

# EXECUTIVE TOWER

MONTEVIDEO, URUGUAY

## INTRODUCTION

The Executive Tower in Montevideo, also known as the Presidential Tower, is today the official workplace of the president of Uruguay. Originally intended as a courthouse when construction began on the building in 1965, development was halted in 1973 during the Uruguayan coup d'état, which marked the start of a civic-military dictatorship that lasted until 1985. By then the building was too small for the Uruguayan justice system, and the project remained unfinished until 2006, when then-president Tabaré Vázquez decided to finish construction and move the seat of presidential executive power from Estévez Palace next door to the Executive Tower.

The building has 12 floors, with the first nine divided into two areas: the South Executive Tower, which overlooks Plaza Independencia, and the North Executive Tower, which overlooks the Ramla, an avenue that runs along the coast of Montevideo.

Reliable Controls Authorized Dealer AC Applied Technologies installed a Reliable Controls system during a retrofit of the building in 2017.



**Reliable**<sup>®</sup>  
controls



**MARKET SEGMENT**  
Administration

**PROJECT TYPE**  
Retrofit

**INSTALLATION TYPE**  
HVAC, lighting

**TOTAL AREA**  
28,500 m<sup>2</sup> (306,771 ft<sup>2</sup>)

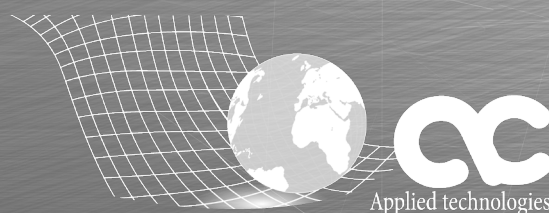
**PROTOCOL**  
BACnet

**INSTALLED EQUIPMENT**  
55 MACH1™ controllers  
2 MACH2™ controllers  
4 MACH-Pro1™ controllers  
4 MACH-ProCom™ controllers  
32 MACH-ProView LCD controllers  
3 MACH-Zone™ controllers  
2 MACH-ProZone™ controllers  
RC-Studio® software

**INTEGRATED EQUIPMENT**  
Schneider PM710 multimeters

**TOTAL SYSTEM OBJECTS**  
1,100

**RELIABLE CONTROLS AUTHORIZED DEALER**



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## PROJECT DETAILS

At the start of the retrofit project, the building had few mechanisms in place for the integral control of lighting and air conditioning. AC Applied Technologies integrated a new Reliable Controls system with the existing older building controllers.

AC Applied Technologies designed the HVAC system at the Executive Tower using three EIA-485 buses and RC-Studio software to integrate MACH1, MACH2, MACH-ProZone, and MACH-Pro1 devices with three water chillers, 64 air-handling units with electric reheat coils, two generators, and over 1,100 control objects. Powerful, freely programmable MACH-ProCom controllers communicate over an Ethernet LAN to regulate the lighting on each floor from a central point.

Today building operators use RC-Studio, a multivendor, multiprotocol integration solution for database, alarming, scheduling, trending, and sequence-of-operation programming, to monitor and control the HVAC and lighting systems. Because the Executive Tower is a symbolic building with a public purpose, its air quality, comfort, and system stability are often referenced for new construction projects in the region.

One of the biggest challenges of the project was to facilitate network communication through a bus that passes through areas in the building with a lot of electrical noise. Prior to the retrofit, the electrical panels had floating ground references, which caused failure at certain points along the network. After several tests, AC Applied Technologies stabilized the network using filters and reconnected the system to a single ground reference with help from the building's electrical contractor.

After the building control system retrofit, yearly energy costs were reduced by an impressive 25–30 percent.

The building control system “helps with energy savings by managing occupancy, lighting, and equipment operation and keeps all areas of the building comfortable,” said security consultant Agustín Sánchez. “AC Applied Technologies provides good service and security against any event that may arise from both operation and training in the use of the system.”

Reliable Controls and AC Applied Technologies were thrilled to install a simple, flexible, sustainable building control system in the building that houses the office of the president of Uruguay.



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