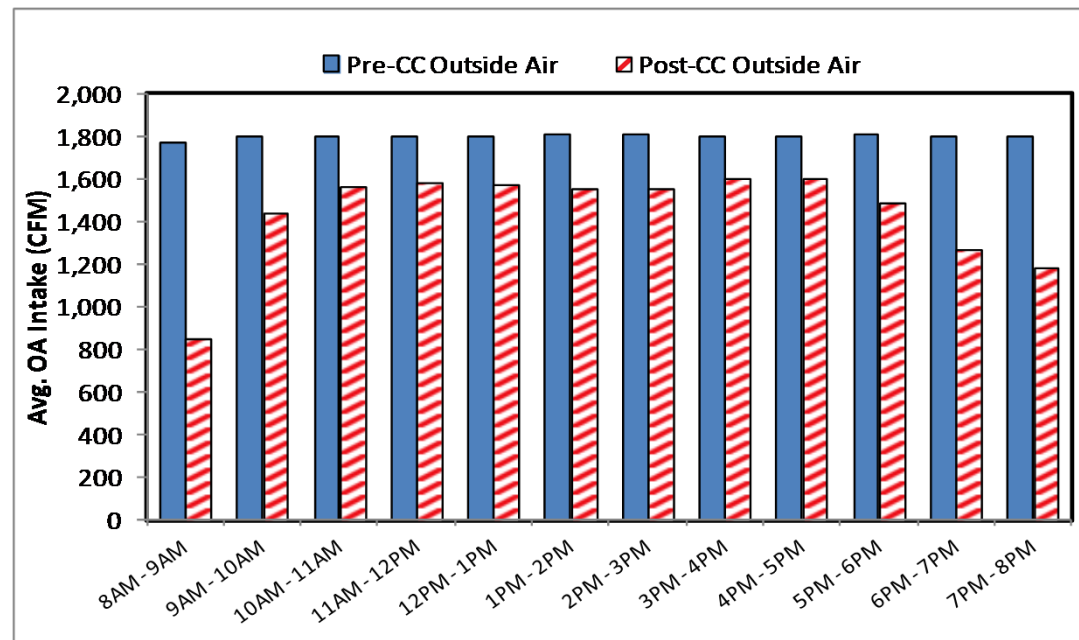


Examples (cont.)

- SDVAV-served spaces at Anderson HS are equipped with motion sensors whose signals are tied into the BAS. The system was previously using these signals to set back or set up the space temperature setpoint when no occupancy was sensed. Building on this, and extending the concept of demand based resets, the CC[®] team implemented a reset of the outside air volume setpoint based on the number of occupied zones.

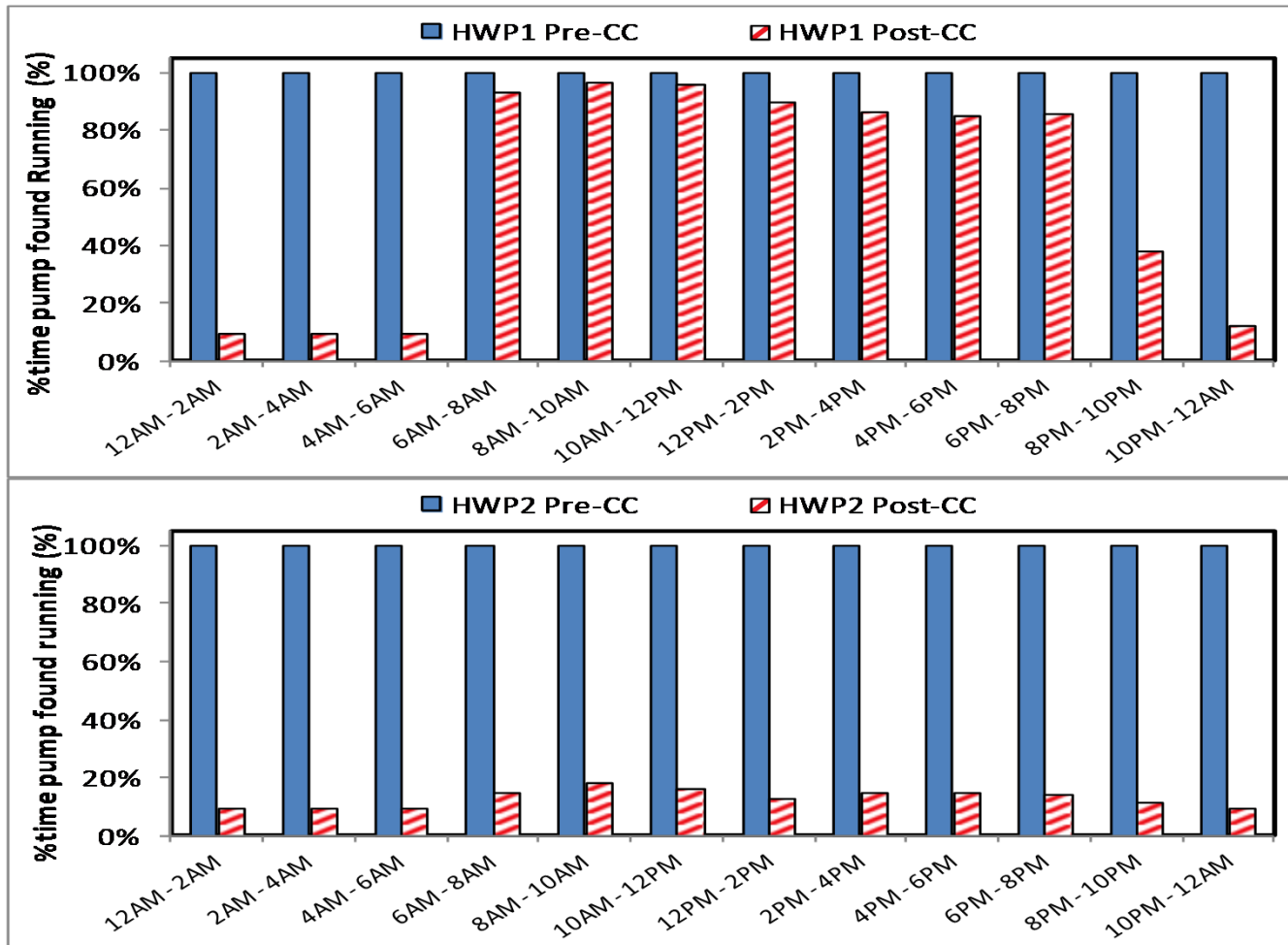


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Examples (cont.)

- Control of Anderson's boilers within the BAS was limited to enable/disable functionality only, and thus fell outside the scope of the project. However, due to trend analysis it was discovered the HW pumps were running around the clock.
- After automatic control was restored, after-hours operation was limited to night setback calls only, and the pumps staged as intended with hot water pump no. 2 (HWP2) rarely coming on.

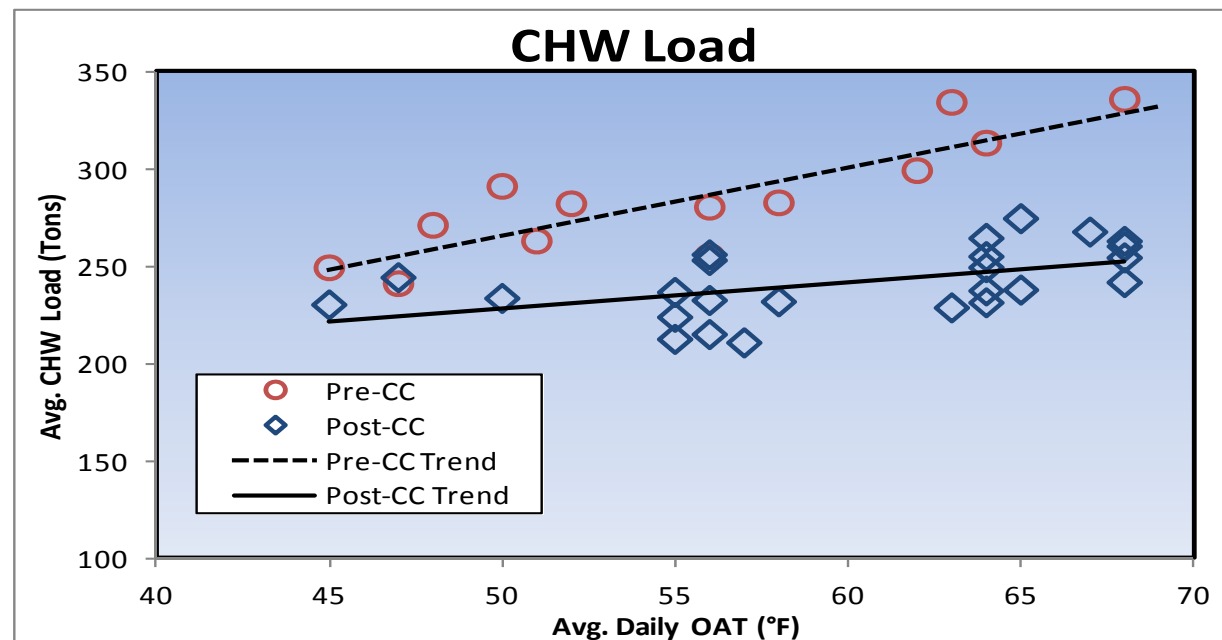
Case Study: Examples (cont.)



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Examples (cont.)

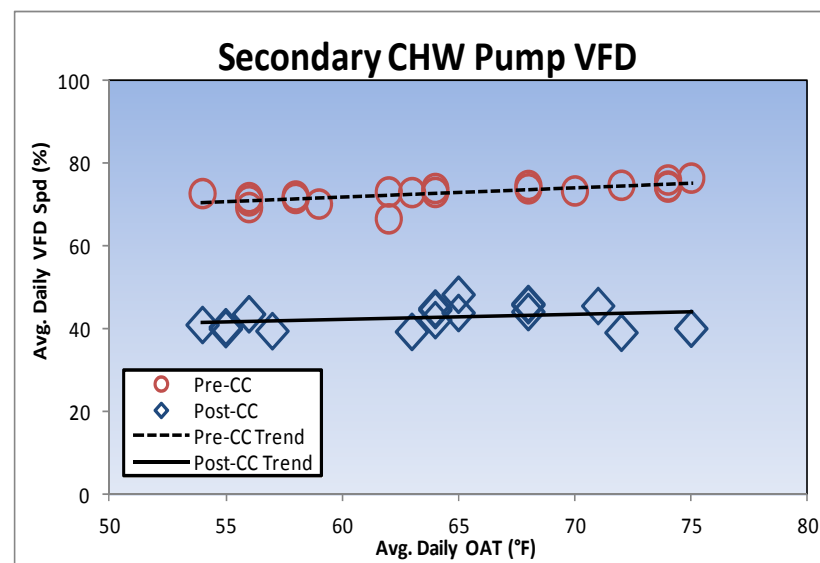
- Cooling supplied to the building was trended in the BAS to monitor the indirect effects of changing setpoints, widening deadbands, reducing reheat, etc. Figure below shows the average daily loads during operation plotted against corresponding average daily outside air temperatures. Sequence changes related to CHW load were successful in reducing the CHW consumption as expected.



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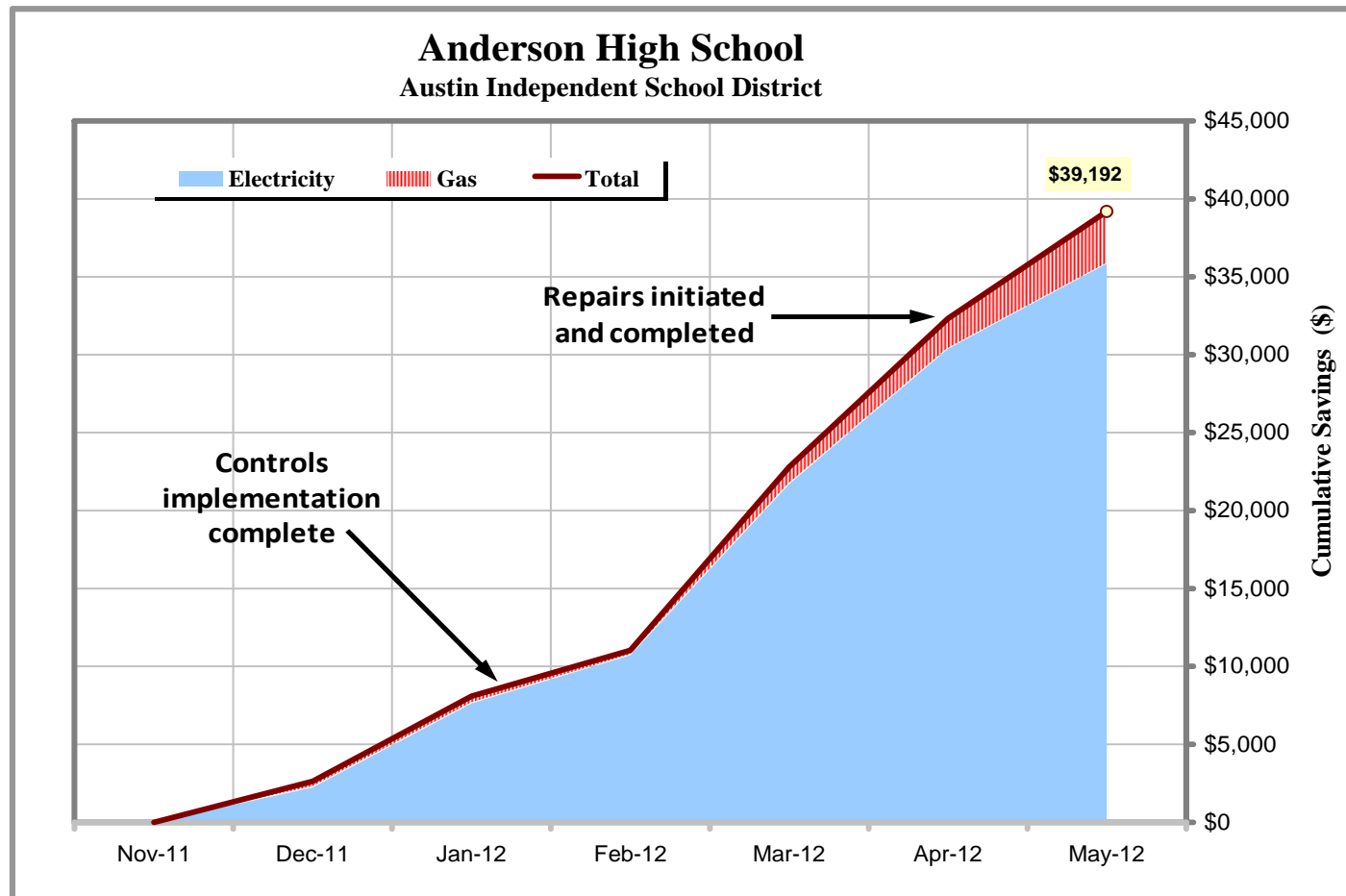
Examples (cont.)

- The DP setpoint for the secondary CHW pump VFDs was reset in order to maintain the most open AHU CHW coil valve at 90%. It was suspected prior to implementation that the existing constant DP setpoint was far higher than necessary under most conditions. Post implementation trend data confirmed this suspicion. Resetting based on actual demand made the system more dynamic and self balancing, allowing the pumps to slow significantly.



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M&V – Savings Report (cont.)



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Lessons

- Team effort
 - Analysis of trend data relevant to individual measures played a vital role
- Using "micro" level data analysis and feedback throughout the CC[®] process, in concert with "macro" level whole building M&V down the line, can be a valuable tool
 - Feedback tool for future assessment studies
- Automated tools such as dashboards are being developed to help monitor and improve the process. However, sound engineering practice and experienced hands-on analysis is essential
- In addition to potentially increasing project savings, micro analysis can also increase building owner and operator confidence in the CC[®] team and process

Discussion and/or Questions?

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