German American Renewables and Energy Efficiency Outlook 2010

AHK German American Chambers of Commerce Deutsch-Amerikanische Handelskammern

Roland Berger Strategy Consultants

2nd German American Energy Conference 2010
Berlin, March 22-23

Introductory remarks on survey

> In early 2010, the German American Chambers of Commerce (GACCs), in cooperation with Roland Berger Strategy Consultants in North America, conducted a survey evaluating the American renewables and energy efficiency outlook

> Together, we contacted companies active in the green sector across three core constituent groups: American companies, US-based subsidiaries of German companies, and other organizations

Source: Roland Berger analysis

The study captured opinions about the US renewables and energy efficiency outlook for the coming years

Scope of study

US EXPERIENCE AND OUTLOOK

> US activities
> Challenges
> Opportunities

SECTOR SPECIFIC EXPECTATIONS

> Growth expectations
> Competition

PARTNERSHIP

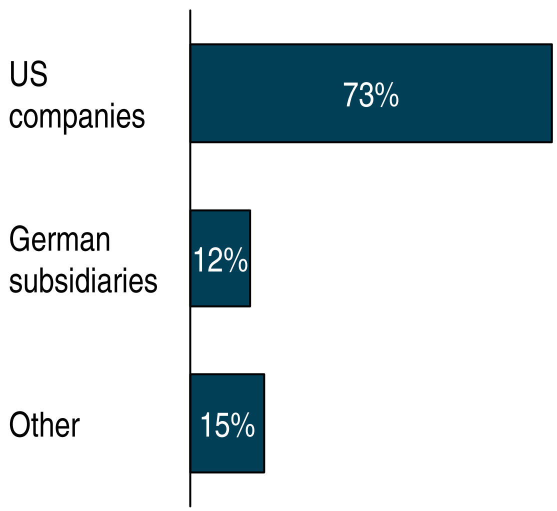
> Current status
> Future opportunities

Source: Roland Berger analysis

The survey respondents are a diverse group of German and American organizations – small companies were a majority

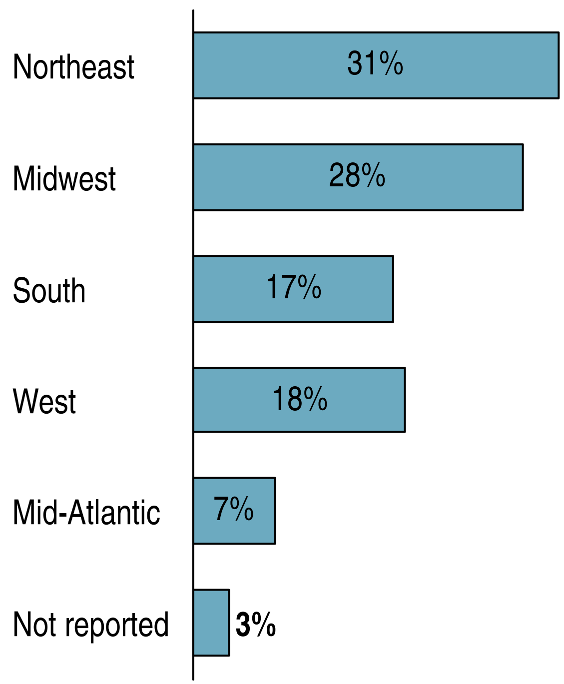
Sample set

RESPONDENT TYPES

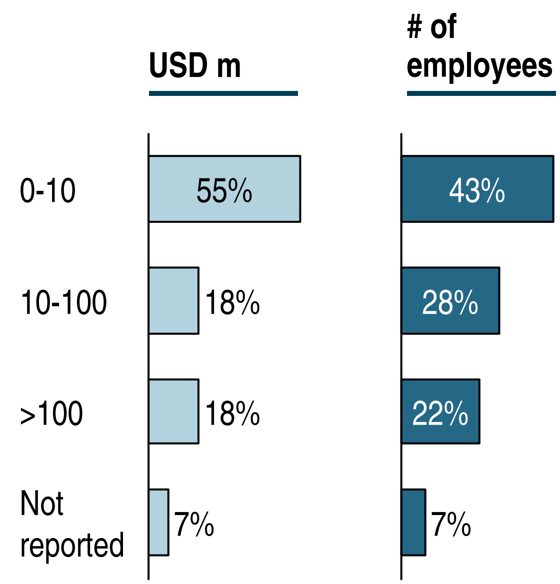


Examples of others:
> Legal
> Consulting
> University/research
> Government programs

US REGIONS OF COMPANIES



COMPANY SIZE

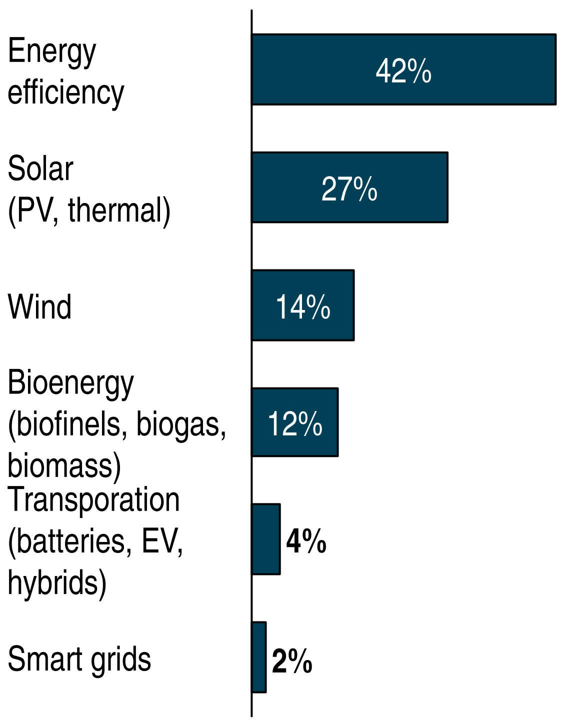


Source: Roland Berger analysis

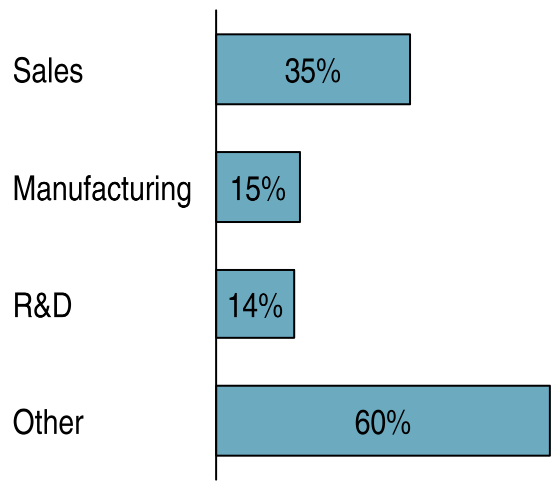
Each of the key renewables sectors and activities is represented – Energy Efficiency companies had the largest representation

Sample set

BUSINESS SECTOR



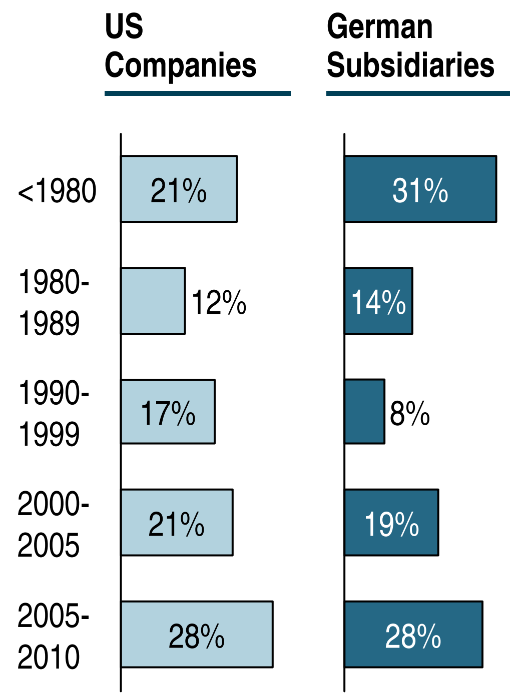
KEY US ACTIVITIES[1)]



Examples of others:

- Consulting
- Architecture
- Research/training

ENTRY IN US MARKET



1) Respondents could select more than one option

Source: Roland Berger analysis

The long-term outlook for revenue and job growth is very strong as is the interest in expanding American and German partnership

Executive Summary

1. Organizations have very positive expectations for revenue growth and job creation over the next five years

2. The key to overcoming today's market challenges will be educating consumers about the benefits of technologies and real energy costs

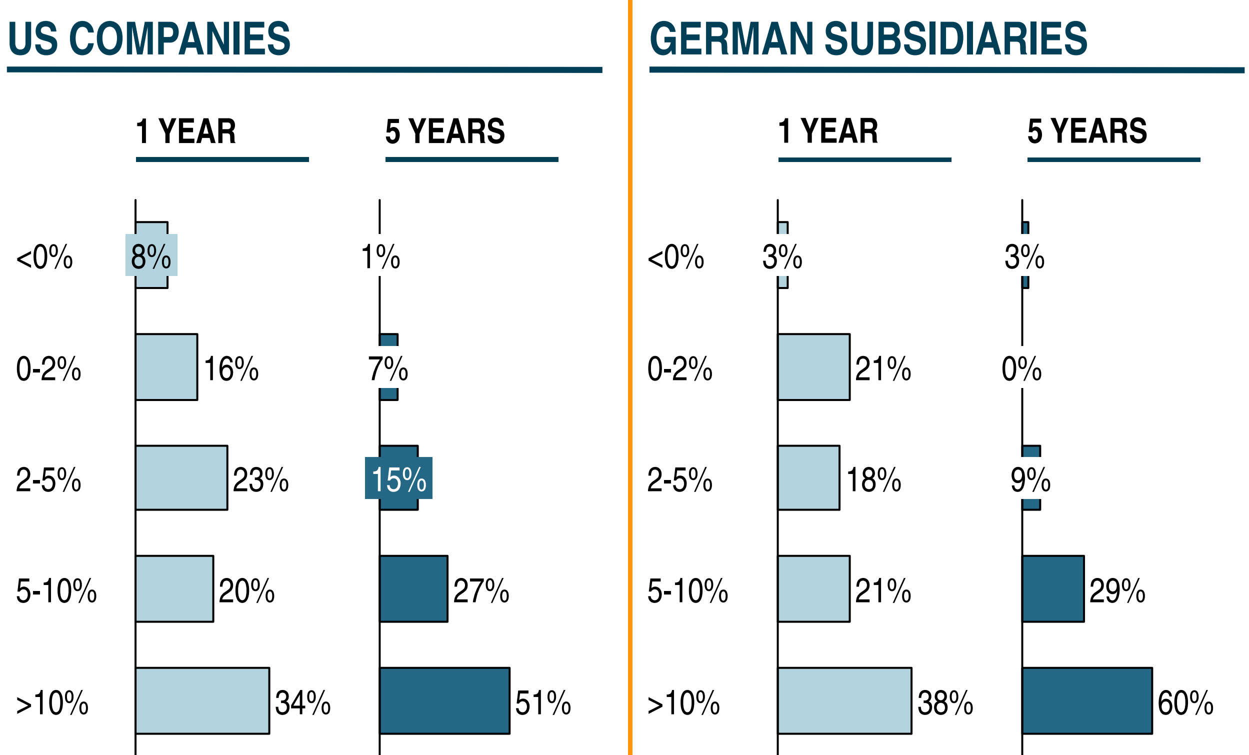
3. The US, Germany, and China are the main countries perceived to be strong competitors across all four key sectors: Wind, Solar, Bio-Energy, and Energy Efficiency

4. While partnership with German companies is still in its early phases, there is strong interest in expanding the size and scope of these relationships

Source: Roland Berger analysis

Both US and German companies expect ample growth in the US green sector

Revenue growth per year expectations for the US



COMMENTS

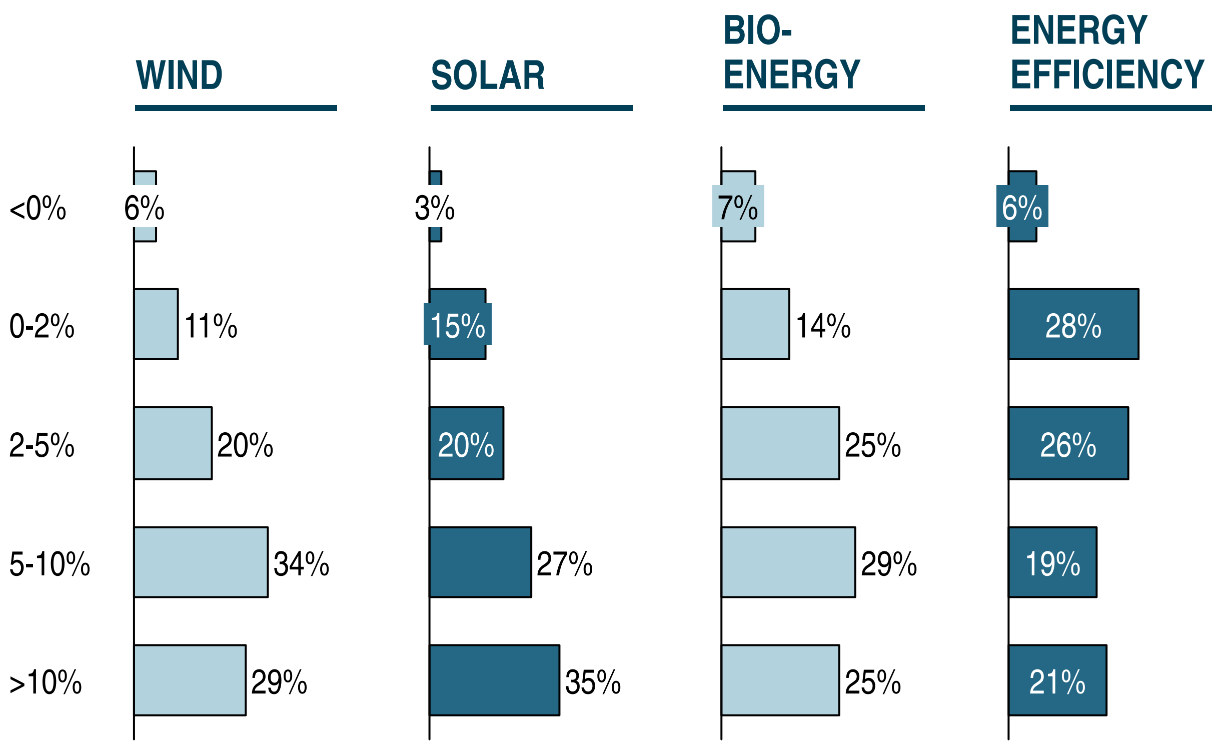
> Over 50% of US and German companies anticipate over 5% growth in the next year despite the challenging economy

> Longer term expectations are even stronger suggesting the sustainability of the industries

Source: Roland Berger analysis

Strong longer term expectations are reflected in each of the segments

Revenue growth per year expectations for the US (5 years)



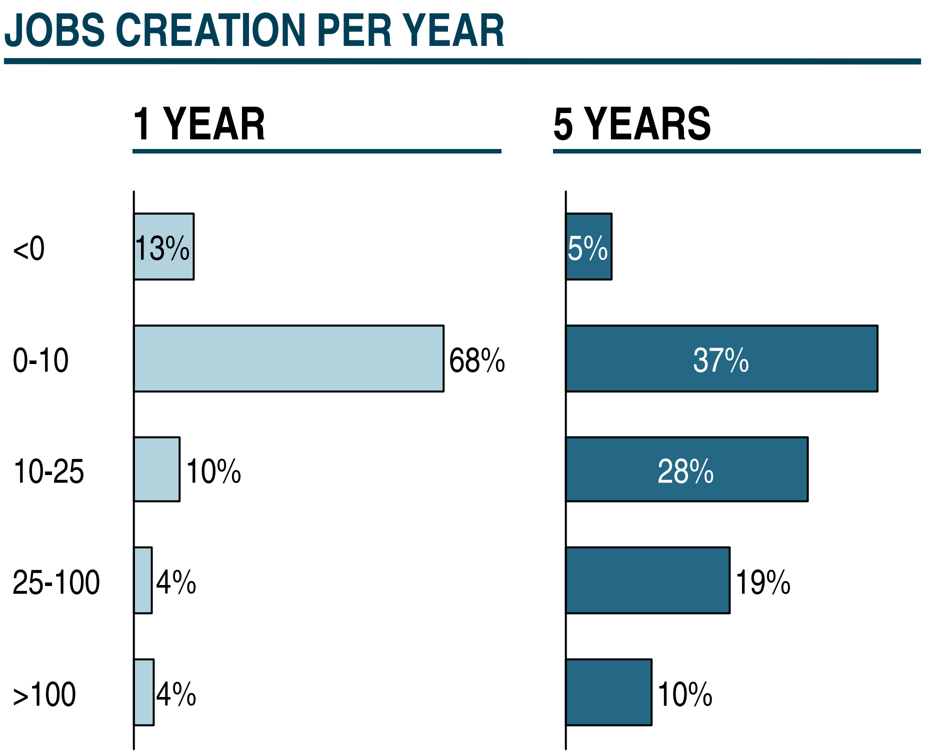
COMMENTS

- > Despite its relative maturity, the wind sector is still expanding
- > The Solar sector has the largest consensus for longer term growth (72% see over 5% growth per annum)
- > Energy Efficiency shows more variability in expectations, reflecting the diversity of the sector's players

Source: Roland Berger analysis

The green sector as a whole is seen as a strong source of job creation in the near and longer term

Expectations for job creation per year



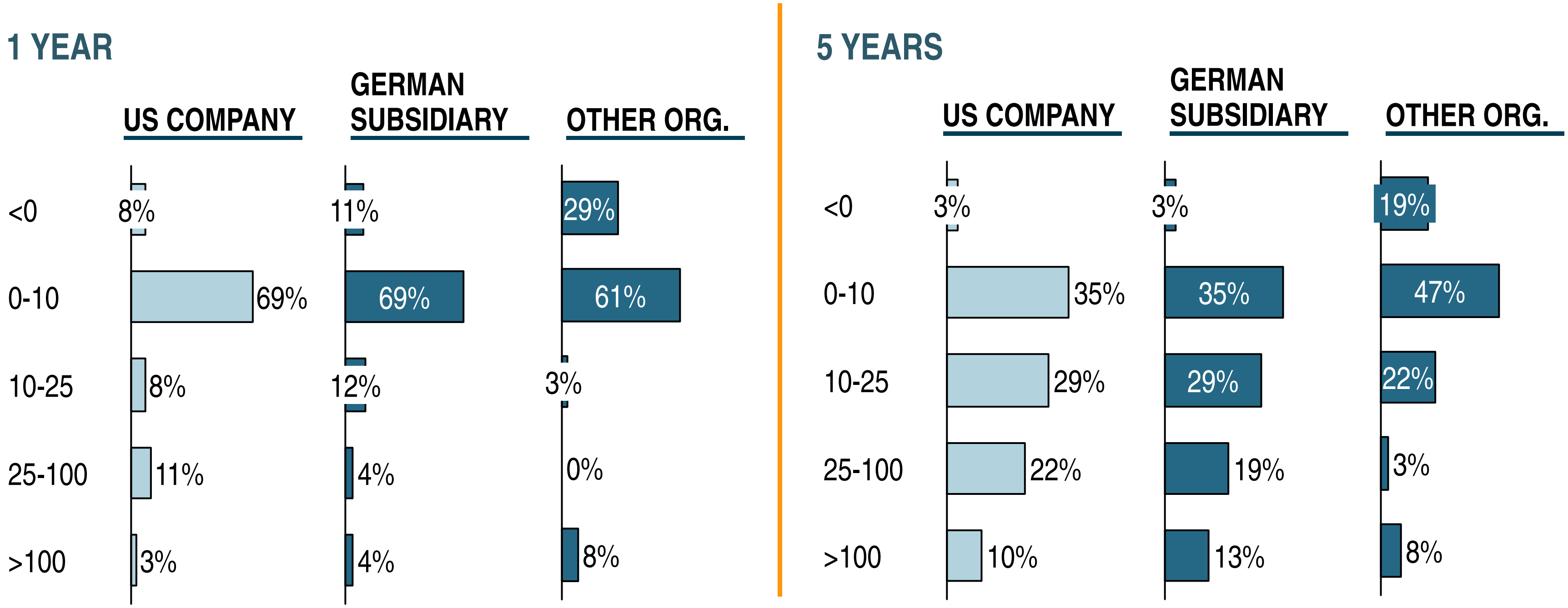
INSIGHTS

- > Most firms, 87%, see some addition of jobs in the next year
- > The expected number of jobs created per company is much larger further out, reflecting the job creating potential of the green industry
- > Though the largest amount of jobs will come in sales and services, manufacturing and R&D jobs are expected to grow too

Source: Roland Berger analysis

Most companies anticipate job growth, though the economy has adversely impacted some service oriented organizations

Expectations for jobs creation per year by type of organization



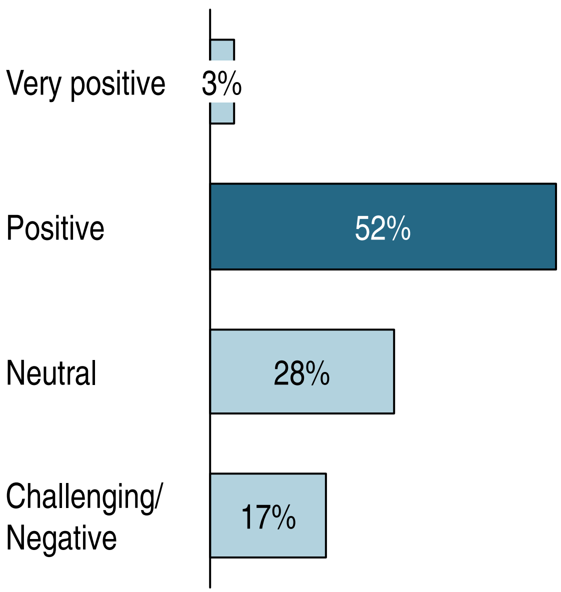
- Most US Companies and German Subsidiaries **expect job creation in the near and long term**, with even larger employment opportunities beyond the coming year
- Other, more **service oriented organizations, foresee challenges**, with 29% seeing job reductions in the next year; however, they believe **brighter times are ahead** with a larger % seeing job growth over 5 years

Source: Roland Berger analysis

German companies who entered the US expecting a positive experience have had those expectations met

German expectations for their US Greentech experiences

German companies expectations for their US experience in Greentech?



Have the expectations been met?

Slightly more challenging than expected

Positive expectations have been met

An even mix of those who saw results better and worse than expectations

Market challenges have been as large as or larger than expected

COMMENTS

> Those who entered the market with the highest hopes appear to have had them met – possibly reflecting the strong positioning of those companies

> Those who foresaw large challenges have experienced them while developing their businesses

Source: Roland Berger analysis

US and German companies generally agree on the major challenges facing the green sector and their solutions

Challenges facing the green sector

US COMPANIES/OTHER

Top 3

1. Poor economy
2. Credit/funding
3. Lack of federal policy

GERMAN SUBSIDIARIES

Top 3

1. Poor economy
2. Lack of federal policy
3. Strong competition

SOLUTIONS

> Educate consumers about real energy costs and technologies

> Set national renewable energy standards

> Increase government subsidies or set feed-in tariff

Source: Roland Berger analysis

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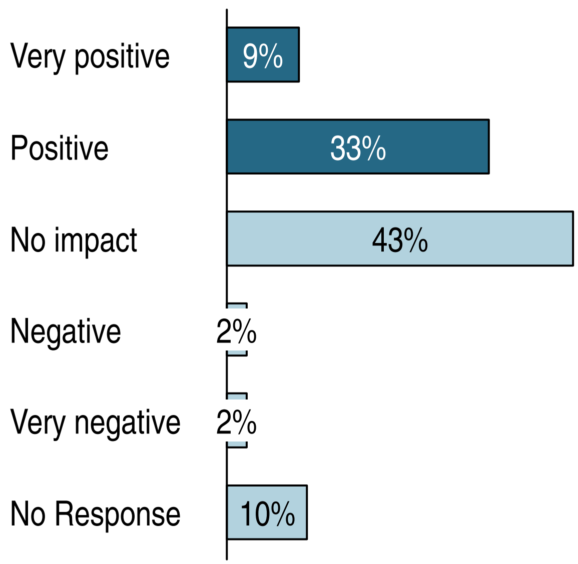
Roland Berger Strategy Consultants

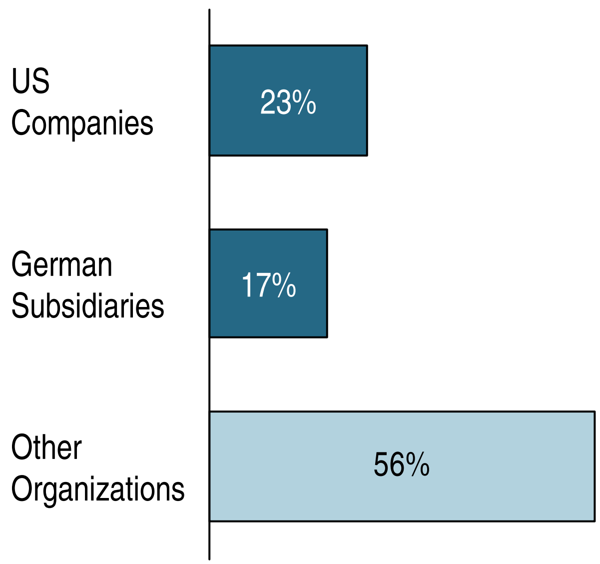
ARRA has had a positive impact on many organizations, but not necessarily through direct grants or subsidies

Use and impact of government subsidies

What impact has the stimulus package (ARRA) had on your organization?



Has your organization received grants/subsidies at a state or federal level?



COMMENTS

> While many organizations have seen positive effects from the ARRA there is no consensus about its impact

> Direct grants/subsidies do not appear to be a core component of many companies' strategies

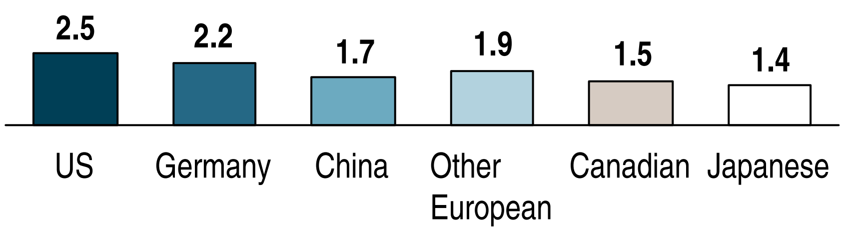
> Grants/subsidies appear to be a larger driver for service oriented organizations

Source: Roland Berger analysis

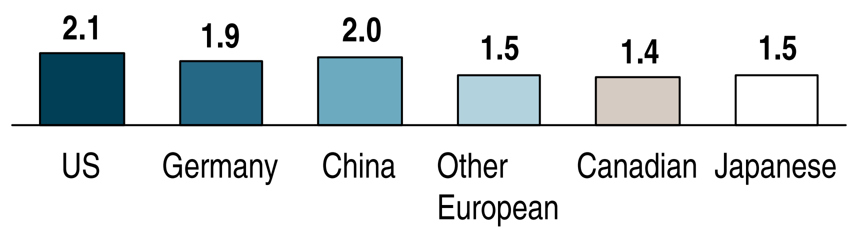
The US, Germany, and China are seen to provide the strongest competition across the green sectors

Key competition by sector (scale of 1-3 with 3 being largest competition)

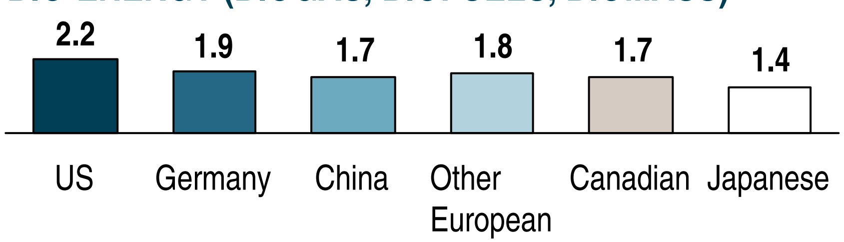
WIND



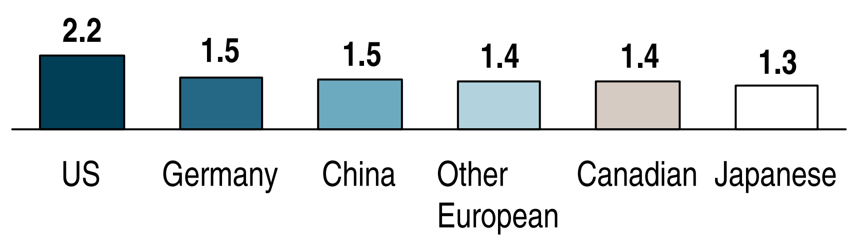
SOLAR (PV, THERMAL)



BIO-ENERGY (BIOGAS, BIOFUELS, BIOMASS)



ENERGY EFFICIENCY



> In the relatively more mature markets such as **Wind and Solar there are clear competitive leaders;** however, in the Bio-Energy sector the primary source of competition to US companies is unclear

> In **Energy Efficiency, there are no clear foreign competitors** – foreign competition may be late to enter or the very local nature of the sector dynamics make it more difficult for foreign firms to compete successfully

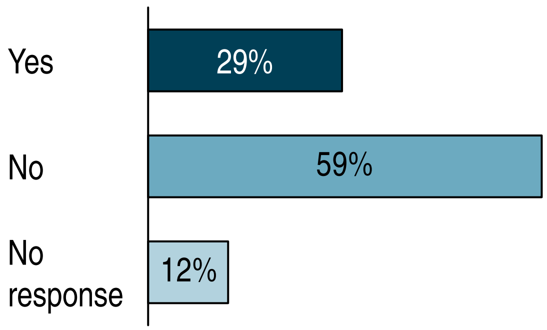
> Strong partnership between US and German companies could present an **effective counter measure against new Chinese entrants** into the US

Source: Roland Berger analysis

Most German American partnerships were formed recently – there is still significant opportunity for additional growth

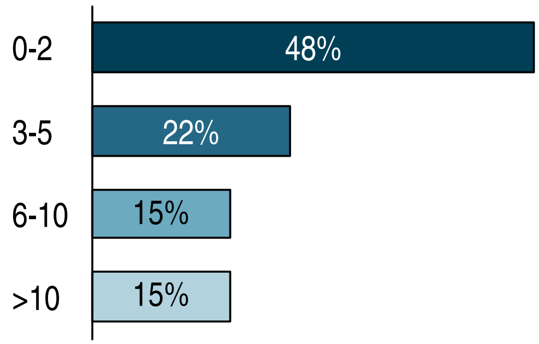
Status of German American partnership

Does your company have any current involvement/ partnerships with German companies?



> Almost 1/3 of respondents already have some form of partnership with German companies

How long has your company partnered with German companies? (Years)



> Partnership is still in their early phases, reflecting the relatively new nature of the green sector in the US

What is the nature of the partnership/involvement with German companies? (In order of most to least frequent response)

1| Supplier to German companies

2| Innovation partner

3| Customer of German companies

4| Joint ventures

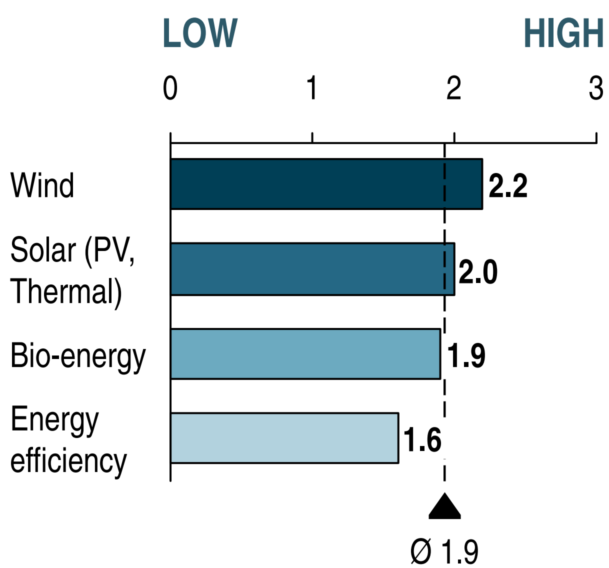
> US companies have recognized the German technological leadership and have set up innovation partnerships

Source: Roland Berger analysis

American companies have expressed interest in expanding their German American partnerships

Future partnership opportunities

Interest level in seeking partnership with German companies[1] (Range of 0-3)



Top partnership opportunities

WIND	> Innovation partner > Customer/Supplier
SOLAR	> Joint venture > Innovation partner
BIO-ENERGY	> Innovation partner > Joint Venture > Investment
ENERGY EFFICIENCY	> Innovation partner > Customer/Supplier > Joint Venture

COMMENTS

- Every sector is looking for innovation partnership
- Wind and Solar, two areas with strong German technological leadership, both expressed strong interest in partnership
- Many expressed interest in JVs, which may reflect the challenges US firms have had with funding

1) Options (none/low/moderate/high) were assigned values (0, 1, 2, 3)

Source: Roland Berger analysis

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Founded in 1967, Roland Berger is one of the world's leading strategy consultancies. With 36 offices in 25 countries, the company has successful operations in all major international markets. In 2008, it generated USD 1 billion in revenues with 2,100 employees. The strategy consultancy is an independent partnership exclusively owned by about 180 Partners. In the US it has offices in Chicago, IL; Detroit, MI; and New York, NY

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