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| Greensparc Brings Reliable, Powerful Computing Infrastructure to Cordova

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by Rindi White | Apr 17, 2024 | Energy, Featured, News, Telecom & Tech

Pressmaster | Envato

An Alaskan-led edge computing company from California has chosen Cordova as the site of its inaugural data center. Greensparc founder and CEO Sam Enoka says the facility is the first of its kind, purpose-built and optimized for sustainability, rapid deployment, and resilience in the toughest conditions.

Creating Local Clouds

In collaboration with Hewlett Packard Enterprise (HPE), the new data center is a step toward bringing reliable data infrastructure to underserved and unserved edge communities. Enoka says legacy data centers take many years and millions of dollars to get up and running and, in many cases, don't meet the needs of unserved and underserved communities.

Rural communities typically rely on data centers hundreds of miles away, with service easily disrupted by adverse weather or cable damage. Without local centers, communities like Cordova sit on the other side of a digital divide.

Enoka knows a thing or two about remote Alaskan communities. He grew up in North Pole and attended the set-for-closure Ben Eielson Jr/Sr High School on Eielson Air Force Base, where his mom taught. He graduated from UAF and obtained his MBA from the University of California, Berkeley. He has been on the board of the Alaska Center for Energy and Power (ACEP) at UAF for several years.

It was through ACEP that he met Clay Koplin, CEO of Cordova Electric Cooperative. The two discussed using Cordova as a pilot project, and it started coming together in 2023.

All last summer, Greensparc operated a demonstration in Anchorage to show the value of local cloud computing. The demonstration took Greensparc about thirty days to build, and it was disassembled in September. Enoka says the team loaded components into a trailer and transferred it by ferry to Cordova.

In the span of thirty days, Greensparc installed the data center at Humpback Creek Hydroelectric Project in Cordova. “It was a great demonstration of our core values of being able to deploy rapidly,” Enoka says.

The local hydro plant powers the computers, capable of supporting major cloud service providers. Greensparc’s relationship with HPE enables the delivery of flexible computing solutions suitable for any use case required in the region.

“HPE values Greensparc’s commitment to bridging the digital divide for difficult-to-reach communities,” says Ulrich Seibold, worldwide vice president of HPE GreenLake partner and service provider sales. “HPE GreenLake’s comprehensive portfolio of solutions is perfectly suited for Greensparc’s delivery of computing infrastructure and cloud capabilities to communities in the toughest conditions and in any environment.”

What does it mean for Cordova?

Greater Security and an Economic Boost

Koplin says Cordova Electric is Greensparc’s first data customer. The cooperative currently uses cloud-based applications, but the nearest cloud-based system is in Seattle. Security and reliability are a concern, Koplin says, especially as his system incorporates more real-time alerts for things like hostile attempts to reboot that could cripple the utility. The other concern is that, as data centers become oversubscribed, access may be restricted and

costs inevitably rise, he says. Having local data options—not just for Cordova, but for all of Alaska—increases local self-sufficiency.

Greensparc also represents a significant boost for Cordova Electric's user base.

Koplin explains, "With electric load comes revenue. That additional revenue—the Greensparc servers, if we are powering them all the time—would represent 5 percent of our energy sales. That's revenue that we would not have. It's beneficial to the whole utility."

He adds, "Greensparc has elevated Cordova, Alaska, from a remote community at risk of being left behind by next-generation technologies to one that is leading at the intersection of sustainable energy, high-speed communications, and transformative cloud computing. Greensparc's computing infrastructure is not an advancement; it is a transformation."

Greensparc bills itself as the only edge infrastructure-as-a-service provider that is optimized for environmental, social, and governance requirements. The company has created a template for deploying data center infrastructure anywhere in the world with a smaller footprint, lower cost, and faster installation.

"By working closely within local municipalities, tribal organizations, minority-serving institutions, and with other underserved groups, our mission is to make equitable computing power at scale a reality regardless of geography," says Enoka. "By providing Cordova Electric with the building blocks for a more sustainable, secure, and connected future, Greensparc is opening access to new economic opportunities and technology services, an important step in helping local communities exercise greater agency over their own destinies."

The new data center in Cordova has implications for other coastal towns and villages. "Edge communities such as Cordova are on the forefront of unprecedented ecological transitions, with far-reaching social and economic impacts for their residents," says Tommy Sheridan, associate director of Alaska Blue Economy Center at UAF. "Greensparc's innovative technology unlocks much potential for the development and diversification of Cordova's blue economy in ways that can be learned from and duplicated elsewhere in coastal Alaska and beyond."

If the Cordova project goes well, Greensparc hopes to expand elsewhere. The company plans to train and hire local workforce from the populations in the communities it serves, creating new employment opportunities.

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