

Contact

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www.phoenixasylum.org (Other)

Top Skills

Photovoltaics
Solar Energy
Renewable Energy

Certifications

EPA Section 608 Certification -
Refrigerant Handling

Honors-Awards

EI Edison Award

Publications

A Peek Inside a PV Cell

Sam Ley, PE

Director of Engineering Technology at AES Clean Energy
Boulder

Summary

I am a multidisciplinary entrepreneur, engineer and manager in the solar and energy storage field. Starting with residential systems and a small company in 2006, I've grown along with the renewables industry to utility projects, innovative energy storage systems, and developing the architecture for the world's largest hybrid PV and battery power plant.

I believe in a better world, where more children are educated, more adults are enriched, more natural land is preserved, and everyone can live a healthier life. My little part in getting there focuses on technical leadership for the development, construction and operation of large scale renewable energy systems, including solar, battery storage, wind, hydro and pumped storage. A 100% renewable grid is in sight, and it is my mission to get us there.

Specialties:

- Utility PV system design and engineering (10 - 500MW)
- Architecture design for hybrid energy storage and renewable generation facilities
- Energy resource assessments
- Technical team management and strategy
- System planning and due diligence
- EPC contract and SOW negotiation
- PV and storage project QA/QC

Qualifications:

- NABCEP Certified Solar PV Installer
- OSHA 30hr General Construction Certified
- State of Colorado Professional Engineer

Experience

AES Clean Energy

7 years 5 months

Director of Engineering Technology

April 2021 - Present (11 months)

I manage a team of engineers and subject matter experts focused on commissioning and implementation of advanced renewables technology including the world's largest hybrid solar and battery energy storage systems.

My team is responsible for the safe and effective commissioning of power and SCADA systems, development of standards and specifications for PV, energy storage, wind and hydroelectric power systems, and technical diligence associated with structured finance and non-recourse debt for large scale renewable generation projects.

Director Of Engineering

February 2018 - Present (4 years 1 month)

Greater Denver Area

Lead a team of 26 technical and engineering team members tasked with renewable product development and innovation, preliminary engineering for development of new utility scale energy projects, engineering project management during the course of construction, commissioning and quality control, and operations support. Areas of focus include vendor qualification, contract negotiation, specifications development, training and mentorship, and growth management.

Projects range from 2 - 200MW, including solar PV, energy storage, wind, and hydro systems, including complex hybrid energy facilities with advanced grid control.

Senior Energy Systems Engineer

October 2014 - February 2018 (3 years 5 months)

Boulder, CO

Technical review and diligence for the purchase, design, construction and operation of photovoltaic, large utility storage and other large-scale distributed renewable energy projects in the Americas and Asia. Manage and support a team of 5 project and development engineers and specialties.

The Phoenix Asylum

Founding Member

November 2008 - Present (13 years 4 months)

Boulder, CO

Founding Member of the Phoenix Asylum, a not-for-profit artist cooperative in Boulder, CO. Phoenix Asylum rents studio space to local artists, hosts gallery openings, and serves as a hub for the local underground art community.

RGS Energy

Senior Design Engineer

January 2012 - October 2014 (2 years 10 months)

Louisville, CO

Lead design and engineering efforts for commercial and utility scale Solar Photovoltaic systems from 200kW to 12MW, with a focus on electrical design and interconnection. Manage external engineering resources, project schedules, and project engineering budgets for RGS Energy projects in the West Coast region. Define standards for quality design, arc flash safety, and value engineering for projects nationwide.

Think PV

Principal Designer

May 2011 - January 2012 (9 months)

Boulder, CO

Principal Designer at Think PV, a photovoltaic design and engineering services company, providing design consultation, RFP review and construction-ready system designs for solar energy projects nationwide.

Bella Energy

Design Engineer, Large Commercial

February 2011 - January 2012 (1 year)

Boulder, CO

Design and engineering for PV systems 100kW to 2MW and up.

GridPoint, Inc.

Chief Designer, Standard Renewable Energy Division

February 2010 - December 2010 (11 months)

After the acquisition of Standard Renewable Energy by Gridpoint, Inc., I manage design standards for residential and commercial renewable energy projects, including small wind, photovoltaic and solar thermal systems.

Standard Renewable Energy

Chief Designer

May 2008 - February 2010 (1 year 10 months)

Greater Denver Area

Managed the photovoltaic designs for Standard Renewable Energy. I helped determine the methods, tools and products used throughout the company's divisions.

Standard Renewable Energy
Operations Manager, Colorado Division
June 2007 - March 2008 (10 months)
Greater Denver Area

I managed the Operations of our Colorado Division. With a team of 15 reporting, including subcontractors, project managers and installation crews, I was responsible for revenue recognition, project completion timelines, revenue forecasting, and general management duties.

Sunflower Solar
Owner
October 2006 - February 2008 (1 year 5 months)
Boulder, CO

I helped start and bring to fruition a solar electric installation company, starting from 2 people to 12, before preparing the company for sale, and merging with Standard Renewable Energy.

Saint Louis Science Center
Gallery Leader
April 2002 - April 2006 (4 years 1 month)

I managed the Physical Sciences gallery operations on the museum floor, including exhibit space, special programs, and daily public science demonstrations, as well as educational and exhibit development. My staff of 4-8 (including full time, part time and volunteers) performed over 3000 live science demonstrations (think "Bill Nye the Science Guy") to over 100,000 people each year, and over 1 million visitors annually passed through our exhibits and galleries.

Education

Washington University in St. Louis
Mathematics, Computer Science · (2003 - 2004)

Colorado State University
Physics · (1999 - 2001)