U.S. DEPARTMENT OF ENERGY

Intro

This communication is being made on behalf of the **Department of Energy (DOE)**. We are conducting a national survey about the energy, water, and emission intensities of industrial manufacturing industries. The important survey addresses businesses that research, develop, manufacture, install, or work with energy-related products and services. The survey covers the following industrial manufacturing sectors: renewable energy production, energy efficiency products and services, electric vehicles, solar, wind, fossil, other energy sources, and energy-related products and services.

The survey questions will take no more than 15 minutes. Any aggregated information will be used in reporting the results of the survey.

The survey is **voluntary** and not take up to 60 minutes (including any necessary preparation) of your time. Your participation will help inform decisions that affect your business and money should be made to support the industry and prepare the present and future labor pool.

Does your organization have at least one location with employees in the United States? (Please base yourself on employees if you are an owner-operated business or sole proprietor)

- ☐ Yes
- ☐ No

Fin

For this survey, please only answer for your current business location. If your organization has other U.S. locations, please do not include their data. What is the zip code of your current location?

- ☐ _____ (Type zip code)
- ☐ Refused

SB

Is your organization involved, in whole or part, with an activity related to energy, energy efficiency or water always?

We define this as being directly involved with researching, developing, producing, manufacturing, installing, or selling products or services related to energy production, energy efficiency, or water. Electric Power Generation, Electric Power Transmission, Distribution, and Storage, Energy Efficiency Including Heating, Cooling and Building Envelope, Fuels, Including Extraction, Processing, Production, Transportation, and Distribution, Transportation, Including Vehicles, Fuels, Infrastructure supporting vehicles such as connecting, Finance, Tax, and legal services related to energy.

- ☐ Yes
- ☐ No
- ☐ Not sure

SC

Which of the following industries describes your organization's work? If your organization is involved in multiple industries, please select all that apply. For clarity, please select the options that are most relevant to your organization.

- ☐ **Electric power generation** (the process of generating electric power from other sources of primary energy such as mechanical energy or heat)
- ☐ **Electric power transmission and distribution, including electric vehicle charging** (moving electric power from the generation site to the end-use site)
- ☐ **Storage, including fuel storage and electric vehicle batteries** (electric energy storage)
- ☐ **Energy efficiency, including heating, cooling and building envelope** (energy efficiency improvements in the United States including, but not limited to, heating and cooling equipment, building envelope improvements, lighting, and other energy efficiency improvements, including EPA's Green Power Partnership Program and Energy Star Program)
- ☐ **Fuels** (including Fossil Fuels, Renewable Energy sources and fuel processes like Energy Efficiency of Fuel Production and Distribution)
- ☐ **Transportation, including fuels, infrastructure supporting vehicles, and vehicles** (motor fuels and other transportation fuels, including biofuels and non-combustible fuels, such as electric vehicles, and vehicles)
- ☐ **Finance, tax, and legal services related to transportation** (services related to fuel such as fuel tax, fuel tax credits, and vehicles)
- ☐ **Other energy and storage**
- ☐ None of the above
- ☐ Don't know/ Refused

SD

Which do you consider your organization's **primary** industry, based on the majority of labor hours spent on this industry?

- ☐ **Electric power generation** (the process of generating electric power from other sources of primary energy such as mechanical energy or heat)
- ☐ **Electric power transmission and distribution, including electric vehicle charging** (moving electric power from the generation site to the end-use site)
- ☐ **Storage, including fuel storage and electric vehicle batteries** (electric energy storage)
- ☐ **Energy efficiency, including heating, cooling and building envelope** (energy efficiency improvements in the United States including, but not limited to, heating and cooling equipment, building envelope improvements, lighting, and other energy efficiency improvements, including EPA's Green Power Partnership Program and Energy Star Program)
- ☐ **Fuels** (including Fossil Fuels, Renewable Energy sources and fuel processes like Energy Efficiency of Fuel Production and Distribution)
- ☐ **Transportation, including fuels, infrastructure supporting vehicles, and vehicles** (motor fuels and other transportation fuels, including biofuels and non-combustible fuels, such as electric vehicles, and vehicles)
- ☐ **Finance, tax, and legal services related to transportation** (services related to fuel such as fuel tax, fuel tax credits, and vehicles)
- ☐ **Other energy and storage**
- ☐ None of the above
- ☐ Don't know/ Refused

SEA

Which of the following **electric power generation** technologies is your organization directly engaged with?

(Select all that apply)

- ☐ Nuclear generation
- ☐ Coal generation
- ☐ Combined heat and power generation
- ☐ Combined heat and power
- ☐ Offshore wind generation
- ☐ Onshore wind power generation
- ☐ Hydroelectricity generation
- ☐ Geothermal generation
- ☐ Solar power generation
- ☐ Natural gas generation
- ☐ Traditional hydroelectric generation
- ☐ Pumped hydroelectric generation (including wavelmotion generation)
- ☐ Fuel cell electric vehicle generation
- ☐ Other _____ (Other generation Capacity)
- ☐ Incorporating combustion natural gas

SEB

Which of the following **electric power transmission and distribution** technologies is your organization directly engaged with?

(Select all that apply)

- ☐ Electric grid
- ☐ Smart grid
- ☐ Traditional transmission and distribution
- ☐ Other _____ (Other grid transmission Capacity)
- ☐ Other _____ (Other Capacity)
- ☐ Electric vehicle charging stations

SEC

Which of the following **storage** technologies is your organization directly engaged with?

(Select all that apply)

- ☐ Mechanical storage (flywheels, compressed air energy storage, etc.)
- ☐ Thermal energy storage
- ☐ Coal oil
- ☐ Nuclear fuel
- ☐ Fossil fuel storage (tank, liquid)
- ☐ Fuel storage (gas, bunker, etc.)
- ☐ Combustible fuels gas
- ☐ Natural gas
- ☐ Petroleum products
- ☐ Pumped hydroelectric
- ☐ Electric, including efficient and thermal
- ☐ Electric vehicle batteries
- ☐ Electric energy, including electric vehicle batteries in storage for solar generation
- ☐ Electric energy, including electric vehicle batteries in storage for wind generation
- ☐ _____ (Other fuel tank Capacity)
- ☐ _____ (Other storage Capacity)
- ☐ _____ (Other Capacity)

What type of **battery storage** do you work with?

(Select all that apply)

- ☐ Batteries where the cathode is made of lithium
- ☐ Lead-acid batteries
- ☐ _____ (Other solid electrolyte batteries Capacity)
- ☐ _____ (Other flow batteries Capacity)

What is the application of your **battery storage** work?

(Select all that apply)

- ☐ Batteries in other transportation
- ☐ Consumer devices
- ☐ Buildings or industrial facilities
- ☐ Electric grid
- ☐ _____ (Other Capacity)

SED

Which of the following **energy efficiency, including heating, cooling and building envelope** technologies is your organization directly engaged with?

(Select all that apply)

- ☐ ENERGY STAR certified electronics (TVs, telephones, audio/video, etc.)
- ☐ ENERGY STAR certified lighting
- ☐ ENERGY STAR certified appliances (non-cooking items)
- ☐ ENERGY STAR certified heating and cooling equipment (HVAC)
- ☐ Traditional HVAC grade, control systems, and sensors
- ☐ ENERGY STAR certified building envelope (windows, doors, and skylights)
- ☐ Other LED, CFL, and efficient lighting (Other than ENERGY STAR certification) (e.g., Indirect-expensive lighting, or Indirect-inexpensive lighting, or Indirect-medium lighting)
- ☐ ENERGY STAR certified insulation
- ☐ ENERGY STAR certified roofs
- ☐ ENERGY STAR certified commercial food service equipment
- ☐ ENERGY STAR certified data center equipment
- ☐ ENERGY STAR certified cooking equipment
- ☐ Other LED, CFL, and efficient lighting
- ☐ Solar thermal water heating and cooling
- ☐ Other energy efficiency improvements (electronic, furnace, heat pumps, etc.)
- ☐ Advanced cooling compressors/motors
- ☐ Recycled building materials
- ☐ Other energy efficiency products and appliances
- ☐ Energy quality services
- ☐ _____ (Other Capacity)

SEE

Which of the following **fuels** technologies is your organization directly engaged with?

(Select all that apply)

- ☐ Carbon neutral gas
- ☐ Biomass thermochemical fuelled
- ☐ Other ethanol from woody biomass
- ☐ Other biodiesel
- ☐ Other biofuels
- ☐ Coal ethanol
- ☐ Coal diesel
- ☐ Coal
- ☐ Fossil fuel processing, including gasoline and diesel
- ☐ _____ (Other Capacity)
- ☐ Offshore petroleum, including gasoline and diesel
- ☐ Offshore natural gas
- ☐ Onshore natural gas
- ☐ Nuclear
- ☐ Waste Coal

Do you primarily work with onshore or offshore petroleum?

- ☐ Offshore petroleum
- ☐ Onshore petroleum
- ☐ Don't know/ Refused

Do you primarily work with onshore or offshore natural gas?

- ☐ Offshore natural gas
- ☐ Onshore natural gas
- ☐ Don't know/ Refused

SEF

Which of the following **transportation vehicles, including motor vehicles** technologies is your organization directly engaged with?

(Select all that apply)

- ☐ Hydrogen vehicles
- ☐ Hybrids (all-electric motor, vehicle consuming liquid transport)
- ☐ Plug-in hybrids vehicles
- ☐ Electric motor vehicles
- ☐ Fuel cell vehicles
- ☐ Natural gas vehicles
- ☐ Natural gas vehicles
- ☐ _____ (Other Capacity)

SEG

Which of the following **component parts for transportation vehicles** technologies is your organization directly engaged with?

(Select all that apply)

- ☐ Transportation vehicle compact system parts
- ☐ Transportation vehicle battery parts
- ☐ Transportation vehicle engine & transmission
- ☐ _____ (Other transportation vehicle parts Capacity)

SEHnew

Which of the following technologies is your organization **PRIMARILY** engaged with?

- ☐ Wave photovoltaic electric generation
- ☐ Wave mechanical electric generation
- ☐ Land-based wind generation
- ☐ Offshore wind generation
- ☐ Onshore wind power
- ☐ Hydroelectricity generation
- ☐ Land-based hydroelectric generation including wavelmotion generation
- ☐ Geothermal electric generation
- ☐ Hydrokinetics (tidal/ocean wave) gen
- ☐ Solar power generation
- ☐ Fuel generation
- ☐ Combined heat and power generation
- ☐ Natural gas generation
- ☐ Combined heat and power
- ☐ Traditional hydroelectric generation
- ☐ Traditional hydroelectric gen (Hydroelectric)
- ☐ Biofuel gen
- ☐ Biofuel gen
- ☐ Electric vehicle charging stations
- ☐ Big Fuel Cell Electric Fuel (hydrogen)
- ☐ Big Fuel Cell Electric Fuel (hydrogen)
- ☐ Big Fuel Cell Electric Fuel (hydrogen)
- ☐ Big Fuel Cell Electric Fuel (hydrogen)
- ☐ Big Fuel Cell Electric Fuel (hydrogen)
- ☐ ENERGY STAR certified appliances (excluding HVAC)
- ☐ ENERGY STAR certified heating, ventilation, and cooling (HVAC)
- ☐ Other LED, CFL, and efficient lighting (Other than ENERGY STAR certification) (e.g., Indirect-expensive lighting, or Indirect-inexpensive lighting, or Indirect-medium lighting)
- ☐ Traditional HVAC grade, control systems, and sensors
- ☐ Other LED, CFL, and efficient lighting
- ☐ ENERGY STAR certified electronics (TVs, telephones, audio/video, etc.)
- ☐ ENERGY STAR certified windows, doors and skylights
- ☐ ENERGY STAR certified lighting
- ☐ ENERGY STAR certified insulation
- ☐ ENERGY STAR certified roofs
- ☐ ENERGY STAR certified commercial food service equipment
- ☐ ENERGY STAR certified data center equipment
- ☐ ENERGY STAR certified cooking equipment
- ☐ Other LED, CFL, and efficient lighting
- ☐ Other energy efficiency products
- ☐ Other renewable fueling sources (biofuel gasoline, biomass, heat pumps, etc.)
- ☐ Advanced cooling compressors/motors
- ☐ Recycled building materials
- ☐ Renewable heat (concentrated solar thermal and geothermal)
- ☐ Big Fuel Cell Electric Fuel (hydrogen)
- ☐ Other fossil fuels
- ☐ Other fossil fuels
- ☐ Carbon sequestration
- ☐ Offshore petroleum fuel
- ☐ Onshore petroleum fuel
- ☐ Offshore natural gas fuel
- ☐ Other fossil fuels
- ☐ Other fossil fuels
- ☐ Renewable fuelsl
- ☐ Nuclear
- ☐ Other renewable energy biomass
- ☐ Waste biomass/waste biofuel
- ☐ Other biomass
- ☐ Other biomass
- ☐ Hydrogen vehicles
- ☐ Fuel cell vehicles
- ☐ Hybrids (all-electric motor, vehicle consuming liquid transport)
- ☐ Plug-in hybrids vehicles
- ☐ Electric vehicles
- ☐ Natural gas vehicles
- ☐ Hydrogen vehicles
- ☐ Fuel cell vehicles
- ☐ Big Fuel Cell Electric Fuel (hydrogen)
- ☐ Transportation vehicle engine & drive parts
- ☐ Transportation vehicle compact system parts
- ☐ Transportation vehicle battery parts
- ☐ Big Fuel Cell Electric Fuel (hydrogen)

SF-SG

Which of the following industry descriptions describes your organization's focus as it relates to the energy industry?

(Select all that apply)

- ☐ An organization that manufactures and/or assembles energy goods or produces components that go into energy products
- ☐ An organization that conducts research and development (R&D) on energy products
- ☐ An organization involved in the wholesale trade and distribution of energy products and services
- ☐ An organization that sells energy products or provides services for installation of energy systems
- ☐ Other _____ (Other Capacity)
- ☐ An organization that provides consulting, engineering, finance, legal, or other professional services related to energy
- ☐ An organization that conducts operations and maintenance (O&M) for energy systems
- ☐ An organization involved in agricultural grows and harvest
- ☐ An organization involved in forestry harvesting
- ☐ An organization primarily involved in education and training
- ☐ Other _____ (Other Capacity)
- ☐ None of the above
- ☐ Other _____ (Other Capacity)
- ☐ Refused

Which do you consider your organization's **primary** focus as it relates to the energy industry, based on the labor hours performed at your location?

- ☐ An organization that manufactures and/or assembles energy goods or produces components that go into energy products
- ☐ An organization that conducts research and development and related services for energy
- ☐ An organization involved in the wholesale trade and distribution of energy products and services
- ☐ An organization that sells energy products or provides services for installation of energy systems
- ☐ A public or private utility
- ☐ An organization that provides consulting, engineering, finance, legal, or other professional services related to energy
- ☐ An organization that conducts operations and maintenance (O&M) for energy systems
- ☐ An organization involved in agricultural grows and harvest
- ☐ An organization involved in forestry and harvesting
- ☐ An organization involved in education and training
- ☐ Other _____ (Other Capacity)
- ☐ Refused

SFA-SFB

Does your organization work with hydrogen fuel in any capacity?

- ☐ _____ (Yes Capacity)
- ☐ No
- ☐ Don't know/ Refused

Is your organization considered an Energy Service Company (ESCO)?

- ☐ Yes
- ☐ No
- ☐ Don't know/ Refused

Does your organization work on ENERGY STAR certified new home construction?

- ☐ Yes
- ☐ No
- ☐ Don't know/ Refused

Does your organization work on ENERGY STAR certified buildings and plants (commercial and industrial)?

- ☐ Yes
- ☐ No
- ☐ Don't know/ Refused

Does your organization have an energy manager or director responsible for energy management (or use of your facility)?

- ☐ Yes
- ☐ No
- ☐ Don't know/ Refused

Does your organization employ workers that are in charge of administrating, managing, evaluating, or otherwise working on utility bill energy efficiency programs, rebates, and other activities?

- ☐ Yes
- ☐ No
- ☐ Don't know/ Refused

SI-SK

For this survey, we will just be asking about the employees that work from or directly report to your current location.

Including **all** full-time and part-time employees, how many **permanent** employees work at or from your current location?

Record # of employees

_____

Based on **$Q1.1GEnDCIncorTotalEnrylValue$**% full-time and part-time permanent employees at your location, how many employees do you expect to have at your location in the next 5 years?

Record # of employees

_____

Just to confirm, you currently have **$Q1.1GEnDCIncorTotalEnrylValue$** permanent employees at your current location. Is this correct? If not, please enter the correct number. If you expect no permanent employees, 0 months from now.

If this is incorrect, please return to the previous question(s) and adjust your response(s).

Of the **$Q1.1GEnDCIncorTotalEnrylValue$**% full-time and part-time permanent employees at your current location, how many employees do you expect to be in your current location? Please note that your response should include administrative staff supporting the energy portion of your business.

Record # of employees

_____

Just to confirm, you **$Q1.1GEnDCIncorTotalEnrylValue$**% employees at your current location. Is this correct? If not, please enter the correct number. If you expect no permanent employees, 0 months from now.

If this is incorrect, please return to the previous question(s) and adjust your response(s).

Of the **$Q1.1GEnDCIncorTotalEnrylValue$**% employees at your location, please describe their current work location. Please note that your response should include administrative staff supporting the energy portion of your business.

- ☐ Remote work
- ☐ Hybrid (remote work and in-person)
- ☐ Entirely in-person
- ☐ Other _____ (Other Capacity)

Please enter percentage
Remote work percentage
Hybrid percentage
In-person percentage

How many full-time and part-time **permanent** employees do you have working at your current location? Including **all** full-time and part-time permanent employees, how many employees do you expect to have in the next 5 years?

Record # of employees

_____

Based on **$Q1.1GEnDCIncorTotalEnrylValue$**% full-time and part-time permanent employees at your current location that support the energy portion of your business and you expect to **$Q1.1GEnDCIncorTotalEnrylValue$**% full-time and part-time permanent employees that support the energy portion of your business, 12 months from now.

Record # of employees

_____

Just to confirm, you currently have **$Q1.1GEnDCIncorTotalEnrylValue$** permanent employees at your current location that support the energy portion of your business and you expect to **$Q1.1GEnDCIncorTotalEnrylValue$** permanent employees that support the energy portion of your business, 12 months from now.

If this is incorrect, please return to the previous question(s) and adjust your response(s).

Thinking of your **$Q1.1GEnDCIncorTotalEnrylValue$**% energy employees, how many spend at least 50% of their time supporting the energy portion of your business?

Record # of employees

_____

Thinking of your **$Q1.1GEnDCIncorTotalEnrylValue$**% energy employees, how many spend all of their time supporting the energy portion of your business?

Record # of employees

_____

SM

Thinking of your **$Q1.1GEnDCIncorTotalEnrylValue$**% workers at your location, please classify them by their work type. Please note that your response should include administrative staff supporting the energy portion of your business.

Please enter percentage
Production percentage
Administrative percentage

Hydro
Tidal/wave energy generation
Geothermal energy generation
Other renewable energy generation
Nuclear power plant
Natural gas power plant
Coal power plant
Oil power plant
Other fossil fuel power plant
Other non-renewable energy generation
Energy storage (batteries, pumped hydro, compressed air, etc.)
Energy efficiency (including heating, cooling and lighting)
Other energy generation
Energy efficiency (including heating, cooling and lighting)
Other energy generation
Energy efficiency (including heating, cooling and lighting)
Other energy generation

Mechanical storage (flywheels, compressed air energy storage, etc.)	
Thermal storage	
Liquefied natural gas storage	
Compressed natural gas storage	
Crude oil storage	
Refined petroleum fuels (liquid) storage	
Refined petroleum fuels (gas) storage	
Coal storage (piles, domes, etc.)	
Biofuels, including ethanol and biodiesel storage	
Nuclear fuel storage	
${q://QID19/ChoiceTextEntryValue/13}	
${q://QID19/ChoiceTextEntryValue/14}	
${q://QID19/ChoiceTextEntryValue/15}	
${q://QID19/ChoiceTextEntryValue/16}	
ENERGY STAR® certified appliances (not including HVAC)	
ENERGY STAR certified heating, ventilation, and cooling (HVAC)	
Other high efficiency HVAC that are out of scope for ENERGY STAR certification (e.g. indirect evaporative coolers, air to water heat pumps, energy recovery systems, etc.)	
Traditional HVAC goods, control systems, and services	
ENERGY STAR certified water heaters	
ENERGY STAR certified electronics (TVs, telephones, audio/video, etc.)	
ENERGY STAR certified windows, doors and skylights	
ENERGY STAR certified roofing	
ENERGY STAR certified insulation	
Air sealing	
ENERGY STAR certified commercial food service equipment	
ENERGY STAR certified data center equipment	
ENERGY STAR certified LED lighting	
Other LED, CFL, and efficient lighting	
Solar thermal water heating and cooling	
Other renewable heating and cooling (geothermal, biomass, heat pumps, etc.)	
Advanced building materials/insulation	
Recycled building materials	
Reduced water consumption products and appliances	
${q://QID22/ChoiceTextEntryValue/20}	
Coal fuel	
Onshore petroleum fuel, including gasoline and diesel	
Offshore petroleum fuel, including gasoline and diesel	
Onshore natural gas fuel	
Offshore natural gas fuel	
Other fossil fuels	
Corn ethanol fuel	
Renewable diesel fuel	
Biodiesel	
Other ethanol/non-woody biomass	
Woody biomass/cellulosic biofuel	
Waste fuels	
Other biofuels	
Nuclear fuel	
${q://QID23/ChoiceTextEntryValue/10}	
Gasoline and diesel motor vehicles (excluding freight transport)	
Hybrid electric vehicles	
Plug-in hybrid vehicles	
Electric vehicles	
Natural gas vehicles	
Hydrogen vehicles	
Fuel cell vehicles	
${q://QID24/ChoiceTextEntryValue/8}	
Transportation vehicle engine & drive parts	
Transportation vehicle exhaust system parts	
Transportation vehicle body parts	
${q://QID25/ChoiceTextEntryValue/4}	

Q44-cont

With which of the following types of transportation vehicles does your firm **primarily** design, manufacture, sell, repair, or otherwise work with?

- ○ Automobiles
- ○ Light duty vehicles
- ○ Heavy duty vehicles
- ○ Industrial vehicles, such as forklifts
- ○ Recreational vehicles, such as golf carts
- ○ Rail
- ○ _____ Other (Specify)
- ○ Don't know/ Refused

Does your firm manufacture, design, sell, and/or distribute parts solely used for alternative vehicles, or vehicles with a fuel source other than gasoline or diesel?

- ○ Yes
- ○ No
- ○ Don't know/ Refused

How much of your firm's work, as a percentage of your total revenue, is attributed to parts solely used for alternative vehicles, or vehicles with a fuel source other than gasoline or diesel?

- ○ All of it (100%)
- ○ Half to most of it (50% to 99%)
- ○ A quarter to almost half of it (25% to 49%)
- ○ Less than a quarter (1% to 24%)
- ○ Don't know/ Refused

Thinking of the type of fuel used, does your organization offer parts for any of the following types of transportation vehicles?

(Select all that apply)

- ☐ Hydrogen vehicles
- ☐ Hybrid electric vehicles
- ☐ Electric vehicles
- ☐ Fuel cell vehicles
- ☐ Plug-in hybrid vehicles
- ☐ Gasoline and diesel motor vehicles (excluding freight transport)
- ☐ Natural gas vehicles
- ☐ _____ Other (Specify)
- ☐ Don't know/ Refused

Which systems for electric and hybrid vehicles does your firm primarily work with?

- ☐ Body design or structure
- ☐ Batteries
- ☐ Charging components
- ☐ Electric propulsion (i.e. converter, controller, transmission, etc.)
- ☐ Auxiliaries (i.e. brakes, steering, climate control, etc.)
- ☐ _____ Other (Specify)
- ☐ Don't know/ Refused

How many of your **${q://QID34/ChoiceTextEntryValue/1}** energy employees work on ENERGY STAR certified new home construction?

Record # of employees _____

How many of your **${q://QID34/ChoiceTextEntryValue/1}** energy employees work on ENERGY STAR certified buildings and plants (commercial and industrial)?

Record # of employees _____

How many of your **${q://QID34/ChoiceTextEntryValue/1}** energy employees work on administering, managing, evaluating, or otherwise working on utility-led energy efficiency programs, rebates, and other activities?

Record # of employees _____

Thank you for completing the survey. Since it sometimes becomes necessary for the project manager to confirm responses to certain questions, please verify your contact information.

This information will also be used to ensure that we do not call you as part of our telephone survey effort for this project.

First and Last Name	
Position	
Phone	
Email	
Organization Name	
Organization Address	
Organization City	
Organization State	
Organization Zip	