

Sustainability at Bethany Healthcare Center

Bethany Health Care Center installed a 150 KW Cogeneration system two years ago. We make 60 % of our own electricity and we utilize 100% of the thermal (hot water) load that comes from the co-gen system. Co-gen or combined heat and power as it is referred to is becoming a very attractive solution for many properties in the US due to the rapid increase in electric cost and demand. The utilities cannot keep up with the demand for electricity and with not many new power plants being constructed the utility companies are beginning to give out major incentives to try and decrease the demand on the grid. With less than a 3 year ROI for most health care facilities and the incredible savings associated with the co-gen it makes a lot of sense to put a co-generation system in place.

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Bethany’s savings has been approximately \$120,000 per year. The cost savings is derived from the electricity savings but the larger portion comes from the use of the hot water in the facility. Our three boilers now only turn on if we have extreme cold weather and the co-gen needs some assistance with the hot water for the heating of the facility. Other than that our boilers remain off. In the summer months the boilers will virtually remain off and will not be needed again until winter. This also extends the life of the boilers. For the first 4 months we achieved \$69,000.00 in savings.

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Due to the stimulus packages that have come out in support of Co-Gen and other forms of Energy Saving initiatives we have been able to get almost an additional \$ 45,000 back from the state.

One of the other cost saving initiatives that we also participate in is a Demand Response program. Demand Response simply put is a way to shed electricity demand if we are experiencing a heavy electric demand on the grid. So we turn on our generators and run them for approximately 4 hours and then turn them off. By doing this once per year or just participating in the program we receive an annual check for \$ 6,000. The price is determined by your generator capacity. We went with a company called ENERNOC. They have a turn key operation. They install monitoring equipment at your facility and they can remote start your generators in the event that your maintenance staff was not there. There is no cost for the equipment and there is no charge for the program. This was the easiest program to participate in because you really do not have to do anything. This is also a GREEN initiative because we are reducing our demand on the grid.

Another cost saving initiative that Bethany Health Care Center has been doing for several years is we melt down all of our sharps in the facility. All of our sharps are melted down into a hockey puck and then it is disposed into the regular trash stream. We have reduced our Hazardous waste removal by almost 90%. We were spending approximately \$ 6,300 per year on hazardous waste removal. We now spend \$ 800 per year. This has led to a 90% reduction in our Hazardous Waste Removal cost. We purchased the system from a company called Medical Innovations. The system paid for itself in less than six months.

This is also a GREEN initiative. We have reduced our foot print with the 90% decrease in hazardous waste from our facility.

By now most facilities should have completed a lighting audit in our buildings. The project is usually funded by the utility company anywhere from 70-100 percent. The utility company will usually give the facility an interest free loan and the savings will pay for the loan. Usually most loans are only 12 months and again the savings pays for the loan.

Many managers don't ask the right questions and the facility has to come up with the difference to fund the project.

We took advantage of this program and our project was funded 70% by the utility company, we asked for an interest free loan from the utility company and they were more than happy to give us a loan for the other 30% to fund the rest of the lighting upgrade. Bethany will save \$ 13,000.00 per year for additional electric savings.

Bethany finished their water conservation project four months ago. The initial cost of the project was \$ 55,000.00. We replaced all the toilets in the facility with .8 gallons per flush toilets. The older ones were 3.5 gallons per flush. We also replaced all the aerators on all the sinks with .5 gpm aerators and all shower heads in the facility were replaced with 1.75 gpm shower heads. For five months with the new equipment we have saved \$ 33,000.00 and we are on schedule to save approximately 3 million gallons of water annually. We will save approximately \$ 79,000.00 annually. This works out to less than a 10 month ROI.

We used Water Tech International for this project.

Bethany Health Care will also be taking advantage of the Renewable Energy Credit Program. We will be receiving an annual check for \$ 35,000.00. You can qualify for this program if you have an 85 KW Co-Gen or higher in your facility. A third party will come in and install metering components. The up front cost is \$ 10,000. You will then receive approximately \$ 35,000.00 per year for 9 years. This is approximately \$ 315,000.00 for participating in the program.

Bethany is trying to participate in as many GREEN initiatives as possible. We also purchase recycled toilet paper and paper towels. This is another GREEN initiative. We also have gone to a thinner ML on trash liners, another GREEN initiative. We also use microfiber instead of generic mops. We use two gallons of water per day on each floor instead of two gallons for every two rooms. This again is a GREEN initiative. We also save hundreds of gallons of water thus reducing cost. This process also cuts down the injury frequency related to back strains from lifting the mop buckets to empty them. Again, saving thousands, on workers comp claims.

Bethany purchased two Boost machines from the CLARKE Company that lets you scrub and strip floors with no chemicals. This is a total GREEN process. It allows us to strip

and refinish resident floors in a quarter of the time it would have normally taken to complete. This is also done without chemicals so the residents are not impacted by strong odors and the process can be done during the day instead of at night.

We have also replaced the flooring in our main lobby and activities room with a floor that is cleaned with water and microfiber products only. Again this is another GREEN initiative.

We need to stay ahead of the curve and bring all that is new and happening to our clients. Like we heard at the area meeting, our clients want us to present new things to them especially if there is cost savings associated with these ideas. We need to help them solve their board room issues as we have been hearing this statement over and over again.