Cyber-Infrastructure Security Agency (CISA)
Essential Critical Infrastructure Workforce Guidance
Version 3.0 – April 17, 2020
Changes to Energy Section from Version 2.0 – March 28, 2020
(new provisions in yellow highlighted text)

ENERGY

- Workers supporting the energy sector, regardless of the energy source (including, but not limited to, nuclear, fossil, hydroelectric, or renewable), segment of the system, or infrastructure the worker is involved in, who are needed to construct, manufacture, repair, transport, permit, monitor, operate engineer, and maintain the reliability, safety, security, environmental health, and physical and cyber security of the energy system, including those who support construction, manufacturing, transportation, permitting, and logistics.
- Workers and contractors supporting energy facilities that provide steam, hot water or chilled water from central power plants to connected customers.
- Workers conducting energy/commodity trading/scheduling/marketing functions who can't perform their duties remotely.
- Workers supporting the energy sector through renewable energy infrastructure (including, but not limited to, wind, solar, biomass, hydrogen, ocean, geothermal, and hydroelectric) and microgrids, including those supporting construction, manufacturing, transportation, permitting, operation and maintenance, monitoring, and logistics.
- Workers and security staff involved in nuclear re-fueling operations.
- Workers providing services related to energy sector fuels (including, but not limited to, petroleum (crude oil), natural gas, propane, liquefied natural gas (LNG), compressed natural gas (CNG), natural gas liquids (NGL), other liquid fuels, nuclear, and coal) and supporting the mining, processing, manufacturing, construction, logistics, transportation, permitting, operation, maintenance, security, waste disposal, storage, and monitoring of support for resources.
- Workers providing environmental remediation and monitoring, limited to immediate critical needs technicians.
- Workers involved in the manufacturing and distribution of equipment, supplies, and parts necessary to maintain production, maintenance, restoration, and service at energy sector facilities across all energy sector segments.

Electricity Industry

- Workers who maintain, ensure, restore, or who are involved in the development, transportation, fuel procurement, expansion, or operation of, the generation, transmission, and distribution of electric power, including call centers, utility workers, engineers, retail electricity, construction, maintenance, utility telecommunications, relaying, and fleet maintenance technicians who cannot perform their duties remotely.
- Workers at coal mines, production facilities, and those involved in manufacturing, transportation,

permitting, operation, maintenance, and monitoring at coal sites.

- Workers who produce, process, ship, and handle coal used for power generation and manufacturing.
- Workers in the electricity industry including but not limited to those supporting safety, construction, manufacturing, transportation, permitting, operation/maintenance, engineering, physical and cyber security, monitoring, and logistics
- Workers needed for safe and secure operations at nuclear generation including, but not limited to, those critical to the broader nuclear supply chain, the manufacture and delivery of parts needed to maintain nuclear equipment, the operations of fuel manufacturers, and the production and processing of fuel components used in the manufacturing of fuel.
- Workers at fossil fuel (including but not limited to natural gas, refined, distillate, and/or coal), nuclear, and renewable energy infrastructure (including, but not limited to wind, solar, biomass, hydrogen, geothermal, and hydroelectric), and microgrids, including those supporting safety, construction, manufacturing, transportation, permitting, operation, maintenance, monitoring, and logistics.
- Workers at generation, transmission, and electric black start facilities.
- Workers at Reliability Coordinator, Balancing Authority, local distribution control centers, and primary and backup Control Centers, including, but not limited to, independent system operators, regional transmission organizations, and local distribution control centers.
- Workers that are mutual assistance/aid personnel, which may include workers from outside of the state or local jurisdiction.
- Vegetation management and traffic control for supporting those crews.
- Instrumentation, protection, and control technicians.
- Essential support personnel for electricity operations.
- Generator set support workers, such as diesel engineers used in power generation, including those providing fuel.

Petroleum Industry

- Workers who support onshore and offshore petroleum drilling operations; platform and drilling construction and maintenance; transportation (including helicopter operations), maritime transportation, supply, and dredging operations; maritime navigation; well stimulation, intervention, monitoring, automation and control, extraction, production; processing; waste disposal, and maintenance, construction, and operations.
- Workers in the petroleum industry including but not limited to those supporting safety, construction, manufacturing, transportation, permitting, operation/maintenance, engineering, physical and cyber security, monitoring, and logistics.
- Workers for crude oil, petroleum, and petroleum product storage and transportation, including pipeline, marine transport, terminals, rail transport, storage facilities, racks, and road transport for use as end- use fuels such as gasoline, diesel fuel, jet fuel, and heating fuels or feedstocks for chemical manufacturing.
- Petroleum and petroleum product security operations center workers and workers who support maintenance and emergency response services.
- Petroleum and petroleum product operations control rooms, centers, and refinery facilities.
- Retail fuel centers such as gas stations and truck stops, and the distribution systems that support them.
- Supporting new and existing construction projects, including, but not limited to, pipeline construction.
- Manufacturing and distribution of equipment, supplies, and parts necessary for production,

maintenance, restoration, and service of petroleum and petroleum product operations and use, including end-users.

- Transmission and distribution pipeline workers, including but not limited to pump stations and any other required, operations maintenance, construction, and support for petroleum products.

Natural Gas, Natural Gas Liquids (NGL), Propane, and Other Liquid Fuels

- Workers who support onshore and offshore drilling operations, platform and drilling construction and maintenance; transportation (including helicopter operations); maritime transportation, supply, and dredging operations; maritime navigation; natural gas and natural gas liquid production, processing, extraction, storage and transportation; well intervention, monitoring, automation and control; waste disposal, and maintenance, construction, and operations.
- Workers in the natural gas, NGL, propane, and other liquid fuels industries including but not limited to those supporting safety, construction, manufacturing, transportation, permitting, operation/maintenance, engineering, physical and cyber security, monitoring, and logistics.
- Transmission and distribution pipeline workers, including compressor stations and any other required operations maintenance, construction, and support for natural gas, natural gas liquid, propane, and other liquid fuels.
- Workers at Liquefied Natural Gas (LNG) and Compressed Natural Gas (CNG) facilities.
- Workers at natural gas, propane, natural gas liquids, liquified natural gas, liquid fuel storage facilities, underground facilities, and processing plants and other related facilities, including construction, maintenance, and support operations personnel.
- Natural gas processing plants workers and those who deal with natural gas liquids.
- Workers who staff natural gas, propane, natural gas liquids, and other liquid fuel security operations centers, operations dispatch and control rooms and centers, and emergency response and customer emergencies (including leak calls) operations.
- Workers supporting drilling, production, processing, refining, and transporting natural gas, propane, natural gas liquids, and other liquid fuels for use as end-use fuels, feedstocks for chemical manufacturing, or use in electricity generation.
- Workers supporting propane gas service maintenance and restoration, including call centers.
- Workers supporting propane, natural gas liquids, and other liquid fuel distribution centers.
- Workers supporting propane gas storage, transmission, and distribution centers.
- Workers supporting new and existing construction projects, including, but not limited to, pipeline construction.
- Workers supporting ethanol and biofuel production, refining, and distribution.
- Workers in fuel sectors (including, but not limited to nuclear, coal, and gas types and liquid fuels) supporting the mining, manufacturing, logistics, transportation, permitting, operation, maintenance, and monitoring of support for resources.
- Workers ensuring, monitoring, and engaging in the physical security of assets and locations associated with natural gas, propane, natural gas liquids, and other liquid fuels.
- Workers involved in the manufacturing and distribution of equipment, supplies, and parts necessary to maintain production, maintenance, restoration, and service of natural gas, propane, natural gas liquids, and other liquid fuels operations and use, including end-users.