Case Study

Church Building

Immanuel Lutheran Church

Boiler Replacement Needs:	In an effort to increase efficiency of 50 year old boilers and save energy and fuel consumption, existing boilers were replaced with high-efficiency condensing boilers.
Project Installation Date:	October 2013
Contractor:	Boiler Pros of Chicago, Inc.
Type of Facility:	Church Building (East and West)
Name of Building:	Immanuel Lutheran Church
Location:	Downers Grove, Illinois
Construction Details:	Total Number of Boilers Required for Job-three
Solution:	West: Weil-McLain® Ultra™ 399, Aqua Plus® 55 Tank, WMCR6 Zone Control East: (2) Weil-McLain® Ultra 750 with BMC Panel

West Building After

East Building After

Details:

When the existing boilers were operating at less than 60% efficiency, Joe Hansen, owner of Boiler Pros of Chicago, Inc., was called in to increase energy savings and redundancy in both the East and West locations of the facility.

The series piping was changed to primary secondary piping, which reduces energy loss of system water running through a boiler that is not firing. Each boiler has 5:1 modulation versus the old boiler 100% on/off. In addition to the 5:1 modulation each boiler also has an indoor/outdoor reset schedule.

By combining combustion efficiency, thermal efficiency and seasonal efficiency, true savings are now optimized. The new Ultra 399 has increased efficiency up to **92.5%** and the Ultra 750 has brought up efficiency to **93.6%**. With these efficiency ratings the facility is now able to receive rebates from the gas company, ultimately saving fuel and money.