

UPGRADE OR REPLACE?

CARBONATE REMOVAL SYSTEM

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INTRODUCTION

Project

Upgrade or replace the current carbonate removal system which is failing, impacting plant availability and performance whilst increasing waste disposal costs for the business

Options

1. Upgrade the current system to optimize efficiency and to maximize plant availability
2. Purchase new carbonate removal system with latest technology

Aims

Consider the most favorable project for the organization, assessing all benefits to the company:

- Financial
- Technological advancement
- Impact on BAU

EXPECTED BENEFITS

Economic

- Increased plant availability
- Increased efficiency of carbonate removal

Environmental

- Reduction in waste disposal
- Improved energy efficiency

Organizational

- Introduction of new technologies

TIME REQUIREMENT

	Option 1 - Upgrade current system	Option 2 - Purchase new carbonate removal system
Delivery & installation	6 - 8 weeks	12 - 14 weeks
Commissioning	3 days	1 day
Software upgrade	2 days	0.5 day
Training	2 days	5 days

ORGANISATIONAL CONSIDERATIONS

OPTION 1



SIZE

SPEED OF
IMPLEMENTATION

STAFF SKILLS

OPERATIONAL EFFICIENCY

RESOURCES

OPTION 2



COSTS & FUNDING

	OPTION 1 (UPGRADE)	OPTION 2 (REPLACEMENT)
COST	£27,000.00	£67,000.00
DELIVERY	£850.00	INCLUDED
INSTALLATION	£2,160.00	INCLUDED
SOFTWARE	£1,200.00	£400.00
TRAINING	£400.00	£1,250.00
TOTAL	£31,610.00	£68,650.00

CapEx

- ❖ Capitalized on a company's balance sheet instead of expensed on the income statement.
- ❖ Can use cash (internal finances) or credit (external finances) for funding
- ❖ Considered an investment in improving, or maintaining assets

PROJECT CONSIDERATION

	Option 1 - Upgrade current system	Option 2 - Purchase new carbonate removal system
Length	5 years	5 years
Useable life	8 – 10 years	20 years
Maintenance schedule	3 monthly	3 monthly
Residual value	£500	£500

FINANCIAL ANALYSIS

	Option 1	Option 2
Payback period (PP)	2 years 9 months	2 years 8 months
NPV	£9,852.37	£26,537.91
IRR	25.97%	28.28%
PI	1.31	1.39
ARR	81.0%	86.8%
BCR	0.65	0.75

CONCLUSION AND RECCOMENDATIONS

OPTION 1

Fastest to implement

Minimum training required

Familiarity for operators

Average investment is lower

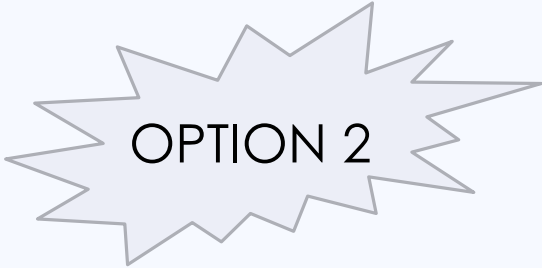
OPTION 2

Expected lifespan is longer

Technological jump

Highest ROI

Shortest payback period



OPTION 2

QUESTIONS

