

**nationalgrid**

HERE WITH YOU. HERE FOR YOU.




## Investing in Upstate New York's Energy Future

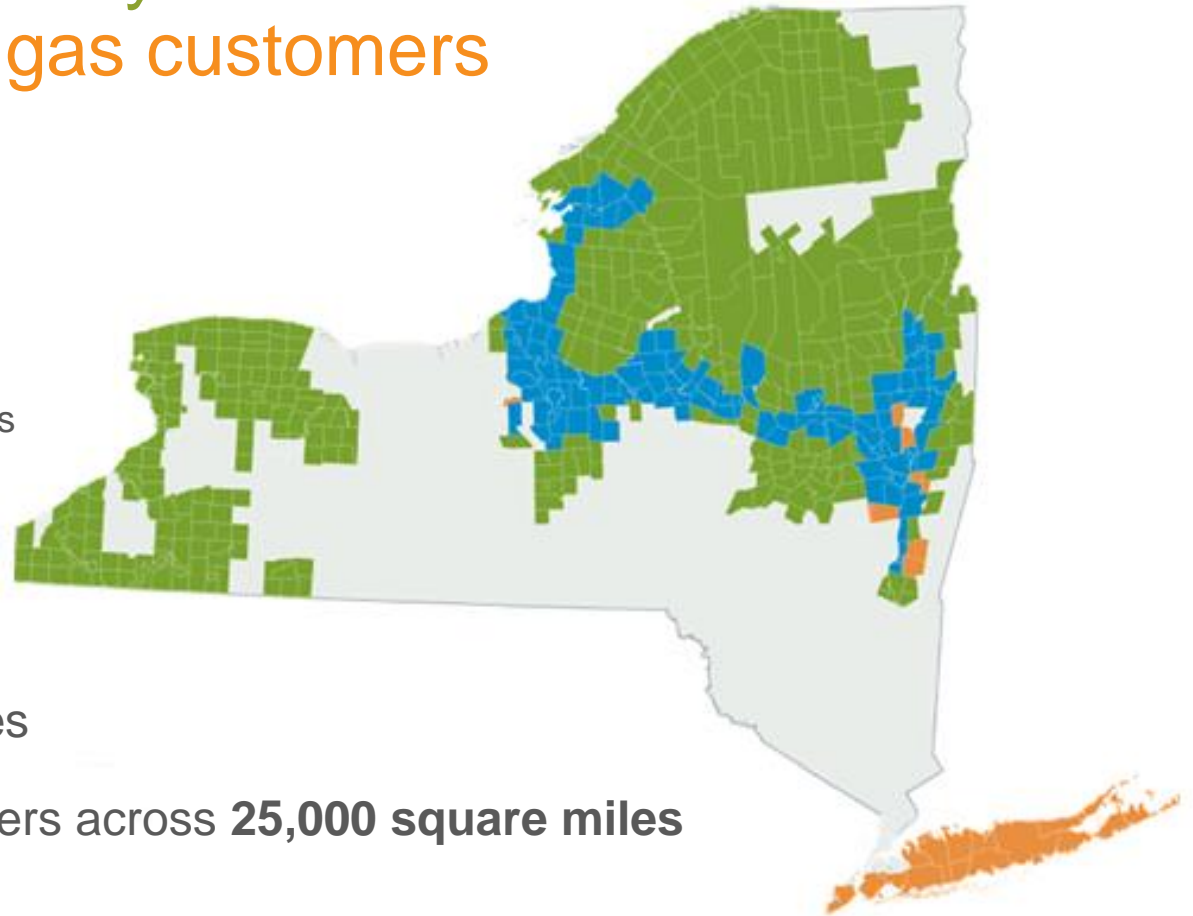



National Grid 2017 Rate Case  
Public Statement Hearings




**1.6 million** electricity customers  
**600,000** natural gas customers

-  Electric
-  Gas
-  Electric and Gas



 Approximately **4,000** employees

 Serving customers across **25,000 square miles**

**492,000 residential, 63,750 commercial, 250 industrial customers**



Approximately  
**1,200** employees

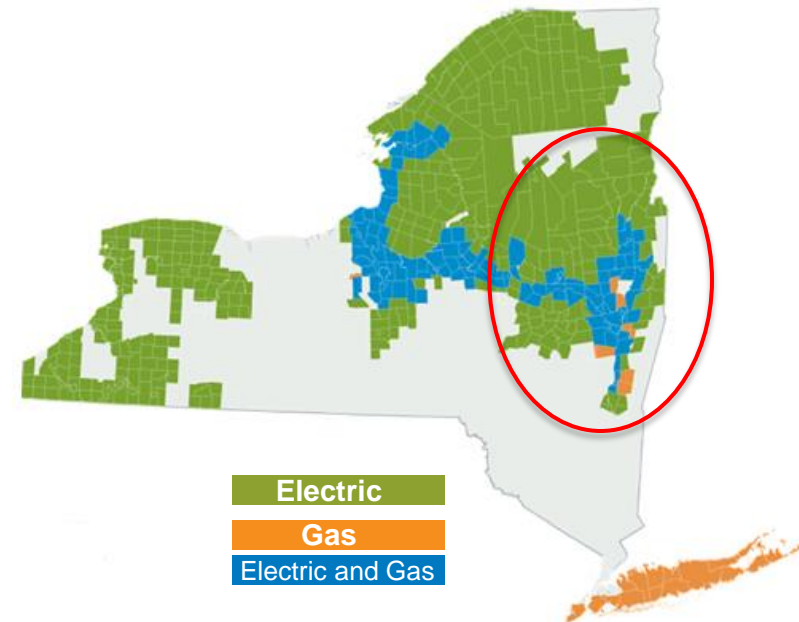


Serving customers across **7,200 square miles**

- Agribusiness, manufacturing, health care, medical devices, warehousing, technology, paper, government, defense, tourism, nanotechnology
- 15,000 miles of overhead and underground line
- 200 substations, 8,594 miles of natural gas pipe

## Regional Commitment, Shared Priorities

- Mohawk Harbor Rehabilitation Project
- Mohican-Battenkill Transmission Line
- Clifton Park Smart Grid Demonstration
- Finch Paper: \$1.8 million incentive/6 million kWh savings/600 jobs
- Quad/Graphics: \$1.1 million incentive/4.3 million kWh savings/800 jobs
- Advanced technology demonstration at the Johnstown-Gloversville wastewater treatment facility, allowing a local food manufacturer to undertake a \$100 million expansion
- Lineworker training program with Hudson Valley Community College



**123,336 residential and 16,451 commercial and industrial customers**

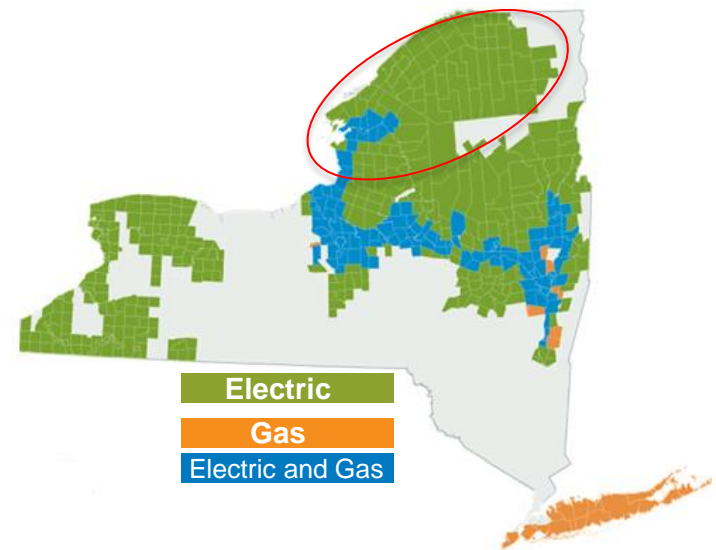


Approximately  
**280** employees



Serving customers across **7,433 square miles**

- Defense, tourism, mining & minerals, paper manufacturing, glass manufacturing, private and public colleges/universities, agribusiness and dairy manufacturing
- 7,000 miles of overhead and underground line
- 85 substations, 331 miles of natural gas pipe



## Regional Commitment, Shared Priorities

- \$300k economic development funding to Clarkson for business incubator at Damon Hall
- Energy efficiency projects: Clarkson University and SUNY Potsdam
- Substation upgrades: Colton, Browns Falls, Battle Hill
- Transmission refurbishments: Colton and Browns Falls, Browns Falls and Taylorville
- Potsdam Resilient Microgrid REV Demonstration Project

**521,000 residential; 67,000 commercial and industrial customers**

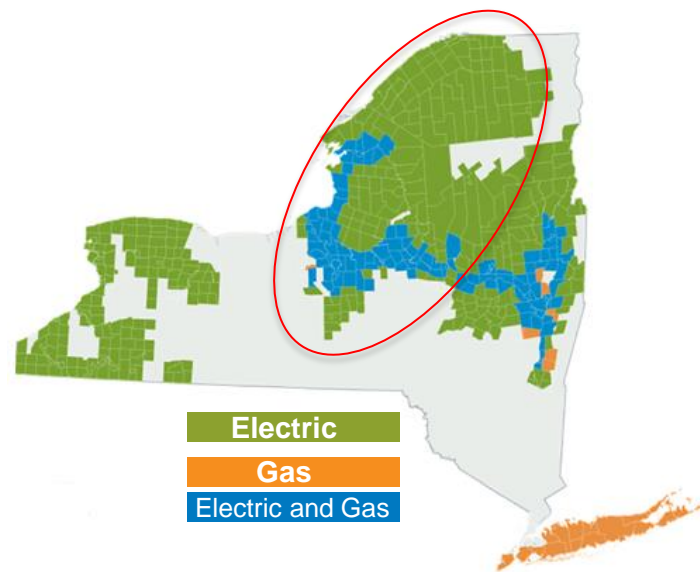


Approximately  
**2,900** employees



Serving customers across **12,705 square miles, 13 counties, 309 cities & towns**

- Colleges and universities, heavy industrial, commercial, health care, agribusiness, medical devices, warehousing, technology, paper, government, defense, tourism, nanotechnology
- 19,000 miles of overhead and underground line
- 295 substations, 4,200 miles of natural gas pipe



## Regional Commitment, Shared Priorities

- Transmission line upgrades for reliability and load growth: Ash Street, Wetzel Road, Collamer Road substations
- STEM education: Partners for Education & Business
- Supporting Syracuse NY Prize Project
- Economic Development: Downtown Syracuse revitalization
- Gas main replacement and infrastructure upgrades
- Lineworker training program with Onondaga Community College

# Our Western New York Business Regional Commitment, Shared Priorities

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**472,000 residential, 45,700 commercial, 1,100 industrial customers**



Approximately  
**800 employees**

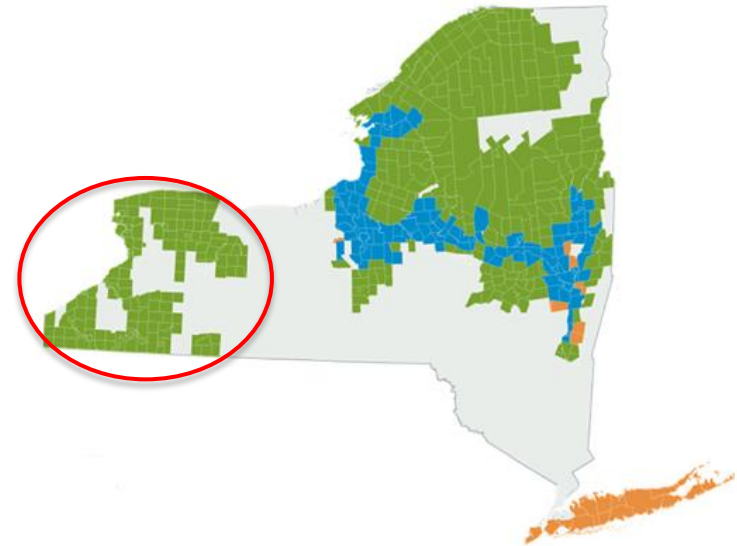


Serving customers across **5,100 square miles**

- Manufacturing (automotive, chemical) to biomedical (research, pharmaceutical); agribusiness to back office (finance, banking and call centers).
- 16,000 miles of overhead and underground line
- 278 substations, 415,000 poles

## Regional Commitment - Shared Priorities

- Fruit Belt Neighborhood Solar Demonstration Project
- Buffalo Building Re-Use, Genesee Region STAMP, Chautauqua/Dunkirk economic development support
- STEM partnerships with University at Buffalo, Niagara University, Canisius College, Chautauqua STEM Coalition, Boys & Girls Clubs of Buffalo and WNY Tech Academy
- Lineworker training program with Erie Community College
- Northland Training Center



- Our Upstate New York delivery prices have remained stable for more than a decade
- While our customers have had a long period of rate stability, we have made significant investments in our upstate electricity and gas businesses
- Since 2008, we have invested nearly \$6 billion in our electricity and gas infrastructure and systems
- In addition, we have a track record of:
  - ✓ Strong Emergency Response
  - ✓ Customer Service and Reliability
  - ✓ Workforce and Economic Development
  - ✓ Working to Advance Clean Energy Solutions
  - ✓ Support for Low Income Customers



## Two Components of Monthly Bill

- Energy Supply:** Reflects the market price of natural gas and electricity
  - We pass these costs along without markup
  - We do not profit from purchasing energy supply for customers; we help mitigate wholesale market fluctuations through various hedging tools
- Energy Delivery:** Reflects our costs to operate, maintain, grow and modernize our distribution system. **This is the portion of your bill we will be discussing today.**

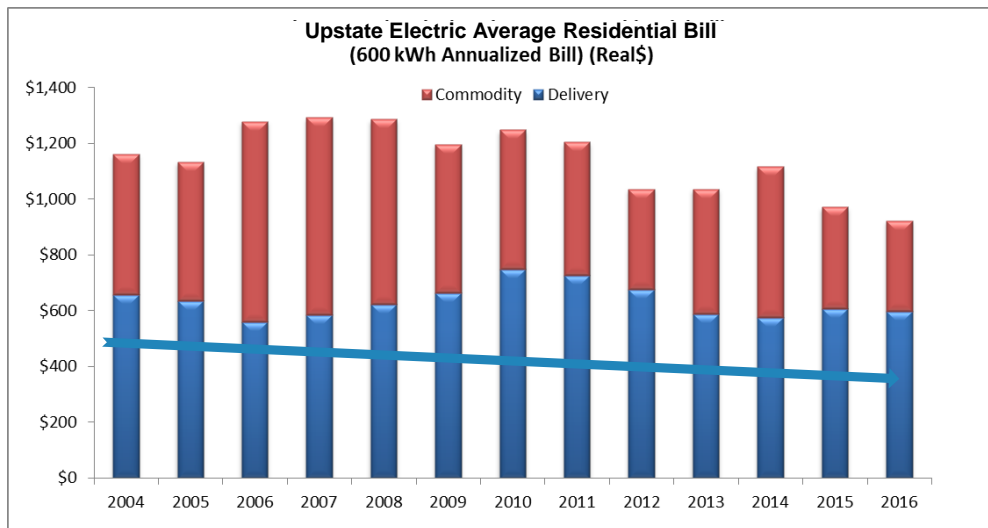
SERVICE FOR		BILLING PERIOD	PAGE 1 of 4
nationalgrid JOHN SMITH 1010 ANY STREET ANYTOWN NY 99999		Mar 7, 2016 to Apr 6, 2016	
ACCOUNT NUMBER		PLEASE PAY BY	AMOUNT DUE
99999-99999		May 1, 2016	\$ 111.94
<a href="http://www.nationalgridus.com">www.nationalgridus.com</a> CUSTOMER SERVICE 1-800-642-4272 AUTOMATED SERVICES 1-888-932-0301 GAS EMERGENCIES 1-800-892-2345 <small>(Does not replace 911 emergency medical service)</small> OUTAGE AND ELECTRIC EMERGENCIES 1-800-867-5222 CORRESPONDENCE ADDRESS 300 Erie Blvd West Syracuse, NY 13202 DATE BILL ISSUED Apr 7, 2016			
<b>ACCOUNT BALANCE</b>			
Previous Balance		136.06	
Payment Received on MAR 31 (Check) THANK YOU		- 136.06	
Current Charges		+ 111.94	
		<b>Amount Due ▶</b>	<b>\$ 111.94</b>
To avoid late payment charges of 1.5%, \$ 111.94 must be received by May 1 2016.			
<b>SUMMARY OF CURRENT CHARGES</b>			
	DELIVERY SERVICES	SUPPLY SERVICES	TOTAL
Electric Service	39.52	14.20	53.72
Gas Service	41.46	16.76	58.22
<b>Total Current Charges</b>	<b>\$ 80.98</b>	<b>\$ 30.96</b>	<b>\$ 111.94</b>

## Recent Upstate New York Rate Case Outcomes:

- 2012 - Delivery prices **decreased 11 percent**
- 2013 - Three-year rate agreement that included **another 10 percent delivery price reduction**; provided for \$1.6 billion in capital investment in electricity and natural gas systems
- 2016 - Approval to **freeze delivery prices at current levels through March 2018**, while providing an additional \$1.3 billion in electricity and gas infrastructure investments
- According to the US Energy Information Association, National Grid's residential bills are below the national average

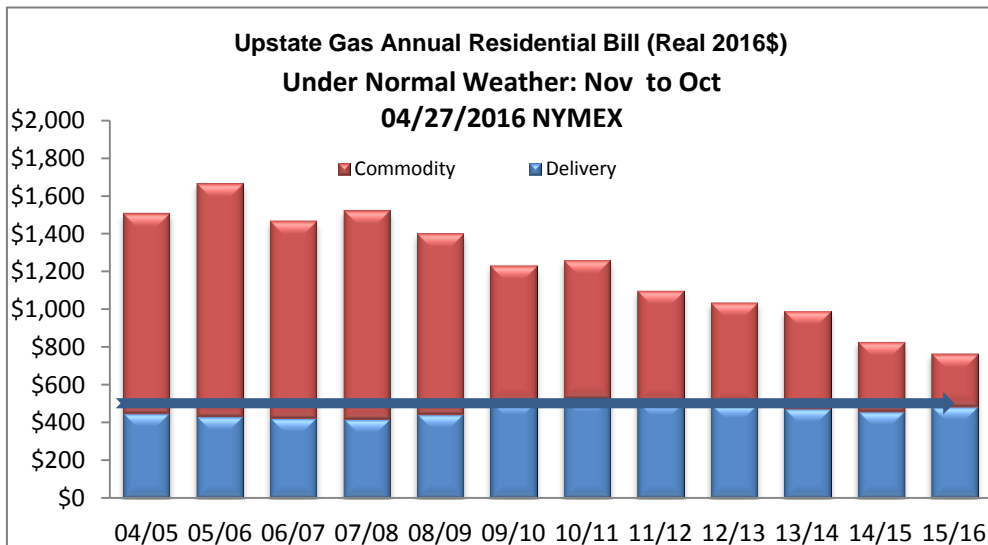


# A closer look at customers' bills: More than a decade of stable delivery prices



## Electricity Bills (real \$)

20% total bill decrease  
9% delivery price decrease  
from 2004-2016



## Natural Gas Bills (real \$)

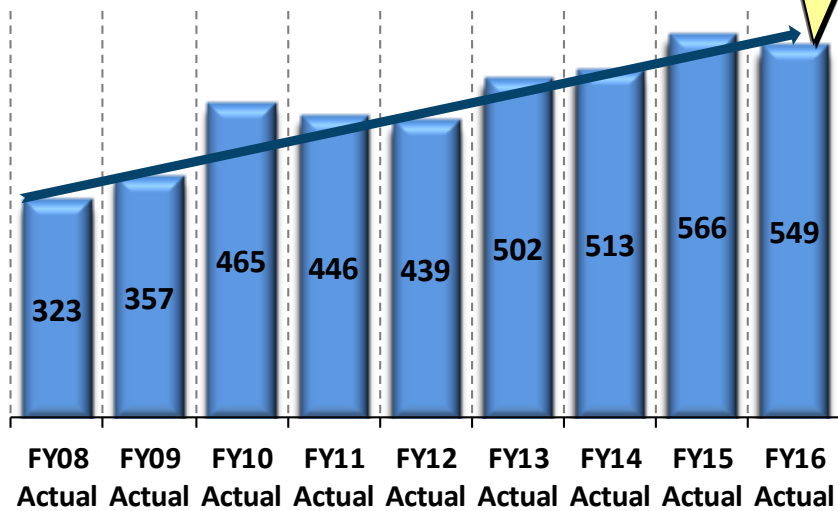
49% total bill decrease  
stable delivery prices  
from 2004-2016



Investments in our electric and gas systems have steadily increased to update aging infrastructure and ensure safe and reliable service

## Upstate Electric

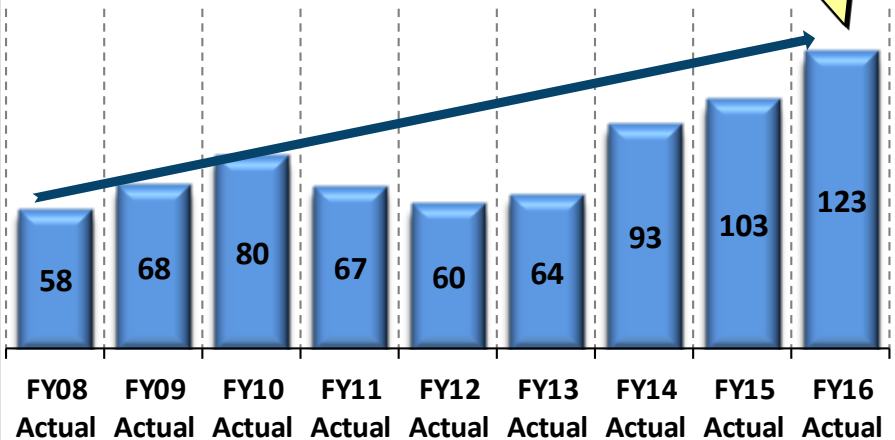
70% increase over FY08 capex spend



(\$ million)

## Upstate Gas

112% increase over FY08 capex spend



(\$ million)

# Strong Storm Response

## Results of Infrastructure Investment

**Our dedicated workforce has delivered strong storm response in the face of increasingly severe weather events**

### **August 13, 2016 – Statewide thunderstorms and high winds**

97,000+ customers interrupted; 90% restored within 24 hours

### **November 20, 2016 – Winter storm with heavy wet snow**

54,000+ customers interrupted; 90%+ restored within 15 hours

### **January 11, 2017 – Winter storm with wet snow and high winds**

85,000+ customers interrupted; 90%+ restored within 11 hours

### **March 1, 2017 – Wind Storm**

112,500+ customers interrupted; total restoration in 48 hours

### **March 8, 2017 – WNY Wind Storm**

180,000+ customers interrupted; 90% restored in <48 hours

*Received Edison Electric Institute Emergency Recovery Award*

### **July 1, 2017 – Heavy Rains, Regional Flooding**

Response with restoration, outreach to intense, concentrated flooding in Whitesboro, Oneida County, Hoosick Falls



**Stakeholder Engagement:** Met with more than 250 customers and stakeholders to gather input for our proposal

- Included customers, various state agencies, local governments, school districts, hospitals, economic and community partners and elected officials across upstate

Overwhelmingly, customers told us their priorities are: **safety, reliability, affordability**

### We also heard:

- Positive feedback on improved reliability, performance & continued infrastructure investments
- Constructive feedback, including:
  - Desire for more information on energy usage, energy efficiency offerings, etc., improved billing and faster response for new service requests



### In our conversations, stakeholders asked for:

- ✓ Phased-in increases over multiple years to smooth bill impacts
- ✓ Stable energy costs to maintain competitiveness, retain jobs
- ✓ Continued strong economic development & energy efficiency support
- ✓ Our continued role as energy experts to help customers manage usage & costs

### **Comprehensive proposals to further strengthen safety, reliability, and resilience while laying the foundation for the new energy future**

1. Modernize system; develop networks to serve the next generation of customers
2. Enhance customer engagement through new technology, more information and control
3. Assist our most-vulnerable customers
4. Help large customers manage energy consumption and stay competitive
5. Deliver economic and environmental benefits
6. Promote energy technologies and markets to support state policy goals

### **Balances the need for investment with impact on customer bills**

- Continuing to manage our costs
- Using regulatory deferrals to offset increases
- Multi-year rate plan would mitigate impact on customer bills

### **Providing appropriate returns will allow access to capital at reasonable rates**



# Rate Case Filing

## Proposed Monthly Bill Impacts

**On July 10, we reduced our April 28th request for new delivery prices by nearly \$76 million.**

- The changes are largely the result of updated forecasts for costs and interest rates included in the April filing
- The updated proposal was a standard part of the regulated rate case process

**If approved as amended, the proposal would result in total monthly bill impacts of**

- \$8.93 or 11 percent (17.5 percent on delivery) for a residential electricity customer using 600 kilowatt-hours.
- \$8.70, or 12.5 percent (20.5 percent on delivery), based on 77 therms used for a residential customer
- **Even if entire increase is approved, most income-eligible customers will see a bill decrease thanks to the new energy affordability programs**

Continues economic development, energy efficiency programs to help grow upstate economy

### Average Residential Monthly Bill Impacts

Comparing original filing to updated, reduced request

	\$ Increase	% Increase Total Bill
<b>Electricity Service (600 kwh)</b>		
Original Apr. 28 filing	\$11.23	13.9%
<b>July 10 update</b>	<b>\$8.93</b>	<b>11.0%</b>
<b>Natural Gas Service (77 Therms)</b>		
Original Apr. 28 filing	\$10.38	14.9%
<b>July 10 update</b>	<b>\$8.70</b>	<b>12.5%</b>

***While regulations require the company to file a one-year plan, National Grid hopes to phase in new rates through a multi-year agreement to mitigate customer impact.***

***Spreading the increase over three years, for example, could reduce total bill impacts to less than 5 percent annually***



***Our Consumer Advocacy team serves more than 21,000 upstate New York households through a comprehensive approach that allows us to meet customers' and communities' individualized needs. Demographic information helps us continue to tailor services for our vulnerable customers across 25,000 square miles.***

## **Expanded 2018 Energy Affordability Program Potential to provide more than \$70 million in low income benefits (more than three-fold increase over current program budget)**

- Plans to identify additional eligible customers could **increase program participants by ~55,000**
- New programs will help customers save money on their heating bills by converting to natural gas
- Reduce or eliminate conversion costs through rebates for high efficiency gas heating equipment & connecting qualifying customers at no cost

***Even if our entire delivery price increase is approved, most income-eligible customers will see a bill decrease thanks to the new energy affordability programs***

## **Strong Consumer Advocacy:**

- **Hosted nearly 1,600 upstate outreach events over last 2 years**
- Customer Assistance Expos
- Advocates in Action - grassroots approach
- **HEAP outreach: ~300,000 outbound calls annually; ~122,000 households assisted**

1. Addresses aging infrastructure to maintain customer safety and reliability
2. Responds to customer needs and pockets of growth
3. Enhances ability to accept Distributed Energy Resources and green power *(we've connected nearly 15,000 renewable projects over last 5 years)*
4. Increases investments in a modernized, smarter grid



### ***Building a Smarter Energy Infrastructure that Delivers New York Greater Capital Region Priorities***

#### **Mohican-Battenkill Transmission Project -**

Fourteen-miles of 115kv transmission line to serve one of the fastest growing areas in upstate: Easton NY

**Eastover Substation** – Reinforces the existing northeast electricity system to support new & future growth

#### **Gloversville-Johnstown Joint Wastewater Treatment Plant**

– With assistance of a \$500,000 National Grid grant, a \$7.2 million upgrade tripled capacity to treat wastewater - up to 1 million gallons a day - in an eco-friendly way

**Gas Pipe Replacement**– Replacing more than 50 miles of leak-prone gas pipe in upstate NY each year at a cost of about \$1M per mile



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## ***Building a Smarter Energy Infrastructure that Delivers Northern New York Priorities***

### **Potsdam Microgrid Community Resiliency Demonstration Project**

#### **Substation upgrades lead to improved reliability for customers**

- Colton, Browns Falls, Battle Hill substations
  - Replaced all circuit breakers, upgraded relay protection and replaced aging switches
- Malone station –transformer and switchgear replacement starting in spring 2020
- Akwesasne – reinforced subtransmission system serving northern St. Lawrence, Franklin counties.
  - Provides capacity, reliability for growth on/around the St. Regis Mohawk reservation
  - Benefits Potsdam, Malone regions

#### **Transmission upgrades lead to improved reliability**

- Improving the Colton-Browns Falls & Browns Falls-Taylorville lines – 115kV lines/backbone of the North Country
- Refurbishment of the Dennison-Colton lines

1. Addresses aging infrastructure to maintain customer safety and reliability
2. Responds to customer needs and pockets of growth
3. Enhances ability to accept Distributed Energy Resources and green power *(we've connected nearly 15,000 renewable projects over last 5 years)*
4. Increases investments in a modernized, smarter grid



### ***Building a Smarter Energy Infrastructure that Delivers Central New York Priorities***

**Collamer Crossing** – New substation will support Nanotechnology & Business Park, support regional area growth (in service late 2018)

**Edic Corridor** – New electric facilities to serve 320 megawatt nanochip fab industrial park; contributed ~\$2 million in economic development funding to support growth of the nanotech industry since 2013

**SUNY Poly** – Supporting customer built substation to serve Quad-C project, power the growing campus

**Wetzel Road** - \$16 million investment supports load growth in Onondaga County and load relief of area substations, improves reliability for ~ 8,000 customers in the Clay, North Syracuse; bolsters economic development benefits to the region

**Gas Pipe Replacement**– Replacing more than 50 miles of leak-prone gas pipe in upstate NY each year at a cost of about \$1M per mile

1. Addresses aging infrastructure to maintain customer safety and reliability
2. Responds to customer needs and pockets of growth
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### ***Building a Smarter Energy Infrastructure that Delivers Western New York Priorities***

**Elm Street Station** – Support growth in downtown Buffalo, Buffalo Niagara Medical Campus and Canalside

**Gardenville Station** – Improve reliability, add capacity, transmission lines serve Riverbend, South Buffalo

**Perry Street Station** – Support growth in Larkinville, introduce 13.2 KV in the City of Buffalo

**Frankhauser Station** – Support growth in Amherst, add capacity

**Five Mile Road Station** – New station to support Southern Tier transmission and distribution systems

**Station #37** – Rebuild of Buffalo indoor station located on Buffalo's west side

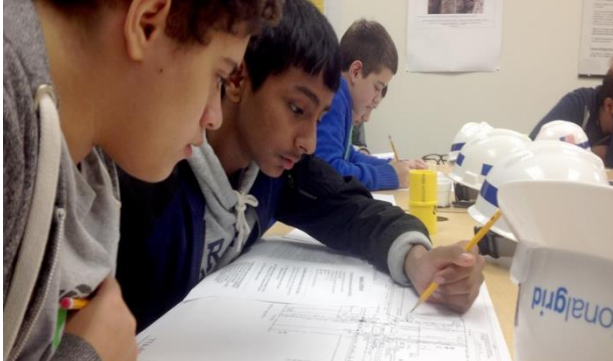
### Energy Efficiency commitment:

- **\$53 million electric; \$11 million gas**
- Customers have saved more than 1.4 billion kilowatt-hours of electricity and 31 million natural gas therms over the last seven years

### Economic Development commitment:

- **\$11 million electric; \$1 million gas**
- 17 grant programs promote economic development, urban revitalization, sustainable smart growth, job creation, regional growth through renewable energy technologies
- Continuing to partner with state, regional, local economic development groups to market region to businesses looking to expand or relocate
- Funding since 2003 has totaled over **\$93 million**, helping to create or retain nearly **50,000 jobs** and leverage over \$9 billion in other private and public investment





## Engineering Our Future

### Strategic Workforce Planning Center of Excellence

- Analyzes workforce demographics, future business needs; develops staffing plans
- Proposing to **add more than 280 positions** over three years to support electric and gas operations, grid modernization, customer & low income programs

### Line Schools, Gas & Customer Service Academies

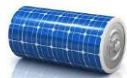
- Erie, Onondaga & Hudson Valley community colleges
- **Nearly 300 line workers hired** through these programs
- Launch upstate Gas Academy at Hudson Valley Community College and Onondaga Community College
- Launch new customer service academy

Continuing to partner with vocational schools, community colleges and veterans' associations to create a job "pipeline"

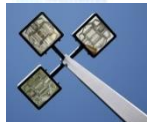
### New Products and Services



Customer Energy Management Portal



Energy Storage Projects



Energy Efficiency including LED street lighting

### Existing and Proposed New Demonstration Programs

Approved. In implementation phase	<b>Buffalo Niagara Medical Campus</b>		Pending approval	<b>Smart Home</b>	<b>DG Interconnx</b>
	<b>Fruit Belt Solar Neighborhood</b>	<b>DSP</b>			
	<b>Potsdam</b>	<b>Clifton Park</b>		<b>VTOU and voice technology</b>	<b>'Make ready' &amp; cost sharing</b>
	<b>Community Resilience</b>	<b>Customer Convenience</b>		<b>Gas DR</b>	<b>Geothermal</b>
			<b>Gas Constraints</b>	<b>Business Models</b>	

- National Grid is dedicated to **improving the customer experience** and continuing to help customers manage their energy costs after an extended period of rate stability
- We are **focused on safety and reliability**, and we are making significant investments to grow and modernize our electricity and gas systems
- We have carefully **managed our costs on behalf of customers** and now require a new rate plan which provides funding for the infrastructure investments and energy programs of the 21st Century
- We are playing a leading role in **advancing grid modernization**, including distributed renewable energy solutions, and we are dedicated to environmental stewardship
- We are actively **engaged in our communities** and are working to strengthen our partnerships to make the areas in which we live and work safer, healthier and more vibrant

Thank You

Questions?

