Electrical Distribution & Generator Systems

Prism designed an electrical distribution upgrade, including this new switchboard, for Airport Executive Park.

Electrical substations, distribution panels and generator systems are critical for providing reliable electricity throughout buildings. Property owners, managers and operators need to **identify equipment that has deteriorated or reached the end of its useful life** and plan for their replacement before they fail.

Electrical system assessments help to identify vulnerabilities within electrical and generator systems that need to be addressed. Assessments can also assist in capital planning and address current and future electrical needs. With a plan in place, **risks can be mitigated to ensure reliability for essential services today and in the future**.

Our team of engineers, project managers and specialists stay on top of design trends, technology, utility requirements, and code standards so that we can design **cost-effective improvements**. We follow through with project management support, review of the installations and the establishment of ongoing maintenance requirements.

In our comprehensive approach, we consider:

- Occupant needs: current and future electrical capacity (ex. EV car charging stations)
- Space usage and changes for occupants
- Energy efficiency improvements
- Low carbon electrification or fuel switching
- Physical space constraints
- Utility requirements
- Service continuity during implementation

Our Process:

Assess

Analyze

Recommend

Design & support

Verify & monitor

Prism ENGINEERING

saving you energy™

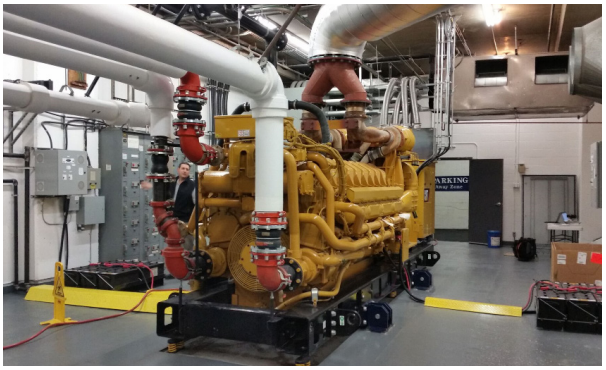
Case Studies

Airport Executive Park (AEP), Richmond BC
Electrical Building Systems Condition Assessments

The AEP Property Manager brought Prism in to assess the main electrical building systems, identify the current condition of the electrical equipment, and provide a long-term strategy to renew the electrical systems in nine buildings. Prism developed a capital plan to upgrade the building electrical distribution equipment and prepare the facility for the addition of electric vehicle charging stations and other electrical distribution needs for the future.

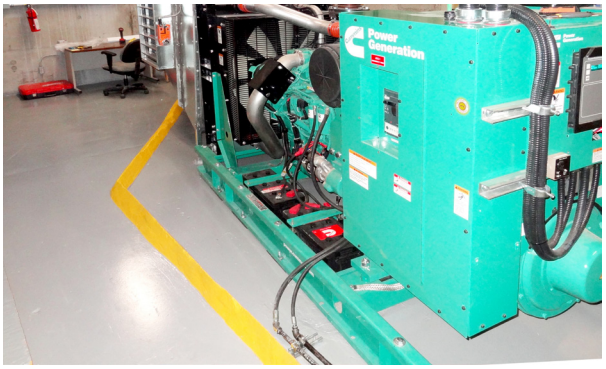
Harbour Centre, Vancouver BC
Data Centre Generator upgrade

From review to design, Prism worked with the client to bring in a new replacement generator. This included being on-site to ensure compliance with design specifications and client requirements. Prism was also the prime consultant overseeing structural support work for the removal of the old and coordinating the installation of the new generator. The new 3-megawatt generator has about 30 times the capacity of a standard generator found in many commercial buildings. This generator provides a critical backup system for the many server rooms located in the data centre.



1285 W. Broadway, Vancouver BC
Generator replacement

New city water bylaws prompted the search for a new generator that would no longer rely on the city water cooling system. Prism provided both electrical and mechanical services to design a full generator and electrical distribution system replacement. The new replacement generator included ventilation to the exterior from a generator mounted cooling system. An upgrade to the electrical distribution was required to bring it up to current code requirements. Prism also coordinated implementation including the tender process, shop drawing reviews, contractors on site and field reviews to ensure installation was completed as specified and met client requirements.



Canada Post Building, Calgary AB
Major Electrical Distribution upgrade

Prism designed a major electrical service upgrade to ensure a higher level of reliability and redundancy. The single service system was converted to a dual electrical service system. The electrical distribution equipment was upgraded to include a double ended substation. The system now includes the ability to connect a 3-megawatt generator to power the full facility should a major utility failure occur. Safety features include remote operations of high voltage equipment during shutdowns or potential faults. The remote controls system also includes load monitoring so operators can prevent overloading.

Prism ENGINEERING

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From design to implementation, we provide energy management, electrical and mechanical engineering, utility monitoring and sustainability consulting to help our clients create a greener, more energy efficient world.