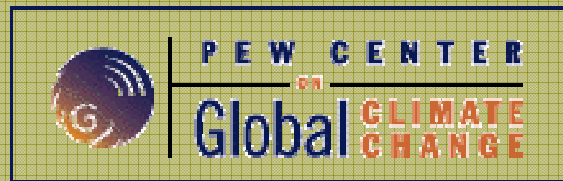


Corporate Energy Efficiency Survey Results



**Project Advisory Committee Meeting
April 6, 2009**

Survey Background



- Survey designed to gather key quantitative data, identify trends, and gauge current activities
- Approximately 65 questions organized under five categories
 1. General company information
 2. Overall strategy
 3. Finance & risk management aspects
 4. Specific initiatives (internal operations, supply chains, and products & services)
 5. Lessons learned

Survey Background



- Survey distributed Jan. 26, 2009
- Last responses collected March 6, 2009
- 95 companies invited to participate
 - Large corporations with demonstrated commitment to climate & energy issues
 - Several industry sectors represented, including: high tech; electric power; autos; chemical; pharma; food & beverage; manufacturing; cement; metals & mining; financial services

Survey Background

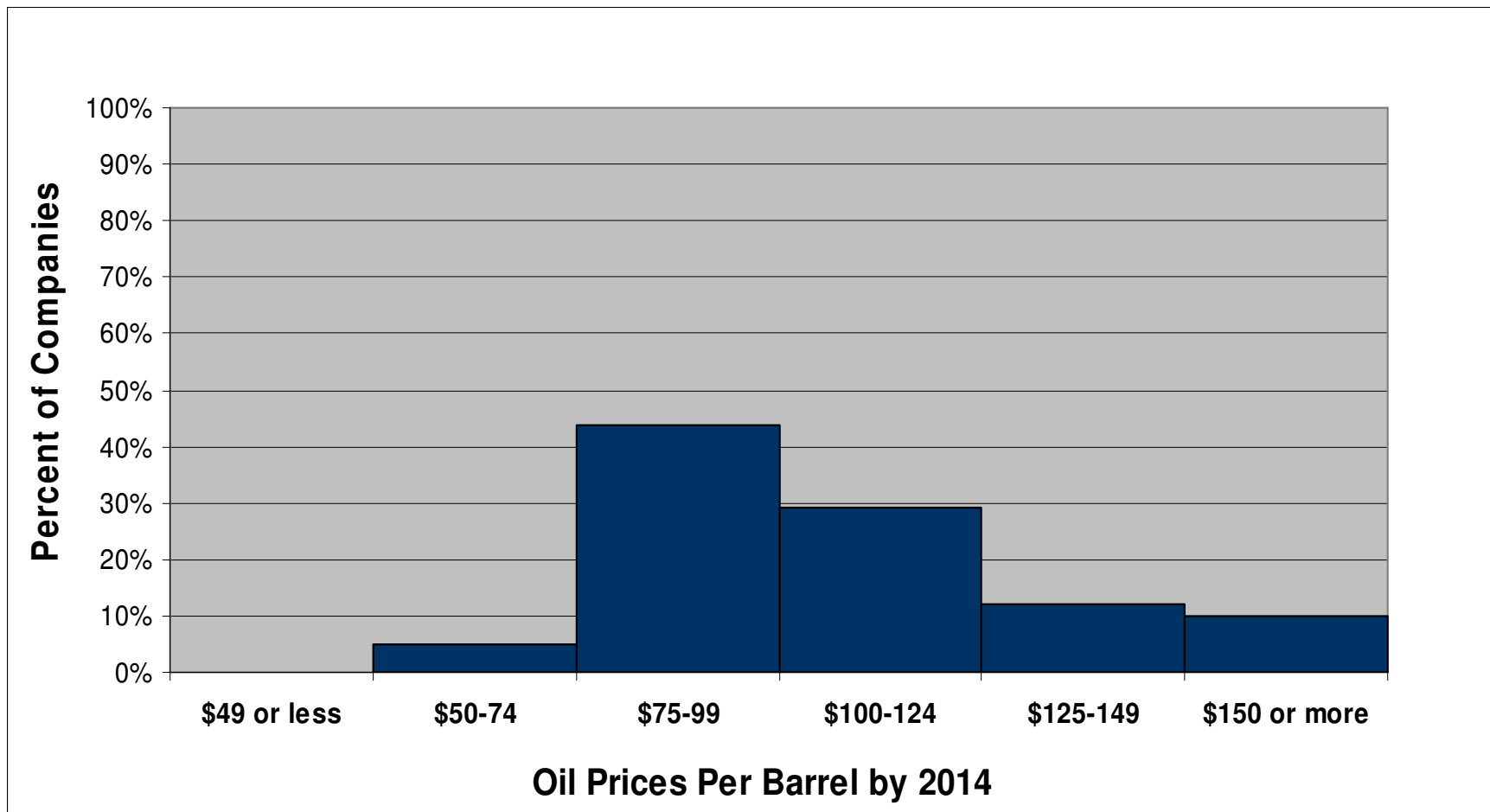


- 48 surveys completed (response rate >50%)
- Average revenue: \$29 Billion
 - Range: \$8-99 Billion
- Average energy costs: \$2 Billion
 - Range: \$25 Million-\$27 Billion
- Energy costs as % revenues: 5% (avg)
 - Range: 0.1%-50%
- ***Note: all numbers preliminary—verification in process***

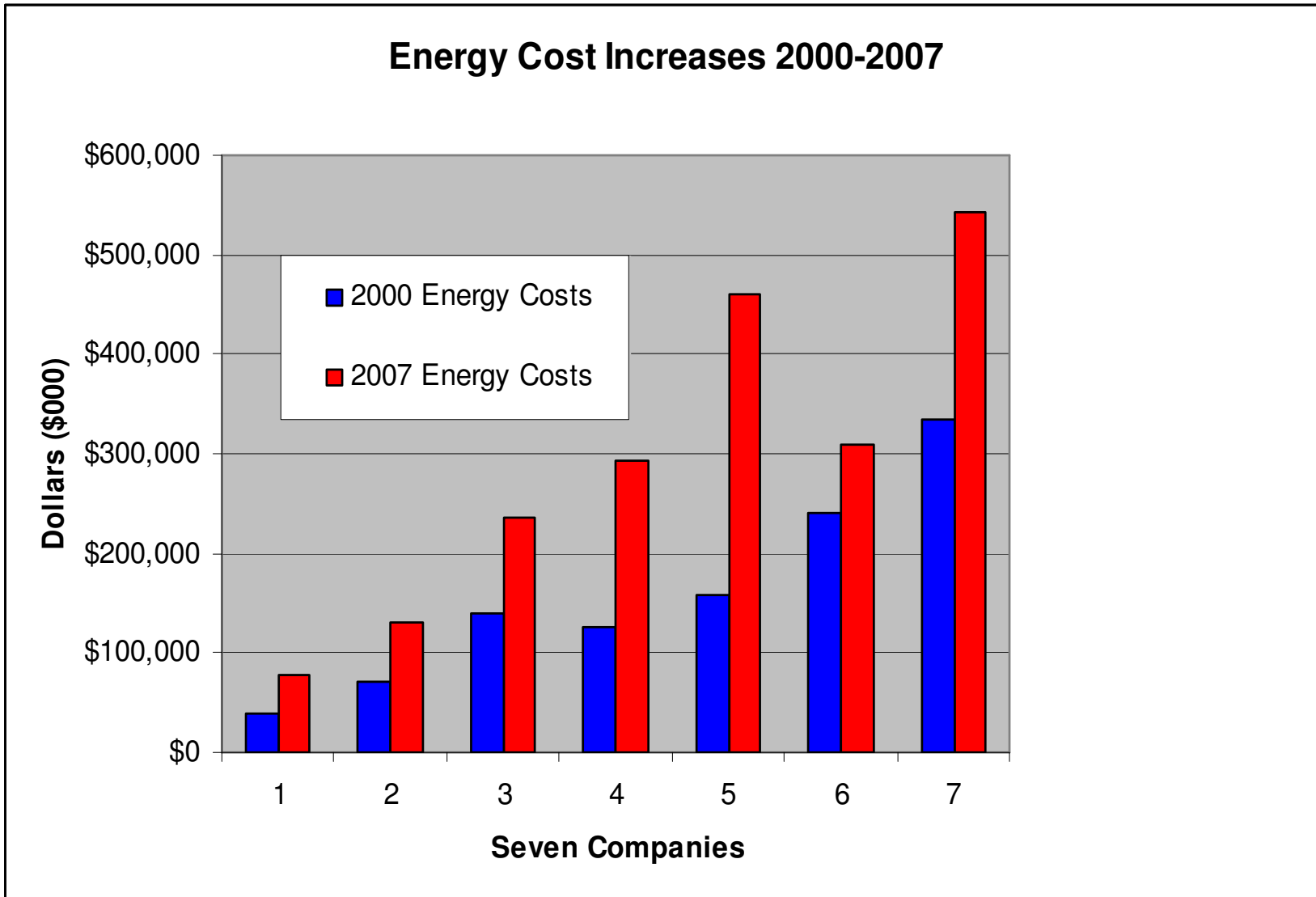
Energy Price Expectations by 2014



(Using World Oil Prices as a Proxy)



Energy Cost Increases



U.S. Climate Legislation Expectations



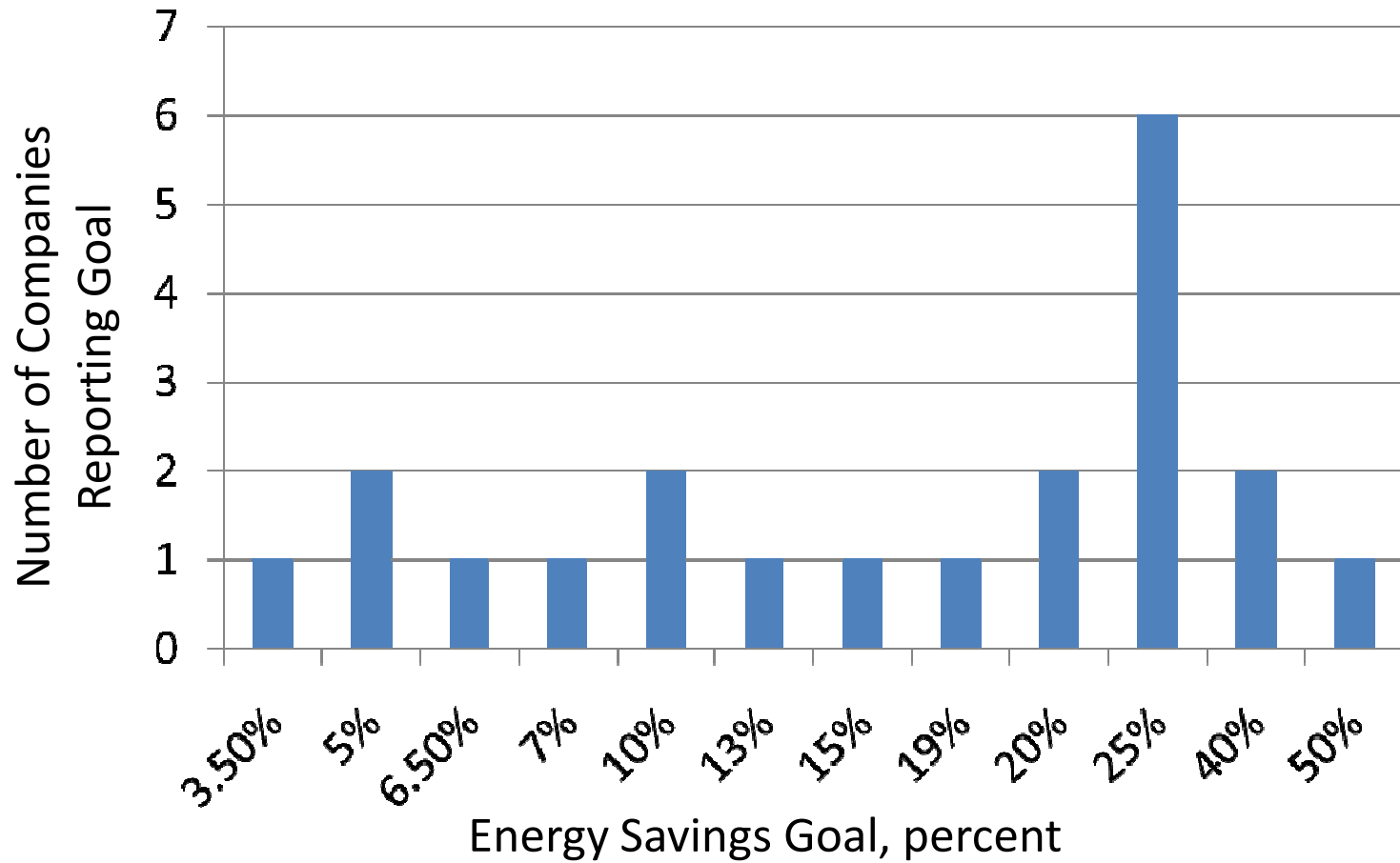
	<u>Number of Companies</u>	<u>Percent</u>
Within Two Years	27	57.4%
After Two Years, but Before Four Years	20	42.6%
Total	47	100.0%

Savings Targets – Timelines



- Average base year: 2003
 - Range: 1990-2009
- Average target year: 2013
 - Range: 2006-2040
- Savings target divided by years in target period:
 - Average: ~2.2%/year
 - Range: 0.5%-12.5%
 - *Note: normalization methods vary/inconsistently reported: i.e. targets vary from absolute % reductions to reductions per unit of product, per square foot, etc. Analysis of these data continues.*

Energy Savings Targets

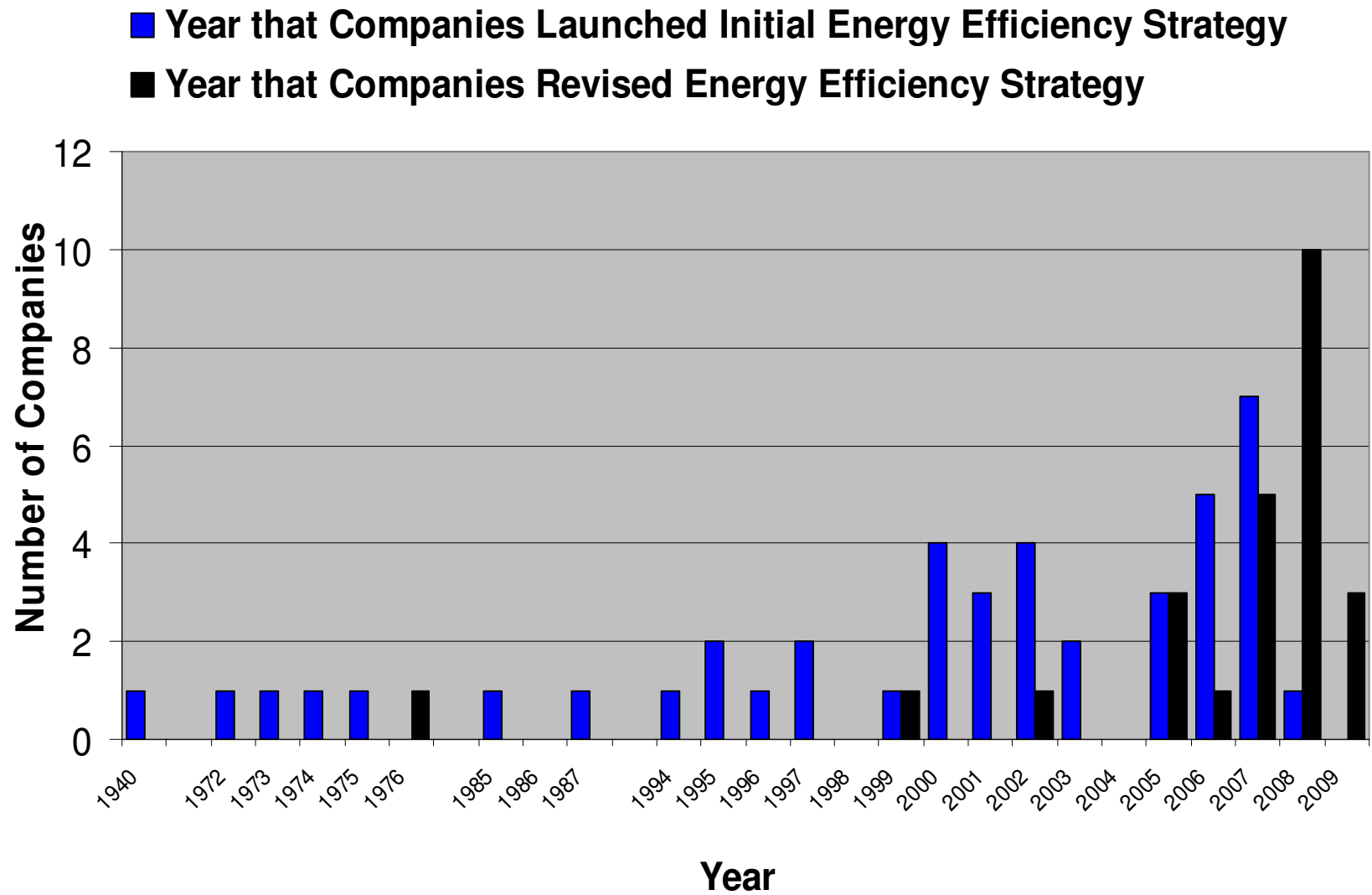


Company Benchmarking

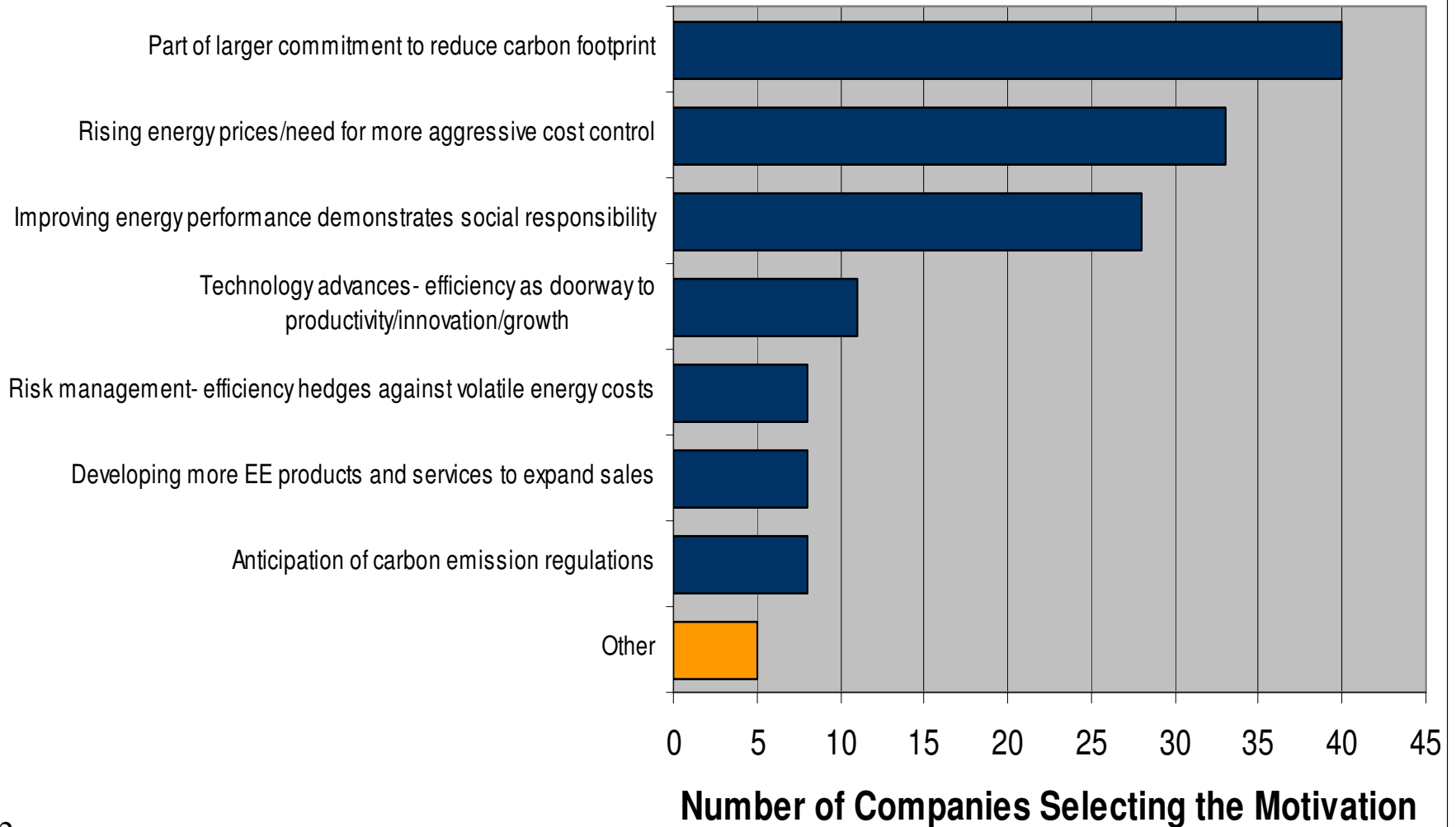


- 80% of respondents benchmark
- Most use competitors' or industry-specific metrics
- Third parties also widely used:
 - EPA Energy Star Buildings
 - EPA Climate Leaders
 - Electronic Products Environmental Assessment Tool (EPEAT)
 - U.S. Department of Energy/EIA Manufacturing Energy Consumption Survey (MECS)
 - The Carbon Disclosure Project
 - Building Owners and Managers Association (BOMA)
 - Green Grid
 - Leadership in Energy and Environmental Design (LEED)
 - Dow Jones Sustainability Indexes (DJSI)

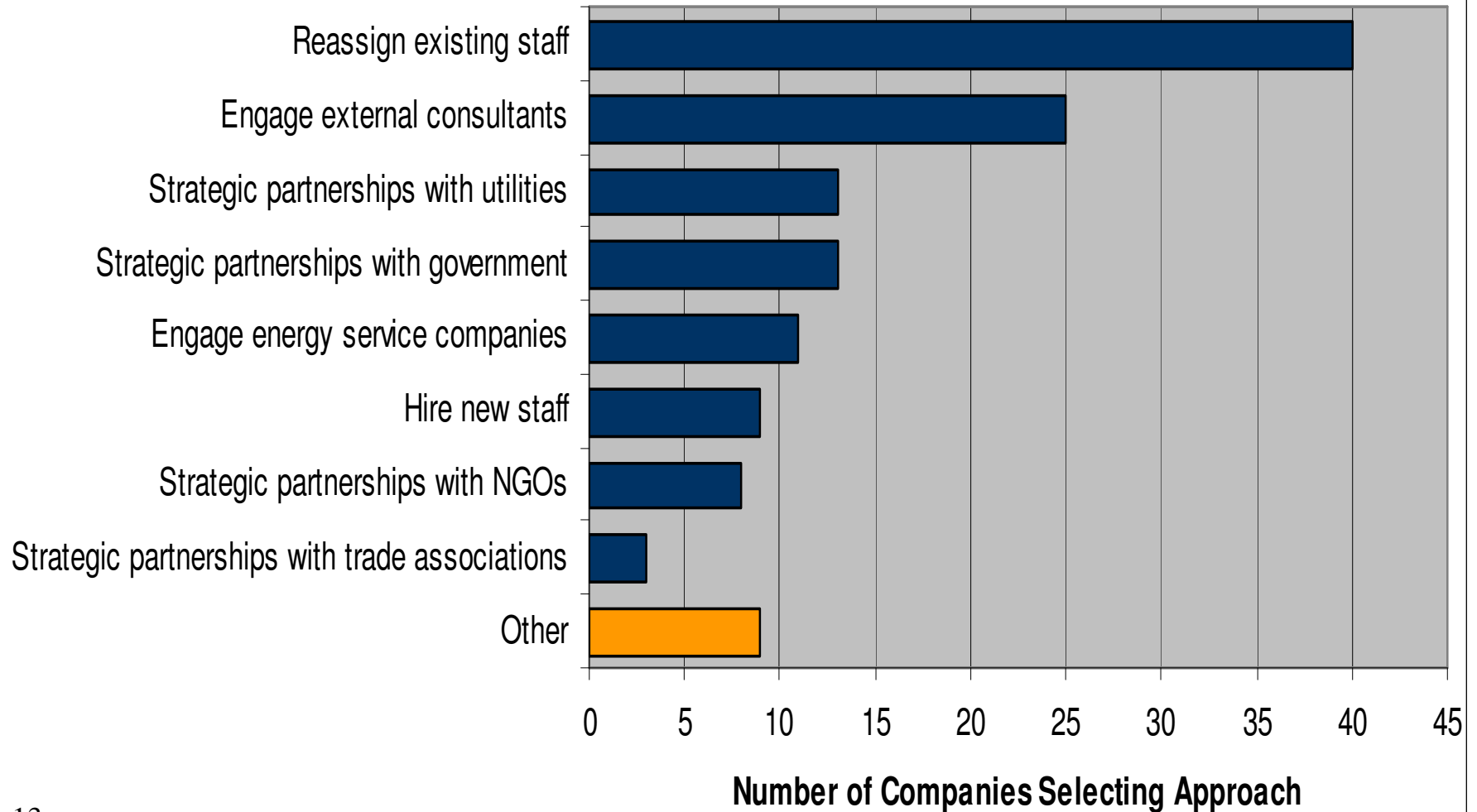
Historical Timelines for EE Efforts



Motivations for EE Strategies



Meeting EE Strategy Resource Needs



Ranking Program Elements



Rankings of Key Program Elements (5=greatest level of effort or cost)

Program Element	Labor Effort	Money Spent
Program management (data collection, reporting, project development, etc.)	5	2
Operations practices improvement (no cost to low cost)	4	3
Low-cost equipment measures (typically 1 year payback or less)	3	4
Larger capital projects (multi-year paybacks, capital financing, etc.)	2	5
Employee engagement communication, etc.	1	1

Where are the EE Champions?



Key Champions for Energy Efficiency Strategies

Champions	Number Selected
Board of Directors	3
CEO and Senior Management Team	37
Plant or Facility Managers	33
Accounting and Finance	4
Environmental Health and Safety	21
Operations	29
Strategic Planning	3
Other	12

Energy Performance Accountability



49% report energy performance is a formal/measured element of job performance and career advancement (regardless of level)

	<u>Number of Companies</u>	<u>Percent*</u>
Facility level (Plant/facility managers)	39	86.7%
Middle Management (Div/dept mgrs)	27	60.0%
Corporate Energy Manager	26	57.8%
Officer Level (VPs/other officers)	25	55.6%
Senior Management ("C-level")	17	37.8%

***45 companies answered this question. The percentage of companies totals more than 100 percent as they were permitted to choose more than one level.**

- 92% report using specific financial criteria for EE investments
 - 52% use simple paybacks (specifics not reported)
 - 50% use IRR (specifics not reported)
- 63% give “special consideration” to EE projects, such as
 - Accounting for co-benefits (100%)
 - Enhanced reputation (100%)
 - Improved competitive positioning (83%)
 - Employee morale (71%)
 - Worker productivity (54%)
 - Creating special EE capital pool (45%)
 - Applying future energy price increases or other risk management factors (41%)

Payback Periods

Payback period	Number Selected
One Year	2
Two Years	4
Three Years	6
Four Years	1
Five years	2

Internal Rate of Return

IRR Threshold	Number Selected
10-15%	2
15%	3
18%	1
20%	1
22%	1
25%	1
35%	1

Co-Benefits of Energy Efficiency Investments

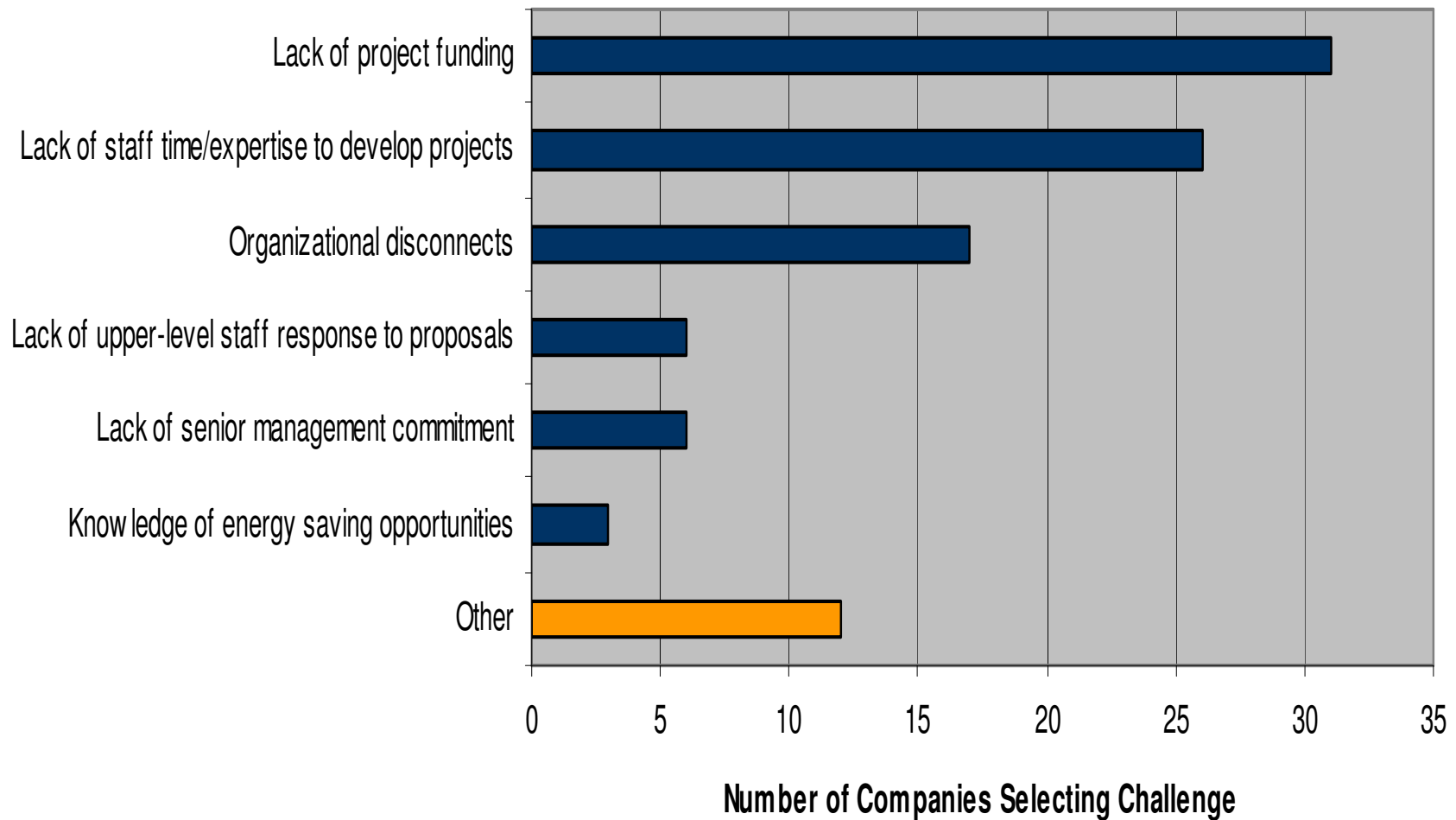
Co-Benefit	Frequency
Improved competitive positioning	24
Enhanced corporate reputation	29
Increased worker productivity	14
Improved employee morale	18

Employee Engagement

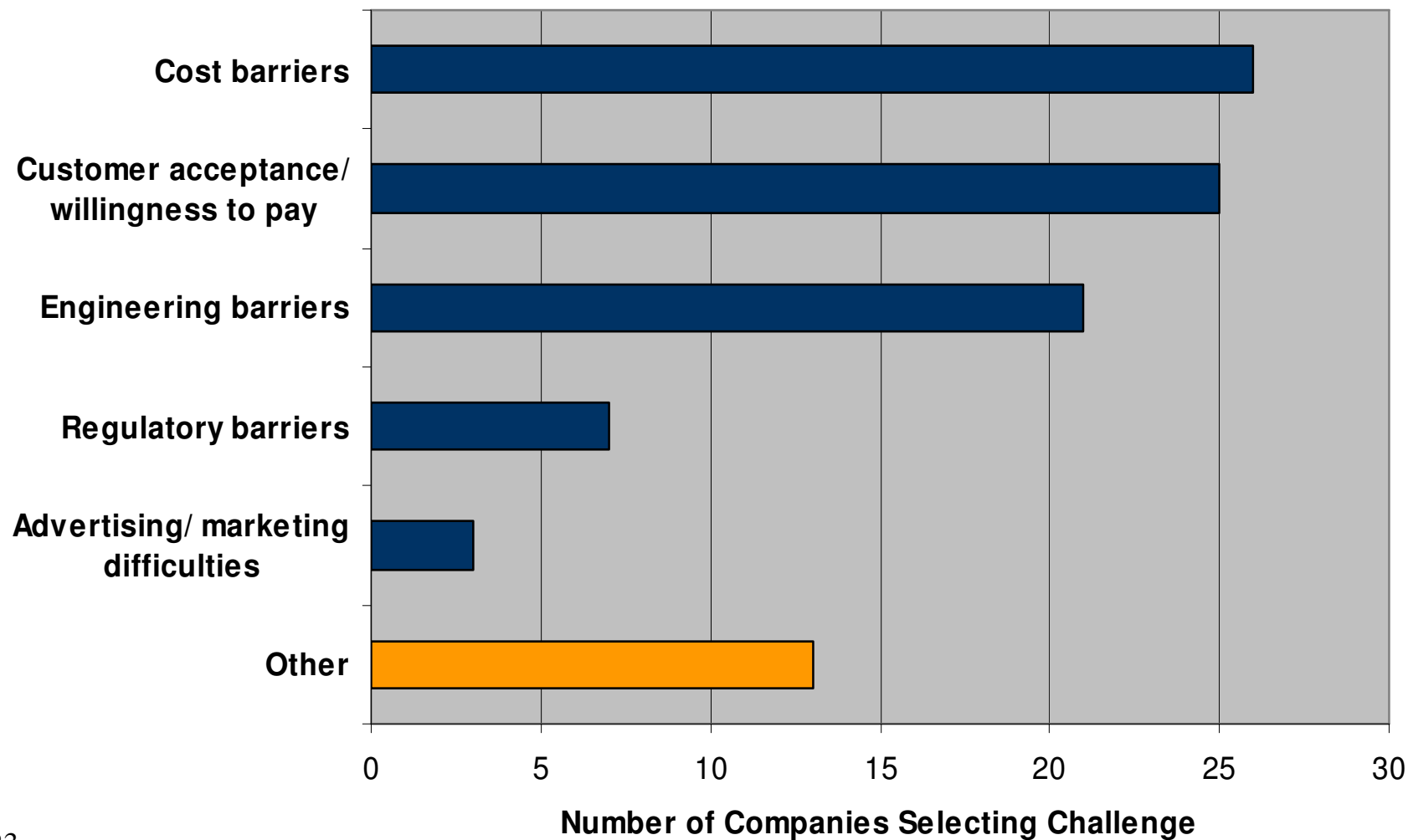


- 89% report employee engagement efforts
- Most common methods
 - Newsletters/Reports/E-mails/Mass communication 33.3%
 - Education and/or Trainings 22.9%
 - Developed a Green Program for Employees 18.8%
 - Green or Energy Teams / Committees 16.7%
 - Intranet or Website 16.7%
 - Employee Suggestion Box 14.6%
 - Energy Efficiency Campaigns or Initiatives 12.5%
 - Posting Signs or Posters 10.4%
 - Rewards / Incentive system 10.4%
 - Energy Themed Forums, Brownbags, Meetings 10.4%

Challenges/Barriers to EE in Internal Operations



Challenges/Barriers to EE in Products or Services



- **Most respondents had taken various supplier initiatives, e.g.**
 - **Information on 3rd-party EE programs** 43.8%
 - **Set up a measuring/reporting system** 20.8%
 - **Provided technical services** 16.7%
 - **Changed suppliers based on performance** 12.5%
- **Challenges in Supplier Initiatives**
 - **Difficulty in accessing energy data from suppliers**
 - **Cost barriers**
 - **Lack of senior management commitment**
 - **Resistance from suppliers**

Greatest Successes



- Meeting / Exceeding Goals 47.9%
- Implementing Corporate Wide Plan 22.9%
- Increasing Employee Involvement 20.8%
- Formalizing a Policy / Strategy 14.6%
- Implementing at Local Level 14.6%
- Better Communication/Biz Units 12.5%
- Support from Management 8.3%
- Winning Awards or Recognition 4.2%

Greatest Setbacks



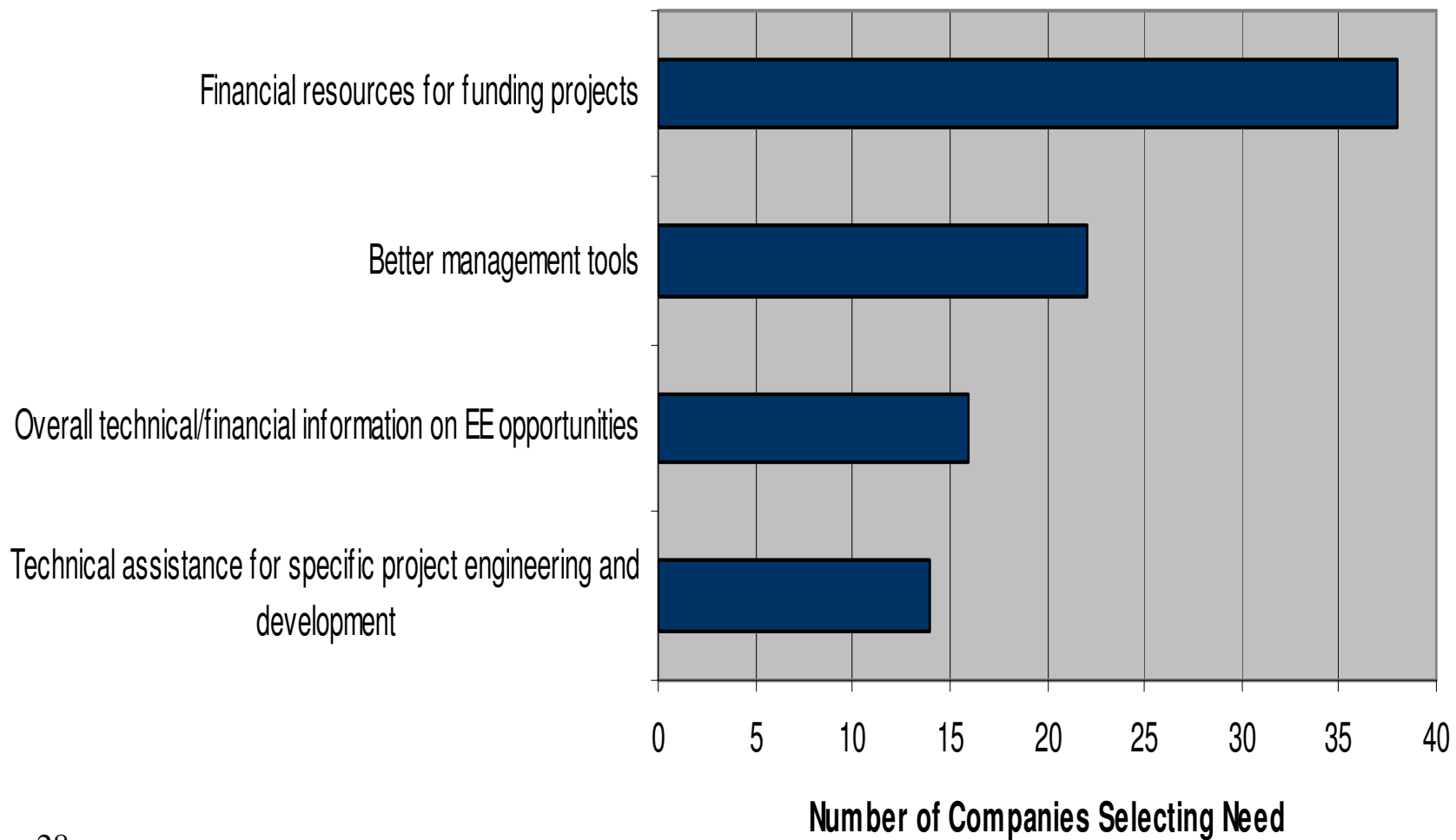
- Limited Capital for EE Projects 18.8%
- Limited Management / Leadership Buy-In 10.4%
- Improving EE was Harder than Initially Thought 10.4%
- Competing Priorities / Resources 6.3%
- Lagging Momentum / Employee Interest 6.3%
- Implementation was Time Consuming 4.2%

Corrective Actions to Setbacks



- Doing Audits for EE improvements 12.5%
- Revising a Strategy / Goals 10.4%
- Building Teams to Support the Effort 10.4%
- Increasing Employee Involvement 8.3%
- Developing Feedback Mechanisms 8.3%
- Setting Aside a Capital Fund/Process 8.3%
- Getting Leadership Buy-In 6.3%
- Better Communication Between Units 6.3%

Key Needs to Sustain/Improve EE: Project-Specific Support



Key Needs to Sustain/Improve EE: Corporation-wide Commitments

