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CAPITOL ENERGY SYSTEM (CES) CLICKAWAY CASE STUDY

**CLICKAWAY REDUCES ENERGY COST BY \$45 PER LOCATION
WITH CES ENERGY MANAGEMENT SYSTEM**

EXECUTIVE SUMMARY

ClickAway, a Verizon Authorized Reseller, identified a financial impact associated with the inability to monitor and manage the HVAC control system throughout their locations.

The CES Total Environment Control System was installed in less than 30 minutes in each location and provided immediate savings and better management of their HVAC system. Within the initial 4-month period, spending was reduced by nearly 12.5% and structural inefficiencies, including damaged duct structures were identified. Overall, ClickAway management realized a cost-savings, reduced time and man-power spent on maintenance, and improved the efficiency of the facilities operations.

“ This is very interesting. We are saving some real dollars here.

— President,
ClickAway Computer and Verizon Wireless

BACKGROUND

ClickAway is a full-service technology company and Verizon Authorized Reseller with over 40 retail locations in Northern California. Located in open air shopping plazas, ClickAway retail sites are contracted under triple net leases, where the tenant is responsible for energy costs.

Within each location, management was faced with the same dilemma - the inability to monitor and manage the existing “nonintelligent” HVAC control system. In most retail environments, HVAC systems account for the greatest demand of energy and could be as high as 50% of a retail location’s energy cost. ClickAway’s HVAC issues were common in the retail space:

- No insight into how well their HVAC systems are working
- Immediate failure of HVAC equipment, leading to lost sales
- Employees leaving equipment on during store closures, wasting money
- Management of multiple HVAC vendors, depending on store location
- Change of schedules during Daylight Savings Time.

Management relied heavily upon store managers to properly monitor the HVACs but had no oversight into their performance. The organization could not quantify the actual financial impact of the HVAC system on total energy costs, measure the efficiency of the HVAC equipment or determine how much energy was being wasted. However, upon an internal corporate review of energy related expenses, it was evident that the HVAC deficiency contributed to a significant “sink” when multiplied across 40 locations.

The primary goals of acquiring the CES technology was to reduce energy expenses, monitor and troubleshoot HVAC issues, and reduce the time and resources associated with site-to-site management of their HVAC systems.

PROPOSED SOLUTION

Upon identifying ClickAway's pain points, CES presented our Energy Management Solution (EMS). By simply swapping out their standard thermostat with our advanced, intelligent Wi-Fi thermostat and monitoring system, we would provide them with instant detailed information on their HVAC system. The installation of the CES thermostat devices, required no interruption of store operations and business carried on as usual.

Our Total Environment Control System (TECS) provides ClickAway with the following controls and information:

- Setup schedules and programs to ensure that the equipment is running only during hours of operations
- Automatically adjusted timing for Daylight Savings Time
- Lock out employees from making it too cold or too hot
- Provide graphs of equipment run times for reviewing the effectiveness of HVAC equipment
- Alerting for any immediate HVAC issues
- Manage the relationship with HVAC contractors for quick issue response

This set of features provided ClickAway with an intuitive, user-friendly interface and usage monitoring, while creating management accountability by limiting the ability for employees to adjust settings through permission authorization features.

“ I love the system, and no longer needed to worry about the HVAC system being managed efficiently. My bonus is tied to the operational costs of the store and energy spend is a big piece of those costs.

— Store Manager



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AT A GLANCE ENERGY SAVINGS

- Average store energy usage declined by 12.42%.
 - Davis saved an average of 17.5%.
 - Folsom saved about 4%.
 - Others saved between 12 and 13%.
- Daily savings averaged \$1.55 per store.
 - This equates to more than \$45 per month per store on average.
 - Davis and San Ramon each saved more than \$2 per day.
 - Folsom saved about 33¢ daily, still about \$10 per month.
- Savings, adjusted for temperature, averaged \$1.74 daily.
 - Savings totaled more than \$52.50 per month.
 - Two stores saved more than \$70 per month, adjusted for temperature.
 - Folsom, the lowest performing store, still saved \$16.78 per month (adjusted).



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PERCENT ENERGY SAVINGS

Store Location	May	June	July	Aug.	Sept.	Avg.
Davis	22.3%	5.9%	20.8%	20.7%	17.8%	17.47%
Folsom		0.7%	9.7%	2.1%	4.1%	4.14%
Manteca		20.5%	19.5%	14.8%	7.6%	15.56%
Pleasant Hill		15.2%	1.9%	16.3%	14.7%	12.05%
San Ramon		8.9%	6.9%	16.5%	19.2%	12.89%
Average		10.22%	11.75%	14.08%	12.69%	12.42%

RATE-ADJUSTED SAVINGS

Store Location	May	June	July	Aug.	Sept.	Avg.
Davis	\$2.85	\$1.05	\$2.92	\$2.93	\$2.36	\$2.42
Folsom		\$0.06	\$0.82	\$0.16	\$0.26	\$0.33
Manteca		\$1.83	\$2.13	\$1.55	\$0.69	\$1.55
Pleasant Hill		\$1.52	\$0.19	\$1.75	\$1.52	\$1.25
San Ramon		\$1.59	\$1.19	\$2.81	\$3.25	\$2.21
Average		\$1.21	\$1.45	\$1.84	\$1.62	\$1.55

TEMPERATURE-ADJUSTED SAVINGS (EFFICIENCY LOSS OF 1% PER °F)

Store Location	May	June	July	Aug.	Sept.	Avg.
Davis	\$2.75	\$1.05	\$3.25	\$3.26	\$2.69	\$2.60
Folsom		\$0.32	\$1.06	\$0.39	\$0.44	\$0.55
Manteca		\$1.91	\$2.40	\$1.82	\$0.94	\$1.77
Pleasant Hill		\$1.52	\$0.49	\$2.02	\$1.78	\$1.45
San Ramon		\$1.27	\$1.52	\$3.10	\$3.52	\$2.35
Average						\$1.74

RESULTS

Initially, we implemented the EMS in five stores in Northern California to test the system. Each location, realized immediate savings. In fact, each test location enjoyed savings every month during the test. In total, energy usage over the five locations dropped by 12.4%, with the Davis store achieving energy savings of 17.5%.

Furthermore, a review of total dollars savings revealed that more money was saved than anticipated. On average, the stores saved \$1.74 per store per day. That's \$52.50 per month, two stores saved more the \$70 per month. Even the lowest performing store still saved nearly \$17 per month.

The CES system provided other positive results besides just energy and dollar savings. One store manager commented that he loved the system, as he no longer needed to worry about the HVAC system being managed efficiently. ClickAway management bonuses are directly tied to the operational costs, the installation of the CES positively impacted his wallet.

CES's system also identified and alerted us to inefficiently operating HVAC equipment. In one case, the system wasn't balanced properly causing the users to continually attempt to override the set points to provide comfort in the backroom in preference to the retail area. Similarly, we found that one system ran much more than it should have been given the outdoor temperature, pointing us to a mechanical problem with the condensing unit.



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