Gníomhaireacht Bainistíochta an Chisteáin Náisiúnta
National Treasury Management Agency

National Public Lighting Project – Development of the Business Case

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Contents

Introduction

To NewERA:

- NewERA is a business unit within the NTMA
- Provides a dedicated centre of corporate finance expertise to the Government

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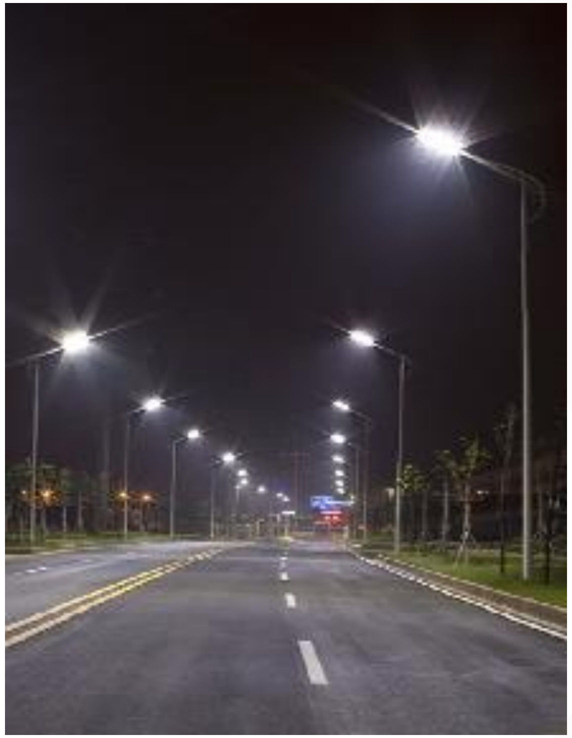

To the project:

- 480,000+ public lights in Ireland, managed by 32 Local Authorities
- Consuming 485GWh of energy p.a.
- Upgrade to LED to reduce consumption by min 50%

RMO
An Oifig um Bainistiú Bóithre
Road Management Office
TII
CCMA

Key Components of the Business Case

Economic Appraisal / Cost Benefit Analysis (CBA):

- Define counterfactual scenario
- Outline project scenario
- Costs and benefits measured on an incremental basis

Financial Appraisal:

- Estimate of cash cost of delivering the project
- Assessment of affordability

Project Structure and Financing:

- Energy Performance Contracting (EPC) vs traditional procurement
- Government balance sheet considerations
- Availability and cost of funding

Economic Appraisal

Inputs:

Counterfactual
- Energy costs
- Maintenance costs
- Carbon costs

Project scenario
- Bulb replacement capex
- Tendering costs
- Energy savings
- Maintenance savings
- Carbon savings

Incremental Measurement
- Only costs/savings directly attributable to the project are taken into account

Sensitivity Analysis
- Flexing key assumptions

Key Outputs:

Net Present Value (5% discount rate)
Benefit Cost Ratio
Internal Rate of Return
Discounted Payback Period

Economic Appraisal Results

CBA Summary

Base case (€m)	Counterfactual	Project	Incremental
Real			
Capital costs	(90.6)	(196.3)	(105.7)
Energy costs	(500.5)	(282.0)	218.4
Maintenance costs	(154.5)	(72.7)	81.8
Carbon costs	(33.6)	(18.8)	14.8
Net benefit			209.3

Base case	Incremental
Present value @ 5% discount rate (€m)	
Incremental capital costs	(102.5)
Avoided energy costs	131.5
Avoided maintenance costs	50.7
Avoided carbon costs	8.0
CBA Outputs	
NPV (€m)	87.8
Benefit cost ratio	1.9
IRR	14.4%
Discounted payback (years)	9.4

Financial Appraisal

Key differences vs. CBA:

- Nominal instead of real
- VAT inclusive
- Cash costs and benefits only
- Consideration of funding costs

Key Outputs:

- Affordability assessment
- Budgetary impacts
- Cash flow projections

Structuring Considerations

The contractual structure used to implement the Project would determine the nature of the payment flows that each Local Authority would commit to, and would also have an impact on how the Project is funded and the resulting funding costs

Traditional Procurement	EPC
A retrofit contractor would carry out the retrofit and be paid upon completion	*Retrofit + maintenance of LEDs for 10-15 years Annual performance-based payments*
PROS:	***PROS:***
• *Well understood procurement process*	• *Performance risk transferred*
• *Potentially lower financing cost*	• *Budgetary advantages if off balance sheet*
CONS:	***CONS:***
• *Budgetary impact of upfront capital costs*	• *Procurement complexity*
	• *Political sensitivities*
	• *Potentially higher financing cost*

Government Balance Sheet Implications

- EPC structure could potentially be classified by the Central Statistics Office (CSO) as 'off-government balance sheet', in which case:
  - ➢ Only the annual payment to the EPC contractor is recorded in Government accounts, rather than the upfront capital expenditure and related or imputed borrowing
  - ➢ The impact of the investment on both Local Authority capital budgets and Government accounts would be spread over a longer period, making it easier to accommodate the investment within budgetary constraints
- Requires the EPC contractor to be the economic owner of the asset

Government Balance Sheet Implications

- Economic owner is the party that bears the majority of the risks and rewards associated with owning the asset

- Performance and maintenance risks must be transferred to the EPC contractor

- Duration of contract must cover a meaningful portion of economic life of EPC assets – minimum of 8 years specified in detailed guidance

- Risks transferred to EPC contractor <u>must include financing risk</u>

- A government commitment to finance any portion of project capex will influence the statistical classification

Financing Considerations

Assessment of project's debt-bearing capacity

- Quantify the projected energy and maintenance cost savings in each period

Housing Finance Agency Debt

- Low cost (1.1% - 1.8% p.a.)
- Long tenor (up to 30 years)

Private finance

- Higher cost (3% - 6% p.a.)
- Shorter tenor (10-15 years)

Conclusion

- At interest rates of 5% and above, forecast savings are insufficient to cover debt service costs in early years
- Project could not sustain higher cost of private finance

Financial Appraisal Results

Financial Appraisal Summary

Aggregate (€m)	
Light replacement costs	(193.9)
Procurement costs	(7.7)
Total upfront capital cost	**(201.6)**
Driver replacement costs (year 13)	(21.8)
Total capital cost	**(223.4)**
Debt funding	201.6
Interest cost @ 1.1%	18.1
Energy cost savings	305.3
Maintenance cost savings	135.5
Net decrease in expenditure (after debt service costs)	**199.2**

Business Case Conclusions

Delivery timeframe critical

Need to implement project as soon as possible to contribute to energy efficiency targets

Very positive NPV

CBA indicated strong economic case for Project

Added complexity of EPC procurement

Estimated 2-3 year procurement timeline for EPC, vs 12 months for traditional procurement

Traditional structure capable of delivering savings

Traditional project structure could deliver guaranteed savings via contract specification

Ability to sustain HFA debt costs

Financial appraisal: projected savings sufficient to service HFA debt

No EPC imperative from Central Government

No imperative from Central Government to pursue an off balance sheet structure

Thank You

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