

# Becoming Green: Hydrogen and the Economy FAMU-FSU College of Engineering

Florida State Univeristy | <u>Benjamin Stanfield</u>, Sastry Pamidi

# Abstract

As the world continues to develop and change, we must learn to adapt and grow from these changes. Fossil fuels are one of those relics. Hydrogen energy has the potential to change the world with its possibilities. Through the processes of innovation and time, countries have started to latch onto this green energy through different economic benefits. Whether it be through grants or simply tax cuts, the spark of a new energy has surfaced. One that is clean and environmentally sound for the future with proper support. Through my research I have been able to breakdown economic impacts and effects that hydrogen energy will have on the future economy and why hydrogen should be the green energy source of the future.

# Background

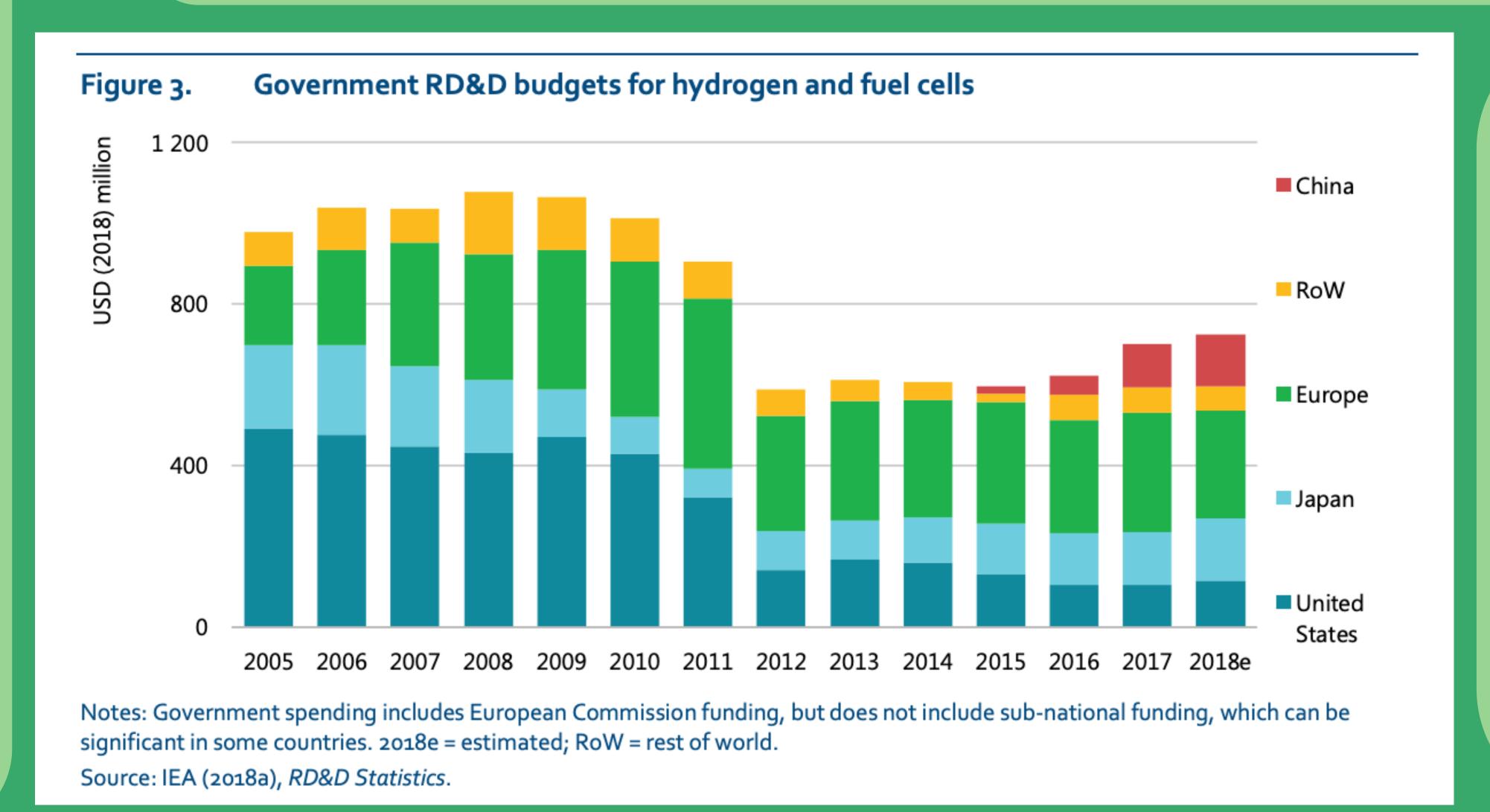
- -- Hydrogen and its use in the global energy sector are becoming more and more of an alternative solution to the use of fossil fuels in the world today.
- -- Sustainability is the future to our longevity. Fossil fuels fail that by releasing chemicals into our atmosphere to increase the greenhouse effect, creating irreversible damage to our ozone layer and dramatically increasing the greenhouse effect.
- -- With policies, tax credits, and other economic benefits that other major company have, it's hard to be able to compete. Fortunately, there is a start to increase funding and create tax incentives for developing and having hydrogen as a fuel source, with the goal to be to decarbonize the fuel market.

# Methods

- -- Used trusted sources to find information related to my topic
- -- Used an unbiased lens to look closely at information that was found to create an unbiased project that accurately reflected the material that was learned and researched
- -- Used graphics that accurately and clearly explain what needs to be conveyed to the audience

## Results

- -- Goal of hydrogen is to create carbon free and clean energy
- -- Hydrogen is complex and can have economic risks as new technologies are introduced and refined
- -- To help develop and mitigate the risks, polices must be put into place that offset risk, create industry standards, long term goals and visions that provide accurate feedback on how hydrogen energy will grow and produce investment
- -- A decrease of Government budgeting for hydrogen and fuel cells as shown in Figure 3(See below), but countries like China are increasing



### References

"Biden-Harris Administration Announces Regional Clean Hydrogen Hubs to Drive Clean Manufacturing and Jobs." The White House, The United States Government, 13 Oct. 2023, www.whitehouse.gov/briefing-room/statements-releases/2023/10/13/biden-harris-administration-announces-regional-clean-hydrogen-hubs-to-drive-clean-manufacturing-and-jobs/.

IEA (2023), Global Hydrogen Review 2023, IEA, Paris https://www.iea.org/reports/global-hydrogen-review-2023, License: CC BY 4.0

Office of Energy Efficiency & Renewable energy. "H2@Scale." Energy.Gov, 2023, www.energy.gov/eere/fuelcells/h2scale. Southeast Hydrogen Energy Alliance & Triangle Clean Cities. Long Haul Transport, 24 Oct. 2023,

United States Department of Energy. "Middle School Activity Guide - Energy." Welcome to Hydrogen & Fuel Cells, www1.eere.energy.gov/hydrogenandfuelcells/education/pdfs/activity\_guide.pdf. Accessed 18 Nov. 2023.