Company: ECL
Nomination Submitted by: Mindshare PR
Company Description: ECL delivered the world's first operational, off-grid, sustainable, cost-effective data center that uses hydrogen as its primary power source. MV1, its facility in Mountain View, California, is the industry's first to be designed from the ground up to support the high densities of GPUs that are the backbone of AI infrastructure, with PUE of 1.05 and high-density deployments of up to 75kw per rack.
Nomination Category: Company / Organization Categories
Nomination Sub Category: Technical Innovation of the Year - At Organizations With Up to 100 Employees
Nomination Title: MV1: The World's First Operational, Off-Grid, Hydrogen-Powered AI Data Center

1. Which will you submit for your nomination in this category, a video of up to five (5) minutes in length about the achievements of the nominated organization since 1 January 2023, OR written answers to the questions for this category? (Choose one):

   Written answers to the questions

2. If you are submitting a video of up to five (5) minutes in length, provide the URL of the nominated video here, OR attach it to your entry via the "Add Attachments, Videos, or Links to This Entry" link above, through which you may also upload a copy of your video.

3. If you are providing written answers for your submission, you must provide an answer to this first question: Briefly describe the nominated organization: its history and past performance (up to 200 words):

   Total 193 words used.

   ECL unveiled MV1—the world's first off-grid, zero-emissions AI data center powered by hydrogen—in Mountain View, CA in June 2024, setting a new benchmark for sustainable, high-performance computing.

   Founded in 2020 and launched in January 2023, ECL is led by Yuval Bachar, who previously held top engineering, infrastructure, and architecture roles at Microsoft Azure, LinkedIn, Facebook, and Cisco. The company raised $7 million in seed funding from Molex Ventures and Hyperwise Ventures, which supported MV1's construction.

   MV1 was created to address the urgent need for sustainable, high-performance infrastructure to support AI and advanced technologies. With global data center power capacity under strain, ECL recognized the necessity for a fundamental redesign. ECL aimed to pioneer efficient and eco-friendly data center solutions that enhanced energy efficiency, reduced water consumption, and integrated seamlessly into the local community. This vision led to the creation of MV1, completed in just 9 months—far faster than the industry's typical 2–5 years.

   In September 2024, ECL announced TerraSite, the world's first 1GW hydrogen-powered data center campus, located near Houston, TX. The first phase, sourcing hydrogen from three converging pipelines, will launch in early 2026. Lambda has been confirmed as the first tenant.

4. If you are providing written answers for your submission, you must provide an answer to this second question: Outline the organization's achievements since the beginning of 2023 that you wish to bring to the judges' attention (up to 250 words):

   Total 237 words used.

   1. First and Currently Only Hydrogen-Powered Data Center in Production: ECL unveiled MV1, the world's first off-grid, zero-emissions AI data center powered by hydrogen, in Mountain View, CA in June 2024, setting a new benchmark for sustainable, high-performance operations.

   2. Partnerships and Tenant Acquisition: ECL has secured high-profile tenants like Cato Digital and Lambda, which recently deployed the first Supermicro NVL72 GB200 system at MV1. These partnerships underscore the growing interest in hydrogen-powered data centers as companies look to meet sustainability targets while ensuring high-performance, reliable services.

   3. Speed to Market: ECL's rapid deployment of MV1, which became operational in just nine months from concept to launch, showcases the company's exceptional ability to bring cutting-edge, sustainable solutions to market quickly. This timeline is notably faster than the industry standard for traditional data centers, which typically take two to three years to complete. Such speed to market is essential as businesses seek to transition to greener data solutions and meet regulatory requirements related to sustainability.

   4. Operational Performance: MV1 consistently achieves industry-leading PUE ratios of 1.1 or better and supports up to 75 kilowatts per rack, demonstrating exceptional performance and energy efficiency.

   5. Upcoming Developments: Announced in September 2024, ECL is developing the worlds first 1GW hydrogen-powered site near Houston, TX. The initial phase of TerraSite-TX1 is expected to be delivered in early 2026 and will source hydrogen from three converging pipelines. Lambda is confirmed as the first tenant at TerraSite.

5. If you are providing written answers for your submission, you must provide an answer to this third question: Explain why the achievements you have highlighted are unique or significant. If possible compare the achievements to the performance of other players in your industry and/or to the organization's past performance (up to 250 words):

   Total 242 words used.

   ECL's groundbreaking achievements in the AI and data center sectors position the company as a leader in both sustainability and innovation. With the unveiling of MV1, the world's first off-grid, zero-emissions AI data center powered by hydrogen, ECL has set a new benchmark in the industry. While other data center providers have deployed hydrogen fuel cells for backup power or conducted trials of hydrogen-powered systems set for future delivery, ECL is the first to fully operationalize a sustainable hydrogen-powered data center. This achievement is significant not only for its environmental impact but also for its capacity to deliver reliable, scalable, and high-performance computing.

   Unlike traditional data centers that rely on fossil fuels or large-scale electrical grids, ECL's solution generates power using hydrogen fuel cells, producing excess water as a byproduct. This water is repurposed for cooling, eliminating the need for external water sources and reducing environmental strain. This unique approach to sustainability, combined with industry-leading performance, places ECL ahead of its competitors and offers a cost-effective, environmentally responsible solution for businesses seeking to meet their sustainability targets.

   ECL's rapid nine-month deployment of MV1 further demonstrates the company's exceptional speed to market, which is particularly critical in addressing the current demands of AI. The AI industry is experiencing exponential growth, requiring data centers that can provide the necessary high-performance infrastructure without delay. ECL's fast deployment timeline offers businesses the agility they need to scale rapidly and meet the ever-increasing demands of AI workloads.

6. You have the option to answer this final question: Reference any attachments of supporting materials throughout this nomination and how they provide evidence of the claims you have made in this nomination (up to 250 words):

   Total 67 words used.

   Hydrogen White Paper: https://www.ecldc.com/wp-content/uploads/2024/02/Hydrogen-Carbon-White-Paper-Jan-2024.pdf

   This white paper provides an in-depth analysis demonstrating how ECL's hydrogen-based microgrid solution significantly reduces or completely eliminates Scope 1 and Scope 2 carbon emissions compared to traditional grid-connected data centers. It specifically details how even grey hydrogen offers carbon footprint advantages relative to average U.S. grid power, while blue and green hydrogen substantially outperform traditional power sources.

Attachments/Videos/Links:

MV1: The World's First Operational, Off-Grid, Hydrogen-Powered AI Data Center

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