## **Forced Air Cooling**

Providing solutions for your specific cooling needs



## Avail Bus Services is a leading provider

Your company is engaging in a power uprate at your facility and a comprehensive analysis has concluded that Forced Air Cooling (FAC) of your bus system is necessary to accommodate the proposed higher current.

Forced Air Cooling designs have long been the most efficient and economical means to dissipate heat within isolated phase bus systems. To accomplish dissipation, cooled air under pressure is introduced within the two outer phases of bus. This air is introduced near the center of the system and moves in opposite directions– toward the generator and step-up transformer– before being channeled to the center phase of bus. The air then moves through an air-to-water heat exchanger where it is cooled and recirculated through the bus system.

As a leading bus systems manufacturer, Avail is also a leading provider of IPB cooling packages.

### **Proven Solutions**

- Avail has designed and manufactured FAC units for many different types of fuel sources, including: hydro, fossil and nuclear facilities.
- We have provided new equipment for MUR's, SPU's and EPU's at these facilities, as well as replacement units for under performing equipment.
- Regardless of your application, Avail can provide you with a solution to meet your specific cooling needs.





# Engineered to your specific requirements

Prior to moving forward with any uprate program, many important factors must be reviewed regarding your facility's current bus system. These factors should only be addressed by specialized professionals, qualified and experienced in highly engineered electrical bus duct applications.

A complete and comprehensive engineering analysis of the system will be performed to fully understand the current capacity of your equipment (including IPB, cubicles and existing cooling units) and identify any areas that need to be addressed for the specified uprate. A full CFD (Computational Fluid Dynamics) analysis will also be completed to evaluate air flow and heat loads on the system.

Utilizing the results of our analysis, we can provide specific ROI calculations and provide recommendations based on costs per kilowatt gained.





### The single source advantage

Avail prides itself as the only IPB manufacturer that can design, build and install our own FAC units. This commitment to complete service is key, as this comprehensive expertise allows for a single point of contact throughout the project—and eliminates the likelihood of communication failures that often occur when multiple contractors are involved on a project.

We ensure that each step of the project is performed to all specifications. From owner preferences to the required standards, Avail can provide the complete design, installation, and service solution.

#### Avail's FAC System Advantage

- Small Footprint
- Save space for other equipment
- Entire FAC system fits under IPB
- Maintenance Friendly

   Maintain components while unit is operational
  - Coils can be removed if necessary
  - Fan and motors are outside of air flow
- Flexible Location of Unit - Indoor or outdoor ilnstallation
- 100% System Redundancy
- All components duplicated: Fans, Motors, Coils, Power Sources
- Redundancy eliminates single point of system failure
- Data collection unit serves to monitor and alarm









Avail utilizes the latest computerized technology, analysis, and modeling techniques.



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