

Gavin Dillingham, PhD

Program Director, Clean Energy Policy and Director of DOE's Southwest CHP TAP at Houston Advanced Research Center (HARC)

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Summary

Program Director for research institute focusing on climate adaptation with specific focus on investment in resilient power infrastructure and the adoption of clean energy policies at the local, state and federal level.

Highlights Include:

- Expert in Electric Power Resilience - Lead the DOE's Southwest CHP Technical Assistance Partnership with the responsibility of increasing investment in combined heat and power (CHP) and microgrid applications across the region. The focus is largely on improving community resilience and reducing energy consumption by providing technical assistance to end-users, as well as conducting education and outreach to potential investors and policy makers.
 - Predictive Modeling and Quantitative Analysis - Conduct research developing predictive models with event history analysis to better understand state and city adoption of clean energy policies
 - Accomplished in grant research, writing, management and evaluation; securing and managing over \$30 million in grants in the past 8 years
 - Expert in City-level Clean Energy Policy and Sustainability Best practices - authored multiple best practice case studies for energy management for large and mid-sized Texas cities; Technical Advisor to the City of Houston for its City Energy Project, a joint project of NRDC and IMT, which will work to develop energy efficiency policies for the city.
 - Lecturer at Rice University in Policy Studies Department teaching a class on public policy planning.
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Experience

Program Director, Clean Energy Policy; Senior Research Scientist at Houston Advanced Research Center (HARC)

January 2016 - Present

HARC is a research hub providing independent analysis on energy, air, and water issues to people seeking scientific answers. We are focused on building a sustainable future that helps

people thrive and nature flourish.

- Lead research efforts focusing on policy adoption and innovation of clean energy policy at local, state and national levels.
 - Lead market analysis and program design efforts for utility incentive and rebate programs
- Conduct policy design and analysis for local and state clean energy programs.
- Direct federal and state grant funded programs focusing on the identification of regulatory and policy barriers barriers to clean energy implementation.
 - Technical Advisor to local government - provide advice on clean energy policy development and design; conduct cost-benefit analysis and life-cycle cost analysis to assess policy feasibility.

Director - Southwest CHP Technical Assistance Partnership at HARC

October 2015 - Present

Lead the Southwest CHP Technical Assistance Partnership at the Houston Advanced Research Center.

The Center's mission is to improve community resilience and reduce energy consumption by promoting combined heat and power and microgrid applications through technical assistance and project qualification screenings, education and outreach to end-users and policy.

Lecturer - Public Policy Planning - Adoption and Innovation

January 2013 - Present

Teaching a class on the public policy process with a specific focus on policy adoption and innovation using event history and survival analysis modeling. Presented a variety of key policy process topics including the advocacy coalition framework, punctuated equilibrium, network analysis and policy diffusion via economic competition and social learning. Discussed topics related to energy efficiency, climate change, oil and gas exploration and production, gun control, public health and public education.

Research Scientist, Clean Energy Policy at Houston Advanced Research Center

August 2012 - December 2015 (3 years 4 months)

- Acting as Technical Advisor to the City of Houston for the City Energy Project; lead effort in developing and deploying strategy to implement CEP program in Houston; identify best practices around proposed policies, determine applicability and feasibility for Houston and incorporate best practice information into outreach and education documents, as well as in policy language; conduct data analysis regarding policy cost benefit, energy savings, emissions reductions, and economic impact to help with drafting policy; provide technical assistance, editing and review for drafting of each policy;
- Working SECO and SPEER on the City Efficiency Leaders Project; conduct research and analysis on best practices and lessons learned for public sector energy efficiency policies and initiatives; develop case studies based on research.
- Lead efforts for SECO's DOE SEP 2013 grant award for removing barriers to combined heat and power and industrial energy efficiency; lead stakeholder engagement efforts and developing action plan with stakeholders to overcome barriers.

- Lead the development and drafting of the City of Houston's Sustainability Action Plan; the action plan provides a way forward for the City to reach its 50% GHG reduction goal by 2020.
- Conduct research regarding the development of predictive models to better understand the diffusion and innovation of energy efficiency and renewable energy policy across state and local governments; considering how networks, learning, competition and state characteristics affect the adoption of policy; Assessment of existing micro-grid policies influencing the deployment of CHP, solar and storage in micro-grid setting

Manager, Energy and Sustainability at Houston ISD

November 2010 - July 2012 (1 year 8 months)

- Lead the development and implementation of a 30 million square foot energy efficiency retrofit with an expected yearly energy savings of \$12 million per year upon project completion;
- Manage the procurement of electricity and natural gas contracts for 300 campuses;
- Develop and deploy the Green School Challenge. A District wide behavioral change program to reduce energy and water consumption at District campuses;
- Implementing single stream recycling program for District, secured \$300,000 in funding for program development;
- Lead the development of renewable energy projects at District; secured grant for solar installation at Wilson Elementary School.

Lecturer - Energy Efficiency Policy at Rice University

August 2010 - December 2010 (4 months)

Taught public policy seminar related to energy efficiency and the built environment.

Director of Sustainable Growth

February 2009 - November 2010 (1 year 9 months)

- Implemented a \$75 million energy performance contracting project, resulting in over \$6 million energy savings per year. The retrofit included City Hall, the Hobby Center for Performing Arts, the City's Admin Building, Police Headquarters, Courthouse, parks, libraries, health facilities and police stations; the project also including a feasibility study to implement a district cooling/heating system for City administration facilities in Downtown Houston;
- Participated in the feasibility study of a combined heat and power installation at two of the City's waste water treatment plants. This was a \$30 million project that would install gas fired turbine generators on each site and utilize waste heat for sludge drying purposes;
- Led energy efficiency, renewable energy and sustainability grant development writing efforts for City securing over \$53 million in grants from the Department of Energy, State Energy Conservation Office and the Environmental Protection Agency;
- Led Texas' largest weatherization assistance program; leading a team to weatherize over 8,000 residence in Houston;
- Led the development and publication of the City's emission reduction plan;
- Assisted in the procurement of electricity contracts.

Senior Business Consultant

June 2008 - February 2009 (8 months)

- Conducted financial analysis to determine suitability of business life-cycle management (BLCM) solution for upstream oil and gas companies;
- Built business case for Human Resource transformation initiative at a \$6B petroleum engineering and construction company;
- Conduct research and analysis on the affect federal government policy has on upstream exploration and production behavior.

Staff Analyst - Public Policy Land Use Planning at City of Houston

January 2007 - May 2008 (1 year 4 months)

- Acted as a liaison between city council members, the Mayor's office and the Planning and Development Department; worked to establish effective policies pertaining to annexation, land development and extra-territorial jurisdiction issues;
- Worked jointly with Public Works' Public Utilities Division on analyzing the feasibility and applicability of municipal utility district (MUD) creation and MUD annexations;
- Conducted legislative review and analysis for all Texas State Legislature bills concerning planning, land-use and economic development.

PhD Candidate at Rice University

August 2002 - January 2007 (4 years 5 months)

- PhD student at Rice University in Political Science - Doctorate earned end of January 2007.
- Conducted research on land use public policy analysis, development and adoption; institutional effectiveness and civic participation in environmental issues
- Taught classes in statistics and American Politics;
- Project manager for a National Science Foundation grant studying the effects of Hurricane Katrina on evacuees from New Orleans.

Environmental Specialist

November 1998 - August 2002 (3 years 9 months)

- Actively worked with Chief Environmental Officer to develop Enron's renewable energy position and policy strategy toward state and federal legislation, specifically focused on with greenhouse gas and air quality issues;
- Conducted analysis of alternative energy legislation and collaborated with energy traders to determine bio-fuel market plays and opportunities
- Participated in the development of the Enron Corp. greenhouse gas inventory utilizing the IPPC guidelines and global climate change policy;
- Participated in the design, content and publication of company's Corporate Responsibility and Sustainability report following Ceres transparency guidelines;

- Managed the design, development and implementation of Web-based environmental health and safety performance management system resulting in more efficient, effective and accurate reporting by global assets.

Education

Rice University

PhD, Political Science - Public Policy Adoption and Analysis, 2002 - 2007

Texas Tech University

B.A, Psychology - Summa Cum Laude, 1995 - 1997

Activities and Societies: Psi Chi, Treasurer; Golden Key International Honor Society; Research Assistant with Psychology Department;

Honors and Awards

Leadership in Action for Environmental ImprovementEnergy Efficiency, Renewable Energy, Public Policy, Economic Development, Running, Cooking and Reading

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