Southwest Texas Junior College

Year 1 Savings Report

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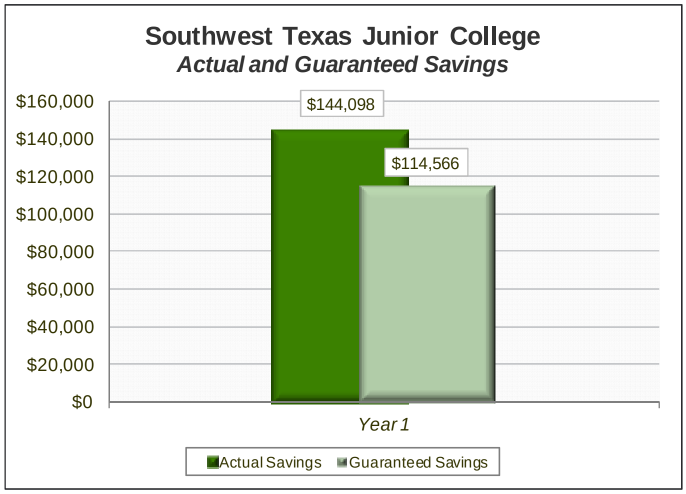
1.0 EXECUTIVE SUMMARY

Schneider Electric is excited to present the Year 1 savings totals achieved for the Southwest Texas Junior College performance contracting project. The analysis and evaluation of project performance has been completed and the results of the savings calculations show that Southwest Texas Junior College has earned **$144,098** in energy cost savings for Year 1. These savings totals surpass the $114,566 Year 1 guarantee mark and they help to communicate the great impact delivered by the project.

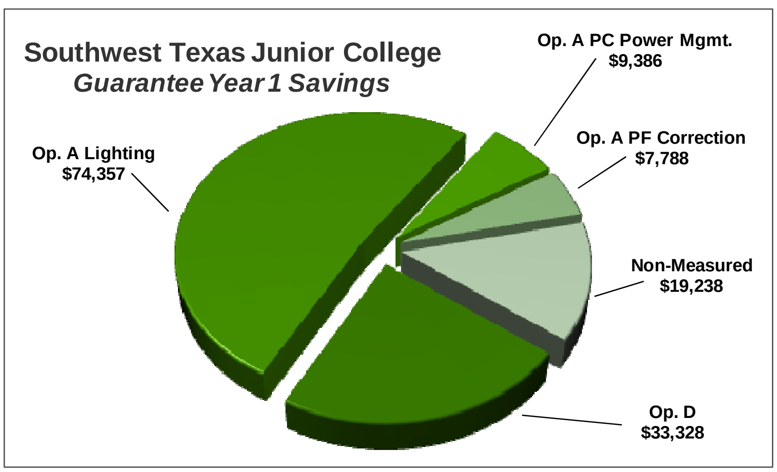


The college's energy savings achieved for Year 1 stem from several different sources as depicted in the pie chart below. One component of the annual savings total is derived from the lighting fixture retrofits that were completed at the Uvalde, Crystal City, Eagle Pass, and Del Rio campuses. The reduction in lighting load produced by the change has led to $74,357 in energy cost savings.

Another contributor to the overall annual savings total is drawn from the Option A Power Factor Correction savings measured at the Uvalde campus main electric meter. Improved monthly power factor readings made possible by the installation of a capacitor bank on site have generated $7,788 in Year 1 energy cost savings.

The third component of the project savings total was delivered through the installation of PC Power Management software on site. Improved control over the energy use of the college's PCs and monitors has helped to provide $9,386 in annual energy cost savings.

Building on each of the elements listed above, the last major component of the overall annual energy cost savings was established as a result of the building automation system work and mechanical improvements completed at multiple campuses. The resulting savings were measured using an Option D approach with the help of detailed building modeling tools. Final calculations for this component of the project have yielded a total of $33,328 in energy cost savings through Guarantee Year 1.



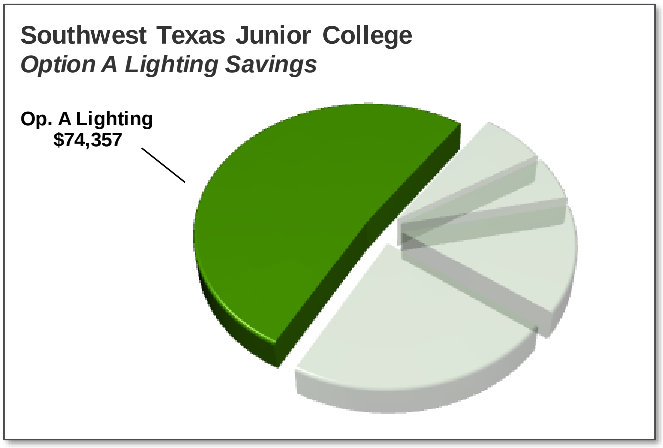
Finally, there is also a non-measured block of $19,238 in savings to account for the improvements made at some of the smaller sites included in the project.

Each of the ECMs mentioned above was chosen with a goal of assembling and delivering a package of solutions that both addresses the college's specific needs and also enables the greatest reduction in energy use. We believe the results of that effort and investment are on display at Southwest Texas Junior College and are also evident through the energy cost savings totals presented in this overview.

More details surrounding the savings achieved through the project will be provided in the sections of the savings report that follow. Congratulations on the great savings and project success!

2.0 OPTION A SAVINGS: LIGHTING

2.1 DETERMINATION OF SAVINGS



One of the most wide-reaching changes brought about by the performance contracting project at Southwest Texas Junior College was the lighting retrofit scope which was completed at many different buildings across multiple campuses for the college. During the installation phase of the project, older, high-wattage lighting fixtures were replaced with new, energy-efficient fixtures that promised not only decreases in annual energy consumption but also reductions in maximum electric energy demand for the individual sites.

In order to measure and report on the energy saving effects of these changes, Schneider Electric adopted an IPMVP Option A: Retrofit Isolation – Key Parameter Measurement approach. This Option A approach required a one-time calculation of annual energy savings through the use of savings formulas (all listed in the contract) along with a group of parameters, or formula inputs, which represent the factors that have and will determine lighting energy use before and after the retrofit. In the case of Southwest Texas Junior College, various formula inputs were required and they have each been listed below:

- *Pre-Retrofit Fixture Quantities*
- *Post-Retrofit Fixture Quantities*
- *Fixture Operating Hours*
- *Burnout Rates*
- *Demand Diversity Factors*
- *Heating Efficiency Conversion Factors*
- *Cooling Efficiency Conversion Factors*
- *Pre-Retrofit Fixture Power Draw*
- *Post-Retrofit Fixture Power Draw*

With the exception of the fixture power draw, all values that have been used for the parameters listed above are estimates that are the result of detailed engineering analysis and careful site investigation. The two remaining parameters, pre-retrofit and post-retrofit fixture power draw, have been derived from sample measurements from each fixture type that was involved in the retrofit. These samples were gathered for both old and new fixture types and were used to establish a representative power draw value for each fixture type that could then be included in savings calculations.

Savings were calculated by taking the difference between Baseline totals and Performance Period totals for both energy consumption and demand. The equation below shows how Baseline energy consumption was calculated for a given fixture. The same equation was used to determine Performance Period energy consumption after Baseline (or pre-retrofit) values were replaced with Performance Period (or post-retrofit) values.

$$C_B = (P_B \times (1 - B) \times Q_B \times H_B) \times (1 + CF + HF)$$

Where,

C_B = *Baseline Consumption Total*
P_B = *Baseline Power Usage of Fixture*
B = *Burn out Rate of Fixture*
Q_B = *Baseline Fixture Quantity*
H_B = *Baseline Burn Hours*
CF = *Cooling Efficiency Conversion Factor for Consumption*
HF = *Heating Efficiency Conversion Factor for Consumption*

2.0 Option A Savings: Lighting

A similar equation was used for determining Baseline demand values, and it has been included below. As was the case for the energy consumption calculations, Performance Period values are computed with the same equation after Baseline values are replaced with Performance Period values.

$$D_B = (P_B \times DF \times Q_B \times M) \times (1 + HF)$$

Where,

$D_B = \text{Baseline Demand Total}$
$P_B = \text{Baseline Power Usage of Fixture}$
$DF = \text{Demand Diversity Factor}$
$Q_B = \text{Baseline Fixture Quantity}$
$M = \text{Months of Annual Demand Savings}$
$HF = \text{Heating Efficiency Conversion Factor for Demand}$

Once values for all necessary inputs were available, kWh and kW savings were determined and the utility rates listed in the contract were referenced to determine Southwest Texas Junior College's overall light savings total: **$74,357**.

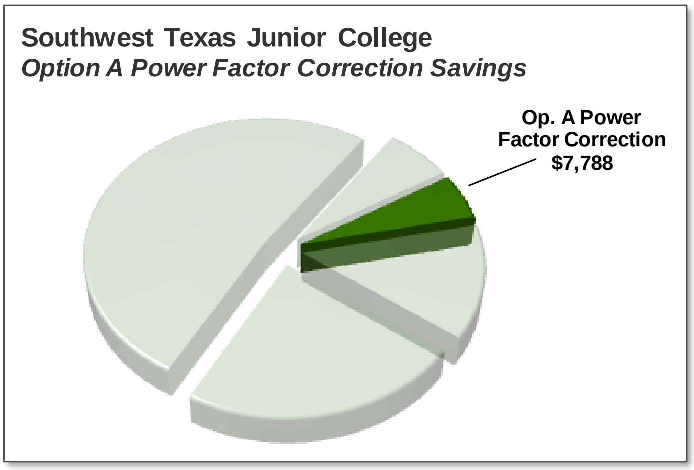
These savings are based on the complete table of lighting fixture retrofits that was listed in the contract. It is important to note, however, that after the contract was signed, additional lighting retrofits were added to the project scope and the savings from added retrofits have been included in the Guarantee Year 1 calculations. Please see Table 2.1 below for kWh, kW and $ savings totals for each campus site.

Site	kWh Savings	kW Savings	$ Savings
UVALDE MAIN	722,471	1,910	$58,742.74
DEL RIO	27,365	73	$2,309.78
DEL RIO - SUL ROSS	38,408	116	$3,174.09
EAGLE PASS	89,203	233	$10,130.11
Total	**877,448**	**2,332**	**$74,356.72**

Table 2.1: kWh, kW and dollar savings for all four sites included in Option A measurement strategy.

3.0 Option A Savings: Power Factor Correction

3.1 Introduction



Another improvement delivered through the performance contract was the power factor correction ECM. This improvement opportunity was highlighted in the development phase of the project during a review of SWTJC's past utility bills and rate structure. While reviewing the information available specifically for the Uvalde campus's main electric meter, it was discovered that power factor influences the meter's monthly charges and that consistently low values for this parameter had caused higher monthly charges for this meter in the recent past. To address this issue, SWTJC and Schneider Electric agreed to the installation of a capacitor bank to improve the power factor at this main electric meter on the Uvalde campus. An overview of the process used to determine the savings from this ECM is included below.

3.2 Determination of Savings

Schneider Electric chose to measure the savings from this improvement through an Option A: Retrofit Isolation - Key Parameter Measurement approach similar to the one used for the lighting retrofit. In this case, however, the parameter to be measured was the performance period power factor, and the only other inputs needed were metered demand values and pre-project power factor values, both of which were established by investigating the college's past utility invoices. The monthly values for the metered demand and pre-project power factor were included in the contract and they are included again in Table 3.1 below.

Billing Period	Baseline/Performance Period Metered Demand	Baseline Power Factor
January	904	92.4%
February	968	92.1%
March	824	89.7%
April	984	89.1%
May	904	87.4%
June	896	87.2%
July	884	86.8%
August	1116	88.0%
September	1040	89.3%
October	876	89.7%
November	756	91.6%
December	732	89.3%

Table 3.1: The demand and power factor values included above are estimates established by determining values that are typical for the Uvalde main meter.

Both pre-project power factor *and* metered demand values were required because the Uvalde campus' account is not directly charged based on the meter's monthly power factor; rather, the account is charged for each month's total kW of billed demand, and the calculation of billed demand is based on metered demand although it can be influenced by the power factor. In particular, when the meter's power factor value for a given month registers at a level below the threshold set by the utility distributor (95% at the

3.0 Option A Savings: Power Factor Correction

time the contract was signed), an adjustment is triggered which increases the metered demand for the month and can lead to an increase in the billed demand.

In order to determine the savings generated through this ECM, monthly billing demand values had to be calculated, first for a baseline year by using fixed metered demand values with pre-project power factor values and then for the performance period year by using the same fixed metered demand values with the performance period power factor values. These Performance Period power factor values were collected throughout the Guarantee Year from utility reports sent by NRG and they reflect a perfect improvement. Table 3.2 below shows the power factor readings received for the Uvalde campus' main electric meter during Guarantee Year 1.

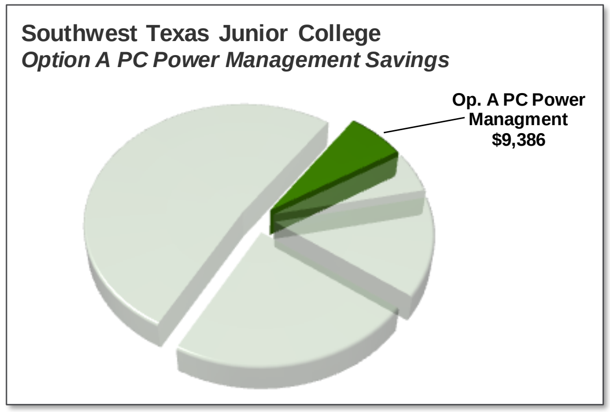
Uvalde Campus - Main Meter	
Billing Period	**Power Factor**
June 2013	100.0%
July 2013	100.0%
August 2013	100.0%
September 2013	100.0%
October 2013	100.0%
November 2013	100.0%
December 2013	100.0%
January 2014	100.0%
February 2014	100.0%
March 2014	100.0%
April 2014	100.0%
May 2014	100.0%

With these readings, the billed demand values were calculated and, by using the billing rates listed in the contract, annual charges for the baseline period and performance period were determined. The resulting difference between the two totals yielded the overall annual dollar savings: **$7,788**. These savings are listed by month in Table 3.2 below.

Billing Period	Baseline Period Energy Cost Total	Performance Period Energy Cost Total	Savings
June 2013	$8,945.76	$8,231.59	$714.16
July 2013	$8,891.69	$8,156.46	$735.23
August 2013	$10,377.27	$9,609.09	$768.17
September 2013	$9,761.21	$9,133.23	$627.98
October 2013	$8,868.56	$8,211.56	$657.00
November 2013	$8,868.56	$8,211.56	$657.00
December 2013	$8,868.56	$8,211.56	$657.00
January 2014	$8,868.56	$8,281.69	$586.88
February 2014	$9,085.59	$8,682.41	$403.18
March 2014	$8,868.56	$8,211.56	$657.00
April 2014	$9,402.91	$8,782.59	$620.31
May 2014	$8,986.22	$8,281.69	$704.53
Total	**$109,793.44**	**$102,004.99**	**$7,788.46**

4.0 Option A Savings: PC Power Management

4.1 Introduction



One of the improvement opportunities brought up during the project's audit phase was the possibility of reducing the annual energy load required to support Southwest Texas Junior College's PCs and monitors. To address this opportunity, Schneider Electric and Southwest Texas Junior College agreed on the installation of PC Power Management software to help the college save energy through the central management of the campus's PCs/Monitors and also through the establishment of policies that allow this equipment to spend more time in low energy consumption modes when they are not in use. During the project's implementation period, this software was installed at multiple campuses and when it was activated, the impact on energy consumption was quickly evident. In Guarantee Year 1, the energy costs savings attributable to the implementation of this ECM totaled $9,386. An explanation of the data and process used to compute these savings will be provided in the remainder of this section.

4.2 Determination of Savings

Schneider Electric once again chose to measure the savings delivered through this ECM with an Option A: Retrofit Isolation - Key Parameter Measurement approach. This strategy involves a one-time calculation of annual energy and cost savings through the use of engineering formulas and values for the inputs used in these formulas. The formulas are used to help find Baseline Energy totals and Performance Period Energy totals, and subtracting the second from the first yields the savings total.

To compute these values, Schneider Electric assembled the list of variables that influence the energy use of the PCs and monitors. This list is included below:

- PC/Monitor Pair Quantity
- CPU Watts: Active Mode
- CPU Watts: Standby Mode
- CPU Watts: OFF/Hibernate Mode
- Monitor Watts: Active Mode
- Monitor Watts: Standby Mode
- Monitor Watts: OFF/Hibernate Mode
- Annual Hours in Active Mode
- Annual Hours in Standby Mode
- Annual Hours in OFF/Hibernate Mode

Now, although values are needed for each of these variables, not all of them will be affected by the implementation of the ECM, and therefore, the measurement strategy that provides the most value for SWTJC was the one that focused measurement resources on the variables whose values were expected to change.

For the variables that are unaffected by the ECM, appropriate estimates have been found through research or notes gathered on campus. The table below shows the variables whose values have been estimated and the exact estimated values that have been used in the savings calculations.

Site	PC/Monitor Qty	CPU Watts: Active Mode	CPU Watts: Standby Mode	CPU Watts: OFF/Hibernate Mode	Monitor Watts: Active Mode	Monitor Watts: Standby Mode	Monitor Watts: OFF/Hibernate Mode
Del Rio - SWTJC Bldgs	252	56	1.8	1.12	30	1	1
Eagle Pass - Admin A-D	265	56	1.8	1.12	30	1	1
Eagle Pass - Bldg E	30	56	1.8	1.12	30	1	1
Uvalde - Main	659	56	1.8	1.12	30	1	1

4.0 Option A Savings: PC Power Management

Table 4.1: The values above are the estimates used for the required variables in savings calculations.

The variables targeted by the ECM that still required measurement included the number of hours that the PCs and Monitors spend in each mode before and after the installation and activation of the PC Power Management software. These measurements were taken over a two week period for the campuses at which significant savings were expected, and the averages of the measurements for each operation state, both before and after the installation, have been included below.

Site	Baseline Annual Hours					
	PCs			Monitors		
	Active Mode	Standby Mode	OFF/Hibernate Mode	Active Mode	Standby Mode	OFF/Hibernate Mode
Del Rio - SWTJC Bldgs	19.907	1.499	2.595	18.805	5.195	0.000
Eagle Pass - Admin A-D	17.005	2.007	4.988	15.674	8.326	0.000
Eagle Pass - Bldg E	17.005	2.007	4.988	15.674	8.326	0.000
Uvalde - Main	15.726	3.296	4.979	14.001	9.999	0.000

Site	Performance Period Annual Hours					
	PCs			Monitors		
	Active Mode	Standby Mode	OFF/Hibernate Mode	Active Mode	Standby Mode	OFF/Hibernate Mode
Del Rio - SWTJC Bldgs	13.816	3.419	6.765	13.583	10.417	0.000
Eagle Pass - Admin A-D	12.093	8.934	2.973	11.887	12.113	0.000
Eagle Pass - Bldg E	12.093	8.934	2.973	11.887	12.113	0.000
Uvalde - Main	8.068	4.758	11.174	7.374	16.626	0.000

Tables 4.2 and 4.3: The measurements of hours spent in each power mode were taken over a two week period at each listed campus. Annual values were found by determining daily averages and multiplying by 235 days/year.

These values have been used in conjunction with the estimated values as inputs to the formulas for calculating Baseline and Performance Period energy use.

Consider as an example the calculation of the annual Baseline energy use of the PCs and monitors at any campus. The formula used for calculating this total has been included in the contract and it is listed again below.

$$E = [(P_{PC,A} \times H_{PC,A} + P_{PC,S} \times H_{PC,S} + P_{PC,O} \times H_{PC,O}) + (P_{M,A} \times H_{M,A} + P_{M,S} \times H_{M.S} + P_{M,O} \times H_{M,O})] \times Q$$

Where,

E = Baseline Energy Use
$P_{PC,A}$ = Power Draw of PC in Active Mode
$H_{PC,A}$ = Annual Hours in Active Mode for PC, Baseline Period
$P_{PC,S}$ = Power Draw of PC in Standby Mode
$H_{PC,S}$ = Annual Hours in Standby Mode for PC, Baseline Period
$P_{PC,O}$ = Power Draw of PC in OFF/Hibernate Mode
$H_{PC,O}$= Annual Hours in OFF/Hibernate Mode for PC, Baseline Period
$P_{M,A}$ = Power Draw of Monitor in Active Mode
$H_{M,A}$ = Annual Hours in Active Mode for Monitor, Baseline Period
$P_{M,S}$ = Power Draw of Monitor in Standby Mode
$H_{M,S}$ = Annual Hours in Standby Mode for Monitor, Baseline Period
$P_{M,O}$ = Power Draw of Monitor in OFF/Hibernate Mode

4.0 Option A Savings: PC Power Management

$H_{M,O}$= Annual Hours in OFF/Hibernate Mode for Monitor, Baseline Period
Q = Quantity of PC/Monitor Pairs

This same formula can be used for calculating Performance Period energy use if Baseline measurements and estimates are replaced with Performance Period measurements and estimates.

By using this process and the appropriate values from these tables, both Baseline and Performance Period totals were calculated for each of the included campuses.

Once these totals were calculated in energy units, the utility rates agreed upon in the contract were used to translate these energy unit totals to energy cost totals, and after Baseline and Performance Period values were available, the difference was taken to discover savings. A summary of the results for each campus is shown below.

Site	Energy Savings (kWh)	Energy Cost Savings ($)
Del Rio - SWTJC Bldgs	28,690	$1,891
Eagle Pass - Admin A-D	23,331	$1,703
Eagle Pass - Bldg E	2,641	$193
Uvalde - Main	94,713	$5,599
Total	***149,375***	***$9,386***

Table 4.4: Total kWh and dollar ($) savings for each site measured.

4.3 Notes

During the process of gathering the data needed for the calculations, there were a couple unexpected changes that had the potential to alter the ECM's projected savings impact as well as the process for calculating savings. Both issues are discussed briefly in the following paragraphs.

4.3.1 Number of Licenses

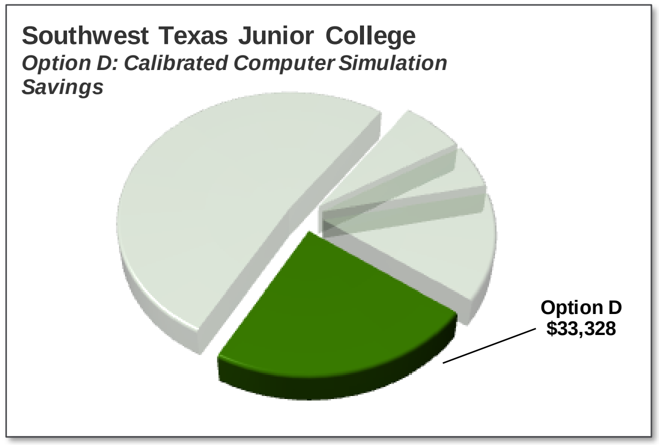
While working to determine the savings expected from the activation of the PC Power Management software on the SWTJC campuses, the project team at Schneider Electric gathered information about the PC's and monitors that would need licenses to use the software. Upon request, SWTJC provided the number of PCs and monitors at each campus that would be using the software and these totals were used in developing projections and they were also included in the contract. During the project's installation phase, it was discovered that the number of PCs and monitors was actually smaller than the number expected and as a result, the cumulative savings effect of the software's installation would also be smaller than expected. Because the project guarantee was built using the original totals and the decrease in realized savings only reflects fewer opportunities to generate savings rather than any failure of the software, the original count totals listed in the contract and in tables above have been used for reporting savings.

4.3.2 Software Activation

The second issue that affected this ECM was the activation of the PC Power Management software. Although, the software was installed at all the campuses included in the project, the benefits for all the affected PC/Monitor pairs were not immediately realized because of delays in activating the software. This problem was evident when the Performance Period hours measurements were gathered. The fraction of PC/Monitor pairs whose operation was being affected by the activated software showed improvement when compared to the Baseline values, however, the PC/Monitor pairs for which the software was not activated produced measurements closer to those observed during the Baseline. Consequently, the savings calculated by using these measurements did not quite meet the levels originally anticipated during the project's development phase. It is expected, however, that the savings Southwest Texas Junior College will achieve through this ECM can and will increase as the PC Power Management software is activated on the remaining PCs and monitors.

5.0 OPTION D SAVINGS: CALIBRATED COMPUTER SIMULATION

2.1 INTRODUCTION



The final project savings components to be discussed are the Option D savings delivered through Building Automation System work and mechanical improvements implemented at the Uvalde Campus, Del Rio Campus, and Eagle Pass Campus. Although the savings for most of the other ECMs implemented at these sites were measured with an Option A: Retrofit Isolation approach, a different measurement strategy was required for these particular ECMs. To measure the savings delivered through this component, Schneider Electric adopted an Option D: Calibrated Computer Simulation approach. Completing this measurement strategy required a different process from those that have been described in earlier sections, but the final result is once again a strong energy cost savings value that helps to augment the stellar overall project total. For Guarantee Year 1, the savings calculations show that SWTJC has saved **$33,328** through this component of the project scope and the remainder of this section will be used to provide more details on these savings and the process used to compute them.

2.2 SAVINGS BREAKDOWN/DETAILS

In order to measure the BAS work and mechanical improvement savings at the Uvalde, Del Rio, and Eagle Pass campuses, the Option D measurement approach suggests that the ECM's savings impact be evaluated in the context of each individual site's overall energy use. This means that savings for an individual site are determined by finding the difference between the entire site's pre-project energy use and the entire site's post-project energy use. Once these energy values are translated into energy costs, savings in units of dollars can be found as well. To find the energy cost totals for these sites, the costs for each of the individual utility meters that serve each site and that also record the site's energy use must be combined. This process was completed for the seven utility meters that both served the affected campuses and that were also expected to show the greatest fraction of savings as a result of the ECM. The chart below shows the annual savings totals that were calculated for each of these included utility meters.

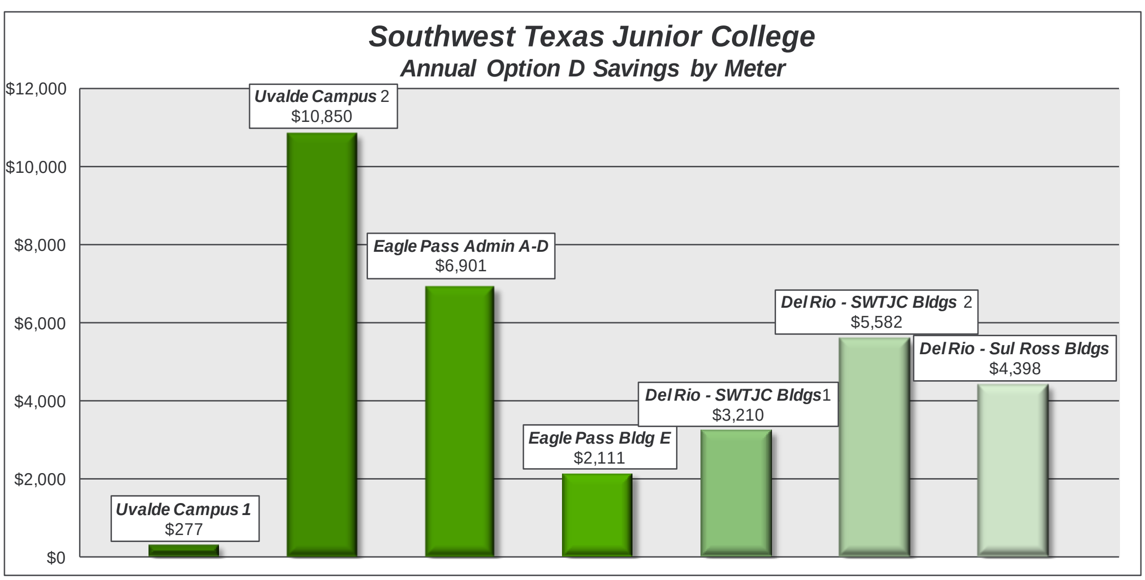


Figure 5.1: Annual Option D Savings for all seven utility meters included.

5.0 Option D Savings: Calibrated Computer Simulation

In order to determine the savings for each of these meters however, it was not possible to simply take the difference between each meter's total annual costs before the project and the meter's total annual costs after the project in Guarantee Year 1. Rather, the selected Option D approach mandates that actual energy use data from the included meters be used in conjunction with detailed building modeling tools in order to compute pre-project and post-project energy use values that can be fairly compared and afterward translated to energy costs in dollars. These energy costs can then be used to arrive at savings totals. The process of finding these pre-project and post-project energy use values and their associated costs is described in the following pages.

2.3 Determination of Savings

As with other measurement approaches, the goal of the Option D strategy is to determine savings by taking the difference between baseline and post project energy use totals. The steps that must be completed to find these values are what distinguish this approach. To start, building modeling tools must be used to develop models that accurately represent the site before the project changes took place and after the project changes are implemented. Once accurate models are obtained, the building modeling tools can be used to simulate annual energy use for the sites in its two different states. These energy use totals become the baseline and post project values that are needed. A number of steps must be completed to reach this stage though and, for each site, the first is the creation of the pre-project model.

2.3.1 Building the Pre-Project Model

To build this first model Schneider Electric gathered all the information about each site that was collected during the audit phase and used it together with the modeling tools Schneider Electric selected for the project: eQuest and TEAMS.

Both eQuest and TEAMS are building energy analysis tools that allow users to develop detailed models of buildings and run simulations to determine expected energy use. TEAMS is a tool developed internally at Schneider Electric but eQuest is publicly available and based on DOE-2 software. A screenshot of the eQuest software is provided in Figure 5.2.

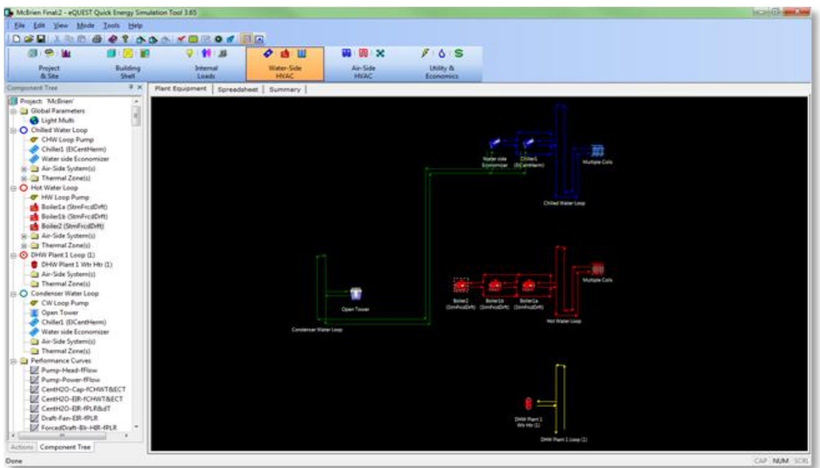


Figure 5.2: Screenshot of eQuest

Using the framework provided by these tools, Schneider Electric used all the information available as inputs to each model so that they accurately reflected the site before any of the project changes were made. In addition to all the notes about the site, the team also used information about the site's past energy use to ensure that each model was accurate. This "calibration" process involved aggregating monthly energy use data for each of the meters serving a particular site, weather normalizing the totals and then comparing them to the output of an energy use simulation for the site. This energy use simulation is performed by the modeling tool which outputs the expected monthly energy use of the model as it has been built. When large differences between the simulation totals and the actual energy use totals are found, the model is adjusted to try to bring the values into alignment. Several iterations of this process can be required, but the end result is an accurate pre-project model for each site. Next, a post-project version of the model is created.

2.3.2 Building the Post-Project Model

Creating a post-project version of the models for the same sites was a simpler process than the one just described above. Because of the features of the tools that have been selected for this analysis, the work done in the previous step was able to be leveraged to build the post project versions of the models. Using eQuest and TEAMS allowed Schneider Electric to start from the base models developed for the pre-project state and make modifications to these models to produce versions representing the post-project state.

Since the purpose of creating the post-project versions was to assess the impact of the implemented project changes on each site's energy use, modifications only had to be made when an input to the model was affected by building automation system work or mechanical improvements. For example, building operation scheduling was a model component that had to be altered as a result of the BAS changes.

Once all of the necessary modifications were completed, an energy use simulation was performed. As with the pre-project version, the output of this simulation was the expected monthly energy use of the site that the model represented. The one major difference is that the output was the expected energy use for the post project version of the model. Aside from this, the simulation was run with the same assumptions.

2.3.3 COMPUTING SAVINGS

After both of the models were prepared, the modeling tools were used to run the energy use simulations for each version so that savings could be calculated. For each site, the output of the pre-project model simulation became the Baseline Energy Use and the output of the post-project model simulation became the post-project or Performance Period Energy Use. These overall site energy use totals were produced for each month of a one year period and they were divided among the meters that serve the individual sites.

Take a look at the chart below which presents the annual Baseline Energy Consumption and annual Performance Period Energy Consumption for each of the meters included in this Option D measurement approach. Though not pictured, the output of the simulations is also used to determine the monthly kW demand values for the meters.

5.0 Option D Savings: Calibrated Computer Simulation

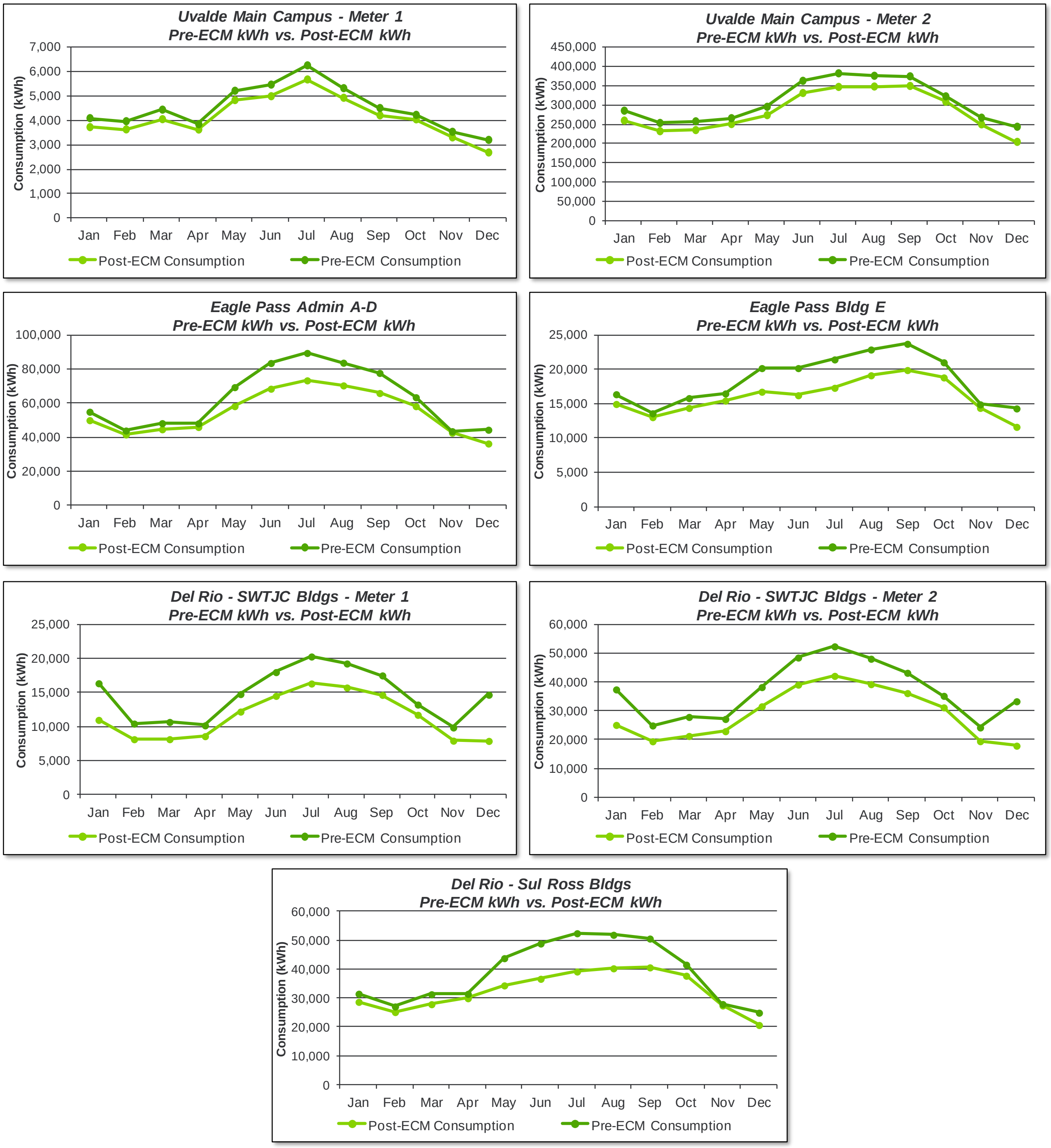


Figure 5.3: Comparison of Baseline and Post-ECM electric consumption for each utility meter included.

Once all consumption and demand values were available, these totals were then converted to energy costs in dollars by using the utility rate structures listed in the contract. Each month then had consumption, demand and energy cost values associated with each meter and the final step is to find the difference between the Baseline and Performance Period versions of these values. These monthly savings number along with the great annual totals mentioned at the beginning of the section are included in the table below.

5.0 OPTION D SAVINGS: CALIBRATED COMPUTER SIMULATION

	January	February	March	April	May	June	July	August	September	October	November	December	TOTAL
Uvalde Main Campus - 5058685													
kWH Savings	368	336	391	220	382	476	579	394	301	184	230	515	4,375
kW Savings	-1	0	-1	-1	-2	-3	-4	-1	-2	-2	-1	0	-16
$ Savings	$23	$29	$28	$15	$23	$32	$27	$27	$18	$7	$12	$36	**$277**
Uvalde Campus Main - 5058696													
kWH Savings	25,630	21,470	22,701	15,220	21,655	31,595	35,358	27,815	24,986	14,007	17,390	39,216	297,043
kW Savings	-25	5	-30	-28	-67	-118	-177	-55	-117	-64	-25	5	-696
$ Savings	$896	$1,210	$1,064	$639	$774	$1,039	$887	$1,210	$657	$341	$440	$1,694	**$10,850**
Eagle Pass Admin A-D - 20409400-1													
kWH Savings	4,950	2,308	3,576	2,118	11,146	15,057	16,062	13,322	11,802	5,233	888	8,074	94,536
kW Savings	0	0	0	0	0	0	0	0	0	0	0	0	0
$ Savings	$361	$168	$261	$155	$814	$1,099	$1,173	$973	$862	$382	$65	$589	**$6,901**
Eagle Pass Bldg E - 20409400-2													
kWH Savings	1,420	557	1,430	1,040	3,437	3,947	4,128	3,748	3,813	2,198	517	2,680	28,915
kW Savings	0	0	0	0	0	0	0	0	0	0	0	0	0
$ Savings	$104	$41	$104	$76	$251	$288	$301	$274	$278	$160	$38	$196	**$2,111**
Del Rio - SWTJC Bldgs - 5058694													
kWH Savings	5,372	2,290	2,525	1,585	2,571	3,482	3,960	3,522	2,848	1,501	1,935	6,772	38,361
kW Savings	0	0	0	0	0	0	0	0	0	0	0	0	0
$ Savings	$449	$192	$211	$133	$215	$291	$331	$295	$238	$126	$162	$567	**$3,210**
Del Rio - SWTJC Bldgs - 10303610													
kWH Savings	12,298	5,473	6,597	4,235	6,658	9,385	10,226	8,795	7,030	3,996	4,757	15,387	94,839
kW Savings	0	0	0	0	0	0	0	0	0	0	0	0	0
$ Savings	$724	$322	$388	$249	$392	$552	$602	$518	$414	$235	$280	$906	**$5,582**
Del Rio - Sul Ross Bldgs - 5058678													
kWH Savings	2,807	1,929	3,434	1,519	9,427	12,223	13,240	11,606	9,976	3,819	485	4,259	74,724
kW Savings	0	0	0	0	0	0	0	0	0	0	0	0	0
$ Savings	$165	$114	$202	$89	$555	$719	$779	$683	$587	$225	$29	$251	**$4,398**

Figure 5.4: Monthly savings totals for Year 1 for each utility meter included.

6.0 Non-Measured Savings

6.1 Non-Measured Savings

Utility Cost Savings Measure	Cost Savings
Uvalde - BAS Installation - Natural Gas	$3,258
Uvalde - Lighting Upgrade - Natural Gas	-$1,151
Uvalde Day Care - BAS Installation	$746
Uvalde Day Care - PC Power Management	$116
Uvalde Lineman - Lighting Upgrade	$206
Uvalde Lineman - PC Power Management	$10
Uvalde Student Services - BAS Recommissioning	$35
Uvalde Student Services - Lighting Upgrade	$1,484
Uvalde Student Services - PC Power Management	$649
Uvalde Sul Ross - BAS Recommissioning	$1,769
Uvalde Wildlife Management - BAS Installation	-$237
Uvalde Wildlife Management - Lighting Upgrade	$1,215
Uvalde Wildlife Management - PC Power Management	$72
Uvalde Witt - BAS Installation	$1,947
Uvalde Witt - Lighting Upgrade	$1,183
Uvalde Witt - PC Power Management	$505
Crystal City - BAS Installation and Expansion	$461
Crystal City - Lighting Upgrade	$1,444
Crystal City - PC Power Management	$1,004

Operation and Maintenance Savings Measure	Cost Savings
Uvalde Campus - Lighting Upgrade Maintenance	$2,987
Crystal City Campus - Lighting Upgrade Maintenance	$169
Eagle Pass Campus - Lighting Upgrade Maintenance	$711
Del Rio Campus - Lighting Upgrade Maintenance	$654