Roger W. Hassard, MSEE

Electrical Energy Savings Consultant

38 Beacon Hill Drive, Waterford, CT 06385-4110

Tel: (860) 442-7625 Fax: (860) 43-7193

February 20, 2000

Mr. James W. Norton, P.E.
Director of Physical Plant Services
Connecticut College
270 Mohegan Avenue
New London, CT 06320-4196

RE: USES® Power Enhancement System Performance Evaluation

Dear Jim,

I recently received, from Peter Horgan, a complete set of the CL&P electricity bills for the athletic center, with the exception of the period 3/8/00 - 4/5/00. I have used this data, as described in my letter to you of June 14, 2000, to evaluate the savings that have resulted from the installation of the USES® equipment. In the proposal of August 18, 1999, we estimated a savings of 15,000 KWH/Month and a 22.5 KW reduction in peak demand. Based on your electricity rate at the time, this would result in savings of over $13,000 per year and a simple payback of about 1.8 years.

The first model of your electricity usage in the athletic center was described in my letter of June 14, 2000, as follows:

$$KWH/Day = 4{,}887 + (2{,}950 \times Ice) - (0.72 \times CDD) - (0.68 \times HDD)$$

where "Ice" is the percent of time during the billing cycle during which ice was down in the hockey rink, CDD is the total Cooling Degree Days for the billing cycle, and HDD is the total Heating Degree Days for the billing cycle.

A plot of the estimated values from this model and the actual values as obtained from your CL&P bills is attached, along with the spread sheet containing values of the variables. This model shows a savings of 509 KWH/Day, or 15,270 KWH for a 30-day month.

The second model described in my letter of June 14, 2000, added a variable called "Students" in an attempt to account for dips in usage observed in the months of January and June. This improved the statistics of the model slightly, but in discussions with Peter Horgan the additional variable was considered to be inappropriate because the student population at any time was not considered to be relative to the facility's electricity usage. That model was as follows:

$$KWH/Day = 3{,}688 + (2{,}776 \times Ice) + (1{,}112 \times Students) + (3.82 \times CDD) + (0.003 \times HDD)$$

A plot of this model and its associated spread sheet is also attached to this letter. This model shows a savings of 320 KWH/Day, or 9,600 KWH for a 30-day month.

In addition to the two models shown above, a more direct model was developed of total KWH per billing cycle. More correctly, of 98% of the actual KWH, which is the amount for which you are charged by CL&P (this is also the level of KWH used in all the models). This model may be considered somewhat unreliable because the billing cycles are of variable lengths, but this is

accounted for by the variables, which are totaled for the specific billing periods. That model is as follows:

$$KWH = 145{,}901 + (76{,}954.1 \times Ice) - (5.027 \times CDD) - (4.283 \times HDD)$$

The result of this model is shown on the attached spreadsheets for the KWH/Day models and is a savings of 12,124 KWH/month, where a month is the average length of a billing cycle.

Finally, a plot is attached which compares the KWH readings from your CL&P bills for 1999 and 2000. The USES® units were installed by early April 2000, so the average difference per month since that time is another way of looking for the savings, but it does not account in any way for the differences in the year-to-year environments. This approach yields an average savings of 6,216 KWH/month.

The second part of the savings made possible with the USES® system is a reduction in peak demand (KW). Because peak demand represents the highest average demand for any 30-minute period during the billing cycle, it does not lend itself to the same type of analysis as energy usage (KWH). If, for example, all loads were operated at full capacity for a very short time (e.g., 20 or 30 minutes) at any time during a billing cycle, it would be possible for the peak demand to increase even though the average demand and the energy usage for the same billing cycle might show a decrease. Furthermore, because of the way you are billed by CL&P, a large peak demand in one month will result in a high peak demand charge (Distribution Demand) for up to a year later.

A reasonable way to look for savings in peak demand would be to compare year-to-year levels from your electricity bills. A plot is attached showing the Production/Transmission Demand and the Distribution Demand for each month from September 1998 to January 2001. The following observations are made from this plot:

1) Peak demand is greatest in the month of August: 496.7 KW in 1998, 492.8 KW in1999 (without USES®) and 467.0 KW in 2000 (with USES®). This would indicate a reduction of about 25 KW with USES®

2) Peak demand is lowest in the months of May, June and July: 293.8 KW average in 1999 (without USES®) and 270.3 KW average in 2000 (with USES®). Again, a reduction of nearly 25 KW.

Because of the drop in peak demand recorded in August 2000, your distribution demand has dropped, since USES® was installed, from 492.8 KW to 467.0 KW. A reduction of 25.8 KW.

I believe that the results noted above provide reasonable verification of the savings estimates that were included in our proposal of August 18, 1999.

Yours truly,

Roger W. Hassard

cc: Mr. C.K. Morse, President, Seakay Management Corporation

ICELANDIC SEAFOOD

COLDWATER SEAFOOD CORPORATION

August 25.1997

Mr. William Morton. Executive Vice President
USES MFG Inc
P.O. Box 156
152 Old Colchester Road
QuakerhilL, CT 06375 U.S.A.

Dear Mr. Morton

Coldwater Seafood installed 11 CMES -3D 480 USES Units at Ammonia Refrigeration compressors and panels on the North end of our production facility in February and March of 1994. In November of 1994 there was a low voltage event on the South end of the production facility that severely damaged many electrical components that were not protected by USES Units. There was no damage to the electrical components protected by USES Units on the North end of the facility.

We feel that the USES Units have been a very wise investment and have proved their beneficial effects on our electrical system. We have at present 41 USES Units in service.

Sincerely yours,

Bob Norcross,
Refrigeration Manager

904 WOODS ROAD · CAMBRIDGE, MARYLAND 21613 · TELEPHONE: 410 228-7500 · FAX: 410 228-7500, EXT. 239

GE Industrial & Power Systems

General Electric Company
Industrial Systems - Engineering Services
1400 Computer Drive, P.O. Box 5043
Westborough, MA 01581-5043
(508) 836-6453
Fx: 508-836-6466

February 21, 1997

Mr. Stuart A. Forbes
System One Solutions, Inc.
533 River Road
Westport, MA 02790

RE: Power Measurements using USES® Shunt Efficiency System - August 1996

Dear Stuart:

During August 1996, I performed power measurement tests on USES® SMES - 3D 480V units temporarily installed on a substation feeding motor loads at the GE Aircraft Engine facility in Lynn, MA. The testing was performed in conjunction with yourself, representing SOS, for the purpose of evaluating the USES® System in reducing KW Demand and improving Power Factor on inductive loads.

The testing instruments that I provided and used were a Dranetz 808 Electric Power/Demand Analyzer and a GE type EPM Electronic Power Meter. The testing instrument that you provided and used to measure Amps and KW was a TIF Instruments type KW 220-3. Typical results of the three testing devices follow:

Dranetz 808 Electric Power/Demand Analyzer -- Testing (3) USES® SMES - 3D 480V units
Without USES®: 137.6 A ave., 69.3KW, 75.8KVA, 0.91 PF
With USES®: 114.0 A ave., 59.3KW, 59.3KVA, 0.99 PF
Note: Meter shows a 17% decrease in Amps, a 14% decrease in KW, and improved PF

TIF KW 220-3 -- Testing (3) USES® SMES - 3D 480V units
Without USES®: 135.3 Amps, 109.6 KW
With USES®: 121.3 Amps, 100.4 KW
Note: Meter shows a 10% decrease in Amps and an 8% decrease in KW

GE type EPM Electronic Power Meter -- Testing (2) USES® SMES - 3D 480V units
Without USES®: 486.3A ave., 341KW, 201KVAR, 395KVA, 0.86 PF
With USES®: 463.0A ave., 339KW, 157KVAR, 372KVA, 0.91 PF
Note: Meter shows a 4.8% decrease in Amps and a 5.8% decrease in KVA due primarily from a reduction of 44 KVAR relating to an improved PF. No appreciable decrease in KW was observed. This case involved two USES® SMES - 3D 480V units.

The GE type EPM meter clearly showed that the USES® System improves Power Factor on inductive loads thus reducing KVA and KVAR demands. The Dranetz 808 Electric Power/Demand Analyzer and TIF Instruments type KW 220-3 both showed that the USES® System improves Power Factor on inductive loads thus reducing KVA and KVAR demands and offers significant reductions in KW usage. In summary, the USES® System tests clearly demonstrated a reduction in KVA demand from Power Factor improvement on inductive loads and may offer significant savings in KWh usage and KW demand charges. Power Factor improvement, coupled with possible savings from reduced KWh and KW demand has the potential to afford a favorable ROI and significant long term savings in power costs.

Sincerely,

Walter E. Davis

Walter E. Davis, P.E.
Senior Power System Engineer
GE IS-ES

SANTORO ASSOCIATES, INC.

10 SUMMER STREET, CHARLESTOWN, MA 02129 TELEPHONE (617)242-9044 FAX (617)242-9045

November 3, 1995

Mr. William Morton, Executive Vice President
USES MFG Inc.
P.O. Box 156
152 Old Colchester Road
Quaker Hill, CT 06375

Reference: USES® Applied to reciprocating and screw compressors in air cooled packaged chillers.

Dear Bill:

Pursuant to our telephone conversation this date, I offer the following USES® applications experience .

I have been engaged by two of my clients to solve the problem of premature compressor and contactor failure in air cooled packaged water chillers.
This type of chiller is commonly used to provide cooling for high rise apartments, condominiums, offices and manufacturing plants.

The problems with the units is that units are generally remote from the source of power, are sensitive to under-voltage conditions, operate for many months under part load and use compressor staging and condenser fan staging for capacity control.

These factors result in constant starting and stopping of multiple motors within the units.
This inherent design feature, coupled with the remote location from the source of power and operation during the summer months during times of low utility voltage, leads to premature compressor motor failure, condenser fan motor failure as well as contactor oxidation and failure.

My clients asked mew to advise whether this type of unit should be scrapped or if there was a retro-fit that could reduce or eliminate the costly component replacements.

I have since rehabilitated five such units employing USES®
After replacing burned-out motors and damaged contactors I had the mechanical service contractor install a USES® unit with a 30 amp breaker across the mains at the power inlet to each unit.

Since the installation of USES® in the spring of 1994 there have been no compressor, condenser fan motor or contactor failures in these five units

In another case for the same client I had to replace two complete chillers because of lighting damage. The units are located on the top of a high rise apartment building in Worcester MA on a hill that is the highest point in the area.
At the time of the replacement we installed a USES® unit in each machine as described above.

Since the installation with USES® there has been no damage to the roof-top equipment from lightning or other causes and the units have operated without service calls for three seasons.

The application described above is applicable to all air cooled, multi-compressor cooling equipment. The installation is simple since there is usually space within the unit electrical enclosure to place the units.

Since the units are remote from daily viewing by the building operator, the operator should be advised to check the pilot lights on a weekly basis or after any electrical storm.

Please call with questions or comments.

Yours truly,

Al Santoro

Western Pennsylvania School for the Deaf
Edgewood, PA

Comments from Mr. William Garrity
Director of Campus Services

Being responsibile for the Operation and Maintenance of the 18 acres that comprises WPSD, I am concerned about the operating costs of utilities. My largest single line item expense is the monthly electricity bill . Until recently, there wasn't much I could do since getting competive quotes is not possible... my facility is in the Duquesne Light territory. I also feel my other utilities are too high but that's another story.

When Ross Farber from Continental Power Corporation approached me early in 1993 about potentially saving money on my electric bill, he got my attention real fast. He explained to me that, basically, each consumer of electricity, each facility, is different but all have some in-efficiencies and the recently patented USES will make improvements. Also, I was assured that this new Power Conditioner would not adversely effect my operation even if it fails, because it's connected to my electric panels in parallel...whatever that means.

It became apparent early on that improvements were being made but Continental Power Corporation wanted to run the test period for 12 months to go through a complete cooling/heating cycle here in Western Pennsylvania. With electric costs being what they are, the savings result in a capital payback period of about 2 years. This represents a great investment for me. Further, there is no maintenance involved and we are not having any electrically related operating problems since units were first installed in August of 1993.

William Garrity
WPSD

412 244-4225

THE ELECTRICAL WATCH DOG

USES

EWS RELEASE
FOR IMMEDIATE RELEASE

MORE ELECTRICITY PER DOLLAR

Swanton, VT—The results are in, **USES® Shunt Efficiency System** really works. It's passed UL and CSA safety standards, independent laboratory analyses, independent energy consultant analyses, but most of all, actual installation testing by a real company doing real work, saving real money, and getting real results.

In June of 1993, Cargill challenged USES MFG, INC. to put their money where their mouth was. **USES®** promised their product would deliver a number of electrical benefits—power factor correction, surge and spike protection, reduction of total harmonic content, and most importantly a reduction of electrical costs—all from the simple installation of their product.

Cargill agreed to allow **USES®** to install four units at their Vermont plant for a 30-day trial period. If **USES®** could demonstrate at least 10% reduction of the KWH consumption during the production process, Cargill agreed to purchase the units, making the installation permanent.

USES® technology works on induction motor loads, found in many industrial settings such as the Nutrena Feed plant, improving the effective efficiency of the electrical system. ther than lower the demand of the system, **USES®** technology raises the percentage of billed energy that is readily usable. The **USES®** units enhances the AC wave form, matching it to the requirements of the inductive load. The peak portion of the current wave on the line side are decreased and electrical inefficiencies that originate in the supplying transformer are reduced. This, combined with **USES®**'s power factor correction capabilities, reduces wasted electricity, maximizing the amount of usable billed energy. Effectively, **USES® provides more electricity per capital dollar.**

Thirty days passed, and the truth was clear. Cargill's analysis showed a 12% reduction in the KWH demand per ton of feed produced. As a result of its successful testing, Nutrena Feed purchased not only the system installed in the Vermont plant, but had the system installed in eight additional Nutrena Feed plants, including its plant in Kansas City, Missouri (see graphs).

USES® tracked and analyzed both the Vermont and Missouri installations, for 12 and 10 months, respectively. In each analysis, **USES®** used a regression model, to determine what the KWH consumption would have been without the installation of the **USES®** system and subsequent savings. The actual readings with the **USES®** system installed were compared with the numbers generated by the model in order to give a more accurate indication of the true savings. **In each case, the USES® units provided savings of over $1000 dollars per month.**

For further information or the dealer nearest you, contact:

USES MFG, INC. PO Box 156, 152 Old Colchester Road, Quaker Hill Connecticut, USA 06375 • Telephone (860)443-8737 Fax (860)439-1515

TIF Instruments, Inc.
9101 N.W. 7th Avenue
Miami, Florida 33150 U.S.A.

Telephone (305) 757-8811 ASK FOR ROGER
Telex 264284

June 7,1991

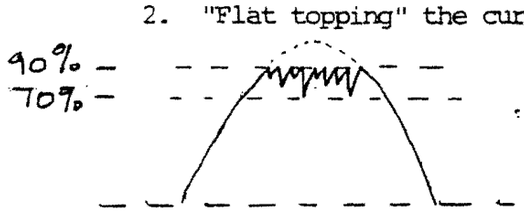
Uses Inc.
Box 156 152 Old Colchester Rd.
Quaker Hill,CT. 06375
Attn;Bryan Wohlforth

Dear Sirs,

This letter is to answer three specific questions you had regarding our model KW220-3 Kilowatt/Kilowatt-hour meter.

1. Power factor determination. The phase relationship between the current and voltage waveforms is measured at the zero crossover point and not at the peaks.

2. "Flat topping" the current waveforms for 10% and superimposing a varying amplitude sawtooth.It is the opinion of our Engineering department that this will not degrade accuracy to worse than 4% of reading. We sketch this waveform here to make sure we have understood your description correctly.



3. Current waveform harmonics. The frequency response of the clamp-on jaws is such that it should respond to harmonics to the third.

Please note that the answer to question 1 is a matter of fact; 2&3 answers are considered opinions of our Engineering staff; no specific measurements were made under these conditions.

We hope this answers your questions and are,

Yours sincerely,

A.Roger Seymour
Customer Service Manager

seakay

AT&T

Michael G. Miller
Senior Technical Associate
Customer Products

P V E
Professional Value Engineering
Technical Consulting
Systems Analysis

19 May 1993

MEMORANDUM

Subj: Surge testing of USES Shunt Efficiency System

1. The following is a synopsis of the surge testing conducted at AT&T Laboratory, Indianapolis, Indiana on this date.

2. USES was tested pursuant to the guidelines from ANSI/IEEE C62.41-1980, formerly IEEE 587, ANSI/IEEE C62.45-1987. Tests were conducted with a Keytech 587 Surge Generator as follows:

PARAMETERS:

Test

A Cat A - Ring Wave, 100khz, 600Volts/200 amps.
B Cat B - Ring Wave, 100khz, 1200Volts/500 amps.
C Cat B - Impulse, 1x50uS, 8x20uS, 6kV, 3k amps.

RESULTS:

Test	Event	Input	Output at intervals of one minute.
A	3	600	50.4
A	4	600	54.4
A	5	600	64.0
B	10	1200	126.8
B	11	1200	133.0
B	12	1200	138.0
C	52	6000	875.0
C	53	6000	856.0
C	54	6000	853.0
Dynamic	1	6000	729.0
Dynamic	2	6000	776.0
Dynamic	3	6000	742.0
Dynamic	4	6000	746.0
Dynamic	5	6000	812.0

OBSERVATION:

The USES Shunt Efficiency System passed as a quality surge protector. Surge protection at the 6000 volt hits actually improved on successive hits. Surge protection also improved when a load was present (dynamic test).

WITNESSES:
Dr. Marvin Needler, PH.D., P.E.
Mr. Michael Miller, AT&T Technical Supervisor
Mr. Ken Beall, Pure Power International
Mr. David Byrnes, Seakay Energy Services

HEC Inc. is the energy services subsidiary of Northeast Utilities. HEC offers an extensive range of energy services to utilities and major energy consumers. For major energy consumers, HEC provides capital improvement and energy efficiency strategies that assure comfortable, reliable and efficient working environments and productive, cost effective industrial processes. We specialize in diagnostic reviews of energy systems and industrial processes, engineering and design, construction management, installation of improvements, project financing support, system commissioning, and service with guaranteed results.

Over 70 percent of HEC employees are degreed engineers, with professional licenses in many States and Canada. The senior management are all technically trained and come from backgrounds in utility, construction, financial, and entrepreneurial management. HEC also maintains a staff of licensed electricians and designers.

This unusual staff complement provides exceptional expertise in energy engineering, assessment of utility DSM programs, installation of improvements, project financing support, and savings assurance with guaranteed results. With a client list that includes may prominent organizations and utility companies in the United States and Canada, HEC has demonstrated its ability to convert this expertise into measurable results.

HEC was founded in 1982 to improve energy efficiency in hospitals. This required consulting, engineering, project management, and financing skills capable of achieving savings while meeting rigorous codes. The management and technical standards set by those challenges have allowed the Company's client base to expand over the past 14 years to include a broad range of energy services for a variety of businesses and utilities. Northeast Utilities, the largest electrical utility in New England and a leader in energy conversation, acquired HEC in 1990 to further expand and intensify its energy efficiency and customer service activities. HEC now has offices in thirteen locations serving clients in over 30 states, Canada, and a number of foreign countries.

HEC's management team has held senior-level positions throughout the utility and energy services industry. They combine a thorough understanding of utility systems, energy markets, and regulations with practical experience in engineering and construction management. The technical staff has hands-on field experience to assist in meeting the challenges that face utilities in engineering design talent.

HEC has designed and installed over $150,000,00 worth of energy efficiency and other capital improvements to commercial, industrial, government, and institutional facilities, and the Company's clients are saving over $30,000,000 of electricity, fuel, water and maintenance costs every year.

UNITED STATES
POSTAL SERVICE

March 20,1996

Re: USES® Shunt Efficiency System

To whom it may concern:

The following is a synopsis of the changes in electrical energy consumption effected by the installation of the USES® Shunt Efficiency System at the US Postal Service, Airport Mail Center at the Jacksonville International Airport. The facility encompasses approximately 37,000 square feet of floor space, with the following major electrical loads:
eight (8) roof mounted air conditioning units
two (2) air compressors
three (3) inbound sack conveyer belts
twelve (12) portable conveyer belts
facility lighting consisting of high pressure sodium and fluorescent fixtures
Due to the time of year and the extended length of the cold weather this year, the air conditioners have not been utilized since this installation, therefore the lighting load comprises approximately **70% of** the total electrical load.
The installation of the system was completed December 15th 1995, since that time I have personally witnessed a reduction in the total electrical energy consumption at this facility as follows: a reduction of 12% in kWh, kW demand dropped by 9%, and the line current was reduced by 14%. The power factor was 85% prior to the installation of the equipment, it is now varying from 98% to 1 as read at the main power panel. This would indicate to me that our entire facility is very energy efficient.
We have installed a permanent metering system at this facility in order to monitor our electrical service. This metering system verifies and confirms the numbers we have previously discussed.

The bottom line effect is stimulating. The system is definitely performing to our expectations, and I would recommend it to anyone trying to control or reduce their electrical energy consumption.

Sincerely,

James E. McLaughlin
Manager Maintenance Operations

Town of Monroe

FINANCE DEPARTMENT

August 28, 1997

Paul E. Veerman
Strathmore Electric – USES
1261 Stratford Avenue
Stratford. CT 06497

Dear Paul:

On Monday, July 7, 1997, our communication tower at our building sustained a direct hit by lightning. The energy from that hit traveled down the wires into the Monroe Police communications equipment and did extensive damage. The lightning also jumped through a window outside the tower and entered our office computer network and did damage to our PC's. All the computers on that network sustained damage through the data communication lines.

Fortunately for us, USES was installed on our power lines four days earlier on July 3, 1997. If there is any glimmer of optimism in this tragedy, it is that there was absolutely no damage to any electrical devices because of surges through our power lines. USES completely eliminated any surges through the electrical lines that would have done damage to TV's, microwaves or computers not on the network.

Even though we lost equipment through the communications lines, we saved a significant amount of dollars and equipment because of USES' surge protection qualities. From a financial perspective, our payback on our investment in USES was only four days. Savings on our electric bill was $307.00 the first month. This was much better than the $219.00 guaranteed by USES.

Sincerely,

Jeffrey T. Whone
Fiscal Officer

aw

7 Fan Hill Road • Monroe, Connecticut 06468-1800 • Phone (203) 452-5454 • Fax (203) 261-6197

CITY OF DUBLIN

6665 Coffman Road
Dublin, Ohio 43017-1006
Phone/TDD: 614/761-6500
Fax: 614/889-0740

July 31, 1995

Continental Power Company
North Fourth Street
P.O. Box 99
Jeanette, Pennsylvania 15644

Re: USES Shunt Efficiency System

The City of Dublin installed the USES Shunt Efficiency System (the System) at one of our water booster station locations on a trial basis. After reviewing this location's electric bills over a four month period, it was apparent that the System resulted in a savings of approximately 18% over the period of review. As a result of this savings, the City decided to purchase the System.

Because of the significant savings generated at the water booster station, the City is planning to install the System at another location on a trial basis. If the results are similar, the City will evaluate the purchase of the System for several other sites and facilities.

Sincerely,

Marsha I. Grigsby
Director of Finance

MIG:dkp

COM Electric

Commonwealth Electric Company
2421 Cranberry Highway
Wareham, Massachusetts 02571
Telephone (508) 291-0950

17 December 1999

Mr. Stuart A. Forbes
POM Energy Concepts
533 River Road
Westport, MA 02790-5191

RE: **USES®** Power Conditioning System

Dear Stuart:

During the past 4 years, I have witnessed first hand several installations of the **USES®** System. These installations ranged from heavy manufacturing to supermarkets to frozen food processing and municipal water and waste water treatment plants. Observed facilities had either 208/240 or 480 volt systems.

At each facility, the **USES®** System has met or exceeded the company's expectations. The **USES®** System provides spike/surge/lightning protection while raising existing Power Factor well into the 90's with resonant free capacitance. Power Quality improvement has enabled several of these firms to suffer minimal or no down time due to power incidents (sags). The **USES®** System has interfaced with normal motors and drives without any degradation of performance. Overall energy reduction has ranged between 9% and 12%.

The average ROI of under two years has precluded the **USES®** System from being actively considered for COM Electric's rebate program. The **USES®** System has proven to be unique in meeting the growing needs of today's modern, energy efficient, CNC controlled facilities. By addressing Power Factor - Power Quality - Power Consumption with one product, the **USES®** System virtually eliminates the need for companies or municipalities to install products that address these issues individually.

Sincerely yours,

Thomas O. Dexter
Technical Sales

Roger W. Hassard, MSEE

Electrical Energy Savings Consultant

38 Beacon Hill Drive, Waterford, CT 06385-4110

Tel: (860) 442-7625 Fax: (860) 43-7193

February 20, 2000

Mr. James W. Norton, P.E.
Director of Physical Plant Services
Connecticut College
270 Mohegan Avenue
New London, CT 06320-4196

RE: USES® Power Enhancement System Performance Evaluation

Dear Jim,

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$$KWH/Day = 4{,}887 + (2{,}950 \times Ice) - (0.72 \times CDD) - (0.68 \times HDD)$$

where "Ice" is the percent of time during the billing cycle during which ice was down in the hockey rink, CDD is the total Cooling Degree Days for the billing cycle, and HDD is the total Heating Degree Days for the billing cycle.

A plot of the estimated values from this model and the actual values as obtained from your CL&P bills is attached, along with the spread sheet containing values of the variables. This model shows a savings of 509 KWH/Day, or 15,270 KWH for a 30-day month.

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The second part of the savings made possible with the USES® system is a reduction in peak demand (KW). Because peak demand represents the highest average demand for any 30-minute period during the billing cycle, it does not lend itself to the same type of analysis as energy usage (KWH). If, for example, all loads were operated at full capacity for a very short time (e.g., 20 or 30 minutes) at any time during a billing cycle, it would be possible for the peak demand to increase even though the average demand and the energy usage for the same billing cycle might show a decrease. Furthermore, because of the way you are billed by CL&P, a large peak demand in one month will result in a high peak demand charge (Distribution Demand) for up to a year later.

A reasonable way to look for savings in peak demand would be to compare year-to-year levels from your electricity bills. A plot is attached showing the Production/Transmission Demand and the Distribution Demand for each month from September 1998 to January 2001. The following observations are made from this plot:

1) Peak demand is greatest in the month of August: 496.7 KW in 1998, 492.8 KW in1999 (without USES®) and 467.0 KW in 2000 (with USES®). This would indicate a reduction of about 25 KW with USES®

2) Peak demand is lowest in the months of May, June and July: 293.8 KW average in 1999 (without USES®) and 270.3 KW average in 2000 (with USES®). Again, a reduction of nearly 25 KW.

Because of the drop in peak demand recorded in August 2000, your distribution demand has dropped, since USES® was installed, from 492.8 KW to 467.0 KW. A reduction of 25.8 KW.

I believe that the results noted above provide reasonable verification of the savings estimates that were included in our proposal of August 18, 1999.

Yours truly,

Roger W. Hassard

cc: Mr. C.K. Morse, President, Seakay Management Corporation