

2008 EAST TENNESSEE ENVIRONMENTAL CONFERENCE

HOW TO SELL



Environmental Projects

To Management

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By: Harding Aslinger

University of Tennessee Center for Industrial Services

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TARGET AUDIENCE



Environmental Managers
Facilities Engineers
Human Resource Professionals
TP3 Contacts
Lean Coordinators
Finance Managers

WHO IS HERE?



Government
Higher Education
Industry
Business
Other?

IF I HAVE A GREAT IDEA?



That is going to save the
company money!

And is environmentally
friendly!

Then “WHY” can I not just
implement it?



Odds are that I am too low on the totem pole!

OUR GOAL!



To out maneuver management at their own game on their own turf in order to achieve an environmentally friendly positive cost enhancement for the facility.

WHO IS MANAGEMENT?



The collective body of those who exercise economy and care while providing control and direction of an enterprise!

WHAT IS SELLING?



To persuade or influence to a course of action or to the acceptance of something.

To develop a belief in the truth, value, or desirability of.

To influence or induce to make a purchase.

ENVIRONMENTAL PROJECTS?



For TP3:

Energy Conservation

Hazardous Chemicals Reduction

Land and Water Conservation

Clean Air

Solid Waste Reduction

THIS SOUNDS LIKE A LOT OF TROUBLE SO WHY BOTHER?



Pride and Self Gratification
Sustainability for Future Generations
Job Fulfillment

ENERGY CONSERVATION

At A Tennessee Manufacturer

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The left side of the slide features a decorative vertical bar composed of several thin, parallel lines in shades of brown, tan, and grey. To the right of this bar, there are several orange circles of varying sizes, some overlapping each other, creating a modern, abstract design.

IF YOU TOLD YOUR BOSS THAT FOR A \$110,000 INVESTMENT THIS YEAR, THE COMPANY WOULD SAVE \$120,000 PER YEAR FOR THE FORESEEABLE FUTURE, HOW WOULD HE/SHE RESPOND?

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Show me the numbers!

**INVESTMENT PROPOSAL
FRONT PAGE**

Description: _____	Investment no.: _____ <i>(to be completed by Controller/Finance Manager)</i>
Project manager: _____	Date: _____

Location: _____ Corporate unit: _____

Category:

- A: Buildings & HES
- B: Departments and IT
- C: Production, rationalization and reinvestments
- D: Production, new orders and capacity expansion
- E: Production, new orders/later income

Functional area:

- Market
- R&D
- Finance
- Purchasing
- Production

Document overview:

1. Investment proposal, Front page _____
2. Investment proposal, Specification _____
3. Investment proposal, Decision-making procedure _____
4. Product calculation _____
5. Cash flow analysis _____
6. _____
7. _____
8. _____

Decision-making level : (ref. budget)

- Department Head
- General Manager
- Vice President - Finance
- President
- CFO
- CEO

Name: _____
Position: _____

Decision: <input type="checkbox"/> Approved <input type="checkbox"/> Rejected	Drawn from budget object: _____ <i>(to be completed by decision-making authority)</i>
Investment limit: _____	Date: _____
Signature: _____	

Subsequent to checking and registration, the Controller/Finance Manager distributes the documents to:

- Original: Controller/Finance Manager,
- Copies: Project Manager _____
(to be completed by project manager)

**INVESTMENT PROPOSAL
SPECIFICATION**

<i>Description:</i> _____	<i>Investment no:</i> _____
<i>Project manager:</i> _____	<i>Date:</i> _____

Background for the proposal:

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Objective of the investment:

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Concrete target criteria:

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Organization of the investment :

Stages	Responsible	Dept:
1. Investment analysis and decision-making basis		
2. Implementation/assembly/technical follow-up		
3. Acceptance test/approval of delivery		
4. Start-up and qualification for production		
5. Training (use and maintenance)		
6. Financial follow-up until completion		
7. Follow-up of above-mentioned target criteria		
8. Members of project team (if appointed)		

Estimate of total expenses (amounts):

Currency:

Cost elements	Amount
1. External purchase of machinery/equipment	
2. Purchase of consultancy services and technical assistance	
3. Own work (hours x rate)	
4. Start-up costs	
5. Investment in tools and fixtures	
6. Training costs	
7. Other (specify)	
8. Import duties	
9. Investment tax	
10. Total investment costs	

	Proposer	Cost accountant	Project manager	Team manager (or Dept. Head)
Name :	_____	_____	_____	_____
Signature :	_____	_____	_____	_____

**INVESTMENT PROPOSAL
DECISION-MAKING PROCEDURE**

<i>Description:</i> _____	<i>Investment no.:</i> _____
<i>Project manager:</i> _____	<i>Date:</i> _____

This form must accompany case documentation when an investment proposal is being prepared/processed. It will aid the administrative procedure. The project manager shall indicate on this form the correct decision-making procedure through to the final decision being made. The system is intended to ensure that all those who ought to influence the decision or have a right of co-determination have been duly involved in the process.

Must the matter be presented to HES Committee ? Yes No Chairman HES Committee, sign.: _____

Has the matter been dealt with by HES Committee ? Yes No Date: _____

Minutes enclosed :

Other information:

Evaluation level/Signature	Comments - Recommendation - Decision
Level: <u>Cost accountant</u> Date: _____ Signature: _____	
Level: <u>Project manager</u> Date: _____ Signature: _____	
Level: <u>Team manager</u> Date: _____ Signature: _____	
Level: _____ Date: _____ Signature: _____	
Level: _____ Date: _____ Signature: _____	
Level: _____ Date: _____ Signature: _____	
Level: <u>Controller/Finance Manager</u> Date: _____ Signature: _____	The Finance Manager/Controller checks that the decision-making authority has available funds under the budget and does not exceed its authority. Assuming that the proposal is approved, the Finance Manager/Controller takes out a new investment order number and distributes the case documents as indicated on the Front Page.

**INVESTMENT PROPOSAL
FINAL REPORT**

Description: _____	Investment no: _____
Project manager: _____	Date: _____

Description of target achievements :

Special experiences:

Financial follow-up (amounts):

Currency: _____

Cost element	Budget	Realized	Deviation
1. External purchase of machinery/equipment			
2. Purchase of consultancy services and technical assistance			
3. Own work (hours x rate)			
4. Start-up costs			
5. Investments in tools and fixtures			
6. Training costs			
7. Other (specify)			
8. Import duties			
9. Investment tax			
10. Total investment costs			
11. Investment limit approved			

Information regarding capitalization :

The invest. is to be used for: Production equipment IT
 Furniture Transport Buildings

Depreciation to be charged to team/dept: _____ Annual rate of depreciation: _____

Other: _____

	Team manager (or Dept. Head)	Finance Manager/ Controller
Name: _____	_____	_____

Signature: _____

Subsequent to checking and registration, the Controller/Finance Manager distributes the documents to:

- Original: Controller/Finance Manager
- Copy: Project Manager _____
(to be completed by project manager)

EXECUTIVE SUMMARY

The lighting retrofit detailed on the attached capital appropriations request is being proposed as a cost reduction as well as a lighting enhancement for our facility. Our request is to replace our thirty-five year old Metal Halide fixtures with high bay fluorescent fixtures utilizing T8 lamps and electronic ballasts.

The \$110,000 investment will save \$120,000/year in energy resulting in an eleven month payback.

The new lamps will provide more light than the existing lights.

There will be a significant reduction in heat output from the lights making the facility more comfortable in the summer months.

It is the recommendation of the management of this facility that this capital appropriations request be approved as submitted in order to complete this lighting retrofit during the current business year.

The EH&S manager developed and submitted a capital appropriations request preceded with an executive summary for approval of funds to complete the project. As with most companies, the approval process took approximately one hundred and twenty days before the new lighting could be ordered and installed.

In 2007, the company recognized \$120,000 in savings through this project yielding less than a one year payback! This savings was proposed, approved, and implemented as the result of what started as an environmental assessment.

The financial payback from energy savings for this project was 335 days (.92 years) and the lighting enhancement for the facility was remarkable. All old lighting and fixtures that were removed were recycled.

Jerry Yant is the plant controller and is available for questions; possibly a facility tour.

HAZARDOUS CHEMICAL REDUCTION

At A Tennessee Manufacturer

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IF YOU TOLD YOUR BOSS THAT FOR A \$200 INVESTMENT THIS YEAR, THE COMPANY WOULD SAVE \$11,000 PER YEAR FOR THE FORESEEABLE FUTURE AND IT WOULD ELIMINATE THE COMPANY AS A HAZARDOUS WASTE GENERATOR, HOW WOULD HE/SHE RESPOND?

No way!

Any body knows that's too good to be true!

If it were that simple, we would have done it years ago

The facilities management team for a food service company where the quality assurance laboratory utilizes an automatic titrator machine to sample test the sodium and fat levels of all their products during the manufacturing process had been stumped for several years on how to reduce/eliminate a hazardous waste stream. The Titrator equipment requires the use of a silver nitrate solution with a concentration of 11,000 PPM and for each test, the machine injects a sample blended from product and water with the silver nitrate solution. An average test sample uses 8.5 mg of silver nitrate with a concentration of 459 mg/L which is too high for discharge into the drain because the acceptable limit is only 5.0 mg/L. Due to the volume of production at the facility, an average of 4,000 lbs. of silver nitrate hazardous waste has been produced per year.

A representative from UT CIS along with a civil engineer from the University of Memphis visited the facility to assess the processes and current waste treatment capabilities. After evaluating numerous options, the joint team determined that by installing a recovery system similar to those used in photographic solution recovery virtually all of the silver could be reclaimed for recycling. Actual tests for silver concentration in the spent solution yields only 0.05 mg/l which is one tenth of the acceptable limit.

Cost reductions to be recognized include:

- Elimination of waste containers.

- Personnel to process the waste and resulting paperwork.

- Hazardous waste generator fees.

EXECUTIVE SUMMARY

After an extensive research of alternative solutions, the facilities team has established that a recovery system similar to what is used in photographic solution recovery will reclaim the silver in our process for recycling and eliminate our last remaining hazardous waste stream.

The \$200 investment will save \$11,000/year in total costs resulting in a one week payback.

The silver will be recovered for recycling.

The hazardous waste stream can be permanently closed.

It is the recommendation of the management of this facility that this capital appropriations request be approved as submitted in order to incorporate this process change and close this waste stream.

ENERGY CONSERVATION

At A Tennessee Manufacturer

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The Environmental Manager for a twenty-five year old custom machine shop in Oak Ridge, TN that deals with regular and radioactive materials requested assistance from the University of Tennessee Center for Industrial services in identifying and selling approval of various environmental projects at his facility. The facility was established in 1982, utilizes 180,000 square feet for its total operations, has less than seventy five associates, and just over ten million in annual sales which qualifies it as a small manufacturer.

During an assessment at the facility, the environmental team determined the following:

- A lighting retrofit in the office area could save the company \$10,000 annually.
 - The project cost was projected at \$11,000.
 - Existing lighting was fixtured with four T12 lamps and magnetic ballasts.
 - Replacement lighting was fixtured with three T8 lamps and electronic ballasts.
 - The T8 lamps selected were also the “day liter” to mimic day light.
- It was determined that switching to a curtailable electric rate could save the company \$25,000 annually.
 - A company must agree that within an hours notice, they will curtail their electrical usage.
 - The company gets benefit of the rate regardless of whether they are called or not.
 - Calls have only gone out twice in the past five years.
- A rate analysis revealed an opportunity to take advantage of a small manufacturer’s credit with a savings of \$60,000 annually.
 - Although this option is not for every company it is great for those that are flexible.
 - A variable rate is utilized and it is beneficial to the company to switch equipment off during certain periods of the day and operate it at other times.

EXECUTIVE SUMMARY

The lighting retrofit detailed on the attached capital appropriations request is being proposed as a cost reduction as well as a lighting enhancement for our facility. Our request is to replace our twenty-five year old four T12 lamp fixtures and magnetic ballasts with three T8 lamp fixtures utilizing electronic ballasts and ‘day liter’ bulbs.

The \$11,000 investment will save \$10,000/year in energy resulting in a thirteen month payback.

The new lamps will provide equivalent and more appealing light than the existing lights.

There is a projected increase in productivity in the office due to the enhanced lighting.

It is the recommendation of the management of this facility that this capital appropriations request be approved as submitted in order to complete this lighting retrofit during the current business year.

The financial payback from energy savings for this lighting retrofit project was 402 days (1.1 years) and the impact on the office was remarkable.

There was no cost for converting to the curtailable electric rates and that \$25,000 immediately dropped to the bottom line.

There was no cost direct associated with taking advantage of the small manufacturer's credit so the \$60,000 immediately dropped to the bottom line.

Overall the company is now saving \$85,000 annually with an investment of approximately \$21,000 for consulting and equipment upgrades.

Tim Waddell is the facilities manager and is available at 865-481-0455 for questions.

WE HAVE “RUN” OUT OF TIME



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The End!