

## Philip Eash-Gates, Senior Associate

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Synapse Energy Economics | 485 Massachusetts Avenue, Suite 2 | Cambridge, MA 02139 | 617-661-3248  
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### PROFESSIONAL EXPERIENCE

**Synapse Energy Economics, Inc.**, Cambridge, MA. *Senior Associate*, September 2019 – present

Provides consulting and researching services, writes reports and testimony, and performs modeling on a wide range of issues related to the electric industry with a focus on energy efficiency, clean energy technologies, energy policy, high performance buildings, strategic energy management, municipal energy planning, and resource planning.

**Massachusetts Institute of Technology, Trancik Lab**, Cambridge, MA. *Research Assistant*, 2017 – 2019

Developed quantitative models and engineering cost tools to accelerate the performance evolution of clean energy technologies. Proposed innovations expected to achieve 20-40% improvement in nuclear and solar power systems.

**CVAL Innovations**, Dallas, TX. *Director of Efficiency Projects*, 2014 – 2017

- Recruited and directed an interdisciplinary team of engineers, contractors, and energy analysts to develop and implement customized facility retrofits, achieving an average reduction in energy consumption of 45%.
- Expanded engineering and consulting services to include strategic resource and sustainability planning, building portfolio analysis, and energy systems commissioning.
- Increased company's project capacity and annual energy savings by 300% over 2.5 years.

**City of San Antonio, Office of Sustainability** San Antonio, TX. *Energy Manager*, 2013 – 2015, *Special Projects Manager*, 2012 – 2013, *Senior Management Analyst*, 2009 – 2012

- Created and administered the City of San Antonio's first Energy Management Division.
- Established a revolving Energy Efficiency Fund to capture municipal energy savings and reinvest in projects.
- Successfully secured and managed \$25M in Federal and State grants for energy efficiency and conservation.
- Monitored performance of 3,200 utility accounts and 650 City facilities to develop a master conservation plan.
- Maintained 5-year budget and project pro-forma to fund a comprehensive retrofit program for municipal buildings.
- Developed and implemented performance-driven retrofits to reduce energy and water consumption.

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- Managed a stakeholder review of building energy codes to recommend improvements toward achieving net-zero energy by 2030. Guided the City to adopt the most advanced building energy codes in Texas.
  - Sample community programs managed: low-income residential weatherization program, one-stop sustainability and green jobs training campus, community shade tree program for energy savings.
  - Sample performance metrics: 3,320 residences weatherized; 5,700 shade trees planted for energy conservation; 178 municipal facilities upgraded – advanced lighting technology and controls, retro-commissioning, efficient heating and cooling systems, thermal envelope improvements, water conservation upgrades.

**City of San Antonio, Office of Mayor Phil Hardberger** San Antonio, TX. *Sustainable Energy Analyst*, 2008 – 2009

- Advised the Mayor on the economic, societal, and environmental viability of various energy generation portfolios for the City’s municipal power utility. Recommendations for energy efficiency and renewable energy as an alternative to nuclear and fossil fuel generation were adopted by the City and utility.
- Assisted with the creation of Mission Verde, the City’s first sustainability plan. Developed key initiatives focused on green jobs training and deployment of clean energy technologies.

## **EDUCATION**

**Massachusetts Institute of Technology**, Cambridge, MA  
Master of Science in Technology and Policy, 2019

**Trinity University**, San Antonio, TX  
Bachelor of Science in Engineering Science; Minors in Environmental Studies and Mathematics, 2008

## **ADDITIONAL PROFESSIONAL COURSEWORK**

- Leadership in Energy and Environmental Design (LEED)
- International Energy Conservation Code
- International Performance Measurement & Verification Protocol (IPMVP)

## **CERTIFICATIONS**

- Professional Engineer, Texas Board of Professional Engineers
- Certified Energy Manager, Association of Energy Engineers, ANSI accredited
- Certified Measurement and Verification Professional, Association of Energy Engineers

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## **RESEARCH AND PUBLICATIONS**

Havumaki, B., E. Camp, B. Fagan, D. Bhandari. 2019. *Planning for the Future at the CTGS Site: Report on the Decommissioning Proposal of Maritime Electric*. Synapse Energy Economics for Carr, Stevenson, and MacKay.

## **SKILLS**

Software: Excel, R, MATLAB, eQuest, Portfolio Manager, Solar Advisor Model, LaTeX, SAP, ProEngineer, Engineering Equation Solver, Adobe Acrobat Professional, Microsoft Office Suite

## **TECHNICAL ADVISORY COMMITTEES**

- Build San Antonio Green
- Texas Property Assessed Clean Energy
- City of San Antonio Building-related and Fire Codes Appeals and Advisory Board

## **ORGANIZATIONAL AFFILIATIONS**

- Association of Energy Engineers
- U.S. Green Building Council
- Build San Antonio Green
- South-Central Partnership for Energy Efficiency as a Resource

*Resume dated October 2019*