

KEY TAKEAWAYS

Cleantech Opportunities in Data Centers

Kilpatrick's [Dr. Siegmair Pohl](#) and [John Pierce](#) recently presented at “**Cleantech Opportunities in Data Centers,**” a Firm event with **Cleantech Open** in San Francisco. Siegmair discussed what to look out for in cleantech venture finance deals and term sheets. John covered opportunities for cleantech companies in the energy mix going into data centers, grid connection issues and behind the fence strategies for Solar, BESS, and new battery chemistries.

The takeaways from their presentations include:

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Cleantech Venture Finance and Term Sheets

In terms sheet for early financing rounds, clean tech start-up should pay close attention to key economic terms, such as pre- and post-money valuations and effective valuations after calculating the required option pool sizes. It is important to understand what the market is when it comes to multiples in participating and non-participating liquidation preferences, dividends and pro-rata rights. Founders should not give up board control in the Seed or Series A stage and carefully review stockholder veto rights that encroach on day-to-day management and other protective provisions. They should pay close attention to avoid assigning more IP rights to the company that are needed for the business plan.

Clean Technology Opportunities in Data Center Developments

The rapid expansion of large data center developments in the US and elsewhere are causing concerns regarding impacts on consumers for the energy they use and impacts on the power transmission infrastructure we all rely on, the potential environmental impacts of the massive expansion of energy use by such data center, as well as the water usage for cooling, as well as the preference for natural gas where renewable energy cannot be procured. There are a few clear opportunities for Clean Tech companies and investors that invest in them. These include:

- a. **Carbon Mitigation Technologies.** These technologies can include carbon capture for utilization or sequestration. These technologies could be applied to capture, storage, and ultimate disposition (utilized in some fashion or sequestered where that is economic and viable) and help mitigate the environmental impacts of using fossil fuels to generate the power necessary for large data centers (often 1GW+ of firm power).
- b. **Grid Technologies.** This recent increase in demand for energy is placing great stresses on the existing grid infrastructure. To address such stresses, there are opportunities for Clean Technology companies that address micro and macro grid requirements (particularly those at address behind the meter projects), battery energy storage systems (BESS) that can address grid managements (such as grid balancing), and the application rapid start power generation equipment that management start up and short duration power losses.
- c. **Cooling Systems.** Water usage and the recovery of water are areas of great public concern. The use of closed looped cooling systems encourages cooling water reuse whether in data center or the power generating units that power them. Where freshwater availability is limited, the use of saline/salty water may be used once cleaned and can be reused.

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