

SETH W. SNYDER, PH.D.

Energy-Water-Decarbonization: Investments, Technology, Policy

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- ⇒ *Track record in attracting funding and partnerships*
- ⇒ *Leadership in developing and deploying DOE-focused applied technologies*
- ⇒ *Leadership and strategy: Large budgets (\$55+ M) and professional staff (150)*
- ⇒ *Serial inventor and tech developer: 21 patents, 3 licenses, national tech transfer award*

EXPERIENCE

2024- Atlas Agro AG: *Senior Technical Advisor*, Insight on commercial green fertilizer production

2024- Clean Energy Venture Group: *Partner*, Angel investing and startup guidance in clean energy

2024- S.W. Scientific Investments LLC: *Founder and CEO*, Clean energy investing and guidance, major research grant development, Science advisor on several clean energy start-ups

2023- MACHH2: *Chief Commercialization and Policy Officer, Hydrogen Hub (Executive)*

2017-2024 IDAHO NATIONAL LABORATORY:

2019- Strategic Research Director, Energy and Environment S&T (Strategy for \$300 M program)

- Lead program developer in hydrogen, decarbonization, manufacturing, critical materials, energy storage, water, waste utilization, and mobility.
- INL lead on large funding bids for the \$1 B+ hydrogen hub (MachH2 awarded) and \$150 M electrification institute (EPIXC awarded), iron & steel decarbonization institute (in development)
- Relationship Manager (RM) for the Industrial Efficiency and Decarbonization Office, Vehicle Technologies Office, ARPA-E, Science - Biological and Environmental Research
 - Direct interaction with program and technology managers
 - Contributed to roadmapping and planning to guide funding offices.
 - Appraised laboratory staff and leadership to office priorities and emerging opportunities
 - Identified partners for competitive proposals and mentored staff to secure funding
- Energy Storage Grand Challenge, Lab lead (Office of Electricity)
- Supported rebid on \$150 M Critical Materials Institute (awarded)
- Led individual research projects on carbon capture and water-energy nexus and mentored graduate students and postdoctoral fellows.
- Secured “SUPER MOU” with Arizona State University

2017-19 Division Director, Clean Energy and Transportation (Line management and strategy)

- Directed research division of ~\$55 M and a staff of ~150 - bioenergy, vehicles, power systems
- RM: Vehicle Technologies Office & Steering Committee for the SMART Mobility Consortium

1998-2017 ARGONNE NATIONAL LABORATORY:

2014-17 Water-Energy Strategic Initiative Leader (Strategy role)

- Developed the strategic plan, coordinating internal investments in water, representing the Laboratory in high profile public and private events.
- Laboratory lead for the DOE Laboratory “Big Ideas” Energy-Water Nexus theme, including highlighting priorities with senior Dept. of Energy staff
- Risk trainer for DHS-OCIA on water, wastewater, chemical facilities

2001-14 Section Leader, Energy Systems (Line management and strategy)

- RM: Bioenergy Technologies Office – Oversaw ~15 parallel projects across the program. Increased funding from a zero base to >\$6M/yr,
- Led a research section with eight principal investigators and a total staff >50. The section was a top performer in patents and R&D 100 awards (~\$20 M/yr).
- Advisor: Illinois loan guarantees for renewable energy and Lt. Governor’s biofuels task force

1998-2001 Associate Director, Chemistry Division (Executive).

- Coordinated chemistry input for the successful \$60 M bid for the Center for Nanoscale Materials (awarded)
- Developed a new program in biobased products
- Managed division operations including building, safety, IT, HR, and budget with a focus on modernizing services and reducing operating costs (\$15 M/yr). Reduced overhead staff by 40%.

2016-17: Current (Chicago): Chief Scientist, A 501(c)(3) research consortium (concurrent, Strategy)

- Help define mission and vision; developed funding plans; and represented international events.
- Secured funding to launch the non-profit

2015-17 AD Up Energy LLC, Founder and CEO, wastewater treatment (concurrent, Founder role)

- Finalist or semi-finalist in three venture accelerator competitions

2011- Northwestern University, Adjunct Professor of Engineering (concurrent, Educational)

- Taught: graduate engineering course “Energy Systems”, with a focus on business aspects
- Taught: undergraduate course “Introduction to Sustainability”
- Served on numerous Ph.D. and M.S. committees

1992-98 Abbott Laboratories, Sr. Research Biochemist (Research role)

- Sr. Research Biochemist in pharmaceutical discovery sciences.
- Postdoctoral Fellow in Alzheimer’s research.

1989-92 Argonne National Laboratory, Postdoctoral fellow in photosynthesis

1981-89 University of Virginia, Research and Teaching Assistant

1979-80 R. Buckminster Fuller’s Office, Research: Published World Energy Data Sheet

1978-79 Environmental Protection Agency, Water Safety Engineer, Drinking Water Branch

RECOGNITION

- FLC Award for Excellence in Tech Transfer “Resin Wafer Electrodeionization”, 2012
- R&D 100 “Enhanced Renewable Methane Production System”, 2011
- Outstanding Mentor Award – DOE FAST Program, 2007
- R&D 100 “Separative Bioreactor for the Production of Recovery of Biobased Products”, 2006
- R&D 100 “Advanced Electrodeionization for Product Desalting”, 2002

INTELLECTUAL PROPERTY COMMERCIALIZATION

- Water treatment technologies licensed to Nalco Company and RWEDI Solutions, Inc.
- Enhanced anaerobic digestion technology (wastewater) license option to Cleanworld Inc.
- Founder, AD Up Water LLC & AD Up Energy LLC to commercialize wastewater technology
- Consultant on water/energy technologies for investment groups and state agencies.

PUBLICATIONS

- 21 issued U.S. patents (<https://bit.ly/3CweRdE>)
- 70+ publications in 40+ journals, h-index = 38 and 7000 citations (<http://bit.ly/Snyder-Google>)
- Editor, “Commercializing Biobased Products”, Royal Society of Chemistry, 2015
- Co-author, “Water Is:”, World Scientific Publications, 2018
- Series Co-Editor, “Clean Energy Research and Education”, World Scientific Publications, 2018-
- Associate Editor – Water-Energy Nexus Journal, KeAi/Elsevier, 2018-

GUEST APPOINTMENTS

- Arizona State University, Adjunct Professor, Fulton School of Engineering, 2022-
- University of Idaho, Ph.D. dissertation committee, 2019-2020
- Northwestern University, Affiliate, Northwestern Water Research Center, 2016-17
- The University of Chicago, Fellow, Institute of Molecular Engineering, 2015-17.
- The University of Chicago, Senior Fellow, Energy Policy Institute at Chicago, 2013-17.

EDUCATION AND TRAINING

- The University of Chicago, Booth School of Business, Strategic Lab Leadership Program, 2008
- Abbott Laboratories, Postdoctoral Fellow, Alzheimer's Disease Research, 1992-94
- Argonne National Laboratory, Postdoctoral Fellow, Photosynthesis Research, 1989-92
- University of Virginia, Ph.D. in Biophysics, 1990 & M.S. in Physical Chemistry 1985
- University of Pennsylvania: B.A. in Chemistry & Environmental Studies, 1980

SERVICE AND ORGANIZATIONS

- Advanced Materials for Energy-Water Systems (AMEWS), Scientific Advisory Board, 2019-
- Current 501(c)(3), Chief Scientist, 2016-17
 - Co-led mission and visioning, represented organization at international conferences
- Council for Chemical Research 501(c)(3), President 2011-13, Chair 2010, Gov. Board, 2006-13
 - Led the non-profit on promoting the value of research in chemistry and chemical engineering.
- Advisory boards on academic/non-profit cleantech and sustainability
 - University of Illinois Integrated Bioprocessing Research Laboratory (Champaign IL)
 - IUPUI Richard G. Lugar Renewable Energy Center (Indianapolis IN),
 - Illinois Sustainable Technology Center (Champaign IL)
 - Clean Energy Trust (Chicago IL), start-up company mentor.
 - With most non-profits, I met with public and private sponsors to secure initial and ongoing funding. These efforts included federal, state, foundation, and individual supporters.
- Village of Lincolnwood (IL), Commissioner of Economic Development, 2000-12
- WNUR-FM Jazz DJ, Northwestern University, 1994-2014