

# Gabe Mantegna

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## **ENERGY AND ENVIRONMENTAL ECONOMICS, INC.**

San Francisco, CA

*Senior Consultant*

Mr. Mantegna joined E3 in 2019 as a Consultant in the Climate Pathways group, where his work focuses on modeling and analyzing policies to achieve steep, long-term, economy-wide emissions reductions on behalf of public and private sector clients. He brings with him private sector experience working as an R&D engineer for Manta Biofuel, a startup developing a renewable biofuel made from algae. He also brings significant technical and data analytics skills including Python, Matlab, SQL, R, GAMS, Unix shell scripting, and Excel. Mr. Mantegna received his B.S. in Environmental Engineering from Johns Hopkins University. Recent projects include:

- **Achieving Carbon Neutrality in California, California Air Resources Board (2019-2020).** Led the E3 modeling efforts supporting CARB in developing and evaluating scenarios for how California can reach its goal of carbon neutrality by 2045.
- **Decarbonization of Natural Gas End-Uses in Minnesota, Great Plains Institute (2020).** Led the E3 economy-wide scenario development efforts, supporting the Great Plains Institute in developing scenarios for decarbonizing natural gas end uses in Minnesota.
- **Minnesota Energy Storage Cost-Benefit Analysis, Minnesota Department of Commerce (2019).** Worked with the Minnesota Department of Commerce to evaluate the costs and benefits of deploying energy storage in the State of Minnesota. Used E3's RESTORE model to evaluate installation scenarios including behind-the-meter storage, paired solar-plus-storage, storage for transmission and distribution deferral, and bulk system standalone storage, including the potential for value streams to change over time under a decarbonizing electric grid.
- **The Potential for Energy Storage to Repower or Replace Peaking Units in New York State, New York State Energy Research and Development Authority (2019).** Led the technical modeling efforts supporting NYSERDA in evaluating the potential for replacing and/or hybridizing New York State's peaking units with energy storage.

## **MANTA BIOFUEL**

Baltimore, MD

*R&D Engineer*

February 2017 – December 2018

- Researched, designed, built, and tested improvements to the company's core algae harvesting technology
- Performed engineering calculations for novel implementations of environmental engineering technologies
- Built economic models of biofuel systems to inform long-term strategy
- Wrote government grant applications in collaboration with company co-founders; secured \$1M Small Business Innovation Research (SBIR) grant from the U.S. Department of Energy in July 2018
- Wrote copy and designed communications materials for investors and stakeholders

**ANTARCTIC CLIMATE AND ECOSYSTEMS COOPERATIVE RESEARCH CENTER** Tasmania, AUS  
*Research Assistant* November 2015 – November 2017

- Investigated how climate change will cause flood-inducing rainfall events to increase in intensity
- Used Matlab to clean, organize, and analyze high-resolution rainfall datasets

**WIND ENGINEERING AND RENEWABLE ENERGY LABORATORY** Lausanne, SUI  
*Research Assistant* June – August 2016

- Developed an autonomous system to predict the power output of a wind farm in Switzerland by running a Weather Research and Forecasting (WRF) model coupled with a Large Eddy Simulation (LES) model
- Analyzed and reported on model results and created visualizations to communicate findings

**JOHNS HOPKINS UNIVERSITY ACADEMIC SUPPORT** Baltimore, MD  
*Physics Tutor* September 2014 – December 2016

- Tutored small groups of Johns Hopkins undergraduate students taking Physics 1 for Engineers

## Education

Johns Hopkins University Baltimore, MD  
*B.S., Environmental Engineering* 2017  
*Faculty Award for Service and Academic Achievement in Environmental Health and Engineering* 2017

## Publications

Mantegna, G. A.; C. J. White; T. A. Remenyi; S. P. Corney; P. Fox-Hughes. "Simulating sub-daily Intensity-Frequency-Duration curves in Australia using a dynamical high-resolution regional climate model." *Journal of Hydrology*, Vol. 554, pp. 277-291 (2017).

## Citizenship

United States