New England
Stephen Woerner, President, New England
Carol Sedewitz, VP Electric Asset Management & Engineering, New England
Welcome and overview

National Grid New England 35% of the NGUSA business

11,000 miles of pipeline
21,000 miles of electric lines

MA state climate goals

85% reduction in GHG emissions by 2030
NET ZERO by 2050

2.2m Customers
$1.2bn FY21 Capex
$8.6bn FY21 Rate Base

NET ZERO by 2050

Waltham, Massachusetts

Electric and Gas
Electricity transmission network
New England

How New England aligns to the Group 5-year financial framework:

- Capex spend of $10bn (£7bn)
- Rate base growth of 8% CAGR
- Earnings growth of 8% CAGR

Delivered through:

- Focus on efficiency
- Modernizing our networks
- Strong growth opportunities

New rates for our distribution businesses:

- Alignment with environmental aims
- Good sight on delivering efficiencies
- Capex visibility out to 2024 (electric) and 2026 (gas)
Driving efficiency across the business
Efficiency is key to operational performance and customer affordability

New England share of Group efficiency programme – £125 million over 3 years

- Minimise customer bill impact
- Control costs
- Perform against our regulatory allowances

Achieve this across gas and electric through:
- Digitalising and automating our work processes
- Enhancing work and asset management capabilities
- Reducing external spend

Enabling us to deliver: **Investing affordably for our customers**

- **95% ROE target** for shareholders
Our growth opportunities

Our sources of growth in New England

- Gas Distribution
- Electric Distribution
- Electric Transmission

Crucial to delivering the affordable energy transition

New England
£7bn capital investment, FY22 to FY26
Growth opportunities
Gas Distribution

Investing right now to enable the energy transition

- 40% of investment will be in gas distribution
- Capex agreed with regulators
- 80% of ongoing investment to deliver safe, reliable network

Filing company plan in March to support State’s climate goals

New England
£7bn capital investment, FY22 to FY26

£3bn investment trend to continue in Massachusetts

Fully engaged in the Future of Heat debate
Growth opportunities
Leak Prone Pipe (LPP) Replacement Work

Major part of ongoing gas capex

- LPP accounts for **£2.6 billion** over the next five years
- Ageing pipeline network
- LPP program has been running since 2012 – another 15 – 20 years to go
- We have reduced **CO₂ equivalent emissions** by **29,000 metric tonnes**
- Clean gas projects (Renewable Natural Gas and hydrogen) to support heat decarbonisation
Growth opportunities
Electric Distribution and Transmission

Investing right now to enable the energy transition

- Strengthening our network to deliver **safe, reliable** and **cost-effective** service
- Facilitating **electrification of state**

**New England**
£7bn capital investment, FY22 to FY26
Growth opportunities
Electric Distribution and Transmission

Storm Hardening Network Reinforcements

Massachusetts Storm Events 2013-2020

$350m spend annually on resiliency across transmission and distribution

73% of our 18,000 miles of distribution lines are above ground

Innovative and Digital Investment

From annual cycle of tree cutting...

...to using Vegetation Management Optimisation (VMO) tool to prioritise cutting

This means less cutting, and lower costs to deliver reliability
As part of overall Transmission 10-Year Workplan, there are key transmission projects planned to reinforce the backbone of the transmission system:

- **5 key projects**
  - ~$900m
- **171 miles** of transmission lines to be reinforced

New England
£7bn capital investment, FY22 to FY26
Growth opportunities
Electric Transmission

Major East to West Transmission Lines

- Replacement of 4 of the 5 x 69kV circuit projects in MA
- Adding:
  - Resiliency
  - Digitalisation to the network
  - Renewable Capacity

- 60 miles of 69kV to a 115kV standard
- 67 miles of 69kV to a 115kV standard
Growth opportunities
Enabling the network of the future – filings outside of our base rates

Grid Modernisation Program
- Reducing network losses
- Minimising demand
- AMI (Smart meter) infrastructure

$700m over 4 years

Progress towards the Massachusetts grid clean energy modernization targets

Significant investment opportunity for National Grid

Awaiting regulatory approval in summer 2022

FLISR
Fault, Location, Isolation and Service Restoration Project

- Locates network faults precisely
- Isolates the fault ‘event’ rapidly
- More effective and efficient deployment of field crews
- Minimises the time customers are disconnected

Plan to implement on 50% of distribution circuits by 2031
Growth opportunities
Enabling the network of the future

Current progress

Phase I

- ~1,400 charging points installed under ‘Make Ready Program’
- Performance Incentive Mechanism threshold of 680 stations met ($1m)

Phase II

- 500 customers participating in off-peak charging program
- 133 EV participants in Connected Solutions Program

New proposal

MA Phase III EV Proposal

- Filed 14th July – $275m
- Largest NG group EV proposal
- To deploy more than 30,000 charging points

And:
- public, workplace residential upgrades
- as well as provide rebate for school buses
Delivering growth in New England

Investment driven by
- Regulatory agreements
- Growth opportunities
- Efficiency programme

New England to target £125m efficiency savings over the next 3 years to deliver flat, controllable costs

FY22 to FY26
- Capex $10bn (£7bn)
- Rate base growth 8% CAGR
- Underlying profit growth 8% CAGR
GROWTH OPPORTUNITIES

Electric Distribution
- Leak prone pipe replacement (15-20 year program)

Electric Transmission
- 10 year workplan, reinforcing the network

Grid Mod
- Network facing investments, AMIs (Smart meters)

Electric Vehicles
- 10 year workplan, reinforcing the network

A strong outlook – long term growth fundamentals