Agenda

Welcome
Andy Agg
Chief Financial Officer

Delivering with real impact
Rudy Wynter
President, New York, National Grid

Our Clean Energy Vision
Ben Wilson
Chief Strategy and External Affairs Officer
& Bryan Grimaldi
Vice President, Corporate Affairs, New York, National Grid

Q&A
hosted by Rudy Wynter

Coffee break
An integrated approach for a clean energy future
Cordi O’Hara
President, National Grid Ventures

National Grid Partners
Lisa Lambert
President, National Grid Partners

Q&A and closing remarks
Rudy Wynter
nationalgrid

US Investor Event
Real solutions for a fossil-free future

Andy Agg
Chief Financial Officer
national grid

US Investor Event

Real solutions for a fossil-free future
Rudy Wynter
President, National Grid New York
nationalgrid

US Investor Event

Delivering with real impact
Overview

New York

Principal offices
- Syracuse
- Brooklyn

Electricity transmission network

3 Operating Companies
8K Employees
4.1m Customers
$2.6bn FY22 Capex
$17.0bn FY22 Rate Base 8% growth from FY21
Delivering net zero – New York State targets

Climate Leadership and Community Protection Act (CLCPA)

- 100% zero carbon electricity by 2040 (85% by 2030)
- Reduction of at least 85% below 1990 levels GHG emissions by 2050

New York State goals by 2050

- Onshore wind ~10 GW
- Offshore wind ~20 GW
- Solar ~60 GW
- Storage ~20 GW
- 100% zero emission vehicles
- 100% zero carbon electricity by 2040 (85% by 2030)
- Reduction of at least 85% below 1990 levels GHG emissions by 2050
Progress on operational priorities
Consistently achieving 95% of allowed RoE and 7-8% asset growth

Underlying operational delivery (FY22)

Excellent reliability across our networks
- Hit our reliability goals for the 14th consecutive year

Achieved ROE 8.8%
- 99% of allowed return

Capital Investment increased by $300m to $2.6bn
- Rate base growth of ~8%

Managing our controllable costs
- Delivering on our contribution to the Group efficiency program

![Graph showing New York Regulated RoE Performance](image-url)

- Nominal RoE % (solid lines)
- % of allowed RoE (dotted line)

Key performance indicators:
- Edison Electric Institute (EEI) Emergency Response Award 2021 ReliabilityOne Award for Outstanding Service
- Achieved ROE 8.8%
- 99% of allowed return
- Capital Investment increased by $300m to $2.6bn
- Rate base growth of ~8%
- Managing our controllable costs
- Delivering on our contribution to the Group efficiency program
Electric Distribution
- 80% of investment is mandated for safety and reliability
- Leak-prone pipe replacement

Gas Distribution
- Mandated investment
- Storm hardening
- Increased electrification

Electric Transmission
- Upgrading transmission to build New York’s 'Green Super-Highway'

New York
£10bn capital investment, FY22 to FY26

US
£17bn capital investment, FY22 to FY26

2/3rd of New York capex is aligned with EU Taxonomy principles of sustainable investment
Forward look to 2026

Driving Growth
- Strong investment drivers to maintain safety and reliability
- Strong capex drivers to help deliver the energy transition

Driving Efficiencies
- New York targeting £175m savings over the next 3 years
- ~£45m delivered since FY21

Driving Innovation
- Through strong partnership with NGP
- ‘Linevision’ – increasing grid flexibility, managing congestion
- AI - ‘Urbint’, using AI to increase safety; vegetation management

FY22 to FY26

Rate base growth
8% CAGR

Underlying profit growth
8% CAGR
A responsible business at the heart of the energy transition

A fair and equitable energy transition across New York State

Delivering for our customers
- Minimizing customer bill impacts
- Support through COVID
- Over $100m in energy efficiency programs
- New York State ‘Solar-For-All’ program

Stronger collaboration with stakeholders
- Equity in Energy summit
- NYC Pathways to Decarbonization Report

Working with our people
- Improving our safety performance
- A diverse, inclusive and equitable workplace
- Hiring and developing skills for a net zero workforce
Project C - #StandForC

Our program to create a more equitable future for every customer in every community we serve

- Supported 6,000 small businesses across New York
- Workforce training for 400 underprivileged children
- $7m support to initiatives across New York
- Supporting 85 community partners & groups
- 15,000 volunteering hours targeted

• Helping revitalise areas we serve by supporting energy, education and development projects
• Providing Technical Assistance Grants to support small, local businesses
• Preserving and sustaining local parks through our Adopt A Park initiative
Delivering for New York State

Strong operating performance

Strong financial performance

Significant growth opportunities

A clean energy future
Thank you

Delivering with real impact
Heat is a large part of energy consumption

A better way to net zero

Our plan for a fossil free future rests on four pillars

Pillar 1
Energy efficiency in buildings

We will continue to provide programs for our customers to accelerate energy efficiency improvements to buildings, including deep retrofits and measures that reduce peak gas and electric demand; and support more rigorous building codes for new buildings.

Pillar 2
100% fossil-free gas network

We will eliminate fossil fuels from our existing gas network no later than 2050 by delivering renewable natural gas (RNG) and green hydrogen to our customers.

Pillar 3
Hybrid electric-gas heating systems

We will support our customers by providing them strategies and tools to capture and maximize the benefits of pairing electric heat pumps with their gas appliance.

Pillar 4
Targeted electrification & networked geothermal

We will support cost-effective targeted electrification on our gas network, including piloting new solutions like networked geothermal. We will support customers who heat with oil and propane with strategies and tools to convert to heat pumps.
Benefits of a hybrid approach

Our vision is a more practical and achievable pathway to net zero for our customers

- **Lower cost:** Provides ~15 - 25% lower heating cost for customers
- **Leaves no customer behind:** Supports equitable outcomes for all customers by avoiding large, upfront retrofit costs
- **Leverages existing infrastructure:** Requires less electric infrastructure by leveraging existing gas network and customer heating infrastructure
- **More resilient and reliable:** Not all eggs in one basket
- **Less gas on a winter peak day:** Our plan uses less gas than high electrification during peak cold periods.
- **Utilizes skill set of our existing workforce:** Empowers gas workers to use skill set to achieve our shared net zero goals.
- **More likely to reach net zero by 2050:** Practical and achievable.

Leaves no customer behind: Supports equitable outcomes for all customers by avoiding large, upfront retrofit costs

Leverages existing infrastructure: Requires less electric infrastructure by leveraging existing gas network and customer heating infrastructure

More resilient and reliable: Not all eggs in one basket
The vital role of our gas network

<table>
<thead>
<tr>
<th>TODAY</th>
<th>2025</th>
<th>2030</th>
<th>2040</th>
<th>2050</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fossil-Free Gas</td>
<td>2%</td>
<td>10%</td>
<td>35%</td>
<td>100%</td>
</tr>
<tr>
<td>H₂</td>
<td>Neighbourhood demonstrations</td>
<td>Community scale projects</td>
<td>20% blend (target areas)</td>
<td>30% blend (100% clusters)</td>
</tr>
<tr>
<td>Neighbourhood demonstrations</td>
<td>2% blend</td>
<td>10% blend</td>
<td>30% blend system-wide</td>
<td>70% blend system-wide</td>
</tr>
<tr>
<td>Customer Count</td>
<td>100%</td>
<td>100%</td>
<td>95%</td>
<td>90%</td>
</tr>
<tr>
<td>Total Gas Demand</td>
<td>98%</td>
<td>95%</td>
<td>80%</td>
<td>45%</td>
</tr>
</tbody>
</table>

A stable customer count means our gas network will play a key role in the energy transition to 2050 and beyond.
RNG supplies are growing significantly

- RNG supply in the US is growing
  - Over 250 RNG facilities operating in the US and Canada today
  - A further 110 are under construction

- RNG potential includes landfill gas, wastewater, food and agricultural waste, forestry residue – not energy crops

- Existing pipeline infrastructure can deliver volumes into the Northeast

- RNG lifecycle emissions are CO₂ negative
  - -10 to 0kg CO₂e/MMBtu

Source: S&P Global
Evidence suggests RNG scale is achievable

- We account for 15% of residential and commercial gas demand in Eastern US
- To achieve our plan, we need to procure 10-20% of Eastern US RNG potential

### National Grid Request For Information (RFI), May 2022

- To validate estimates of RNG resource potential
- Covers RNG and hydrogen projects in or pre-development
- Responses received in June

#### Forecasted RNG supply in Eastern US region (TBtu/yr)

- **2030**
  - Low: 325
  - High: 665

- **2040**
  - Low: 685
  - High: 1,500

#### Required for Fossil-Free

- 10-20% of Eastern US RNG potential in 2030
- 5-15% of Eastern US RNG potential in 2040

Planned offshore wind can jumpstart green H$_2$ production

<table>
<thead>
<tr>
<th>Green Hydrogen for fossil free building heat in US Northeast by 2050</th>
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<tbody>
<tr>
<td>240 TBtu</td>
</tr>
<tr>
<td>170 TBtu</td>
</tr>
<tr>
<td>Rest of Northeast gas LDCs*</td>
</tr>
<tr>
<td>70 TBtu</td>
</tr>
<tr>
<td>NGUSA</td>
</tr>
<tr>
<td>Fossil Free</td>
</tr>
</tbody>
</table>

Policy expectation in New York and New England by 2050

- **40 GW** Offshore wind capacity by 2050
- **21 TBtu** Hydrogen through electrolysis

Further offshore wind capacity required in New York and New England by 2050

- **22 GW** Further offshore wind capacity required by 2050
- **219 TBtu** Hydrogen through electrolysis

Assumes (a) a 50% load factor for offshore wind generation, (b) 40GW supplies 5% of generation for hydrogen production; incremental 22GW supplies 100% generation dedicated to hydrogen production, (c) 70% electrolysis efficiency, 3.41 TBtu per TWh.

*Local Distribution Company*
A hybrid pathway means less electric capacity requirements
Lowering costs to customers

- Hybrid requires less new electric infrastructure
  - even when taking into account green hydrogen production

- Hybrid avoids nearly ~70 GW of new generation and transmission versus a full electrification pathway

- This is more than today’s NYISO/ISO-NE generation fleet

2050 NYISO/ISO-NE installed electric capacity for economy-wide load (GW)

- Today: 70
- Hybrid: 186
- Full Electric: 280


We’ve started on this journey

We can’t achieve this by ourselves – we are:

- Working with policymakers and regulators in New York and Massachusetts to realise this ambition
- Engaging with all stakeholders and interested parties to seek support for our vision
Bryan Grimaldi
Vice President Corporate Affairs, National Grid New York
We have a diverse gas customer base in New York

- We serve over 2.5 million gas customers across New York State
- We serve a diverse customer base:

<table>
<thead>
<tr>
<th>The communities we serve</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Queens</td>
<td>One of the world’s most ethnically diverse areas</td>
</tr>
<tr>
<td>Brooklyn</td>
<td>Most populous borough in NYC with 2.7m people</td>
</tr>
<tr>
<td>Syracuse</td>
<td>Highest child poverty in US among cities with at least 100,000 people (48.4%)</td>
</tr>
<tr>
<td>Albany</td>
<td>National leader in nanotechnology and longstanding presence of IBM and General Electric</td>
</tr>
<tr>
<td>Staten Island</td>
<td>Second highest median income of NYC boroughs after Manhattan</td>
</tr>
</tbody>
</table>

New York gas customers

- New York City
- Upstate New York
- Long Island

2.5m
A hybrid pathway is more affordable

Lower costs for our customers

- By 2040, a hybrid pathway could mean 15-20% lower heating costs versus a full electrification pathway

- Progressive blending of clean gas over time keeps commodity costs manageable

- Increased building efficiency and avoided electric infrastructure investment also mitigates customer impact

### Annualized total energy spend for a typical customer in 2040 (2021 $)

<table>
<thead>
<tr>
<th></th>
<th>Full Electrification</th>
<th>Dual Fuel Heat</th>
<th>100% Gas Heat</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heating cost</td>
<td>$5,100</td>
<td>$4,300</td>
<td>$4,100</td>
</tr>
<tr>
<td>($800)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>($1,000)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Heating equipment</th>
<th>Electric heating bill</th>
<th>Electric transport cost</th>
<th>Gas heating bill</th>
<th>Other electric costs</th>
</tr>
</thead>
</table>

### Notes:

- By 2040, a hybrid pathway could mean 15-20% lower heating costs versus a full electrification pathway.
- Progressive blending of clean gas over time keeps commodity costs manageable.
- Increased building efficiency and avoided electric infrastructure investment also mitigates customer impact.

Sources:

2. In 2021, US Department of Energy launched the “Hydrogen Earthshot” initiative to reduce H2 commodity costs (excluding delivery) to $7/MMBtu by 2030 (an 80% reduction vs today); Lazard “Levelized Cost of Hydrogen” 2021
The Northeast cannot electrify everything by 2050

To electrify every single household would require the electrification of 9 million households by 2050

Building stock presents challenges to electrification
- particularly in urban areas where National Grid operate gas networks

A hybrid pathway is more practical
Building stock limitations prevent full electrification, particularly in urban areas

“Ease of Electrification” for US Northeast building stock (% of square footage)

<table>
<thead>
<tr>
<th>Location</th>
<th>Harder</th>
<th>Easier</th>
</tr>
</thead>
<tbody>
<tr>
<td>NYC</td>
<td>29%</td>
<td>10%</td>
</tr>
<tr>
<td>LI</td>
<td>29%</td>
<td>11%</td>
</tr>
<tr>
<td>Boston</td>
<td>13%</td>
<td>11%</td>
</tr>
<tr>
<td>NY ROS¹</td>
<td>12%</td>
<td>9%</td>
</tr>
<tr>
<td>MA ROS¹</td>
<td>14%</td>
<td>6%</td>
</tr>
</tbody>
</table>

% difficult to electrify
- NYC: ~70%
- LI: ~40%
- Boston: ~30%
- NY ROS¹: ~20%
- MA ROS¹: ~5%

Source: ARUP Building Stock Assessment for National Grid (2021)
¹ NY ROS and MA ROS reflect data for ‘rest of state’, excluding NYC and Boston.
How we are advocating to deliver the key outcomes in New York, Massachusetts and District of Columbia

1. **Demonstrating thought leadership** at events and in the media, led by our executives and subject matter experts.

2. **Engaging deeply with elected officials and regulators** to develop the supporting regulatory framework.

3. **Building coalitions** of allies to engage key stakeholders.

4. **Transforming our media strategy** and storytelling to be more proactive, building trusting relationships with reporters & outlets.

5. **Generating community interest** by increasing our presence in civic activities, community investment and events.
We have generated support from key groups…

**UNIONS**

“The National Grid vision protects good union jobs, creating new opportunities for the future of energy and paving the way to long-term economic growth”

– Constance Bradley, AFL-CIO TWU Local 101

**BUSINESS GROUPS**

“[We] are eager to partner on actionable, practical solutions like this that will get us to net zero at the most affordable cost for our residents and businesses”

– Bob Rio, Associated Industries of Massachusetts

**ACADEMIA**

“National Grid’s plan will enhance system reliability while simultaneously reducing the economy’s emissions of the destructive greenhouse gas methane”

– Tristan Brown, SUNY
...with positive stakeholder feedback

“The business community supports the steps that National Grid is taking to eliminate fossil fuels in a sustainable way that ensures affordable and reliable energy for all New Yorkers.”

Kathryn Wylde
President & CEO, Partnership for New York City

“I commend National Grid for taking a lead in the region in trying to balance our energy goals with affordability.”

Hon. Joseph C. Borelli
Minority Leader, New York City Council

“The National Grid vision protects good union jobs, creating new opportunities for the future of energy and paving the way to long-term economic growth.”

Constance Bradley
President of TWU Local 101

“Their [National Grid] plans to eliminate fossil fuels is a tremendous step in our continued efforts to transform our energy sector.”

Hon. Michael Cusick
Chairman of the Assembly Energy Committee, New York State Assembly
We are already on the pathway to a clean energy future

**Today**
- Delivering safe, affordable, and reliable heat
  - Investing in network modernization

**2022-2025**
- Set foundation to transition to fossil-free heat
  - Support legislative and regulatory policy framework

**2030**
- Scale a broad set of solutions
  - Serve 10-20% of gas demand with RNG

**2040**
- Wide adoption of fossil-free heating solution
  - Blend 20% green hydrogen and 30% RNG

**2045**
- Net zero economy-wide emissions
  - Continue to accelerate deployment of fossil free gas

**2050**
- 100% fossil-free heat
  - 100% fossil-free heat
Clean Energy Vision
National Grid Partners
Coffee Break
Cordi O’Hara
President, National Grid Ventures
An integrated approach for a clean energy future
Overview of National Grid Ventures

National Grid Ventures is at the forefront of the energy transition. We operate in competitive energy markets in the UK and US.

We develop, own and operate the large-scale clean energy infrastructure that will accelerate society’s drive towards net zero while at the same time helping to maintain security of supply today.

£2-3bn
Capex
FY2022-26

UK

8GW interconnector portfolio
Grain LNG import terminal – largest in Europe

US

1.3GW US onshore renewables
3GW US offshore wind capacity potential
3.8GW Long Island generation capacity
Delivering net zero – New York State targets

Climate Leadership and Community Protection Act (CLCPA)
- 100% zero carbon electricity by 2040 (85% by 2030)
- Reduction of at least 85% below 1990 levels GHG emissions by 2050

Leading partnership for Northeast Hydrogen Hub proposal with MA, NJ, and CT

New York State goals by 2050
- Onshore wind: ~10 GW
- Offshore wind: ~20 GW
- Solar: ~60 GW
- Storage: ~20 GW
- Hydrogen
- 100% zero emission vehicles (EVs)
We envision buildings powered by offshore wind and solar, and heated by green hydrogen. Energy stored by batteries and transported through modernized transmission networks.
Our unregulated positions in the US provide reliable and affordable electricity today and we are investing in renewable generation for the future.

- Under contract with LIPA* until 2028
- CLCPA 100% zero carbon electricity by 2040
- In active discussions with LIPA:
  - Re-contracting
  - Asset repurposing

National Grid operates 3.8GW of generation capacity on Long Island.

*LIPA – Long Island Power Authority
We are investing in key partnerships that will advance clean electricity provision and enable transmission in order to meet state goals.

**Onshore Renewable JVs:**
- Large scale onshore solar and wind through National Grid Renewables
- Solar & battery projects on Long Island with NextEra

**Community Offshore Wind:**
- 3GW capacity seabed lease - located between New York/New Jersey
- Joint venture with RWE, bringing unparalleled expertise in offshore wind, the local transmission system, and siting major infrastructure projects in the northeast US

**NY Transco JV:**
- Proposed by our JV NY Transco to add 3 to 6 GW of transmission capacity between Long Island and the main NY system.
Pursuing a Hydrogen Hub
We envision buildings powered by offshore wind and solar, and heated by green hydrogen. Energy stored by batteries and transported through modernized transmission networks.
This new future creates optionality to develop the clean energy hubs of the future for the communities we serve

We recognize the impact infrastructure development has on communities and are putting them first in the energy transition.

Our projects grow local economies, create jobs, contribute tax revenue, and lift up communities in the northeast US.

We are engaging with the people that live in the towns where we will be making clean energy investments and we want to improve their neighborhoods.
An integrated approach for a clean energy future

NG Ventures is complementary to the regulated business

Long Island is uniquely positioned to become an integrated clean energy hub

We are innovating right now to accelerate the transition to clean energy
Lisa Lambert
President, National Grid Partners
Decentralization

Digitization

Decarbonization

Investing

Venture acceleration

Business development

Innovation
National Grid strategic directive for innovation drives formation of NGP

Hundreds of 1:1 meetings, Town Halls, Round Tables, Listening Tours

External launch of NGP and announcement of first 5 investments

Added more disruptive investments to our portfolio

Created Innovation Center of Excellence (CoE) forming new Horizon 3 businesses

2018

2019

Launched NextGrid Alliance (NGA) and commenced events

Delivered strong financial returns – first two exits
Innovation CoE launched first disruptive innovation project and BU rollout

2020

Scaled up Venture Acceleration function (Venture Fellows, Power Tuesdays, Sprint Teams, US Core Pilot, Advisory Boards, Secondments)

2021

NGP Advisory board launched and expanded scope of ToR to include all functions in strategic impact

Continue with strong financial returns AND announced $150m in new funds – two additional exits

2022

Decarb partnership and investment strategy rollout

Two more exits
<table>
<thead>
<tr>
<th><strong>$345m</strong> deployed</th>
<th><strong>100+</strong> years’ investing experience</th>
<th><strong>125+</strong> years’ utility experience</th>
<th><strong>44</strong> investments</th>
<th><strong>6</strong> successful exits</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>50%</strong> lead investor</td>
<td><strong>75%</strong> strategic engagements</td>
<td><strong>38%</strong> gross IRR</td>
<td><strong>20%</strong> net IRR</td>
<td><strong>85</strong> NG Alliance companies</td>
</tr>
</tbody>
</table>

**Demonstrated track record of success**
TS Conductor involves a carbon composite core encapsulated by an aluminum layer providing improved efficiency in transmission and distribution through reduced line losses.
Viridi Parente deploys safe lithium-ion technology into applications that have been historically dominated by fossil fuel energy sources.

200+ Green machine units currently in use

1MWh Of back up power through battery storage

50% Quieter than diesel alternatives
Exodigo is a revolutionary, non-intrusive subsurface imaging platform, providing a digital geolocated 3D map of buried assets. It combines multi-sensor fusion and artificial intelligence to dramatically improve accuracy and time to map, which reduces damages and costs associated with unnecessary excavation.
Mega trends

- Decarbonization
- Decentralization
- Digitization

Investment categories

- Customer-focused solutions
- Modern assets & operations
- Utility of the future
- Smart enterprise

Enabling Technologies

- IoT
- Connectivity
- Data analytics
- Storage cloud
- Material science
- AR/VR
- Blockchain
- Simulation
- Robotics
- Remote sensing
- Cloud
- Cloud
- Cloud
Urbint uses AI to predict safety threats, enabling companies to optimally deploy resources to mitigate risk and stop safety incidents before they happen.

- 40% of parent customers use multiple solutions
- 70 unique product customers
- 30%+ reduction in damages

Urbint
LineVision is securing the future of the grid by enabling utilities to improve transmission line capacity, resilience, and safety through advanced non-contact sensors and analytics.
Financial performance

For early exits
Cash-on-cash ~2x
IRR 25% -150%

Up-rounds

15x
Step-up since initial investment

10x
Step-up since initial investment

Unicorns
($>1bn valuation)

Expected breakout investments

Expected above-market performers
Decarbonization will require transformative leaps in clean energy investment and innovation.

The IEA estimates we need to 4x current investment spend to $4tn by 2030 and continue that annually to achieve net zero by 2050.

Together We Can Get There Faster

- Helping to drive National Grid’s clean energy vision
- Launching the NextGrid Alliance helps us convene the industry in order to accelerate the path to Net Zero

Strong Team Chemistry and Utility Experience

- A strong team with over 2 decades of experience investing together and deep knowledge of the workings of a utility
- A process and drive for both financial and strategic returns through our investment thesis
- Connecting the startup landscape to the utility industry

Global Impact

- Sharing knowledge and ideas with over half of the world’s leading utilities through the NG Alliance
- Through regular working groups, peer-to-peer learnings, round tables and the NGA Summit, we are helping to make change on a global scale

Thank you

National Grid Partners
at the heart of
a clean, fair
and affordable
energy future