Delivering a *Sustainable Future*

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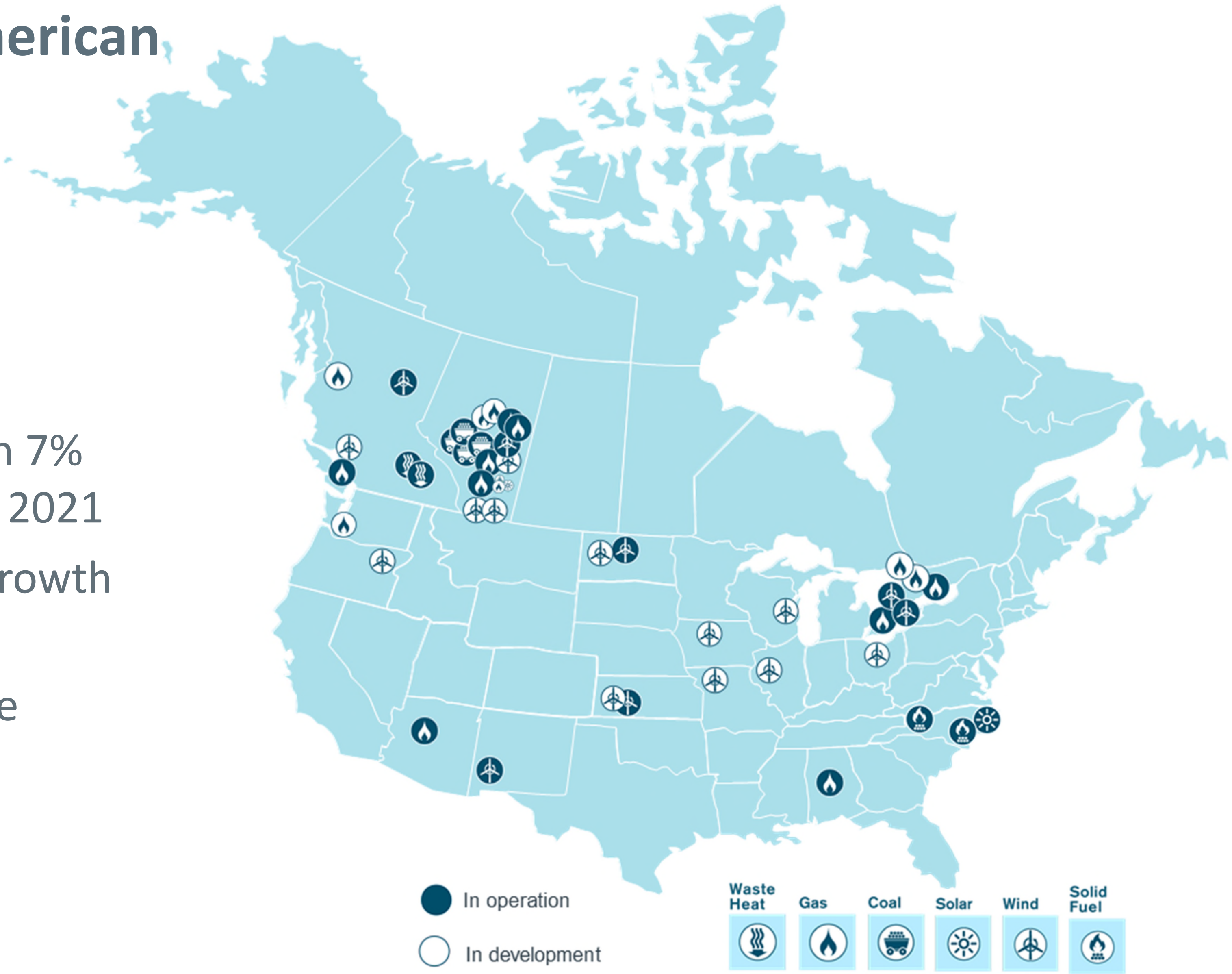
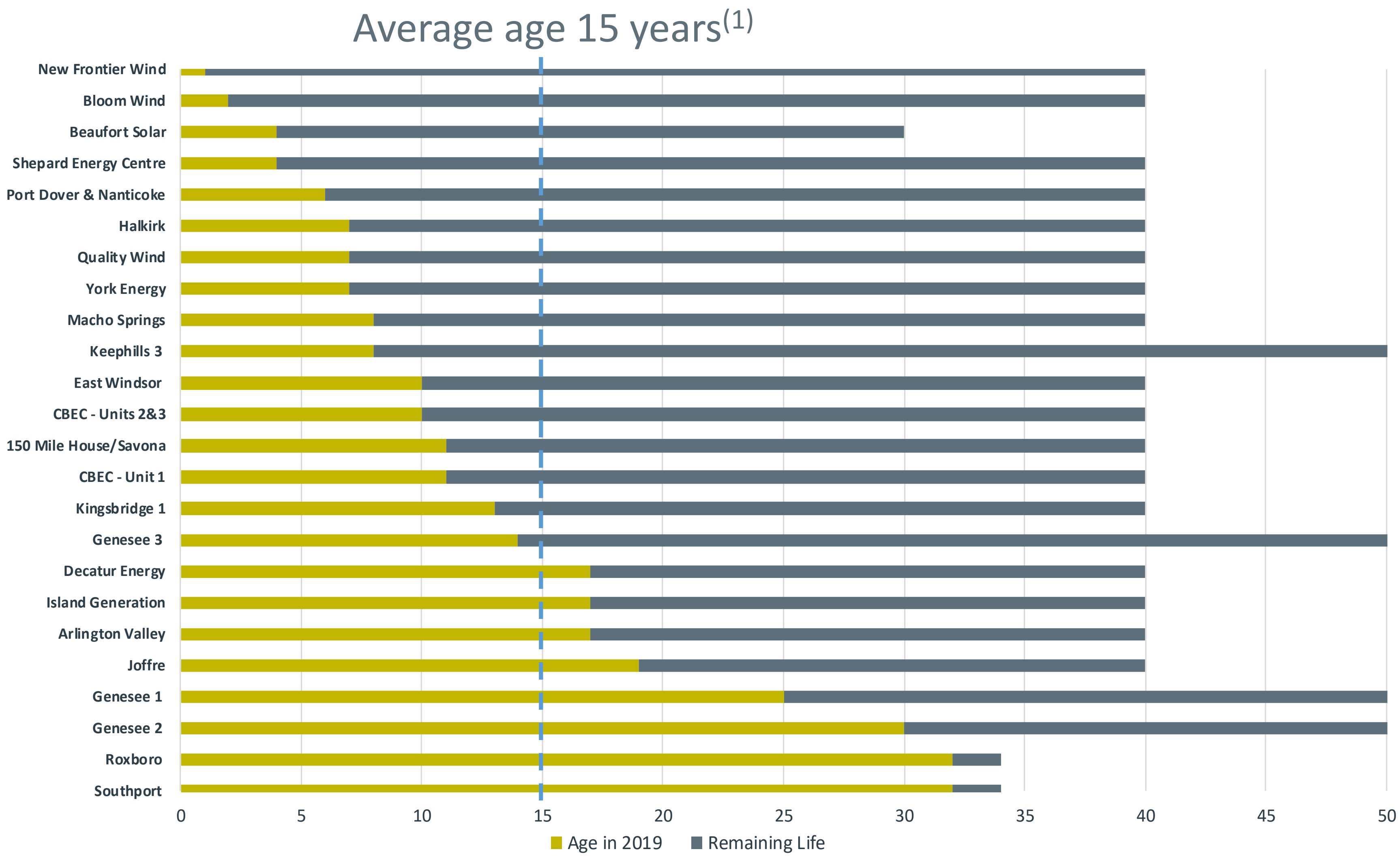
Investor Presentation
January 2019

Growth-oriented North American power producer

- 5,100 MWs of owned capacity
- Highly-contracted portfolio
- History of dividend growth with 7% annual growth guidance out to 2021
- Strong pipeline of contracted growth opportunities
- Committed to investment grade credit rating



Young fleet with long asset lives



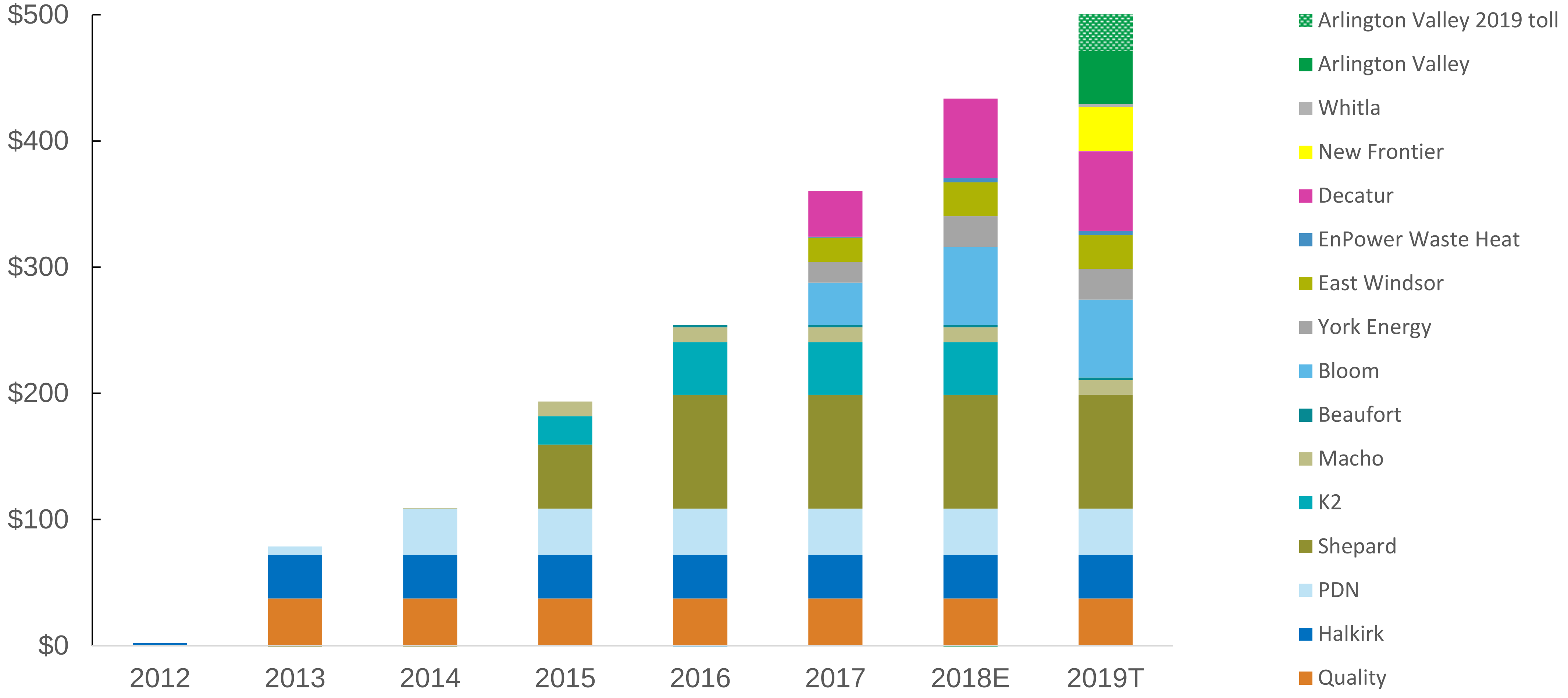
95% 5-year average availability (2019 target of 95%)

3% of current generation portfolio is expected to retire in the next decade

11 Years[2] Average PPA term remaining

1) Megawatt-weighted average.
2) Based on 2018 EBITDA. Includes Off-Coal Agreement with the Province of Alberta and excludes Genesee 1 & 2 PPA.

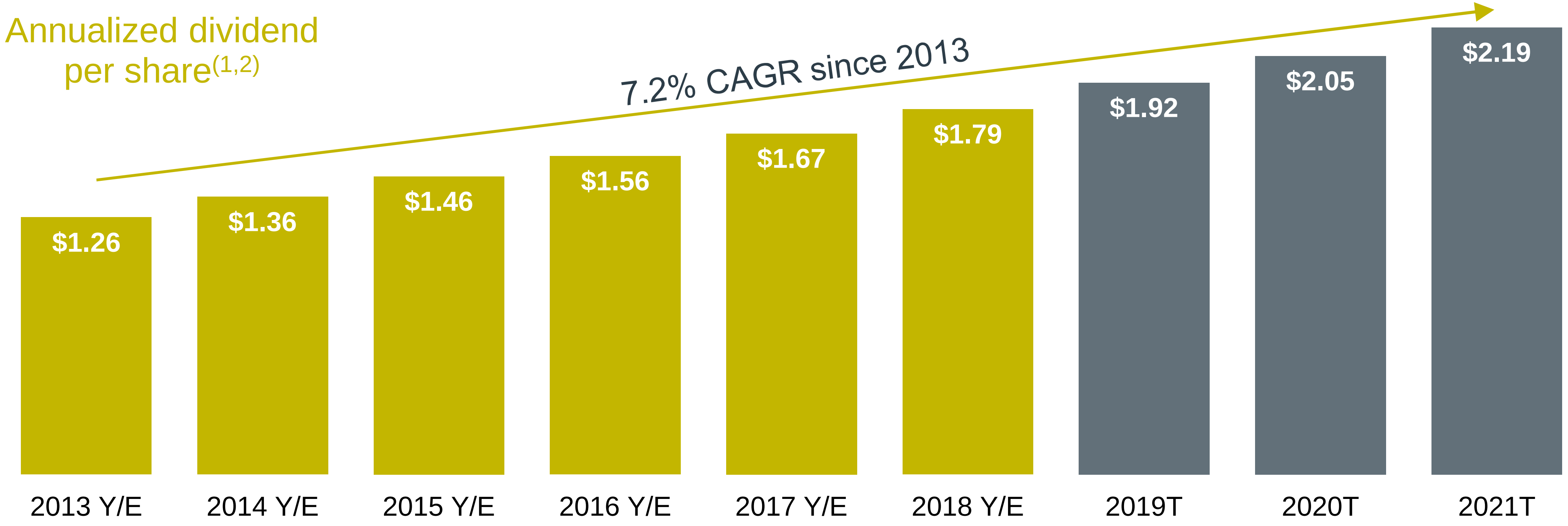
EBITDA from new assets has supported dividend growth[(1-5)]



Growth capex since 2012 averages ~$500M[(5)] per annum

1) Margins have been averaged over the periods except in the year of commissioning/acquisition. 2) Capital Power's share of adjusted EBITDA for all assets. Adjusted EBITDA is a non-GAAP measure. 3) Includes both merchant and contracted components of Shepard and Halkirk. The merchant components include contributions from trading activity attributable to the plants' production. 4) Includes finance lease principal payments for 2012-2018. 5) Includes gross capex from tax-equity investments.

Dividend growth guidance extended to 2021



Target long-term annual AFFO payout ratio of 45-55%

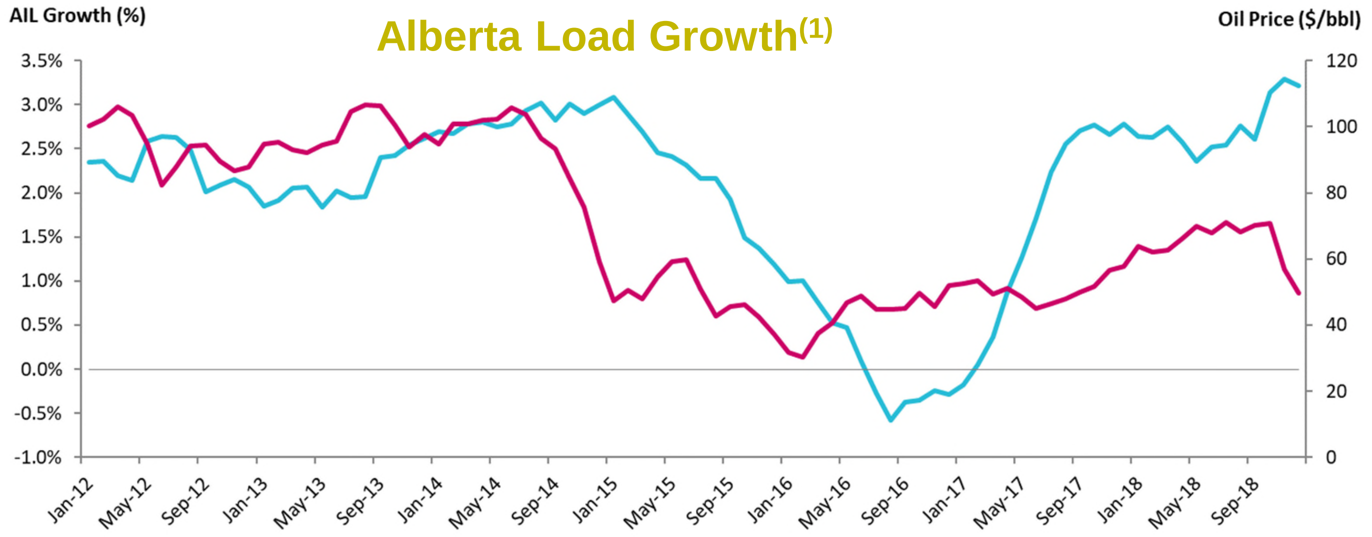
Delivering consistent annual dividend growth should result in EBITDA multiple expansion

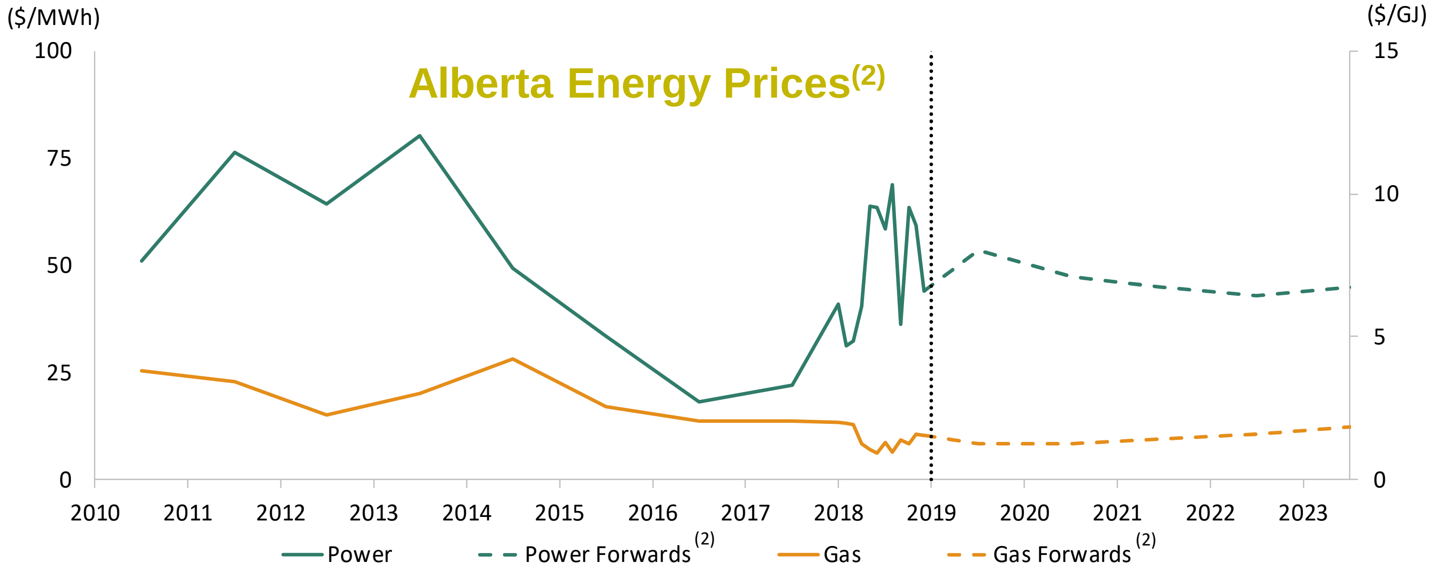
1) Subject to market conditions, economic outlook, cash flow forecast, and Board approval at the time.
2) 2013 to 2018 annualized dividend based on year-end quarterly common shares dividend declared.

Alberta Power Market

- Robust outlook for power prices
- Demand growth of 3-4%
- Reasonable capacity market design

Positive Alberta power market fundamentals

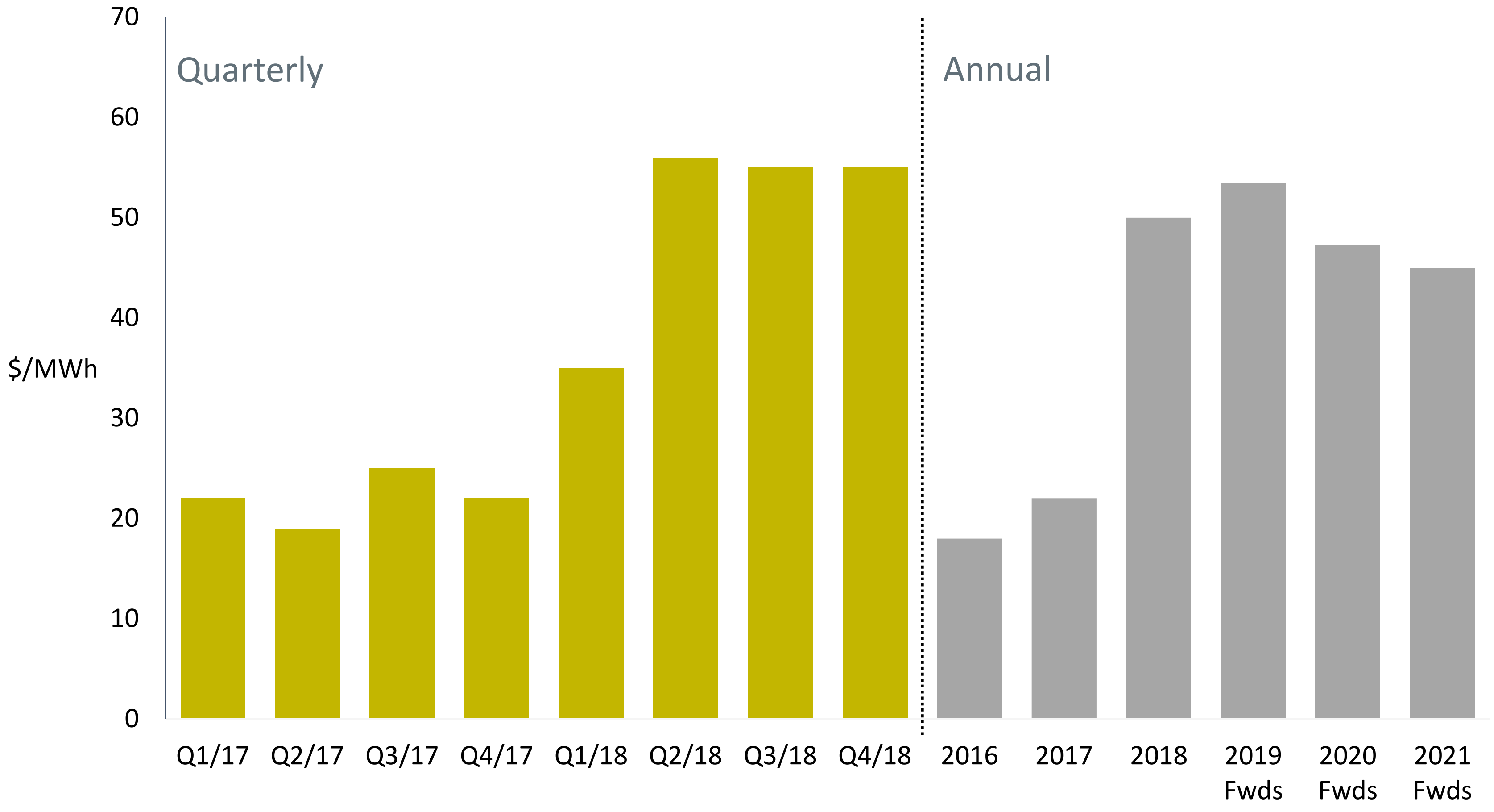




- Alberta is experiencing strong demand growth
- New summer peak record of 11,169 MW on Aug 10/18
- Older coal fired units have started to retire
- Termination of 2,000 MW of PPAs have facilitated commercial optimization

1) Alberta Internal Load normalized for weather. Source: Capital Power, EIA.
2) Monthly details shown for the year 2018. Forward prices as of January 2019.

Stable outlook in Alberta power prices



Material improvement in 2018 power prices

- Coal plant retirements / mothballing
- Robust demand growth
- Higher carbon tax

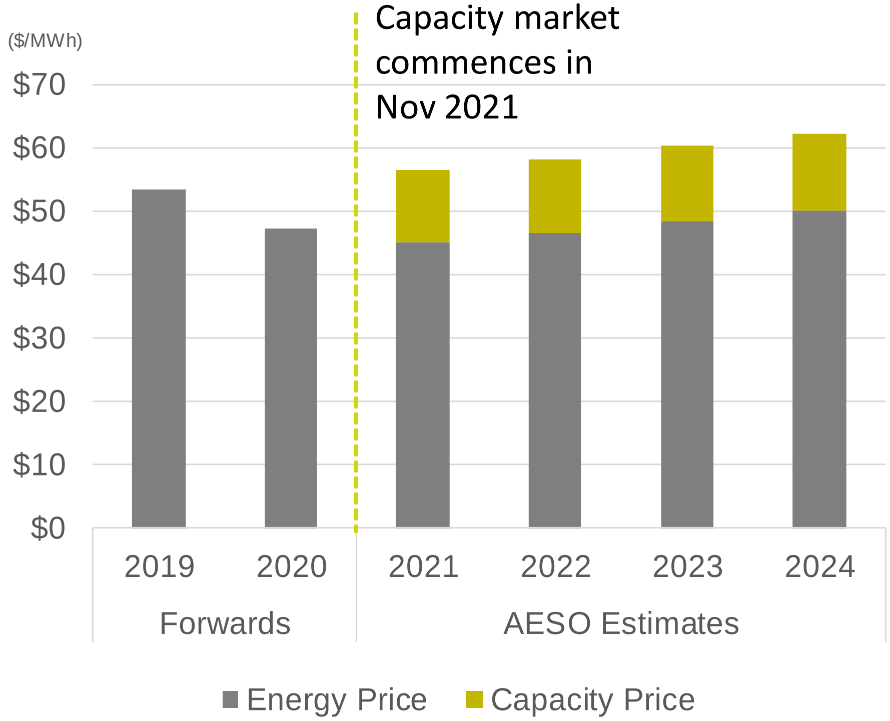
1) Forward prices as of January 2019.

Capacity market design

Final design is consistent with our view of a properly designed capacity market for Alberta

- AESO has finalized its proposed market design
- Design is constructive and provides an equal opportunity for existing and new assets to earn a return on and of capital
- Next steps:
  - Alberta Utilities Commission (AUC) approval expected by mid-2019
  - First capacity auction in late 2019
  - Capacity commitments awarded in 2020 for delivery in November 2021

AESO's forecast revenue for baseload facilities



AESO's forecast of $55-$65/MWh for the combined capacity and energy payments will allow existing and future assets an opportunity to earn a return on/of capital

Portfolio optimization

AB commercial portfolio positions

	2019	2020	2021
% sold forward[1]	73%	31%	1%
Contracted prices[2] ($/MWh)	Low-$50	Low-$50	Low-$70[3]
Forward prices[4] ($/MWh)	$56	$46	$45
EBITDA sensitivity to a $5/MWh change in spot prices[5] ($M)	$16	$28	$67

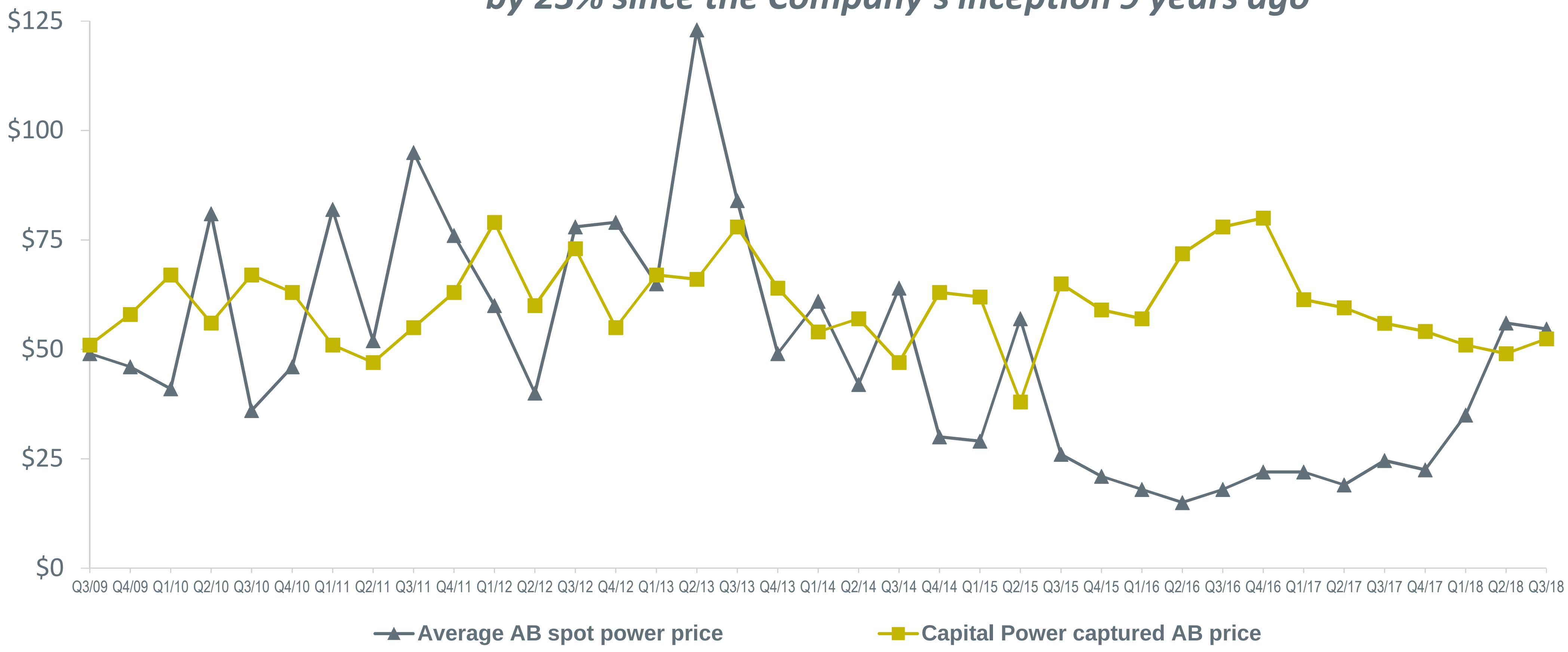
Nearly 500 MW (gas peaking, wind) available to capture the upside from low natural gas prices, higher power prices, and price volatility

1) Based on the Alberta baseload plants plus a portion of Joffre and the uncontracted portion of Shepard.
2) Forecasted average contracted prices may differ significantly from future average realized prices as future realized prices are driven by a combination of previously contracted prices and settled prices.
3) Average contract pricing on net 2021 position is abnormally high due to low net volume sold forward where gross sales were transacted at higher prices than gross purchases.
4) Forward prices as of November 30, 2018.
5) Includes both baseload and non-baseload positions.

Maximizing the Alberta commodity portfolio

Creating incremental value and stability through market expertise

Average realized power prices[1] have exceeded spot power prices by 23% since the Company's inception 9 years ago



1) Based on the Alberta baseload plants and the acquired Sundance PPA plus the uncontracted portion of Shepard Energy Centre baseload. Effective Mar/16, Sundance PPA is no longer a part of Capital Power's baseload generation due to termination of the Sundance PPA.

Capital Power is well positioned in Alberta

Market certainty is returning

Young Assets	High Availability	Advantaged Locations	Conversion Optionality	Market Knowledge

- Competitive fixed and variable costs
- Maximal capacity volumes due to high availability and strategically located wind assets
- Coal to gas conversion optionality through bid rules
- Potential for good operators to capture more value
- Existing and new assets treated equally

Growth Strategy

- Strong renewable pipeline including 1,200 MW of U.S. wind development
- Potential natural gas plant acquisitions
- Growth target of $500M committed capital per year for contracted opportunities

Current projects under construction/development

Additional 350 MWs of long-term contracted wind facilities to be added by Mar/20

2018 — 2019 — 2020 — 2021

New Frontier Wind
(North Dakota)

- ✓ 99 MW, 12-year PPA
- ✓ Project completed on-schedule with COD in Dec/18
- ✓ Costs below $182M (US$145M) budget
- ✓ Received net tax equity financing of $125M (US$92M) from J.P. Morgan
- ✓ Returns on project forecasted to exceed original expectations

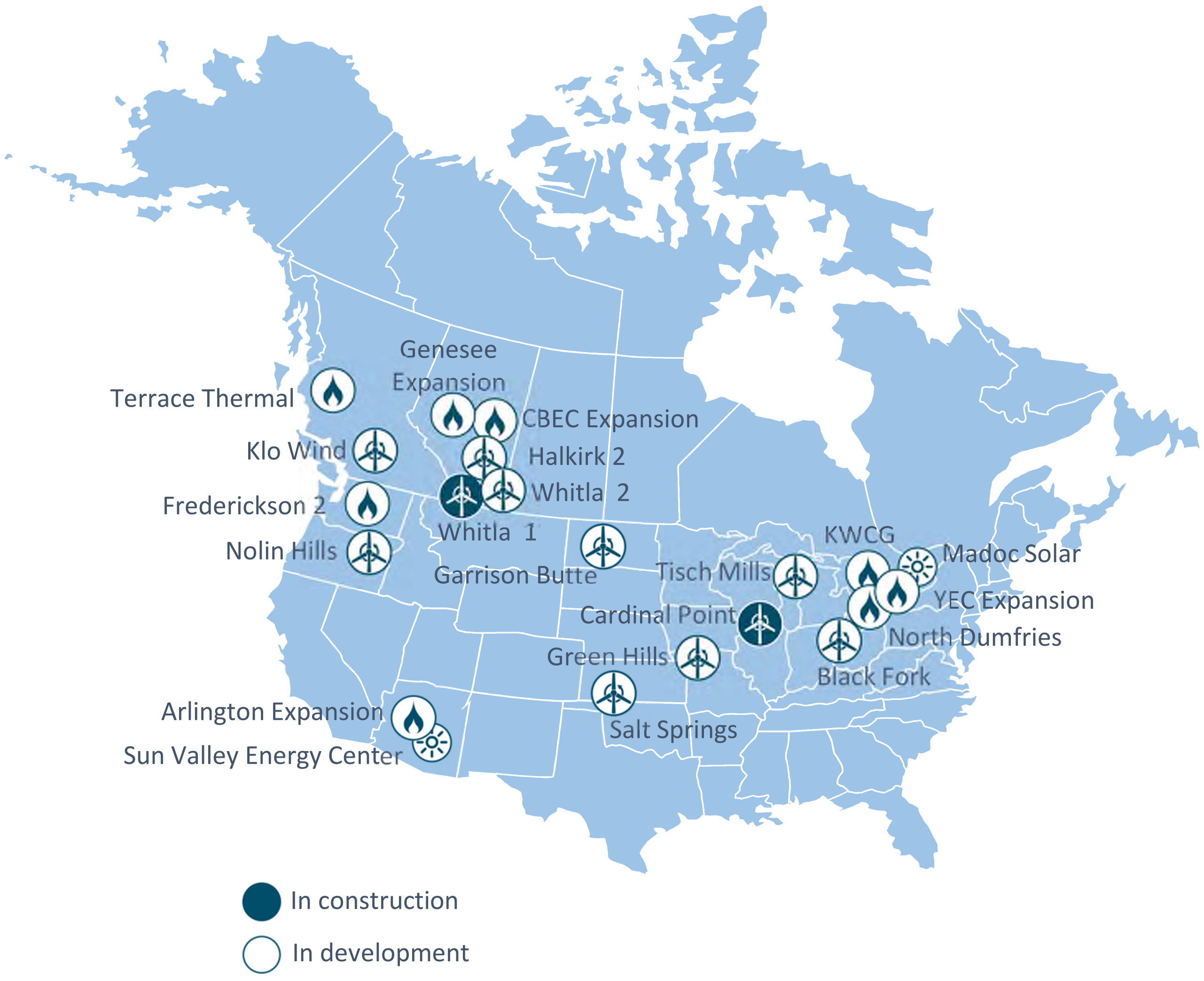
Whitla Wind
(Alberta)

- 201.6 MW (Phase 1)
- 20-year PPA
- $315-$325M
- COD in Q4/19

Cardinal Point Wind
(Illinois)

- 150 MW
- 12-year PPA
- $289-$301M
- COD in Mar/20

Visible pipeline of growth opportunities in targeted markets



>2,000 MW
Potential wind developments

>3,500 MW
Potential gas developments

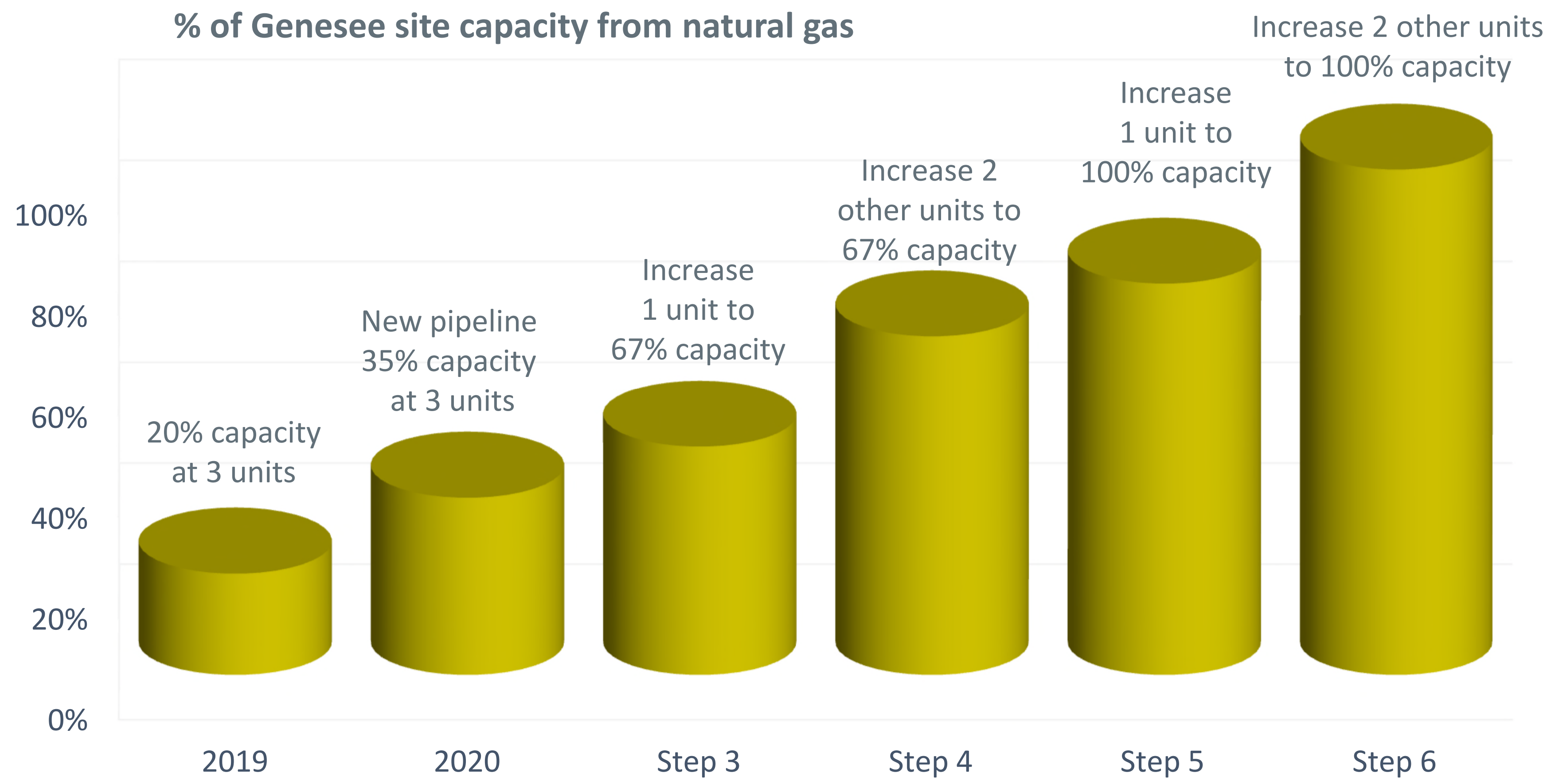
>250 MW
Potential solar developments

Sustainability Strategy

- Focus on building renewables
- Leveraging low natural gas prices by co-firing gas at coal facilities
- Coal-to-gas conversion
- World leading carbon reduction program targeting 10% reduction in GHG emissions
- Carbon capture investments (C2CNT)

Coal-to-gas conversion (dual-fuel capability)

A staged approach to ensure maximal operational flexibility is maintained



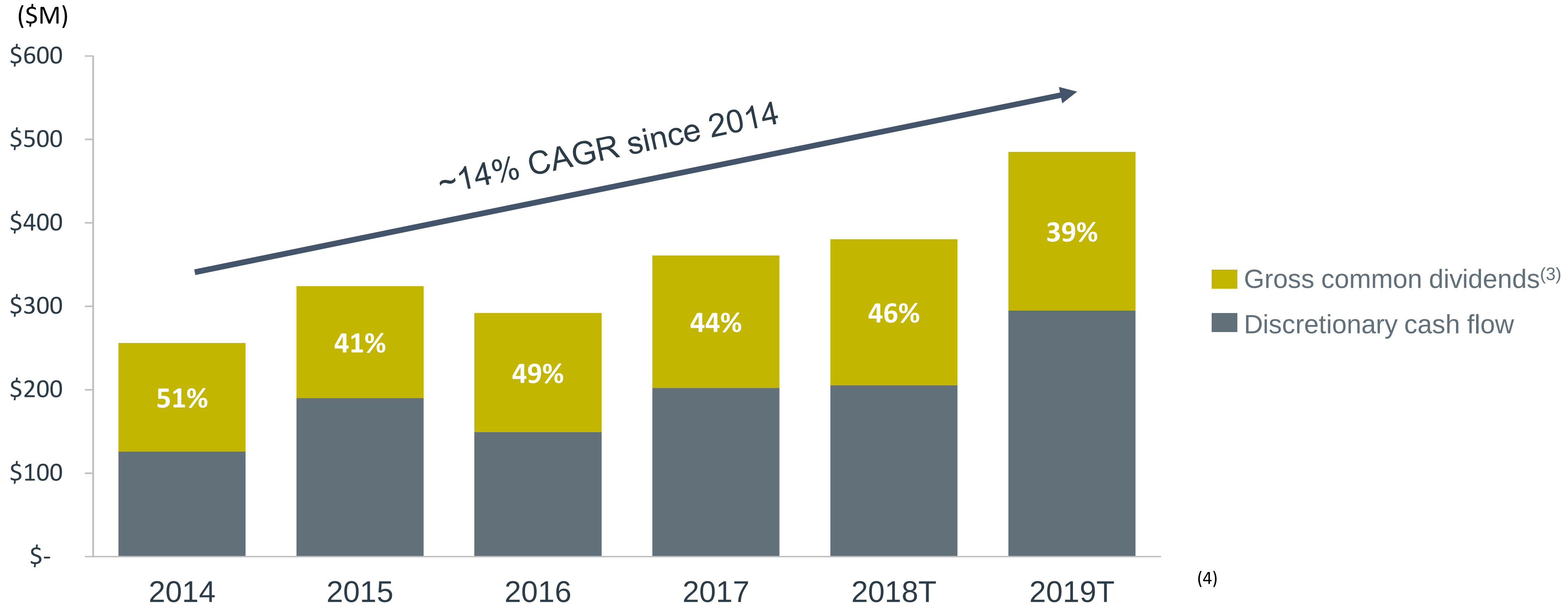
- Timing dependant on market pricing & structure, carbon taxes, natural gas prices
- Conversion work can be completed within regular planned outages (2-year cycle)
- $85M capital costs for 4 units (incl. Keephills 3)
- All the advantages from efficient coal units are transferred to converted gas units

Financial

- AFFO growth supports dividend growth
- Ability to fund targeted $500M growth per year without accessing equity markets
- Share price appreciation driven by dividend growth and risk reduction

AFFO[1,2] growth and conservative payout supports dividend growth

Expect to generate $295M in discretionary cash flow in 2019

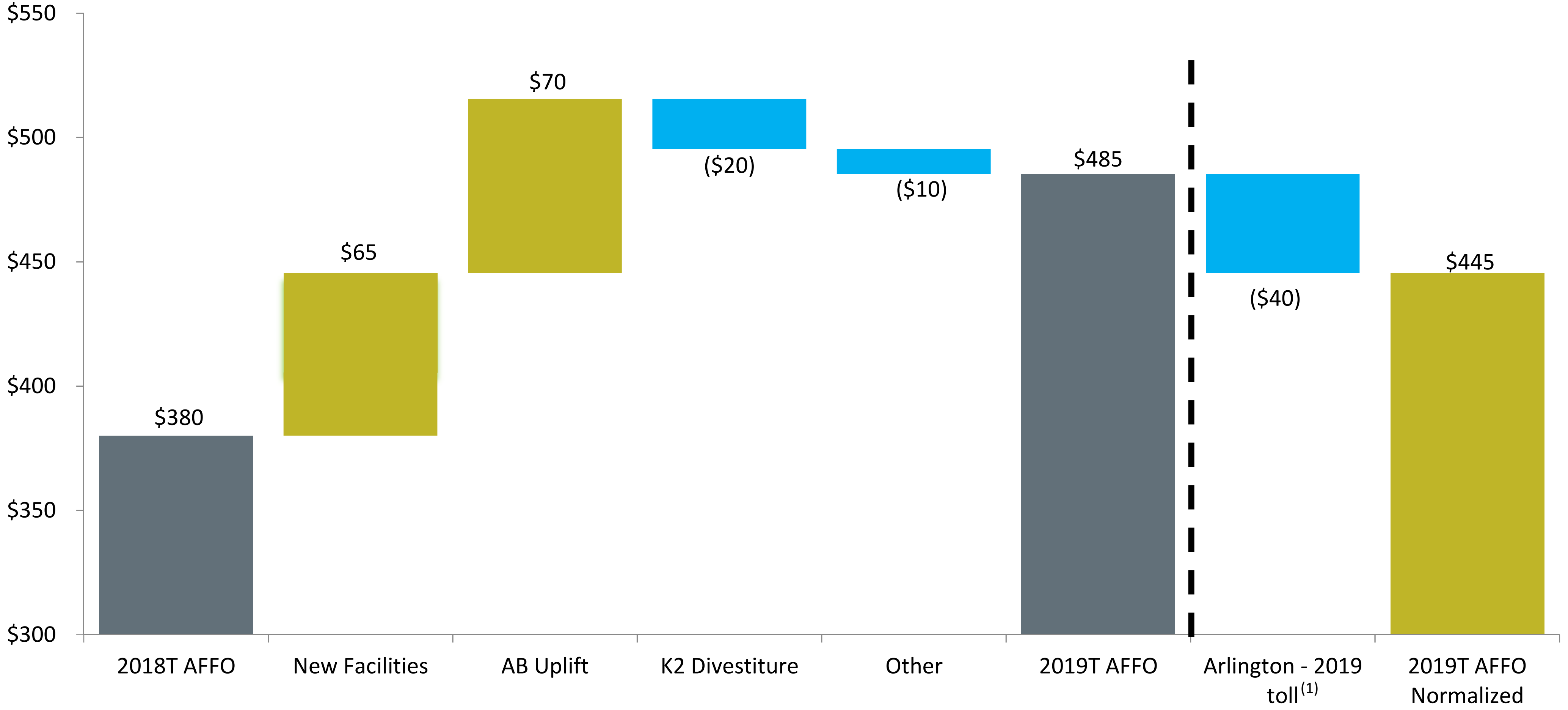


Long-term AFFO payout ratio target of 45-55%

1) AFFO is a non-GAAP financial measure. 2) Historical AFFO figures restated using Adjusted AFFO (2018 method). 3) Includes cash dividends, dividends retained under DRIP, and distributions to EPCOR. 4) 2019 represents midpoint of $460 - $510M guidance range.

AFFO for 2019

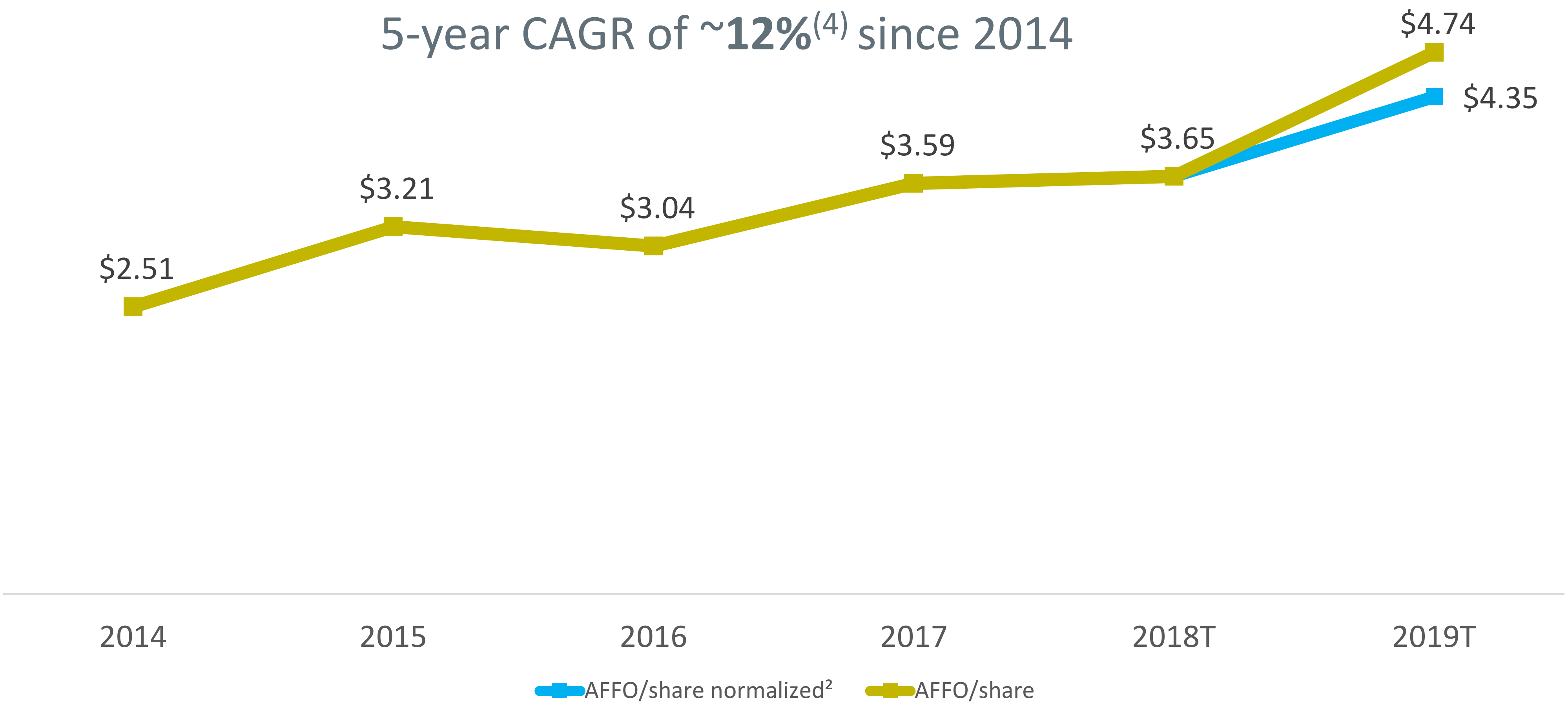
Higher Alberta power prices and AFFO from Arlington and New Frontier offset K2 divestiture



17% year-over-year AFFO growth after normalizing for 2019 Arlington toll

1) Non-recurring component of 2019 Arlington Valley toll payment.

Growing AFFO[1,3] per share



1) Represents Adjusted FFO (2018 method), less the portion allocated to the non-controlling interest (calculated consistent with the proportion of income and distributions allocated to the non-controlling interest in each period). Commencing in 2016, there is no longer a non-controlling interest, therefore, for 2016 onward this metric reflects adjusted FFO (2018 method).
2) 2019 normalized for non-recurring component of 2019 Arlington Valley toll payment.
3) 2019 is based on midpoint of $460M - $510M guidance range.
4) 5-year CAGR from 2014 to 2019 based on normalized AFFO per share for 2019.

Cash flow and financing outlook

Sufficient funding for current growth projects

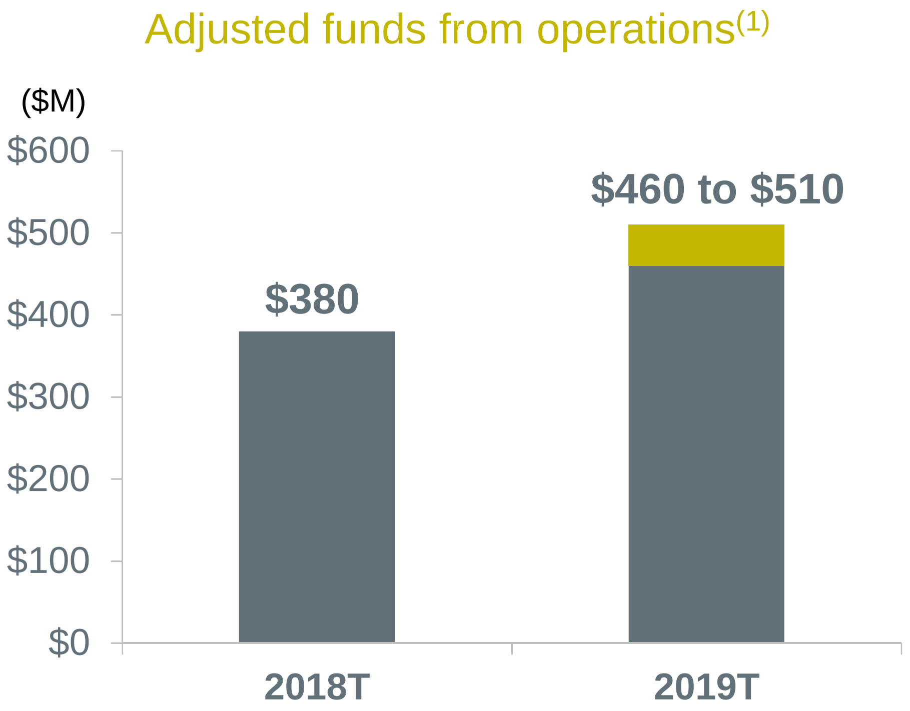
Sources of cash flow	2019T ($M)
Funds from operations[3] + off-coal compensation	$615
Proceeds from disposal of K2 Wind	$215
Debt issuances	$650
	$1,480
Uses of cash flow	
Dividends (common & preferred shares)	($235)
Debt repayment[1]	($525)
Genesee Performance Standard[2]	($15)
Enhancement capex	($25)
Sustaining and maintenance capex	($85)
Development capex – Whitla & Cardinal Point	($515)
	($1,400)
Surplus	**$80**

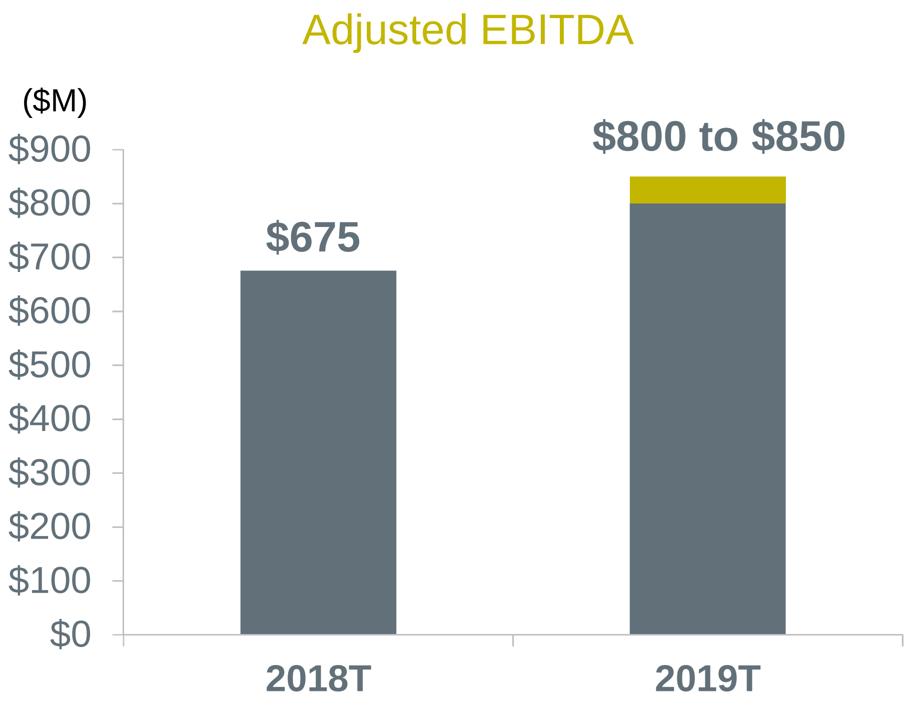
1) Excludes debt repayments to tax equity investor & equity accounted investment debt repayments. Includes principal payments on finance lease payables.
2) Genesee Performance Standard (GPS) is a program to reduce CO2 and improve coal plant efficiency. Total program costs of ~$35M.
3) Funds from operations (FFO) is a is a non-GAAP financial measure.

Financial targets

2019 key assumptions

- Based on 70% of the Alberta Commercial baseload generation sold forward at an average contracted price in the low-$50/MWh range
- Excludes any impacts from $500M of committed capital for growth

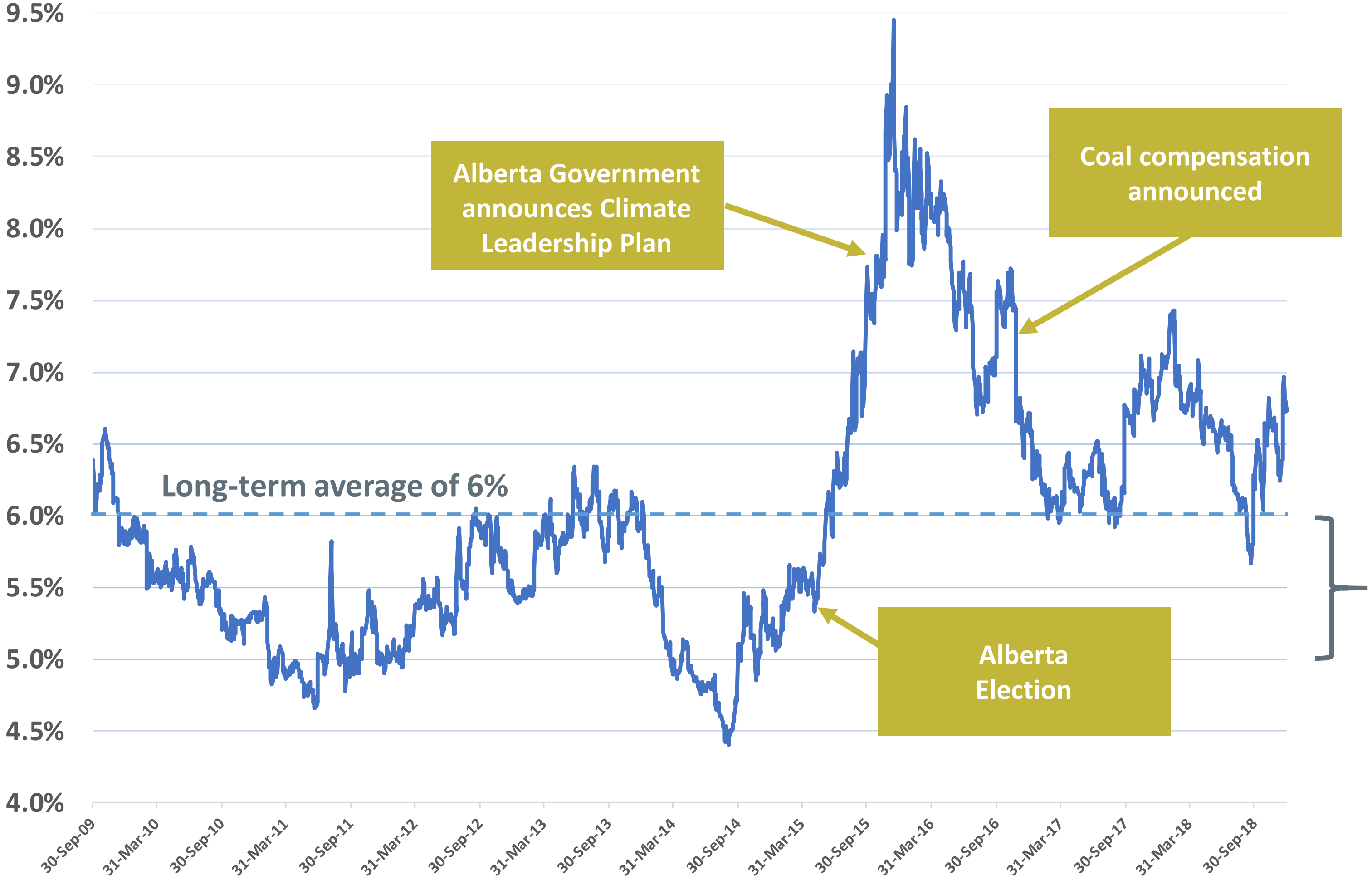




1) AFFO and Adjusted EBITDA are non-GAAP financial measures.

Sustainability and dividend growth

Dividend yield



Dividend yield closer to historic 5-6% range with recovery in Alberta power prices and more clarity on capacity market design

Strategically evolving our portfolio

	Generation technology[1]	Contracted capacity[1]	North American footprint[1]	AFFO per share[2]
2014	33% Gas and renewables	58% Contracted	76% Alberta	$2.51
2019	64% Gas and renewables	77% Contracted	55% Alberta	$4.74[3]
	Renewables and gas growth	Greater visibility	Geographic diversification	Increased cash flow per share

1) Based on Adjusted EBITDA excluding G&A expenses and including off-coal compensation and finance lease principal payments. 2) AFFO per share is a non-GAAP financial measure
3) Based on midpoint of the $460M - $510M guidance range.

Appendices

- Alberta’s coal fleet
- DCF supports dividend growth
- Credit rating metrics
- Debt maturity schedule
- Summary of assets
- Projects under development/construction

Alberta's coal fleet

Retirements under federal / provincial regulations and conversion to gas

Facility	AESO max capacity (MW)	Age in 2019 (yrs)	End of coal life (CLP)[1]	Current Status	Coal to gas conversion Expectation	PPA status
Battle River 3	149	50	2019	Online	Co-firing with gas	Merchant
Sundance 1	288	49	2019	Retired Jan 2018		PPA expired end of 2017
H.R. Milner	144	47	2019	Return from mothball end of May 2018		Merchant
Sundance 2	288	46	2019	Retired Jul 2018		PPA expired end of 2017
Battle River 4	155	44	2025	Online	Co-firing with gas	Merchant
Sundance 3	368	43	2026	Mothballed Apr/18 (up to 2 yrs)	AUC approved CtG 2020-23	Returned to TA in Apr/18
Sundance 4	406	42	2027	To be mothballed Apr/19 (up to 2 yrs)	AUC approved CtG 2020-23	Returned to TA in Apr/18
Sundance 5	406	41	2028	Mothballed Apr/18 (up to 1 yr)	AUC approved CtG 2020-23	Returned to TA in Apr/18
Sundance 6	401	39	2029	Online	AUC approved CtG 2020-23	Returned to TA in Apr/18
Battle River 5	385	38	2029	Online	AUC approved CtG 2019-22	Returned to ATCO Oct/18
Keephills 1	395	36	2029	Online	AUC approved CtG 2020-23	Balancing Pool; Dec/20 expiry
Keephills 2	395	35	2029	Online	AUC approved CtG 2020-23	Balancing Pool; Dec/20 expiry
Sheerness 1	400	33	2030	Online	AUC applied CtG 2019-22	Balancing Pool; Dec/20 expiry
Genesee 2	**400**	**30**	**2030**	Online		Balancing Pool; Dec/20 expiry
Sheerness 2	390	29	2030	Online	AUC applied CtG 2019-22	Balancing Pool; Dec/20 expiry
Genesee 1	**400**	**25**	**2030**	Online		Balancing Pool; Dec/20 expiry
Genesee 3[2]	**466**	**14**	**2030**	Online		Merchant
Keephills 3[2]	**463**	**8**	**2030**	Online	AUC applied CtG 2020-23	Merchant

1) Current coal regulations under Climate Leadership Plan (Alberta).
2) Capital Power and TransAlta Corporation are 50% owners on Genesee 3 and Keephills 3.

Discretionary cash flow supports dividend growth target[1]

$500M
Capital

$50M
EBITDA

$36M[2]
AFFO

8.1%
AFFO/share Growth

7%
Dividend Growth

AFFO growth from discretionary cash flow covers 7% annual dividend growth without dilution to existing shareholders

1) Assumes a 10x EBITDA multiple and a capital structure of 50% DCF, and 50% debt issued at 7 year indicative rate of 4.8%. AFFO growth is compared to the 2019 target midpoint of $445M, normalized for non-recurring component of Arlington Valley toll.
2) AFFO includes a reduction of $2M from expected maintenance CAPEX.

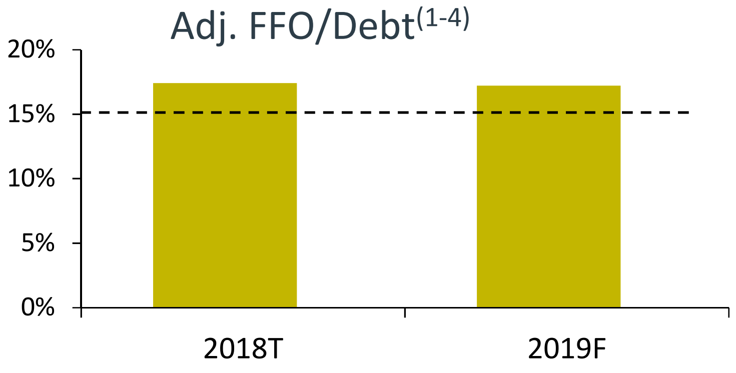
Financial strength

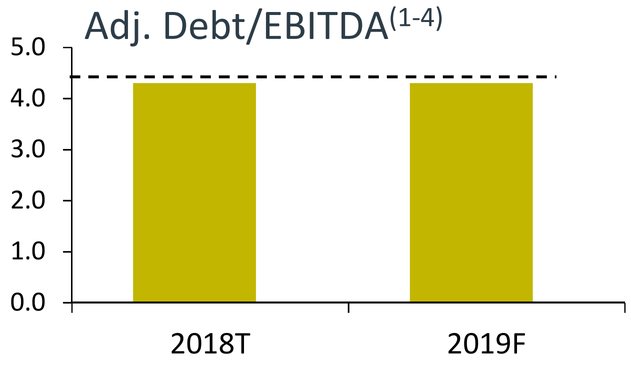
Strong balance sheet and commitment to investment grade credit ratings

Agency	Ratings	Outlook
S&P	BBB- / P-3	Stable
DBRS	BBB(low) / Pfd-3 (low)	Stable

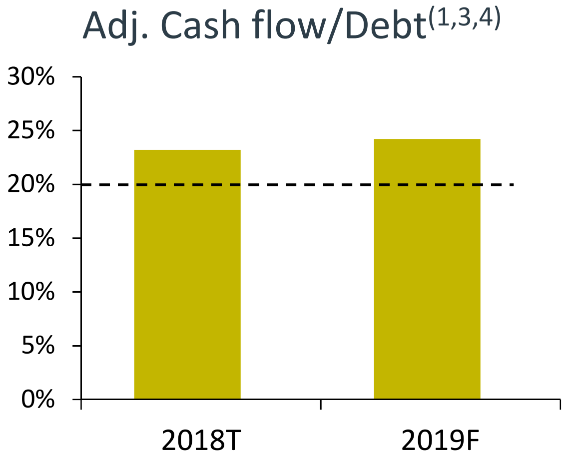
- Strong liquidity from cash flow from operations and $1B of committed credit facilities with 5-year tenor
- Strong financial metrics that exceed rating agency thresholds for existing ratings

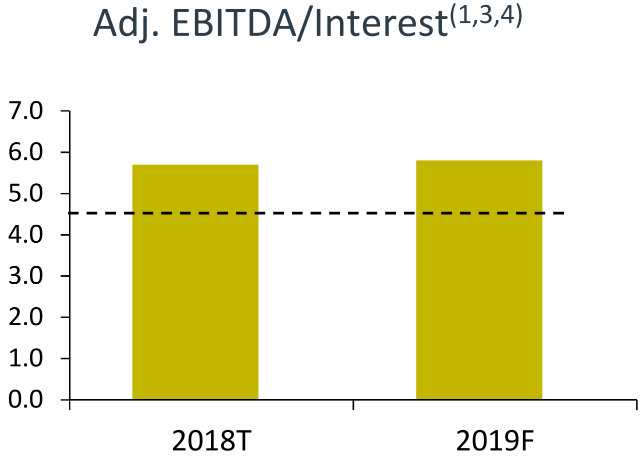
Within S&P financial criteria for current rating





Within DBRS financial criteria for current rating

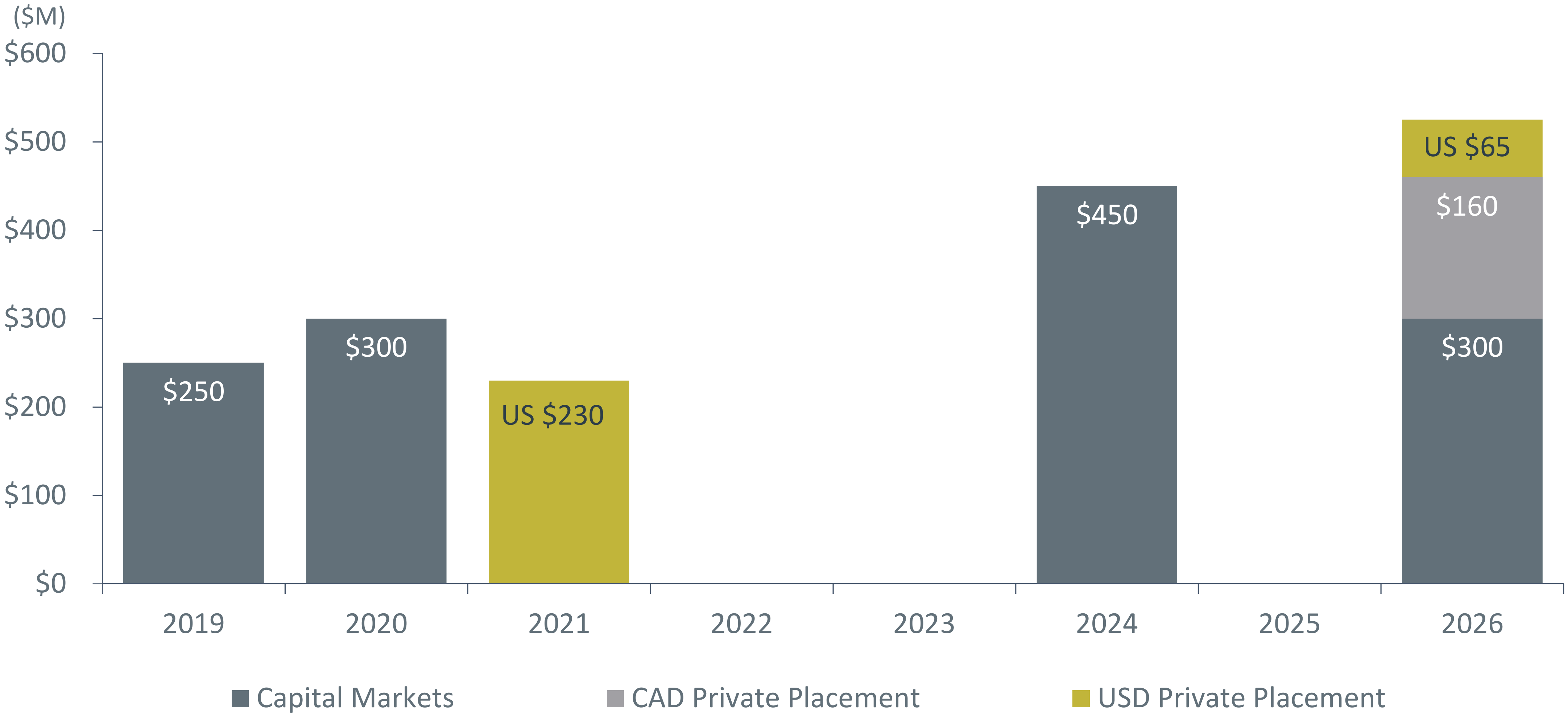




1) Cash flow and adjusted EBITDA amounts include off-coal compensation.
2) Based on S&P's weighted average ratings methodology.
3) 2018T means 2018 target and 2019F means 2019 forecast.
4) AFFO and Adjusted EBITDA are non-GAAP financial measures.

Debt maturity schedule[1]

Well spread-out debt maturities supported by long asset lives



1) Debt amounts as of January 16, 2019 excludes non recourse debt, credit facility debt, and tax-equity financing.

Summary of assets

	Alberta Contracted		Alberta Commercial						
	Genesee 1	Genesee 2	Genesee 3	Keephills 3	Joffre	Clover Bar Energy Centre	Clover Bar Landfill	Halkirk	Shepard Energy Centre
Capacity	430 MW	430 MW	516 MW	516 MW	480 MW	243 MW	5 MW	150 MW	800 MW
% owned / operated	100 / 100	100 / 100	50 / 100	50 / 0	40 / 0	100 / 100	100 / 100	100 / 100	50% / 0%
Location	Warburg	Warburg	Warburg	Wabamun	Joffre	Edmonton	Edmonton	Halkirk	Calgary
Fuel & equipment	Coal (50% ownership of coal mine)	Coal (50% ownership of coal mine)	Coal (50% ownership of coal mine)	Coal	Natural gas (Combined cycle cogeneration)	Natural gas (Two 100 MW GE LMS100 turbines; 43 MW GE LM6000)	Landfill gas	Vestas wind turbines	Natural gas (Combined cycle; two Mitsubishi G-Class natural gas turbines; steam turbine)
Commercial Operations	1994	1989	2005	2011	2000	Unit 1 in 2008; units 2&3 in 2009	2005	2012	2015
PPA Expiry	2020	2020	Merchant	Merchant	Primarily merchant with some revenues under contract	Merchant	Merchant	Large portion of total revenues from 20-year REC sale agreement / Merchant	20-year tolling agreement on 50% of Capital Power's output

Summary of assets

	Ontario & British Columbia Contracted							
	Island Generation	Quality Wind	Savona	150 Mile House	Port Dover & Nanticoke	Kingsbridge 1	York Energy	East Windsor
Capacity	275 MW	142 MW	5 MW	5 MW	105 MW	40 MW	400 MW	84 MW
% owned / operated	100 / 100	100 / 100	100 / 0	100 / 0	100 / 100	100 / 100	50 / 100	100 / 100
Location	Campbell River, BC	Tumbler Ridge, BC	BC	BC	Counties of Norfolk and Haldimand, Ontario	Goderich, Ontario	Township of King, Ontario	Windsor, Ontario
Fuel & equipment	Natural gas (Combined cycle - Alstom GT24B gas turbine & Alstom steam turbine)	Vestas wind turbines	Waste Heat	Waste Heat	Vestas wind turbines	Vestas wind turbines	Natural gas (Simple cycle; two Siemens SGT6-5000F combustion turbine generators)	Natural gas (Cogeneration; two GE LM 6000PD turbines)
Commercial Operations	2002	2012	2008	2008	2013	2006, 2001	2012	2009
PPA Expiry	2022	2037	2028	2028	2033	2026 / 2027	2032	2029

Summary of assets

	U.S. Contracted							
	Roxboro	Southport	Macho Springs	Beaufort Solar	Decatur	Bloom Wind	Arlington Valley	New Frontier Wind
Capacity	46 MW	88 MW	50 MW	15 MW	795 MW	178 MW	580 MW	99 MW
% owned / operated	100 / 100	100 / 100	100 / 100	100 (sale & leaseback) / 100	100 / 100	100 / 100	100 / 100	100 / 100
Location	Roxboro, North Carolina	Southport, North Carolina	Luna County, New Mexico	Beaufort County, North Carolina	Decatur, Alabama	Ford and Clark Counties, Kansas	Phoenix, Arizona	McHenry County, North Dakota
Fuel & equipment	Mixture of wood residuals, tire-derived fuel and coal	Mixture of wood residuals, tire-derived fuel and coal	Vestas wind turbines	Solar	Natural gas (Combined cycle; 3X1 CCGT Siemens 501FD2 combustion turbines)	Vestas wind turbines	Natural gas (two GE 7FA combustion turbines)	Vestas wind tubines
Commercial Operations	1987	1987	2011	2015	2002	2017	2002	2018
PPA Expiry	2021	2021	2031	2030	2022	2027	2025	2030

Projects under development / construction

	Alberta Commercial	Alberta Contracted	U.S. Contracted
	Genesee 4&5	**Whitla Wind (Phase I)**	**Cardinal Point Wind**
Capacity	Up to 1,060 MW	201.6 MW	150 MW
% owned / operated	50 / 100	100 / 100	100 / 100
Location	Warburg	Medicine Hat	McDonough / Warren Counties, Illinois
Fuel & equipment	Combined-cycle natural gas (Mitsubishi J-Class natural gas turbine technology)	Wind	Wind (technology to be determined)
Commercial Operations	To be determined	Q4 2019	March 2020
PPA Expiry	8-year tolling arrangement with ENMAX for 50% of Capital Power's share of the output.	20-year contract-for-differences structured contract	12-year fixed price contract
Expected Capital Cost	$1.4B for total project (excluding interest during construction and refundable transmission system contribution payments)	$315M to $325M	$289M to $301M

Non-GAAP financial measures

The Company uses (i) earnings before net finance expense, income tax expense, depreciation and amortization, impairments, foreign exchange gains or losses, finance expense and depreciation expense from its joint venture interests, gains or losses on disposals and unrealized changes in fair value of commodity derivatives and emission credits (adjusted EBITDA), (ii) AFFO, (iii) AFFO per share (iv) normalized earnings attributable to common shareholders, and (v) normalized earnings per share as financial performance measures.

These terms are not defined financial measures according to GAAP and do not have standardized meanings prescribed by GAAP and, therefore, are unlikely to be comparable to similar measures used by other enterprises. These measures should not be considered alternatives to net income, net income attributable to shareholders of the Company, net cash flows from operating activities or other measures of financial performance calculated in accordance with GAAP. Rather, these measures are provided to complement GAAP measures in the analysis of the Company’s results of operations from management’s perspective.

Commencing with the Company’s March 31, 2019 quarter-end, adjusted EBITDA will exclude unrealized changes in fair value of commodity derivatives and emission credits which were previously included in adjusted EBITDA. This change has been made to better align the Company’s measure of adjusted EBITDA with its other non-GAAP measures, as both the AFFO and the normalized earnings per share measures exclude the impacts of unrealized changes in fair value of commodity derivatives and emission credits. This change will also result in period over period adjusted EBITDA being more comparable.

Forward-looking information

Forward-looking information or statements in this presentation and in responses to questions are provided to inform the Company's shareholders and potential investors about management's assessment of Capital Power's future plans and operations. This information may not be appropriate for other purposes. The forward-looking information is generally identified by words such as will, anticipate, believe, plan, intend, target, and expect or similar words that suggest future outcomes.

Material forward-looking information includes disclosures regarding: (i) 2019 plant availability, (ii) 2019 sustaining capital expenditures, (iii) securing of new development projects, (iv) future additional committed capital for growth, (v) expected completion dates and costs compared to budget for ongoing development projects, (vi) future AFFO, AFFO per share and expected increases in those metrics, (vii) 2019 adjusted EBITDA, and (viii) future dividend growth.

These statements are based on certain assumptions and analyses made by the Company in light of its experience and perception of historical trends, current conditions, expected future developments and other factors it believes are appropriate. The material factors and assumptions used to develop these forward-looking statements relate to: (i) electricity, other energy and carbon prices, (ii) anticipated facility performance, (iii) business prospects (including potential re-contracting opportunities) and opportunities including expected growth and capital projects, (iv) status of and impact of policy, legislation and regulations, and (v) effective tax rates.

Whether actual results, performance or achievements will conform to the Company's expectations and predictions is subject to a number of known and unknown risks and uncertainties which could cause actual results and experience to differ materially from the Company's expectations. Such material risks and uncertainties are: (i) changes in electricity prices in markets in which the Company operates, (ii) changes in energy commodity market prices and use of derivatives, (iii) regulatory and political environments including changes to environmental, financial reporting, market structure and tax legislation, (iv) facility availability and performance including maintenance of equipment, (v) ability to fund current and future capital and working capital needs, (vi) developments including timing and costs of regulatory approvals and construction, (vii) changes in market prices and availability of fuel, and (viii) changes in general economic and competitive conditions. See Risks and Risk Management in the Company's Management's Discussion and Analysis for the year ended December 31, 2017, prepared as of February 15, 2018, for further discussion of these and other risks.

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

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