



ADC builds 45MW facility in Sacramento - green pods will go fast

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T1R recently sat down with Michael Cohen, CEO of **Advanced Data Centers (ADC)**, a datacenter real estate development firm in the midst of building its first facility at Sacramento, California's former McClellan Air Force Base. Like many former military bases, it has several of the key attributes for building quality datacenters – power, inexpensive real estate, optical fiber nearby and a reasonable level of municipal infrastructure (roads, etc). ADC's site has an additional benefit – relatively low-cost power, especially for California. The facility will be sited within the territory for Sacramento's municipal power utility, which charges 7.7 cents per kilowatt hour, as opposed to pricier **Silicon Valley Power** and **Pacific Gas & Electric (PG&E)**.

The ADC facility will be built in two stages. The first stage is a brownfield that utilizes an existing 66,000-square-foot building and will yield 40,000 square feet of raised floor. The second phase is a greenfield on the site of a demolished building at the former base, with an additional 85,000 gross square feet, which will yield 70,000 square feet of datacenter space. Presumably, all of the administration, security, restrooms, etc, will be in the initial phase in order to provide that sort of yield. In terms of power, the site already has 45MW fed from two separate substations. ADC is upgrading the site with its own 45MW substation, which it will own and operate.

The ADC Sacramento facility will have several key differentiators. The first is power density – the site will initially boast 200w/square foot, upgradable to 300w/square foot. Second, the facilities will be highly efficient, with a PUE of 1.2, which, from what T1R has seen, will make it the most efficient datacenter in North America, if it can be done. It's not that T1R doubts the word of the ADC execs, here – it's just that a 1.2 PUE is a very difficult thing to achieve – it means that, of the 45MW fed into the site, 37.5MW will be available as IT load.

Initial plans are for the facility to be sold as wholesale pod or cell datacenter, with default 10,000-square-foot datacenter rooms. Of course, if the right offer came in, ADC would lease the entire facility, the same sort of arrangement we saw with **Ascent** and **Microsoft** in Chicago. As a wholesale play, ADC plans to offer only limited services on site, with remote hands technician services being provided by contractors – a standard arrangement for this sort of facility.

ADC is also ready to expand beyond the first two phases – the municipal utility has promised another 45MW in two years, should the firm need it. Certainly it will have plenty of physical areas if it needs additional buildings – one thing that former Air Force bases have is plenty of elbow room.

Holder Construction is providing construction services – that firm is closing on 100 datacenters (and 3.5m square feet of raised floor) built in the last 10 years, mostly on the enterprise side. Peter Rumsey of **Rumsey Engineers** is doing the mechanical design. Considering Rumsey's involvement, it's no surprise that airside economizers figure prominently in the facility designs. Sacramento is a good place to use them, with outside air being usable

75% of the time in temperate Northern California. Electrical design is being performed by **The Engineering Enterprise**, best known for its work on numerous **Equinix** IBX facilities.

The facility has a number of interesting design features, including the use of HiTec CPS instead of UPS batteries (designers seem to either love or hate CPS as a concept – T1R is a fan). The facility will eschew raised floor for cooling, utilizing overhead cooling ducts, similar to Equinix facilities in North America. There will be a small 6" raised floor for the distribution of cooling water (initially to CRACs and eventually to cabinets), which T1R can't help but think of as a bilge. ADC is negotiating with a number of nearby fiber providers, including **XO**, **Verizon**, **AT&T**, **SureWest Communications**, **Integra Telecom** and **Global Crossing**, and clearly plans on a carrier-neutral facility. The site is seismically stable (at least, by California standards), and is outside the 500-year flood plain – a differentiator from other Sacramento facilities that ADC management was quick to point out.

One of this facility's claims to fame will be its 'greenness' – it's quite efficient (that 1.2 PUE) and the design has received LEED Platinum pre-certification. It draws on a gray water (non-potable) well for cooling water, and will provide metered power to its customers. It still remains to be seen whether that green aspect will help it sell the space. There is such a great demand for cell or pod datacenters in the San Francisco Bay Area that T1R has little doubt that this space will sell out quickly, for two reasons. First, there are only four pods initially available – the next seven are in the second phase. Second, even though the facility is a good 90 minutes from San Francisco, it's close enough to allow server huggers to feel at ease. Finally, there simply isn't much competition for datacenter pods in Northern California – **Digital Realty Trust** and **365 Main** have both done a very brisk business and availability is limited.