

Unison Energy Operations & Maintenance

Our Regional Field Service Team, with over 100+ combined years of operating experience, executing a major maintenance overhaul at [TidalHealth Peninsula Regional](#).

Unison Energy maximizes microgrid uptime and client benefits through proactive monitoring, optimized troubleshooting, and ongoing analysis.

Unison Energy offers a turnkey solution for microgrids through an energy service agreement (ESA). We handle the design and construction of each microgrid, in addition to procuring and financing equipment. We then continue to maintain and operate the system for the duration of our ESA agreement, ensuring our clients see the maximum benefits of cost savings, carbon reduction, and resilient power.

Many firms can't tell you their downtime, let alone how much of that is planned or unplanned. Unison Energy can — down to the second. Our approach to operations and maintenance is proactive in order to achieve the highest uptime possible for our clients. Our interests are aligned, as our revenue depends on keeping our clients' systems running.

We don't wait for clients to report problems. We use round-the-clock remote monitoring and data-driven preventative maintenance to minimize chances of downtime. When downtime does occur, we solve the problem quickly with the best our firm has to offer, often before the client realizes that a problem has occurred.

24/7/365 Monitoring

Our monitoring centers are fully staffed 24/7/365, with in-house engineering teams standing by to either remotely troubleshoot issues or notify our technicians to take action on site. With our continuous monitoring, we provide peace of mind for our clients.

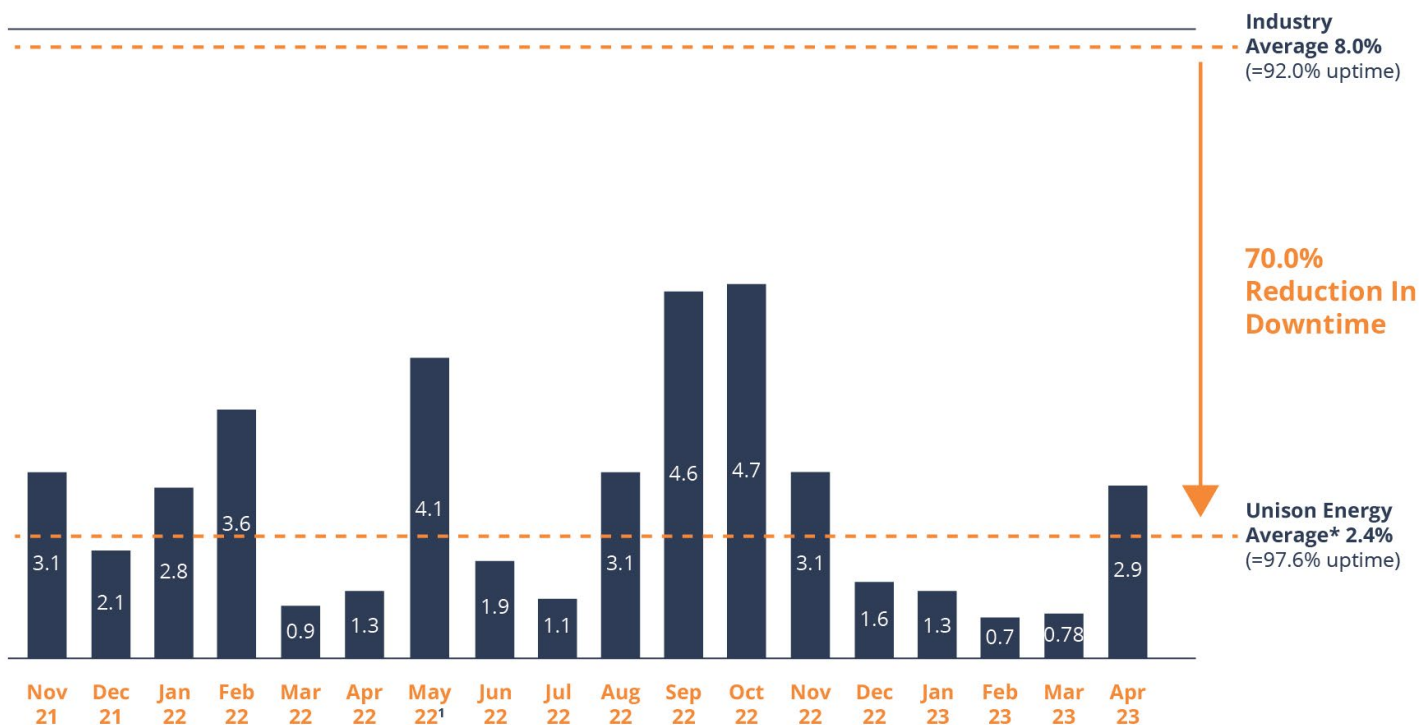
Sensors built into our microgrids collect 600-800 data points per second at each of our sites, or 60-80 million data points per day. This data is stored and organized in our data warehouse, which allows us to learn from previous incidents and continuously improve our processes.

Predictive Data Analytics

Our cutting-edge approach to data allows us to dynamically assess the health of our plants and catch problems before they occur, going beyond factory installed equipment and alerts. Sensor data — including both factory-installed sensors and additional sound, vibration, and electric sensors — feeds into our proprietary PowerIQ platform where our remote monitoring team and technicians can see system stats and alerts.

Downtime - Fleet Average

All outages including planned, unplanned, and utility-caused



*Fleet Average for 26 Engines
1. Annual Planned Maintenance

■ Downtime (%)

In combination with remote video, this enables our team to identify, assess, and potentially resolve issues in real time.

Our in-depth data forms the basis for our machine-learning algorithms, which reflect the relationship between various sensors and parts of the system in order to identify even minor deviations from the norm. Using vibration and sound data, our algorithms can identify issues that can't be heard by the human ear in a loud engine room — the sound of a gas leak, for instance. Our proprietary machine-learning algorithms are trained to identify which sounds, vibrations, and sensor data is normal for that specific machine and which data might be within spec but outside of “normal” ranges for that site. The algorithm effectively “watches” and “listens” to the site when technicians aren't there, and sends alerts so the team can take action as needed.

Field Service

Every member of our in-house team has the highest certification levels, such as the United States Coast Guard Steam, Diesel, Gas Turbine Unlimited Operator license and all Original Equipment Manufacturer (OEM) training specific to site machinery. Together we have a combined experience of over 100 years in CHP plant O&M. All of our technicians are military veterans and used to operating with efficiency and precision. Safety is always a top priority and is at the center of everything we do.

Each technician is responsible for the maintenance and operation of 1-4 microgrid locations. This allows our team to become familiar with the specific needs and solutions of each site. Our team members are self-dispatching, based on a monitoring ALERT system, and in regular communication with clients to keep them informed of any ongoing maintenance.

Timely maintenance and effective troubleshooting practices require easy, reliable access to parts and replacement components. That's why we maintain a parts inventory of over 1 million components, stored either on site or in regional parts depots.

The combination of in-house staff, certified training, and on-hand inventory gives us the ability to make repairs quickly without having to wait on parts or third-party scheduling.

Client Reporting

Unison Energy is committed to providing clients with transparent reporting and access to the data we collect. Our real-time operations mobile app allows clients to see the millions of data points captured in our data warehouse each day.

We run weekly fleet production and execute monthly financial reviews to identify opportunities for further improvement, whether it's optimizing utility settings or adjusting boiler usage to make better use of the thermal energy our systems offer.

With these continual insights, clients know they have a partner who is looking out for their best interests and who will work with them to resolve problems and improve operations.

Achieving More for Our Clients

Our operations and maintenance model is designed to optimize uptime and asset productivity for our clients while offering peace of mind. With proactive 24/7 monitoring and streamlined on-site troubleshooting, we are prepared to prevent and address issues. With our transparent reporting, we communicate exactly how we are working to maximize benefits for your facility. In short, our clients are free to focus on their core business, knowing they can rely on us for best-in-class uptime and performance.



If you would like to learn more about how a Unison Energy microgrid could work for your facility, please contact our sales team at sales@unisonenergy.com or visit us at unisonenergy.com.