

POWER LOFT @ INNOVATION

9651 Hornbaker Road
Prince William County, Virginia

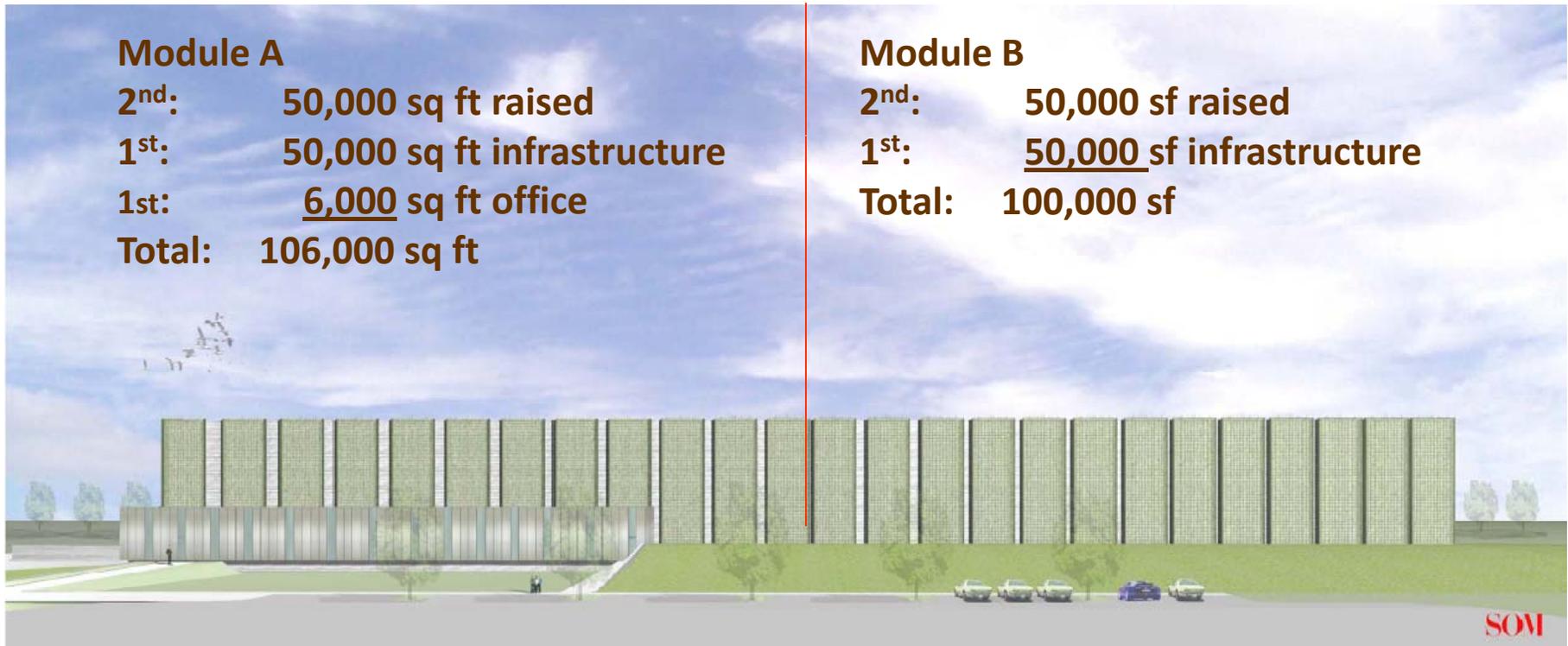


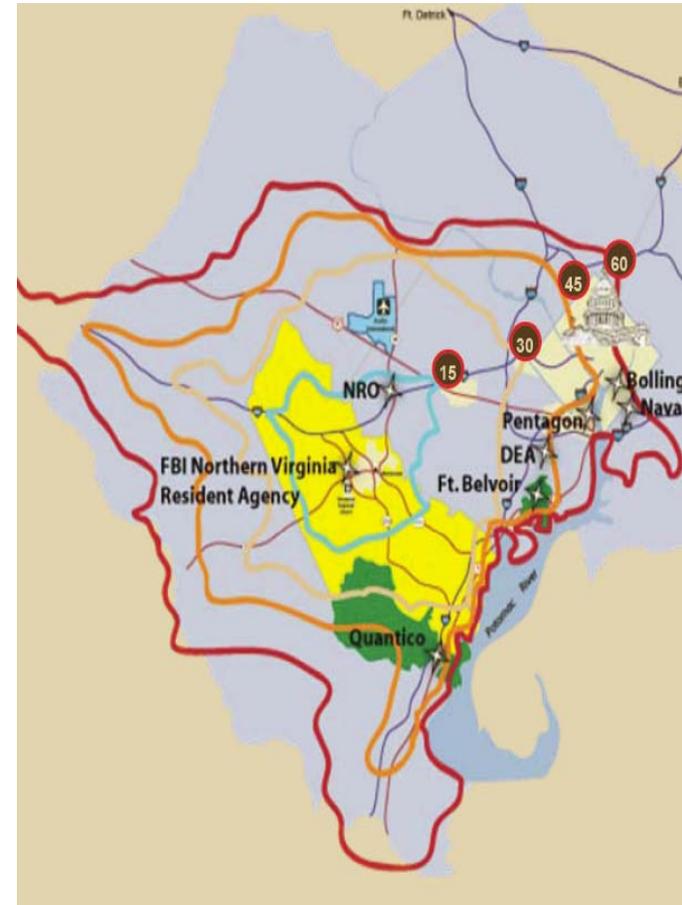
Module A

2nd: 50,000 sq ft raised
1st: 50,000 sq ft infrastructure
1st: 6,000 sq ft office
Total: 106,000 sq ft

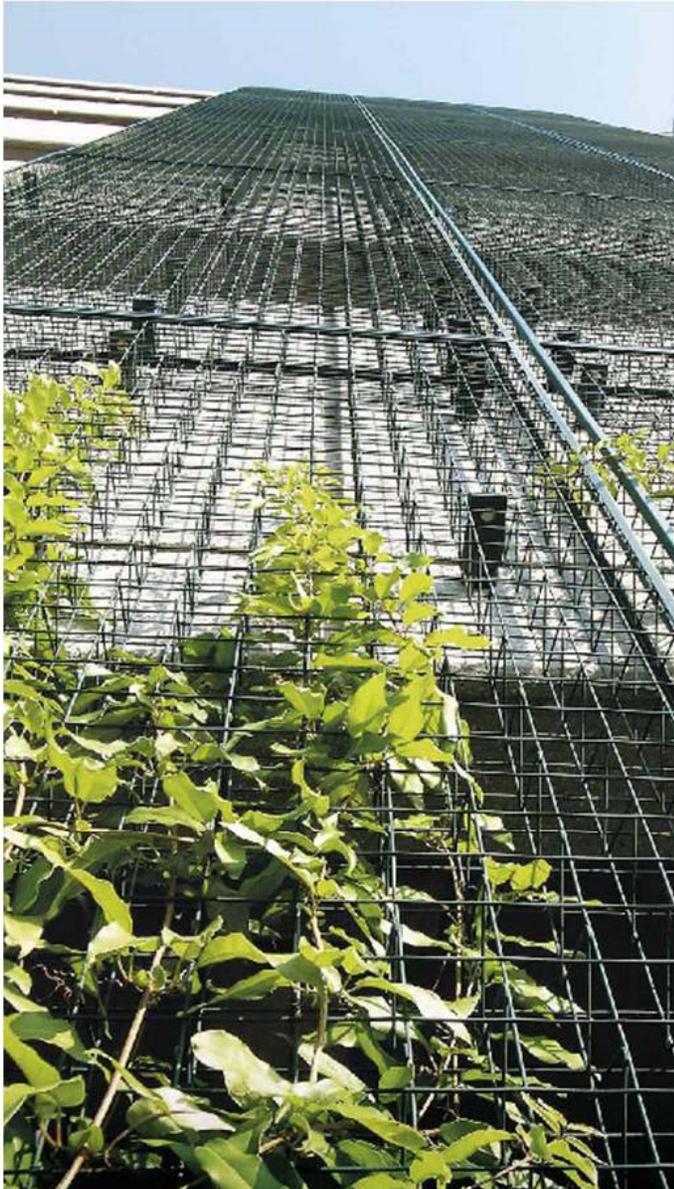
Module B

2nd: 50,000 sf raised
1st: 50,000 sf infrastructure
Total: 100,000 sf





Above: Prince William County—30 miles from DC
Top Left: 160 Acres of expansion land abutting facility
Bottom Left: Bird's eye of site looking northeast



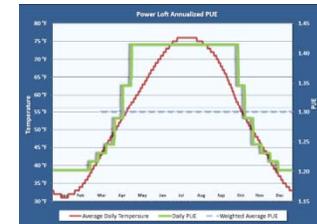
LEED Silver Certification

- Energy Efficiency
- Sustainable Sites
- Water Efficiencies
- Minimal Atmospheric Impact
- Use of reusable and regional materials
- Responsible waste management



PUE = 1.28 (annual average)

- 35% savings over most existing data centers
- Reduced CO₂ emissions
- Government Energy saving credits



NVTC 2009 “Green” Award

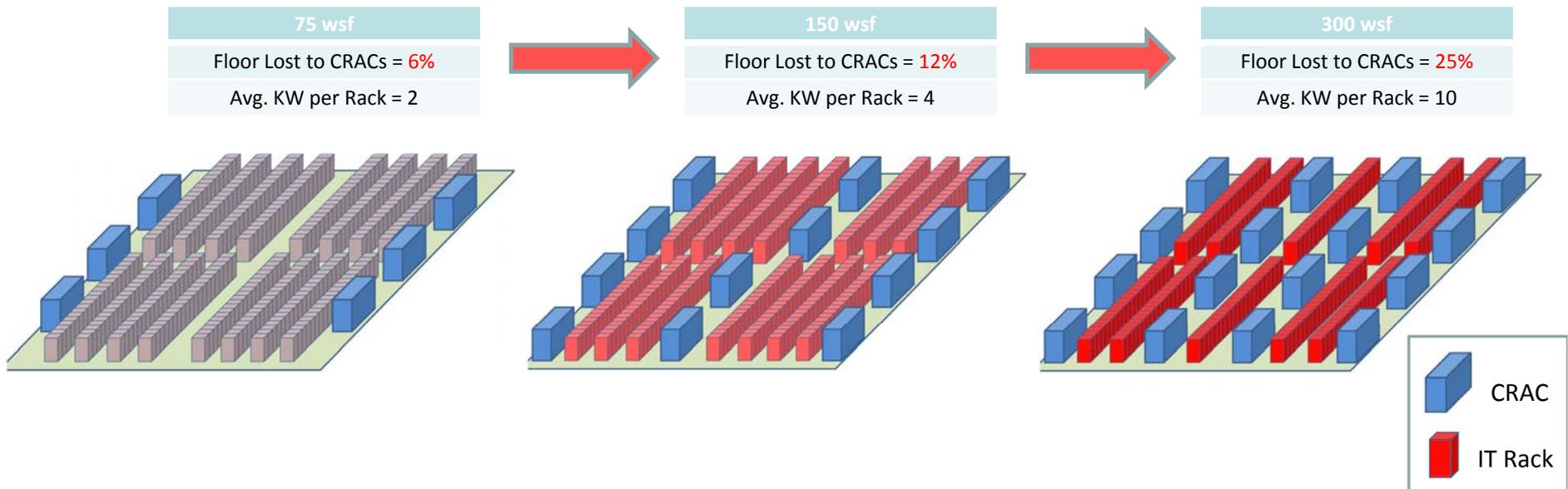
- Northern Virginia Technology Council
- Small business category
- One of two companies cited
- Recognition for energy efficient design





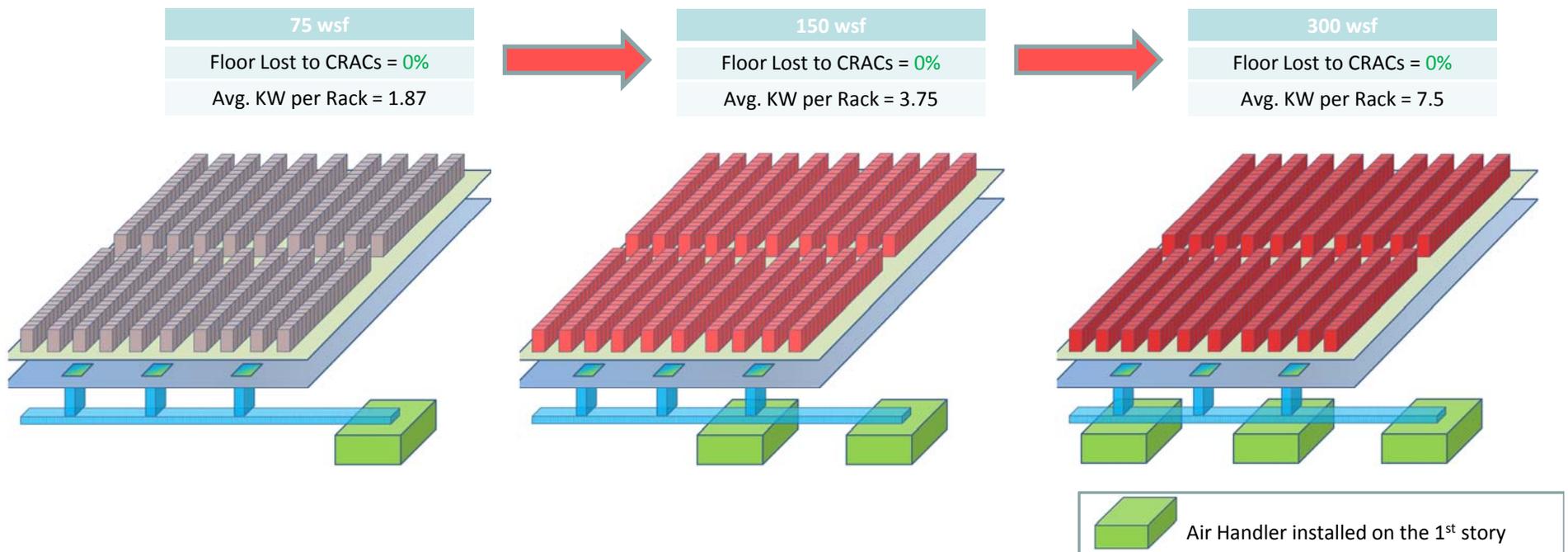
Power growth challenges in traditional data centers:

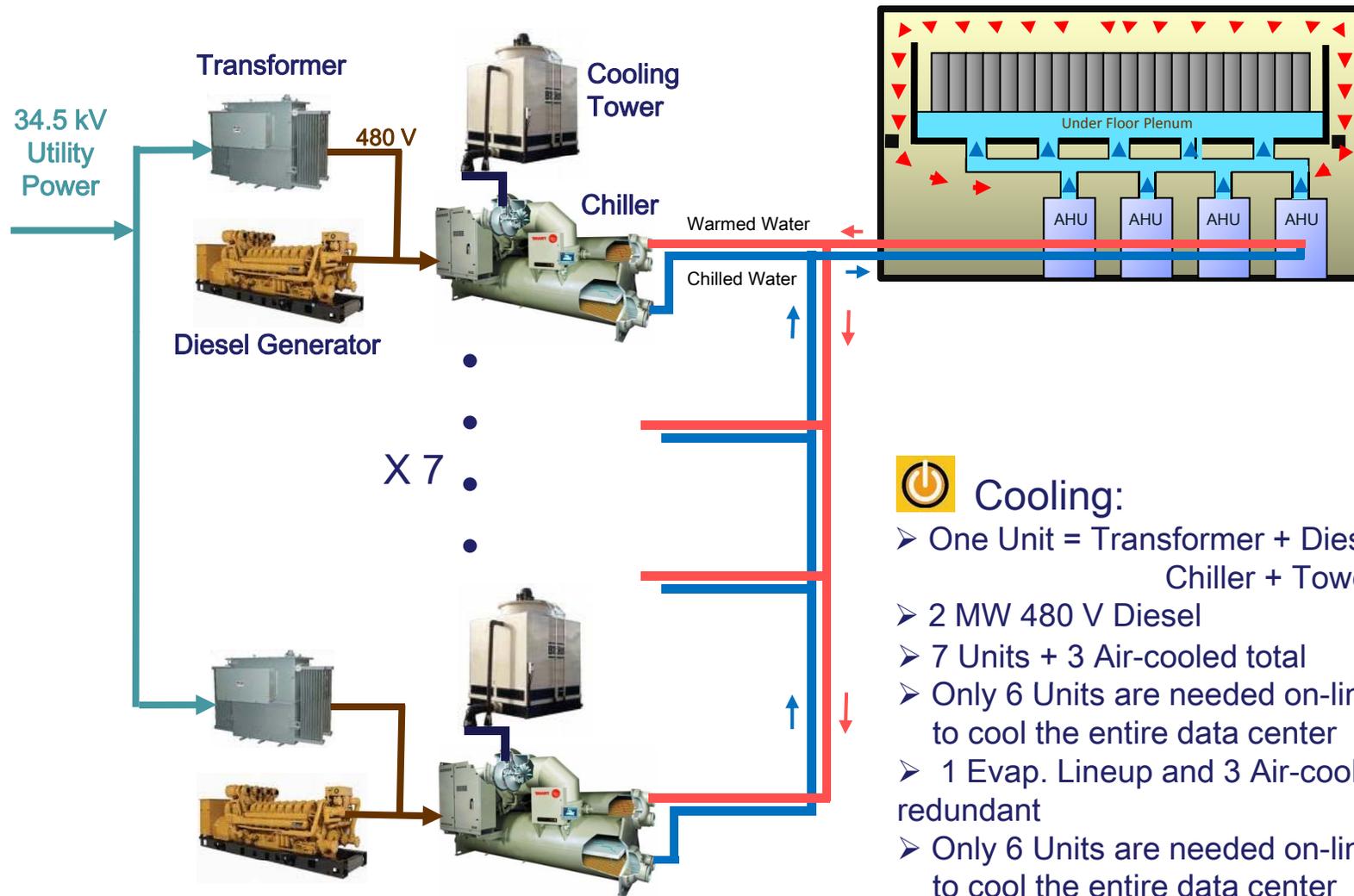
- ✘ Useable raised floor is lost to CRACs
- ✘ CRACs then compete with racks for power and cooling
- ✘ Construction on the raised floor creates unavoidable disruptions
- ✘ Disruptions repeat with subsequent additions of power



Power Loft power expansion solution:

- ✓ Minimize raised floor attrition by eliminating CRACs
- ✓ Apply industrial scale cooling methods to maximize efficiency
- ✓ Maximize the ratio of racks per raised square feet
- ✓ Segregate power and cooling operations from the secured raised floor

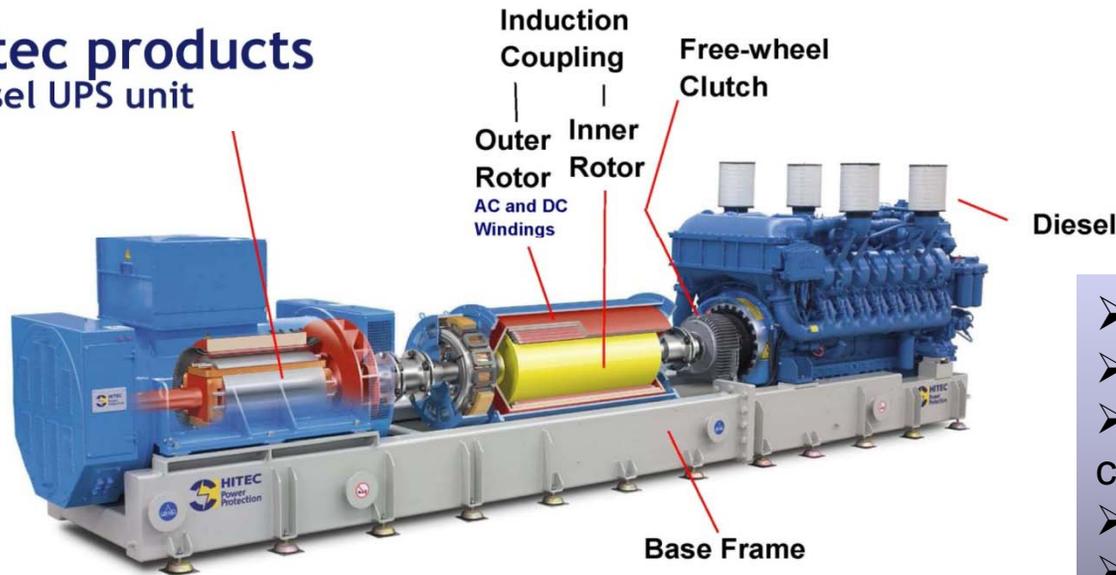




Cooling:

- One Unit = Transformer + Diesel + Chiller + Tower
- 2 MW 480 V Diesel
- 7 Units + 3 Air-cooled total
- Only 6 Units are needed on-line to cool the entire data center
- 1 Evap. Lineup and 3 Air-cooled redundant
- Only 6 Units are needed on-line to cool the entire data center

Hitec products
Diesel UPS unit



- 2.5 MVA / 2 MW System
- 480 Volt / 60 Hz
- Continuous power conditioning
- 1,250 units sold worldwide
- 1,476 Megawatt total capacity
- Installed in 45 countries

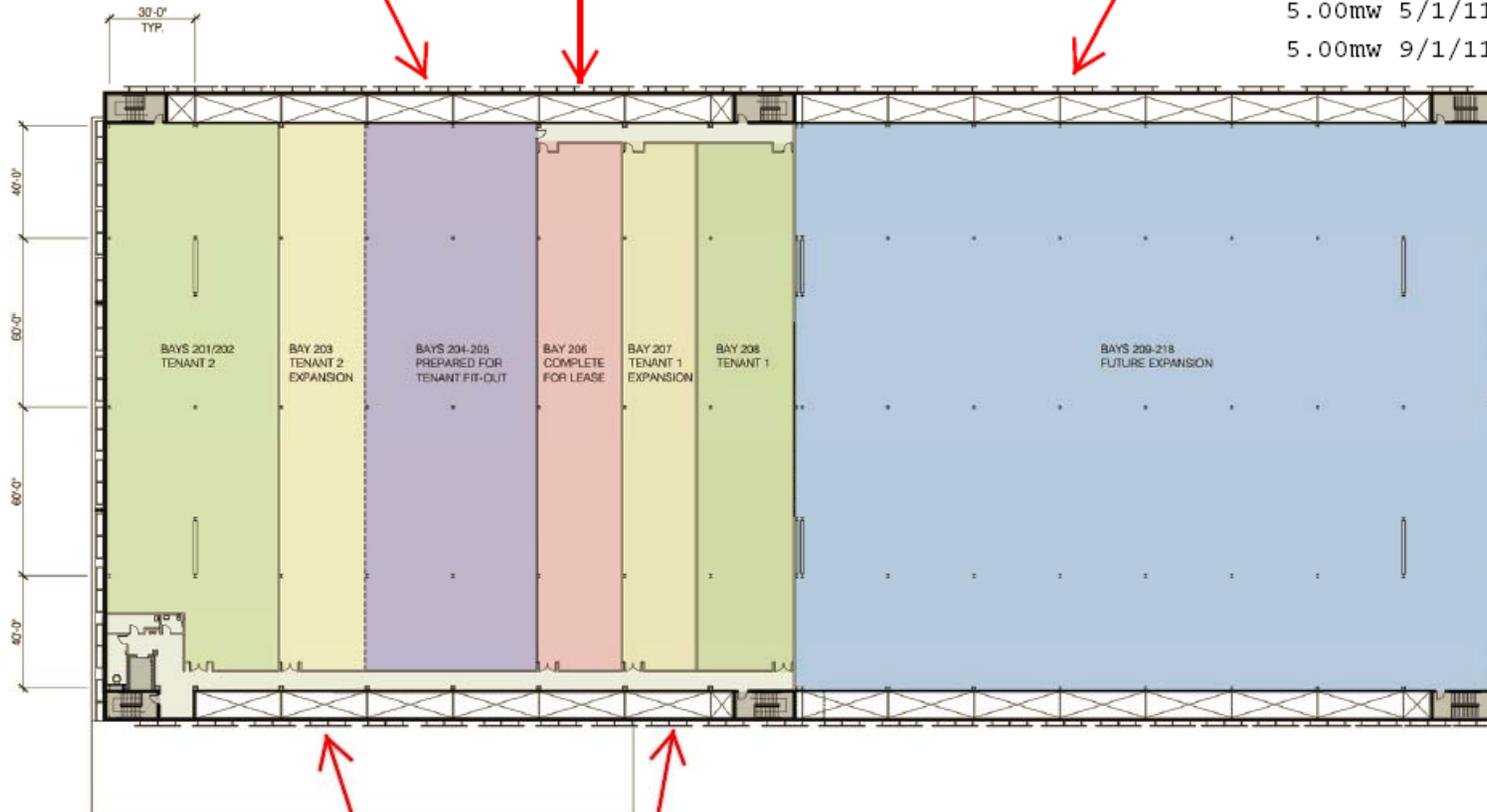
Power to rely on  People to rely on

- 96% Efficiency
- 25 year life expectancy with no reserve degradation
- No reinvestment costs other than maintenance
- ½ Floor Space Requirement of Static UPS (no A/C)
- Dual output (critical and essential) provides backup for HVAC pumps and fans
- Faster recharge and recharge under diesel in comparison to static UPS
- TCO studies show minimum \$700,000/mW savings over static UPS over 10 years

Suite 204-205
11,208 sf/raised
Up to 3.75mw 11/1/10
Total: 1.875mw

Suite 206
5,604 sf/raised
1.0 mw 7/1/10
0.875mw 11/1/10

Suite 209-216
45,741 sf/raised
Option A: 15.0mw 210 days
Option B:
5.0mw 1/1/11 +
5.00mw 5/1/11
5.00mw 9/1/11



Suite 203-207
Subject to RFR
10,326 sf/raised
Up to 3.75mw 11/1/10







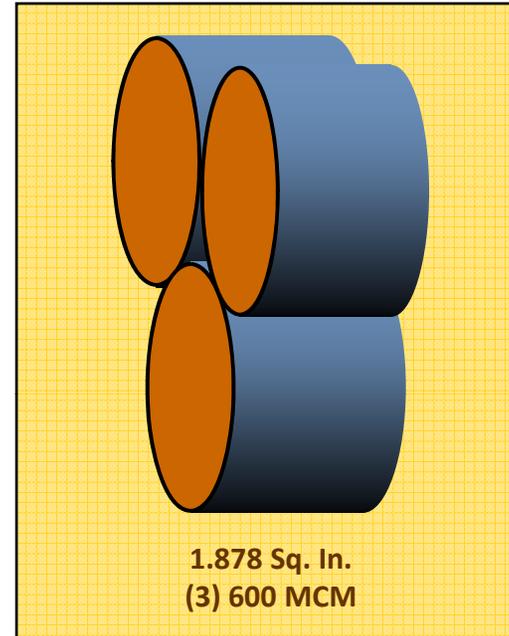




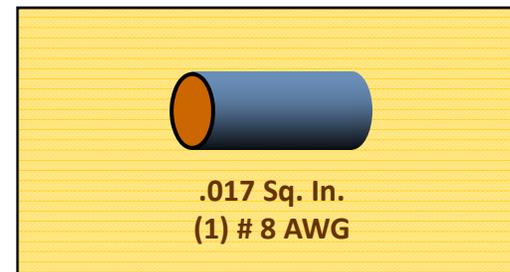
DC Power Advantage



**Conductor Size Required to
Deliver 30 KW 100 feet at -48V**



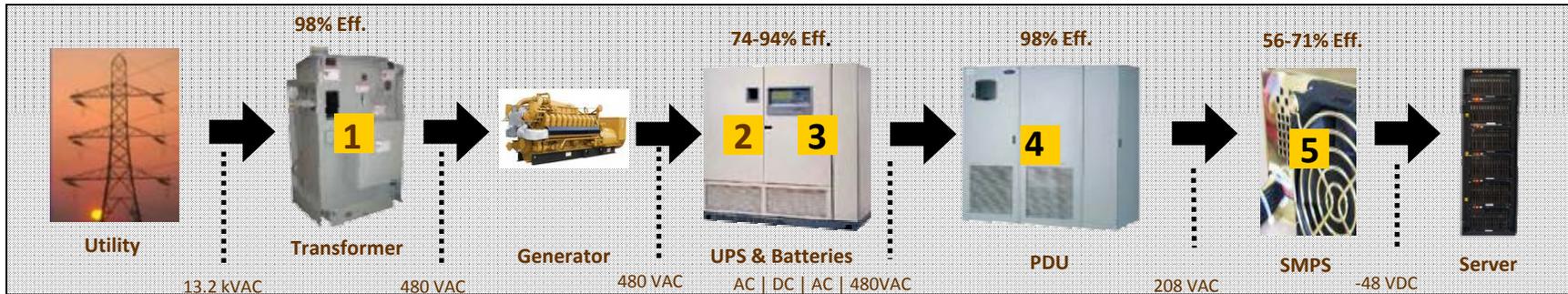
**Conductor Size Required to
Deliver 30 KW 100 feet at -550V**



AC AND DC POWER PATHS

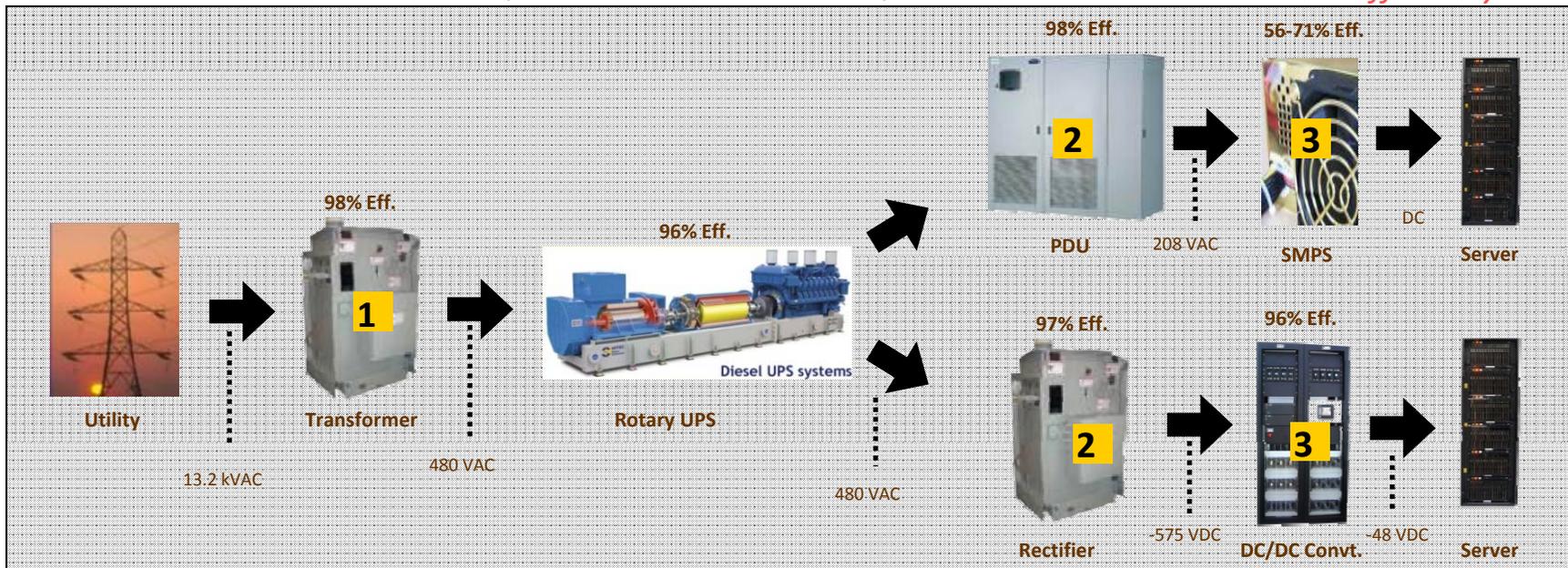
Typical AC Power Path (5 Electrical Conversions)

54% Overall Efficiency



Power Loft AC/DC Power Path (3 Electrical Conversions)

61% Overall Efficiency AC
89% Overall Efficiency DC





- 120kW in a 19" rack
- 95% Efficient
- N+1 Redundant
- -575VDC input, -48VDC output
- Hot swappable drawers
- Dual feeds
- Redundant parallel controls



Power Loft Advantage: 25% more useable floor space!

Number of Racks



kW per Rack



Electric Cost

