in their respective calculations. We have adjusted our comparable distributable cash flow and comparable distributable cash flow per common share for 2017 and 2016 to reflect the amended presentation format which we believe provides better information for readers.

Shareholder Information

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Board of Directors

You may contact the Board directly
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