

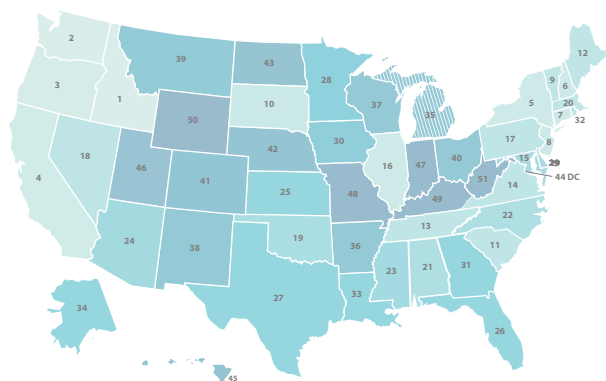
HOW DOES MICHIGAN STACK UP ON CLEAN ENERGY?



DATA AS OF 2019

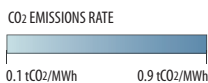


LOWEST CO₂ EMISSIONS RATE

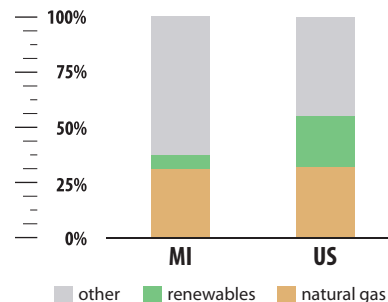


#35

0.51 tCO₂/MWh



ELECTRICITY SOURCES



CLEAN ENERGY JOBS

#6

127,821 (2019)



COVID-19 job losses totaled at least 23,871 March-August 2020 (cumulative).



CLEAN ENERGY RANKINGS

#13

ENERGY EFFICIENCY SCORE = 28.5



#29

30% GENERATION FROM NATURAL GAS



#35

7% GENERATION FROM RENEWABLES



RENEWABLE ELECTRICITY CAPACITY

#18

237 MW (2019)

NEW BUILD



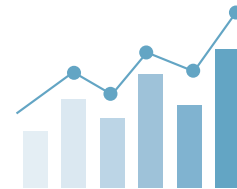
#25

3,134 MW

CUMULATIVE



ENERGY INNOVATION IN A 21ST CENTURY ECONOMY



WHAT ENERGY INNOVATION MEANS FOR MICHIGAN



\$53.4 MILLION Office of Energy Efficiency and Renewable Energy Grants in FY19

\$119.7 MILLION Office of Science grants in FY19

\$109.7 MILLION State and Indian energy programs, environmental cleanup, and other routine activities in FY19

\$79.4 MILLION Advanced Research Projects Agency-Energy grants since FY2009

29 GRANTS By ARPA-E since 2009

#14 1,200 JOBS SUPPORTED

#15 \$122 MILLION CONTRIBUTED TO GDP

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

BUSINESS SPOTLIGHT

FLASH STEELWORKS (WASHINGTON, MI) | www.FlashBainite.com



Flash Steelworks is the innovator of technology to make steel lighter and stronger, with dramatic potential benefits for fuel efficiency (i.e., vehicle lightness), military applications, and a range of other beneficial uses. The company is based in Michigan's Lower Peninsula and has worked with Oak Ridge National Laboratory in Tennessee to help develop the technology, with support from a number of Department of Energy Small Business Innovation Research (SBIR) awards. The firm is now launching commercial production of its steel. In 2017, the company was recognized as Department of Energy's SBIR Small Business of the Year.