Investor Day

Powered for Tomorrow

December 5, 2019

Capital Power

RESPONSIBLE ENERGY
FOR TOMORROW

Forward-looking Information
Cautionary Statement

Certain information in today's presentations and in responses to questions contains forward-looking information. Actual results could differ materially from conclusions, forecasts or projections in the forward-looking information, and certain material factors or assumptions were applied in drawing conclusions or making forecasts or projections as reflected in the forward-looking information.

Please refer to the forward-looking information slides at the end of the presentation and in our disclosure documents filed with securities regulators on SEDAR, which contain additional information about the material factors and risks that could cause actual results to differ materially from the conclusions, forecasts or projections in the forward-looking information and the material factors or assumptions that were applied in drawing a conclusion or making a forecast or projection as reflected in the forward-looking information.

The forward-looking information contained in today's presentations is provided for the purpose of providing information about management's current expectations and plans relating to the future. Such information may not be appropriate for other purposes.

Executive Leadership Team

Brian Vaasjo
President and Chief Executive Officer

Kate Chisholm
SVP, Chief Legal and Sustainability Officer

Bryan DeNeve
SVP, Finance and Chief Financial Officer

Jacquie Pylypiuk
VP, Human Resources

Darcy Trufyn
SVP, Operations, Engineering and Construction

Mark Zimmerman
SVP, Corporate Development and Commercial Services

Agenda

Time	Topic	Presenter
9:00 am	Introduction	Randy Mah
	Powered for Tomorrow	Brian Vaasjo
	Maximizing Asset Value	Darcy Trufyn
	Delivering Growth	Mark Zimmerman
	Financing Growth	Bryan DeNeve
10:20 am	*Break*	
	Powering a Sustainable Future	Kate Chisholm
	2020 Corporate Priorities	Brian Vaasjo
	Q&A	
11:15 am	C2CNT (carbon to carbon nanotubes) Q&A	Brian Vaasjo Dr. Stuart Licht
12:15 pm	Lunch	

Powered for Tomorrow

Brian Vaasjo
President & CEO

- Creating shareholder value from strategy
- Delivering on our focus for past 6 years
- Well-positioned to continue shareholder value creation

Delivering year-over-year

Our Focus	5 years (2014-2018)
AFFO per share	Compounded annual growth of 14%
Renewables / Wind	Doubled wind facilities to 8 with 854 MW
Natural gas assets	2,800 MW generation capacity Added 5 facilities – 4 from acquisitions
Contracted EBITDA	Increased from 58% to 82%
Diversification	Adjusted EBITDA from Alberta decreased from 76% to 56%

~3,500 MWs from 12 facilities added since 2013

Delivering year-over-year

Our Focus	5 years (2014-2018)	6 years (2014-2019)
AFFO per share	Compounded annual growth of 14%	Compounded annual growth of 13%
Renewables / Wind	Doubled wind facilities to 8 with 854 MW	9 facilities with 966 MW
Natural gas assets	2,800 MW generation capacity Added 5 facilities – 4 from acquisitions	3,600 MW generation capacity 6 facilities – 5 from acquisitions
Contracted EBITDA	Increased from 58% to 82%	58% to 76%
Diversification	Adjusted EBITDA from Alberta decreased from 76% to 56%	76% to 53%

~3,500 MWs from 12 facilities added since 2013

How investors should think about Capital Power

Growth-oriented North American power producer

Delivering short and long-term value

Anticipating the future – strategy and tactics are evolving

Credible, Competent, Creative & Competitive

Operational excellence

Then

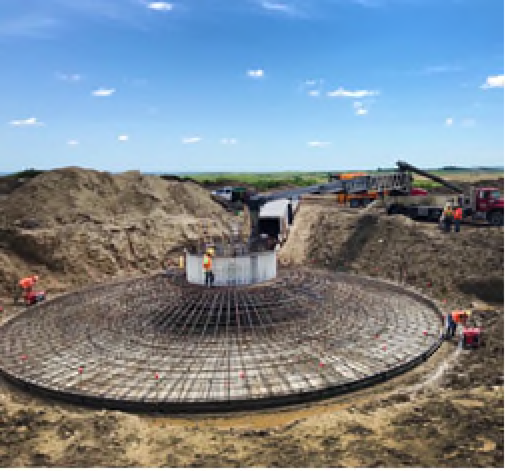
- Completion of 6 projects on-time and on-budget
- Moving from 3rd quartile benchmarking
- Improving performance / reducing cost / reducing risk
- Genesee Performance Standard (GPS): 11% reduction in emissions

Now

- Top quartile moving to best in North America
- GPS: 12% plus 100% natural gas capability by 2021
- 5 more projects on-time and on-budget
- Competitive advantage

Tomorrow

- Adding real value to existing and new assets
- OPs2030
- Ongoing innovation



Growth

Then

- Contracted cash flow, dividends and credit rating
- Natural gas growth
- Renewables growth

Now

- Reached our goals of 2/3 contracted, almost $5 billion invested
- Natural gas success
- Renewable facilities success

Tomorrow

- Maintain 2/3 contracted
- Wind, solar, and storage
- Natural gas technology and CCUS

ESG

Environmental responsibility

- Leader in carbon mitigation
- Setting targets and executing strategy

Social responsibility

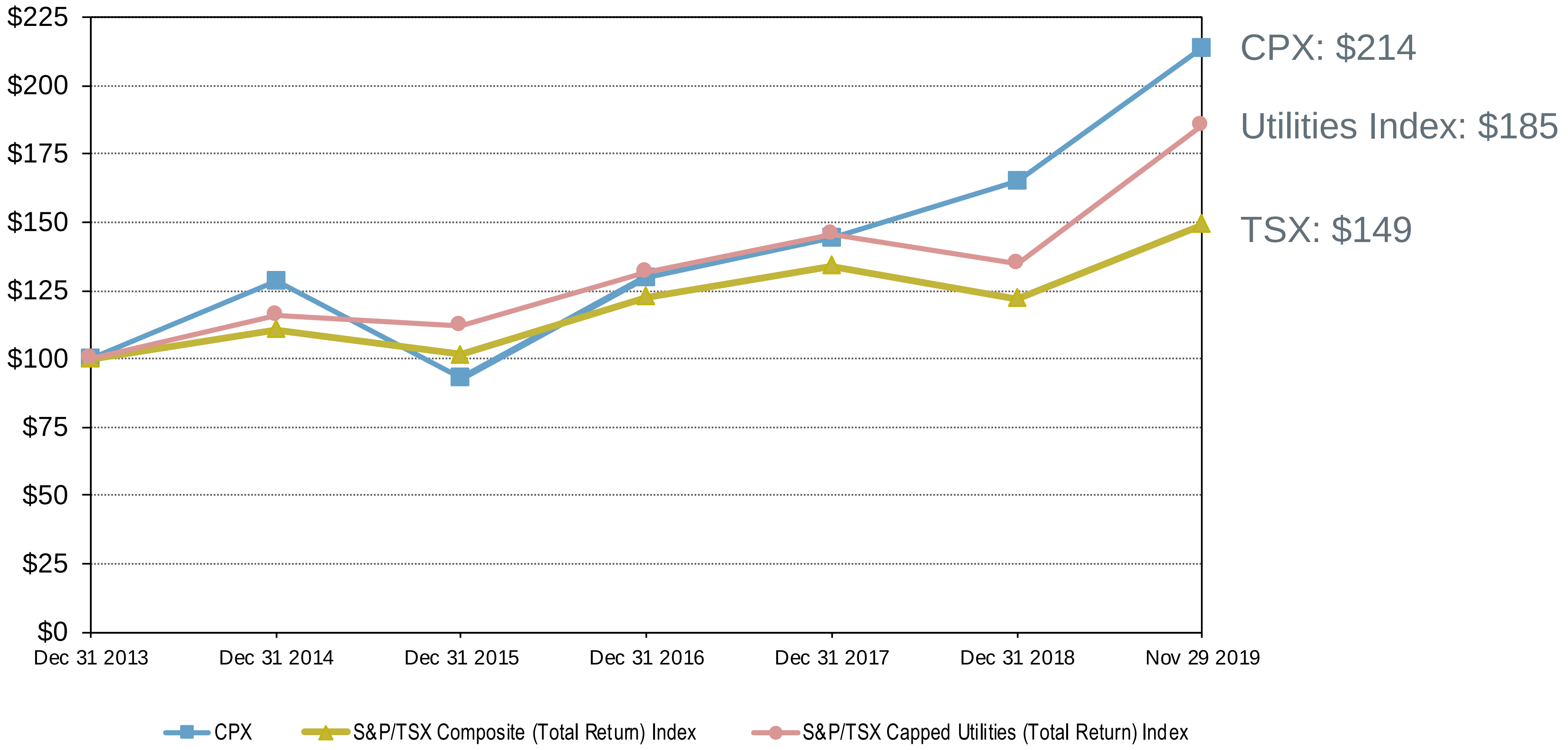
- Safety – CEA safety recognition
- Diversity – Executive 33% women, Board 40% women

Governance

- Board outreach
- 20% performance measures ESG related
- Integrated reporting in February 2020

Executing strategy is creating shareholder value

CPX has delivered an average annual total shareholder return of ~19% since 2013(1)



1) Assumes $100 invested in CPX on Dec 31, 2013 and reinvestment of dividends.

Maximizing Asset Value

Darcy Trufyn

Senior Vice President - Operations, Engineering and Construction

- Sustained excellence in Operations
- Creating asset value
- Continued development success

Sustained excellence in Operations

Fleet performance

- Outstanding overall availability = 95.5% average since 2014
- Renewables = 97%+ availability
- Benchmarking[1] results show thermal fleet availability rate in the top decile among peers

Maintenance

- Proactive maintenance culture
- Disciplined approach to long term maintenance

Risk

- Actively managed and mitigated
- Claim free on insurance for 6 years

Safety

- Canadian Electricity Association (CEA) President's Award for outstanding safety performance for the past 6 years

(1) 2015-19 1H performance against peers (similar equipment type, capacity rating, age, and capacity factor) based on NERC GADS 2014-2018 data

Adding value to acquired assets

Long term ownership philosophy

- Optimize asset performance and costs
- Mitigate and reduce risks

Phase 1: Integrate

- Common systems, standards and processes
- Establish operating parameters and requirements
- Centralized operations and technical support
- Establish the Capital Power “culture”

Phase 2: Validate and implement

- Ensure power island equipment is as represented
- Identify any gaps/deficiencies and address
- Achieve operating to the business case parameters

Phase 3: Identify improvements and optimize

- Operational
- Technical

Actively operate and proactively maintain

Optimize acquisition asset value

Attain objectives

- Availability and start reliability at or better than business plan
- O&M spend at or below business plan

Value added

- Decatur
  - Additional 100 MW by 2021
  - Improved heat rate
- York Energy
  - Additional 14 MW Q4/2019
  - Extend combustion turbine wear life
- Arlington
  - 20%+ water discharge reduction
  - Increase capacity factor (Q2/20)
  - Energy storage system
- All – reduce planned outage durations

OPs2030

CP has a track record of successfully increasing asset value

- 5-year Reliability and Optimization Program (2013-17)
  - $50M per annum EBITDA improvement
- 5-year GPS program at a total cost of $45M
  - Forecast $38M per annum savings by 2022

OPs2030 will create the sustainable plant of the future

- Optimize facilities through the use of technology and innovation
- 10-year program expected to create tens of millions of recurring new value per annum through modest capex
- Three focus areas
  - Performance
  - Production
  - Operations and maintenance costs

OPs2030

- Annual objectives incorporated into Long Term Plan
- Early focus: maximize value of existing processes, technology, and tools
- Later years: begin incorporating advanced technology

Short Term (1-3 years)

- Remote monitoring control rooms
- Plant specific opportunities
- Asset performance management
- Plant upgrades

Long Term (4-10 years)

- Condition-based monitoring
- Predictalytics
- Artificial Intelligence
- Machine learning
- 3-D printing versus inventory
- Robotic maintenance

OPs2030 – Renewables

Remote Operations and Control Center (ROCC)

- ROCC on track for end of 2019 completion; already yielding results
- ROCC Phase II expands alarm monitoring to improve response times, maximize revenues
- Data based decision making and OEM accountability
- In-house wind data expert, developing analytics expertise
- Performance anomaly identification, correction and optimization
- Incremental value creation to new development and acquisitions

Remote Monitoring & Surveillance

Optimization & Performance Management

Contractual and Regulatory Obligations

Transformation of Genesee

- **GPS - industry leading carbon reduction program**
  - CO_2 intensity reduced 12% by 2021
  - Intensity levels of Subcritical G1&2 below that of Supercritical units
  - Includes Supercritical G3 turbine upgrade
  - Heat rate/CO_2 improvements flow through to gas
- **Conversion of all 3 units to 100% dual fuel capability by 2021**
  - Maximize real-time fuel mix flexibility and further reduce carbon footprint
  - Total capital cost of converting all three units is $70M
  - All conversions completed during regular maintenance outages
- **Increased output of G3**
  - Turbine upgrade increases net output by 7 MW to 473 MW
- **Rationalizing planned outage cycles**
  - Lengthen module overhaul durations
  - Extend outage cycles as we increase gas utilization

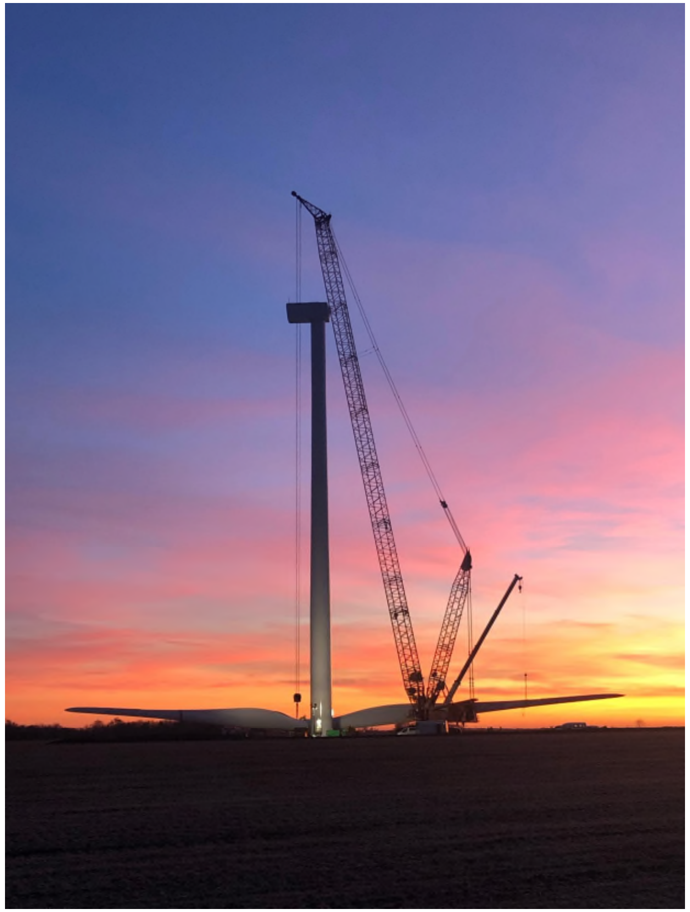
Continued success in development

Whitla Wind Phase 1

- 202 MW: 56 Vestas V136 – 3.6 MW turbines
- Located near Medicine Hat, Alberta
- 20-year PPA
- COD Dec 1 2019

Completed on-budget and early

Continued success in development



Cardinal Point Wind

- 150 MW – 60 GE 2.5 MW turbines
- Located near Macomb, Illinois
- 12-year fixed price power contract, 15-year fixed price REC contract
- COD planned end of Q1 2020
- Expected to be on budget

Cardinal Point will be another successful project!

Highlights

- Operations continues to achieve high availability from all assets
- New value is being created at acquired assets
- Significant, long-lasting incremental value will be created through OPs2030
- Transformation of Genesee is well underway
- Successful track record for delivering wind projects on-time and on-budget continues

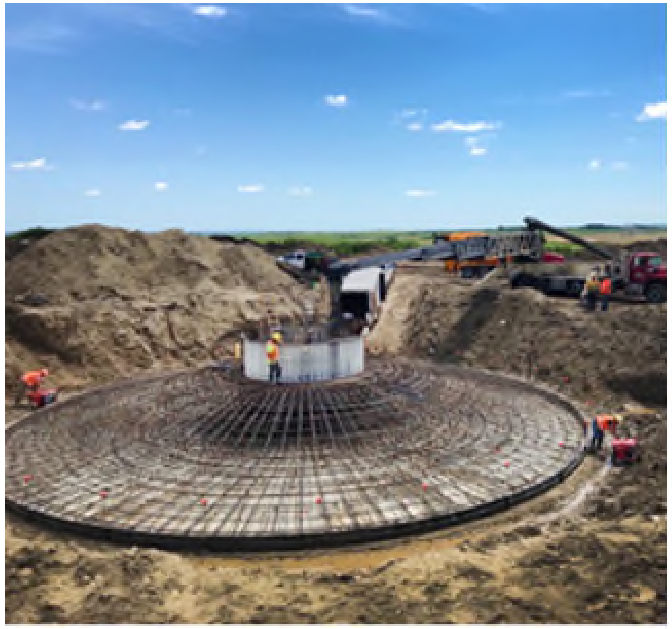
Capital Power is delivering responsible energy for tomorrow!

Delivering Growth

Mark Zimmerman
Senior Vice President - Corporate Development and Commercial Services

- Advantaged portfolio
- High performance people
- Robust opportunity

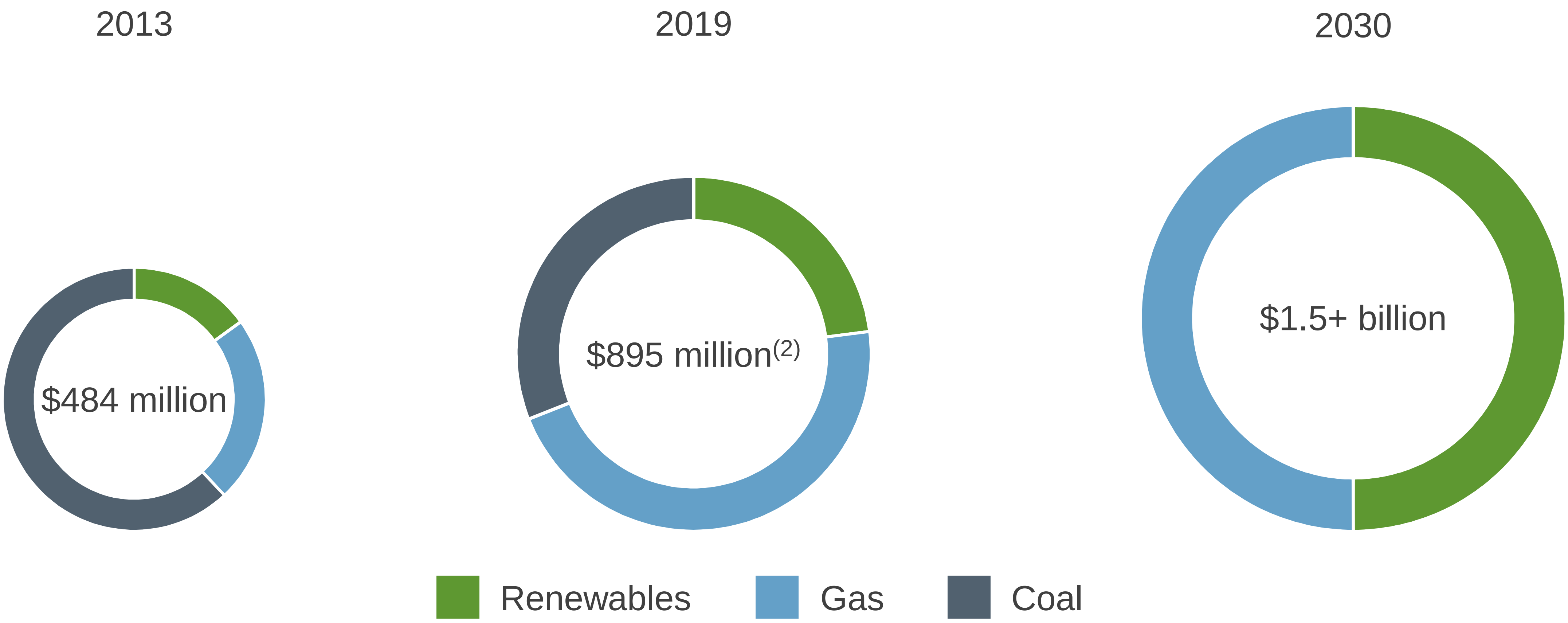
Delivering growth
A sustainable approach to the future

Advantaged portfolio	High performance people	Robust opportunity
		

Disciplined strategy plus advantaged assets = steady growth in any environment

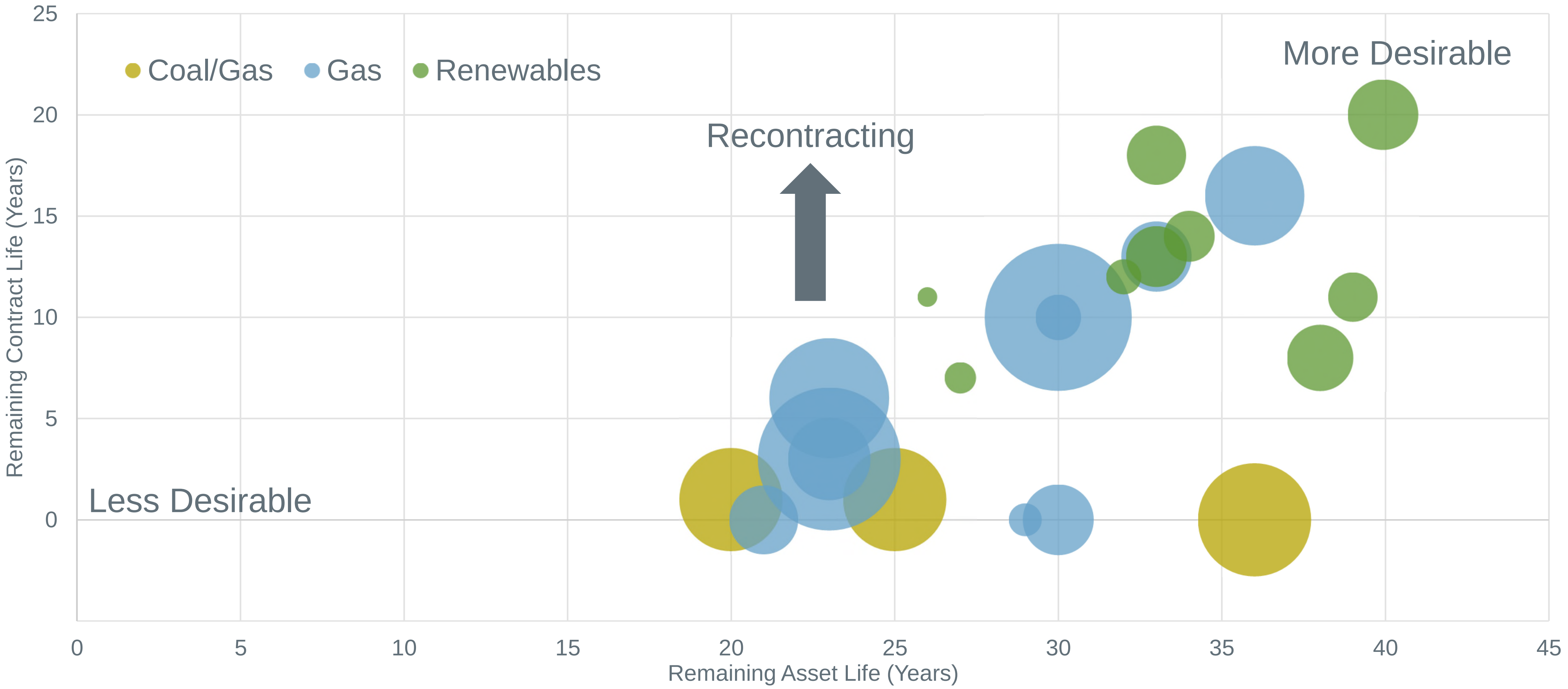
Adjusted EBITDA[1] growth

Proud of the past, confident in the future



1).Adjusted EBITDA includes contributions of trading activity attributable to the plants' production. Excludes mark to market changes
2) Midpoint of 2019 guidance.

Young, contracted, reliable and diverse
Advantaged portfolio



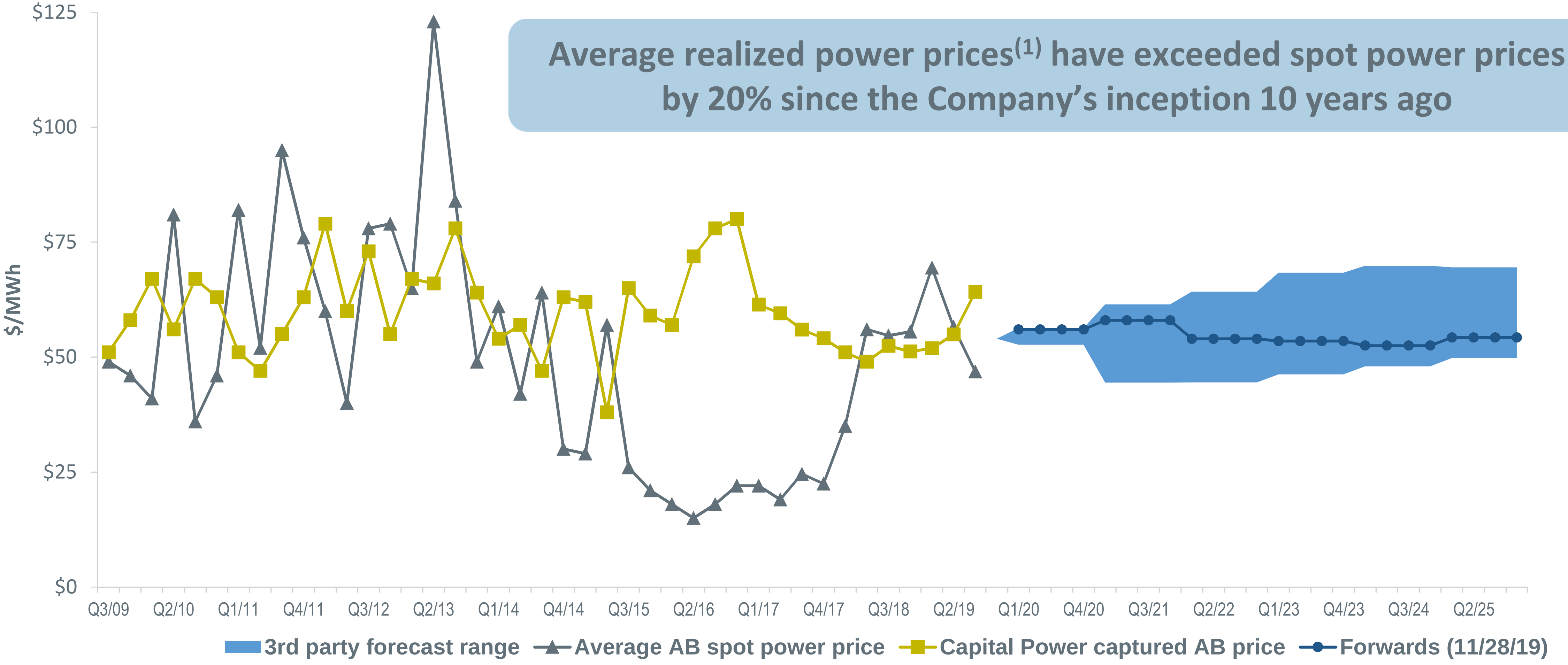
1) Circle sizes based on relative ownership of facility capacities.

Strategically positioned
Enviable portfolio

	Alberta	Ontario	US South	US Midwest
Load Growth	✓	✓	✓	↔
Retirements	✓	✓	✓	✓
Renewables Penetration	✓	✓	✓	✓
Opportunities to Contract	✓	✓	✓	✓

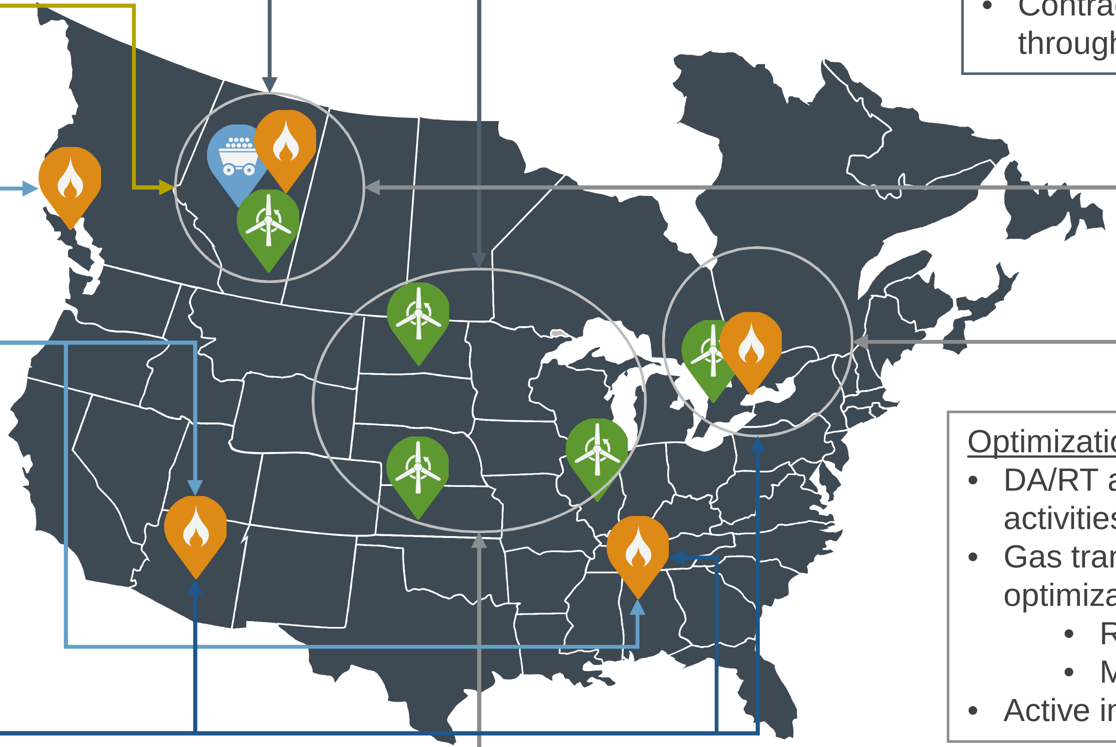
Well positioned in the Alberta market

Enviable portfolio



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.

Superior optimization and execution
High performance people



Alberta Franchise
- Strong historical trading performance
- Dual fuel and conversion optionality
- 20-year contract at Whitla 1
- Synergies with Whitla 2

Commercial Management
- Heat-rate call option in Desert South West
- Re-contracting efforts throughout North America
- Heat rate improvements at existing sites

M&A Capability
- Disciplined approach to M&A processes
- Track record of quick integration
- Preferred buyer in many instances
- Will crystalize value and redeploy proceeds when prudent to do so

Origination Presence
- Environmental commodities throughout North America
- Power and gas hedging in Alberta
- Contracting wind developments throughout North America

Optimization and Synergies
- DA/RT and other optimization activities in the Midwest
- Gas transport/storage asset optimization in Alberta and Ontario
  - Re-directing transport
  - Monetizing storage optionality
- Active in ancillary services markets

Disciplined deployment of capital
Recent gas acquisitions

Facility	Contract Expiry	Market Fundamentals	AFFO Accretion[1]	2018 Assessment	Current Assessment
East Windsor	2029	Bullish		↑	↑
York	2032	Bullish	$0.25/shr	↓	↔
BC Waste Heat	2029	N/A		↔	↓
Decatur	2022	Bullish	$0.18/shr	↑	↑
Arlington Valley	2025	Bullish	$0.22/shr	↔	↔
Goreway	2029	Bullish	$0.27/shr	N/A	↔

(1) Projections from respective Capital Power news releases.

Disciplined deployment of capital
Greenfield developments

Facility	Contract Expiry	Schedule	Budget	Capex	Current Assessment
Halkirk	2032	Early	Under	$323M	↔
Quality Wind	2037	On Time	Under	$413M	↓
Port Dover Nanticoke	2033	On Time	Under	$288M	↔
Beaufort	2031	On Time	Under	$38M	↑
Bloom	2027	Early	Under	$314M	↔
New Frontier	2030	On Time	Under	$176M	↑
Whitla Wind 1	2039	Early	On Budget	~$325M	↔

Good recontracting potential at Decatur

High performance people

~$60M USD total turbine upgrade (2019-21)

~100 MW of additional capacity

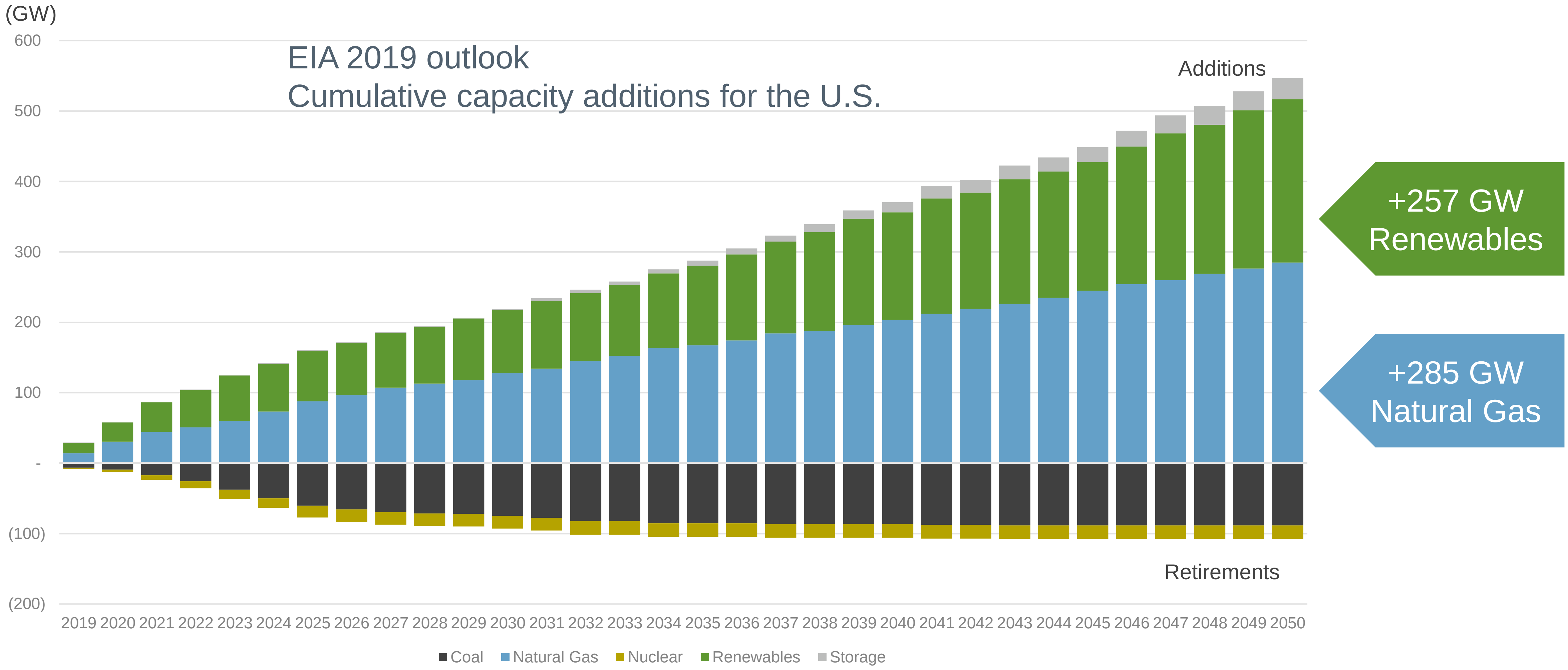
Fuel efficiency improvements

Whitla Wind 2
Robust opportunity

- ~97 MW expansion project
- Construction in 2021, $165M budget
- Synergies with Phase 1

Cumulative capacity additions[1,2,3]

Generating capacity outlook



1) EIA 2019 Outlook, Electrical Generating Capacity, Reference Case
2) Natural gas includes Combined Cycle and Combustion Turbine categories.
3) Storage includes Pumped, Diurnal, and Fuel Cells categories.

Gas is here for the long term

Highlighting the opportunity

1. Coal and nuclear retirements
2. Proliferation of renewables
3. Low gas prices and high barriers to entry

"The U.S. electricity system continues to replace aging coal and nuclear with cheaper renewables and gas, which become the country's premier source of power generation"

Bloomberg New Energy Finance

Positioned for the future
Robust opportunity

Greenfield
Acquire & Develop

M&A Activity
$10-$30 billion annual opportunity[1]

Complimentary Tech
CCU, Solar, Storage

1) Based on historical precedent transactions.

2020 Growth targets

- $500 million committed capital for growth
- Expect one renewable development project
- Potential for strategically aligned acquisitions

Responsible energy for tomorrow

A sustainable approach to the future

Renewables growth	Greater certainty	Average contract life	Geographical diversification	AFFO per share CAGR
100% Gas, renewables, and new tech	**>67%** Contracted	**>10** Years	**<40%** Alberta	**~9%** CAGR

Aspirations for 2030

Financing Growth

Bryan DeNeve
Senior Vice President, Finance and
Chief Financial Officer

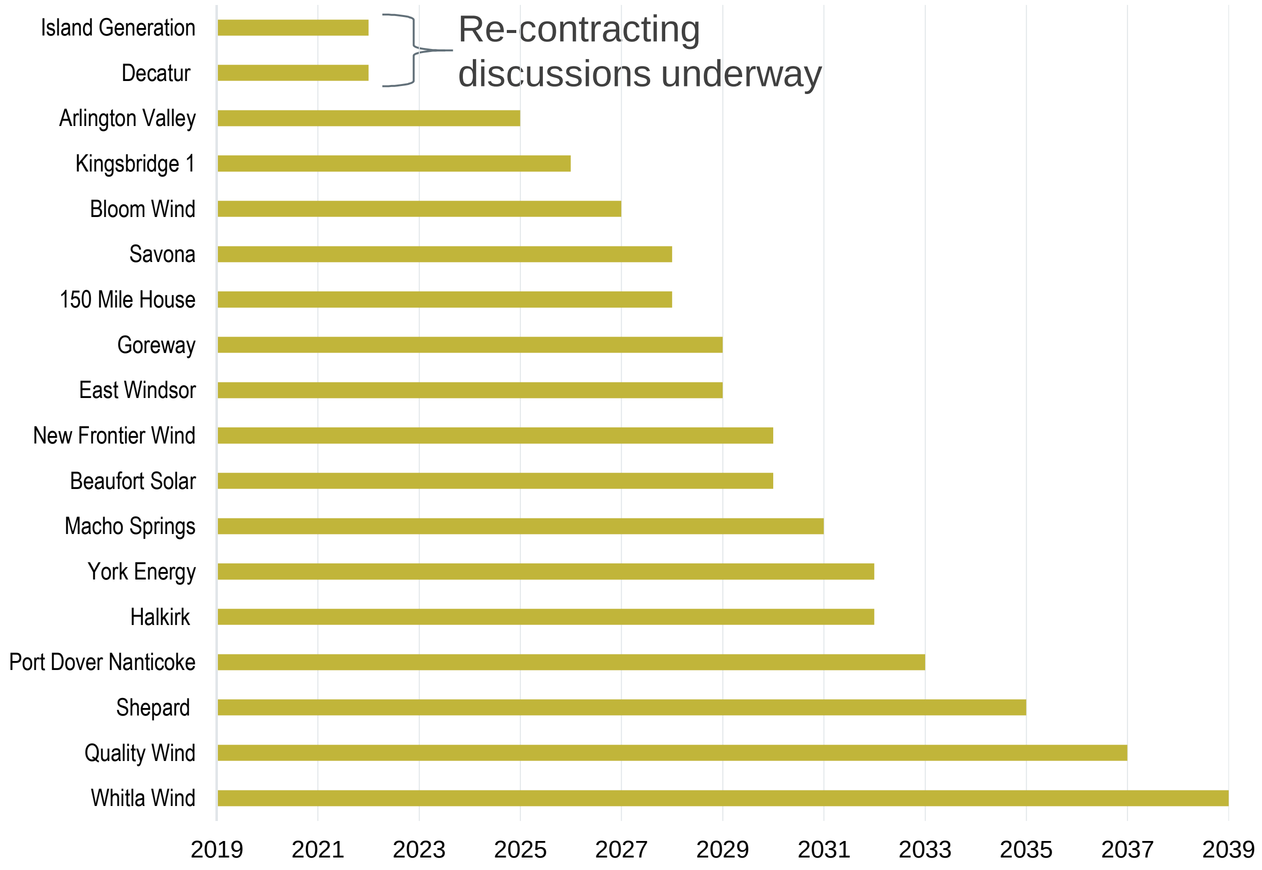
- AFFO growth supports dividend growth
- Ability to fund $500M growth per year without accessing equity markets
- Maintain investment grade credit rating

Overview of financial strategy

Deliver annual dividend growth	▪ Annual dividend growth within long term AFFO payout ratio target of 45% to 55% ▪ Provide dividend stability through contracted cash flow profile
Maintain investment grade credit rating	▪ Maintain competitive cost of capital ▪ Ensure access to capital markets through business cycles ▪ Provides stability to the dividend
Manage financing risk	▪ Properly laddered debt maturities ▪ Effective management of interest rate, foreign exchange and counterparty risk
Ensure economic discipline in growth	▪ Adherence to target return expectations ▪ Supports target AFFO per share growth

Re-contracting of near term PPAs

PPA Expiries



Facility	PPA expiry & counterparty credit rating	Re-contracting Outlook
Island Generation (BC)	2022 (A-rated Entity)	▪ Provides critical back-up and reliability services to Vancouver Island
Decatur (Alabama)	2022 (A-rated Entity)	▪ Strong history of re-contracting ▪ Need for capacity due to supply retirements and load growth
Arlington Valley (Arizona)	2025 (A-rated Entity)	▪ Well-positioned asset required for transmission ▪ Attractive Desert Southwest market with growing demand and low investment risk environment

Prudent capital allocation

Dividend growth

Growth opportunities

- Existing asset improvements
- Development projects
- Acquisitions

Share buybacks & debt repayment

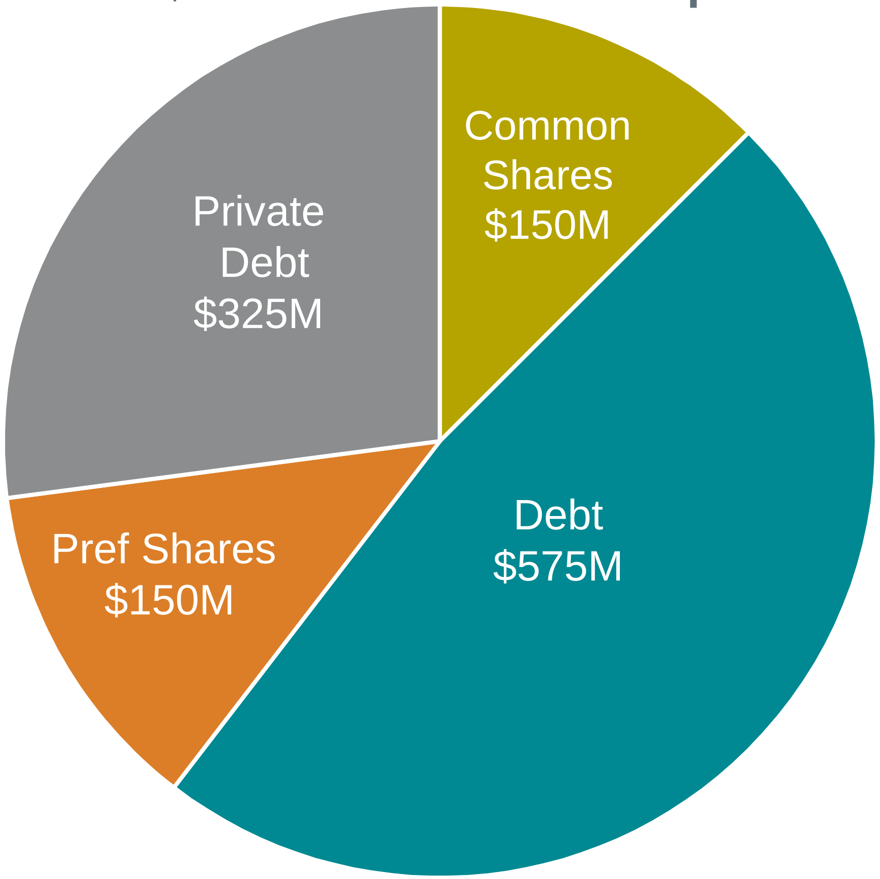
- Balanced focus between dividend growth and growth opportunities
- Dividend growth provides certainty in returns for investors
- Share buybacks are considered during periods of limited growth opportunities
- Purchased 2.5 million shares at a total cost of $74M in 2019 under NCIB

Efficient capital allocation leading to shareholder value

Capitalizing on attractive capital market opportunities

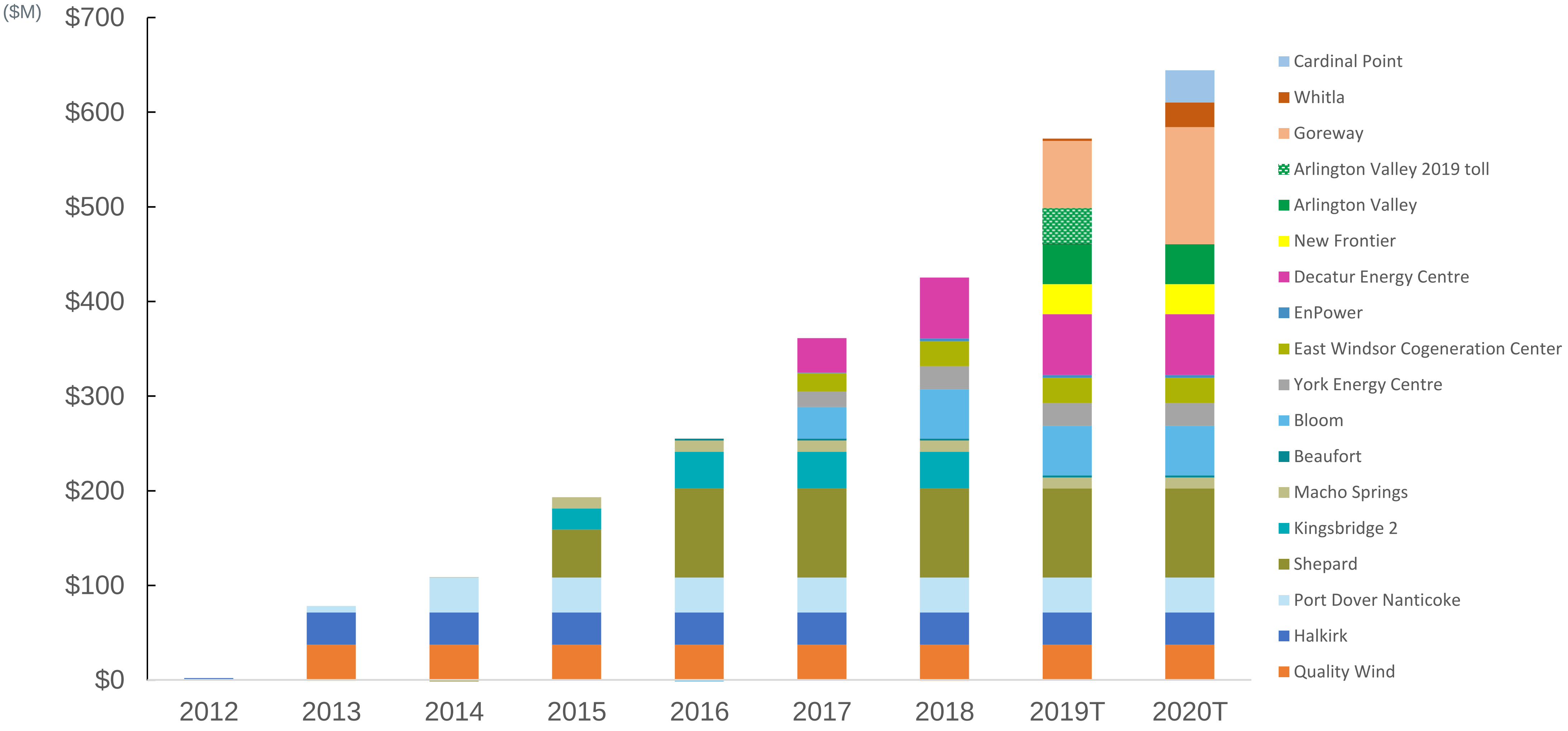
- Raised $1.2B in gross proceeds from recent financings in 2019
- $150M common share issuance used to finance the Goreway Power Station
- $150M in preferred shares
  - Cumulative Minimum Rate Reset with a 5.75% yield
- $325M private placement with 10, 12, and 15 year terms
- $575M medium term notes
  - $300M 7-year term at 4.986%
  - $275M 10-year term at 4.424%

$1.2 billion raised in capital



Committed to maintaining investment grade credit ratings while strengthening financing capabilities to fund growth

EBITDA from new assets supports dividend growth(1-5)

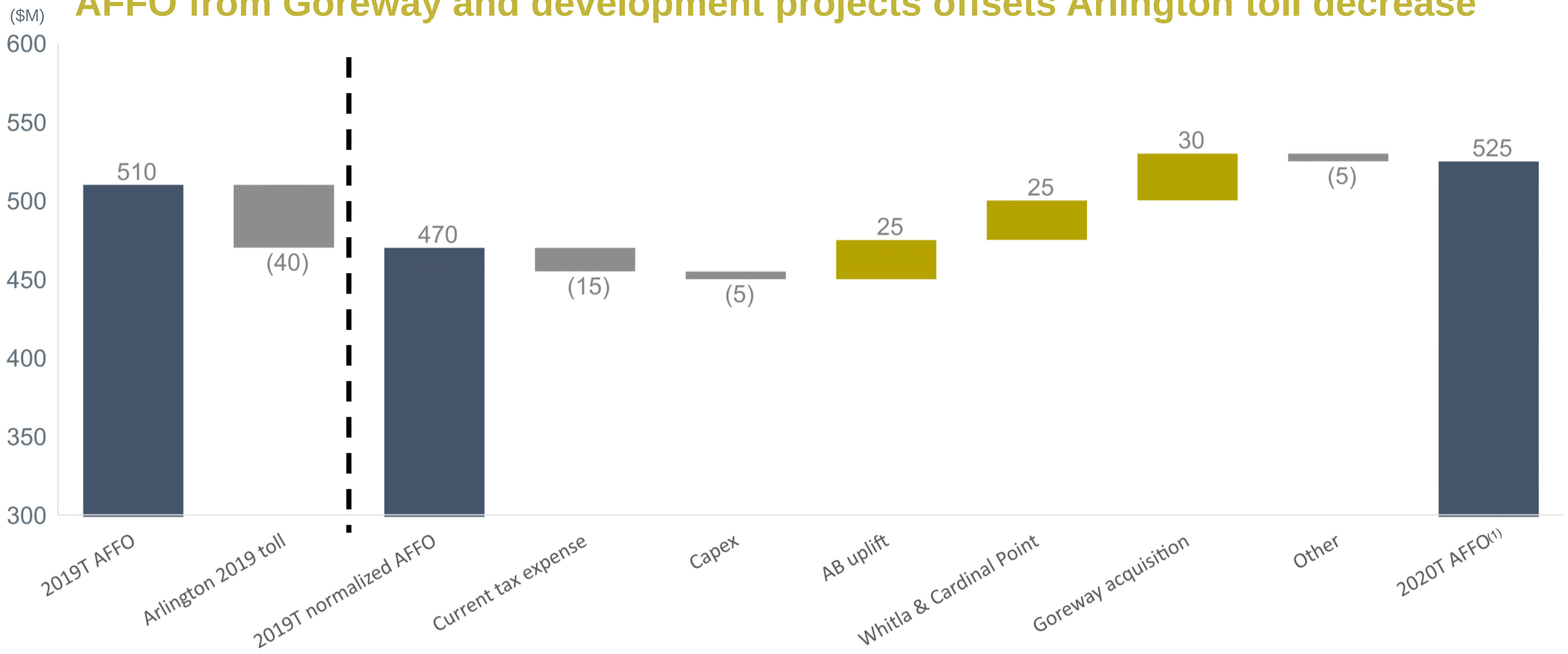


Growth capex since 2012 averages ~$650M(5) per annum

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. 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.

AFFO for 2020

AFFO from Goreway and development projects offsets Arlington toll decrease

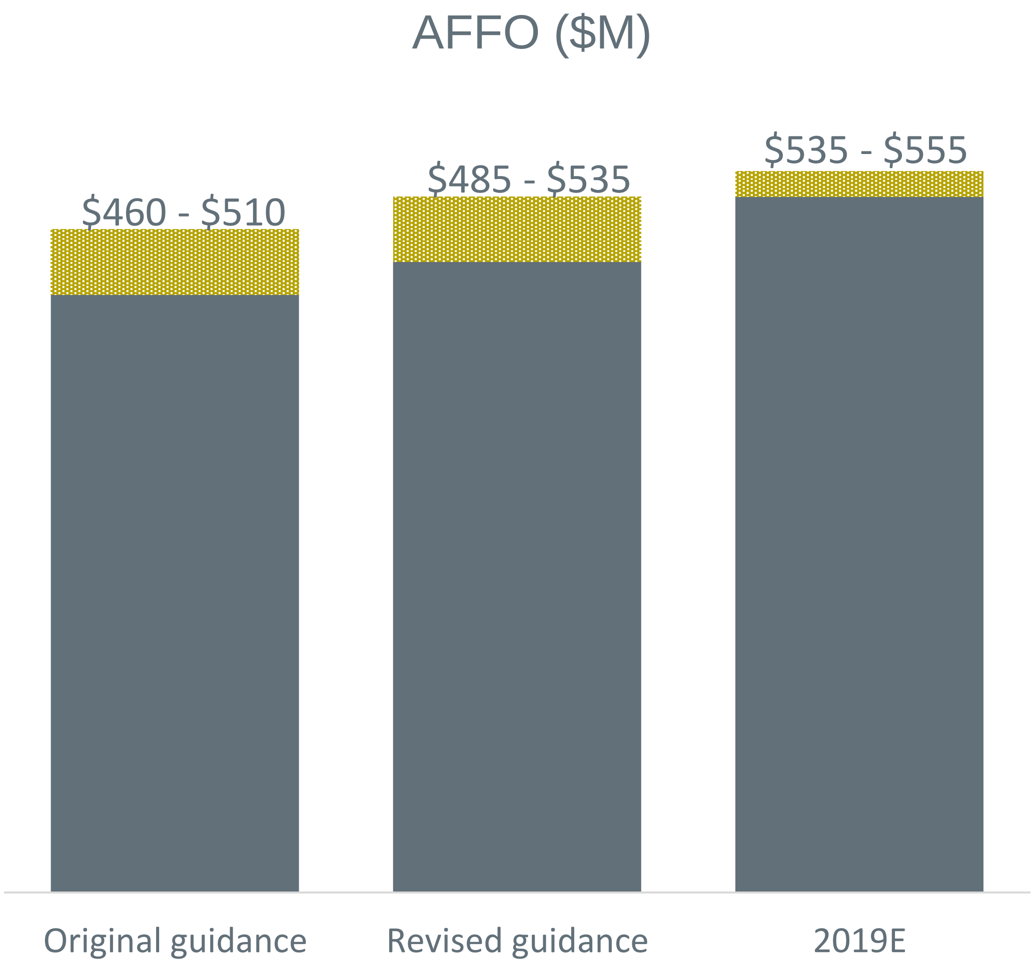


12% year-over-year AFFO growth after normalizing for 2019 Arlington toll

(1) 2020 AFFO represents midpoint of $500 - $550M guidance range

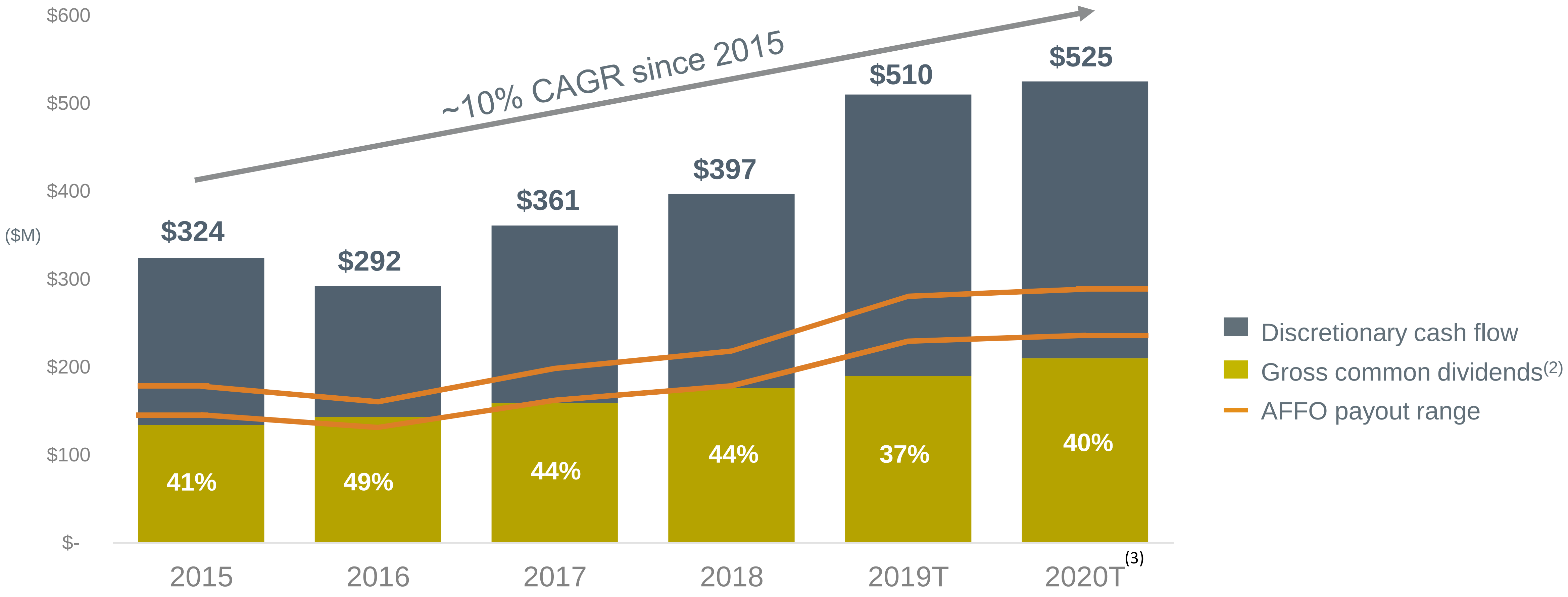
2019 AFFO guidance

- Revised guidance reflects acquisition of Goreway Power in June 2019
- Current AFFO outlook exceeds revised guidance



AFFO[1] continues to support dividend growth

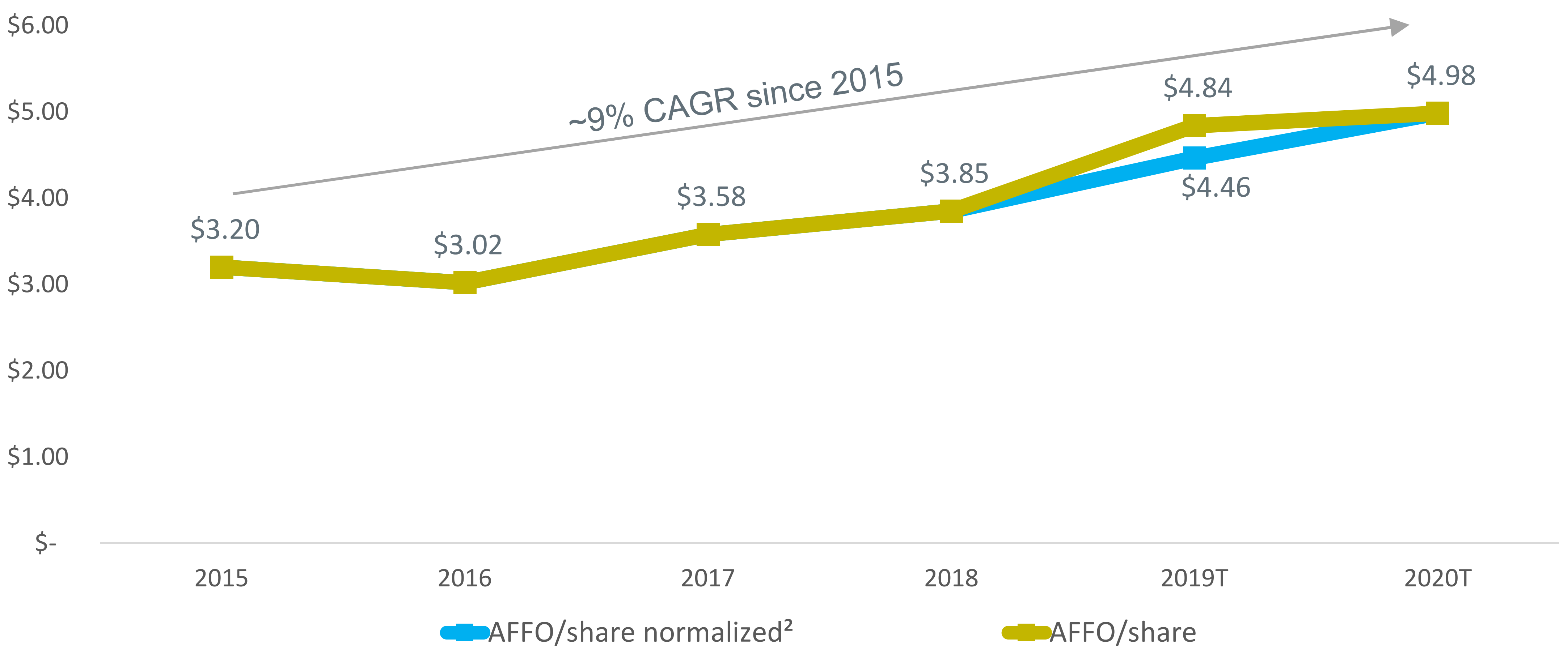
Discretionary cash flow is forecast to be $315M in 2020



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

1) Historical AFFO figures restated using Adjusted AFFO (2018 method). 2) Includes cash dividends, dividends retained under DRIP, and distributions to EPCOR. 3) 2020 represents midpoint of $500 - $550M guidance range.

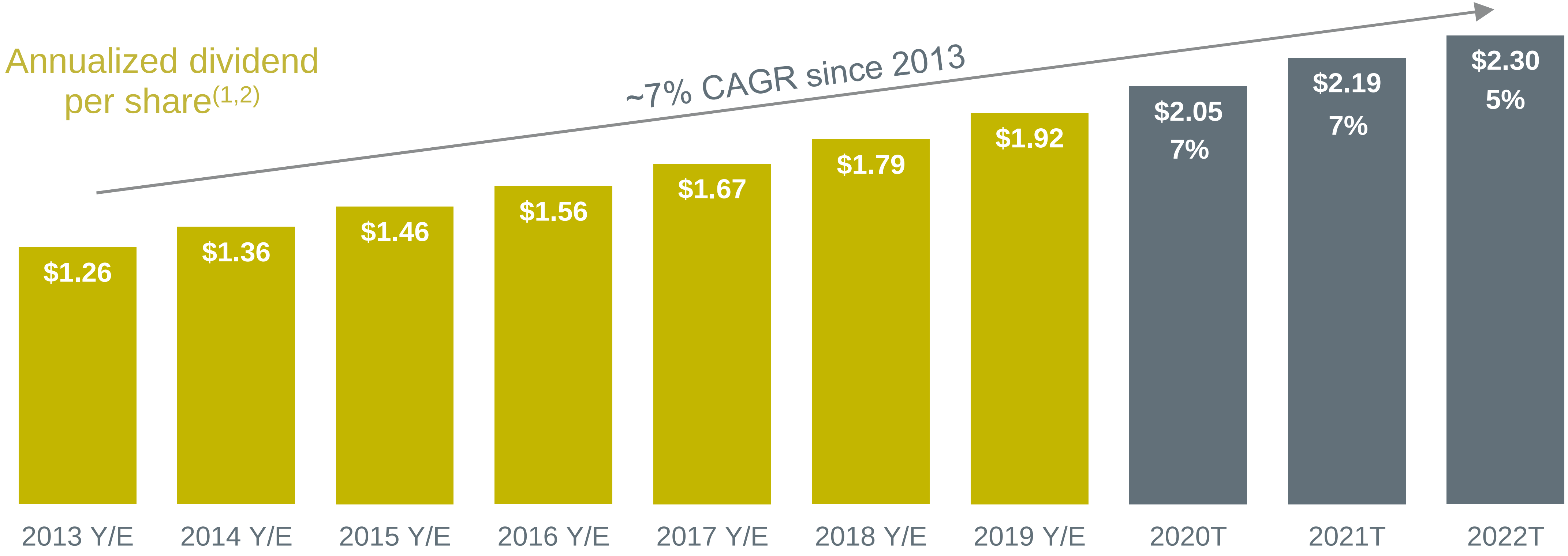
Growing AFFO[1,3] per share



Normalized AFFO per share growth of ~12% in 2020

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) 2020 is based on midpoint of $500M - $550M guidance range.

Dividend growth guidance to 2022



Delivering consistent annual dividend growth with 5% dividend guidance for 2022

1) Subject to market conditions, economic outlook, cash flow forecast, and Board approval at the time.
2) 2013 to 2019 annualized dividend based on year-end quarterly common shares dividend declared.

Discretionary cash flow supports dividend growth target[1]

$500M
Capital

$50M
EBITDA

$38M[2]
AFFO

7%
AFFO/share Growth

5%
Dividend Growth

AFFO per share growth from discretionary cash flow covers 5% 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 3.89%. AFFO growth is compared to the 2020 target midpoint of $525M.
2) AFFO includes a reduction of $2M from expected maintenance CAPEX.

Cash flow and financing outlook

Sufficient funding for current growth projects

Sources of cash flow	2020T ($M)
Funds from operations[(1)] + off-coal compensation	$670
TEI debt issuance	$210
Bond issuances	$200
	$1,080
Uses of cash flow	
Dividends (common & preferred shares)	($260)
Debt repayment[(2)]	($420)
C2CNT equity investment	($25)
Enhancement capex	($95)
Growth capex	($150)
Sustaining and maintenance capex	($95)
	($1,045)
Additional cash available	**$35**

1) Funds from operations (FFO) is a is a non-GAAP financial measure.
2) Excludes debt repayments to tax equity investor & equity accounted investment debt repayments. Includes principal payments on finance lease payables and expected repayments of credit facilities

Portfolio optimization
AB commercial portfolio positions

	2020	2021	2022
% sold forward[(1)]	63%	2%	10%
Contracted prices[(2)] ($/MWh)	Mid-$50	Mid-$60	Low-$50
Forward prices[(3)] ($/MWh)	$56	$58	$54
EBITDA sensitivity to a $5/MWh change in spot prices[(4)] ($M)	$16	$64	$60

Lower hedge positions in 2021-2022 due to expectations of greater price volatility and higher prices going forward. Will opportunistically hedge when forward prices align with our fundamental view

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) Forward prices as of November 30, 2019.
4) Includes both baseload and non baseload positions.

Financial strength

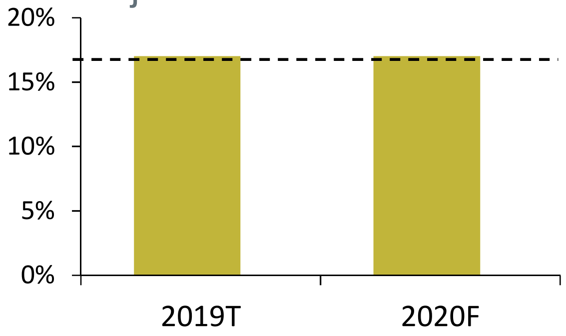
Strong balance sheet and commitment to investment grade credit ratings

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

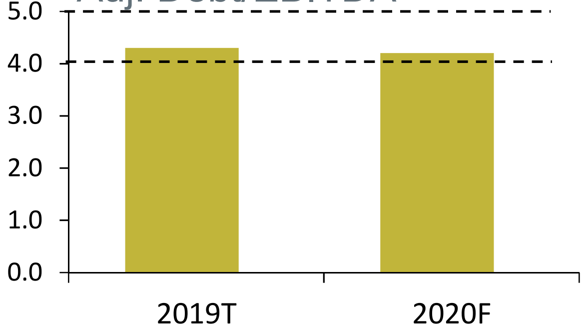
- Strong liquidity from cash flow from operations and $1B of committed credit facilities with 5-year tenor
- Forecast metrics remain strong and are within rating agency expectations for the current ratings with stable outlook

S&P financial metrics

Adj. FFO/Debt[(1-3)]

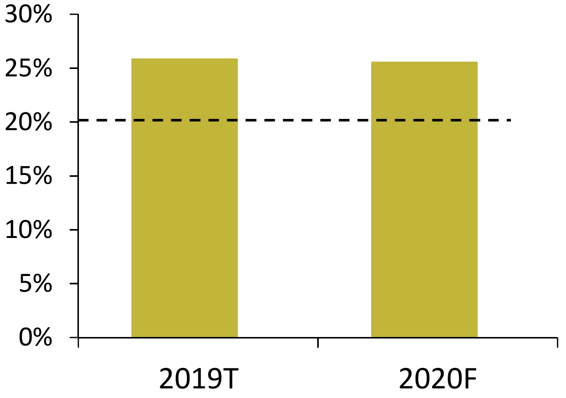


Adj. Debt/EBITDA[(1-3)]

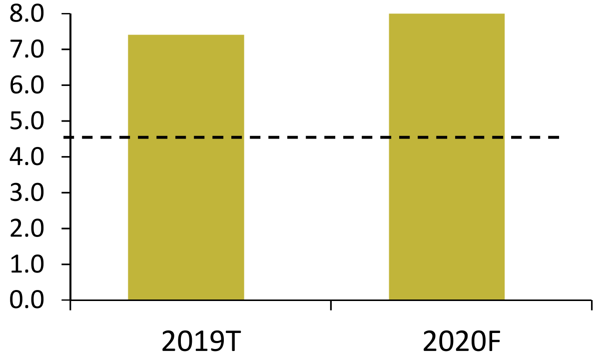


DBRS financial metrics

Adj. Cash flow/Debt[(1,3)]



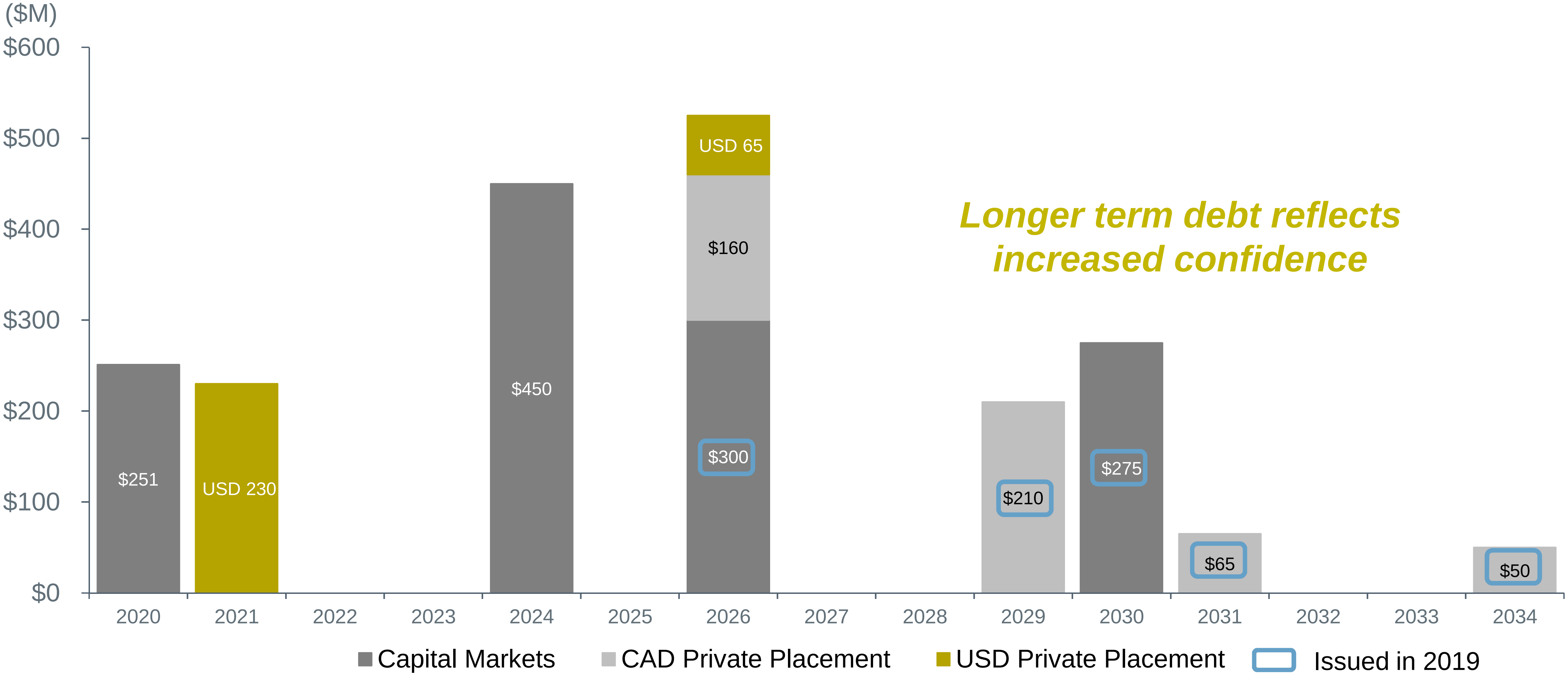
Adj. EBITDA/Interest[(1,3)]



1) Cash flow and adjusted EBITDA amounts include off-coal compensation.
2) Based on S&P's weighted average ratings methodology.
3) 2019T means 2019 target. 2020F means 2020 forecast.

Debt maturity schedule(1)

Well spread-out debt maturities supported by long asset lives



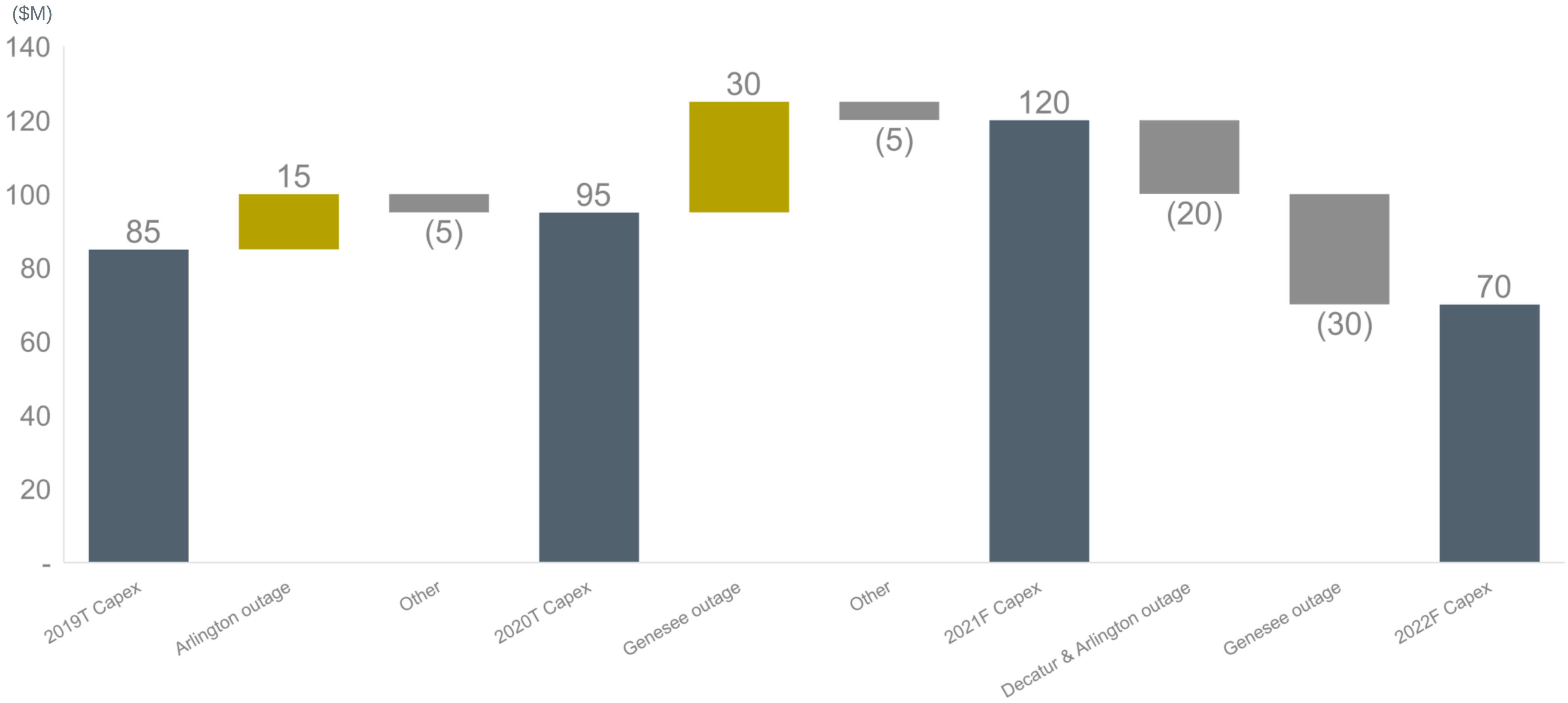
1) Debt amounts as of November 30, 2019 excludes non recourse debt, credit facility debt, and tax-equity financing.

Dividend sustainability and growth

Dividend yield

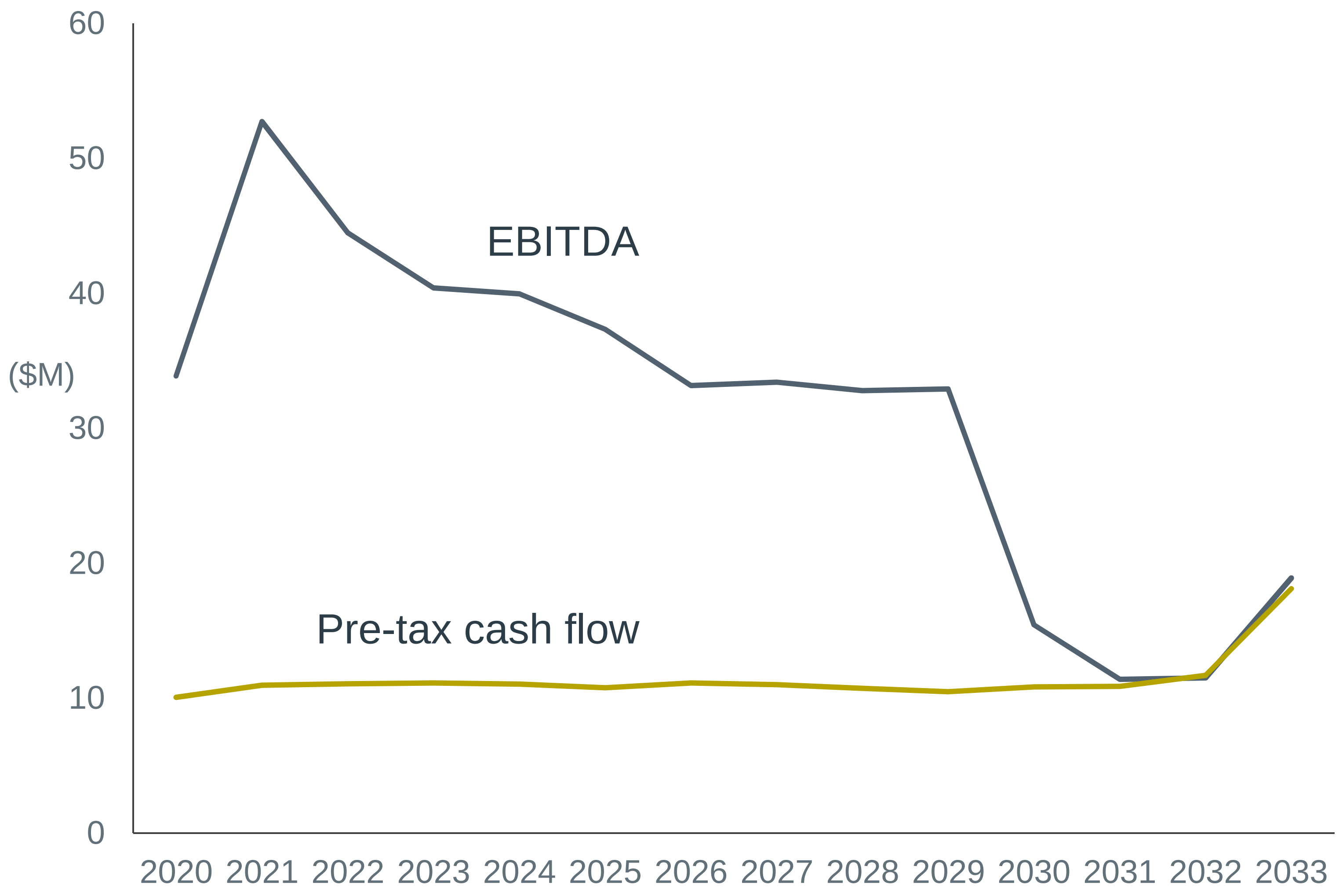
Dividend yield has returned to historic 6% range with greater certainty and confidence in the Alberta power market

Sustaining capex guidance



Long-run maintenance capital averages $85-$95M per year

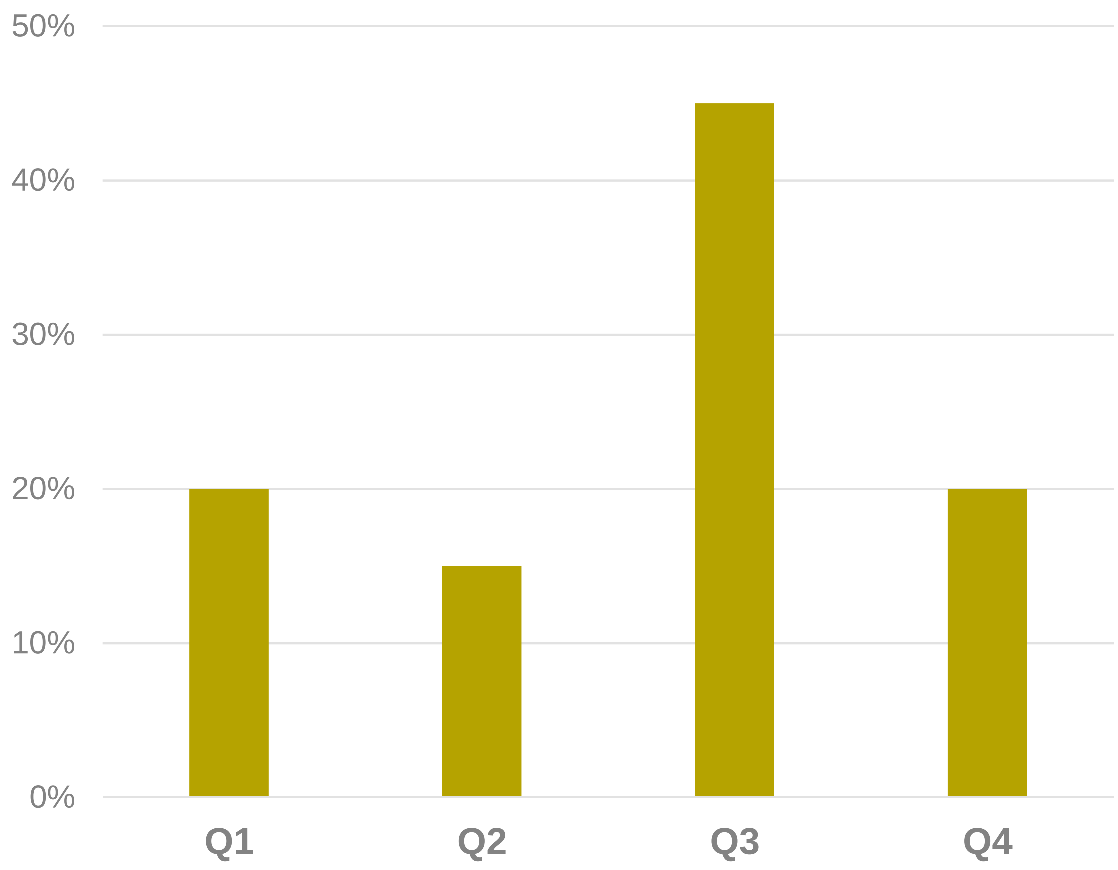
Modeling guidance for Cardinal Point



- Main difference between EBITDA and cash flow is driven by the accounting of the production tax credits (PTCs) and tax depreciation credits allocated to the Tax Equity Investor prior to the flip-date
- Cash flows increase after 2032 as hedge expires and higher merchant pricing is captured

Modeling of 2020 AFFO

Seasonality impacted by timing of sustaining capex and receipt of off-coal compensation payment



- Majority of scheduled outages occur in the first half of the year
- Receipt of $50M off-coal compensation payment in Q3
- Margins from Alberta assets is typically highest in Q3
- Seasonality of contracts (ie. Q3 highest revenue quarter for Decatur, Jun-Sep summer tolls for Arlington)

Highlights

- Continued strong balance sheet to support investment grade credit rating
- Conservative payout ratio target of 45% to 55%
- Financial capacity in 2020 to fund $500M growth without accessing equity market
- Optimistic outlook for re-contracting on near term PPAs to support contracted EBITDA
- Confirming dividend guidance of 7% through 2021 and extending dividend guidance of 5% for 2022

Powering a Sustainable Future

Kate Chisholm

Senior Vice President, Chief Legal and Sustainability Officer

- Supplier of Choice
- Employer of Choice
- Neighbor of Choice

Responsible Energy for Tomorrow

We create dependable, cost-effective and future-ready electricity solutions to power a sustainable future for generations to come.

As a group of experts and innovators in our field, we develop, acquire, own, and operate power generation facilities in Canada and the United States.

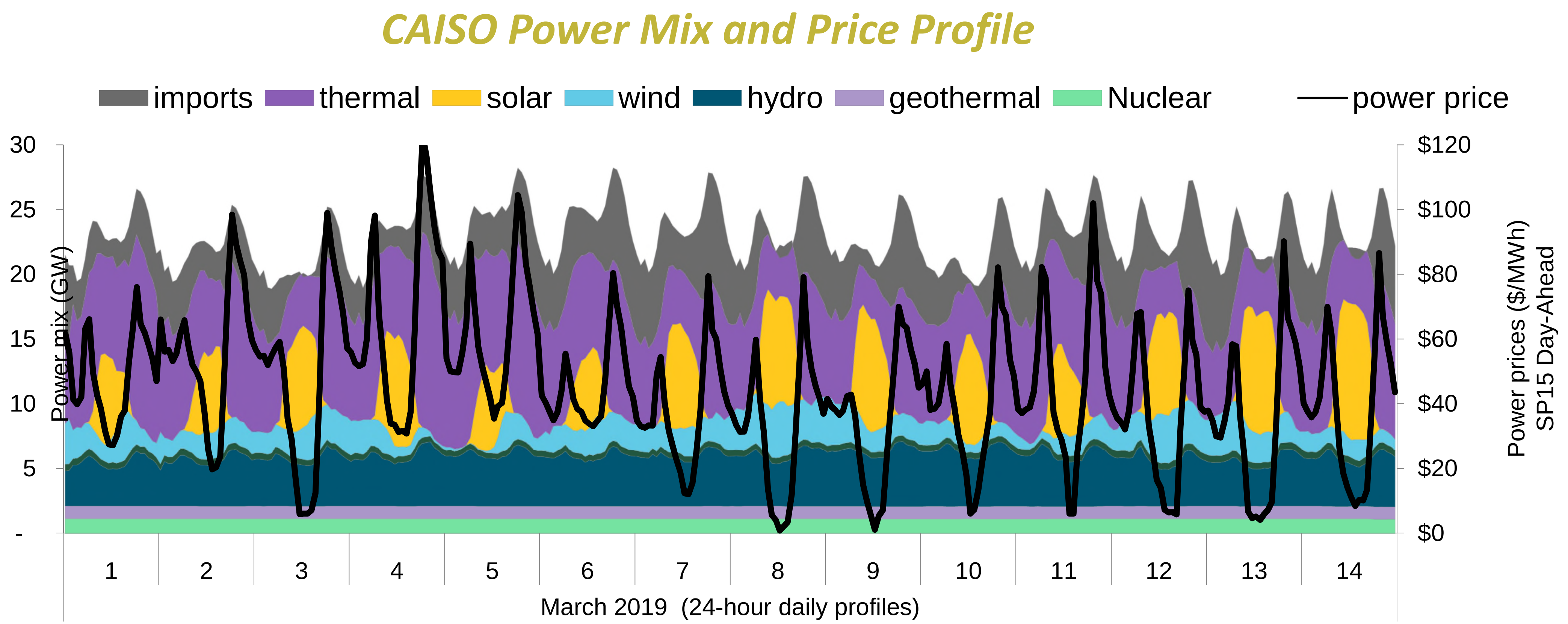
Real-life example: Alberta, February 2019

If you wanted to run Alberta on renewables alone (wind and battery storage) you'd need enough battery storage to deal with long bouts of zero wind generation.

To serve all load by discharging battery only for a…

- ***full 24 hours*** to serve an average 10,000MW load (eg. 240,000MWh of battery capacity), you would increase the long-run cost of electricity by $80/MWh. This scales arithmetically.
- ***full week*** to serve an average 10,000MW load (eg. 1.68M MWh of battery capacity), you would increase the long-run cost of electricity by $560/MWh.
- ***full month*** to serve an average 10,000MW load (eg. 6.72M MWh of battery capacity), you would increase the long run cost of electricity by $2240/MWh.

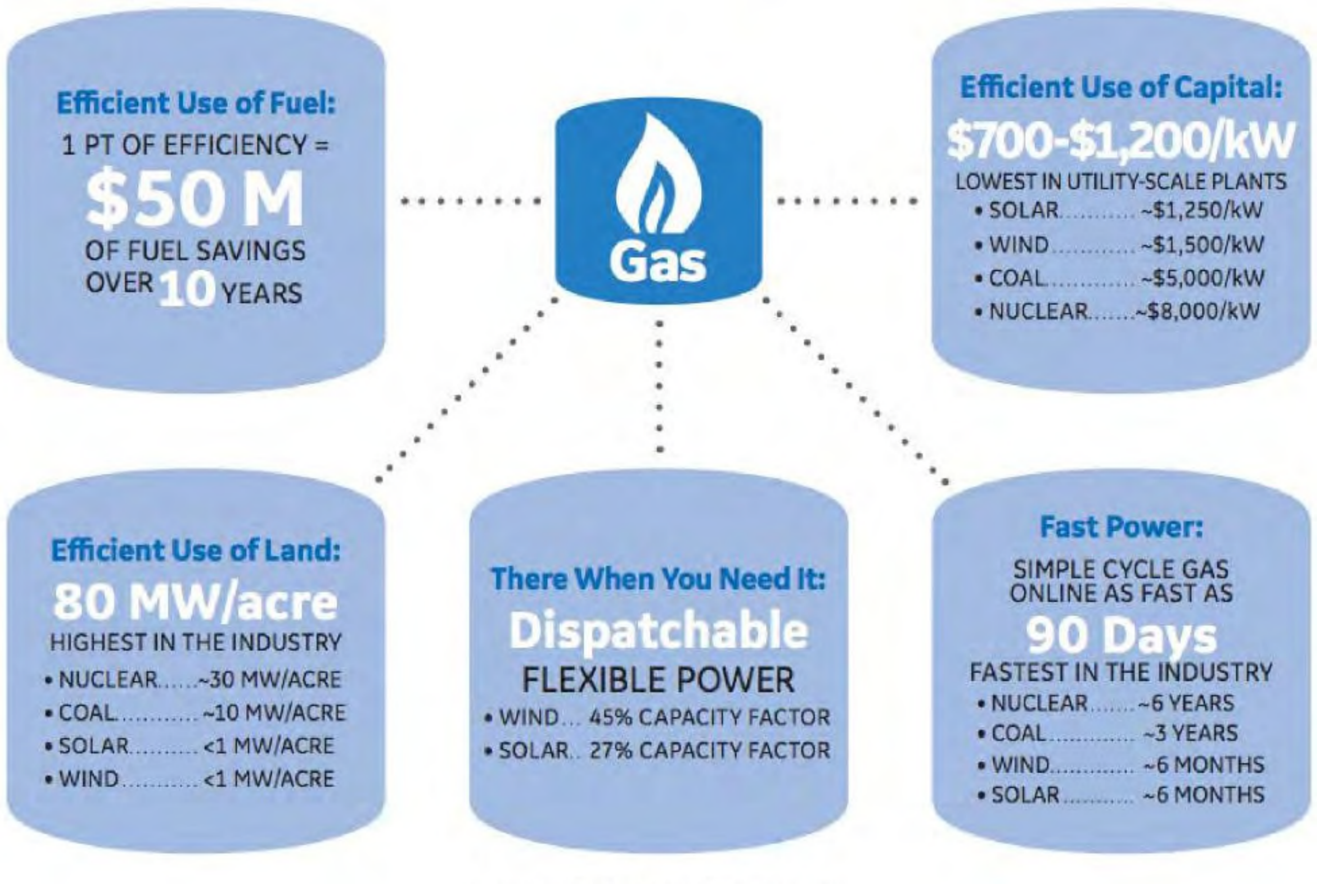
Flexible, dispatchable generation is needed to fill intermittency of variable renewables



Reference: Bloomberg New Energy Finance

Gas continues to play a critical role

- **PHYSICAL**
  Power dense... renewables cannot solve power needs in places like Japan, Taiwan, Bangladesh... with lot of people and little space
- **FINANCIAL**
  Abundant, economic, and importable... gas supply trends in our favor + lowest capex
- **SUSTAINABLE**
  Balances the grid for renewables
- **ENVIRONMENTAL**
  Reduces CO_2 footprint + nuclear out of fashion



Source: IEA, IHS, EIA, EPRI, DoE EE&RE, GE Marketing

Advancing carbon capture, utilization and storage (CCUS)

CCUS is a key component of the decarbonization pathway and can support the development of a sustainable energy system through:

- Enabling zero or near-zero emissions from natural gas generation
- Reducing emissions from industrial processes that will continue to rely on natural gas
- Converting carbon emissions into a range of useful and valuable products
- Creating new jobs and employment opportunities in multiple sectors

Capital Power’s sustainability strategy…

“Supplier of Choice”

1. Continue to build out renewables
2. Work toward decarbonization of natural gas generation
   - Educate & advocate for carbon capture & conversion (“CC”) technology (ongoing)
   - Use Partnerships to scale/market test new CCUS technologies (e.g. C2CNT / Lehigh Hanson)
   - Construct Genesee Carbon Conversion Centre to produce up to 2500t of CNT (which will produce 2MMt of downstream benefits, 2021)
   - Develop carbon conversion partnerships within other emitting industries (e.g. aluminum, steel)
   - Once market for carbon conversion products established, expand Genesee Carbon Conversion Centre (to produce up to 7500t of CNT)
   - Once market for carbon conversion products adequate, incorporate direct air capture
3. Enhance sustainable sourcing and water management plans

Capital Power’s sustainability strategy…

“Employer of Choice”

- 2019 Top Employer for Young People and Top 75 in Alberta
- CEA president’s Award for Excellence in Employee Safety (6th consecutive year)
- Top Quartile employee engagement
- Implementing diversity & inclusion strategy

Capital Power's sustainability strategy…

"Neighbour of Choice"

- Industry leading stakeholder consultation process / results
- Community investment – in past 5 years, have invested $5.1M in the communities in which we operate
- Community engagement – annual engagement plans for each plant, meeting needs identified by communities
- Facility-specific newsletters to leaseholders
- Land remediation innovation
- Wind turbine lease benefit spreading

Sustainability targets

- Constructing all new natural gas generation units to be carbon capture and/or hydrogen-ready
- Reducing CO_2 emissions at Genesee by 50% by 2030 from 2005 levels
- Reducing CO_2 emissions by 10% and our emission intensity by 65%, in 2030 from 2005 levels[(1)], in spite of increasing our generation by 145%
- Investing in carbon capture and utilization technology (such as C2CNT) to eventually decarbonize our natural gas generation assets (ongoing)
- Enhancing sustainable sourcing plan (2020)
- Building the Genesee Carbon Conversion Centre (2021)
- Enhancing water management plan (2021)

1) Based on our 2019 fleet.

The climate change disclosure journey

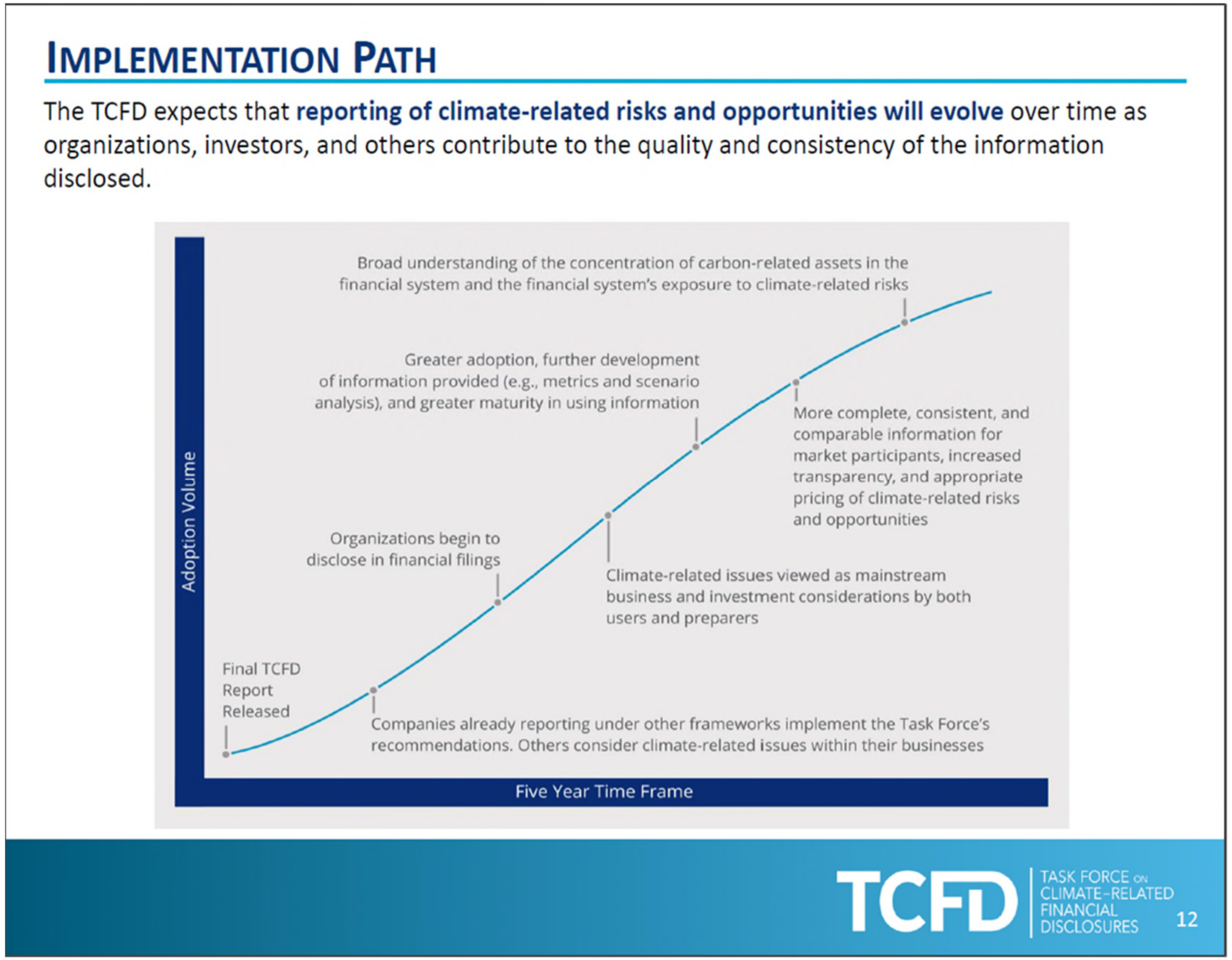
Objectives TCFD: Provide information for investors and enable stakeholders to understand risks and opportunities related to climate

Step-by-step growth

- Integrate climate into business planning
- Further development of metrics and scenarios

TCFD is a journey, the report merely an outcome

- **Capital Power Road to Paris**



Source: TCFD Overview of Recommendations, June 2017

Highlights

Environment

- World leading carbon reduction program (targeting 12% reduction in Genesee GHG emissions by 2020)
- Investing in innovation – CCUS, windfarm financing, land remediation research, wind turbine detuning
- Industry leader in financial support for diverse offset creation

Social

- 44% women on Board and 33% on Executive team that is consistent with our policy of having minimum 30% female representation at both
- Successful stakeholder engagement program aimed at being “neighbor of choice”
- CEA president’s Award for Excellence in Employee Safety (6th consecutive year)
- Community investment – in past 5 years, have invested $5.1 million in the communities in which we operate
- Named one of Canada’s 50 Best Corporate Citizens for eight consecutive years

Governance

- Board specifically mandated to include sustainability as a core part of business strategy, and Board receives quarterly reports
- CEO/Executive Short Term Incentive Targets include 20% ESG KPIs
- Annual Board Shareholder Engagement Road Show
- Reporting more transparent climate-related financial disclosure (TCFD)
- Named one of World’s Most Ethical Companies by Ethisphere in 2019

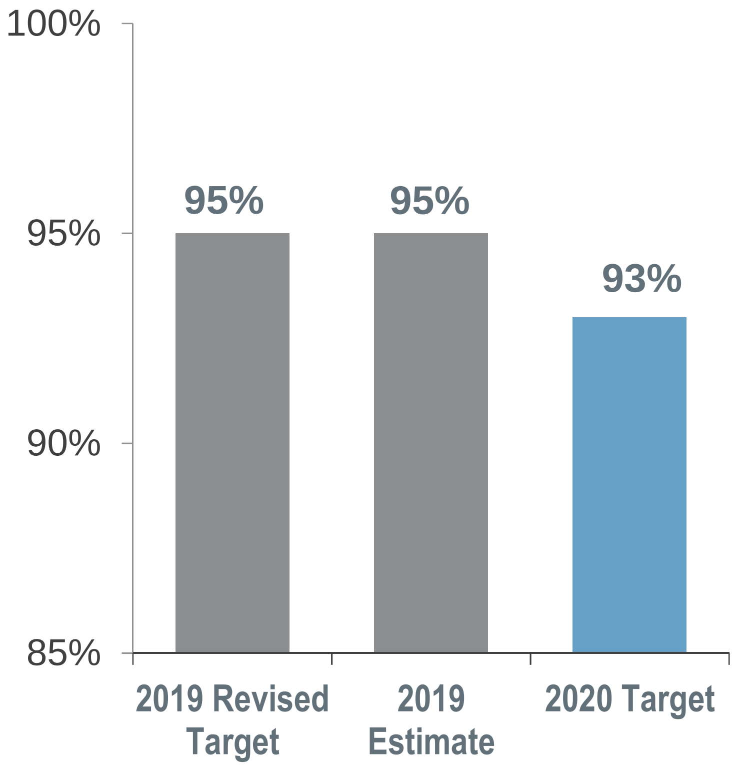
2020 Corporate Priorities Attractive Investment

Brian Vaasjo

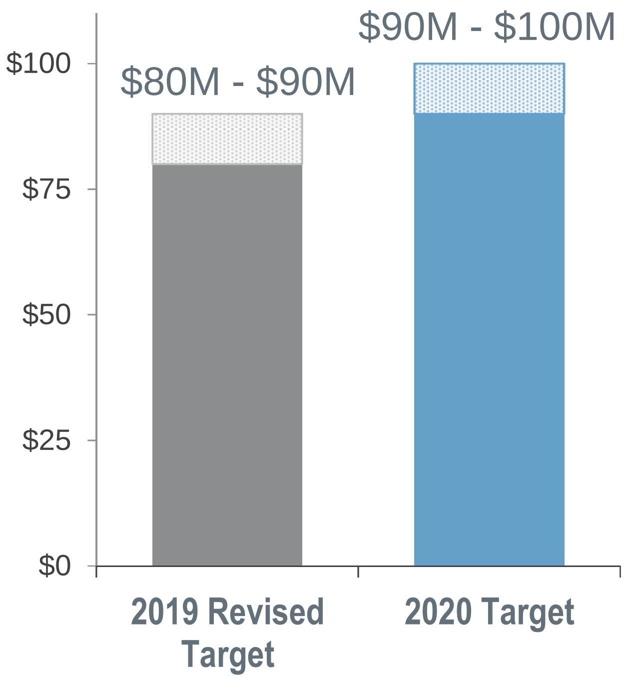
President & CEO

2020 Operational targets

Facility availability



Sustaining capex



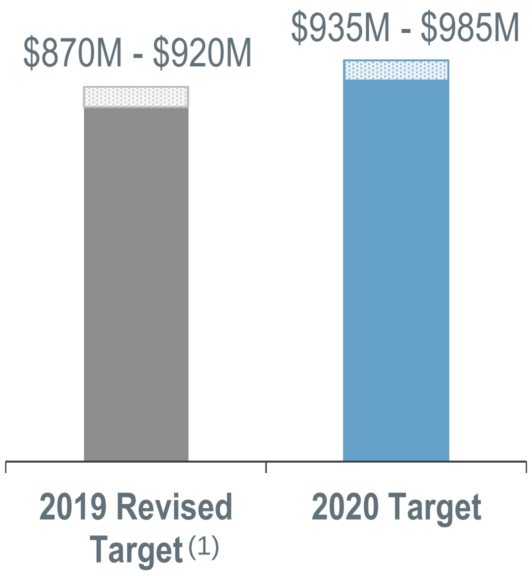
1) 2019 revised targets reflects the acquisition of Goreway Power on June 4, 2019.

2020 Financial targets

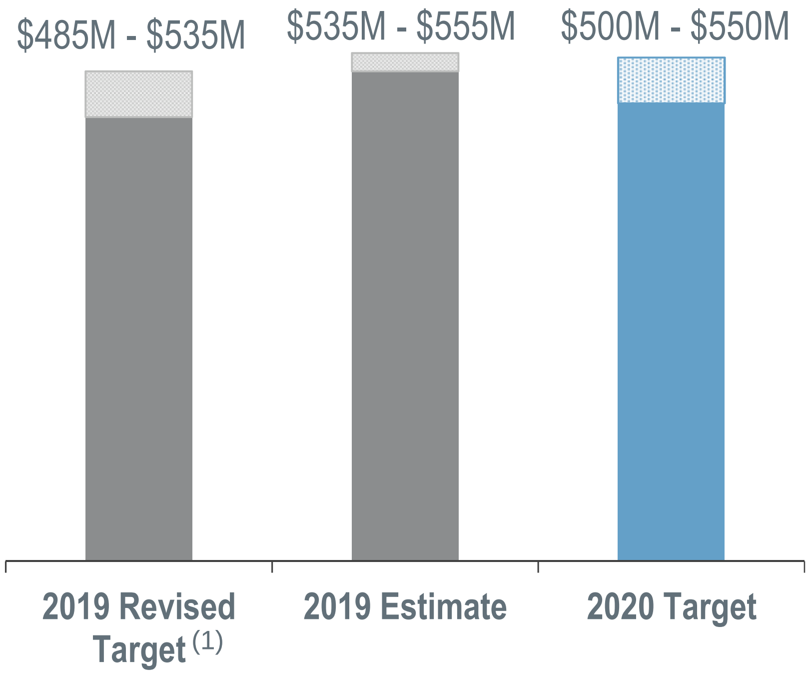
Key assumptions

- Based on 63% of the Alberta Commercial baseload generation sold forward at an average contracted price in the mid-$50/MWh range
- Excludes any impacts from $500M of committed capital for growth

Adjusted EBITDA



Adjusted funds from operations



1) 2019 revised targets reflects the acquisition of Goreway Power on June 4, 2019.

Growth from development and construction projects

- $500 million committed capital for growth
- Complete Cardinal Point wind project on time and on budget for commercial operations in March 2020
- Advance Whitla Wind 2 project
- Expect one renewable development project

How investors should think about Capital Power
Attractive investment opportunity

- Proven track record and guidance for sustainable dividend growth
  - 2020 and 2021 guidance remains at 7%
  - 2022 at 5%
- Delivering on or exceeding 2019 targets
- Strong 2020 outlook, AFFO up 12% (normalized)
- Growth target of $500M committed capital for contracted opportunities
- Alberta power market stabilized and outlook continues to be positive
- Excellent long term outlook
- Expect dividend yield improvement

2020 targets and expectations consistent with what we have been delivering for the past 6 years

Capital Power & C2CNT

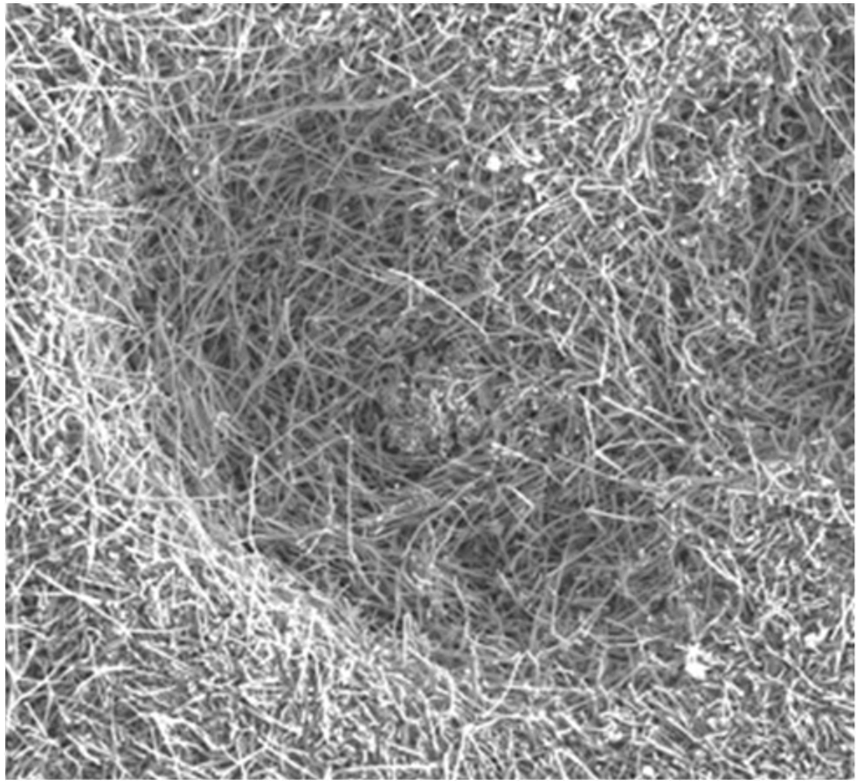
Brian Vaasjo

President & CEO

Capital Power

RESPONSIBLE ENERGY FOR TOMORROW

Investment in C2CNT



- C2CNT owns all intellectual property associated with Dr. Licht's work in nanocarbon technology
- Capital Power currently committed to own 9% of C2CNT
  - Intend to exercise options to move to 40% interest by end of 2020[1]
  - Benefits from 40% interest in production at Shepard and third party commercial arrangements

(1) Assuming C2CNT is successful.

Investment in C2CNT production

Plan to start commercial scale production of CNTs at Genesee Carbon Conversion Centre[1]

- 7,500 tonne per annum production facility
- Proceed with permitting early 2020

Phase 1 construction

- CNT output: 2,500 tonnes per annum
- Expected construction start: summer 2020
- Expected operations: 1st half of 2021
- Estimated capital cost: $20-25 million
- Provides base for increasing production as markets grow

(1) Assuming C2CNT and Lehigh Hanson efforts are successful.

Presented by Dr. Stuart Licht
Founder, C2CNT

C2CNT

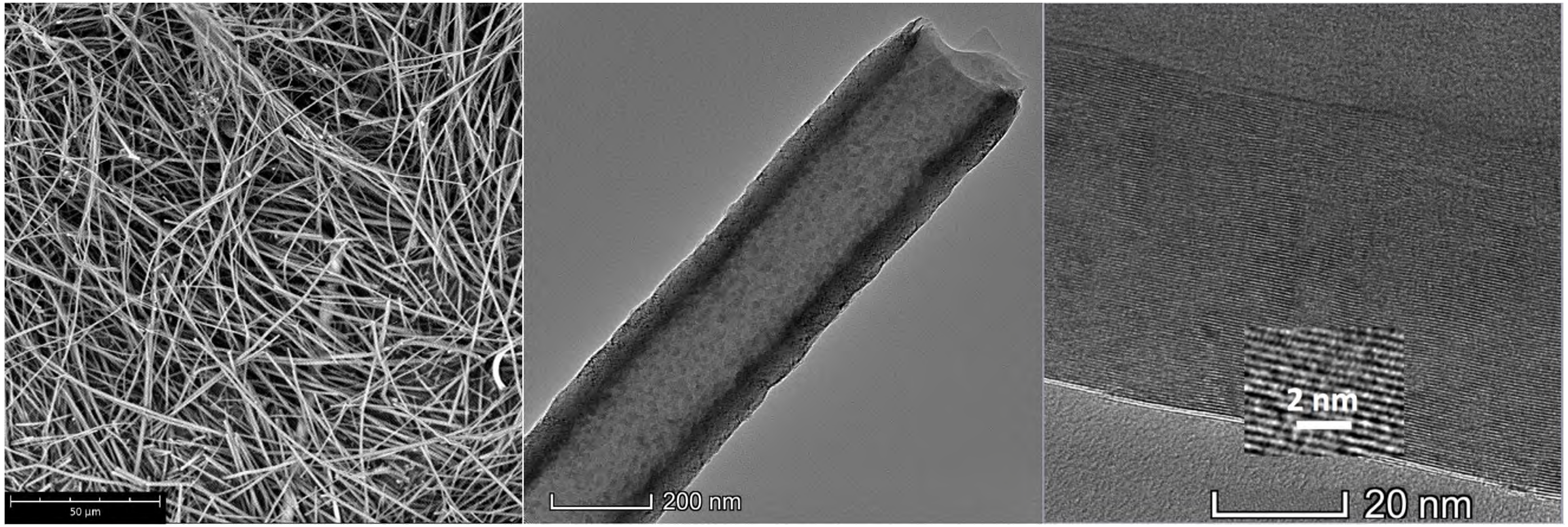
Our Mission:

- Transform anthropogenic carbon dioxide into valuable carbon nanomaterials to incentivize reduction of this greenhouse gas and pioneer a nanocarbon economy to save the planet from the impacts of climate change.

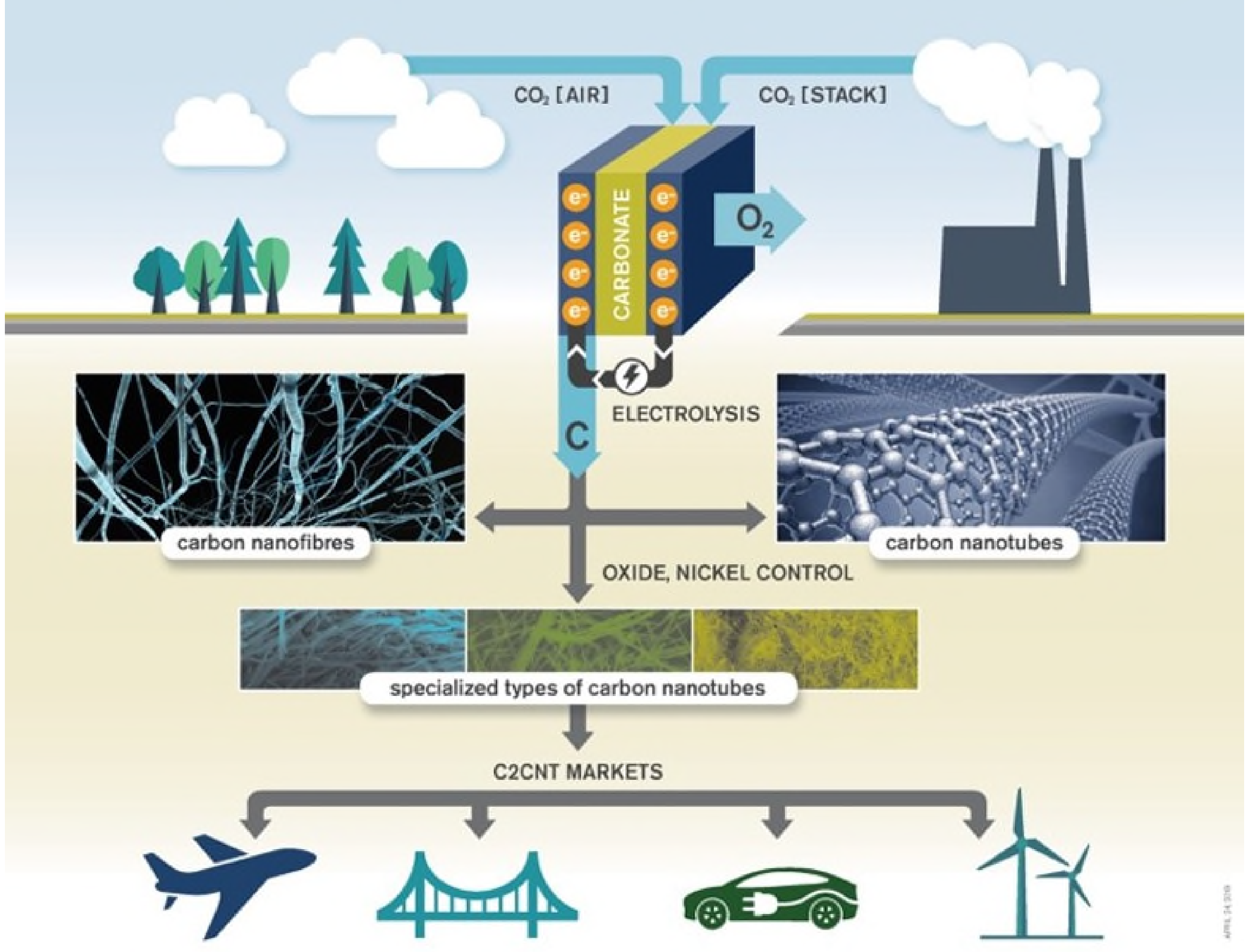
Technology in Action

- C2CNT's revolutionary technology transforms CO_2 directly into valuable carbon nanotubes, nano-onions, graphene and ultra-strong carbon structural materials at a fraction of the cost of current manufacturing processes.

Carbon Nanotubes: 40x stronger than steel and lighter than aluminum



C2CNT: process & product overview



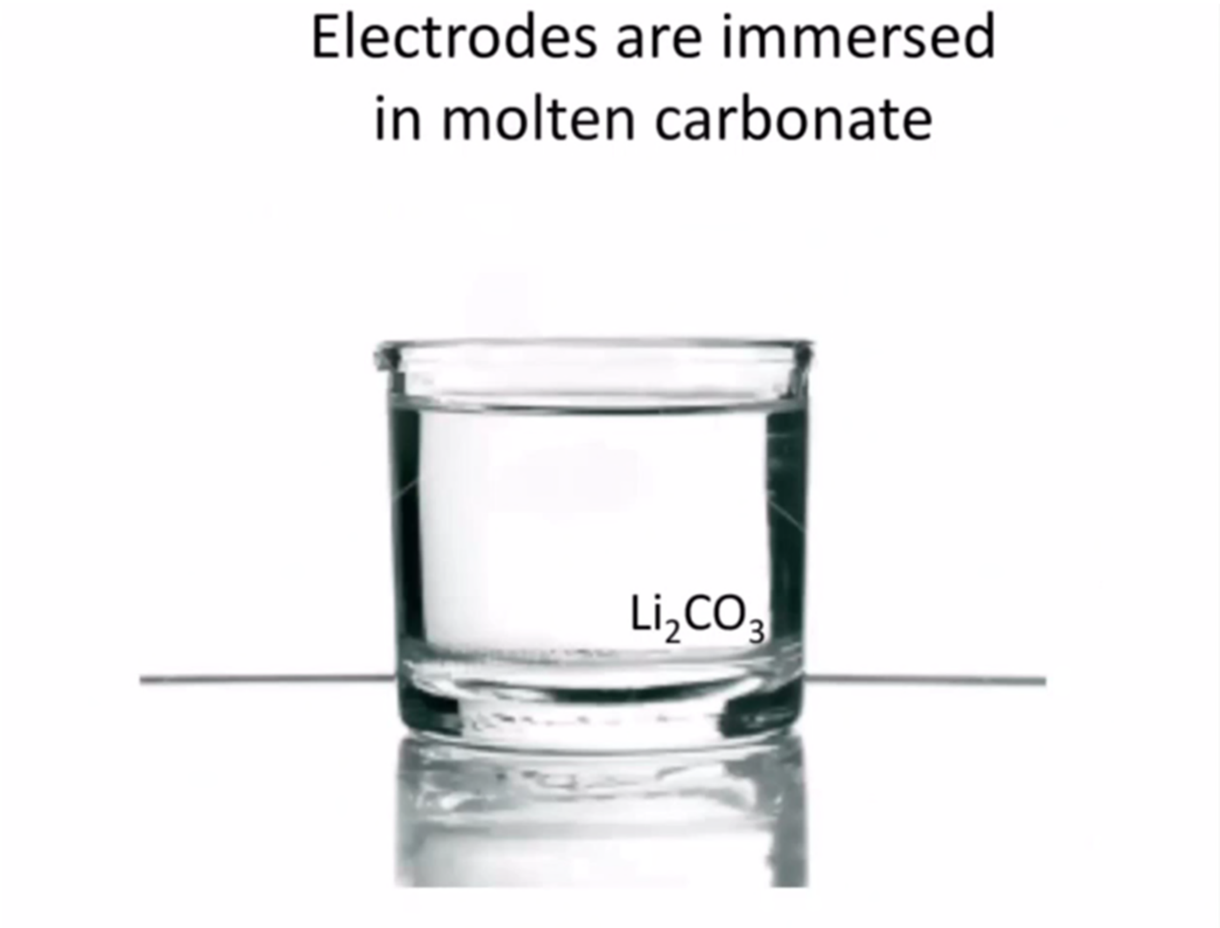
1. CO_2 is captured from the atmosphere and industrial processes
2. CO_2 is split by molten carbonate electrolysis into high value carbon nanotubes and O_2
3. Specialized carbon nanotubes are used for various industrial materials applications

Our progress

- 1 of 5 finalists in NRG COSIA Carbon XPRIZE (natural-gas track)
  - $10M competition for turning CO_2 emissions into valuable products
  - Winner: converts the most CO_2 into products with the highest value determined by
    1. How much CO_2 per day is converted (2 to 5 tonnes)
    2. The net value of the product
- Competition hosted at Alberta Carbon Conversion Technology Centre
  - A unique facility built to demonstrate CO_2 capture and conversion technologies
  - Funded with support from the governments of Alberta and Canada
  - Located at the Shepard Energy Centre (co-owned by Capital Power and ENMAX)

We're producing carbon nanotubes in Calgary today

How does the CO_2 to carbon nanotube process work?



Commercialization

- Known applications as an additive to materials, textiles, batteries, electronics and other carbon materials
- Numerous applications for carbon nanotubes have been studied extensively but current market price of over $100,000 per tonne make utilization uneconomic.
- Reducing the cost by an order of magnitude significantly increases potential utilization.

Market potential for CNT in structural materials

Structural Materials Strength Improvements & Composite CNT ratio

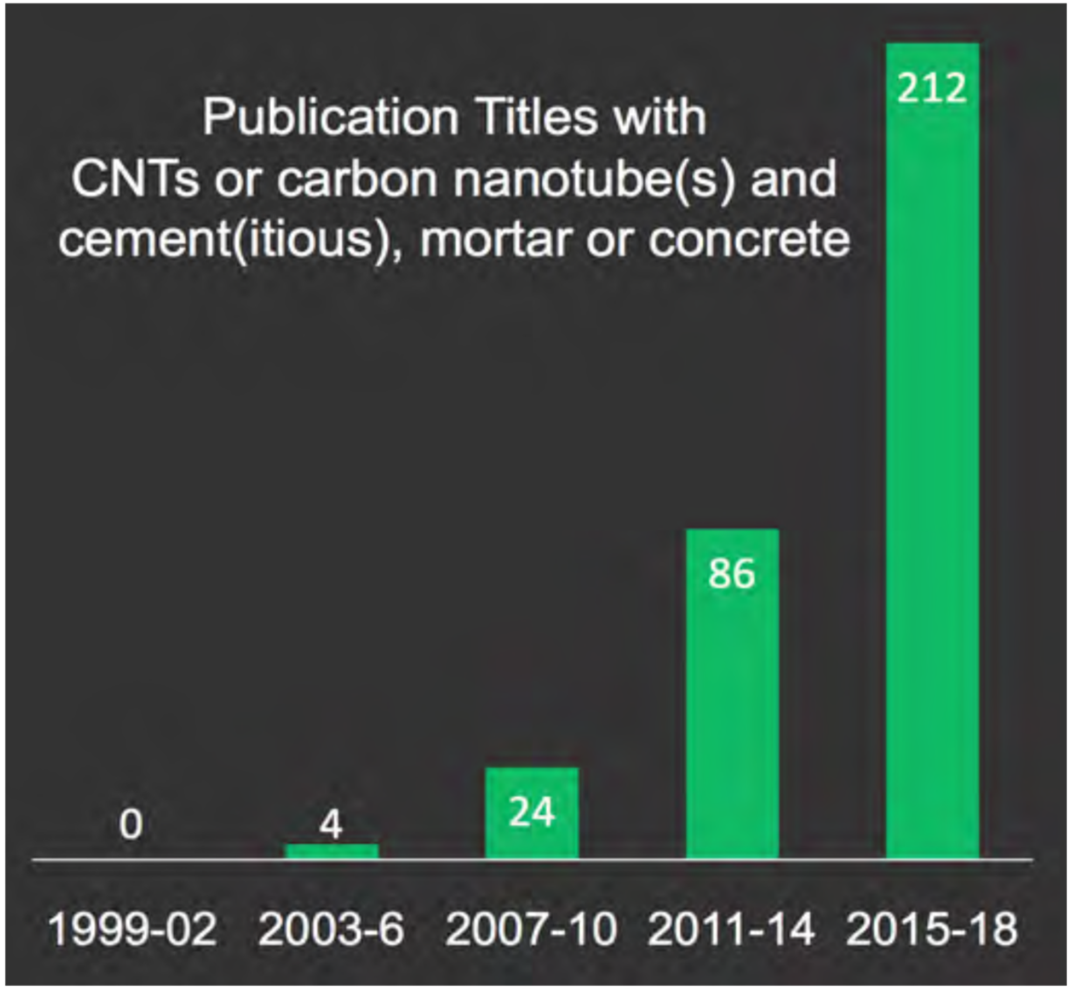
	wt % CNT	Property	Increase in Property	Production Cost (tonne)	Implied Reduction (CNT:Material)	Tonnes of CO_2 avoided per tonne of C2CNT
Concrete	0.048%	tensile strength	45%	$100	1:938	840
Aluminium	0.10%	tensile strength	37%	$1,880	1:370	4,400
Steel	0.75%	tensile strength	37%	$541	1:49	302

Global Structural Materials Market for CNTs (000 tonne)

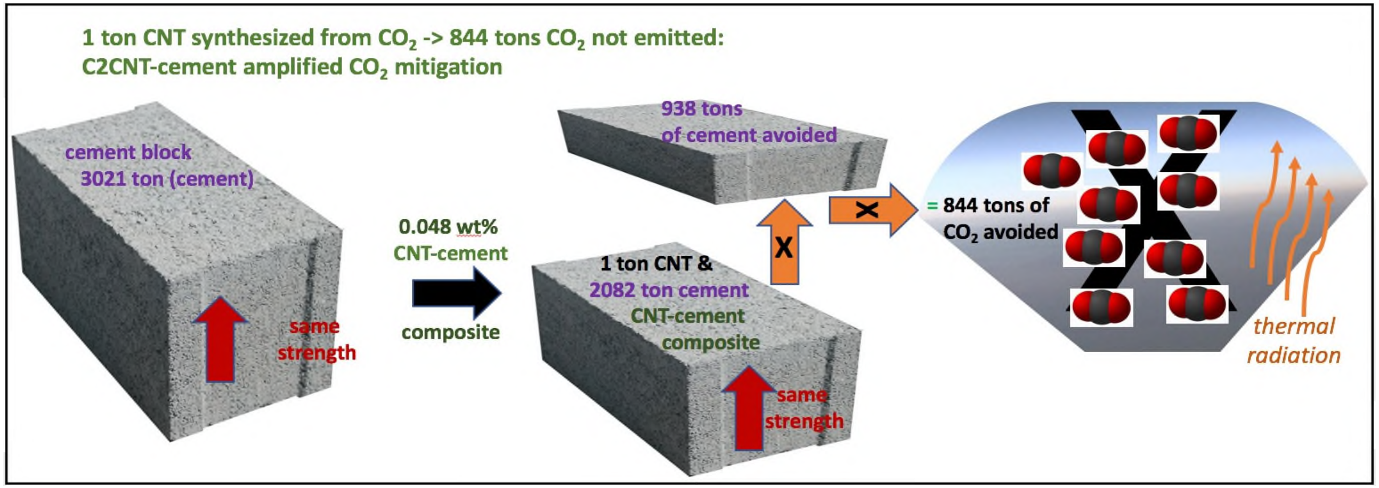
Material	Canada	United States	Global
Concrete	12,700	97,000	4,100,000
Aluminium	3,200	1,000	64,000
Steel	14,000	82,000	1,692,000

Initial target market: concrete

Properties extensively studied



Concrete commercialization



Lehigh Hanson Partnership

- Lehigh Hanson conducting all internal and external testing of concrete at their cost
  - Testing starting soon
- Optimal nanotube for concrete determination taking place at George Washington University
- Marketing of CNT-enhanced concrete in Alberta early next year

- Questions?

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) adjusted funds from operations, (iii) adjusted funds from operations 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.

Additional disclosure around the Company's non-GAAP financial measures, including reconciliations of these non-GAAP financial measures to their nearest GAAP financial measures are disclosed in the Company's Management's Discussion and Analysis prepared as of October 25, 2019 for the third quarter of 2019, which is available under the Company's profile on SEDAR at SEDAR.com and on the Company's website at capitalpower.com.

Forward-looking information

Forward-looking information or statements included in this presentation 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 in this presentation 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:

- timing of commercial operations commencement for Cardinal Point Wind,
- timing of the Whitla Wind 2 project and expected capital costs,
- expected AFFO and adjusted EBITDA impacts of Whitla 1,
- timing and cost of the transition to dual-fuel capability at Genesee,
- expected efficiency and performance improvements at Genesee resulting from the GPS program,
- timing of commencing commercial production of CNT and expected capital costs of the production facility,
- expectation of exercising the Company's option to increase its interest in C2CNT,
- full year AFFO guidance for 2019,
- future dividend growth through 2022, and
- targets for 2020 including operational, growth and financial targets.

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:

- electricity, other energy and carbon prices,
- performance,
- business prospects (including potential re-contracting of facilities) and opportunities including expected growth and capital projects,
- status of and impact of policy, legislation and regulations,
- results of CNT concrete testing and preliminary marketing and
- 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:

- changes in electricity prices in markets in which the Company operates,
- changes in energy commodity market prices and use of derivatives,
- regulatory and political environments including changes to environmental, financial reporting, market structure and tax legislation,
- generation facility availability and performance including maintenance of equipment,
- ability to fund current and future capital and working capital needs,
- acquisitions and developments including timing and costs of regulatory approvals and construction,
- changes in market prices and availability of fuel, and
- 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, 2018, prepared as of February 15, 2019, 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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