

nationalgrid

US INVESTOR SEMINAR  
LONDON SEPTEMBER 2019



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**AARTI SINGHAL**

DIRECTOR OF  
INVESTOR RELATIONS



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This document contains certain statements that are neither reported financial results nor other historical information. These statements are forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. These statements include information with respect to National Grid's financial condition, its results of operations and businesses, strategy, plans and objectives. Words such as 'aims', 'anticipates', 'expects', 'should', 'intends', 'plans', 'believes', 'outlook', 'seeks', 'estimates', 'targets', 'may', 'will', 'continue', 'project' and similar expressions, as well as statements in the future tense, identify forward-looking statements. These forward-looking statements are not guarantees of National Grid's future performance and are subject to assumptions, risks and uncertainties that could cause actual future results to differ materially from those expressed in or implied by such forward-looking statements. Many of these assumptions, risks and uncertainties relate to factors that are beyond National Grid's ability to control or estimate precisely, such as changes in laws or regulations, including any arising as a result of the United Kingdom's exit from the European Union; announcements from and decisions by governmental bodies or regulators, including proposals relating to the RII0-T2 price controls as well as increased political and economic uncertainty; the timing of construction and delivery by third parties of new generation projects requiring connection; breaches of, or changes in, environmental, climate change and health and safety laws or regulations, including breaches or other incidents arising from the potentially harmful nature of its activities; network failure or interruption, the inability to carry out critical non network operations and damage to infrastructure, due to adverse weather conditions including the impact of major storms as well as the results of climate change, due to counterparties being unable to deliver physical commodities, or due to the failure of or unauthorised access to or deliberate breaches of National Grid's IT systems and supporting technology; failure to adequately forecast and respond to disruptions in energy supplies; performance against regulatory targets and standards and against National Grid's peers with the aim of delivering stakeholder expectations regarding costs and efficiency savings; and customers and counterparties (including financial institutions) failing to perform their obligations to the Company. Other factors that could cause actual results to differ materially from those described in this announcement include fluctuations in exchange rates, interest rates and commodity price indices; restrictions and conditions (including filing requirements) in National Grid's borrowing and debt arrangements, funding costs and access to financing; regulatory requirements for the Company to maintain financial resources in certain parts of its business and restrictions on some subsidiaries' transactions such as paying dividends, lending or levying charges; the delayed timing of recoveries and payments in National Grid's regulated businesses and whether aspects of its activities are contestable; the funding requirements and performance of National Grid's pension schemes and other post-retirement benefit schemes; the failure to attract, develop and retain employees with the necessary competencies, including leadership and business capabilities, and any significant disputes arising with National Grid's employees or the breach of laws or regulations by its employees; and the failure to respond to market developments, including competition for onshore transmission, the threats and opportunities presented by emerging technology, development activities relating to changes in the energy mix and the integration of distributed energy resources, and the need to grow the Company's business to deliver its strategy, as well as incorrect or unforeseen assumptions or conclusions (including unanticipated costs and liabilities) relating to business development activity. For further details regarding these and other assumptions, risks and uncertainties that may impact National Grid, please read the Strategic Report section and the 'Risk factors' on pages 212 to 215 of National Grid's most recent Annual Report and Accounts. In addition, new factors emerge from time to time and National Grid cannot assess the potential impact of any such factor on its activities or the extent to which any factor, or combination of factors, may cause actual future results to differ materially from those contained in any forward-looking statement. Except as may be required by law or regulation, the Company undertakes no obligation to update any of its forward-looking statements, which speak only as of the date of this document.



# Agenda

TIME	TOPIC	SPEAKERS	
08:30	<b>Introduction</b>	JOHN PETTIGREW	
08:35	<b>US Introduction</b>	DEAN SEEVERS	
08:50	<b>Breakout presentations</b> (30 mins each, speakers rotate)	<b>US GAS</b>	CORDI O'HARA & JOHN BRUCKNER
		<b>US ELECTRIC</b>	CHRIS KELLY & MARCY REED
		<b>CAPITAL DELIVERY</b>	RUDY WYNTER
10:20	<b>BREAK</b>		
10:35	<b>Customer &amp; Regulation</b>	TERRY SOBOLEWSKI & MIKE CALVIUO	
11:20	<b>Finance</b>	PEGGY SMYTH	
11:30	<b>General Q&amp;A</b>	JOHN PETTIGREW, DEAN SEEVERS & PEGGY SMYTH	
12:00	<b>CLOSE</b>		



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## Introduction



US Introduction

US Gas

US Electric

Capital Delivery

Customer

Regulation

Finance

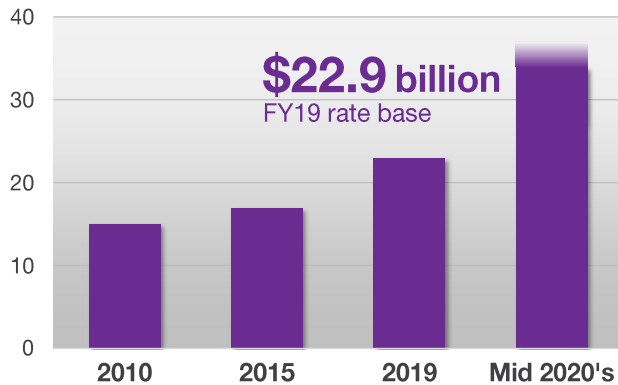
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**JOHN PETTIGREW**  
CHIEF EXECUTIVE



## A strong and growing US regulated business

US rate base (\$bn)



- US represents 44% of our total asset portfolio
- Rate base of almost \$25bn by end of FY20
- Expect asset growth of over 8% for the medium term
- Translates to rate base of over \$35bn in the mid 2020s



## Evolving US energy industry needs significant investment



Investment in aging  
**NETWORKS**



Investment to drive  
**DECARBONIZATION**

### Major investment trends

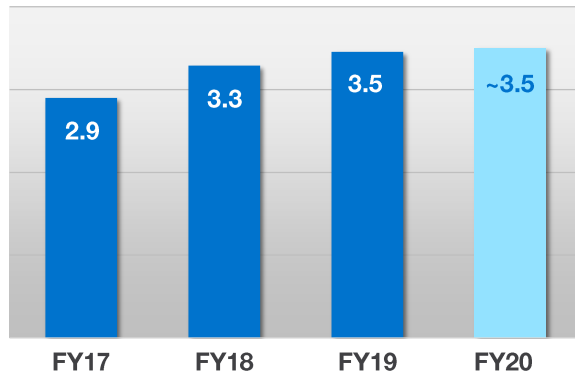
- Driven by safety and asset health
  - around 80% of investment
- Investment driven by significant growth in renewables
- Customer offering changing
  - improving affordability and supporting decarbonization





# Driving shareholder value by delivering for customers

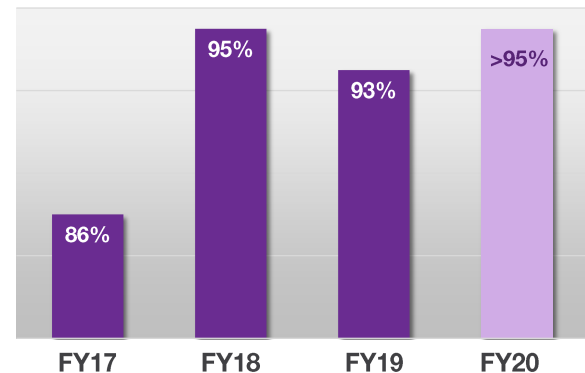
US Capex<sup>1</sup> (\$bn)



~\$13bn of total investment across FY17 to FY20

<sup>1</sup>IFRS

US RoE (% of allowed)



Driving improvement in ROEs



## Our pathway to value creation

National Grid has a clear operational focus across the portfolio to deliver for our stakeholders and tackle climate change



Customer affordability  
& experience



Efficiently maximize  
safety, reliability and  
resilience



Deliver digital,  
smarter networks



Enabling  
decarbonization



Invest in talent and  
evolve our operating model



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## US Business Overview



US Introduction

US Gas

US Electric

Capital Delivery

Customer

Regulation

Finance

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**DEAN SEAVERS**  
EXECUTIVE DIRECTOR, US

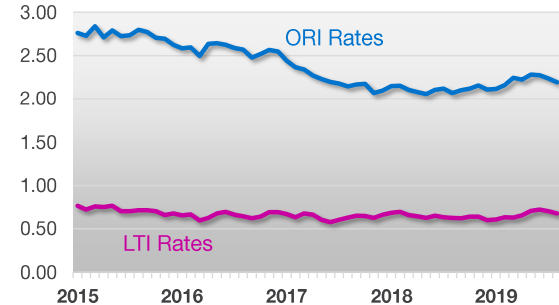


## Safety is a top priority

- We strive for continuous improvement safety standards
- Progressive improvement in safety performance
- We can't be complacent – tragic incident last month
  - comprehensive review underway
- Focus on improving safety culture through leadership and workforce engagement
- Our goal is to achieve a generative safety culture
  - where leaders and employees are proactively engaged and focused on positive safety behaviors

### US Performance

12-month Rolling Rates



OSHA Lost Time incidents (LTI) ▼ **11%**      OSHA Recordable Incidents (ORI) ▼ **21%**

OSHA (Occupational Safety and Health Administration) Recordable Incidents



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## National Grid is one of the fastest growing US utilities

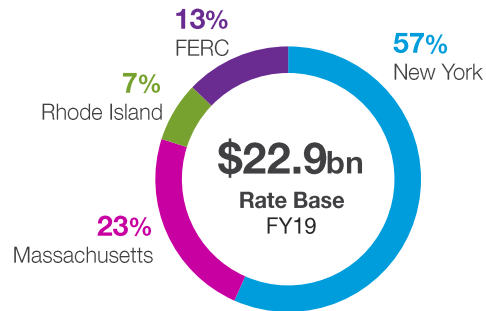
**7 million**

Electric and Gas accounts

Serving

**20 million**

People



- Top 10 utility by number of customers we serve
- Solid foundation for growth
- Focused on advancing the US energy sector to a cleaner future



## Delivering robust operational performance

### Over the last three years we have...

- Consistently delivered electric transmission and distribution reliability of 99.9%
- 100% compliance with all regulatory gas leak response targets
- Replaced 400 miles of pipe every year



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15

## Performed well on all objectives we set in 2015

November 2015	Achievements
<b>7% medium term rate base growth</b>	➤ ~9% CAGR from FY17 to FY19
<b>Restart rate case filings</b>	➤ Rates updated for all 8 Distribution businesses
<b>Target 95% of allowed ROE</b>	➤ Achieved 95% of allowed in FY18 and 93% in FY19

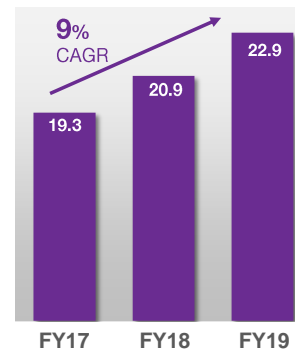




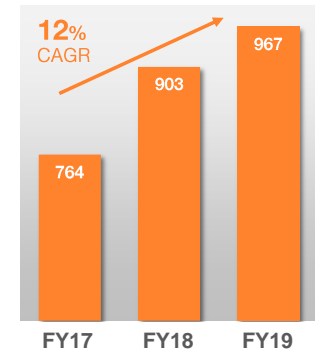
## Improving financial and regulatory performance

- Growth in profitability underpinned by asset growth
  - improved returns and strong regulatory progress
- New rate plans commenced since 2016
- Strategy to ensure timely recovery of investment
- Enhanced earnings from new performance incentives and new clean energy investments
- Striving to achieve ROEs close to allowed levels
  - targeting > 95% of allowed for FY20

US rate base (\$bn)



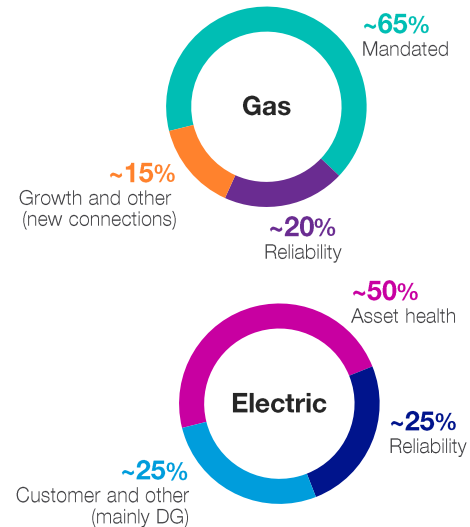
Adjusted US GAAP earnings (\$m)



## Supportive political and regulatory backdrop for investment in aging networks

- Wide agreement across our states for modernizing networks and driving decarbonization
  - enhance safety, reliability and resilience
- Mandated or asset health and reliability spend driving around 80% investment need in our networks
- Supporting growth in renewables and electrification of transport
- Leveraging synergies across the business
  - as part of jurisdictional model

### Medium-term capital investment drivers



## Customer affordability and experience



Customer affordability  
& experience

**7 million**

Electric and Gas accounts

Serving

**20 million**

People

- Drive efficiency and create value for customers
  - regulatory frameworks to achieve balance of value and affordability
- Enhancing customer experience:
  - **Personalization** to meet differentiated needs of customers
  - **Ease** of doing business with us
  - **Customer Trust**



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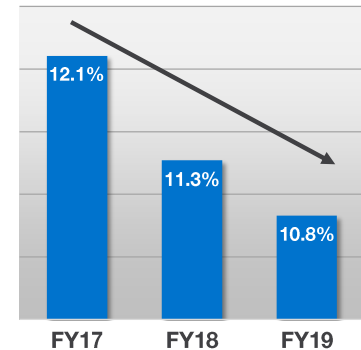
## Driving continuous efficiency improvements



Efficiently maximize  
safety, reliability and  
resilience

- Managing costs through driving continuous efficiency improvements
  - enables us to manage bill impact while investing in networks
- Limiting controllable cost increases
  - despite ~9% growth in rate base since FY17
- New cost efficiency program launched in 2019
  - will deliver cost savings of \$30m in FY20 and \$50m in FY21 onwards

### Improving Opex efficiency



IFRS controllable cost as a  
% of closing rate base



# Innovating and modernizing our networks through investing in digital



Deliver digital, smarter networks



**Asset digitization**

Digitization of substations



**Workforce digitization**

**Examples...**

Enhanced field force efficiency



**Customer experience digitization**

Customer benefits through personalization

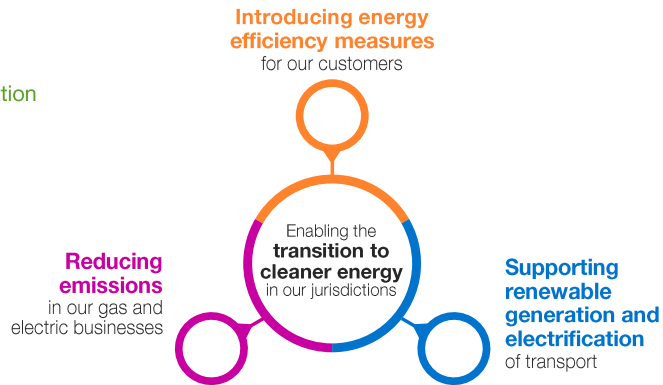


# Enabling decarbonization



Enabling decarbonization

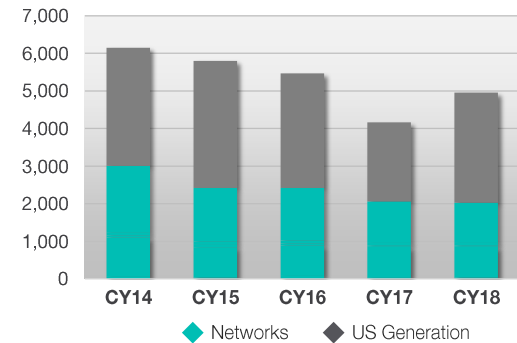
## National Grid's actions in enabling energy decarbonization in our jurisdictions:



- Need for a thoughtful energy transition – balancing affordability
- Opportunities to decarbonize heat

## Reducing our own carbon footprint

(000s tons CO<sub>2</sub>e)



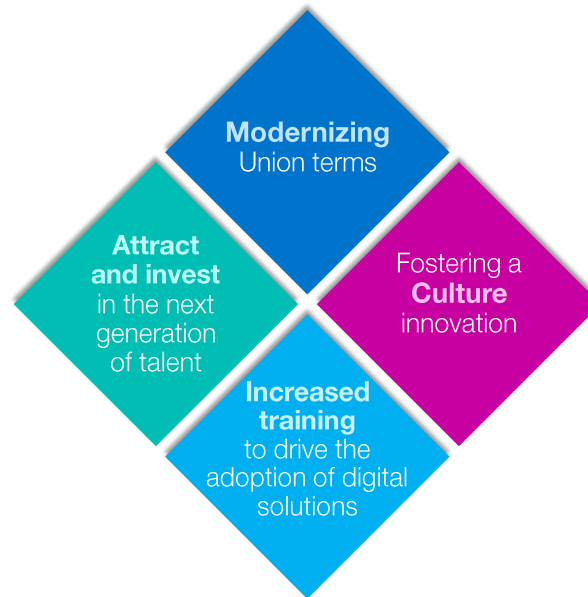
## Investing in talent and developing a forward looking organization



Invest in talent and evolve our operating model

- Investing in our talent
- Developing a forward looking organization

16,000  
Employees



## A highly experienced and committed team



**CORDI O'HARA**  
GAS CHIEF OPERATING  
OFFICER



**JOHN BRUCKNER**  
PRESIDENT, NEW YORK



**CHRIS KELLY**  
ELECTRIC CHIEF OPERATING  
OFFICER



**MARCY REED**  
PRESIDENT,  
MASSACHUSETTS



**RUDY WYNTER**  
PRESIDENT AND COO,  
FERC



**TERRY  
SOBOLEWSKI**  
PRESIDENT, RHODE ISLAND



**MIKE CALVIU**  
SVP BUSINESS AND  
REGULATORY STRATEGY



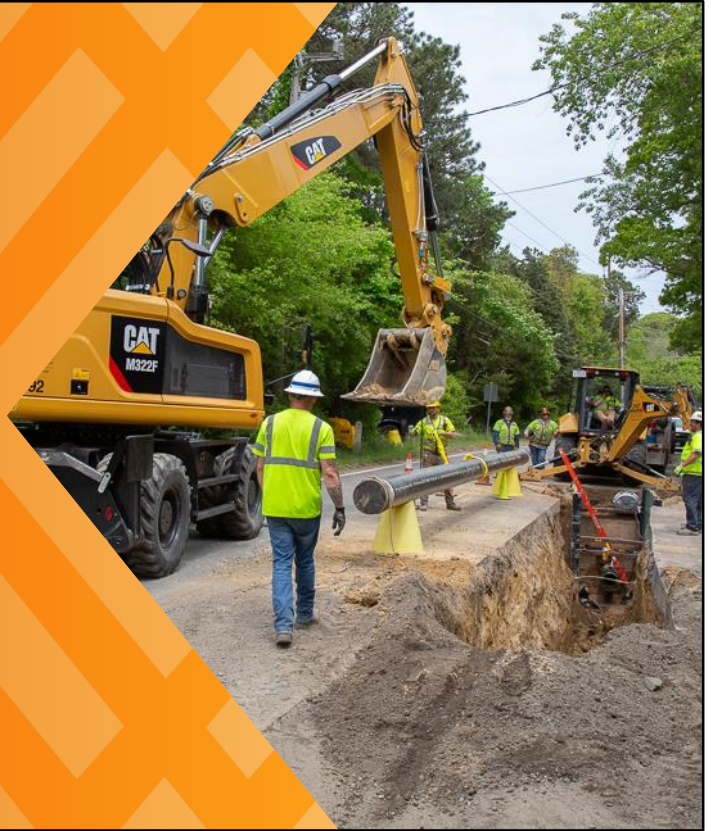
**PEGGY SMYTH**  
US CHIEF FINANCIAL  
OFFICER





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# The US Gas Business



US Introduction

US Gas

US Electric

Capital Delivery

Customer

Regulation

Finance

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## **CORDI O'HARA**

COO GAS

- Cordi O'Hara is Chief Operating Officer, US Gas Business for National Grid, accountable for the safe, reliable and affordable operation of National Grid's US gas businesses. Prior to this, she ran the UK System Operator, where she oversaw the strategy, planning and operation of over 14,000 miles of gas and electricity networks in Great Britain.
- Cordi has more than 20 years' experience in the energy industry, managing key relationships with government officials, regulators and customers. Prior to joining National Grid, Cordi worked for Centrica, the largest UK energy retailer, in a variety of commercial and operational roles.
- Cordi was invited to become a fellow of the UK Energy Institute in 2016, acknowledging her significant experience in UK and European energy markets and networks. In 2019 Cordi was awarded an OBE for services to the energy industry. She serves as an ambassador for POWERful Women, a program advocating for increased participation of women in the energy sector.



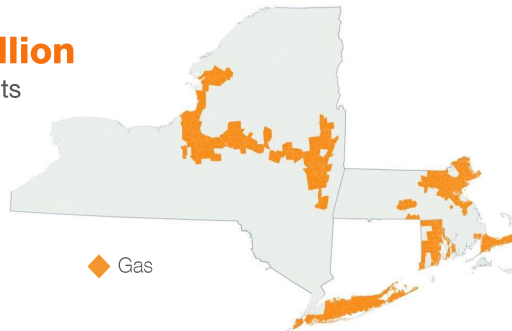
## US Gas business today

**36,000**

Miles of natural gas pipeline in  
New York, Massachusetts, Rhode Island

**3.6 million**

Gas accounts



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**Strong operational progress  
since FY17**

**34%**

Increase in gas rate base to \$11.3bn

**>1,000 miles**

Pipeline replaced, improving network safety

**100%**

Regulatory leak response target compliance

**7**

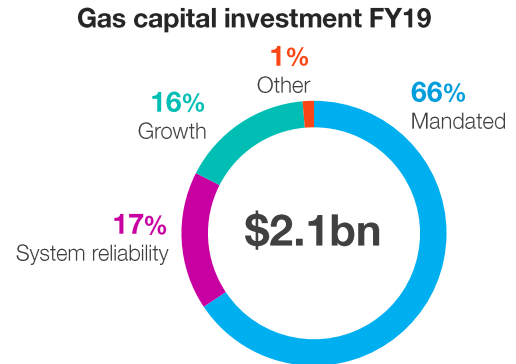
Gas rate filings made since 2015

**100%**

Operating companies under new rates

## Delivering safe and reliable networks is our top priority

- Greater regulatory and industry focus on safety
- Future Federal and State rules expected to increase focus on addressing safety
  - driven by incidents such as Merrimack Valley
- Increasing safety requirements will continue to drive investment in medium term
- ~85% of capital investment is mandated safety and reliability

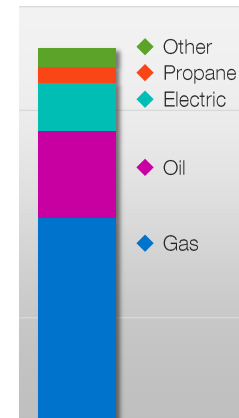


## Driving decarbonization and leading on the future of heat

### Gas has a critical long-term role

- Heating needs are among the highest in the country in MA, NY & RI, with highest oil saturation across the US
- Ambitious 2050 carbon reduction targets set by MA, NY & RI
- Actively engaged with industry stakeholders in the role the gas networks in the clean energy transition
- Up to 20% of our customers qualify for heating bill assistance
- Gas networks continue to facilitate economic growth
- Economic fairness must underpin a thoughtful energy transition

### Primary home heating source in MA, NY & RI



Source: US Energy Information Administration, 2015



## Digital enablement journey well underway

Significant upgrade to systems underway to make field operations more efficient and provide real-time customer information

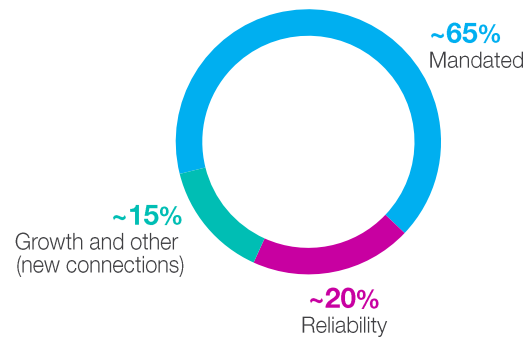
Past	Present	Benefits
<ul style="list-style-type: none"><li>• Workforce managed manually</li><li>• Manual daily dispatching of teams</li><li>• Field teams use paper maps</li><li>• Network data managed on paper, input to system back in the office</li></ul>	<ul style="list-style-type: none"><li>• Field workforce dispatched automatically through optimized software</li><li>• Work order automatically on iPads for all jobs</li><li>• Minute by minute location tracking of teams in the field</li></ul>	<ul style="list-style-type: none"><li>• Live team tracking gives:<ul style="list-style-type: none"><li>– better information for customers</li><li>– quicker emergency response</li></ul></li><li>• Significant time savings</li><li>• More jobs complete in one day</li><li>• More efficient supply chain</li></ul>



## US Gas business – Looking forward

- Steady capital investment levels
  - less than 15% relates to new connections
- Key objectives are:
  - maintaining and enhancing the safety and reliability of the gas network
  - modernizing the system and operations
  - promoting customer connections to decarbonize and boost the economy

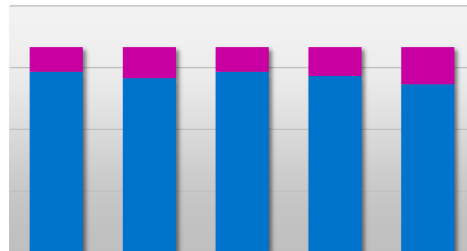
### Medium-term capital investment drivers



## Pipeline replacement programs driving long-term growth...

- Early stages of significant pipeline replacement programs across all states
  - 3,200 miles replaced in the last decade
  - ~1/3 of the way through the programs

Forecast capex split by size of project (%)

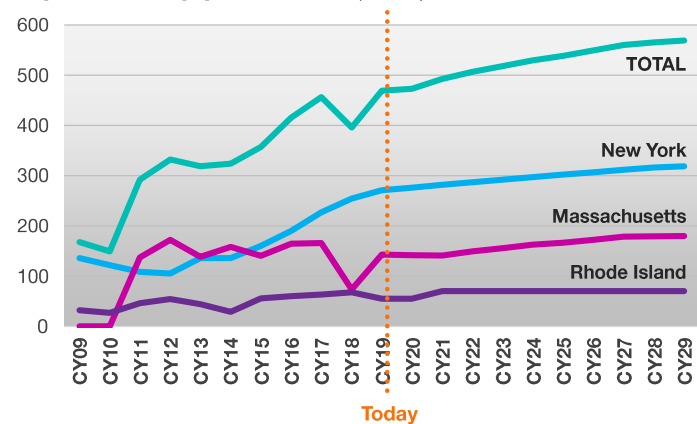


FY19 FY20 FY21 FY22 FY23

◆ Projects < \$50m    ◆ Projects > \$50m



Historic and forecast annual replacement pipe distance (miles)

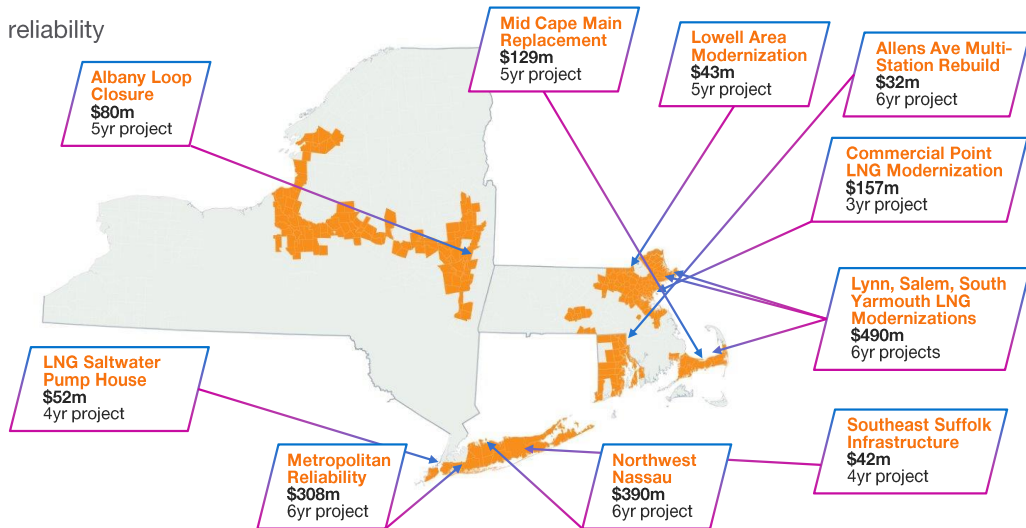




## ...Coupled with other mandated investment

**85%**

Future capex is safety and reliability related, including:



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## JOHN BRUCKNER

JURISDICTIONAL PRESIDENT - NEW YORK

- John Bruckner, president of National Grid's New York business, has over 34 years' experience in the energy industry.
- A resident of Long Island, John began his career with National Grid and its legacy companies in 1985. He has held leadership positions in Electric Generation, Transmission and Distribution, including engineering, operations, construction and project management.
- In his current role John Bruckner leads National Grid's regulated businesses that deliver electricity to 1.6 million customers and natural gas to 2.3 million customers.
- John is a graduate of the U.S. Merchant Marine Academy and has a Master's degree in Business Administration from New York Institute of Technology. He serves on a number of boards, including the Center for Energy Workforce Development and American Red Cross.



## Northeast Supply Enhancement – enabling new customer connections

- Northeast Supply Enhancement (NESE) – pipeline project by Williams, planned for completion by Fall 2020
- Will provide much-needed new capacity to Brooklyn, with gas demand expected to increase 10% over the next decade
- Current moratorium on new connections and extension to existing customers to maintain safety of network
- We will continue to work with regulator and all stakeholders to deliver economic growth while enabling decarbonization of economy



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35

## Commercial Point LNG facility enhancements

- 13.9 million gallon tank constructed in 1971
- \$157 million investment to upgrade and modernize site
- Improving safety, reliability and operability
- Additional safety investments including
  - automated emergency shutdown systems
  - high-expansion foam systems
  - remote water cannons



## Shaping the future – decarbonizing the gas network

- Newtown Creek renewable natural gas (RNG) project
  - partnership with NYC DEP to convert the city's largest wastewater treatment plant into a source of clean energy
  - inject enough RNG to heat 2,500 homes
  - reduce CO<sub>2</sub> emissions by ~16,000 metric tons
  - \$37m investment



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37

## Summary

- Gas business a long-term driver of strong asset growth for the US
  - increasing pipeline safety requirements the major part of this growth
  - around 85% of capex on safety and reliability
- Decarbonization of heat pilot projects already in the field
  - providing further growth opportunities in the medium-term



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# The US Electric Business



US Introduction

US Gas

**US Electric**

Capital Delivery

Customer

Regulation

Finance

nationalgrid

## CHRIS KELLY

COO ELECTRIC

- Chris Kelly is the Chief Operating Officer (COO) of the US Electric Distribution Business Unit at National Grid, one of the largest investor-owned energy companies in the world. As COO, Chris oversees 4,500 employees and is responsible for the safe and reliable delivery of electricity to 10 million people across Rhode Island, Massachusetts, and New York. One of his top priorities is to lead the transformation of the electric distribution system. This transformation to a digitized, modern grid will enable a clean energy future while upholding network reliability and resiliency.
- Chris has been with National Grid for over 30 years and has held other executive roles. He was the Senior Vice President of Electric Process and Engineering as well as the Vice President of Electric Systems Engineering. Earlier in his career, Chris was a technical leader in substation, protection, and telecommunications engineering in addition to electric operations. He earned his bachelor's degree in electrical engineering from Rutgers University and his MBA from Worcester Polytechnic Institute. Chris is also a licensed Professional Engineer in the Commonwealth of Massachusetts.





## US Electric business today

**81,500**

Miles of transmission and distribution lines in New York, Massachusetts, Rhode Island

**1st**

Largest T&D company in North East US

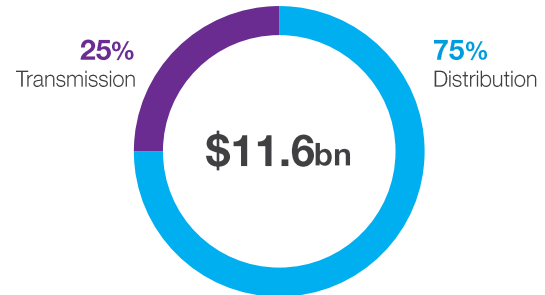
**99.9%**

Network reliability

**3.5 million**

Electric accounts

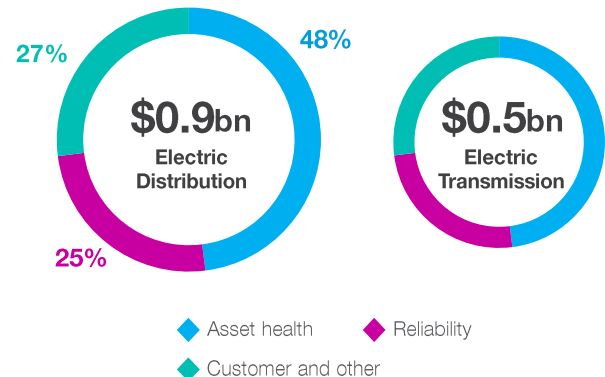
Electric rate base FY19



## Delivering safe, reliable and accessible networks is our top priority

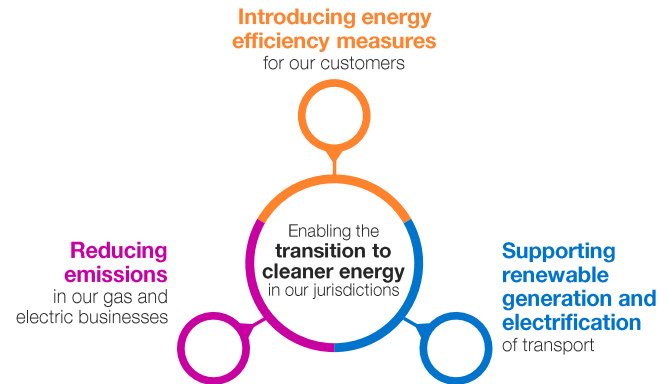
- Total electric capex of \$1.4bn in 2018/19
  - ~75% relates to mandated asset health and reliability
- Investment covers a diverse range of projects
  - managing >1,000 capex projects
  - requires optimal organization
- A safe, reliable network that enables a clean energy future for customers is critical to our success

US Electric capex FY19



## Driving decarbonization for our customers

- Connecting renewable generation
  - 2.7GW connected; further 1.5GW by end 2020
  - 78,000 renewable projects connected since 2013
- Electric Vehicle growth requires significant charging infrastructure
  - \$167m in MECO filing for EV charging
- Energy Efficiency measures and emissions reductions
  - EE programs saved over 1 million tonnes CO<sub>2</sub> in 2018
  - net economic benefit of \$1.7bn in Massachusetts & Rhode Island in 2018



## Delivering digital, smarter networks for our customers

- Grid modernization to future proof the network
  - enabling access to renewable energy
  - ensure continued reliability
  - new market opportunities and capabilities
- Investments to optimize the network
  - telecom systems – use of ‘big data’
  - new network management systems
  - smart systems
- Digitization across the ‘value chain’
  - from customer smart meters to substations
  - Distributed Energy Resource optimization



**Asset  
digitization**



**Workforce  
digitization**



**Customer experience  
digitization**



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## MARCY REED

JURISDICTIONAL PRESIDENT, MASSACHUSETTS

- Marcy L. Reed is President of National Grid's Massachusetts business and Executive Vice President of US Policy & Social Impact. She is responsible for the gas and electricity businesses in Massachusetts, including their operational, customer service, financial, and reputational outcomes. Marcy joined National Grid in 1988 and has held various positions in finance, merger integration, corporate affairs, and business operations. She also spent three years in London as the head of Investor Relations for National Grid.
- Marcy sits on a number of boards, including the Massachusetts Business Roundtable and the Greater Boston Chamber of Commerce. She is the global executive sponsor for National Grid's Women in Networks employee resource group.
- Marcy is a graduate of Dartmouth College and holds a master's degree from Northeastern University. Married with two children, she lives in Concord, MA.



US Introduction

US Gas

US Electric

Capital Delivery

Customer

Regulation

Finance

## Major investments across our network

### Asset health

Example:  
**Substation replacements**

- Gardenville - \$100m
- South Street - \$84m
- Condition of equipment
- Risk vs customer value
- Clean energy policies



### Reliability

Example:  
**Transmission systems**

- Clay Teall - \$90m
- Mohican Battenkill - \$77m
- Redundancy/contingency
- Climate change
- Resiliency



## Major investments across our network

### Customer

Example:

#### DG connection and EV

- Customer-owned DG
- Investments doubled since 2017
- Significant growth in interconnections
- Electric vehicles



### Efficiency/ optimization

Example:

#### Digital networks

- >\$1bn proposed to modernize grid to 2030
- \$530m committed to digitize transmission substation network to 2030



## Nantucket Energy Storage Project

- Cost effective, innovative and clean solution
  - meets the island's growing energy needs
- 6 MW, 48MWh, battery storage project with back-up generator, commissioned 2019
- Can provide the island with all electricity needs
  - back-up during cable failure
  - air conditioning and peak summer load
- Unique project in the US
  - delays or avoids costly third sub-marine cable
  - fully automated, dispatched from existing control centers

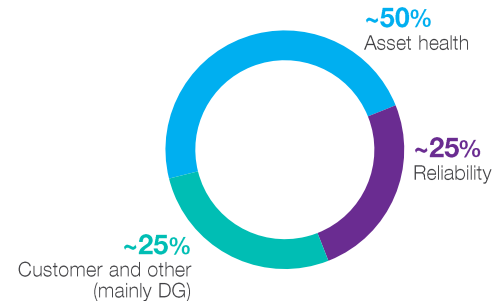




## Significant opportunities enabling the energy transition

- Significant investment across the network
  - highly reliable network and efficient business
- Continued capex growth out to 2023
- Long-term growth drivers
  - asset health half of investment
  - Grid modernization to support renewables
  - digitizing the network for greater efficiency
- Driving benefits for customers and shareholders

### Medium-term capital investment drivers



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## Capital Delivery



US Introduction

US Gas

US Electric

Capital Delivery

Customer

Regulation

Finance

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## RUDY WYNTER

COO WHOLESALE NETWORKS  
& CAPITAL DELIVERY

- Rudolph Wynter oversees businesses with an asset base of \$4.5 billion, including one of the largest electric transmission networks in the northeast, regulated energy storage assets, 3.8GW Long Island generation fleet, and the development and construction of complex capital projects in the company.
- In his more than 25-year tenure at National Grid and its legacy companies, Mr. Wynter has served as senior vice president of US Shared Services and has held senior positions in Customer Operations, Strategic Planning, Engineering, and Operations.
- He is a member of The American Society of Mechanical Engineers, the American Gas Association, and the Edison Electric Institute. He also on the board of the Brooklyn Historical Society. He earned his Bachelors in Mechanical Engineering from Pratt Institute, an MBA from Fordham University, and has completed an executive development program at Harvard University.



## US FERC businesses today

**9,000 miles**

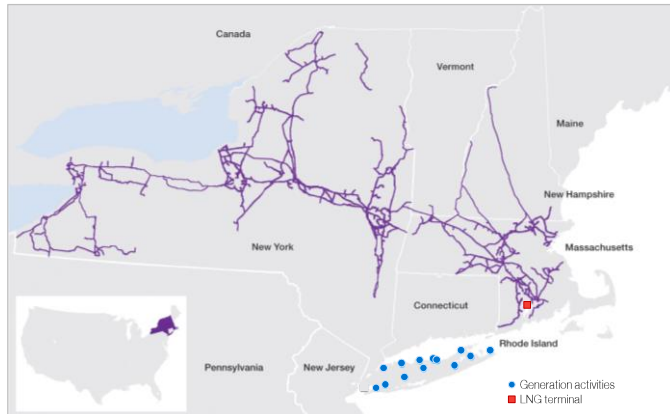
Electricity transmission line  
across Northeastern US

**3.8 GW**

Generation on Long Island

**2.2 bcf**

Of gas capacity from our LNG storage on Rhode Island



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## Operational performance

### Transmission

- Network availability of nearly 100%
- Customer satisfaction over 80% in 2018

### Generation

- Meeting operational, environmental and safety targets

## Financial performance

- Earn an average return of 11.5%
- 13% of total US rate base

## The US business has a record of strong delivery

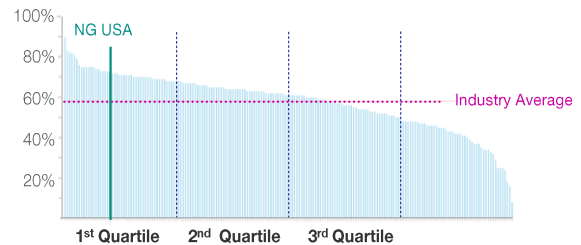
- Capex has more than doubled since FY12
  - rising by nearly \$1bn in the last 3 years alone
- 400 miles of pipe replaced this year
- Continue to deliver complex projects to high standards
  - Providence South Street Substation
  - Metropolitan Reliability Infrastructure
  - Gardenville Substation
- Relentless focus on safety

### US Capex<sup>1</sup> as at 31 March 2019



### Process Safety Performance Top Quartile Performance

National Grid (USA) average compared to 190 Oil and Gas companies



# Shaping a best-in-class Capital Delivery function

## AMBITION

To create a best-in-class Capital Delivery capability function

Our focus areas

Benchmarking



Center of excellence



Investing in our people



Digitalization



Leveraging synergies



# Striving for Capital Delivery excellence

## Benchmarking



- Aligning ourselves to best in class project management standards
- Consult regularly with industry peers and UK colleagues

## Center of excellence



- Evolving the US operating model and creating centers of excellence
- Realizing potential efficiencies of scale
  - saving \$21m on the Suffolk gas reinforcement project



## Investing in our people

- Significant workforce planning challenges facing the industry
- Ensuring we have the right people with the right skills to equip us for the future
- Encouraging and developing the next generation of engineers
- Promoting STEM employment initiatives
- Hiring 7x number of Graduates than in 2015
- Partnering with local schools and colleges



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56

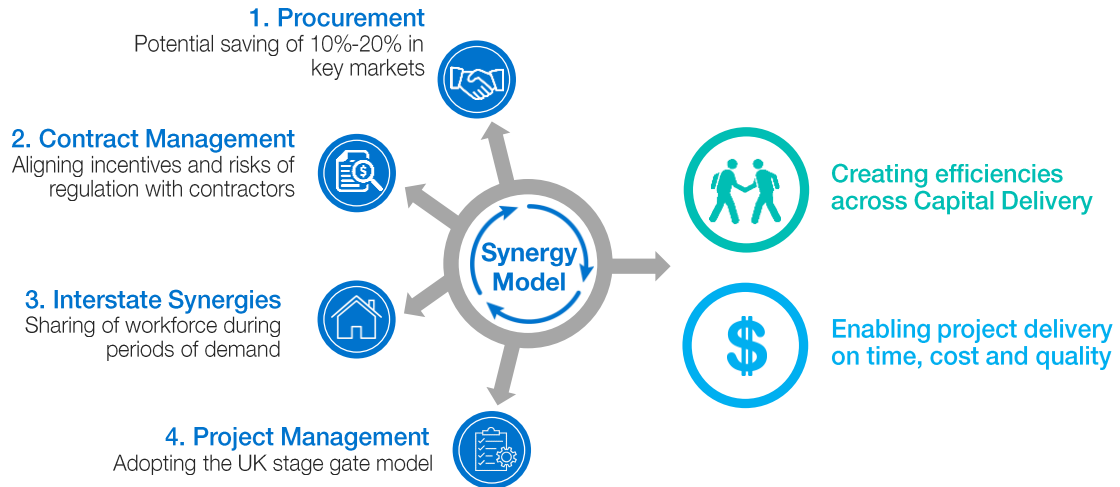


## Enabling our workforce through innovation

- Enabling our people with effective digital solutions
  - project and risk management software
  - workforce scheduling applications
- Our commitment to digitize our transmission substations
- 'Cured in place' liner technology
  - can now recondition 900 feet of pipe in a week
  - up to 7 times quicker than traditional methods
- Cast iron sealing robot technology (Cisbot)



# Leveraging synergies across the Group



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# Delivering on complex construction projects

## Metropolitan Reliability Infrastructure Project

- A \$308m, 6-year project upgrading and modernizing the natural gas system in Brooklyn
- To improve gas systems safety, reliability and operational flexibility
- Installing 7 miles of new 30" gas main through a busy neighborhood
- Remain on schedule and budget despite unexpected re-routing
- Saving \$33m during project development
- Doubling the pace of pipeline replacement



# Delivering for customers and communities

## Gardenville Substation

- Over \$100m investment in modernizing, upgrading and building the Gardenville substation in West Seneca, New York
- Supplying an affordable and reliable source of renewable power for decades to come
- Early engagement with key stakeholders
- Limiting the impact on the local environment
  - reducing disruption in the surrounding area
  - re-using over 30,000 tons of waste
- Commissioned four months ahead of schedule



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60

## Delivering efficiently for customers, communities and shareholders

### Minimizing customer bill impact



Keep bill payer pressure down by offsetting headwinds and growth through efficiency

### A positive relationship with communities



Maintaining strong relationships with communities and stakeholders

### Recovery of return



Maximizing returns by delivering to rate plans

### Driving the decarbonization agenda



Constructing networks for the future



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# Customer experience



US Introduction

US Gas

US Electric

Capital Delivery

**Customer**

Regulation

Finance

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**TERRY SOBOLEWSKI**  
PRESIDENT RHODE ISLAND  
JURISDICTION

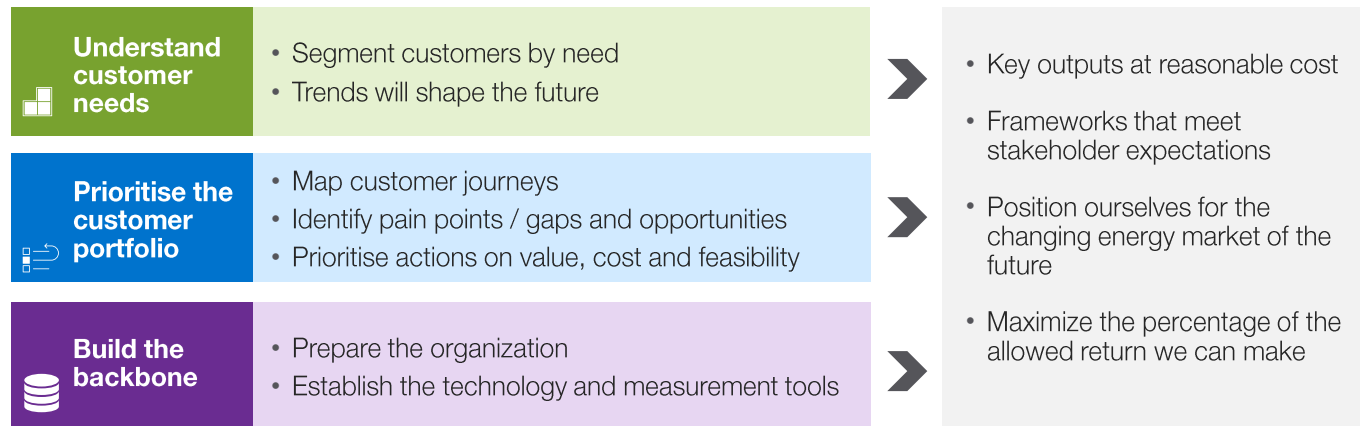
- Terry joined National Grid in August 2011 and is President of the Rhode Island jurisdiction. Previously, Terry served as Senior Vice President and Chief Customer Officer where he was responsible for customer innovation, sales & solution delivery. Additionally, while at National Grid, Terry has held roles in sales and program operations, business planning, and enterprise-wide process and performance improvement.
- Terry currently serves on the Board of Directors for The Alliance to Save Energy as well as the Advisory Board of Duke's Center for Energy, Development and the Global Environment (EDGE).
- Prior to joining National Grid, Terry led East Coast Business Development for SunPower Corporation. Terry also worked for GE Capital in various leadership roles
- He served four years in the US Navy, completing training as a Naval Intelligence Officer, spending the majority of his time with Electronic Warfare, Squadron 130, in Whidbey Island, WA.
- Terry received both his B.S.E. in Mechanical Engineering and his M.B.A. from Duke University.



## Our customer-centric approach

Achieving mutually advantageous outcomes for customers and regulators drives performance and growth

### Actions





# We know our customer base and what they care about

Customers  
Surveyed:  
50k/year

Customer  
Panel:  
6,000  
Residential  
"Advisors"

## Residential segmentation

	EDUCATED ECO-FRIEND	AFFLUENT CONSERVER	HELP WANTED	YOUNG GREEN MOVER	MATURE BASIC	EFFORTLESS INDEPENDENT
<b>Differentiated needs</b>	<ul style="list-style-type: none"> <li>• Energy management solutions</li> </ul>	<ul style="list-style-type: none"> <li>• Mobile app, real-time outage info</li> </ul>	<ul style="list-style-type: none"> <li>• Bill clarity / predictability</li> </ul>	<ul style="list-style-type: none"> <li>• Socially responsible</li> </ul>	<ul style="list-style-type: none"> <li>• Being able to reach a person</li> </ul>	<ul style="list-style-type: none"> <li>• Ease of business</li> </ul>

## Commercial and industrial segmentation

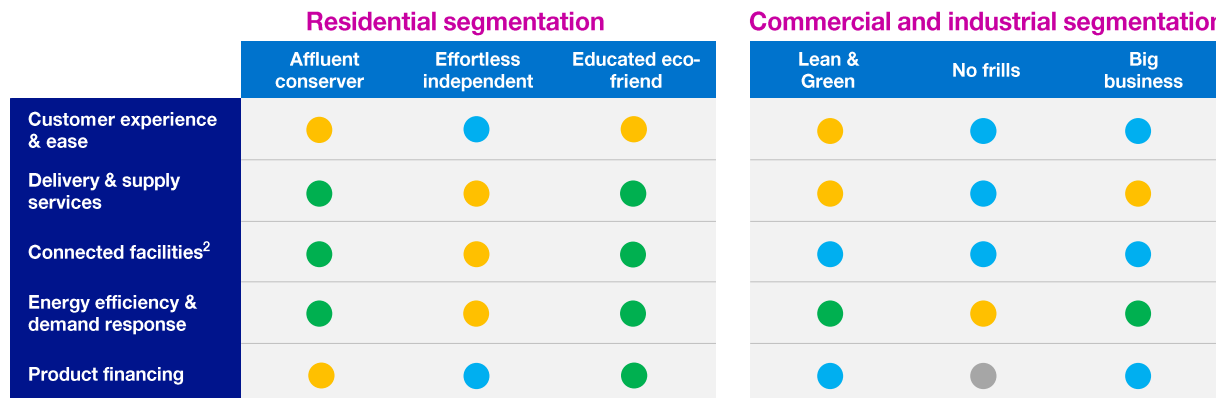
	LEAN & GREEN	SMALL & SEAMLESS	SEEKING SOLUTIONS	NO FRILLS	BIG BUSINESS
<b>Differentiated needs</b>	<ul style="list-style-type: none"> <li>• Tools to reduce peak power usage</li> </ul>	<ul style="list-style-type: none"> <li>• Account management, online &amp; mobile tools</li> </ul>	<ul style="list-style-type: none"> <li>• Advice and info to track usage, savings</li> </ul>	<ul style="list-style-type: none"> <li>• Effective customer service</li> </ul>	<ul style="list-style-type: none"> <li>• Commercial solutions</li> </ul>



# Some customers seek more value in a customized way

Our analysis has identified certain themes that matter more to some customer categories

## Customer interest by portfolio category and segment<sup>1</sup>



**Customer interest level**  
 ● High ● Medium ● Low ● Negligible

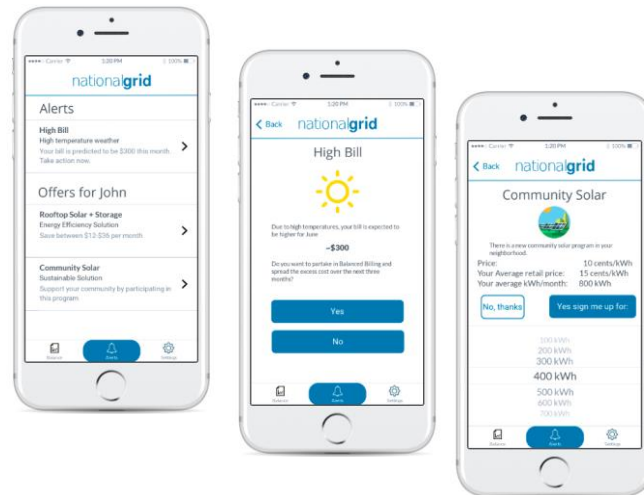
<sup>1</sup> Heat map shading based on ranges of average percent interest in products within the portfolio category  
<sup>2</sup> Includes smart technology-related offerings, e.g. thermostats, appliances and equipment  
 Source: NGUSA Customer Survey results, Oct/Nov 2018



## To be a trusted energy advisor, we must meet customers and stakeholders on their terms

- Online account management options
- Mobile apps and social media
- Real time outage information
- Peak usage tools
- Energy management solutions
  - comfort
  - cost
- Want to talk to a real person
- Three year transformation timeline

### Integrated mobile platform in development



## Investing for customer value and affordability creates value for shareholders: **Personalization**

### We are investing for our customers

- Advance Meter Infrastructure
- Preference Management
- Personalization
- Arrears propensity model

### Personalization Results:

- ✓ Program enrollments ▲24% (avg) through call center
- ✓ Call volume ▼11% for customers who enrolled in programs
- ✓ ▲16% in arrears collection
- ✓ ▲5%+ in trust scores among surveyed customers

### And we are impacting their lives

Signed up **20,000** more low to moderate income customers through Personalization than we would have otherwise reached



# Investing for customer value and affordability creates value for shareholders: Demand Response


## Behavioral demand response in Upstate NY

- Launched “Peak Reduction” Earnings Adjustment Mechanism (EAM) in 2018
- Developed behavioral demand response program for electric customers
- Simply shifting customer behavior significantly lowers peak electricity demand, saving customers money and reducing carbon emissions
- Created \$54m in gross benefits for customers
- National Grid earned \$4.1m on our EAM



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**Tomorrow's the day to curb energy use.**







We're anticipating a high energy demand day tomorrow. It's time to unleash your energy-saving super powers!

Voluntarily saving energy during the hottest days of the year is good for you, the environment and our communities.

**Let's do this!**





**Limit your use between the peak hours of 3-7 pm. Here are some ideas:**

 Turn up your thermostat a few degrees	 Reduce use of window air conditioners by pre-cooling your home
 Use large appliances during non-peak hours	 Use fans to help spread cool air around

**For extra power and cool cash rewards, enroll your qualifying thermostat in Connected Solutions.**

**Enroll today!**

**IMPORTANT SAFETY REMINDER:** Prolonged temperatures of 90°F or higher can lead to heat-related illnesses, especially for the elderly, young children and those with chronic illnesses. More information on heat stress can be found at [nationalgridus.com](http://nationalgridus.com).

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# Regulation



US Introduction

US Gas

US Electric

Capital Delivery

Customer

Regulation

Finance

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## MIKE CALVIUO

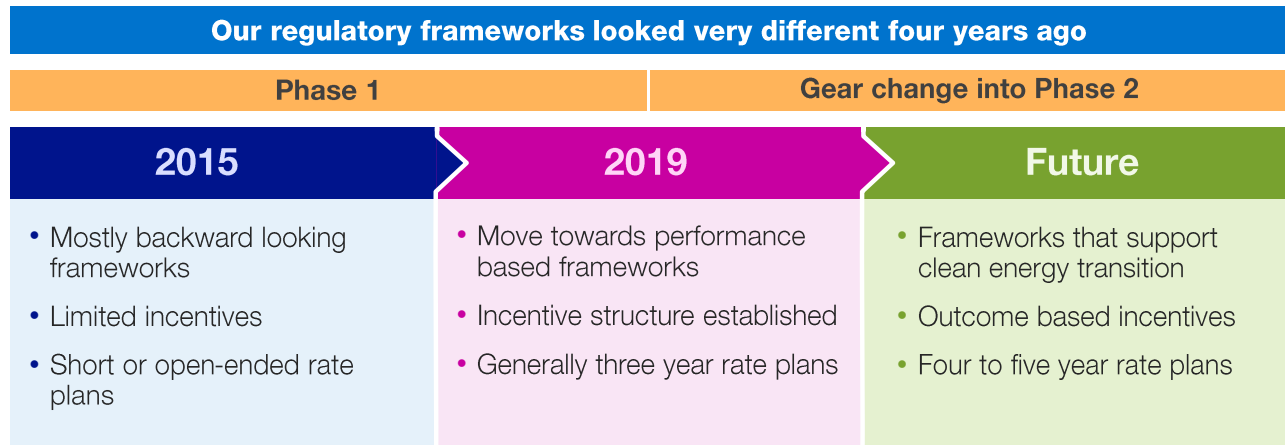
SVP STRATEGY & REGULATION

- Mike has been with National Grid for 29 years and oversees the regulatory and pricing functions across all National Grid's U.S. jurisdictions and operating companies.
- In past roles Mike led all of the customer and commercial activities as well as the strategic design for Great Britain's (GB) electricity and gas transmission networks, and Chaired SO Exec Committee.
- He has also held positions in various capacities in the U.S. and UK, including senior leadership positions in Asset Management, Customer Support, and Strategy.
- University of Cambridge graduate, with a degree in theoretical physics.



## We have evolved our regulatory strategy

Our goal is to develop frameworks that maximise our ability to perform through aligning Policy Maker's goals with customer expectations



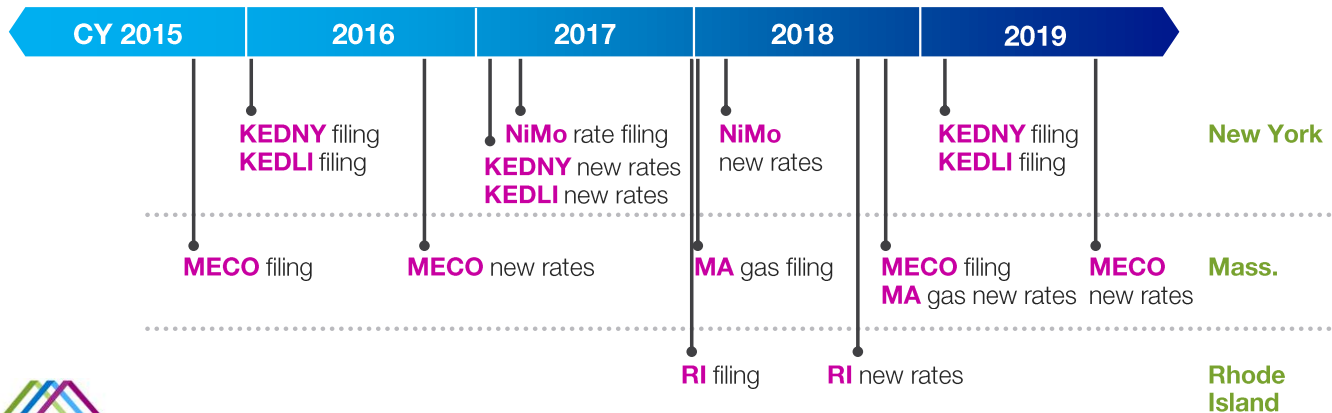
**We are continuing to evolve the frameworks into the future**





## Significant regulatory progress since 2015

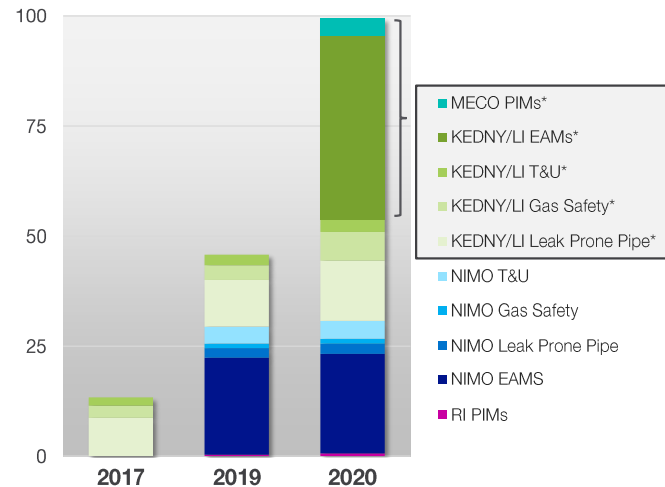
- We have new rates in place at all operating companies
- Extensive engagement with Regulators and other stakeholders
- New rates contributed to \$0.9bn of incremental revenues since FY16



## Regulatory strategy – laying the groundwork for long term performance

- Implemented regulatory frameworks that maximize performance from sharing value with customers
- Over \$40m in annual upside from new performance incentives approved
- An additional \$69m in annual upside in the MECO and KEDNY/LI rate cases
- Moved to multi-year rate plans
- Supported growth in clean energy opportunities

Performance incentive maximum potential (\$m)<sup>1</sup>



\* Proposed incentives not yet approved

1. Does not include upside potential from FCM, LT contracts or gas capacity optimization



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## The next phase of our strategy

**Seeking to build upon the traditional regulatory goals to create new upside opportunities and investment potential**

### Fund the core business

Enable investments in safe, reliable service

### Innovative regulatory frameworks

Align incentives with outcomes and longer term rate plans

### New clean energy investments

Cost-effective clean energy transition

### We have an emerging leadership position in this area

- We are influencing in the US energy policy debate
- Key stakeholders have asked us to share our experience in preparing Future Energy Scenarios
- Proud to take a leadership position to advance the clean energy transition



## Update on current rate cases

### Massachusetts Electric – filed November 2018

- Revenue increase of \$55m with the order expected at the end of September\*
- Key aspects of our filing:
  - 10.5% ROE and 65 basis points of potential Performance Incentive Mechanisms annually by year five
  - new performance based regulation (I-X) regulatory framework with a five year period
  - clean energy investment proposals in energy storage and EV infrastructure
  - new customer program to support redevelopment of midsize urban centers



\*Original revenue increase of \$70m amended to \$55m due to updated expense assumptions; Order expected at the end of September

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76

## Update on current rate cases

### KEDLI / KEDNY – filed April 2019

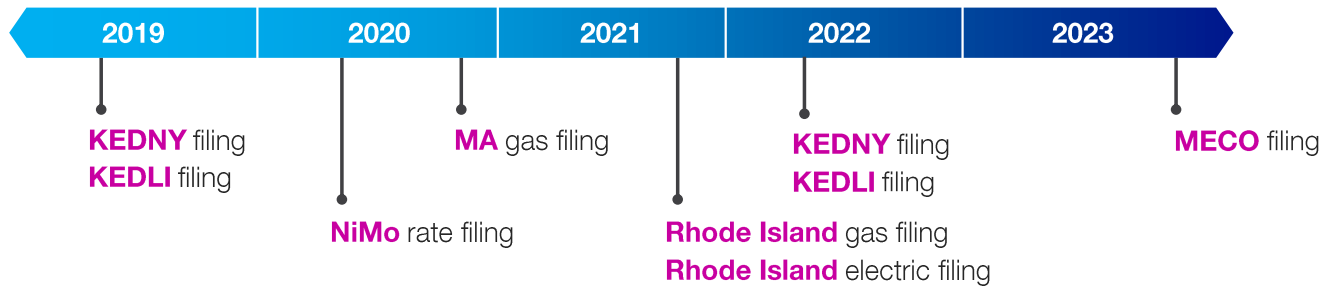
- Revenue increase of \$196m for KEDNY and \$61m for KEDLI\*
- Key aspects of our filing:
  - 9.65% ROE and 140 basis points of potential Earnings Adjustment Mechanisms and incentives annually
  - Future of Heat proposals including Renewable Natural Gas, Green Gas Tariff and Energy Efficiency
  - total four year capital investment requested
    - KEDNY \$4.3bn
    - KEDLI \$2.6bn
  - data provided to facilitate a four year settlement
- PSC staff and Interveners filed their positions on August 30<sup>th</sup> followed by hearings (or settlement discussion)
- Order for rates effective April 1<sup>st</sup> 2020



\*Original revenue increase of \$237m for KEDNY and \$49m for KEDLI were amended to \$196m and \$61m following updated sales forecasts

# Rate case outlook

Over the next few years we will continue to file rate cases across all our jurisdictions



## Multiple proposals to deliver clean energy goals

- Supportive of State decarbonization goals
- Grid Modernization & Advanced Metering
- EV charging infrastructure and energy storage
- Large-scale renewables
- Future of heat
- Distributed generation

These proposals allow us to offer new products and services to our customers



## Summary

- Delivered on our regulatory strategy
- Next regulatory phase
  - long-term rate plans represent a better alignment to the business
  - positioned for new energy opportunities
- Energy transition / decarbonization
  - electric vehicles
  - renewables
  - future of heat
- Customers at the heart of our Regulatory journey



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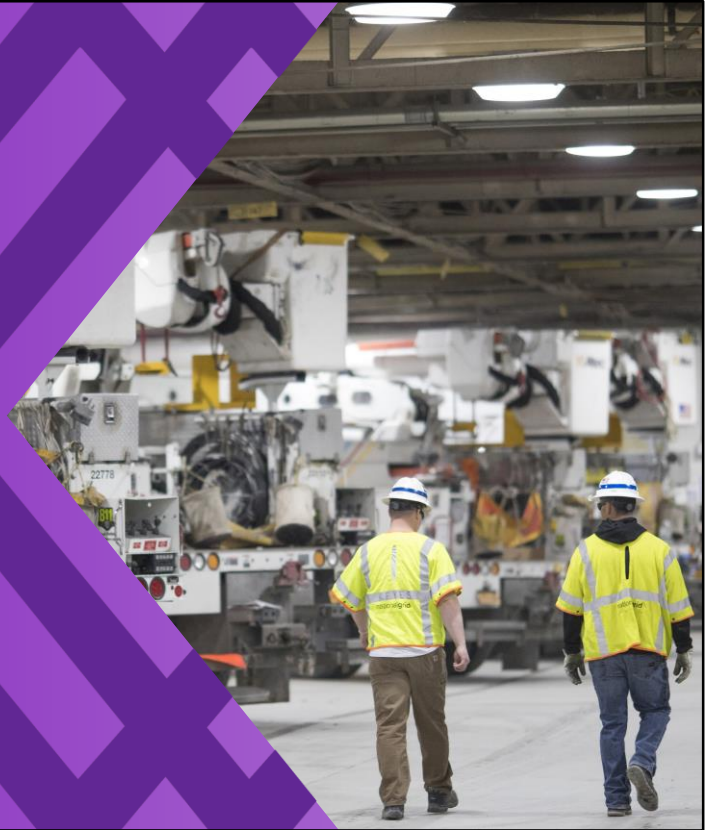


80



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US Introduction

US Gas

US Electric

Capital Delivery

Customer

Regulation

Finance

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## PEGGY SMYTH

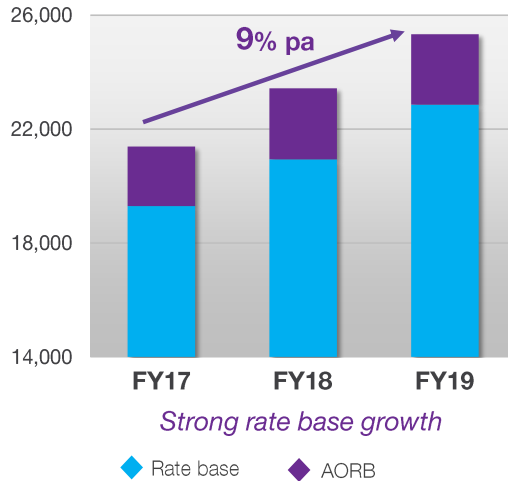
US CFO

- 5 years as National Grid's US CFO
- Previously held senior finance positions at Consolidated Edison, United Technologies and 3M as well as serving as a Senior Managing Partner at Deloitte and Arthur Andersen
- Board member of British-American Business, Etsy, Inc. and two subsidiaries of Mutual of America
- Board Member of the Organization for International Investment, CFO Committee, Edison Electric Institute Finance Committee, WSJ CFO Network and a member of the Executive Committee of the President's Council for Fordham University
- Graduate of Fordham University and holds a master's degree from NYU Stern School of Business as well as Honorary Degree of Doctor of Commercial Science by St. Thomas Aquinas College



# Good progress in US since FY17

US rate base and AORB\* growth (\$m)



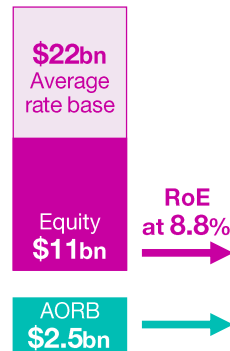
US Achieved RoE vs Allowed (%)



\*AORB – Assets Outside Rate Base, principally Construction Work in Progress (CWIP)

## Rate base growth and improved returns drove strong increase in net income

- US GAAP offers better measure of performance against rate plans and rate base growth compared to IFRS
- US GAAP improves comparability to other US utilities - closer to regulatory accounting



\$m	Year ended 31 March 2019	Year ended 31 March 2018
<b>EBIT</b>	<b>1,864</b>	<b>1,818</b>
Pension interest	(95)	-
Interest*	(457)	(395)
Tax	(345)	(520)
<b>Earnings</b>	<b>967</b>	<b>903</b>
<b>Earnings (incl. AORB) ~\$1,040m ~\$951m</b>		

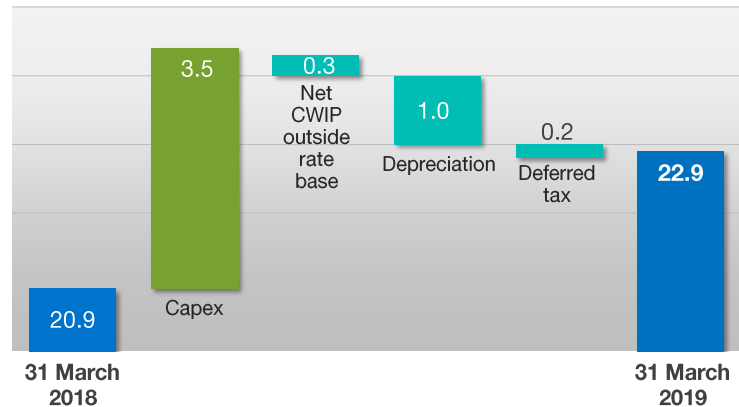


\*Interest assumes 50% leverage. Applying group gearing of 65% increases interest by ~\$100m  
Excludes the impact of the Massachusetts gas work continuation

## How investment flows into rate base

- Net rate base additions for the year around 60% of capex spend
- US tax reform has increased rate base growth by c.100bps

US Rate base growth (\$bn)



## Remuneration for significant projects under construction

- Assets outside rate base (AORB) consist primarily of construction work in progress (CWIP), and regulatory assets/liabilities
- In FY19, CWIP contributed \$2.2bn to AORB and has been growing since FY16 in line with investments

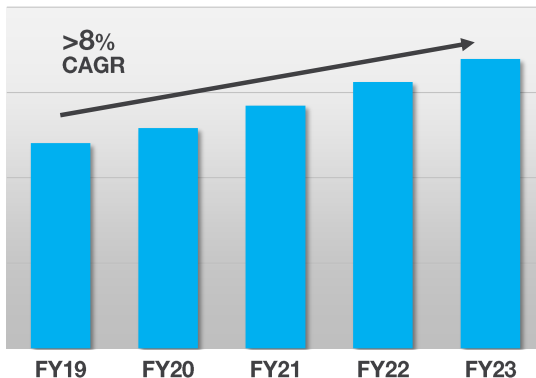
AORB (\$bn)	FY16	FY17	FY18	FY19
CWIP	1.3	1.5	1.9	2.2
Other	0.8	0.6	0.6	0.3
<b>Total</b>	<b>2.1</b>	<b>2.1</b>	<b>2.5</b>	<b>2.5</b>

- Construction periods can range from a month to over a year



## A clear path for sustainable growth

### Closing rate base (\$m)



- Rate base growth of over 8% in the medium term
  - around 80% of investment to modernize aging networks
  - over 85% of investment to FY23 already agreed in rate plans
- GAAP net income growth expected to be at least in line with rate base growth
  - with further upside potential from incentives



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**JOHN PETTIGREW**  
CHIEF EXECUTIVE





## Summary

- Evolving industry needs significant investment
- A strong and growing US regulated business
  - expect rate base growth of over 8% for the medium-term
  - investing to upgrade and modernize aging networks
  - actively enabling decarbonization
- Strong regulatory progress, contributing to improved returns
- Creating long-term value for shareholders by delivering for customers

### Operational focus



Customer affordability  
& experience



Efficiently maximize  
safety, reliability and  
resilience



Deliver digital,  
smarter networks



Enabling  
decarbonization



Invest in talent and  
evolve our operating model



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Q&A

