



# Heliostat Consortium Seminar Series

Brought to you by the Resource, Training, and Education (RTE) topic area



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Solar Energy Technologies  
Expert

**Host:** Dr. Rebecca Mitchell

**Title:** CSP Tower  
Technology: 10+ Years of  
Innovation and 35+ Years  
of Mature Prior Innovation

**When:** April 10<sup>th</sup> 10-11 AM  
MDT

**Zoom:**

<https://nrel.zoomgov.com/j/1618832995?pwd=V1ovUmhRczNURksvMnVYRVRS5mJoZz09>

## **Abstract:**

The CSP industry, like other domains, tends to have ups and downs. Though there is currently not enough data to compare, the current expensive solar field and storage costs makes it difficult for CSP to compete with the PV industry. On the other hand, to prepare for upcoming trends in the energy market, the industry must prepare and focus on practices that make most the most attractive sense based on past CSP development experience. Particularly including tower potential high temperature challenge for Hydrogen production, in intermediate hybrid steps, using current CSP experience in power tower technology for electricity, and also keeping in mind lessons learned from the parabolic trough industry. In recent years I have analyzed the operation of 2-3 large CSP plants, 1 trough and 1 tower. I was delighted to find parabolic troughs to be a mature technology, incorporating a full understanding of all details associated with the industry and even potential upgrades. The power tower industry is not yet there, with strategies to address the major challenges not fully understood, as is evidenced by plants such as Ivanpah and Ashalim (no storage). The path towards CSP tower technology at 560°C is even less clear. Here, we will examine how lessons learned from the trough industry can inform how we mature power tower technologies.

## **Bio:**

Yoel Gilon is a leader in CSP technology development and deployment and expert consultant in solar energy technologies. He was the Senior Vice President of BrightSource Energy from 2006-2013 and has served as a consultant in the energy domain for 22 years, particularly in solar power, for Solel, Flagsol, Ormat, StorageDrop, Shikun Binui, and other companies. Prior to his time at BrightSource, he was the Vice President of Electrical Vehicle Technologies at Electric Fuel Corp. from 1994-2006, the Project Development Manager at Ormat Industries from 1991-1994, and the Vice President of System Engineering Development at Luz Industries. He received his M.S. in Mathematics and B.S. in Mathematics and Physics from the Hebrew University of Jerusalem and B.A. in Fine Arts from the Bezalel Academy in Jerusalem. Since 2013, he is a painter and astrophysics student at the Hebrew University.