

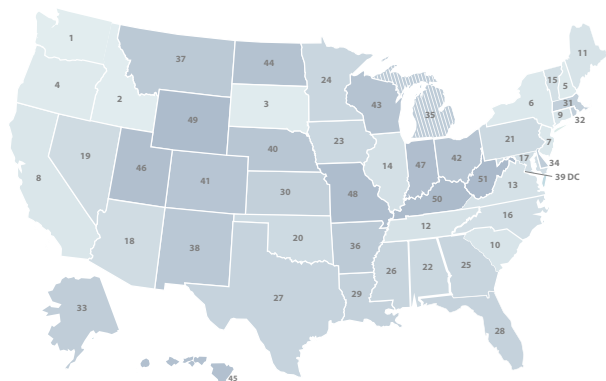
# HOW DOES MICHIGAN STACK UP ON CLEAN ENERGY?



DATA AS OF 2021

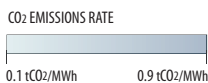


## LOWEST CO<sub>2</sub> EMISSIONS RATE

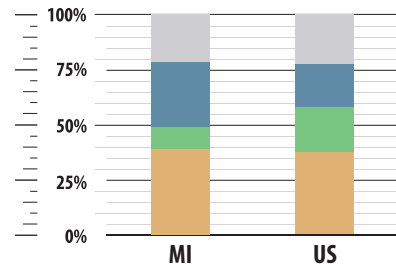


# #35

0.48 tCO<sub>2</sub>/MWh



## ELECTRICITY SOURCES



coal / other nuclear renewables natural gas



## CLEAN ENERGY JOBS

# #8

105,407 (2021)



Change since 2020: -1,462 jobs (-1.4%)



## CLEAN ENERGY RANKINGS

# #13

ENERGY EFFICIENCY SCORE = 29



# #26

35% GENERATION FROM NATURAL GAS



# #36

9% GENERATION FROM RENEWABLES



## RENEWABLE ELECTRICITY CAPACITY

# #15

705 MW (2021)

NEW BUILD



# #19

5,222 MW

CUMULATIVE



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



## WHAT ENERGY INNOVATION MEANS FOR MICHIGAN



**\$155.4 MILLION** Total Department of Energy funding in FY21

**\$47 MILLION** Office of Energy Efficiency and Renewable Energy Grants in FY21

**\$94.2 MILLION** Office of Science grants in FY21

**\$89.6 MILLION** Advanced Research Projects Agency-Energy grants since FY2009

**115 AWARDS** DOE Small Business Innovation Research (SBIR) since 2012

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

**#14** 1,200 JOBS SUPPORTED

**#15** \$122 MILLION CONTRIBUTED TO GDP

## BUSINESS SPOTLIGHT

FLASH STEELWORKS (WASHINGTON, MI) | [FlashSteelWorks.com](http://FlashSteelWorks.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.