

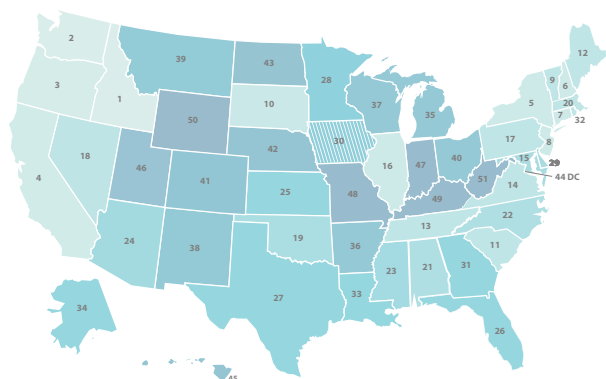
# HOW DOES IOWA STACK UP ON CLEAN ENERGY?



DATA AS OF 2019



## LOWEST CO<sub>2</sub> EMISSIONS RATE

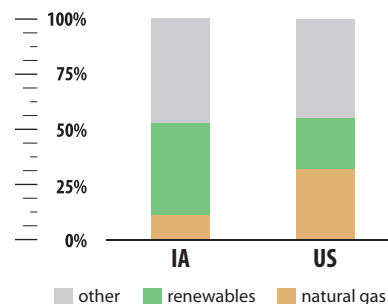


# #30

0.42 tCO<sub>2</sub>/MWh



## ELECTRICITY SOURCES



## CLEAN ENERGY JOBS

# #32

35,856 (2019)



COVID-19 job losses totaled at least 4,332 March-August 2020 (cumulative).



## CLEAN ENERGY RANKINGS

# #23

ENERGY EFFICIENCY SCORE = 18.5



# #39

13% GENERATION FROM NATURAL GAS



# #41

10% GENERATION FROM RENEWABLES



## RENEWABLE ELECTRICITY CAPACITY

# #2

1733 MW (2019)

NEW BUILD



# #5

10,434 MW

CUMULATIVE



# ENERGY INNOVATION IN A 21<sup>ST</sup> CENTURY ECONOMY



## WHAT ENERGY INNOVATION MEANS FOR IOWA



**\$10.2 MILLION** Office of Energy Efficiency and Renewable Energy Grants in FY19

**\$15.7 MILLION** Office of Science grants in FY19

**\$77.1 MILLION** State and Indian energy programs, environmental cleanup, and other routine activities in FY19

**\$11.6 MILLION** Advanced Research Projects Agency-Energy grants since FY2009

**7 GRANTS** By ARPA-E since 2009

## IMPACTS OF FEDERAL R&D IN ENERGY SECTOR (TOTAL, 2018)

**#13** 1,670 JOBS SUPPORTED

**#13** \$159 MILLION CONTRIBUTED TO GDP

## BUSINESS SPOTLIGHT

**FRONTLINE BIOENERGY (AMES, IA) | <https://FrontLineBioEnergy.com>**



Frontline Bioenergy converts biomass and waste-based feedstocks into valuable products such as energy, fuels, and chemicals. The company received a Department of Energy grant to develop a pilot biomass-to-jet/diesel fuel plant using an innovative gasification and Fischer-Tropsch process, based on Frontline's patented gasification technology. Separately, the company is developing an estimated \$130 million renewable natural gas project near Bakersfield in the San Joaquin Valley of California.