

Energy Finance for Real Estate

New Tools.
New Capital.
New Markets.

An Urban Land Institute Policy and Practice Forum

Organized by:

The ULI Climate Change, Land Use, and Energy
(CLUE) Initiative

June 7–8, 2010 • New York City

Principal Support



Patron Support



Producer Support



ULI thanks Malkin Holdings for use of the event space at the Empire State Building.

Coordinating Organizations

The Clinton Climate Initiative
Initiative for Responsible Investment at Harvard University
ULI New York District Council
ULI Daniel Rose Center for Public Leadership in Land Use
ULI Center for Capital Markets and Real Estate



The State of the Energy Efficiency Market in Real Estate

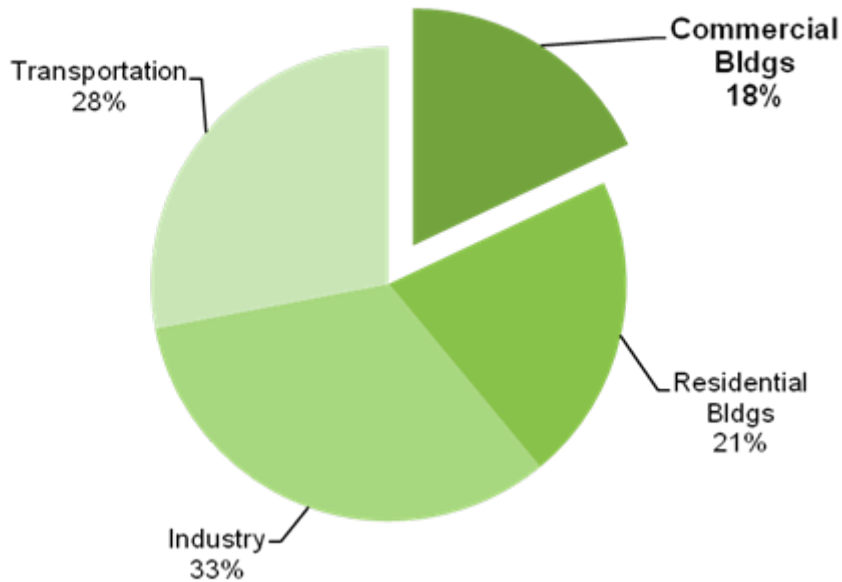


Clay Nesler (clay.g.nesler@jci.com)
VP, Global Energy and Sustainability
Johnson Controls, Inc.

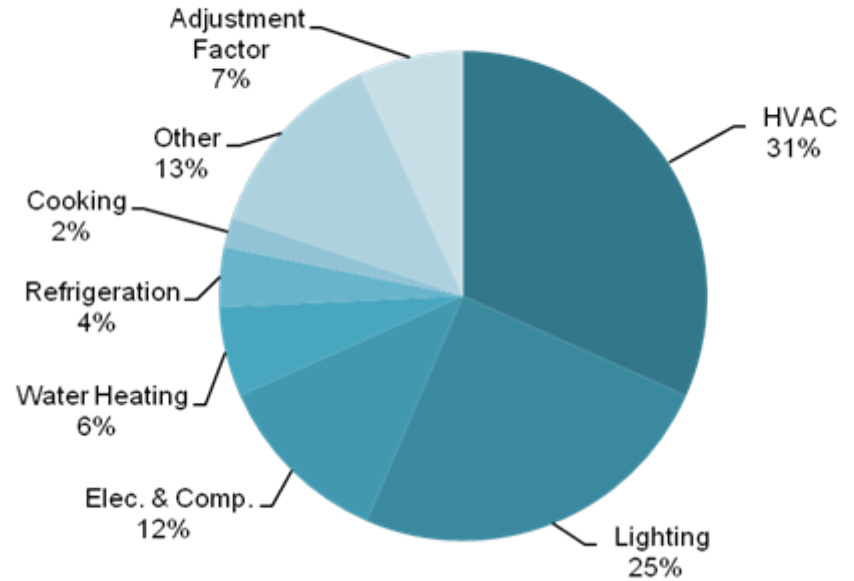


U.S. Commercial Building Energy Use

Total US Primary Energy Use



Commercial Building Energy Use

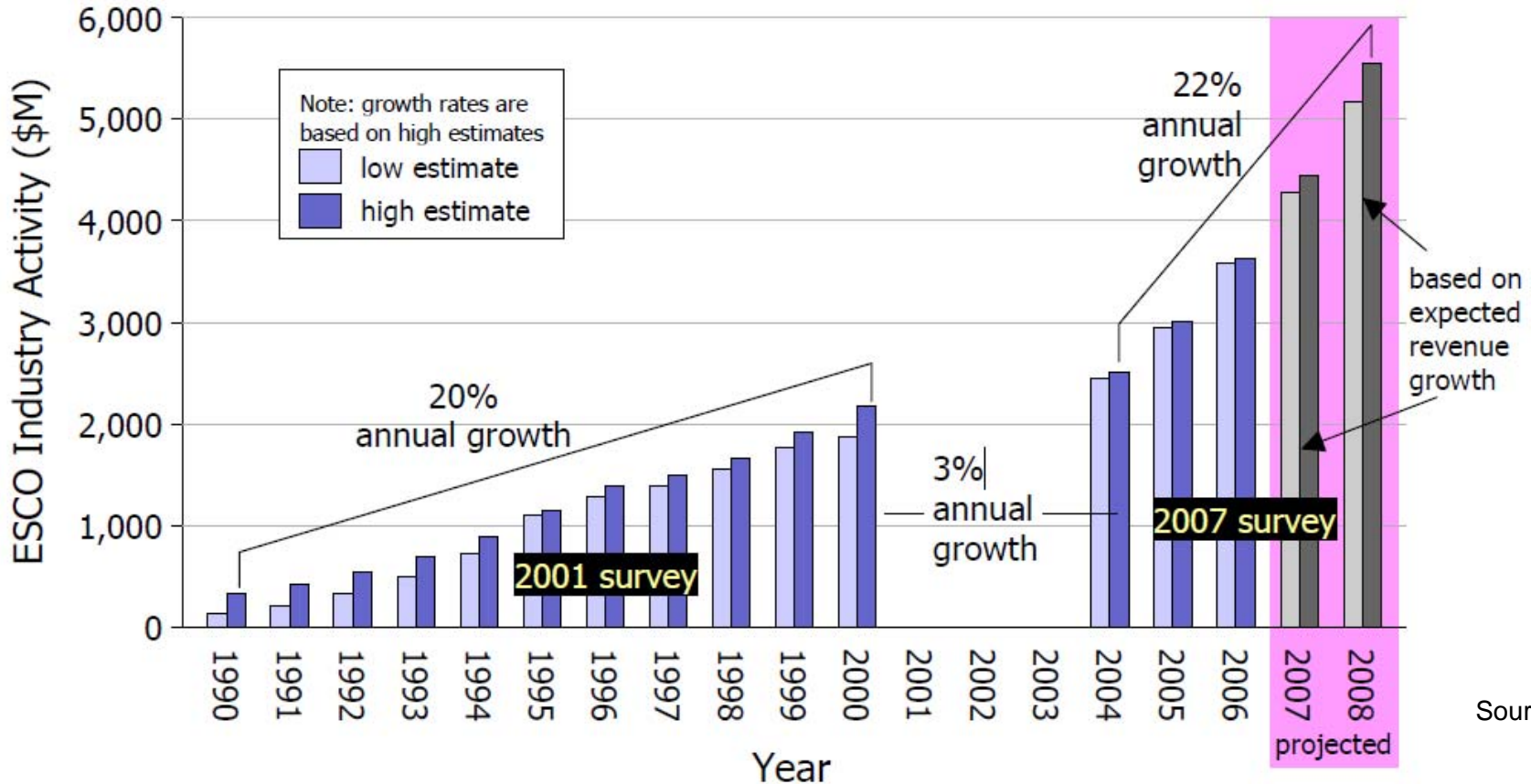


- ▶ Over \$170 billion spent annually
- ▶ 12% of US GHG emissions

Source – DOE: Buildings Energy Data Book

EE Investment Trends

- ESCO industry used as proxy for growth (overall level of investment is difficult to measure, but much higher than \$6 billion).
- 18-22% annual growth expected, 10-15% for private non-industrial (“Commercial”) sector



Source – LBNL



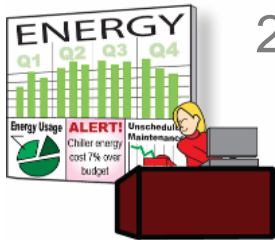
Global Energy Efficiency Indicator study

2882 total respondents across the world

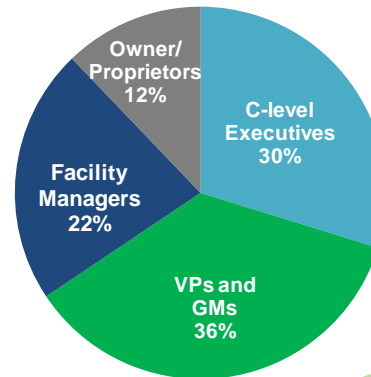
1. Must have capital- or operations budget responsibility for facilities



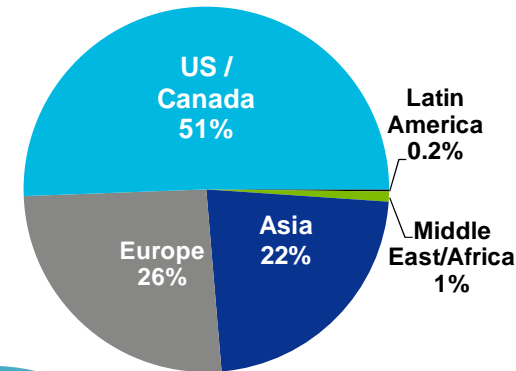
2. Responsibilities must include monitoring energy usage, proposing or approving efficiency initiatives



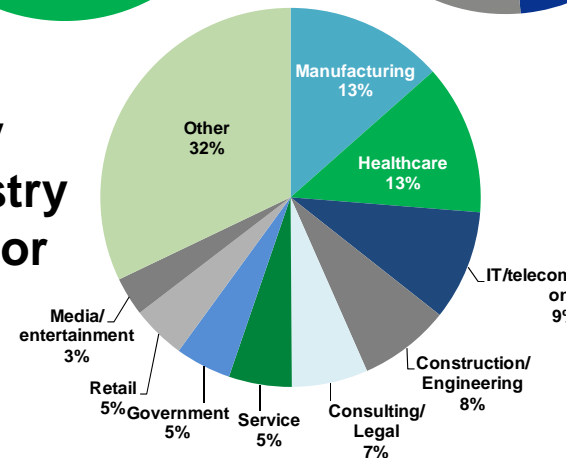
By Role



By Region



By Industry Sector



Energy efficiency is a global business priority

71%...

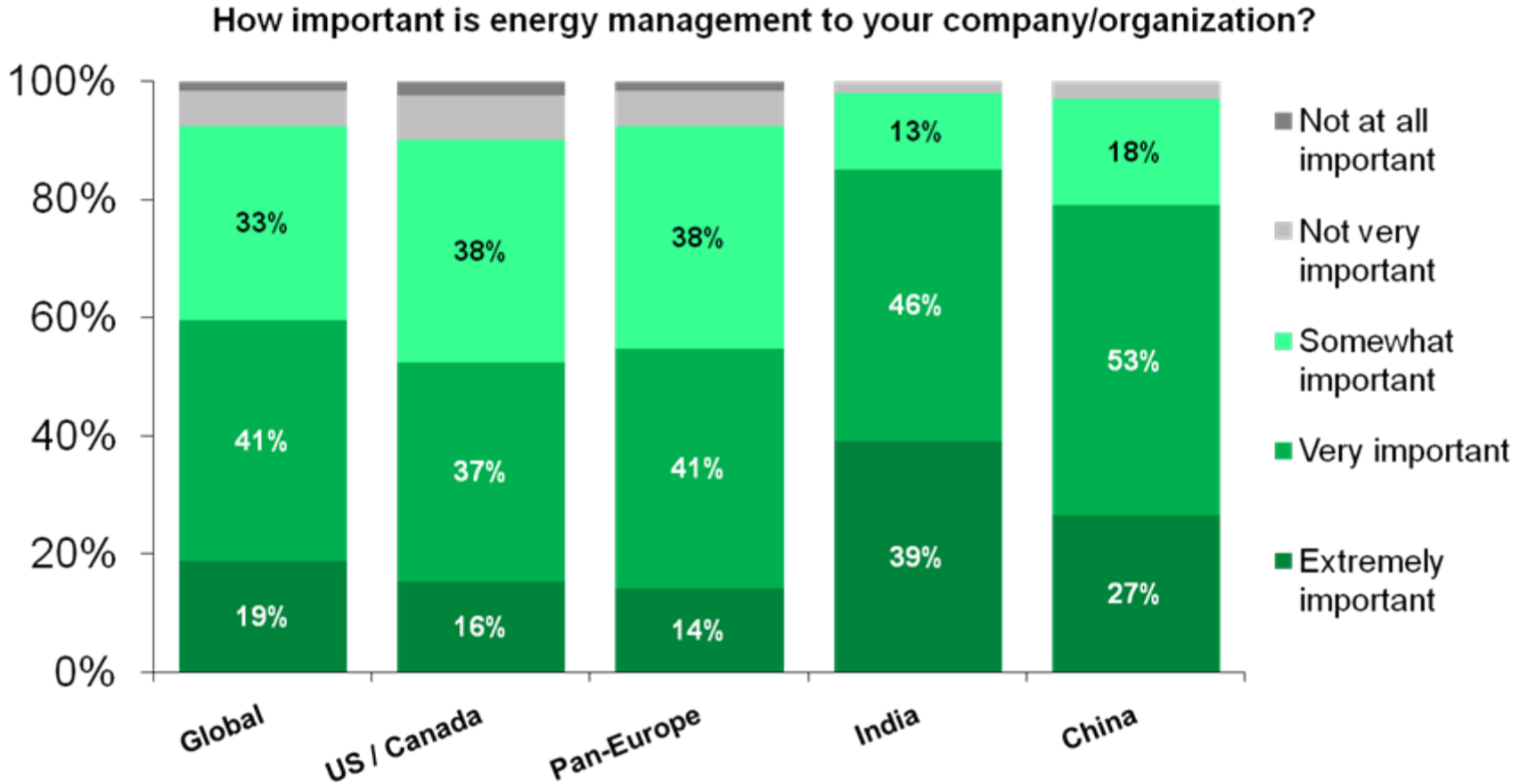
are paying more attention to energy efficiency than last year

85%...

Say energy efficiency is a priority for new construction and retrofit projects

Energy management is important worldwide

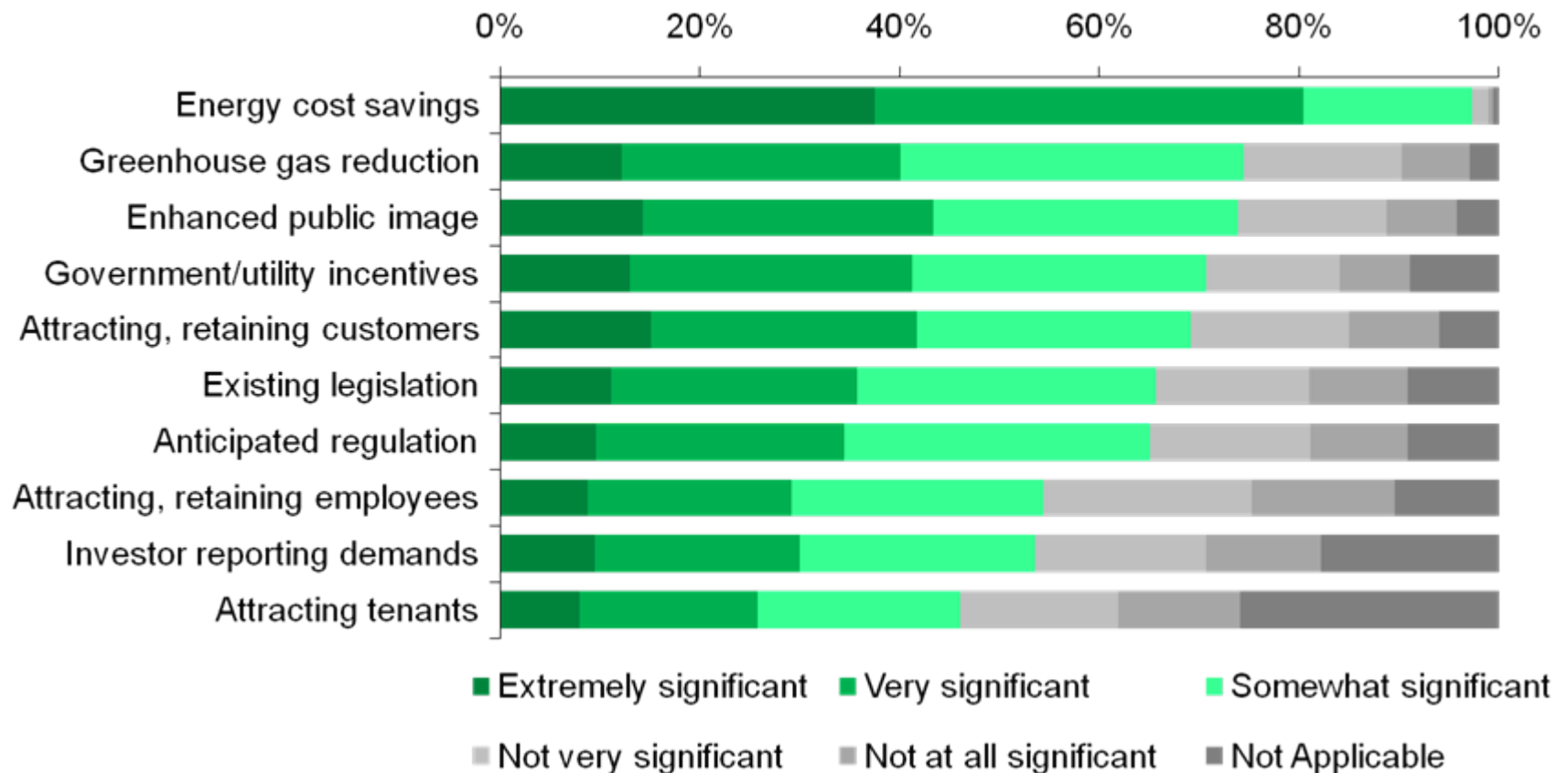
Particularly in India and China



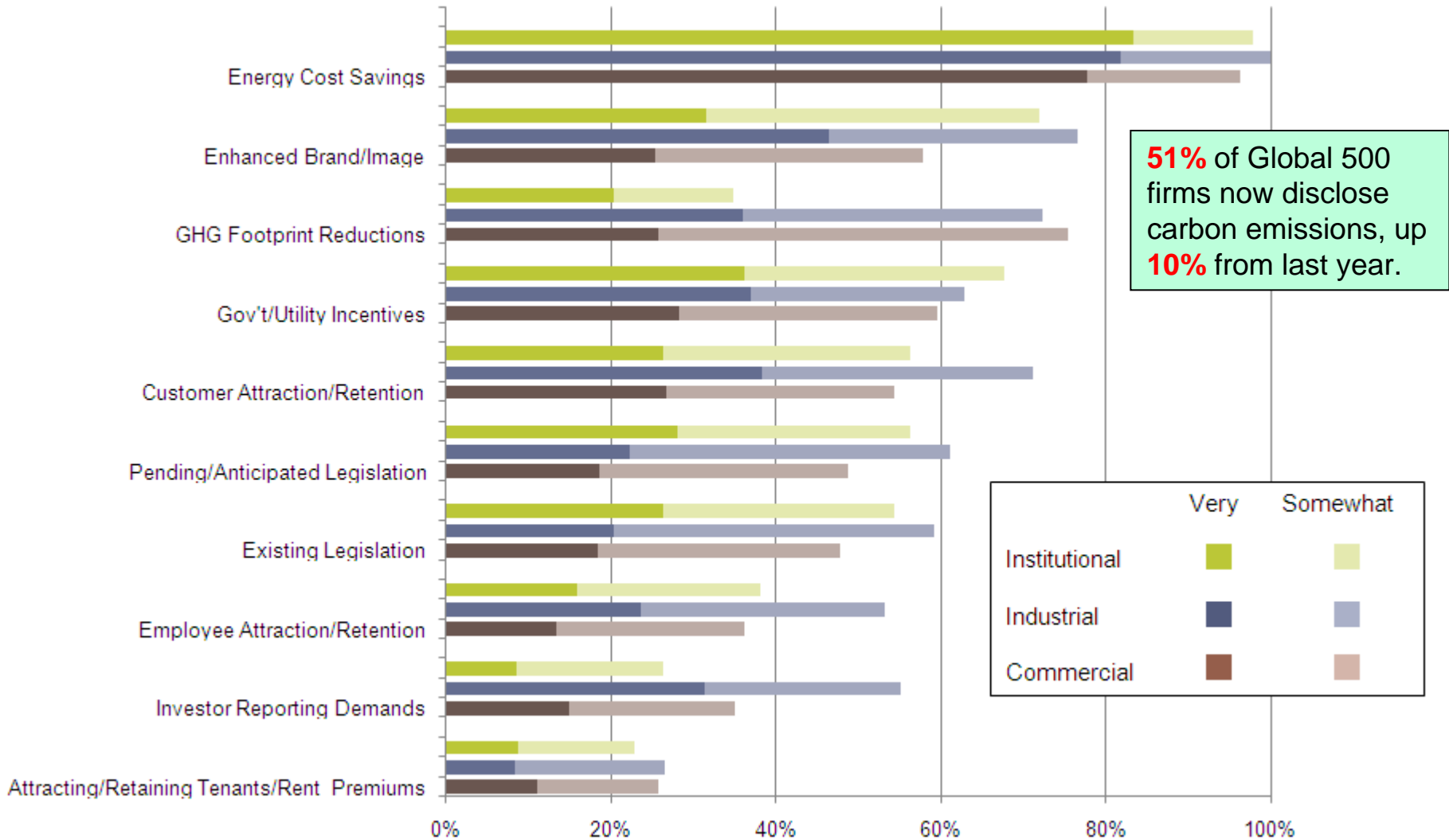
Reducing energy costs most important driver

Public image and incentives also influential

How significant an influence are the following in your organization's energy efficiency decisions?

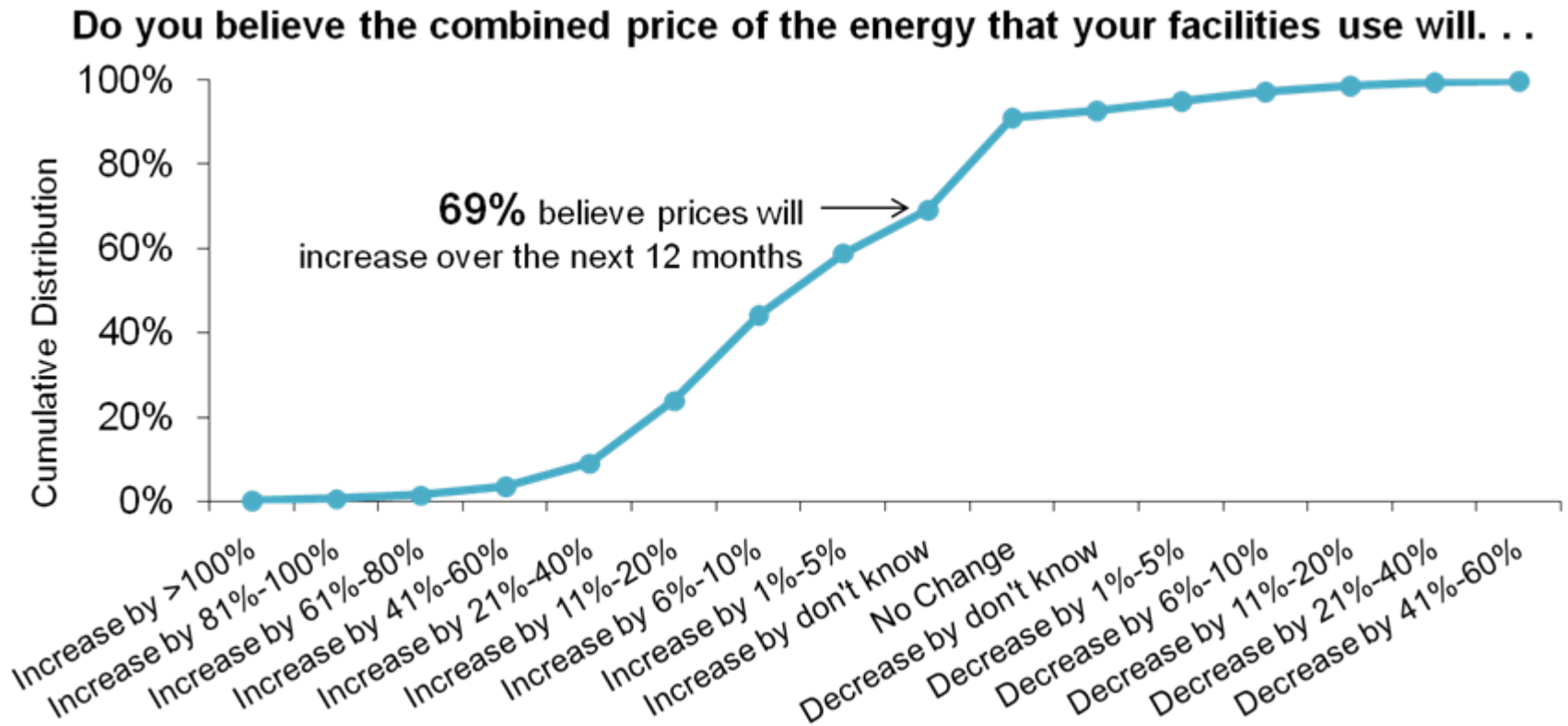


GHG reduction more important in commercial



Real estate leaders believe energy prices will climb significantly this year

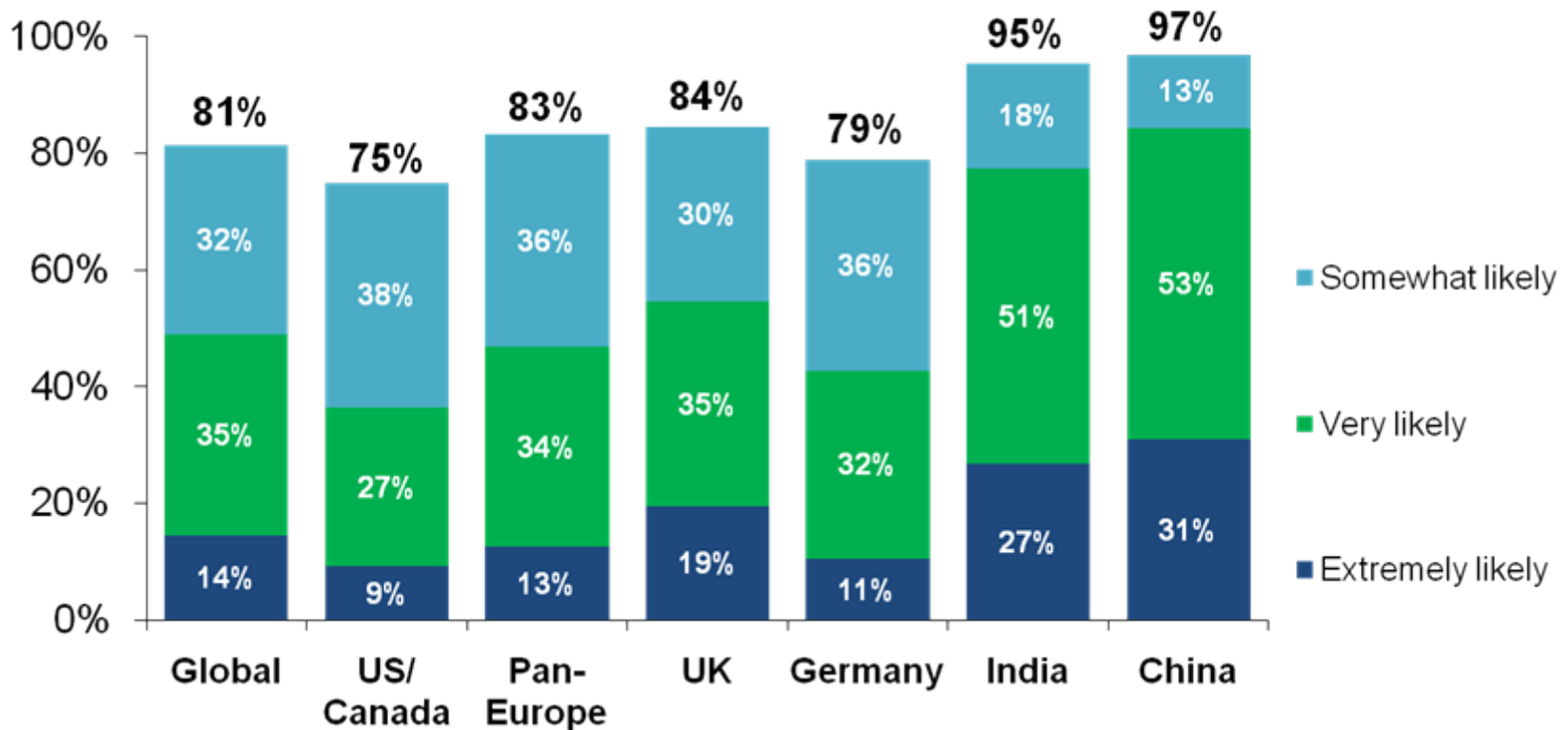
Average expected change in energy prices
over next 12 months = **9% increase**



Significant legislation expected within two years

US/Canada expectations dropped from last year

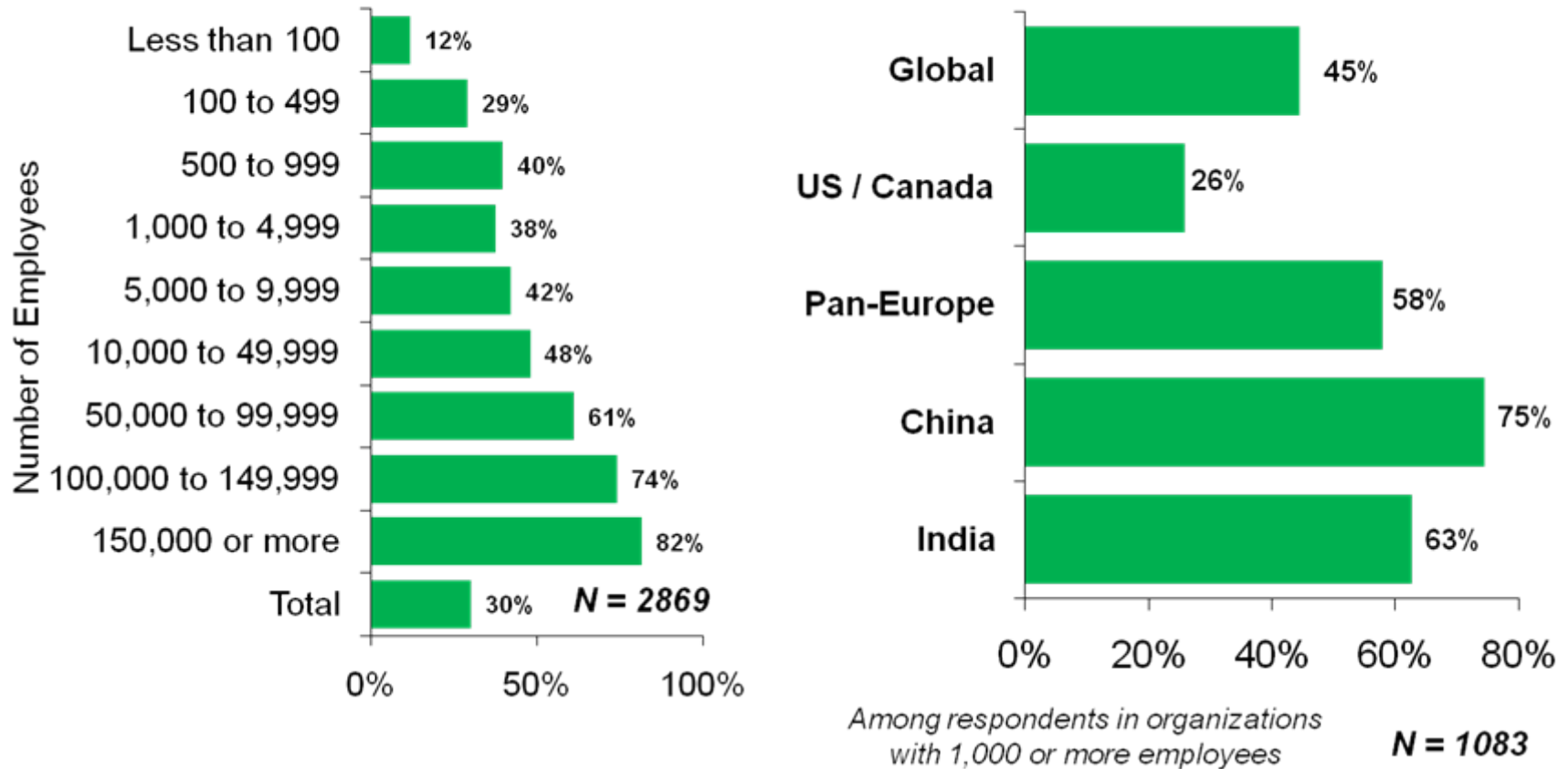
How likely is significant legislation mandating energy efficiency and/or carbon reduction within the next 2 years?



Voluntary commitments becoming common

Especially among larger organizations

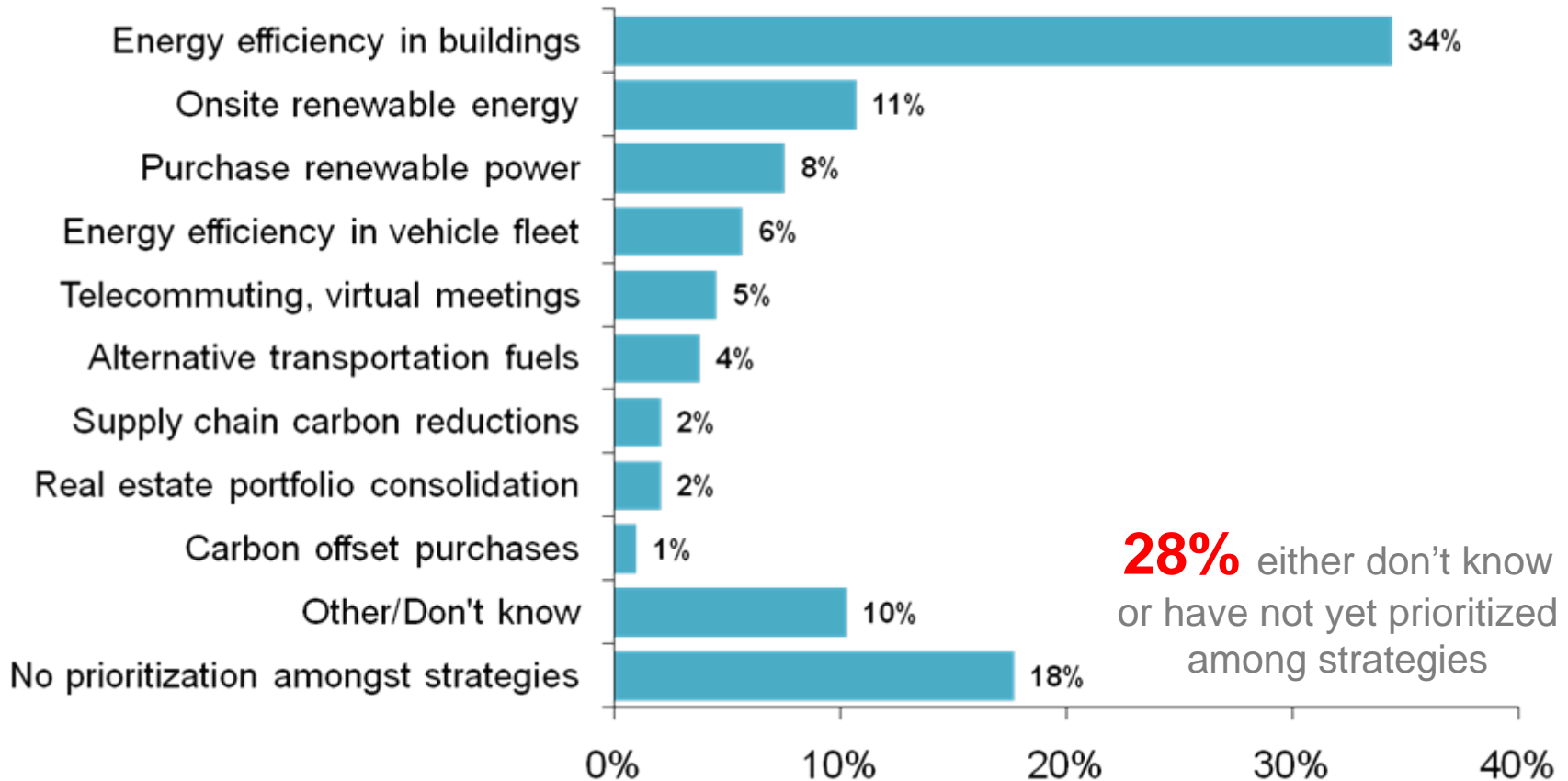
Does your company/organization have a publicly stated carbon-reduction goal?



Building efficiency is highest priority strategy

Onsite renewables, green power & fleet efficiency also strong

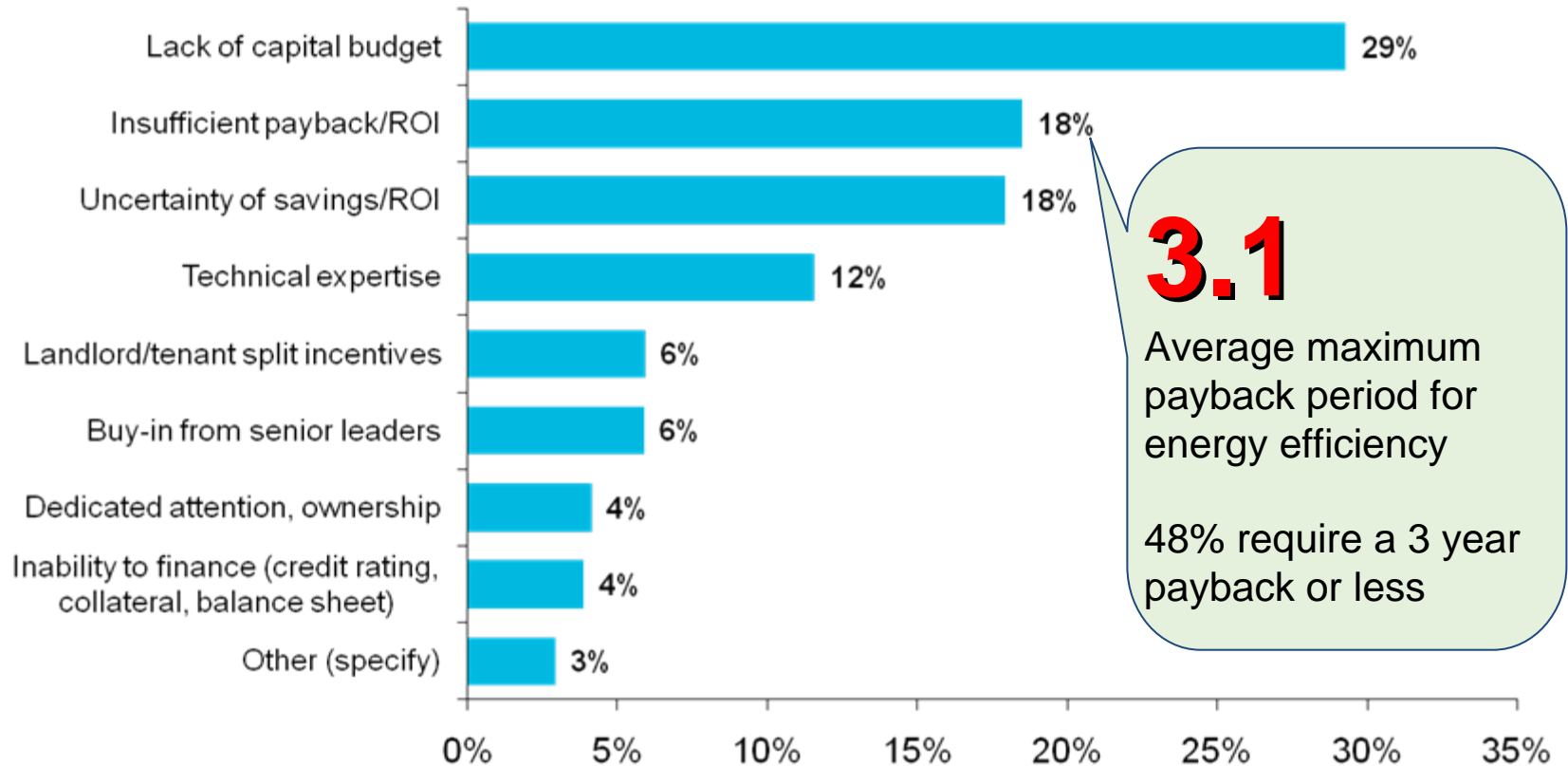
What is your organization's top strategy to reduce its carbon emissions?



Limited internal capital is greatest overall barrier

There are some important differences by region

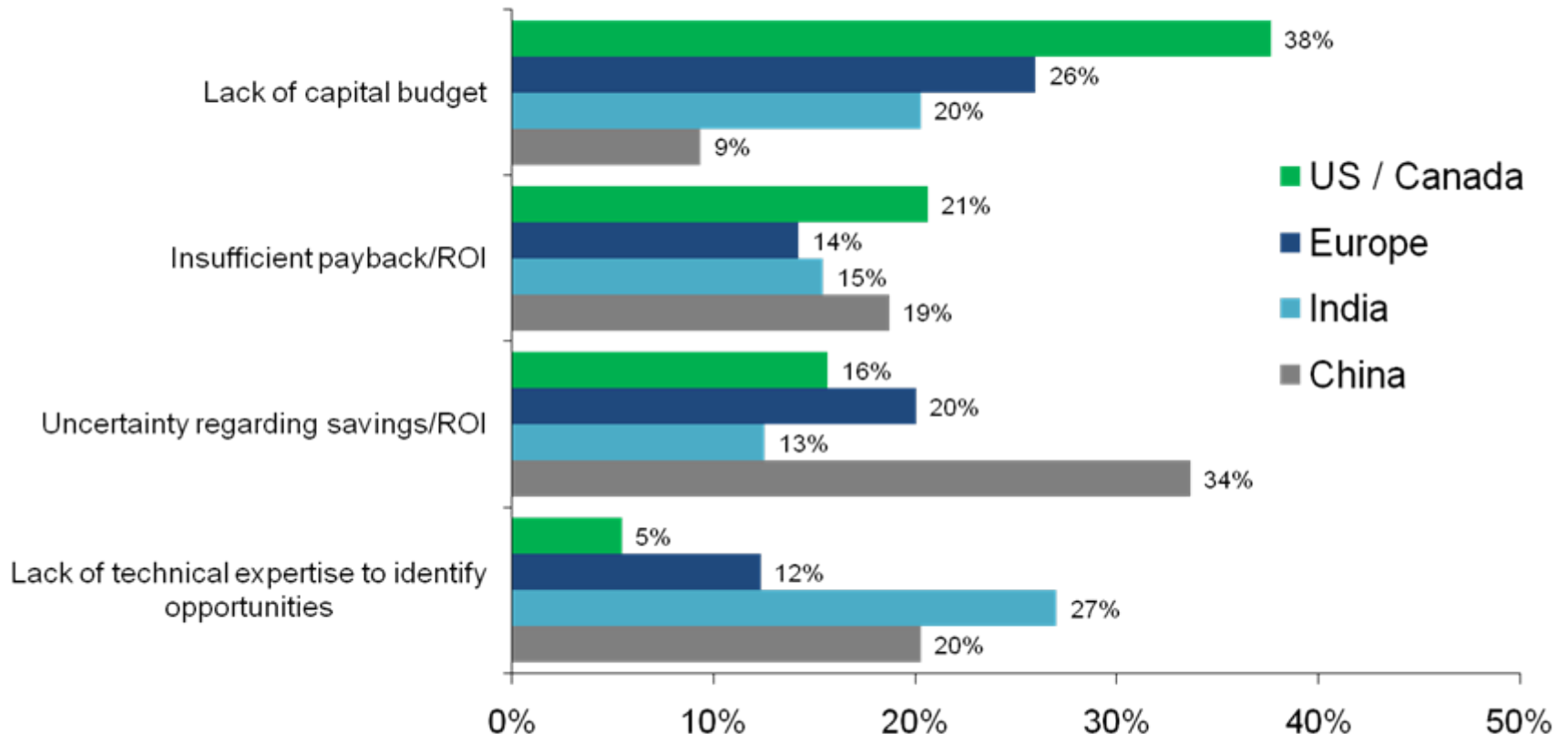
What is the top barrier to capturing potential energy savings for your organization?



Lack of capital largest barrier in NA and EU

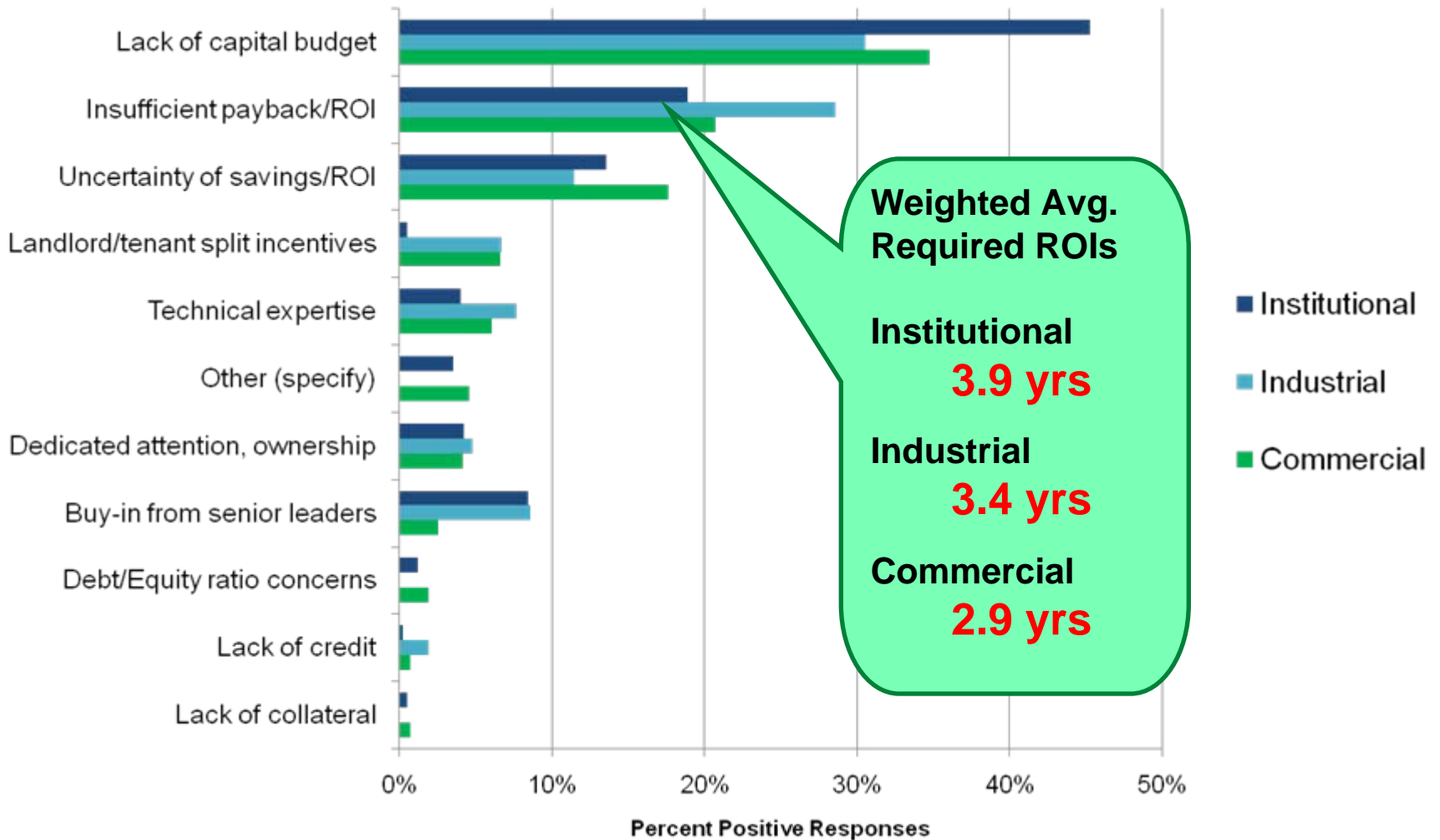
Payback uncertainty and expertise barriers in China and India

What is the top barrier to capturing potential energy savings for your organization?



Barriers to Investment

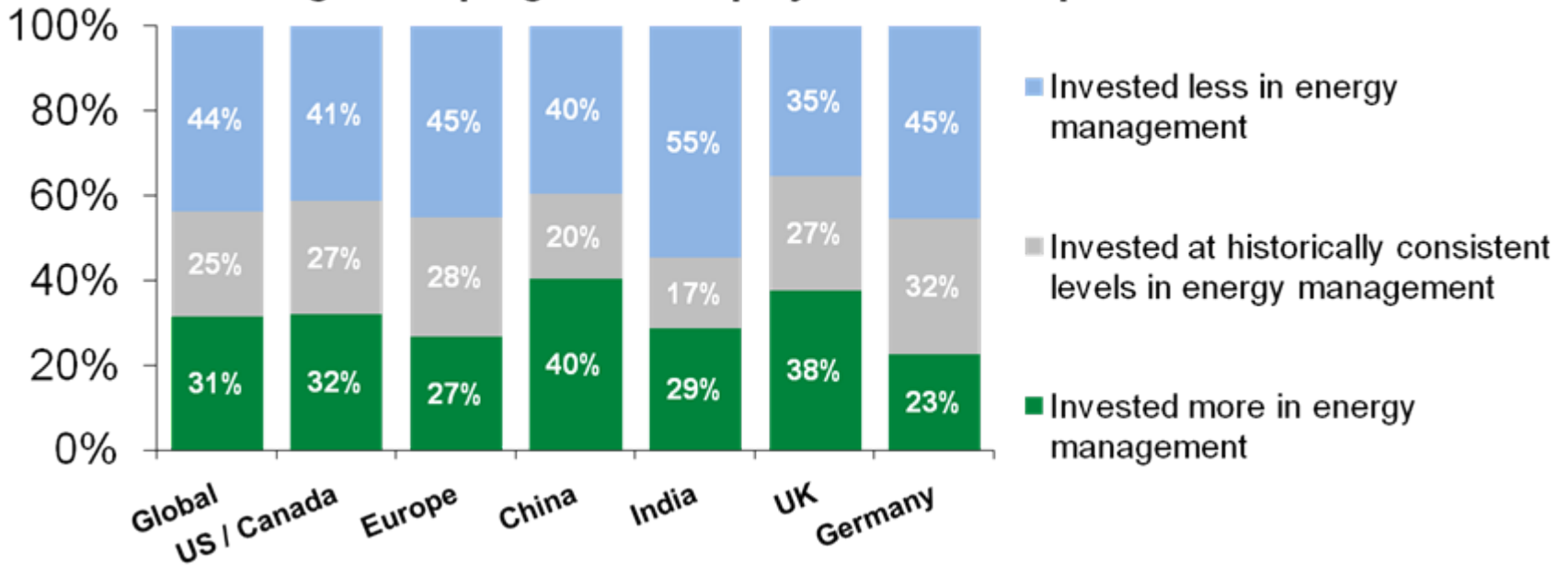
Upfront costs are the largest hurdle



Investment in efficiency remained strong

Even in spite of the global recession

What impact has the economic recession had on your level of investment in energy management programs and projects over the past 12 months?

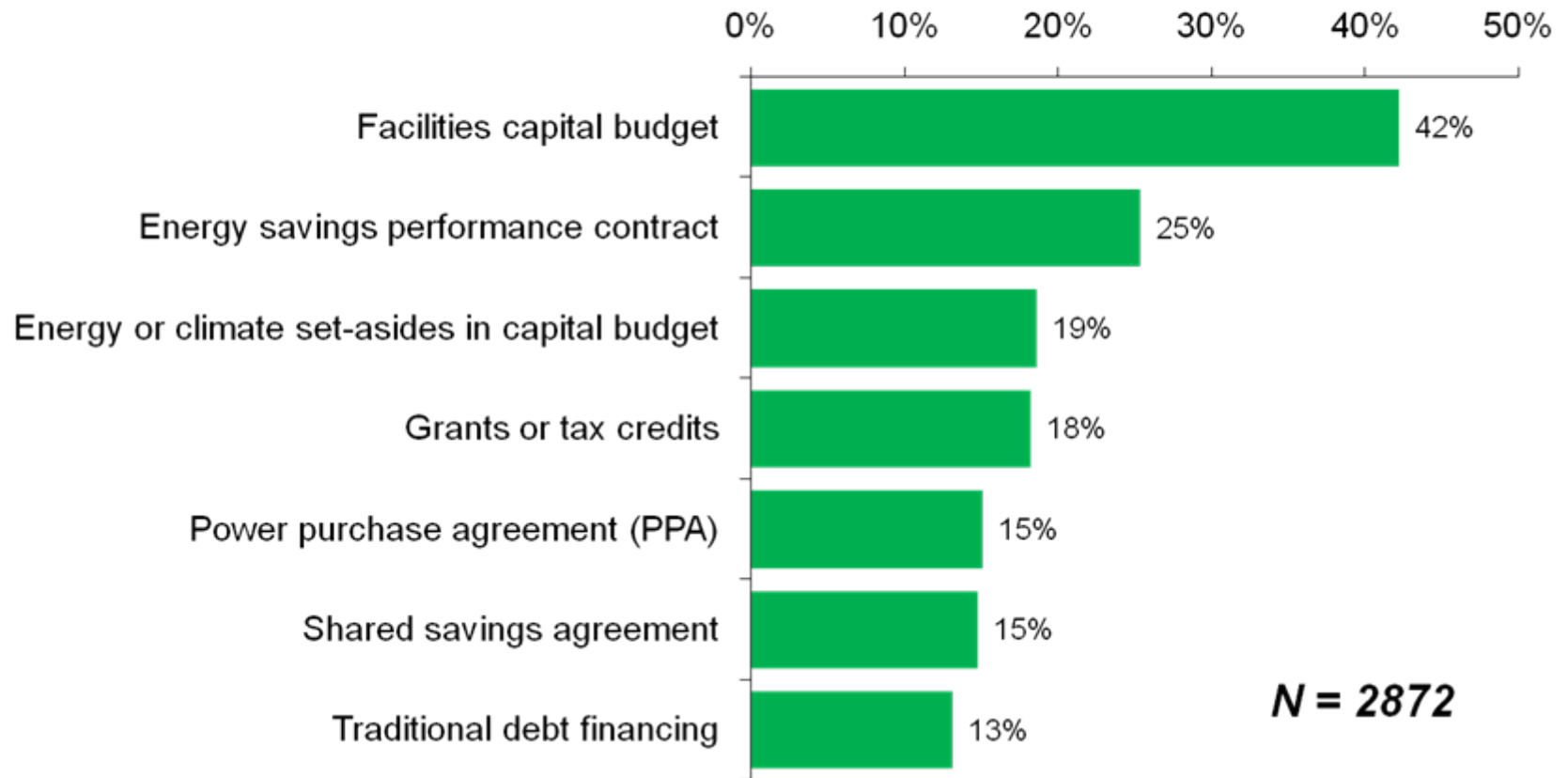


56% have invested the same or *more* in energy efficiency over the past 12 months due to the recession

Internal capital budgets is primary funding source

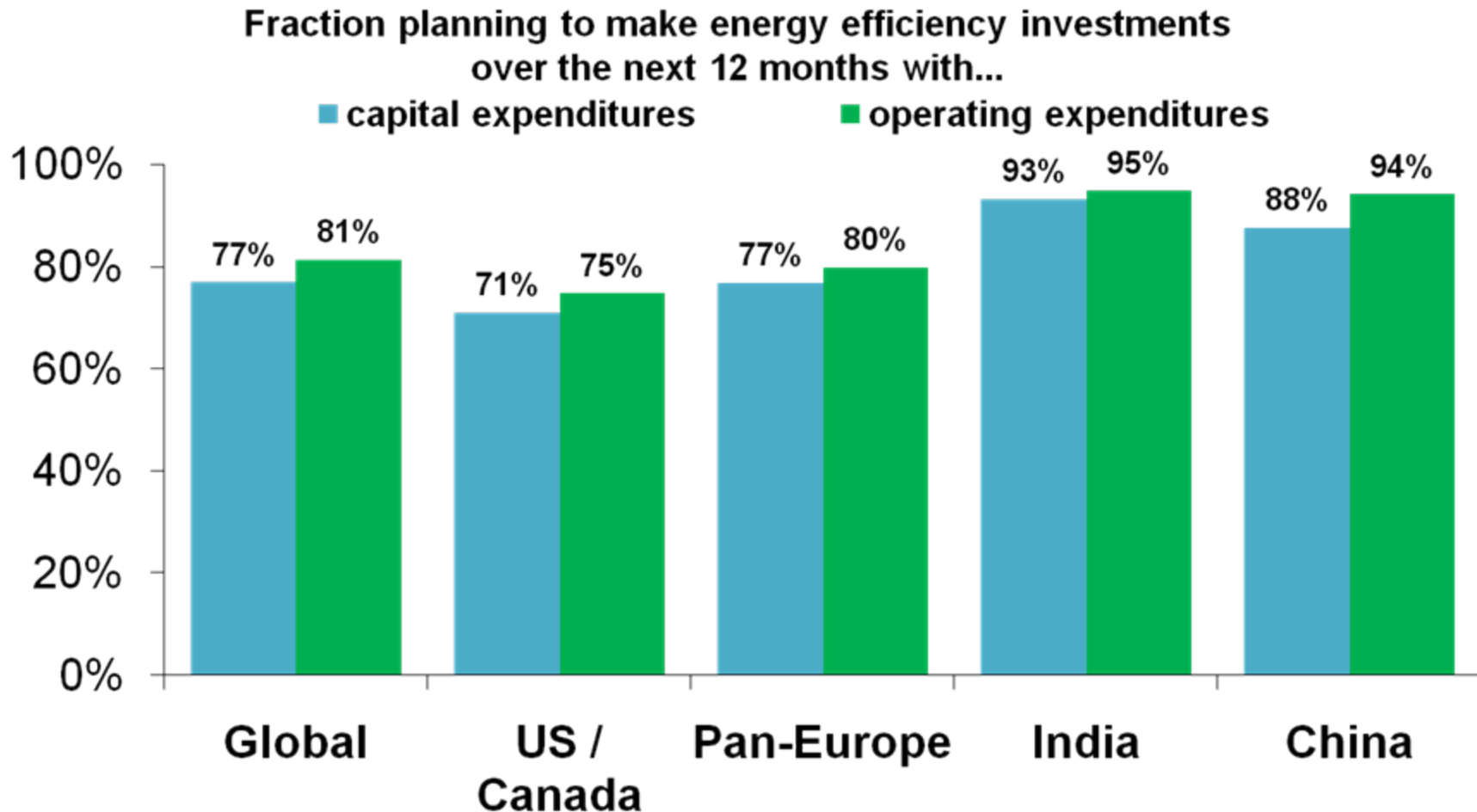
Performance contracting is a strong second place

Which options will your organization consider to pay for energy efficiency and renewable energy projects over the next 12 months? (Select all that apply)?



Energy efficiency spending plans for 2010

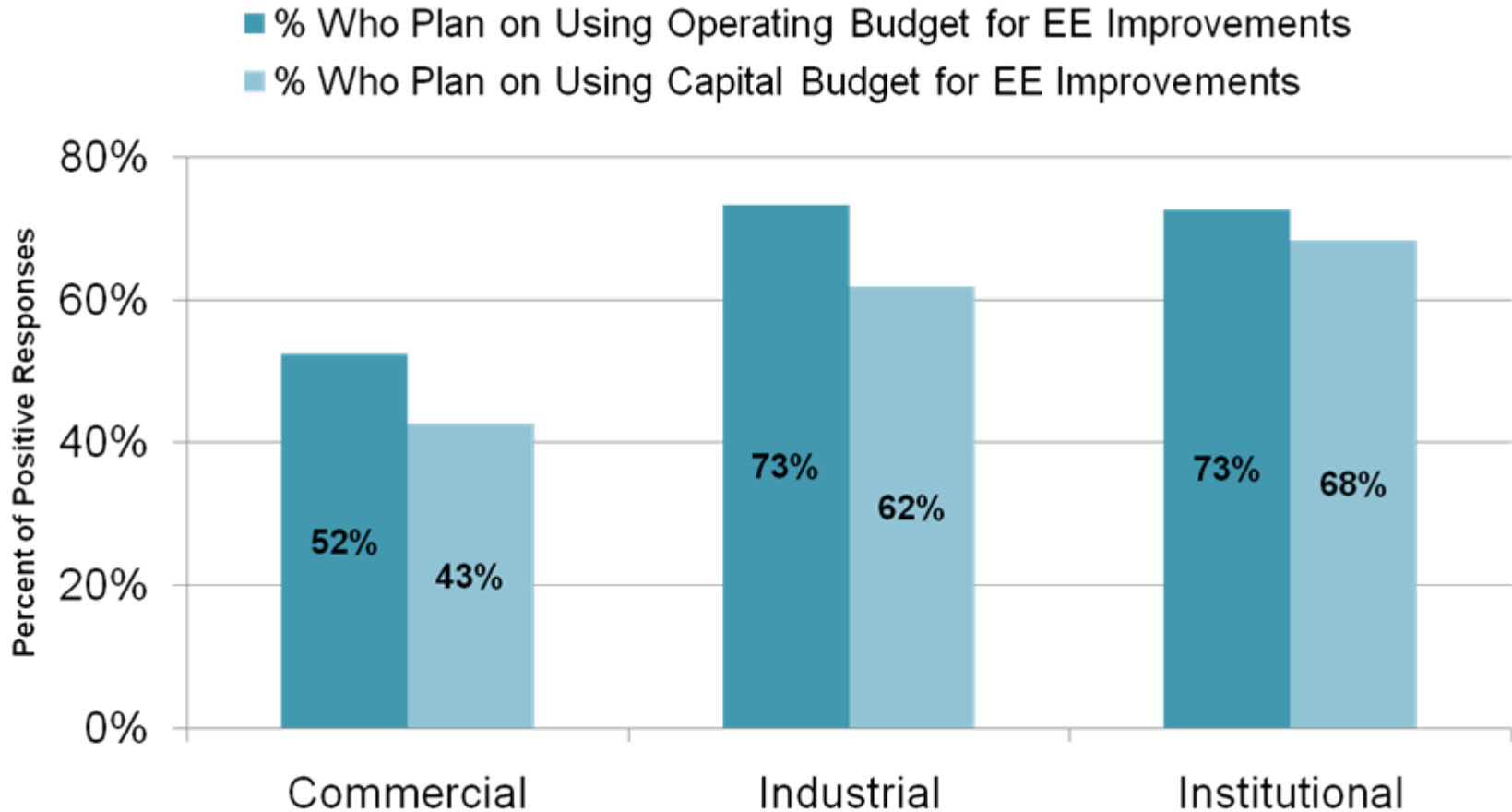
Greatest percentage seen in India and China



Among respondents responsible for 100,000 sf or more

N = 1571

US Spending Plans – 2010 By Sector



Over the past year, many organizations invested in measures with low cost or rapid payback

73% switched to more energy efficient lamps, ballasts, or lighting fixtures

64% educated facilities operations staff

62% educated building occupants

49% adjusted HVAC schedules/setpoints

44% installed occupancy or daylight sensors

...but an impressive fraction also made significant efficiency investments

37% replaced inefficient equipment *before the end of its useful life*

37% upgraded building management systems

32% installed energy-saving glass in windows

22% participated in demand response programs

21% installed renewable energy systems

For more complete EEI results

Go to www.InstituteBE.com

→ What's New

→ Global Energy Efficiency Indicator Results for 2010

Includes link to webcast archive

The screenshot shows the homepage of the Institute for Building Efficiency, an initiative of Johnson Controls. The navigation menu includes: Existing Building Retrofits, Green Buildings, Smart Grids & Smart Buildings, Renewable & Distributed Energy, Financing Clean Energy, Carbon Management, Energy & Climate Policy, and What's New. The 'What's New' section features a 'What's New' icon and a link to 'Global Energy Efficiency Indicator Results for 2010'. Below this, there are sections for 'Articles' and 'Resources & Tools'. The 'Articles' section includes 'Johnson Controls Launches Institute for Building Efficiency' and 'Signature Study: Energy Efficiency Indicator Goes Global in 2010'. The 'Resources & Tools' section lists various presentations and reports. A 'SPOTLIGHT' section highlights 'ENERGY EFFICIENCY INVESTMENTS TO INCREASE' with a line graph showing trends from 2007 to 2010. The graph shows two lines: a red line starting at 61% in 2007, dipping to 55% in 2008, and rising to 60% in 2010; and a green line starting at 58% in 2007, dipping to 46% in 2008, and rising to 52% in 2010. Below the graph is an 'Energy Efficiency Indicator Overview' video player.

<http://www.institutebe.com/Whats-New/global-energy-efficiency-indicator.aspx>