

## **Christopher B. Harto**

Energy and Environmental Analyst,

Environmental Sciences Division (EVS)  
ARGONNE NATIONAL LABORATORY  
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### **Education:**

M.S. Arizona State University, Sustainability, 2009  
B.S. Ohio State University, Chemical Engineering, 2003

### **Professional Experience:**

2010-Present Energy and Environmental Analyst, Environmental Science Division,  
Argonne National Laboratory

Research areas cover a range of topics related to the energy-water nexus. Recent work has involved: estimating risks to electricity production from drought, evaluating produced water treatment and management systems, studying potential water related environmental impacts from shale gas exploration and production, studying the geochemistry of geothermal fluids and deep saline aquifers targeted for carbon storage, and estimating life cycle water consumption for geothermal electricity and carbon sequestration.

### **Previous Experience:**

2009 Research Participant Program, Strategic Energy Analysis Center,  
National Renewable Energy Lab

Critically assessed the medium and long term potential for biofuels production in South East Asia, South America and the United States. Provided recommendations to the state of Hawaii on meeting the biofuels importation portion of their clean energy goals for 2030.

2007-2009 Graduate Research Assistant, Center for Earth Systems Engineering and  
Management, Arizona State University

Research focused on investigating life cycle water consumption of alternative transportation fuels and sustainability assessment of algae biofuels processes.

2001-2007 Aerosol Physics Researcher, Applied Biology and Aerosol Technologies  
Research Group, Battelle Memorial Institute

Performed research involving probabilistic risk assessment, atmospheric transport and diffusion modeling, and hazard assessment.

**Research Interests:**

Life Cycle Analysis

Energy-Water Nexus

Sustainability Analysis

**Publications:**

Author or co-author of 16+ journal, book, report, and conference publications and presentations.