Natural Gas & Energy Efficiency:
Keys to Reducing GHG Emissions

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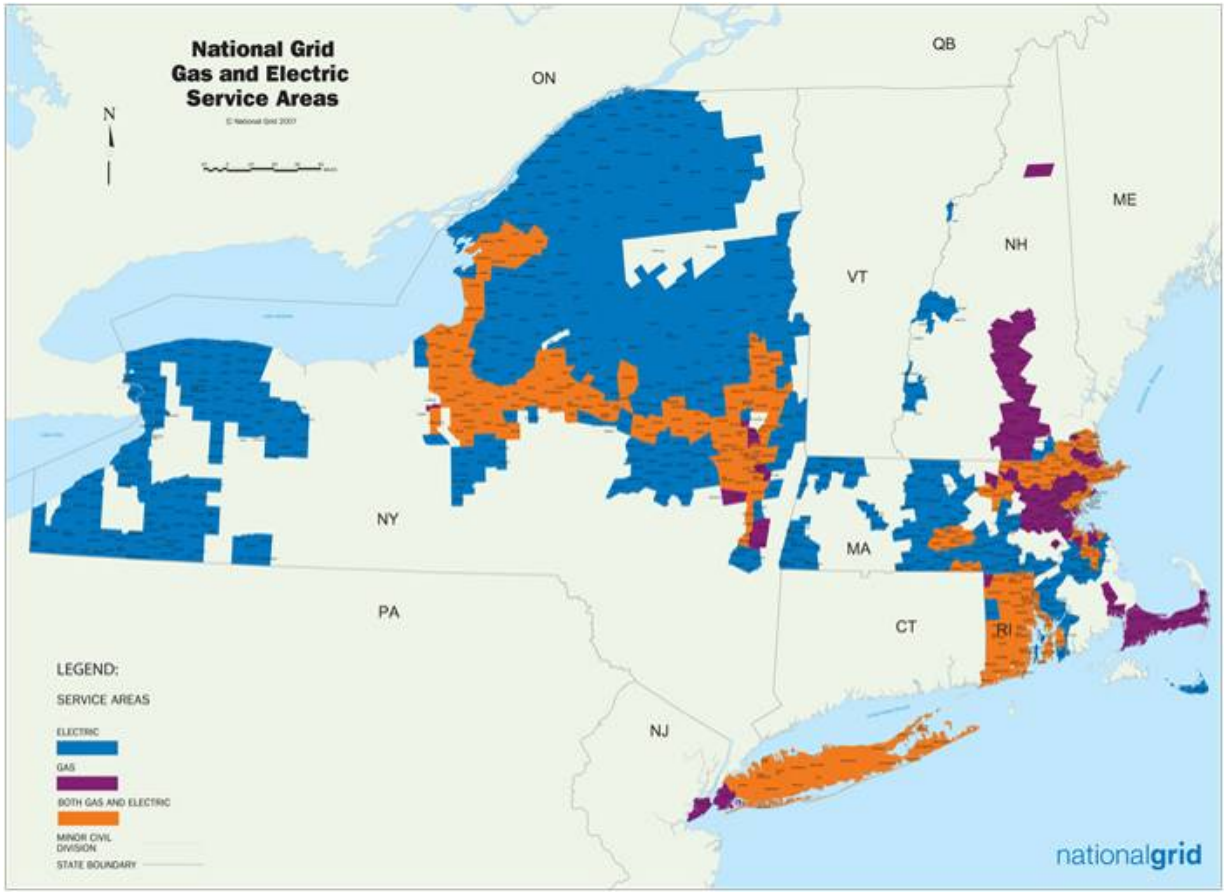
Overview

1. About National Grid
2. Today's energy picture
3. Energy efficiency
4. Climate change
5. Direct use of natural gas
6. The energy world is changing
7. What we need to do
8. Win-win solutions

National Grid:
An international electricity and gas company

National Grid Electricity and Gas Service Areas - US



- Largest utility in UK; second largest in US*
  - 50% UK, 50% US
  - 50% Electricity, 50% Gas
  - 50% Transmission, 50% Distribution
  - 27,000-plus employees
  - Almost 18 million customers
- Northeast US
  - Distributes electricity to 3.3 million customers
  - Services 1.1 million customers of Long Island Power Authority (LIPA)
  - Provides natural gas to 3.5 million customers
  - Currently owns over 4,000MW of generation

•Based on customer numbers; includes the servicing of LIPA's 1.1 million customers

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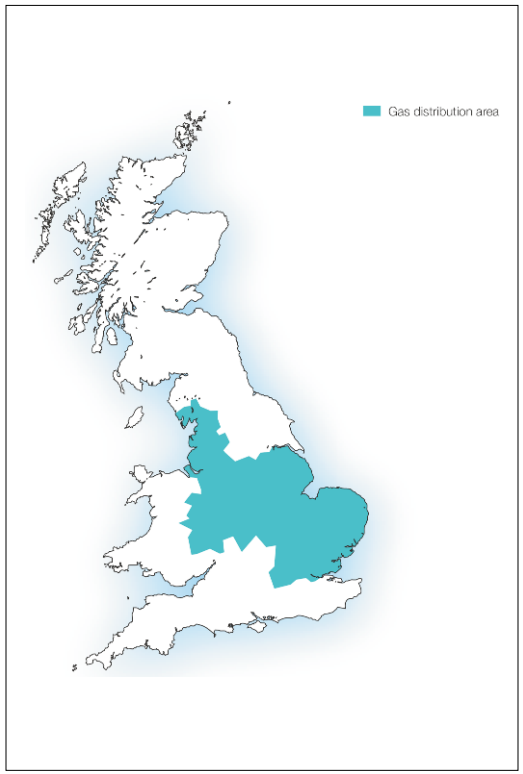
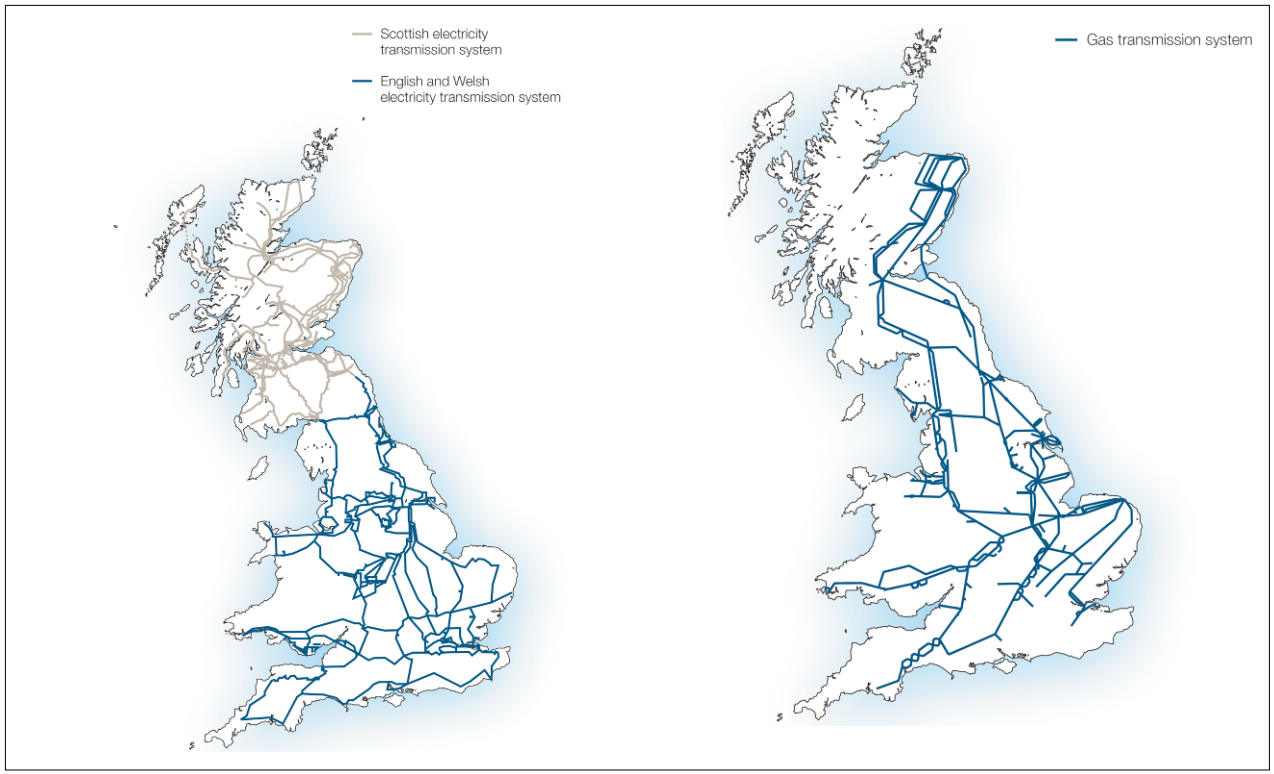
Gas Distribution - UK



Operates the UK gas distribution system; distributes gas on behalf of shippers and suppliers to 11 million consumers.

Transmission – Electricity and Gas - UK



Owns the high-voltage electricity transmission system in England and Wales and operates the system across Britain. Also owns and operates the high pressure gas transmission system in Britain.

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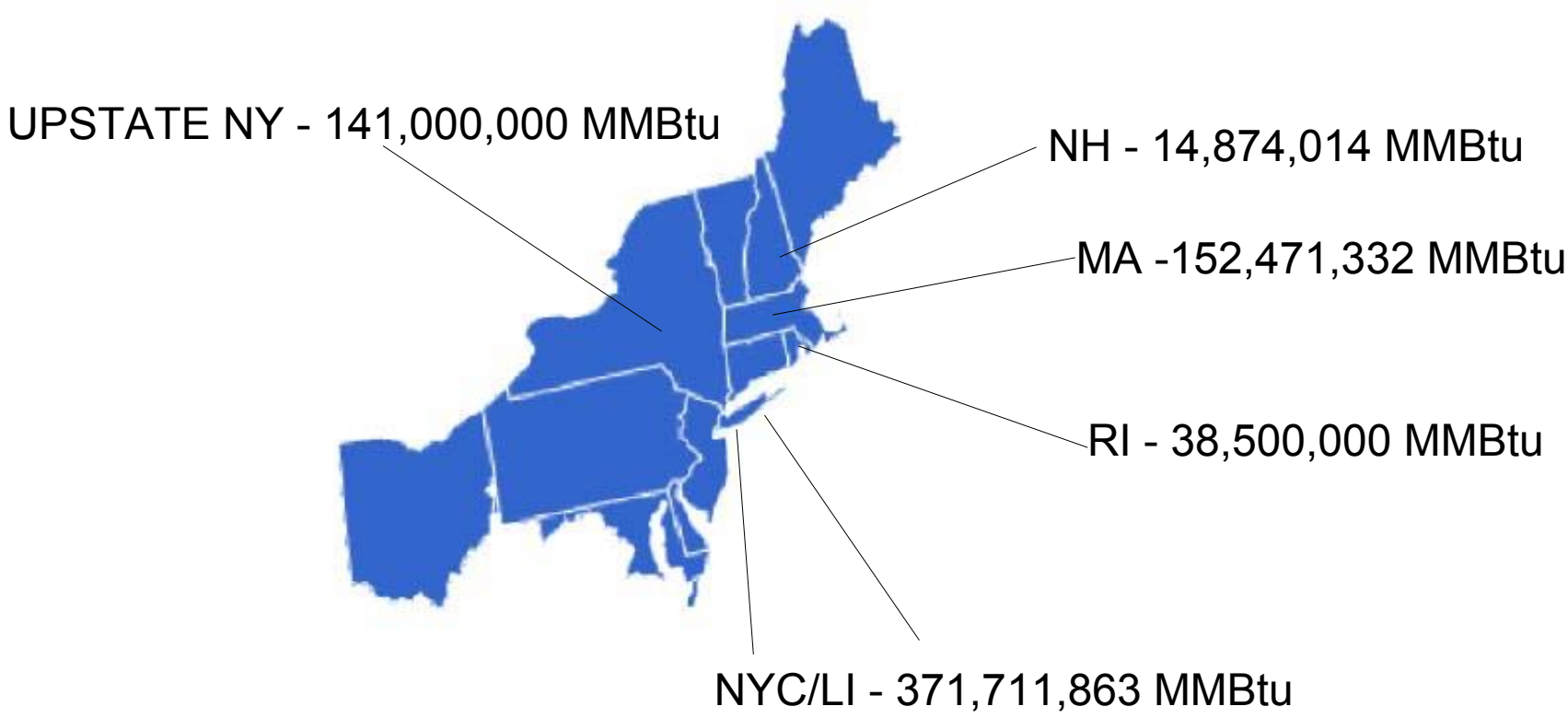
National Grid's annual gas throughput – 718 Bcf



TOTAL:718,557,210 MMBtu (718 Bcf)

- 3% of total annual US consumption
- 30% of total annual Northeast consumption

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Today's energy picture: new challenges, new priorities

An intensified focus on:

- Mitigating climatic and environmental impacts
- Lessening the financial burden on American families and businesses
- Decreasing dependence on foreign energy sources

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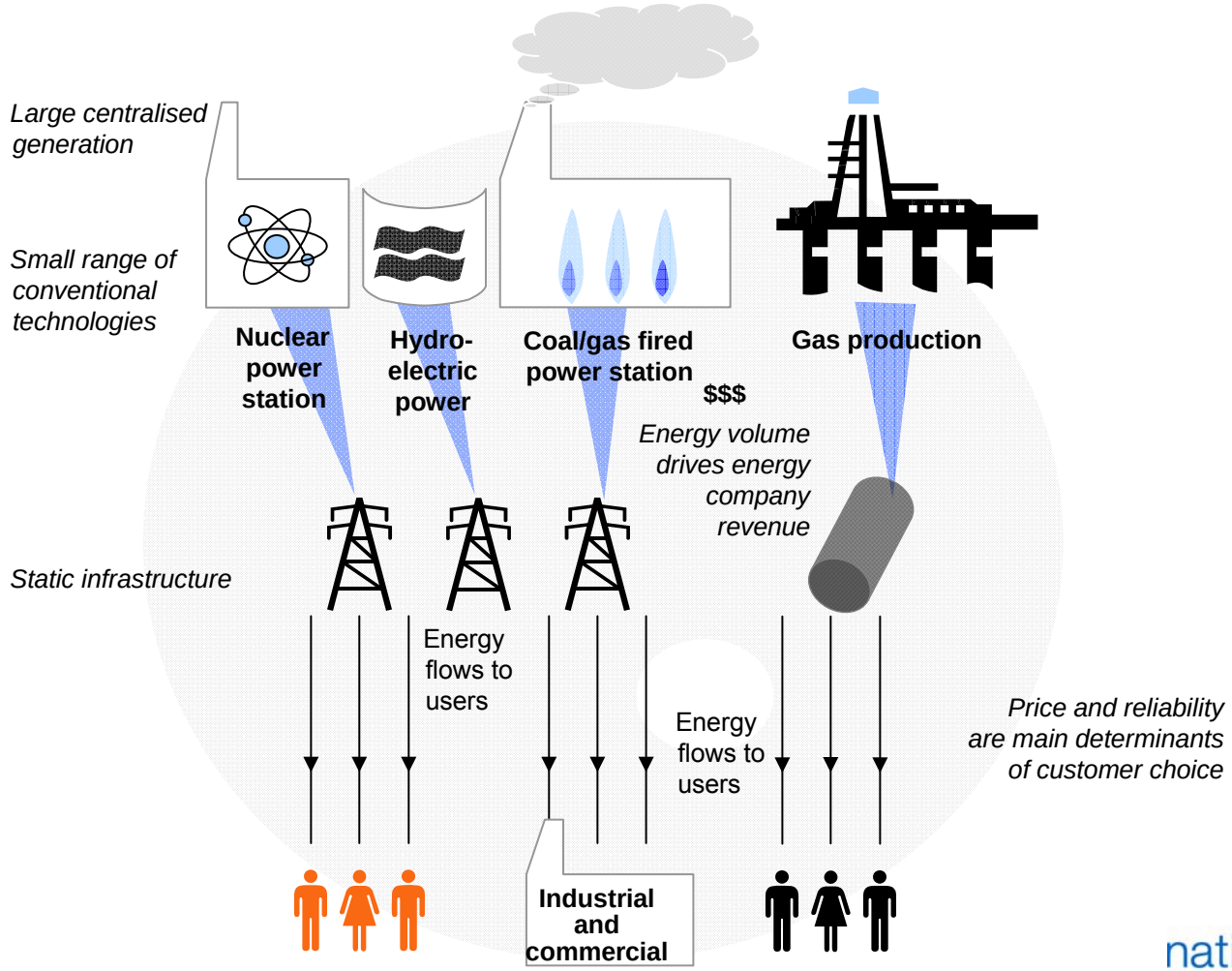
The energy world is changing …

Traditional Energy Market - Supply Driven



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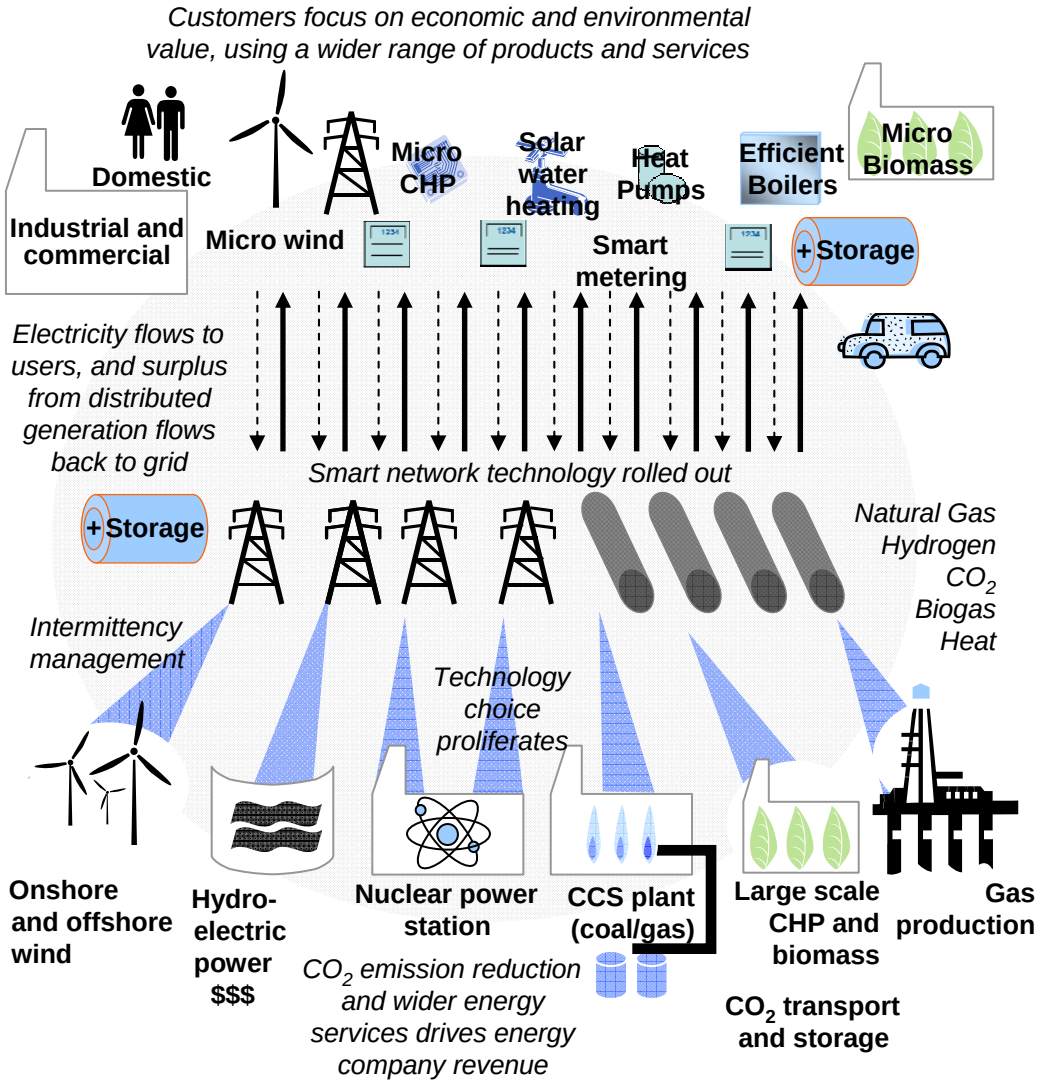
… as the customer becomes more active

Today's Evolving Market - Customer Driven



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Why focus on climate change?

Most Quoted Source of information

- United Nations Intergovernmental Panel on Climate Change (IPCC) Reports, 1990 – 2007
- Building on earlier work the 4th Report:
  - "Warming of the climate system is unequivocal"
  - "… increase in global average temperatures since the mid-20th century is *very likely* due to the observed increase in anthropogenic greenhouse gas concentrations"

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What's being done - National Grid will help drive change

- National Grid recognizes climate change to be one of the biggest threats to society; made a commitment to reduce our GHG emissions by 80 percent by the year 2050.
- Achievements to date:
  - Hit UK & US Kyoto targets
  - Achieved 38% reduction in GHG emissions
    - Gas distribution mains replacement program
    - More efficient compressors
    - Reduction in Sulfur Hexafluoride (SF6) leakage
- National Grid will also:
  - Work with our legislators and regulators to shape the regulatory framework and energy markets to meet the climate change challenge
  - Implement operational changes
  - Help and support customers, employees and communities in changing their energy consumption habits

Natural gas consumers and utilities have a demonstrated commitment to energy efficiency

Total residential and commercial consumption and associated GHG emissions have remained flat since 1980, *even though 26 million more homes and businesses are now using natural gas*

Taking a look at the trend in recent years:

- *2000-2006* Total CO_2 emissions from natural gas residential and commercial customers decreased by 11.7% from 2001 to 2006 *(source: EPA)– this represents a tremendous success for natural gas consumers.*

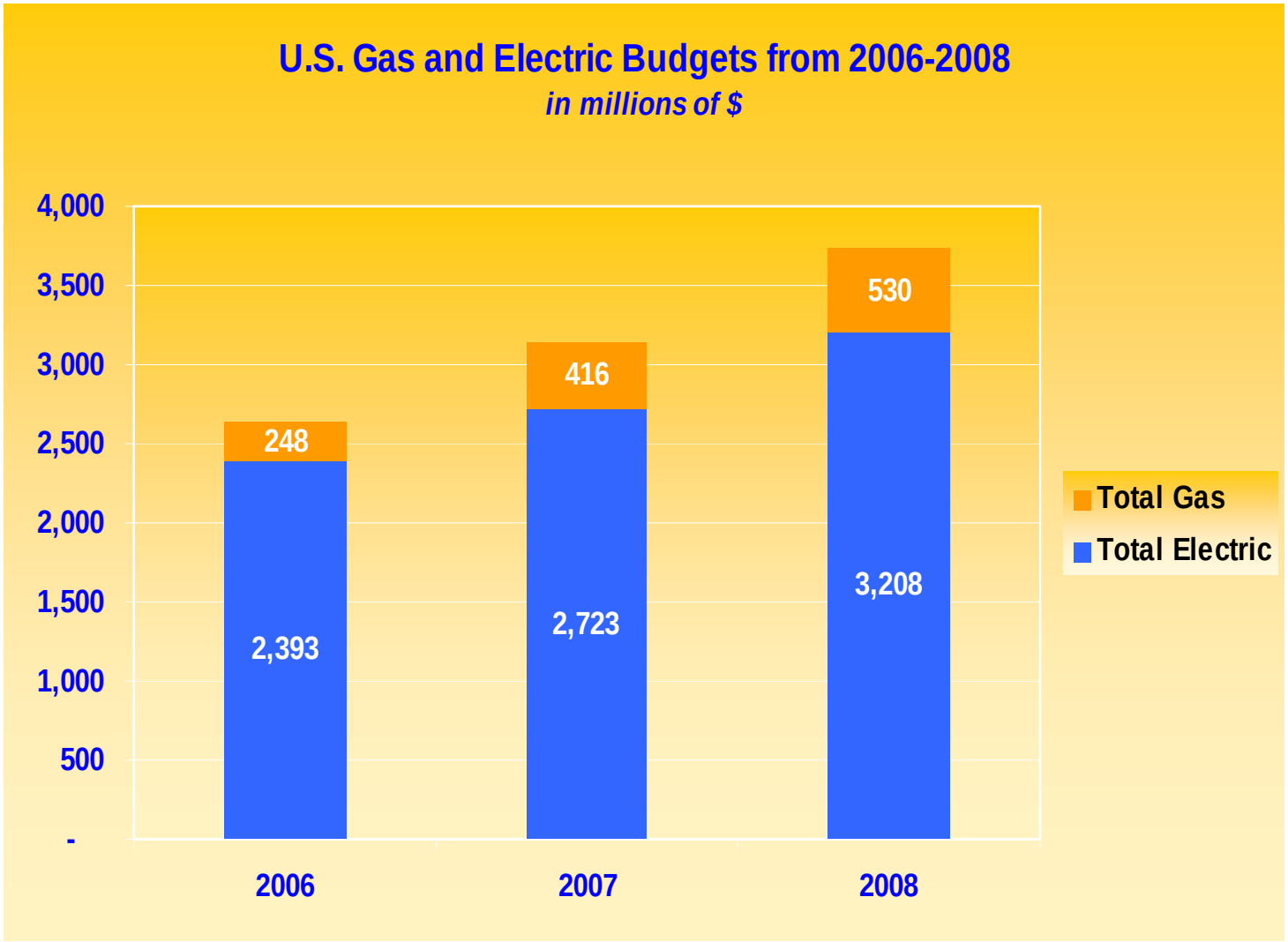
Utility-level energy efficiency programs

AGA Survey of Member Natural Gas Energy Efficiency Programs found that in the 2007 program year:*

- 59 utilities in 32 states have natural gas energy efficiency programs
- Utilities spent $338 million on energy efficiency programs, and project their spending for the current program year to grow by 7%
- EE programs include: low-income weatherization, energy audits, equipment replacement and upgrades, building operator training, technology demonstrations, energy management systems, process improvements, energy efficient homes design assistance, thermostat upgrades & financing

** Results are preliminary. A full report of these survey results will be published in December 2008.*

Total US energy efficiency budget – *continues to show growth*



This high level of growth is expected to continue as state and national legislation favor the growth and expansion of energy efficiency programs

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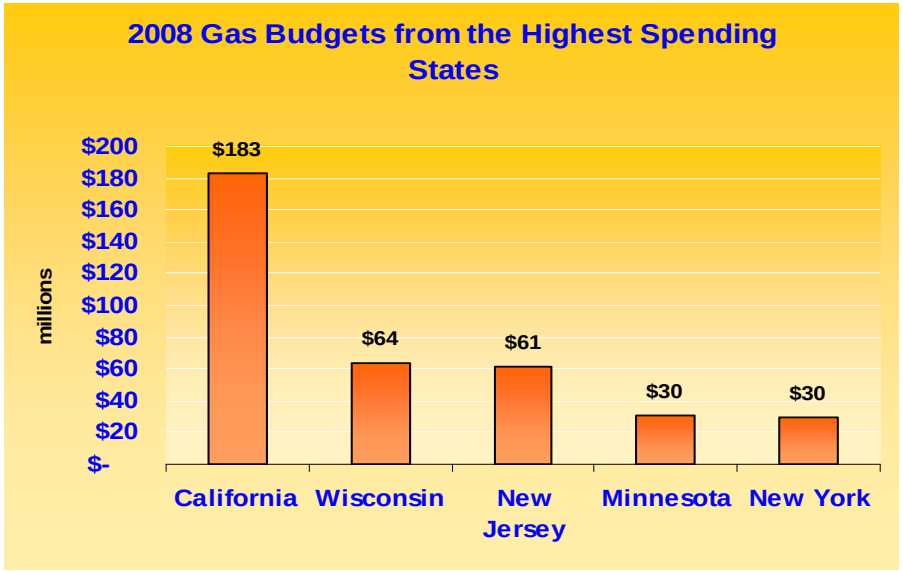
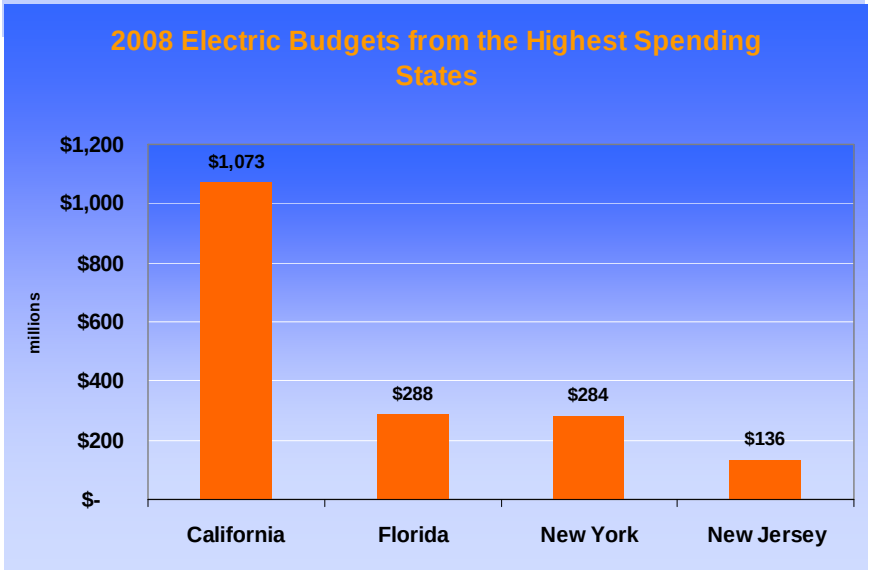
Gas / electric energy efficiency programs in the US





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National Grid: a long-standing commitment to energy efficiency

- More than $1.5 billion invested in New England over the past 20 years with no interruptions
- Proven resource based on extensive evaluation saving customers $250 million annually
- Most cost-effective resource available

  3.4 cents/kwh for efficiency

  vs.

  12 cents per kwh for generation
- A key tool for addressing climate change
  - McKinsey report (December 2007)
- Current budget $164 million per year (electric and gas – includes LIPA)
  - Expecting to double programs over next 3-5 years

In 2007, National Grid delivered energy efficiency to:

✓ 41,000 gas participants, saving 4.6 Million therms and reducing 27,000 Tons of CO_2

✓ 1.8 Million electric participants, saving 387,000 MWh and reducing 218,000 Tons of CO_2

Total CO2 reductions are Equivalent to <u>48,068 cars not driven for one year</u>

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Energy efficiency: projected spending

$M	2008 Actual	Expected Approval Date	2009 Projected	2010 Projected	Decoupling	
					Electric	Gas
MA	$65	12/08	$90	$128	In progress	In progress
RI	$21	12/08	$30	$41	No plans	In progress
NY	$30	12/08	$70	$95	In progress	In progress
NH	$4	11/08	$5	$8	In progress	In progress
LIPA	$44	11/08	$55	$74	N/A	N/A
Total	**$164**		**$250**	**$346**		

Direct use of natural gas is efficient use of natural gas

The direct use of natural gas in homes and businesses is part of the solution to these challenges, and one that works without compromising the productivity or comfort of American homes and businesses.

2008 American Gas Foundation study reveals:

- Energy savings of 1.25 to 2.00 quadrillion Btu *(represents 6% of total energy consumption growth projected by AEO through 2030 --2 out of 31 quads)*
- Avoided electric generation of 63 to 80 GW *(equates to 41% of total electric generating capacity growth projected by AEO through 2030 --80 out of 195 GW)*
- Avoided investment costs of $49 billion to $112 billion *(compare to $400B investment EIA anticipates will be necessary to address climate change in the same time period)*

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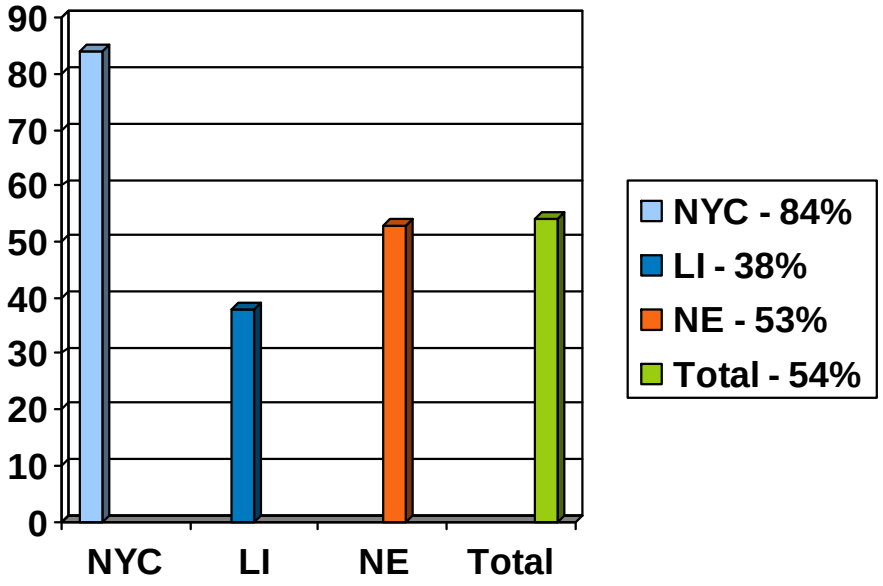
Great potential for oil-to-gas conversions in Northeast US

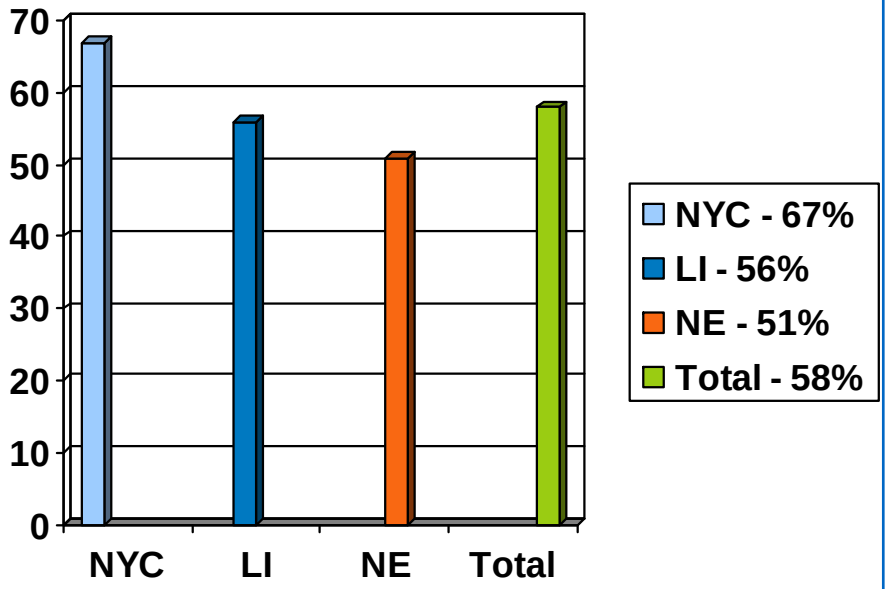
Natural Gas Market Saturation Levels – Former KeySpan Territory*

Residential Market



Greatest opportunity:
LI and New England

Business Market



Business market saturation is more closely aligned across the regions due to commercial building corridors occurring along routes of gas distribution

**Based on 2005 data*

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What we need to do

- Encourage energy efficiency
  - Bring award winning programs to all service areas
  - Decouple rates (true-up mechanism – utility becomes indifferent to throughput)
  - Fixed variable rates (used by most pipelines – most costs recovered through monthly demand charges)
  - Other revenue stabilization mechanisms
- Invest in existing infrastructure
  - Gas distribution, electricity transmission, electricity distribution
- Invest in existing and new technologies
  - Smart grids, smart meters, renewables, distributed generation
- Foster partnerships

Win-win solutions for customers and utilities

- Remove disincentives for utilities to promote energy efficiency and reduce GHG emissions, and unite to achieve increased savings through programs and standards
- Develop performance-based incentives for utilities to promote energy efficiency and reduced GHG emissions
- Recognize the potential contributions of efficient natural gas use in promoting reduced GHG emissions
- Recognize the importance and necessity of investing in infrastructure