```
***INDUSTRY***

MULT RESPONSE GROUPS=$sc (sc_1 sc_2 sc_3 sc_4 sc_5 sc_6 sc_7 sc_8 (1,50))
/FREQUENCIES=$sc.
```

# Multiple Response

**Case Summary**

| | Cases | | | | |
|---|---|---|---|---|---|
| | Valid | | Missing | | To |
| | N | Percent | N | Percent | N |
| $sc[a] | 5518 | 99.3% | 40 | 0.7% | 5558 |

a. Group

**$sc Frequencies**

| | | Responses | | |
|---|---|---|---|---|
| | | N | Percent | Percent of Cases |
| $sc[a] | Electric power generation | 2321 | 27.7% | 42.1% |
| | Electric power transmission, distribution, and storage | 1068 | 12.7% | 19.4% |
| | Energy efficiency, including heating, cooling and building envelope | 2333 | 27.8% | 42.3% |
| | Fuels | 1454 | 17.3% | 26.4% |
| | Motor vehicles | 977 | 11.7% | 17.7% |
| | Other | 219 | 2.6% | 4.0% |
| | DK/NA | 10 | 0.1% | 0.2% |
| Total | | 8382 | 100.0% | 151.9% |

a. Group

```
FREQUENCIES
VARIABLES = SDPrime
/ORDER=ANALYSIS.
```

# Frequencies

**Statistics**

SDPrime

| | | |
|---|---|---|
| N | Valid | 4077 |
| | Missing | 1481 |

**SDPrime**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Electric power generation | 1569 | 28.2 | 38.5 | 38.5 |
| | Electric power transmission, distribution, and storage | 272 | 4.9 | 6.7 | 45.2 |
| | Energy efficiency, including heating, cooling and building envelope | 1317 | 23.7 | 32.3 | 77.5 |
| | Fuels | 587 | 10.6 | 14.4 | 91.9 |
| | Motor vehicles | 244 | 4.4 | 6.0 | 97.8 |
| | Other | 74 | 1.3 | 1.8 | 99.7 |
| | DK/NA | 14 | 0.3 | 0.3 | 100.0 |
| | Total | 4077 | 73.4 | 100.0 | |
| Missing | System | 1481 | 26.6 | | |
| Total | | 5558 | 100.0 | | |

```
***ELECTRIC POWER GENERATION***

MULT RESPONSE GROUPS=$se_a (se_a_1 se_a_2 se_a_3 se_a_4 se_a_5 se_a_6 se_a_7 se_
/FREQUENCIES=$se_a.
```

# Multiple Response

**Case Summary**

| | Cases | | | | |
|---|---|---|---|---|---|
| | Valid | | Missing | | To |
| | N | Percent | N | Percent | N |
| $se_a[a] | 2287 | 41.1% | 3271 | 58.9% | 5558 |

a. Group

**$se_a Frequencies**

| | | Responses | | |
|---|---|---|---|---|
| | | N | Percent | Percent of Cases |
| $se_a[a] | Solar photovoltaic electric generation | 1719 | 40.5% | 75.2% |

| | | | | |
|---|---|---|---|---|
| | Concentrated solar electric generation | 271 | 6.4% | 11.8% |
| | Wind generation | 527 | 12.4% | 23.0% |
| | Geothermal generation | 217 | 5.1% | 9.5% |
| | Bioenergy/Biomass generation | 263 | 6.2% | 11.5% |
| | Low-impact hydroelectric generation including wave/kinetic generation | 159 | 3.7% | 7.0% |
| | Traditional hydropower | 218 | 5.1% | 9.5% |
| | Advanced/Low emission natural gas | 307 | 7.2% | 13.4% |
| | Nuclear | 101 | 2.4% | 4.4% |
| | Fossil fuel generation | 358 | 8.4% | 15.7% |
| | Other generation | 108 | 2.5% | 4.7% |
| Total | | 4248 | 100.0% | 185.7% |

a. Group

```
***ELECTRIC POWER TRANSMISSION, DISTRIBUTION, STORAGE***

MULT RESPONSE GROUPS=$se_b (se_b_1 se_b_2 se_b_3 se_b_4 se_b_5 (1,50))
/FREQUENCIES=$se_b.
```

# Multiple Response

**Case Summary**

| | Cases | | | | |
|---|---|---|---|---|---|
| | Valid | | Missing | | To |
| | N | Percent | N | Percent | N |
| $se_b[a] | 1029 | 18.5% | 4529 | 81.5% | 5558 |

a. Group

**$se_b Frequencies**

| | | Responses | | |
|---|---|---|---|---|
| | | N | Percent | Percent of Cases |
| $se_b[a] | Traditional transmission and distribution | 632 | 39.7% | 61.4% |
| | Storage | 534 | 33.5% | 51.9% |
| | Smart grid | 346 | 21.7% | 33.6% |
| | Other | 81 | 5.1% | 7.9% |
| Total | | 1593 | 100.0% | 154.8% |

a. Group

```
***ENERGY EFFICIENCY***

MULT RESPONSE GROUPS=$se_c (se_c_1 se_c_2 se_c_3 se_c_4 se_c_5 se_c_6 se_c_7 se_
/FREQUENCIES=$se_c.
```

# Multiple Response

**Case Summary**

| | Cases | | | | |
|---|---|---|---|---|---|
| | Valid | | Missing | | To |
| | N | Percent | N | Percent | N |
| $se_c[a] | 2268 | 40.8% | 3290 | 59.2% | 5558 |

a. Group

**$se_c Frequencies**

| | | Responses | | |
|---|---|---|---|---|
| | | N | Percent | Percent of Cases |
| $se_c[a] | Energy star appliances | 819 | 13.4% | 36.1% |
| | LED, CFL and other efficient lighting | 1110 | 18.2% | 48.9% |
| | Traditional HVAC goods and services | 1089 | 17.8% | 48.0% |
| | Energy Star/ High AFUE HVAC | 909 | 14.9% | 40.1% |
| | Renewable heating and cooling (including solar thermal) | 969 | 15.9% | 42.7% |
| | Advanced building materials/insulation | 960 | 15.7% | 42.3% |
| | Other | 249 | 4.1% | 11.0% |
| Total | | 6105 | 100.0% | 269.2% |

a. Group

```
***FUELS***

MULT RESPONSE GROUPS=$se_d (se_d_1 se_d_2 se_d_3 se_d_4 se_d_5 se_d_6 se_d_7 (1,
/FREQUENCIES=$se_d.
```

# Multiple Response

**Case Summary**

| | Cases | | | | |
|---|---|---|---|---|---|
| | Valid | | Missing | | To |
| | N | Percent | N | Percent | N |
| $se_d[a] | 1373 | 24.7% | 4185 | 75.3% | 5558 |

a. Group

**$se_d Frequencies**

| | | Responses | | |
|---|---|---|---|---|
| | | N | Percent | Percent of Cases |
| $se_d[a] | Fossil fuels | 985 | 52.3% | 71.7% |
| | Corn ethanol | 332 | 17.6% | 24.2% |
| | Other ethanol/non-woody biomass | 159 | 8.4% | 11.6% |
| | Woody biomass | 122 | 6.5% | 8.9% |
| | Nuclear | 46 | 2.4% | 3.4% |
| | Other | 239 | 12.7% | 17.4% |
| Total | | 1883 | 100.0% | 137.1% |

a. Group

```
***MOTOR VEHICLES***

MULT RESPONSE GROUPS=$se_e (se_e_1 se_e_2 se_e_3 se_e_4 se_e_5 se_e_6 se_e_7 se_
/FREQUENCIES=$se_e.
```

# Multiple Response

**Case Summary**

| | Cases | | | | |
|---|---|---|---|---|---|
| | Valid | | Missing | | To |
| | N | Percent | N | Percent | N |
| $se_e[a] | 977 | 17.6% | 4581 | 82.4% | 5558 |

a. Group

**$se_e Frequencies**

| | Responses | |
|---|---|---|

| | | N | Percent | Percent of Cases |
|---|---|---|---|---|
| $se_e[a] | Gasoline and diesel motor vehicles (excluding freight trucking) | 755 | 40.8% | 77.3% |
| | Hybrid and plug-In hybrid vehicles | 325 | 17.6% | 33.3% |
| | Electric vehicles | 265 | 14.3% | 27.1% |
| | Natural gas vehicles | 245 | 13.2% | 25.1% |
| | Hydrogen vehicles | 52 | 2.8% | 5.3% |
| | Fuel cell vehicles | 107 | 5.8% | 11.0% |
| | Other | 73 | 3.9% | 7.5% |
| | DK/NA | 28 | 1.5% | 2.9% |
| Total | | 1850 | 100.0% | 189.4% |

a. Group

```
***VALUE CHAIN***

MULT RESPONSE GROUPS=$sf (sf_1 sf_2 sf_3 sf_4 sf_5 sf_6 sf_7 (1,50))
/FREQUENCIES=$sf.
```

# Multiple Response

**Case Summary**

| | Cases | | | | |
|---|---|---|---|---|---|
| | Valid | | Missing | | To |
| | N | Percent | N | Percent | N |
| $sf[a] | 5518 | 99.3% | 40 | 0.7% | 5558 |

a. Group

**$sf Frequencies**

| | | Responses | | |
|---|---|---|---|---|
| | | N | Percent | Percent of Cases |
| $sf[a] | A firm that manufactures and/or assembles | 834 | 9.9% | 15.1% |
| | A firm that provides engineering and research services | 1065 | 12.6% | 19.3% |
| | A firm that sells and distributes | 2335 | 27.6% | 42.3% |
| | A firm that installs | 2342 | 27.7% | 42.4% |
| | A firm that provides consulting, finance, etc. | 1401 | 16.6% | 25.4% |

| | | | | |
|---|---|---|---|---|
| | Other | 371 | 4.4% | 6.7% |
| | Not sure | 105 | 1.2% | 1.9% |
| Total | | 8453 | 100.0% | 153.2% |

a. Group

```
FREQUENCIES
VARIABLES = sg
/ORDER=ANALYSIS.
```

# Frequencies

**Statistics**

SGPrime

| | | |
|---|---|---|
| N | Valid | 4087 |
| | Missing | 1471 |

**SGPrime**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | A firm that manufactures and/or assembles | 407 | 7.3 | 10.0 | 10.0 |
| | A firm that provides engineering and research services | 393 | 7.1 | 9.6 | 19.6 |
| | A firm that sells and distributes | 1062 | 19.1 | 26.0 | 45.6 |
| | A firm that installs | 1314 | 23.6 | 32.2 | 77.7 |
| | A firm that provides consulting, finance, etc. | 610 | 11.0 | 14.9 | 92.6 |
| | Other | 212 | 3.8 | 5.2 | 97.8 |
| | Not sure | 89 | 1.6 | 2.2 | 100.0 |
| | Total | 4087 | 73.5 | 100.0 | |
| Missing | System | 1471 | 26.5 | | |
| Total | | 5558 | 100.0 | | |

```
***PRODUCTS***

FREQUENCIES
VARIABLES = sh si
/ORDER=ANALYSIS.
```

# Frequencies

**Statistics**

| | | sH \| Product stage | sI \| Primary product stage |
|---|---|---|---|
| N | Valid | 1753 | 217 |
| | Missing | 3805 | 5341 |

# Frequency Table

**sH | Product stage**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Primarily work with products that are already commercially available | 1011 | 18.2 | 57.7 | 57.7 |
| | Primarily work with products still under development | 217 | 3.9 | 12.4 | 70.1 |
| | Work with both products that are already available and under development | 467 | 8.4 | 26.6 | 96.7 |
| | DK/NA | 58 | 1.0 | 3.3 | 100.0 |
| | Total | 1753 | 31.5 | 100.0 | |
| Missing | System | 3805 | 68.5 | | |
| Total | | 5558 | 100.0 | | |

**sI | Primary product stage**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Concept | 26 | 0.5 | 12.0 | 12.0 |
| | Product development | 99 | 1.8 | 45.6 | 57.6 |
| | Pilot | 71 | 1.3 | 32.7 | 90.3 |
| | DK/NA | 21 | 0.4 | 9.7 | 100.0 |
| | Total | 217 | 3.9 | 100.0 | |
| Missing | System | 5341 | 96.1 | | |
| Total | | 5558 | 100.0 | | |

```
***EMPLOYMENT***

FREQUENCIES
```

```
VARIABLES = q1_code q2 q3_code q5
/ORDER=ANALYSIS.
```

# Frequencies

**Statistics**

| | | q1_code \| Permanent employees | q2 \| More or fewer permanent employees 12 months from now | q3_code \| Energy employees | q5 \| More or fewer energy employees 12 months from now |
|---|---|---|---|---|---|
| N | Valid | 5518 | 5518 | 5518 | 5437 |
| | Missing | 40 | 40 | 40 | 121 |

# Frequency Table

**q1_code | Permanent employees**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | None | 1 | 0.0 | 0.0 | 0.0 |
| | 1 to 5 employees | 2268 | 40.8 | 41.1 | 41.1 |
| | 6 to 10 employees | 1047 | 18.8 | 19.0 | 60.1 |
| | 11 to 24 employees | 933 | 16.8 | 16.9 | 77.0 |
| | 25 to 49 employees | 508 | 9.1 | 9.2 | 86.2 |
| | 50 to 99 employees | 289 | 5.2 | 5.2 | 91.4 |
| | 100 to 249 employees | 206 | 3.7 | 3.7 | 95.2 |
| | 250 to 499 employees | 72 | 1.3 | 1.3 | 96.5 |
| | 500 employees or more | 75 | 1.3 | 1.4 | 97.8 |
| | DK/NA | 119 | 2.1 | 2.2 | 100.0 |
| | Total | 5518 | 99.3 | 100.0 | |
| Missing | System | 40 | 0.7 | | |
| Total | | 5558 | 100.0 | | |

**q2 | More or fewer permanent employees 12 months from now**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | More | 2247 | 40.4 | 40.7 | 40.7 |
| | Fewer | 135 | 2.4 | 2.4 | 43.2 |
| | Same number | 2803 | 50.4 | 50.8 | 94.0 |
| | Don't know/ Refused | 333 | 6.0 | 6.0 | 100.0 |
| | Total | 5518 | 99.3 | 100.0 | |
| Missing | System | 40 | 0.7 | | |

| | | | | | |
|---|---|---|---|---|---|
| Total | | 5558 | 100.0 | | |

**q3_code | Energy employees**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | None | 59 | 1.1 | 1.1 | 1.1 |
| | 1 to 5 employees | 2584 | 46.5 | 46.8 | 47.9 |
| | 6 to 10 employees | 1049 | 18.9 | 19.0 | 66.9 |
| | 11 to 24 employees | 801 | 14.4 | 14.5 | 81.4 |
| | 25 to 49 employees | 431 | 7.8 | 7.8 | 89.2 |
| | 50 to 99 employees | 203 | 3.7 | 3.7 | 92.9 |
| | 100 to 249 employees | 132 | 2.4 | 2.4 | 95.3 |
| | 250 to 499 employees | 36 | 0.6 | 0.7 | 96.0 |
| | 500 employees or more | 39 | 0.7 | 0.7 | 96.7 |
| | DK/NA | 184 | 3.3 | 3.3 | 100.0 |
| | Total | 5518 | 99.3 | 100.0 | |
| Missing | System | 40 | 0.7 | | |
| Total | | 5558 | 100.0 | | |

**q5 | More or fewer energy employees 12 months from now**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | More | 2014 | 36.2 | 37.0 | 37.0 |
| | Fewer | 127 | 2.3 | 2.3 | 39.4 |
| | Same number | 2989 | 53.8 | 55.0 | 94.4 |
| | Don't know/ Refused | 307 | 5.5 | 5.6 | 100.0 |
| | Total | 5437 | 97.8 | 100.0 | |
| Missing | System | 121 | 2.2 | | |
| Total | | 5558 | 100.0 | | |

```
FREQUENCIES
VARIABLES= q6_1 q6_2 q6_3 q6_4 q6_5 q6_6
/STATISTICS=MEAN MEDIAN SUM
/ORDER=ANALYSIS.
```

# Frequencies

**Statistics**

| | | q6_1 \| Electric power generation | q6_2 \| Electric power transmission, distribution, and storage | q6_3 \| Energy efficiency, including heating, cooling and building envelope | q6_4 \| Fuels |
|---|---|---|---|---|---|
| N | Valid | 2130 | 929 | 2169 | 1368 |
| | Missing | 3428 | 4629 | 3389 | 4190 |
| Mean | | 30.61 | 15.43 | 10.13 | 12.97 |
| Median | | 4.00 | 2.00 | 3.00 | 4.00 |
| Sum | | 65202 | 14336 | 21981 | 17737 |
| | | 49.3% | 10.9% | 16.6% | 13.4% |
| | | 0.49346639548 | 0.1085010952 | 0.16635667067 | 0.13423825523 |

```
FILTER OFF.
USE ALL.
EXECUTE.

FREQUENCIES
VARIABLES= q7_1 q7_2 q7_3 q7_4 q7_5 q7_6 q7_7 q7_8 q7_9 q7_10 q7_11
/STATISTICS=MEAN MEDIAN SUM
/ORDER=ANALYSIS.
```

## Frequencies

| | | q7_1 \| Solar photovoltaic electric generation | q7_2 \| Concentrated solar electric generation | q7_3 \| Wind generation | q7_4 \| Geothermal generation |
|---|---|---|---|---|---|
| N | Valid | 1472 | 195 | 389 | 157 |
| | Missing | 4086 | 5363 | 5169 | 5402 |
| Mean | | 26.17 | 4.41 | 18.98 | 5.98 |
| Median | | 4.00 | 0.00 | 1.00 | 0.00 |
| Sum | | 38529 | 860 | 7382 | 933 |
| | | 64.4% | 1.4% | 12.3% | 1.6% |
| | | 0.6438234982 | 0.01437517284 | 0.12335909191 | 0.01559049631 |

```
FILTER OFF.
USE ALL.
EXECUTE.

FREQUENCIES
VARIABLES= q8_1 q8_2 q8_3 q8_4
/STATISTICS=MEAN MEDIAN SUM
/ORDER=ANALYSIS.
```

# Frequencies

**Statistics**

| | | q8_1 \| Traditional transmission and distribution | q8_2 \| Storage | q8_3 \| Smart grid | q8_4 \| Other |
|---|---|---|---|---|---|
| N | Valid | 500 | 400 | 249 | 68 |
| | Missing | 5058 | 5158 | 5309 | 5490 |
| Mean | | 20.11 | 4.74 | 4.61 | 6.72 |
| Median | | 2.00 | 1.00 | 0.00 | 1.00 |
| Sum | | 10055 | 1896 | 1149 | 457 |
| | | 74.2% | 14.0% | 8.5% | 3.4% |
| | | 0.74168326326 | 0.13985394999 | 0.084753264 | 0.03370952276 |

```
FILTER OFF.
USE ALL.
EXECUTE.

FREQUENCIES
VARIABLES= q9_1 q9_2 q9_3 q9_4 q9_5 q9_6 q9_7
/STATISTICS=MEAN MEDIAN SUM
/ORDER=ANALYSIS.
```

# Frequencies

**Statistics**

| | q9_1 \| Energy Star appliances | q9_2 \| LED, CFL and other efficient lighting | q9_3 \| Traditional HVAC goods and services | q9_4 \| Energy Star/ high AFUE HVAC |
|---|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| N | Valid | 507 | 725 | 724 | 556 |
| | Missing | 5051 | 4833 | 4834 | 5002 |
| Mean | | 2.48 | 4.84 | 6.32 | 2.16 |
| Median | | 0.00 | 1.00 | 1.00 | 0.00 |
| Sum | | 1259 | 3506 | 4578 | 1200 |
| | | 7.6% | 21.1% | 27.6% | 7.2% |
| | | 0.07589885778 | 0.21131370363 | 0.27594707815 | 0.07233657816 |

```
FILTER OFF.
USE ALL.
EXECUTE.

FREQUENCIES
VARIABLES= q10_1 q10_2 q10_3 q10_4 q10_5 q10_6
/STATISTICS=MEAN MEDIAN SUM
/ORDER=ANALYSIS.
```

# Frequencies

**Statistics**

| | | q10_1 \| Fossil fuels | q10_2 \| Corn ethanol | q10_3 \| Other ethanol/non-woody biomass | q10_4 \| Woody biomass |
|---|---|---|---|---|---|
| N | Valid | 891 | 258 | 121 | 94 |
| | Missing | 4667 | 5300 | 5437 | 5464 |
| Mean | | 13.89 | 5.32 | 4.09 | 4.66 |
| Median | | 4.00 | 1.00 | 0.00 | 1.00 |
| Sum | | 12374 | 1372 | 495 | 438 |
| | | 71.4% | 7.9% | 2.9% | 2.5% |
| | | 0.71414555318 | 0.07918277832 | 0.02856813066 | 0.02527846713 |

```
FILTER OFF.
USE ALL.
EXECUTE.

FREQUENCIES
VARIABLES= q11_1 q11_2 q11_3 q11_4 q11_5 q11_6 q11_7
/STATISTICS=MEAN MEDIAN SUM
/ORDER=ANALYSIS.
```

# Frequencies

**Statistics**

| | | q11_1 \| Gasoline and diesel motor vehicles (excluding freight trucking) | q11_2 \| Hybrid and plug-in hybrid vehicles | q11_3 \| Electric vehicles | q11_4 \| Natural gas vehicles |
|---|---|---|---|---|---|
| N | Valid | 660 | 224 | 182 | 194 |
| | Missing | 4898 | 5334 | 5376 | 5364 |
| Mean | | 7.41 | 2.38 | 3.50 | 3.36 |
| Median | | 2.00 | 0.00 | 0.00 | 0.00 |
| Sum | | 4893 | 532 | 637 | 651 |
| | | 69.3% | 7.5% | 9.0% | 9.2% |
| | | 0.69335411648 | 0.07538614142 | 0.09026498512 | 0.09224883095 |

```
FILTER OFF.
USE ALL.
EXECUTE.


***VALUE CHAIN EMPLOYMENT***

FREQUENCIES
VARIABLES= q13a q13b q13c q13d q13e q13f
/STATISTICS=MEAN MEDIAN SUM
/ORDER=ANALYSIS.
```

# Frequencies

**Statistics**

| | | q13a \| Production or manufacturing positions | q13b \| Installation or repair positions | q13c \| Administrative positions | q13d \| Management or professional positions |
|---|---|---|---|---|---|
| N | Valid | 4826 | 4859 | 4817 | 4779 |
| | Missing | 732 | 699 | 741 | 779 |
| Mean | | 3.19 | 4.93 | 3.47 | 2.88 |
| Median | | 0.00 | 1.00 | 1.00 | 1.00 |
| Sum | | 15403 | 23974 | 16695 | 13752 |
| | | 18.0% | 28.0% | 19.5% | 16.1% |
| | | 0.18011459978 | 0.28034847688 | 0.19523416944 | 0.16080863006 |

```
FILTER OFF.
USE ALL.
EXECUTE.


***HIRING DIFFICULTY***

FREQUENCIES
VARIABLES = q18
/ORDER=ANALYSIS.
```

# Frequencies

**Statistics**

Difficulty finding

| | | |
|---|---|---|
| N | Valid | 3111 |
| | Missing | 2447 |

**q18 | Difficulty finding qualified applicants**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Very difficult | 808 | 14.5 | 26.0 | 26.0 |
| | Somewhat difficult | 1435 | 25.8 | 46.1 | 72.1 |
| | Not at all difficult | 775 | 13.9 | 24.9 | 97.0 |
| | DK/NA | 93 | 1.7 | 3.0 | 100.0 |
| | Total | 3111 | 56.0 | 100.0 | |
| Missing | System | 2447 | 44.0 | | |
| Total | | 5558 | 100.0 | | |

```
MULT RESPONSE GROUPS=$q19 (q19_1code q19_2code (1,50))
/FREQUENCIES=$q19.
```

# Multiple Response

**Case Summary**

| | Cases | | | | |
|---|---|---|---|---|---|
| | Valid | | Missing | | To |
| | N | Percent | N | Percent | N |
| $q19[a] | 916 | 16.5% | 4642 | 83.5% | 5558 |

a. Group

**$q19 Frequencies**

| | | Responses | | |
|---|---|---|---|---|
| | | N | Percent | Percent of Cases |
| $q19[a] | Lack of soft skills (work ethic, dependability, critical thinking) | 160 | 10.9% | 17.5% |
| | Competition/ small applicant pool | 183 | 12.4% | 20.0% |
| | Insufficient qualifications, certifications, education | 293 | 19.9% | 32.0% |
| | Lack of experience, training, technical skills | 389 | 26.4% | 42.5% |
| | Difficulty finding industry-specific knowledge and skills | 122 | 8.3% | 13.3% |
| | Cannot provide competitive wages | 78 | 5.3% | 8.5% |
| | Location | 85 | 5.8% | 9.3% |
| | Other | 116 | 7.9% | 12.7% |
| | Cultural fit | 28 | 1.9% | 3.1% |
| | DK/NA | 19 | 1.3% | 2.1% |
| Total | | 1473 | 100.0% | 160.8% |

a. Group

```
MULT RESPONSE GROUPS=$q20 (q20_1code q20_2code (1,50))
/FREQUENCIES=$q20.
```

# Multiple Response

**Case Summary**

| | Cases | | | | |
|---|---|---|---|---|---|
| | Valid | | Missing | | To |
| | N | Percent | N | Percent | N |
| $q20[a] | 916 | 16.5% | 4642 | 83.5% | 5558 |

a. Group

**$q20 Frequencies**

| | | Responses | | |
|---|---|---|---|---|
| | | N | Percent | Percent of Cases |
| $q20[a] | Technician/ technical support | 109 | 7.1% | 11.9% |
| | Engineer | 166 | 10.8% | 18.1% |

| | | | | |
|---|---|---|---|---|
| | Sales, marketing, customer service | 219 | 14.2% | 23.9% |
| | Installation | 179 | 11.6% | 19.5% |
| | Manager, director, supervisor, VP | 207 | 13.5% | 22.6% |
| | Electrician/ construction | 157 | 10.2% | 17.1% |
| | Administrative support | 51 | 3.3% | 5.6% |
| | Other | 174 | 11.3% | 19.0% |
| | Software/ web development | 22 | 1.4% | 2.4% |
| | Design/ architecture | 56 | 3.6% | 6.1% |
| | Manufacturing/ production | 18 | 1.2% | 2.0% |
| | Finance/ accounting | 35 | 2.3% | 3.8% |
| | Analyst/ research | 27 | 1.8% | 2.9% |
| | Consultant | 11 | 0.7% | 1.2% |
| | Operations/ business development | 20 | 1.3% | 2.2% |
| | Legal | 10 | 0.7% | 1.1% |
| | DK/NA | 76 | 4.9% | 8.3% |
| Total | | 1537 | 100.0% | 167.8% |

a. Group

```
***CUSTOMERS AND SUPPLIERS***

FREQUENCIES
VARIABLES = q22 q23
/ORDER=ANALYSIS.
```

# Frequencies

**Statistics**

| | | q22 \| Customer location | q23 \| Supplier and vendor location |
|---|---|---|---|
| N | Valid | 5137 | 5133 |
| | Missing | 421 | 425 |

# Frequency Table

**q22 | Customer location**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | In-state | 3593 | 64.6 | 69.9 | 69.9 |
| | In a bordering state but out of state | 267 | 4.8 | 5.2 | 75.1 |
| | In the United States, but outside of a bordering state | 1015 | 18.3 | 19.8 | 94.9 |
| | Outside of the United States | 105 | 1.9 | 2.0 | 96.9 |
| | DK/NA | 157 | 2.8 | 3.1 | 100.0 |
| | Total | 5137 | 92.4 | 100.0 | |
| Missing | System | 421 | 7.6 | | |
| Total | | 5558 | 100.0 | | |

**q23 | Supplier and vendor location**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | In-state | 2518 | 45.3 | 49.1 | 49.1 |
| | In a bordering state but out of state | 462 | 8.3 | 9.0 | 58.1 |
| | In the United States, but outside of a bordering state | 1563 | 28.1 | 30.5 | 88.5 |
| | Outside of the United States | 205 | 3.7 | 4.0 | 92.5 |
| | DK/NA | 385 | 6.9 | 7.5 | 100.0 |
| | Total | 5133 | 92.4 | 100.0 | |
| Missing | System | 425 | 7.6 | | |
| Total | | 5558 | 100.0 | | |

```
***POLICIES CONTRIBUTED TO SUCCESS***

MULT RESPONSE GROUPS=$q24 (q24_1 q24_2 q24_3 q24_4 q24_5 q24_6 (1,50))
/FREQUENCIES=$q24.
```

# Multiple Response

**Case Summary**

| | Cases | | | | |
|---|---|---|---|---|---|
| | Valid | | Missing | | To |
| | N | Percent | N | Percent | N |

| | | | | | |
|---|---|---|---|---|---|
| $q24[a] | 5116 | 92.0% | 442 | 8.0% | 5558 |

a. Group

**$q24 Frequencies**

| | | Responses | | |
|---|---|---|---|---|
| | | N | Percent | Percent of Cases |
| $q24[a] | Renewable Energy Investment Tax Credit | 1224 | 19.1% | 23.9% |
| | Clean Power Plan or EPA's Clean Power Plan | 294 | 4.6% | 5.7% |
| | State-level Renewable Portfolio Standard (RPS) or Energy Efficiency Resource Standard (EERS) | 692 | 10.8% | 13.5% |
| | Other | 914 | 14.3% | 17.9% |
| | None | 2517 | 39.4% | 49.2% |
| | DK/NA | 105 | 1.6% | 2.1% |
| | Net metering | 35 | 0.5% | 0.7% |
| | Utility rebates | 98 | 1.5% | 1.9% |
| | Accelerated depreciation | 18 | 0.3% | 0.4% |
| | Solar Renewable Energy Credits and Carve-Outs | 20 | 0.3% | 0.4% |
| | Production Tax Credit and other production incentives | 24 | 0.4% | 0.5% |
| | Other tax exemptions, credits, and rebates | 383 | 6.0% | 7.5% |
| | Grants and loans | 42 | 0.7% | 0.8% |
| | Property Assessed Clean Energy | 9 | 0.1% | 0.2% |
| | Renewable Energy Credits | 3 | 0.0% | 0.1% |
| | Feed-in-Tariff | 6 | 0.1% | 0.1% |
| | Energy Star and other rating programs | 12 | 0.2% | 0.2% |
| Total | | 6396 | 100.0% | 125.0% |

a. Group

```
***BARRIERS TO SUCCESS***

MULT RESPONSE GROUPS=$q25 (q25_1 q25_2 q25_3 q25_4 q25_5 q25_6 (1,50))
/FREQUENCIES=$q25.
```

# Multiple Response

**Case Summary**

| | Cases | | | | |
|---|---|---|---|---|---|
| | Valid | | Missing | | To |
| | N | Percent | N | Percent | N |
| $q25[a] | 5117 | 92.1% | 441 | 7.9% | 5558 |

a. Group

**$q25 Frequencies**

| | | Responses | | |
|---|---|---|---|---|
| | | N | Percent | Percent of Cases |
| $q25[a] | EPA's carbon regulations | 153 | 2.9% | 3.0% |
| | Clean Power Plan or EPA's Clean Power Plan | 101 | 1.9% | 2.0% |
| | State-level Renewable Portfolio Standard (RPS) or Energy Efficiency Resource Standard (EERS) | 176 | 3.3% | 3.4% |
| | Other | 1380 | 26.1% | 27.0% |
| | None | 2647 | 50.1% | 51.7% |
| | DK/NA | 423 | 8.0% | 8.3% |
| | Utility oppositions, policies/ regulations | 83 | 1.6% | 1.6% |
| | Policy uncertainty/ insufficiency | 167 | 3.2% | 3.3% |
| | Red tape regulations | 105 | 2.0% | 2.1% |
| | Competition | 18 | 0.3% | 0.4% |
| | Financing/ material costs | 27 | 0.5% | 0.5% |
| | Finding qualified employees | 5 | 0.1% | 0.1% |
| Total | | 5285 | 100.0% | 103.3% |

a. Group

```
***SPECIFIC POLICIES***

FREQUENCIES
VARIABLES = q26 q27 q28 q29 R1 R2
/ORDER=ANALYSIS.
```

# Frequencies

**Statistics**

| | | q26 \| Are you aware of or familiar with the Renewable Energy Investment Tax Credit or ITC? | q27 \| Effect of Renewable Energy Investment Tax Credit on business prospects | q28 \| Are you aware of or familiar with the EPA's Clean Power Plan? | q29 \| Expected impact of EPA's Clean Power Plan on business prospects |
|---|---|---|---|---|---|
| N | Valid | 3123 | 2568 | 3564 | 2046 |
| | Missing | 2435 | 2990 | 1994 | 3512 |

# Frequency Table

**q26 | Are you aware of or familiar with the Renewable Energy Investment Tax Credit or ITC?**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Yes | 1883 | 33.9 | 60.3 | 60.3 |
| | No | 1154 | 20.8 | 37.0 | 97.2 |
| | DK/NA | 86 | 1.5 | 2.8 | 100.0 |
| | Total | 3123 | 56.2 | 100.0 | |
| Missing | System | 2435 | 43.8 | | |
| Total | | 5558 | 100.0 | | |

**q27 | Effect of Renewable Energy Investment Tax Credit on business prospects**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Considerably Increased business prospects | 905 | 16.3 | 35.2 | 35.2 |
| | Somewhat increased business prospects | 496 | 8.9 | 19.3 | 54.6 |
| | No impact on business prospects | 944 | 17.0 | 36.8 | 91.3 |
| | Somewhat reduced business prospects | 41 | 0.7 | 1.6 | 92.9 |
| | Considerably reduced business prospects | 19 | 0.3 | 0.7 | 93.7 |

| | | | | | |
|---|---|---|---|---|---|
| | DK/NA | 163 | 2.9 | 6.3 | 100.0 |
| | Total | 2568 | 46.2 | 100.0 | |
| Missing | System | 2990 | 53.8 | | |
| Total | | 5558 | 100.0 | | |

**q28 | Are you aware of or familiar with the EPA's Clean Power Plan?**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Yes | 1806 | 32.5 | 50.7 | 50.7 |
| | No | 1644 | 29.6 | 46.1 | 96.8 |
| | DK/NA | 114 | 2.1 | 3.2 | 100.0 |
| | Total | 3564 | 64.1 | 100.0 | |
| Missing | System | 1994 | 35.9 | | |
| Total | | 5558 | 100.0 | | |

**q29 | Expected impact of EPA's Clean Power Plan on business prospects**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Considerably Increase business prospects | 332 | 6.0 | 16.2 | 16.2 |
| | Somewhat increase business prospects | 575 | 10.3 | 28.1 | 44.3 |
| | No impact on business prospects | 772 | 13.9 | 37.7 | 82.1 |
| | Somewhat reduce business prospects | 85 | 1.5 | 4.2 | 86.2 |
| | Considerably reduce business prospects | 73 | 1.3 | 3.6 | 89.8 |
| | DK/NA | 209 | 3.8 | 10.2 | 100.0 |
| | Total | 2046 | 36.8 | 100.0 | |
| Missing | System | 3512 | 63.2 | | |
| Total | | 5558 | 100.0 | | |

**R1 | Are you aware of or familiar with a Renewable Portfolio Standard (RPS) or Energy Efficiency Resource Standard (EERS) in your state?**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Yes | 1595 | 28.7 | 41.5 | 41.5 |
| | No | 2117 | 38.1 | 55.1 | 96.5 |
| | DK/NA | 133 | 2.4 | 3.5 | 100.0 |
| | Total | 3845 | 69.2 | 100.0 | |
| Missing | System | 1713 | 30.8 | | |
| Total | | 5558 | 100.0 | | |

**R2 | Impact of Renewable Portfolio Standard (RPS) or Energy Efficiency Resource Standard (EERS)**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Considerably Increase business prospects | 424 | 7.6 | 24.4 | 24.4 |
| | Somewhat increase business prospects | 430 | 7.7 | 24.8 | 49.2 |
| | No impact on business prospects | 641 | 11.5 | 36.9 | 86.1 |
| | Somewhat reduce business prospects | 54 | 1.0 | 3.1 | 89.2 |
| | Considerably reduce business prospects | 65 | 1.2 | 3.7 | 92.9 |
| | DK/NA | 123 | 2.2 | 7.1 | 100.0 |
| | Total | 1737 | 31.3 | 100.0 | |
| Missing | System | 3821 | 68.7 | | |
| Total | | 5558 | 100.0 | | |

```
MULT RESPONSE GROUPS=$q30 (q30_1code q30_2code q30_3code (1,50))
/FREQUENCIES=$q30.
```

# Multiple Response

**Case Summary**

| | Cases | | | | |
|---|---|---|---|---|---|
| | Valid | | Missing | | To |
| | N | Percent | N | Percent | N |
| $q30[a] | 948 | 17.1% | 4610 | 82.9% | 5558 |

a. Group

**$q30 Frequencies**

| | | Responses | | |
|---|---|---|---|---|
| | | N | Percent | Percent of Cases |
| $q30[a] | Utility rebates | 133 | 10.0% | 14.0% |
| | Investment Tax Credit | 273 | 20.6% | 28.8% |
| | Renewable Energy Credits | 16 | 1.2% | 1.7% |
| | Renewable Portfolio Standards | 16 | 1.2% | 1.7% |
| | Solar Renewable Energy Credits | 49 | 3.7% | 5.2% |
| | Production Tax Credit | 5 | 0.4% | 0.5% |
| | Net metering | 31 | 2.3% | 3.3% |
| | Other tax exemptions, credits, rebates | 322 | 24.3% | 34.0% |

| | | | | |
|---|---|---|---|---|
| | Carbon tax/ trading | 5 | 0.4% | 0.5% |
| | Feed-in-Tariff | 7 | 0.5% | 0.7% |
| | Grants and loans (incl. Rural Energy for America Program) | 36 | 2.7% | 3.8% |
| | Property Assessed Clean Energy | 14 | 1.1% | 1.5% |
| | Other | 67 | 5.1% | 7.1% |
| | DK/NA | 307 | 23.2% | 32.4% |
| | Production incentives | 20 | 1.5% | 2.1% |
| | Accelerated depreciation | 23 | 1.7% | 2.4% |
| Total | | 1324 | 100.0% | 139.7% |

a. Group

```
***REVENUE***

FREQUENCIES
VARIABLES = q31
/ORDER=ANALYSIS.
```

# Frequencies

**Statistics**

q31 | Revenue

| | | |
|---|---|---|
| N | Valid | 5093 |
| | Missing | 465 |

**q31 | Revenue**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | All of it (100%) | 2253 | 40.5 | 44.2 | 44.2 |
| | Half to most of it (50% to 99%) | 1103 | 19.8 | 21.7 | 65.9 |
| | A quarter to almost half of it (25% to 49%) | 447 | 8.0 | 8.8 | 74.7 |
| | Less than a quarter (1% to 24%) | 921 | 16.6 | 18.1 | 92.8 |
| | DK/NA | 369 | 6.6 | 7.2 | 100.0 |
| | Total | 5093 | 91.6 | 100.0 | |
| Missing | System | 465 | 8.4 | | |
| Total | | 5558 | 100.0 | | |

| tal |
| --- |
| Percent |
| 100.0% |

**42.1% Electric power generation**

**19.4% Electric power transmission, distribution, and storage**

**42.3% Energy efficiency, including heating, cooling and building envel**
**26.4% Fuels**
**17.7% Motor vehicles**
**4.0% Other**
**0.2% DK/NA**

**38.5% Electric power generation**

**6.7% Electric power transmission, distribution, and storage**

**32.3% Energy efficiency, including heating, cooling and building envel**
**14.4% Fuels**
**6.0% Motor vehicles**
**1.8% Other**
**0.3% DK/NA**

```
_a_8 se_a_9 se_a_10 se_a_11 se_a_12 (1,50))
```

| |
|---|
| tal |
| Percent |
| 100.0% |

**75.2% Solar photovoltaic electric generation**

**11.8%** **Concentrated solar electric generation**
**23.0%** **Wind generation**
**9.5%** **Geothermal generation**

**11.5%** **Bioenergy/Biomass generation**

**7.0%** **Low-impact hydroelectric generation including wave/kinetic gen**
**9.5%** **Traditional hydropower**

**13.4%** **Advanced/Low emission natural gas**
**4.4%** **Nuclear**
**15.7%** **Fossil fuel generation**
**4.7%** **Other generation**

| tal |
| --- |
| Percent |
| 100.0% |

**61.4%** **Traditional transmission and distribution**
**51.9%** **Storage**
**33.6%** **Smart grid**
**7.9%** **Other**

_c_8 (1,50))

| tal |
| --- |
| Percent |
| 100.0% |

**36.1% Energy star appliances**

**48.9% LED, CFL and other efficient lighting**

**48.0% Traditional HVAC goods and services**

**40.1% Energy Star/ High AFUE HVAC**

**42.7% Renewable heating and cooling (including solar thermal)**

**42.3% Advanced building materials/insulation**

**11.0% Other**

50))

| tal |
| --- |
| Percent |
| 100.0% |

**71.7% Fossil fuels**
**24.2% Corn ethanol**

**11.6% Other ethanol/non-woody biomass**
**8.9% Woody biomass**
**3.4% Nuclear**
**17.4% Other**

e_8 (1,50))

| tal |
| --- |
| Percent |
| 100.0% |

**77.3% Gasoline and diesel motor vehicles (excluding freight trucking)**

**33.3% Hybrid and plug-In hybrid vehicles**
**27.1% Electric vehicles**
**25.1% Natural gas vehicles**
**5.3% Hydrogen vehicles**
**11.0% Fuel cell vehicles**
**7.5% Other**
**2.9% DK/NA**

| tal |
| --- |
| Percent |
| 100.0% |

**15.1% A firm that manufactures and/or assembles**

**19.3% A firm that provides engineering and research services**

**42.3% A firm that sells and distributes**
**42.4% A firm that installs**

**25.4% A firm that provides consulting, finance, etc.**

**6.7% Other**
**1.9% Not sure**

**10.0% A firm that manufactures and/or assembles**

**9.6% A firm that provides engineering and research services**

**26.0% A firm that sells and distributes**
**32.2% A firm that installs**

**14.9% A firm that provides consulting, finance, etc.**
**5.2% Other**
**2.2% Not sure**

| | |
|---|---|
| 57.7% | Primarily work with products that are already commercially avai |
| 12.4% | Primarily work with products still under development |
| 26.6% | Work with both products that are already available and under de |
| 3.3% | DK/NA |

| | |
|---|---|
| 12.0% | Concept |
| 45.6% | Product development |
| 32.7% | Pilot |
| 9.7% | DK/NA |

| | |
|---|---|
| 0.0% | None |
| 41.1% | 1 to 5 employees |
| 19.0% | 6 to 10 employees |
| 16.9% | 11 to 24 employees |
| 9.2% | 25 to 49 employees |
| 5.2% | 50 to 99 employees |
| 3.7% | 100 to 249 employees |
| 1.3% | 250 to 499 employees |
| 1.4% | 500 employees or more |
| 2.2% | DK/NA |

| | |
|---|---|
| 40.7% | More |
| 2.4% | Fewer |
| 50.8% | Same number |
| 6.0% | Don't know/ Refused |

| | |
|---|---|
| 1.1% | None |
| 46.8% | 1 to 5 employees |
| 19.0% | 6 to 10 employees |
| 14.5% | 11 to 24 employees |
| 7.8% | 25 to 49 employees |
| 3.7% | 50 to 99 employees |
| 2.4% | 100 to 249 employees |
| 0.7% | 250 to 499 employees |
| 0.7% | 500 employees or more |
| 3.3% | DK/NA |

| | |
|---|---|
| 37.0% | More |
| 2.3% | Fewer |
| 55.0% | Same number |
| 5.6% | Don't know/ Refused |

| q6_5 \| Motor vehicles | q6_6 \| Other |
|---|---|
| 903 | 206 |
| 4655 | 5352 |
| 11.91 | 10.27 |
| 2.00 | 2.50 |
| 10759 | 2116 |
| 8.1% | 1.6% |
| 0.08142314196 | 0.01601444145 |

**49.3% Electric power generation**
**10.9% Electric power transmission, distr**
**16.6% Energy efficiency, including heati**
**13.4% Fuels**
**8.1% Motor vehicles**
**1.6% Other**

**Statistics**

| q7_5 \| Bioenergy/Biomass generation | q7_6 \| Low-impact hydroelectric generation including wave/kinetic generation | q7_7 \| Traditional hydropower | q7_8 \| Advanced/Low emission natural gas | q7_9 \| Nuclear | q7_10 \| Fossil fuel generation |
|---|---|---|---|---|---|
| 207 | 118 | 162 | 246 | 71 | 285 |
| 5351 | 5440 | 5396 | 5312 | 5487 | 5273 |
| 2.80 | 1.77 | 6.45 | 5.08 | 48.35 | 15.42 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.00 |
| 579 | 209 | 1045 | 1250 | 3433 | 4395 |
| 1.0% | 0.3% | 1.7% | 2.1% | 5.7% | 7.3% |
| 0.00967713636 | 0.00349691657 | 0.0174678728 | 0.02089176636 | 0.057365674 | 0.07344076238 |

**74.2% Traditional transmission and distribution**
**14.0% Storage**
**8.5% Smart grid**
**3.4% Other**

| q9_5 \| Renewable heating and cooling (including solar thermal) | q9_6 \| Advanced building materials/insulation | q9_7 \| Other |
|---|---|---|

| | | |
|---|---|---|
| 623 | 599 | 197 |
| 4935 | 4959 | 5361 |
| 3.20 | 4.44 | 7.09 |
| 0.00 | 1.00 | 2.00 |
| 1992 | 2658 | 1398 |
| 12.0% | 16.0% | 8.4% |
| 0.12008679666 | 0.16018203189 | 0.08423495374 |

**7.6% Energy star appli**
**21.1% LED, CFL, and oth**
**27.6% Traditional HVAC**
**7.2% Energy Star/ high**
**12.0% Renewable heati**
**16.0% Advanced buildi**
**8.4% Other**

| q10_5 \| Nuclear | q10_6 \| Other |
|---|---|
| 28 | 272 |
| 5530 | 5286 |
| 1.14 | 9.62 |
| 0.00 | 2.00 |
| 32 | 2616 |
| 0.2% | 15.1% |
| 0.00184682865 | 0.15097824205 |

**71.4% Fossil fuels**
**7.9% Corn ethanol**
**2.9% Other ethanol/ non-woody bioma**
**2.5% Woody biomass**
**0.2% Nuclear**
**15.1% Other**

| q11_5 \| Hydrogen vehicles | q11_6 \| Fuel cell vehicles | q11_7 \| Other |
|---|---|---|
| 27 | 67 | 57 |
| 5531 | 5491 | 5501 |
| 2.07 | 1.30 | 3.53 |
| 0.00 | 0.00 | 0.00 |
| 56 | 87 | 201 |
| 0.8% | 1.2% | 2.8% |
| 0.00793538331 | 0.01232818478 | 0.02848235794 |

**69.3% Gasoline and die**
**7.5% Hybrid and plug-**
**9.0% Electric vehicles**
**9.2% Natural gas vehi**
**0.8% Hydrogen vehicl**
**1.2% Fuel cell vehicles**
**2.8% Other**

| q13e \| Sales positions | q13f \| Other |
|---|---|
| 4756 | 965 |
| 802 | 4593 |
| 1.79 | 7.42 |
| 0.00 | 2.00 |
| 8535 | 7157 |
| 10.0% | 8.4% |
| 0.09980120447 | 0.08369291937 |

**18.0% % of solar workers in productio**
**28.0% % of solar workers in installatio**
**19.5% % of solar workers in administra**
**16.1% % of solar workers in managem**
**10.0% % of solar workers in sales posi**
**8.4% % of solar workers in other posi**

**26.0% Very difficult**
**46.1% Somewhat difficult**
**24.9% Not at all difficult**
**3.0% DK/NA**

| | |
|---|---|
| tal | |
| Percent | |
| 100.0% | |

| | |
|---|---|
| 17.5% | Lack of soft skills (work ethic, depe |
| 20.0% | Competition/ small applicant pool |
| 32.0% | Insufficient qualifications, certifica |
| 42.5% | Lack of experience, training, techn |
| 13.3% | Difficulty finding industry-specific |
| 8.5% | Cannot provide competitive wages |
| 9.3% | Location |
| 12.7% | Other |
| 3.1% | Cultural fit |
| 2.1% | DK/NA |

| | |
|---|---|
| **42.5%** | **Lack of experien** |
| **32.0%** | **Insufficient quali** |
| **20.0%** | **Competition/ sm** |
| **17.5%** | **Lack of soft skills** |
| **13.3%** | **Difficulty finding** |
| **9.3%** | **Location** |
| **8.5%** | **Cannot provide c** |
| **12.7%** | **Other** |
| **3.1%** | **Cultural fit** |
| **2.1%** | **DK/NA** |

| tal |
|---|
| Percent |
| 100.0% |

| | |
|---|---|
| 11.9% | Technician/ technical support |
| 18.1% | Engineer |

| | |
|---|---|
| **23.9%** | **Sales, marketing** |
| **22.6%** | **Manager, directo** |

| | |
|---|---|
| 23.9% Sales, marketing, customer servic | **19.5% Installation** |
| 19.5% Installation | **18.1% Engineer** |
| | |
| 22.6% Manager, director, supervisor, VP | **17.1% Electrician/ cons** |
| 17.1% Electrician/ construction | **11.9% Technician/ tech** |
| 5.6% Administrative support | **6.1% Design/ architec** |
| 19.0% Other | **5.6% Administrative s** |
| | |
| 2.4% Software/ web development | **3.8% Finance/ accoun** |
| 6.1% Design/ architecture | **2.9% Analyst/ researc** |
| 2.0% Manufacturing/ production | **2.4% Software/ web d** |
| 3.8% Finance/ accounting | **2.2% Operations/ busi** |
| 2.9% Analyst/ research | **2.0% Manufacturing/** |
| 1.2% Consultant | **1.2% Consultant** |
| | |
| 2.2% Operations/ business developmen | **1.1% Legal** |
| 1.1% Legal | **19.0% Other** |
| 8.3% DK/NA | **8.3% DK/NA** |

**69.9%** **In-state**

**5.2%** **In a bordering state but out of state**

**19.8%** **In the United States, but outside of a bordering state**

**2.0%** **Outside of the United States**

**3.1%** **DK/NA**

**49.1%** **In-state**

**9.0%** **In a bordering state but out of state**

**30.5%** **In the United States, but outside of a bordering state**

**4.0%** **Outside of the United States**

**7.5%** **DK/NA**

| |
|---|
| tal |
| Percent |

100.0%

23.9% Renewable Energy Investment Ta

5.7% Clean Power Plan or EPA's Clean

13.5% State-level Renewable Portfolio S
17.9% Other
49.2% None
2.1% DK/NA
0.7% Net metering
1.9% Utility rebates
0.4% Accelerated depreciation

0.4% Solar Renewable Energy Credits

0.5% Production Tax Credit and other pr

7.5% Other tax exemptions, credits, and
0.8% Grants and loans

0.2% Property Assessed Clean Energy

0.1% Renewable Energy Credits
0.1% Feed-in-Tariff

0.2% Energy Star and other rating prog

**23.9% Renewable Ener**

**5.7% Clean Power Pla**

**13.5% State-level Rene**
**0.7% Net metering**
**1.9% Utility rebates**
**0.4% Accelerated depr**
**0.4% Solar Renewable**
**0.5% Production Tax C**
**7.5% Other tax exemp**

**0.8% Grants and loans**

**0.2% Property Assesse**

**0.1% Renewable Ener**
**0.1% Feed-in-Tariff**

**0.2% Energy Star and**

**17.9% Other**
**49.2% None**

**2.1% DK/NA**

| tal |
| --- |
| Percent |
| 100.0% |

3.0% EPA's carbon regulations

2.0% Clean Power Plan or EPA's Clean

3.4% State-level Renewable Portfolio S
27.0% Other
51.7% None
8.3% DK/NA

1.6% Utility oppositions, policies/ regula

3.3% Policy uncertainty/ insufficiency
2.1% Red tape regulations
0.4% Competition
0.5% Financing/ material costs

0.1% Finding qualified employees

**3.4% State-level Rene**

**3.3% Policy uncertaint**

**3.0% EPA's carbon reg**
**2.1% Red tape regulat**
**2.0% Clean Power Plar**
**1.6% Utility oppositio**

**0.5% Financing/ mate**

**0.4% Competition**
**0.1% Finding qualified**
**27.0% Other**
**51.7% None**

**8.3% DK/NA**

| R1 \| Are you aware of or familiar with a Renewable Portfolio Standard (RPS) or Energy Efficiency Resource Standard (EERS) in your state? | R2 \| Impact of Renewable Portfolio Standard (RPS) or Energy Efficiency Resource Standard (EERS) |
|---|---|
| 3845 | 1737 |
| 1713 | 3821 |

**60.3% Yes**

**37.0% No**

**2.8% DK/NA**

**35.2% Considerably Increased business prospects**

**19.3% Somewhat increased business prospects**

**36.8% No impact on business prospects**

**1.6% Somewhat reduced business prospects**

**0.7% Considerably reduced business prospects**

**6.3% DK/NA**

**50.7% Yes**
**46.1% No**
**3.2% DK/NA**

**16.2% Considerably Increase business prospects**

**28.1% Somewhat increase business prospects**

**37.7% No impact on business prospects**

**4.2% Somewhat reduce business prospects**

**3.6% Considerably reduce business prospects**
**10.2% DK/NA**

**41.5% Yes**
**55.1% No**
**3.5% DK/NA**

**24.4% Considerably Increase business prospects**

**24.8% Somewhat increase business prospects**

**36.9% No impact on business prospects**

**3.1% Somewhat reduce business prospects**

**3.7% Considerably reduce business prospects**

**7.1% DK/NA**

| tal |
| --- |
| Percent |
| 100.0% |

14.0% Utility rebates

28.8% Investment Tax Credit

1.7% Renewable Energy Credits

1.7% Renewable Portfolio Standards

5.2% Solar Renewable Energy Credits

0.5% Production Tax Credit

3.3% Net metering

34.0% Other tax exemptions, credits, reb

**34.0% Other tax exemp**

**28.8% Investment Tax C**

**14.0% Utility rebates**

**5.2% Solar Renewable**

**3.8% Grants and loans**

**3.3% Net metering**

**2.4% Accelerated depr**

**2.1% Production incer**

0.5% Carbon tax/ trading
0.7% Feed-in-Tariff

3.8% Grants and loans (incl. Rural Ene

1.5% Property Assessed Clean Energy
7.1% Other
32.4% DK/NA
2.1% Production incentives
2.4% Accelerated depreciation

1.7% Renewable Ener
1.7% Renewable Portf

1.5% Property Assesse

0.7% Feed-in-Tariff
0.5% Production Tax C
0.5% Carbon tax/ trad
7.1% Other
32.4% DK/NA

**44.2% All of it (100%)**

**21.7% Half to most of it (50% to 99%)**

**8.8% A quarter to almost half of it (25% to 49%)**

**18.1% Less than a quarter (1% to 24%)**
**7.2% DK/NA**

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**evelopment**

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**ng, cooling, and building envelope**

| q7_11 \| Other |
|---|
| 89 |
| 5469 |
| 13.79 |
| 1.00 |
| 1228 |
| 2.1% |
| 0.02051161225 |

**64.4% Solar photovoltaic electric generation**
**1.4% Concentrated solar electric generation**
**12.3% Wind generation**
**1.6% Geothermal generation**
**1.0% Bioenergy/ biomass generation**
**0.3% Low-impact hydroelectric generation include wave/ kinetic gene**
**1.7% Traditional hydropower**
**2.1% Advanced/ low emission natural gas**
**5.7% Nuclear**
**7.3% Fossil fuel generation**
**2.1% Other**

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ng materials/ insulation

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in hybrid vehicles

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all applicant pool

(work ethic, dependability, critical thinking)

industry-specific knowledge and skills

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, customer service
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other rating programs

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**ıtions, credits, rebates**
**Credit**

**Energy Credits**

**s (incl. Rural Energy for America Program)**

**reciation**

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