

**MONUMENTAL**

OPPORTUNITIES AT THE INTERSECTION OF

# Science & Policy

Cynthia Robinson  
Director, S& Policy Fellowships



@AAASFellowships

[fellowships.aaas.org](http://fellowships.aaas.org)

*“Today, more than ever before, science holds the key to our survival as a planet and our security and prosperity as a nation.”*

— President Barack Obama  
2009 Presidential Memorandum on Scientific Integrity

# What is Science Policy?

Policy for  
Science

Establish guidelines and regulations on the direction, funding, and conduct of science

Science for  
Policy

Inform decision-making, implementation, and evaluation of policies, regulations and programs

# Transferable Skills

## SCIENCE

- Develop hypothesis, test, analyze results
- Design, implement, manage experiments and studies
- Curiosity, analytical skills, investigate using different research methodologies
- Integrate information from disparate sources, generalize from data, ascertain patterns

## POLICY AND BEYOND

- Creativity, problem-solving, reach conclusions
- Project management, ability to focus and multi-task
- Objectivity, ability to consider other positions, alternate options
- Technical expertise coupled with interdisciplinary and systems thinking

# Transferable Skills

## SCIENCE

- Suspend judgment, work with ambiguity
- Poster, paper presentations
- Relay complex concepts, support position with data and logic
- Write and publish papers
- Write proposals, secure grants

## POLICY AND BEYOND

- Open-minded, flexible, persistent
- Public speaking
- Persuasive, resourceful communicator; rational thinker
- Writing and editing skills
- Fundraising, grant management

# Abilities to Develop

- Frame issues and messages
- Communicate to non-scientific audiences - concise, bottom-line focus
- Write in policy language
- Strategic planning and timing
- Negotiation, persuasion, diplomacy
- Network, build alliances
- Collaborate, foster consensus
- Respond in necessary timeframes
- Balance return on investment



# Explore

**Assess** your interests, strengths, areas for growth, preferred work environment:



**Research** science-policy employers:

- local/state/federal/international entities; national laboratories, government contractors
- think tanks and consulting firms
- scientific and engineering associations
- nonprofit organizations, industry, academia

# Explore

## **Network** with people working in policy

- Opportunities, challenges, rewards
- Types of projects, work flow and environment
- Skills needed, stakeholders engaged
- Trends in the sector or field
- Salary ranges
- Paths to current position

## **Experiment** with assignments

- Societies
  - policy committees
  - Congressional Hill visits
  - government relations offices
- Internships and fellowships



# Policy Fellowships Offer:

- Knowledge of:
  - Interactions of branches of government
  - Balance and flow of power
  - Federal budget
  - Policymaking processes
  - Procedure
- Understanding of stakeholders and factors affecting policy
- Political awareness

# Fellowships & Resources

## AAAS S&T Policy Fellowships

[fellowships.aaas.org](http://fellowships.aaas.org)

**Deadline: Nov 1**

- Partner Society Fellowships
- Resource section on other fellowships

## AAAS Mass Media Science & Engineering Fellowships

[www.aaas.org/programs/education/MassMedia](http://www.aaas.org/programs/education/MassMedia)

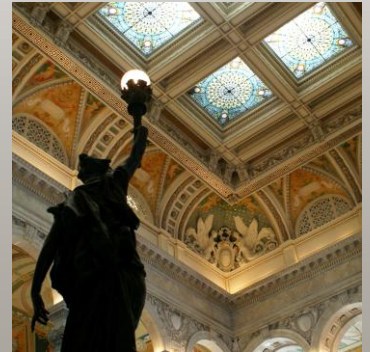
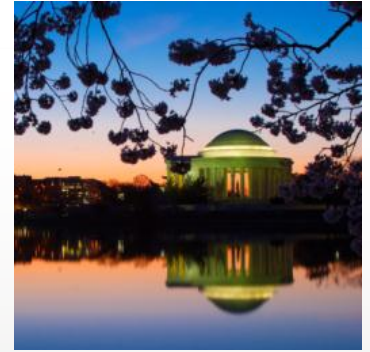
## California S&T Policy Fellowships

[www.fellows.ccst.us](http://www.fellows.ccst.us)

[ScienceCareers.org](http://ScienceCareers.org)

**Professional Association Career Resources**

SCIENCE & TECHNOLOGY  
POLICY FELLOWSHIPS



# Enhancing Public Policy Transforming Careers

SCIENCE & TECHNOLOGY  
POLICY FELLOWSHIPS



**GOAL:** Foster scientifically informed, evidence-based policy and practice.

**STRATEGY:** Engage scientists and engineers from a broad range of disciplines, backgrounds and career stages to:

- contribute knowledge and analytical skills to the federal government;
- learn first-hand about policymaking and implementation at the federal level; and
- build S&T leadership equipped to address complex societal challenges.

**OUTPUT:** Policy-savvy scientists & engineers



## Legislative Branch

- Collect, analyze information
- Research options
- Meet with stakeholders
- Write: briefings, talking points, speeches, press releases, reports, text for bills
- Organize hearings
- Facilitate, negotiate legislation
- Oversight

## Executive Branch

- Collect, analyze information
- Research options
- Meet with stakeholders
- Write: briefings, talking points, speeches, press releases, reports, websites, testimony
- Prep for hearings
- Program development, implementation, evaluation
- Interagency collaboration

# Serving Society: Congress

- Organized press conference to announce a proposed bill on early warning systems following the Asian earthquake and tsunami
- Wrote text for a bill on water quality restoration for the Colorado River
- Coordinated oversight investigation of food safety issues and handling of peanut product recall



**Greg Hinrichsen,**  
2007-08 APA  
Congressional Fellow (center)

*Staffed Senator Wyden at aging  
committee hearings*

# Serving Society: Federal Agencies

- Assisted in developing U.S. counter-piracy strategy for the Horn of Africa
- Orchestrated distribution of more than \$5 million in famine funds to provide rust resistant wheat seed
- Organized workshop on environmental impact assessment in Oman.



**Jun Bando, PhD**  
2006-2008 Fellow at  
State Department



**Michael Smith,**  
2006-2007 Fellow at EPA



# Global Alliance for Clean Cookstoves

SCIENCE & TECHNOLOGY  
POLICY FELLOWSHIPS



Alliance is developing standards for the cookstove sector and facilitating partnerships and activities leading to the widespread adoption of clean cookstoves

Dr. Raynee Chiang, contributing author an IPCC report, working on international collaborations to build and disseminate clean, efficient cookstoves to households in developing countries



Raynee Chiang, 2010-12 Fellow at Department of Energy, in Uganda working on clean stove initiatives in the field

# 2012-2013 AAAS S&T Policy Fellows

SCIENCE & TECHNOLOGY  
POLICY FELLOWSHIPS



## 279 Year-long Fellows

- **176** first year
- **103** second-year
- **6** short-term extensions

## 245 Executive Branch Fellows

- **235** selected & administered by AAAS
- **10** selected & administered by partner societies

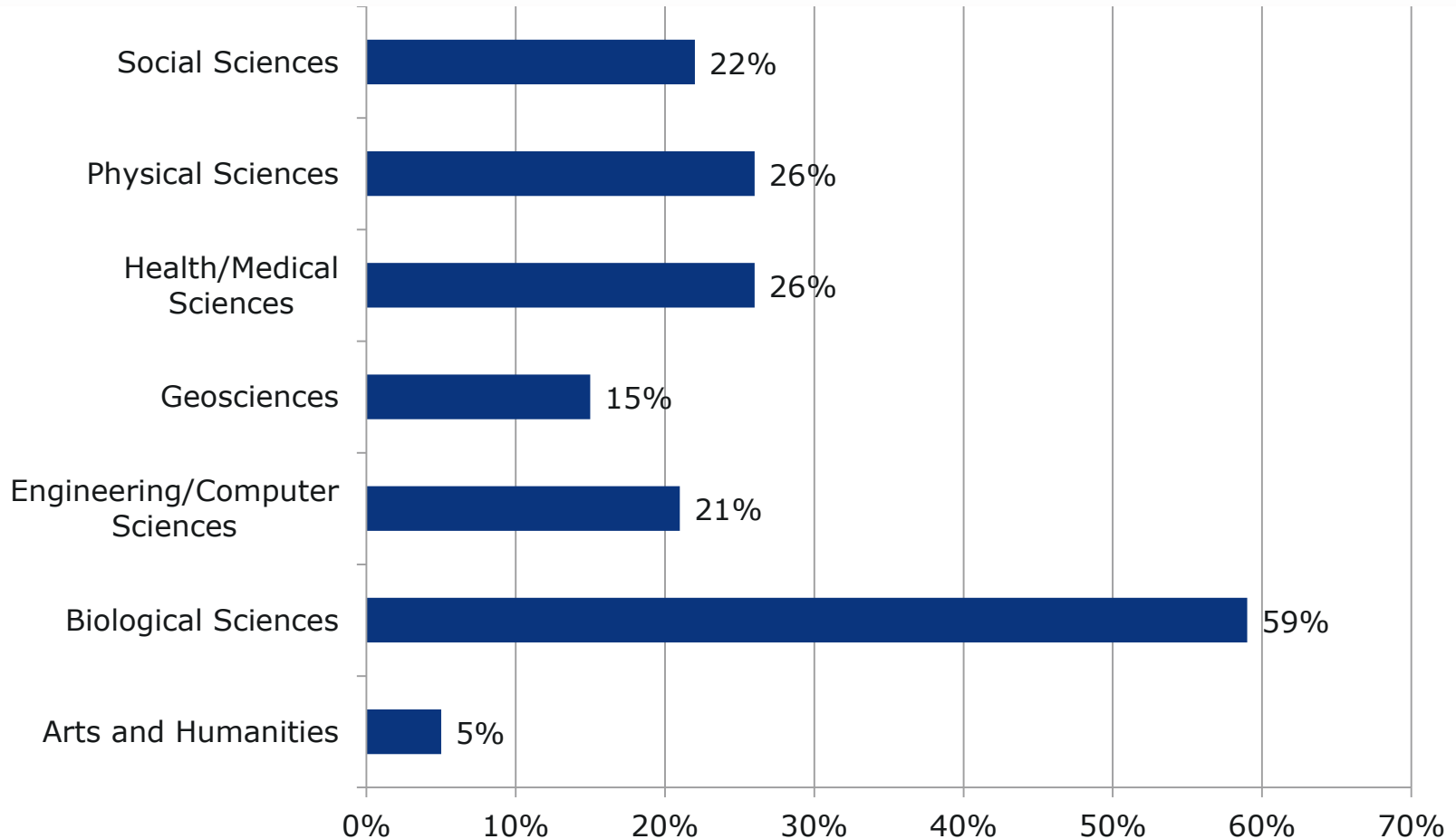
## 34 Congressional Fellows

- **2** selected & sponsored by AAAS
- **32** selected & sponsored by partner societies



# 2012-13 Fellows' Discipline

Yearlong Fellows (n=200; Yr1 and Yr2 via AAAS only)



# Fellowship Areas

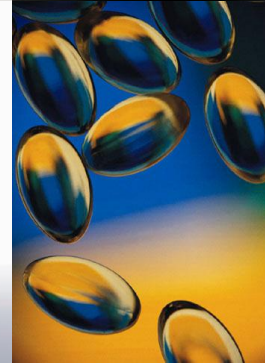
SCIENCE & TECHNOLOGY  
POLICY FELLOWSHIPS



Diplomacy, Security  
& Development



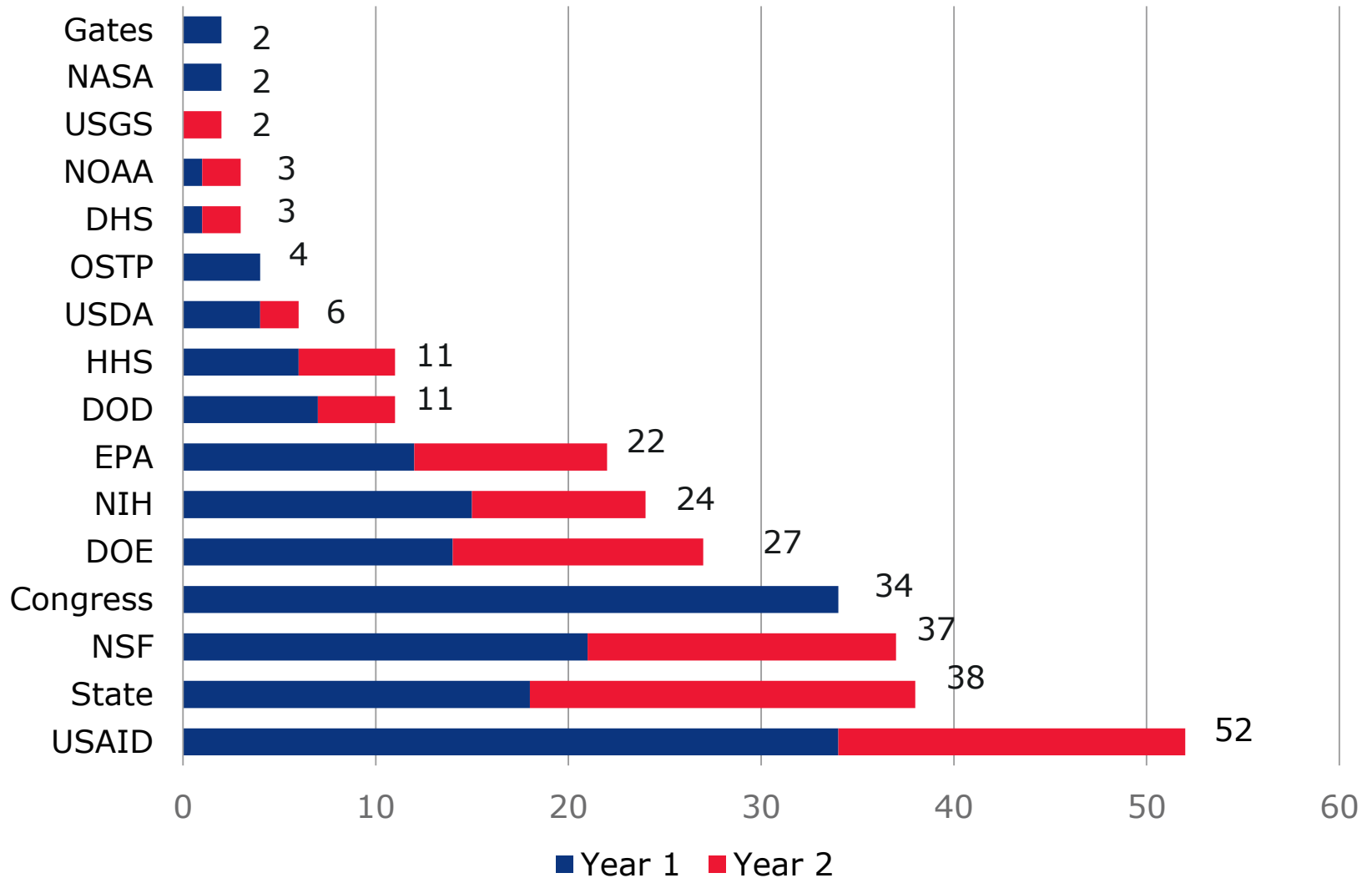
Congressional



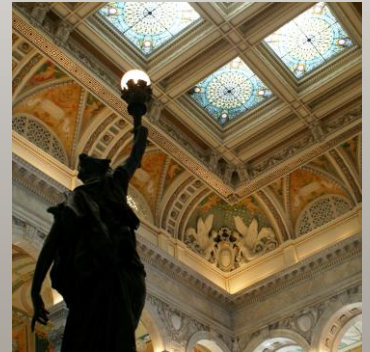
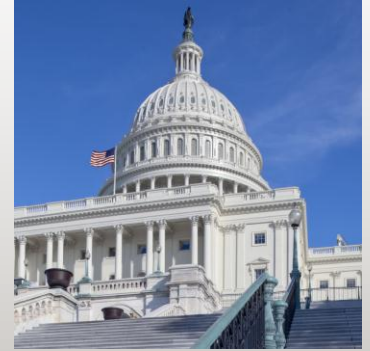
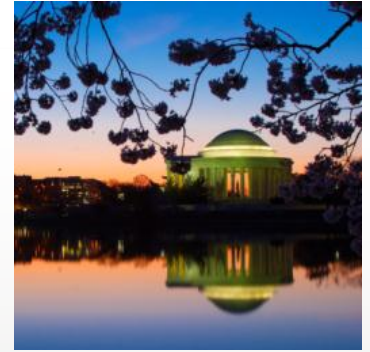
Energy, Environment &  
Agriculture

Health, Education &  
Human Services

# 2012-13 Placements



# Qualifications



- Doctoral-level degree (PhD, MD, DVM, DSc) in any scientific or engineering discipline
- Master's degree in engineering & three years of professional engineering experience also may apply
- Hold U.S. citizenship\*

\* Some partner societies accept non U.S. citizens

# Criteria

- Solid **S/T credentials** for career stage
- Show a **commitment** to apply scientific or technical expertise **to serve society**
- Exhibit good **communication skills**, especially to non-scientific audiences
- Demonstrate:
  - **problem-solving**
  - **initiative**
  - **maturity, good judgment**
  - **leadership qualities**
- **Match** to fellowship **program area**



# How Competitive Are the Fellowships?

## 2013-14 Selection Statistics

	APPS	APPS TO SCs	SEMI FINALISTS	INTERVIEWS	FINALISTS
Cong	101	31	11	11	2
DSD	267	162	96	95	64
EEA	193	164	96	96	59
HEHS	280	126	72	71	44
	841	483	275	273	169*

\* includes 30 dual finalists = 139 individual finalists

# AAAS Fellowship Schedule

- Applications Due\* November 1
- Notification of Eligibility Late December
- Notification of Interview February
- Selection Interviews Early March
- Notification of Finalists Mid-March
- Exec Branch Finalist Interviews April
- Exec Branch Placement Offers May – June
- Fellowships Begin September 1
- Cong Placement Interviews and Offers Mid-September - October
- Fellowships End August 31

\* Note: partner societies have different application and interview deadlines



# Compensation & Support

- **Compensation:** ~\$74,000 – \$97,000
- **Health Insurance:** Individual to family coverage
- **Relocation Reimbursement\*:** Up to \$4,000 if relocation is >50 miles from DC
- **Travel/Training Allowance\*:** Up to \$4,000 with prior approval
- **Professional Development:** Intensive orientation and year-long program
- **Alumni Network:** ~2,600 alumni around the world

\* Varies by agency



# Professional Development

- Orientation
- Skill Development & Career Workshops
- Educational Events
- Affinity Groups
- Networking



Kei Koizumi, Assistant Director for Federal R&D at the White House Office of Science and Technology Policy at a AAAS Symposium

# Alumni Fellows

Dr. Kit Batten, USAID Global Climate Change Coordinator

- Coordinates all climate change activities across all bureaus in the agency
- Previously served as the science advisor to the Deputy Secretary of the Interior:
  - Communication of climate change science, adaptation strategies for cultural & natural resources
  - Mitigation strategies, including helping lead the creation of Interior's Climate Science Centers & Landscape Conservation Cooperatives



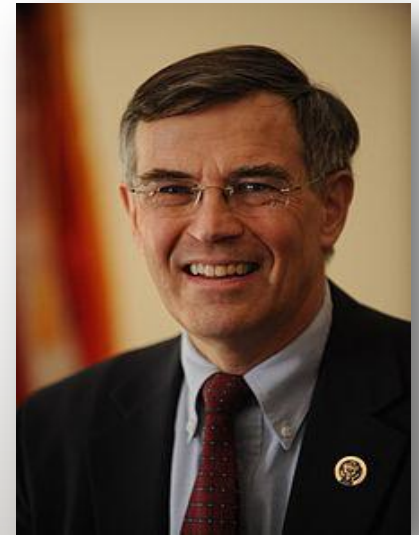
Dr. Kit Batten, USAID Global Climate Change Coordinator, Congressional Fellow, Office of Senator Joseph Lieberman, 2005-06

# Alumni in Government



Frances A. Colón  
Deputy Science and Technology  
Adviser to the Secretary of State  
U.S. Department of State

U.S. Representative  
Rush Holt Jr. (D-NJ)  
House of Representative  
U. S. Congress



Arati Prabhakar  
Director  
Defense Advanced Research Projects  
Agency (DARPA)  
DoD

Julie Callahan  
International Policy Manager  
Center for Food Safety and Applied Nutrition  
FDA



# Alumni in Academia



Joe Helble  
Professor and Dean  
Thayer School of Engineering  
Dartmouth University



Rosalyn Hobson Hargraves  
Associate Professor of Engineering  
Virginia Commonwealth University



Kevin Michael Foster  
Professor and Executive Director  
Institute for Community, University and  
School Partnerships  
University of Texas, Austin



Rosina Bierbaum  
Formerly Dean, Professor, School of  
Natural Resources and Environment,  
University of Michigan; Member of PCAST

# Alumni in Private Sector



Asha Collins  
Engagement Manager  
Quintiles Consulting



David Lee  
Associate  
Booze Allen Hamilton



Andrew Robertson  
Director of Regulatory Policy  
Merck



Audrey Ichida  
Senior Manager  
ICF International



# Alumni in Nonprofits



Jessica Tuchman Mathews  
President  
Carnegie Endowment for International Peace



Francesca Grifo  
Senior Scientist and Director, Scientific  
Integrity, Union of Concerned Scientists



Uday Varadarajan  
Senior Analyst  
Climate Policy Initiative



Steven Buchsbaum  
Deputy Director, Discovery Division  
Bill & Melinda Gates Foundation

# Thank You



For building your  
knowledge and skills  
to improve policy  
and implement  
solutions for the  
environment!

# Engaging at the Intersection of Science and Policy: Panelists

## Noel Bakhtian, Ph.D.

ASME Congressional Fellow, U.S. Senate, Office of Sen. Jeanne Shaheen (D-NH), 2012-13

MPhil, Engineering; MS, Aeronautics and Astronautics; Ph.D. in Aeronautics and Astronautics

## Sean Watts, Ph.D.

EEA Fellow, Directorate for Biological Sciences, Division of Environmental Biology, National Science Foundation, 2011-13  
Ph.D. in Ecology

## Kelly Visconti, M.S., P.E.

Technology Manager, Advanced Manufacturing Office - U.S. Department of Energy

EEA Fellow, U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy; Industrial Technologies Program, 2011-12  
MS in Civil & Environmental Engineering

