



LEADERSHIP IN AI DATA CENTER EVOLUTION



e3i's team has been working in the data center market for 30 years, making us experienced... and pioneers in the field.

While many companies are just now entering the AI data center space, e3i has been here since the beginning, adapting data center design as the industry has evolved. We've seen the shift from data centers requiring 3 kW per cabinet to now needing 100+ kW per cabinet. AI processors perform up to 140 times the computing power of traditional servers, but they also require much more energy and better cooling. **That's where e3i comes in.** We've innovated solutions utilizing Direct to Chip cooling (DtcC) also known as cold plate technology, which brings water directly into computing systems to help keep them cool. e3i utilizes their vast experience in medium voltage applications to provide the high power required while minimizing transformation and distribution losses and costs.

DID YOU KNOW?

- » ChatGPT search consumes 10x the power of a Google search, driving unprecedented energy demands.
- » AI data centers are expected to consume up to 28% of the nation's electricity in the coming years.
- » The availability of high-voltage power (115-230kv) is now the primary factor in determining data center site location.
- » AI firms are investing in dedicated AI data centers, shifting away from traditional location models.

WHAT WE DO

- » **Cooling Solutions:** e3i is ahead of the curve implementing Direct to Chip (DtcC) cooling, liquid cooling rack enclosures and active rear door heat exchangers, making sure AI data centers stay cool despite their increased power demands.
- » **Backup & Redundancy:** AI data centers require redundancy and resilience, especially with water running through the systems. We've adapted to these needs with customized solutions.
- » **Power Infrastructure:** We design data centers with the infrastructure needed to handle large amounts of power, including access to high-voltage lines and custom substations.
- » **Experience Matters:** Our solutions utilize leading edge technologies while ensuring reliability and resilience are paramount.



William J. Leuci, PE
President
 wleuci@e3i-inc.com



Bob Quitadamo, PE
*Partner & Dir. of Mech. +
 Energy Services*
 bquitadamo@e3i-inc.com



Paul A. Corrado, PE
Dir. of Electrical Services
 pcorrado@e3i-inc.com

e3i-inc.com

WHO WE WORK WITH

We have worked with third-party providers, co-location owners, enterprise users, AI companies, developers, and all sorts of entities requiring AI data center services. Now, many AI companies are building their own facilities to rent out AI technology to others, and we're helping them build the infrastructure they need to support these operations. Stay tuned for our new first-of-its-kind quantum computing design!



A SAMPLE OF OUR PROJECTS

- » **Pennsylvania:** 16 MW data center expansion.
- » **Massachusetts:** 50 MW expansion at an existing facility.
- » **Connecticut, New Jersey, and Virginia:** enterprise data centers updated and colocated to meet today's demands
- » **Fort Worth, TX:** 20 MW expansion at an existing facility.
- » **Charlotte, NC:** 20 MW expansion at an existing facility.
- » **Chicago, IL:** 25 MW expansion at an existing facility.
- » **Alabama:** 300 MW new facility.