

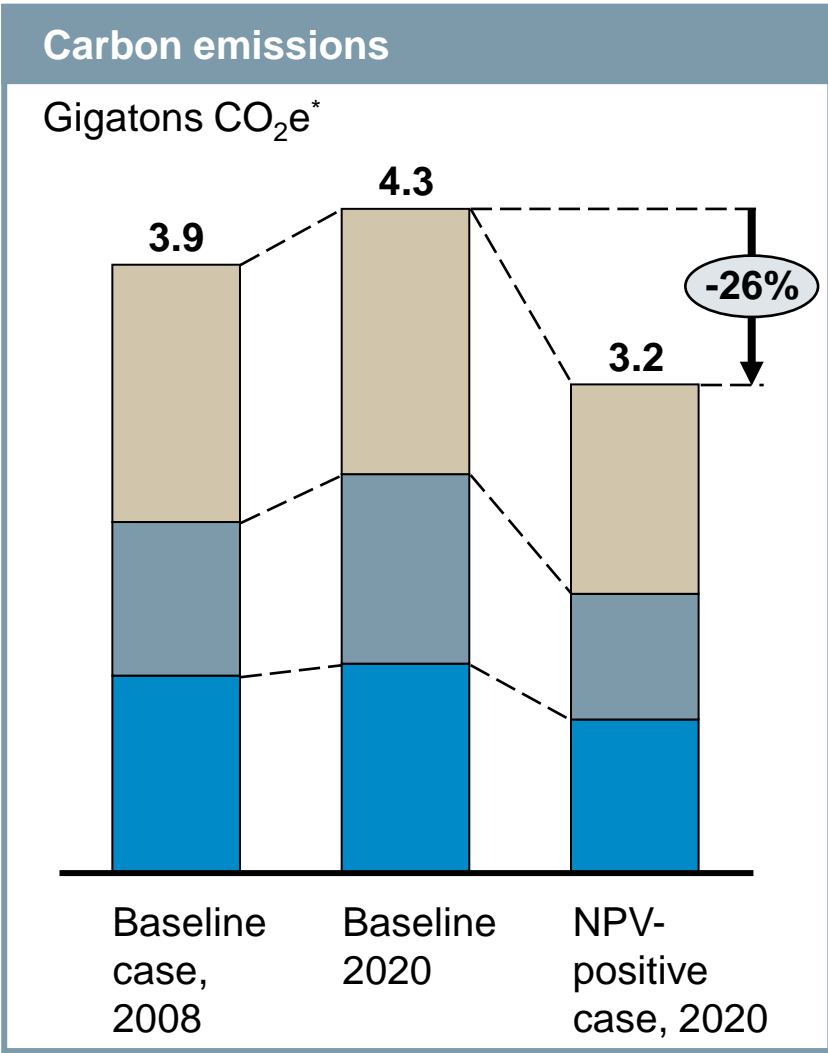
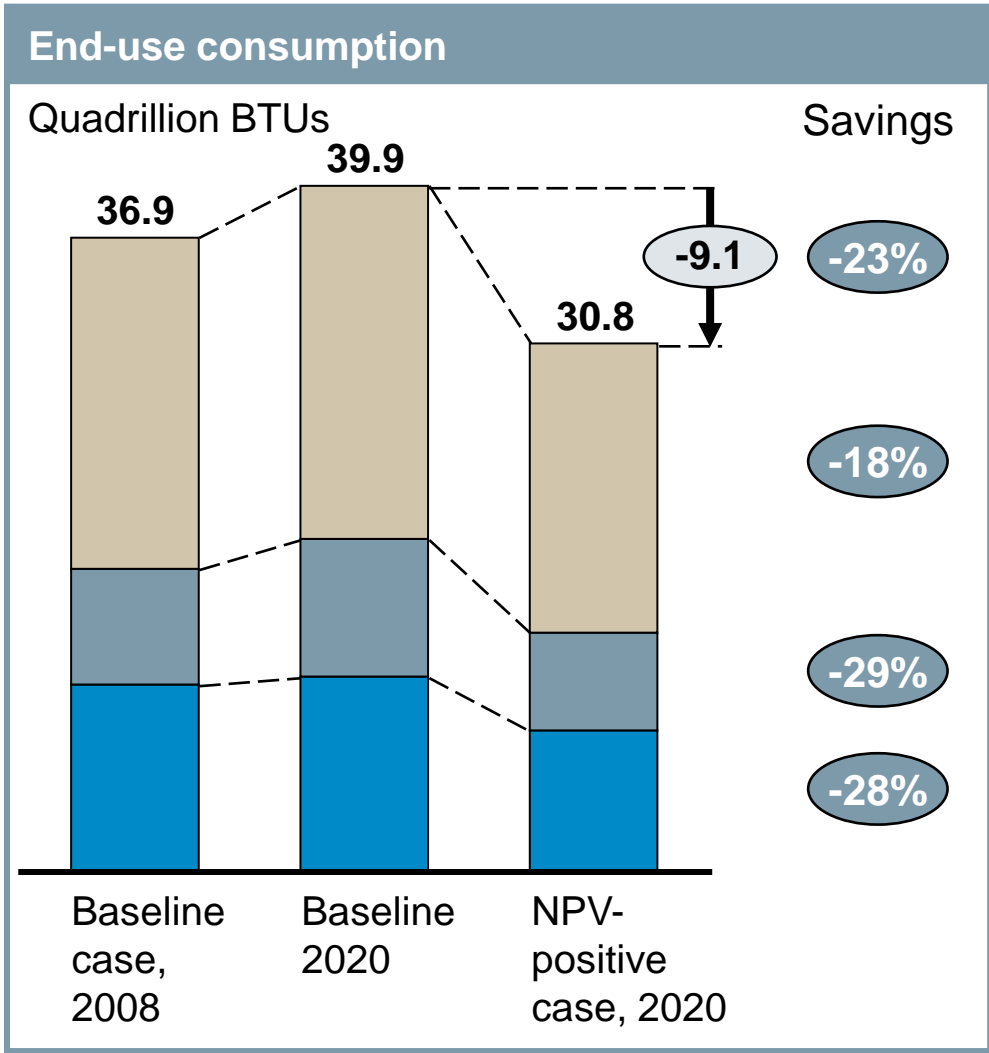


Unlocking Energy Efficiency in the U.S. Economy

2010 Energy Conference
EIA, SAIS
April 7, 2010

Significant energy efficiency potential exists in the U.S. economy

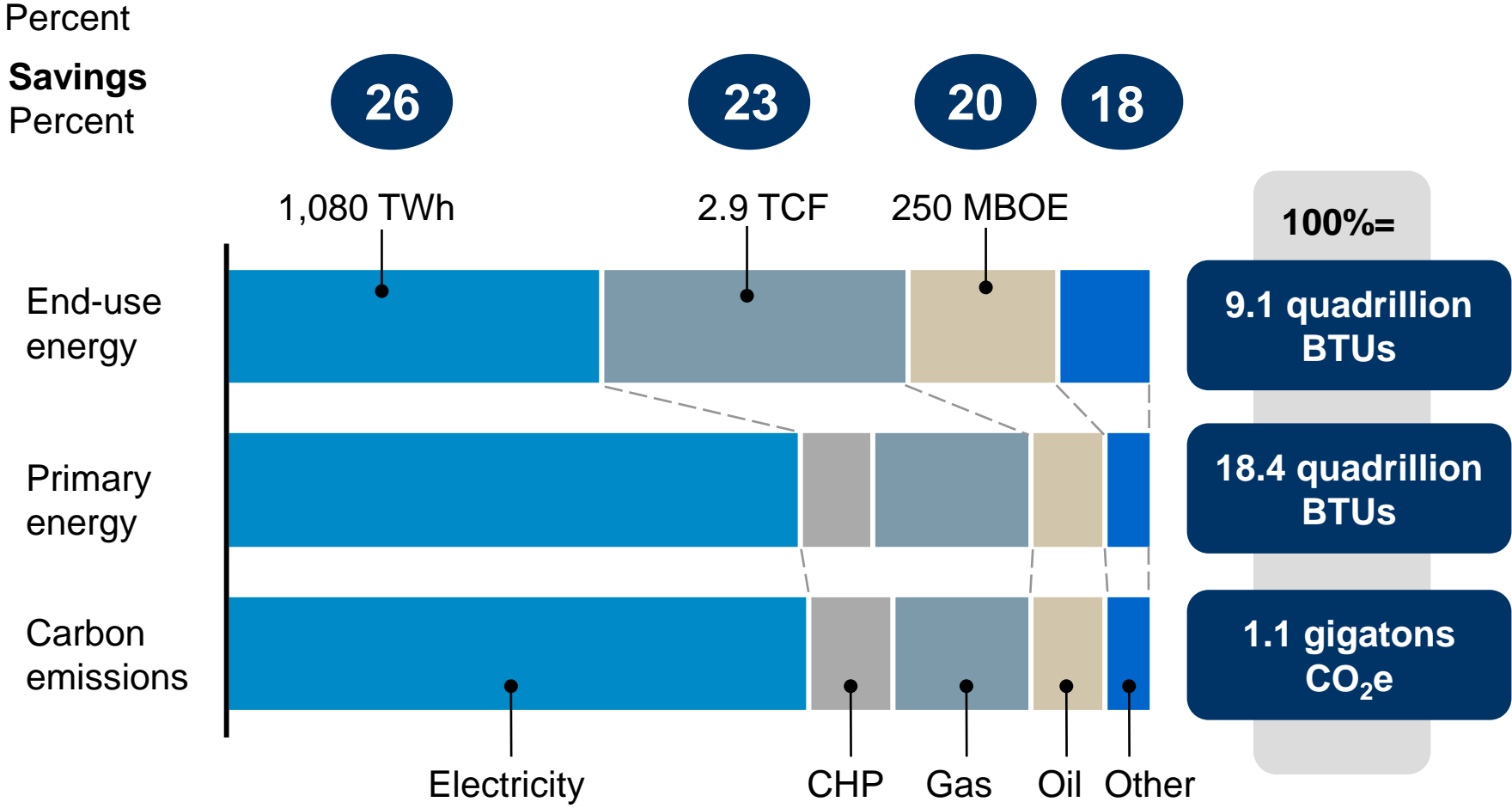
- Industrial
- Commercial
- Residential



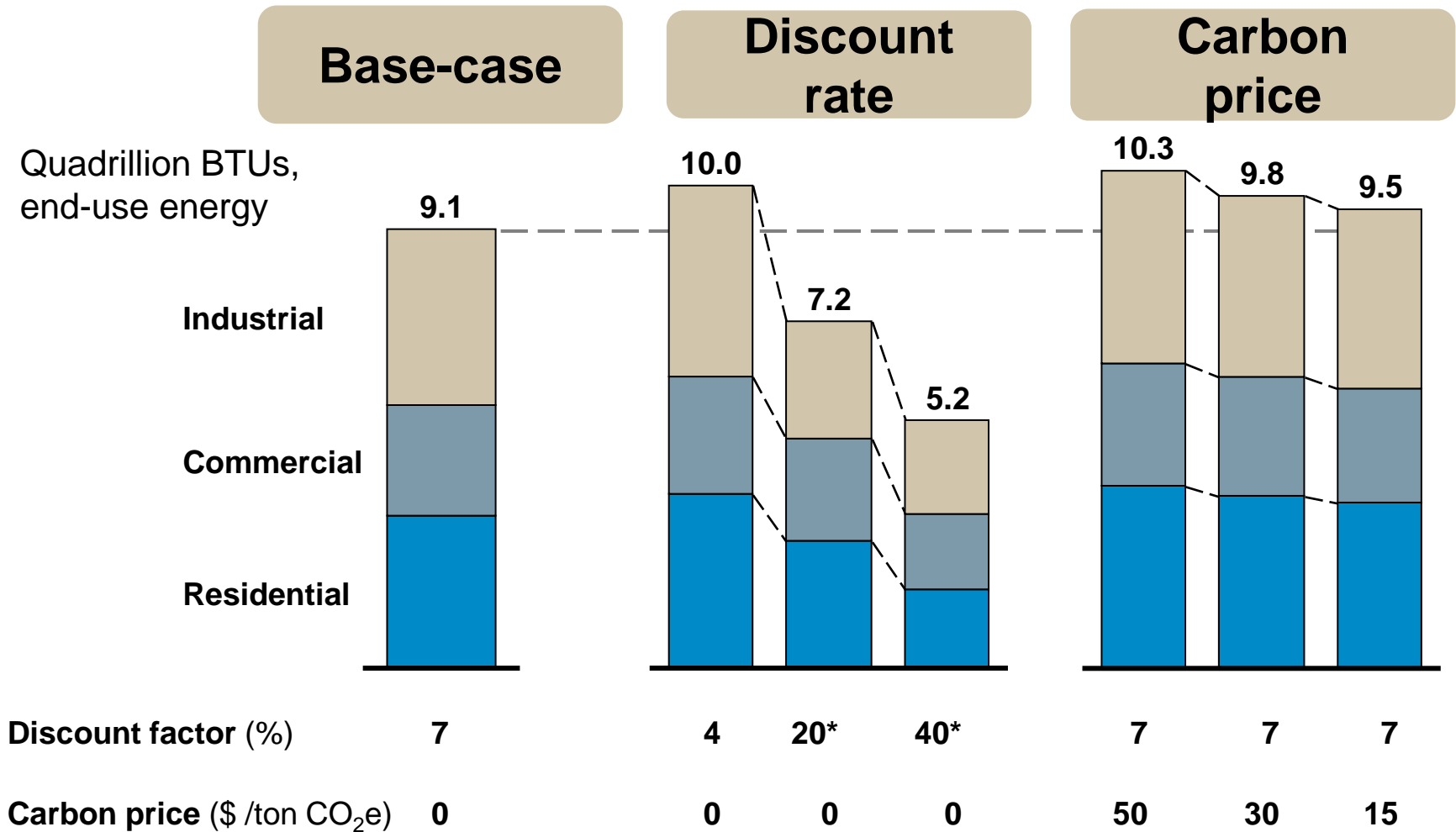
* Includes carbon emission abatement potential from CHP

Significant efficiency potential across fuel types

Contribution by energy source to 2020 efficiency potential



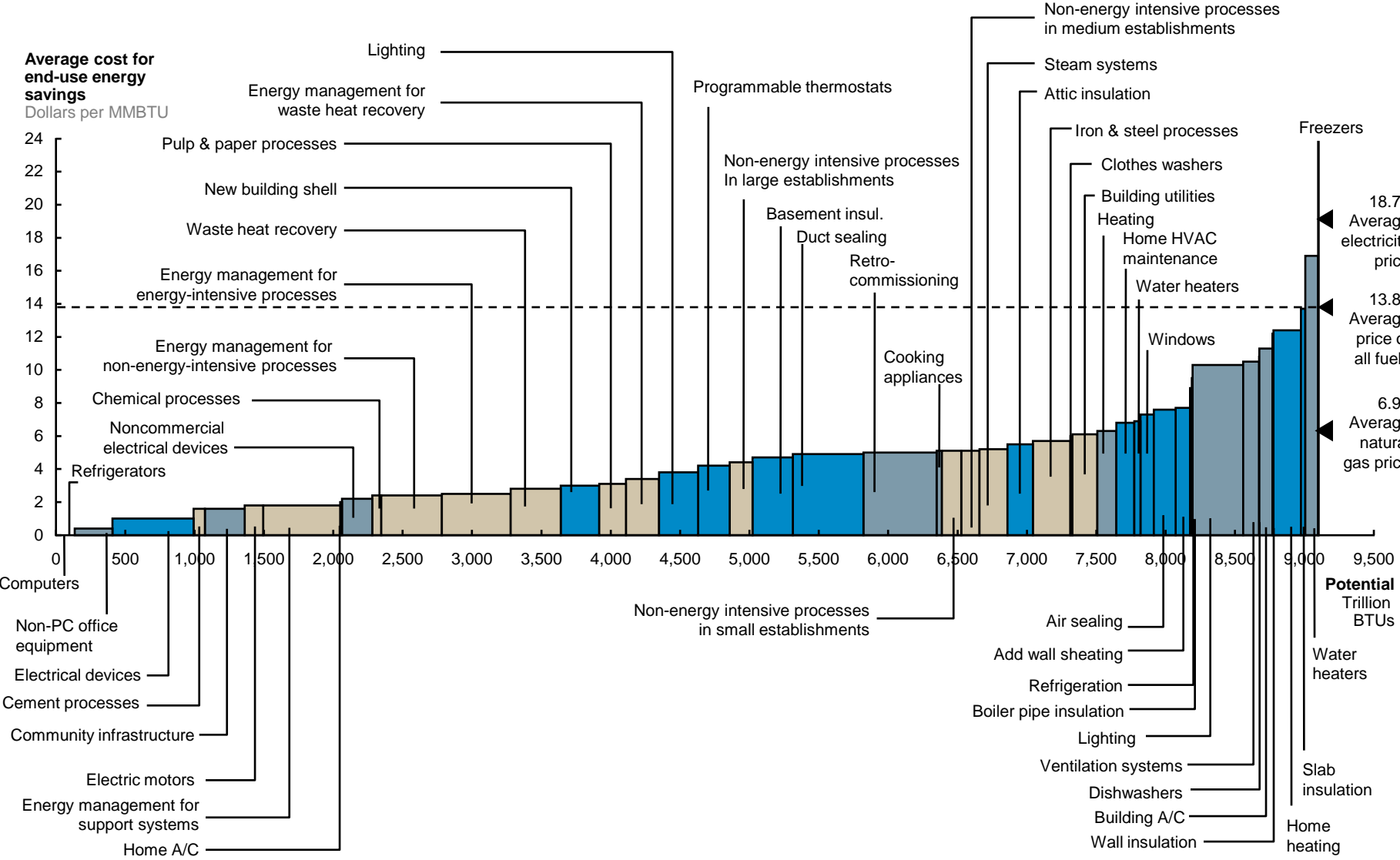
Potential remains attractive even under significant changes in assumptions



* Utilizes retail rates (vs. lower “avoided cost” rate proxy of industrial rates)

Energy efficiency offers the most affordable means of delivering energy

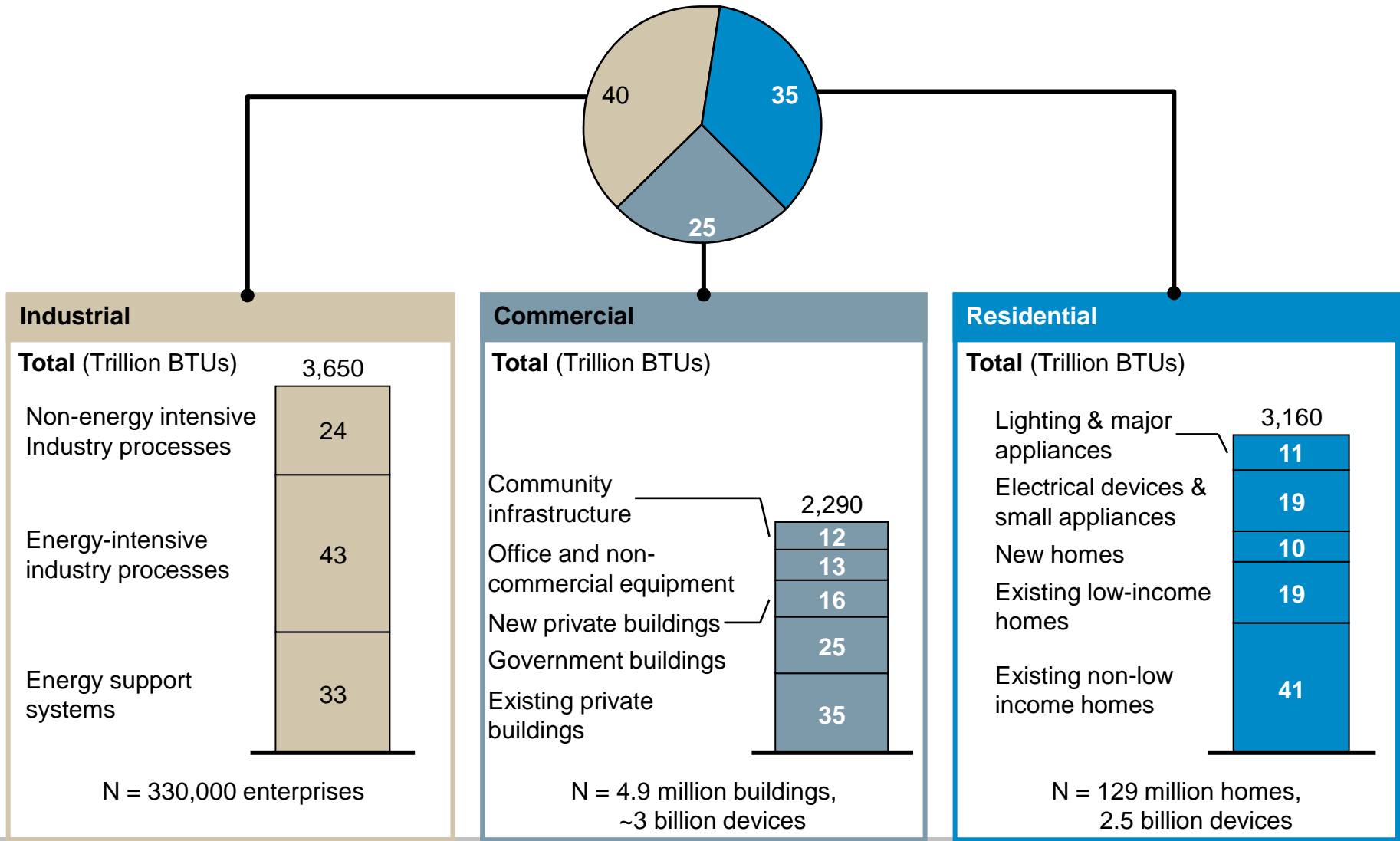
Residential
Commercial
Industrial



Source: EIA AEO 2008, McKinsey analysis

Clusters of opportunity emerge

Percent, 100% = 9,100 trillion BTUs of end-use energy efficiency potential



Source: Energy Information Agency's Annual Energy Outlook 2008; McKinsey analysis

The fundamental nature of energy efficiency creates challenges

FUNDAMENTAL ATTRIBUTES OF ENERGY EFFICIENCY

Requires outlay

Full capture would require upfront outlay of about \$50 billion per year, plus program costs

Fragmented

Potential is spread across more than 100 million locations and billions of devices

Low mind-share

Improving efficiency is rarely the primary focus of any in the economy

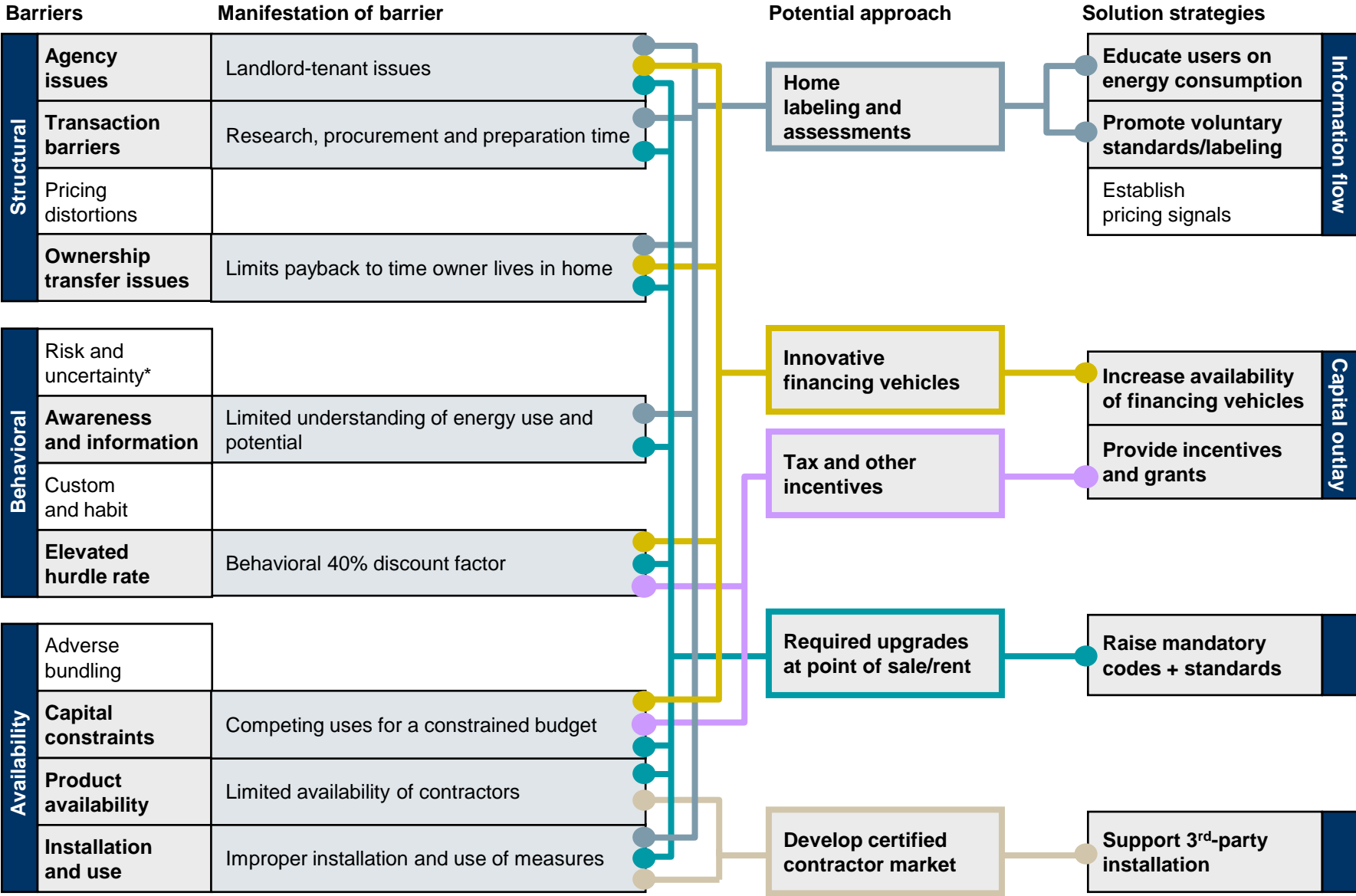
Difficult to measure

Evaluating, measuring and verifying savings, is more difficult than measuring consumption

Opportunity-specific barriers inhibit capture

Opportunity-specific barriers	
Structural	<p>Agency: Incentives split between parties, impeding capture of potential</p> <p>Ownership transfer issue: Owner expects to leave before payback time</p> <p>Transaction barriers: Unquantifiable incidental costs of deployment</p> <p>Pricing distortions: Regulatory, tax, or other distortions</p>
Behavioral	<p>Risk and uncertainty: Regarding ability to capture benefit of the investment</p> <p>Lack of awareness: About product efficiency and own consumption behavior</p> <p>Custom and habit: Practices that prevent capture of potential</p> <p>Elevated hurdle rate: Similar options treated differently</p>
Availability	<p>Adverse bundling: Combining efficiency savings with costly options</p> <p>Capital constraints: Inability to finance initial outlay</p> <p>Product availability: Insufficient supply or channels to market</p> <p>Installation and use: Similar options treated differently</p>

Addressing barriers in non-low income homes



Solution strategies, with varying degrees of experience, are needed to unlock barriers

SOLUTION STRATEGIES

Proven

ENERGY STAR for appliances
Mandatory building codes

Piloted

LEED certified commercial buildings
Promoting energy management

Emerging

Long Island Green Homes in Babylon, NY
Loan guarantees for performance contracting

Important observations

- **Recognize energy efficiency as an important energy resource** while the nation concurrently develops new energy sources
- **Launch an integrated portfolio** of proven, piloted, and emerging approaches
- Identify methods to **provide upfront funding**
- **Forge greater alignment** among stakeholders
- **Foster development** of next-generation energy efficient technologies