

Green IT Project TA: Kadra Branker Email: 5kb3 @queensu.ca

Energy Conservation Measure : ECM Project Feedback (parts 1 and 2) Marks: 35.75 to 47.25 out of 50 Correct ECMs Good Work Overall – Bonuses available?





• Due Dates:

• Thurs. 18th Tutorial mandatory

- Individual ECM overview cont'd

- fix ECMs - ¹/₂ class (time permitting)

• Correct ECMs by Friday 19th - 8:30 am

Start Company Audits

• Final Project Due March 12th (~3 ½ weeks away!)

Reminder!

<u>Do not post information about your company or its data</u> on Appropedia

ECM to choose from and groups



Consider what ECMs you want to use. Wait for final version.				
ECMs	Group			
Energy-efficient PC/workstations (<u>Monitors</u> / <u>Laptops</u> / Power Supply)	1			
Phantom power reducing Power Bars (2 options <u>ready</u> & <u>not ready</u>)	2			
Linear Fluorescent Retrofit (<u>Upgrading to T8 from T12</u>)	3			
Server Virtualization	4			
Motion Sensor Controlled Vending Machines	5			
<u>Telecommuting</u> (needs to be revamped)	6			
Energy Monitoring (needs to be revamped)	7			
<u>Collaborating documents electronically</u> (needs subtle corrections)	8 3			
	/			



Marking Explanation

Marked based on Penalty

- Start at 100%
- marks deducted for errors

(I assume you will help fix large errors)

Tougher Marking this round

- Need to have correct ECMs for audits
- I have to correct final errors

The more I have to correct, the less marks you get

- Corrected ECM is mandatory

Marking Explanation – Peer Review

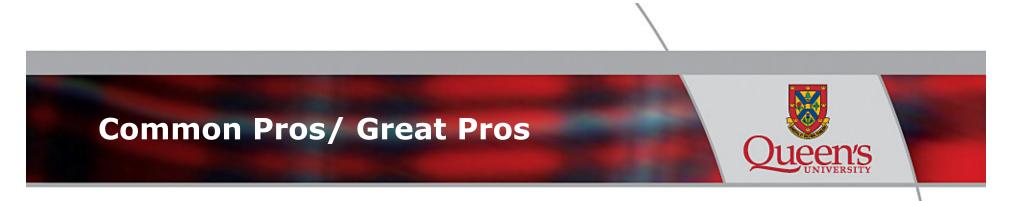
Peer Review:

- Individually review another group (5)
- As a group, use reviews given (5)
- o <u>Individual</u> Reviewer marks lost if:
 - I found major errors you did not/ group did not
 - No review by individual
 - late review
- **<u>Group "</u>Reviewee" marks lost if:**
 - Major errors you did not change that reviewer mentioned

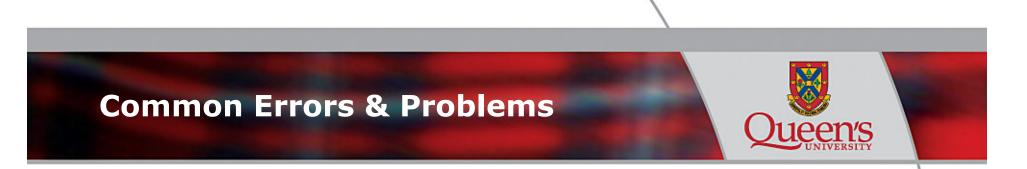


Grading Rubric for Parts 1 and 2 Combined

Group Members:		Student:		
		Topic:		
		ECM:		
		Graded	l out of 50 points; Final Mark	0
CONTENT : 20 19	0 18 17 16 15 14 13 12 11 10 9	876543210		0
*Appropriate	topic covered thoroughly		3	
	rmation given to understand to	Dic	3	
_	tion was interesting	•	1	
*Technically	competent		3	
*Page was ful	ly annotated		3	
*Complete lite	erature search was apparent		5	
*Could be rep	roduced		2	
ECONOMIC and 0	ENVIRONMENTAL ANAL	YSIS : 20 19 18 17 16 15 14 13 12 1	1 10 9 8 7 6 5 4 3 2 1	0
*Followed Te	mplate – created one of value		1	
*Easy to see a	and follow		2	
*Aesthetically	Appealing		1	
*Correct:	Econ		8	
	Enviro		8	/
Peer Review : 109	876543210			0
*Comments w	vere helpful (Individual)		5	_ /
	cted on Appropedia page and E	CM (Group)	5	/
				/
General Comments				/
Comments				
				6
			/	



- Good template
- Covered topic generally well
- **o** Colour legend/freeze frames/ other nifty formatting
- o Printer Area- "View" -> "page layout"
- Correct Economics for 2 -3 groups
- Good Enviro considerations and calcs



- 1 group uploading file error (talk to Amir)
- <u>Refs. not dated</u> in ECM (when accessed or source date) need to know when valid
- NPV discounting calc. wrong (2 groups got correct)
 different rates in each year

$$NPV = -C_0 + \frac{C_1}{(1+r_1)^1} + \frac{C_2}{(1+r_2)(1+r_1)^1} + .$$
$$NPV = -C_0 + \frac{C_1}{(1+r_1)^1} + \frac{C_2}{(1+r_1)^2} + ...$$

- Correct in videoconferencing ECM example



• Key – BE TRANSPARENT

- Should not have to search for things
- equations should be easy to find (either on page

or in assumptions or an equations page)

\odot Spelling and Grammar errors

Weak/ Strong Assumptions –

- Make sure people know this. When doing for Company, show a range of inputs if volatile assumption.
 - eg. You assume measure gives 8.2% savings. What if I only do 1%, 3%, 5%? How sensitive is the analysis? Give company targets/ options.

Common Errors & Problems cont'd

- Round to nearest dollar if > \$100
- Print Area specify letter or legal in 1st page
- Confusion between Year 0 and Baseline
- Limitations not addressed
- Lost Lit. Review marks if:
- <u>no</u> implementation considerations, limitations, energy& enviro citations
- Named Cells- edit with "Formulas"-> "Name Manager"
- Commercial vs Residential Rates ask business
- Enviro effects for correct jurisdiction (1 group US)

Green IT Audit

• Weak or volatile assumptions

- Give company 2 -5 scenarios.
- Show working for 1
- E.g changing electricity costs
 - labour costs
 - variable replacement times
 - different % reduction in energy costs

What are the client's motives ? Ask them questions to improve assumptions Grading Rubric for Parts 3 and 4



Graded out of 50 points

CONTENT: 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0

- Recommendation report covered thoroughly
- Well written
- The presentation was interesting and followed directions
- Technically competent
- Aesthetically Appealing

ECONOMIC and ENV. ANALYSIS: 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0

- Followed Template
- Easy to follow
- Correct (-20 if incorrect)

WORK: 109876543210

- Complete audit apparent
- Represented Queen's University well

ECMs to choose from and groups



ECM	Group
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Respective groups are like consultants	13





- Leverage level of debt to equity financing
- Taxation
- **o** Depreciation/ Capital Cost Allowance
- Tax Credits, Deductions
- Insurance
- Salvage Value/ Donation/
- Electronic Waste Collection (WEEE)
- Rebates
- **o** Soft Costs : Labour, Transport, Tax on product



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No office hours. Make an appointment as a group.

Appropedia Discussion board Green IT project - for global concerns. (no confidential issues posted)

Green IT Appropedia TA is Amir Nosrat