FALKIRK COUNCIL

# Financial and Economic Impact Assessment

## 1.1 Introduction

EKOS has carried out an independent impact assessment of a proposed draft visitor levy scheme for Falkirk Council.

We have developed a bespoke financial and economic model within a cost benefit framework in accordance with HM Treasury Green Book guidance. The model quantifies a range of costs and benefits associated with the set-up and implementation of a visitor levy scheme in Falkirk and has allowed for three distinct analyses, including:

- a financial cost benefit analysis from the perspective of Falkirk Council measuring the tax revenue generated against the cost of implementing and operating a visitor levy.
- a financial cost benefit analysis from the perspective of Falkirk accommodation providers who would act as collecting agents and be responsible for remitting these funds to the council to reinvest in local tourism infrastructure and services. This considers the:
    - benefits: uplift in business turnover/income as a result of investment by Falkirk Council in the visitor economy using funds collected from a visitor levy.
    - costs: direct costs to accommodation businesses for the implementation and ongoing administration of a visitor levy; and indirect costs in terms of business turnover/income lost due to consumer behavioural changes in response to price increases (price elasticity of demand, (PED)).
- an economic cost benefit analysis from a regional economic development perspective assessing the net additional economic impacts (Gross Value Added) generated through visitor levy funded investment against the public sector and private (accommodation) sector costs of implementing and operating a visitor levy.

### Approach

In assessing the costs and benefits associated with a visitor levy, we have taken an approach which estimates a range of scenarios based on different model specifications.

This approach is driven by the nature of the data and evidence available, which is presented as a range of possible values, and the uncertainty around the impacts of visitor levies in general, which have only been recently introduced in a select number of areas and cities globally.

There are several key variables in the model which are subject to multiple specifications. Where feasible and where data allow, to avoid the use of assumptions we have used data available from official published sources and the Scottish Government's Financial Memorandum to the Visitor Levy Scotland Bill. The key variables are:

- set-up/implementation costs and administrative costs for both Falkirk and accommodation businesses. Three cost scenarios have been modelled including low, mid and high-cost scenarios based on data from Scottish Government's Financial Memorandum to the Visitor Levy Scotland Bill.
- price elasticity of demand (PED) values. Three PED values have been modelled to reflect uncertainty in the response overnight visitors will have when facing a price increase in the total price of a trip to Falkirk. Specification with a low-level responsiveness (PED of -0.2), medium-level responsiveness (PED of -0.85) and high-level responsiveness (PED of -1.50) based on evidence in Scottish Government's Financial Memorandum to the Visitor Levy (Scotland) Bill have been modelled.
- investment impact. The impact on the accommodation sector and overnight visitor economy turnover driven by visitor levy funded public investment in the Falkirk visitor economy. As there is no detail available on the scope and scale of any specific investment projects, the potential effects have been modelled using a range of return to investment ratios, which are realised over a 5-year period. For example, an investment impact ratio of 3:1 implies that returns are equal to three times the value invested and that these returns are realised over a 5-year period with 20% of the returns realised per annum. This is a 'project level assumption' and allows for a comparison of the effects of varying level of return on investment.

We have also considered two visitor levy charging structures, including:

- a fixed rate visitor levy structure. This assumes there is a fixed amount visitor levy charged per room per night on all eligible accommodation.
- a percentage rate visitor levy structure. This assumes a percentage visitor levy charged based on the nightly rate of eligible accommodation.

Applying all of these specifications in combination has enabled the modelling of a range of levy structure specifications and enables a wide range of possible results to be analysed. It also allows for direct comparison of a fixed rate and percentage rate charging structure.

## Technical note and key assumptions

The financial and economic analysis considers the following technical elements and key assumptions which have been informed by HM Treasury Green Book guidance for undertaking economic and financial appraisals.

**Constant Prices -** are prices that have been adjusted to remove the effects of inflation. This allows a comparison of costs and benefits over time in real terms, also known as ‘real prices.’ Expressed in terms of the prices prevailing in a selected base year and used to isolate the real change in value over time, without the distortion caused by inflation. We have assumed the base year for the analysis is 2026-2027, the first year a visitor levy could be approved in Falkirk.

**Present Value -** is the value today of a stream of future costs or benefits, discounted to account for the Social Time Preference to reflect the concept that a pound today is worth more than a pound tomorrow. This has been calculated at the HM Treasury recommended discount rate of 3.5%.

**Appraisal Period** – we have set the appraisal period (the timescale over which the model estimates costs and benefits) at 10 years to consider the longer-term implications that could be driven by the introduction of a visitor levy.

**Assumptions**:

- the full charge of a visitor levy has been applied on the assumption that the full cost is passed through to the end consumer.
- all available funding (net of set-up and ongoing administration costs) is invested back into the local visitor economy under the broad themes as outlined in the Visitor Levy (Scotland) Bill:
    - maintaining and improving tourism infrastructure.
    - environmental management.
    - cultural and heritage projects.
    - public transport and local services.
    - promoting sustainable tourism.

## Limitations

The financial and economic analysis is based on the best evidence available and provides a range of possible costs and benefits to Falkirk Council, accommodation sector businesses and the wider Falkirk economy.

It is important to recognise the limitations of the analysis such as:

- the analysis presents accommodation and overnight visitor economy businesses in aggregate, and the potential turnover losses and gains are assessed on a sectoral basis.
- it is possible that turnover losses due to a visitor levy may be unevenly distributed across the Falkirk region. This could have significant impacts on specific businesses and may result in closure of businesses who are particularly impacted.
- businesses may be differentially impacted by investment in the sector, and the potential benefits may not be evenly felt across the region.
- it is not able to determine which consumer response scenario will occur.
- it does not determine which set of costs (set-up and administration) will occur.
- it is not able to determine which investment impact scenario will occur.

For the purpose of comparing the likely impacts generated under the different visitor levy structures, the following model specification has been carried through this chapter.

| Visitor levy structure | Fixed rate | Percentage rate |
|---|---|---|
| Cost scenario | Low | Medium |
| PED Value | -0.2 | -0.2 |
| Investment impact | 3:1 over 5 years | 3:1 over 5 years |
| Levy Revenue Retained by Businesses | 2% | 2% |

Through this approach, the analysis allows for a comparison between the different forecast impacts on a range of stakeholders under the two proposed visitor levy charging structures. Further, the analysis provides insight into a range of possible costs and benefits and an understanding of the magnitude of impact that investment of visitor levy funds will need to generate a positive impact/return.

# 1.2 Costs

This section outlines the approach to estimating costs only - this includes the costs borne by Falkirk Council and those borne by the Falkirk accommodation providers as a result of implementing a visitor levy scheme.

## Local authority costs

As set out in the Visitor Levy (Scotland) Bill Financial Memorandum local authorities will face three sets of costs because of implementing a visitor levy scheme. These are:

- implementation costs.

- ongoing costs associated with administration of a visitor levy.
- accommodation provider retention.

Using a range of cost estimates sourced from the Financial Memorandum, **Table 1** summarises the cost forecasts for the low, mid and high-cost scenarios.

**Table 1: Falkirk visitor levy set-up and administration costs**

| Cost Scenario | Cost Type | 2025/26 | 2026/27 | 2027/28-2034/35 (per annum costs) | Total | Present Value |
|---|---|---|---|---|---|---|
| Low | Implementation | £55,000 | £55,000 | £0 | £110,000 | £108,000 |
| | Administration | £0 | £0 | £160,000 | £1,277,000 | £1,061,000 |
| | **Total** | **£55,000** | **£55,000** | **£160,000** | **£1,388,000** | **£1,169,000** |
| Mid | Implementation | £154,000 | £154,000 | £0 | £308,000 | £303,000 |
| | Administration | £0 | £0 | £212,000 | £1,696,000 | £1,408,000 |
| | **Total** | **£154,000** | **£154,000** | **£212,000** | **£2,004,000** | **£1,711,000** |
| High | Implementation | £253,000 | £253,000 | £0 | £507,000 | £498,000 |
| | Administration | £0 | £0 | £264,000 | £2,114,000 | £1,084,000 |
| | **Total** | **£253,000** | **£253,000** | **£264,000** | **£2,621,000** | **£1,755,000** |

Note: Values rounded to nearest thousand. Present values discounted at 3.5% annually.

Please note that the Low-Cost scenario values are carried forward to assess fixed-rate visitor levy structure costs and the Mid-Cost scenario is used to assess percentage-rate visitor levy structure costs. This is due to the relative complexity of implementing and enforcing a percentage based levy compared to a fixed rate.

Accommodation provider levy retention costs do not vary with set-up or admin cost scenarios, but rather with the total gross value of levy collected. The value of the levy collected is dependent on levy structure and rates, investment returns and market response. Note that while accommodation provider levy retention is a cost from the perspective of Falkirk Council, it is considered a cash benefit from the perspective of accommodation providers.

## Falkirk accommodation provider costs

Falkirk accommodation providers are expected to face direct and indirect costs associated with the implementation and ongoing collection of a visitor levy.

The Financial Memorandum provides a range of potential direct costs which may vary depending on business size[1] and the sophistication of their booking channels.

**Direct costs**:

- one-off set-up and implementation costs – for example, IT systems changes and updates, staff training, etc.
- ongoing costs associated with administration of a visitor levy - increased staff resources.

**Table 2** presents the three cost scenarios for direct Falkirk accommodation sector business costs.

**Table 2: Falkirk Accommodation businesses visitor levy set-up and administration costs**

| Cost scenario | Cost type | 2026/27 | 2027/28 | 2028/29-2035/36 (per annum costs) | Total | Present value |
|---|---|---|---|---|---|---|
| Low | Implementation | £0 | £105,000 | £0 | £105,000 | £102,000 |
| | Administration | £0 | £0 | £59,000 | £469,000 | £389,000 |
| | **Total** | **£0** | **£105,000** | **£59,000** | **£574,000** | **£491,000** |
| Mid | Implementation | £0 | £306,000 | £0 | £306,000 | £295,000 |
| | Administration | £0 | £0 | £144,000 | £1,153,000 | £957,000 |
| | **Total** | **£0** | **£306,000** | **£144,000** | **£1,459,000** | **£1,253,000** |
| High | Implementation | £0 | £506,000 | £0 | £506,000 | £489,000 |
| | Administration | £0 | £0 | £230,000 | £1,838,000 | £1,526,000 |
| | **Total** | **£0** | **£506,000** | **£230,000** | **£2,344,000** | **£2,015,000** |

Note: Values rounded to nearest thousand. Present values discounted at 3.5% annually.

As with the scenario estimates for Falkirk Council's cost, please note that the Low-Cost scenario values are carried forward to assess fixed-rate visitor levy structure costs and the Mid-Cost scenario is used to assess percentage-rate visitor levy structure costs. This is due to the relative complexity of implementing and collecting a percentage-based levy compared to a fixed-rate.

**Indirect costs**:
Indirect costs are assessed based on a financial modelling exercise undertaken by EKOS which assesses the potential lost revenue/income based on the application of a range of price elasticity of demand values:

- decreased business turnover/income as a result of a visitor levy-induced price increase.

[1] The costs are assessed based on business with annual turnover below £90,000; business with turnover between £90,000 and £1,000,000; and businesses with annual turnover above £1,000,000.

Estimates for the PED for an overnight trip vary widely and the academic literature does not suggest a consensus.

Scottish Government commissioned research into estimating a PED for the Scottish Overnight Tourism Sector suggests a low-end value (that is, least price sensitive response) of -0.2 and a high-end value (that is, the most price sensitive response) of -1.50.

To support the development of a range of scenarios to estimate the impact of a price increase on sector turnover, EKOS has used the above PED values as low and upper bounds and have included a midpoint value of -0.85 to inform low, mid, and high-impact scenarios. The baseline scenario used for purpose of comparison of visitor levy structures is -0.2.

A range of investment returns have also been modelled. The baseline scenario used for purpose of comparison is a 3:1 return ratio.

The indirect costs are measured as the difference between the counterfactual accommodation sector turnover and the new accommodation sector turnover after the consumer response. The indirect costs, or decreased business turnover, is presented for each visitor levy charging structure in **Table 3**.

**Table 3: Falkirk accommodation business visitor levy indirect costs**

| Visitor levy structure | Rate | Total | Present value |
|---|---|---|---|
| Percentage rate | 3% | £43,000 | £35,000 |
| | 5% | £71,000 | £59,000 |
| | 7% | £100,000 | £83,000 |
| Fixed rate | £1.00 | £11,000 | £9,000 |
| | £2.50 | £26,000 | £22,000 |
| | £5.00 | £53,000 | £44,000 |
| | £7.00 | £74,000 | £62,000 |

Note: Values rounded to nearest thousand. Present values discounted at 3.5% annually.

# 1.3 Benefits

This section outlines the potential benefits arising from the introduction of a visitor levy and considers the following benefits:

- financial returns to Falkirk in the form of tax receipts collected from a visitor levy.
- increased turnover/income within the accommodation sector and wider overnight visitor sector generated by visitor levy funded investment in the local visitor economy.

- the net additional GVA generated within the visitor economy as a result of the net change in sector turnover/income accounting for the effect of public sector investment and consumer responses to price increases associated with a visitor levy.

## Tax revenue generated

The tax revenue  generated by the fixed rate structure and by the percentage rate structure has been estimated by applying the charges to the total accommodation expenditure.

The estimates are based on the following assumption on the design of a visitor levy in Falkirk: no local exemptions; no cap on the number of nights of accommodation on which a visitor levy is charged; 2% levy retention to accommodation businesses; and that a visitor levy goes into effect in year 3 (2029) after approval and an 18-month implementation period as required by legislation.

The estimates for **gross tax receipts** under each visitor levy structure are presented in **Table 4.**

**Table 4: Gross average annual tax receipts (£millions)**

| Visitor levy structure | Rate | Average annual gross tax receipts | Present Value |
|---|---|---|---|
| Percentage rate | 3% | £1,050,000 | £6,940,000 |
| | 5% | £1,760,000 | £11,680,000 |
| | 7% | £2,490,000 | £16,510,000 |
| Fixed rate | £1.00 | £260,000 | £1,740,000 |
| | £2.50 | £660,000 | £4,380,000 |
| | £5.00 | £1,330,000 | £8,830,000 |
| | £7.00 | £1,880,000 | £12,450,000 |

Note: Figures rounded to nearest ten thousand. Present values discounted at 3.5% annually

The net tax receipts consider the set-up and implementation costs (as presented in **Table 5**) borne by Falkirk Council and this figure represents the maximum funding that would be available for investment in the visitor economy, before any exemptions, caps, and business payments are considered. **Table 5** presents net tax receipts.

**Table 5: Net average annual tax receipts**

| Visitor levy structure | Rate | Average annual net tax receipts | Present Value |
|---|---|---|---|
| Percentage rate | 3% | £810,000 | £5,340,000 |
| | 5% | £1,520,000 | £10,040,000 |
| | 7% | £2,230,000 | £14,770,000 |
| Fixed rate | £1.00 | £100,000 | £650,000 |
| | £2.50 | £490,000 | £3,230,000 |
| | £5.00 | £1,150,000 | £7,590,000 |
| | £7.00 | £1,680,000 | £11,140,000 |

Note: Figures rounded to nearest ten thousand. Present values discounted at 3.5% annually

# Accommodation sector turnover

The impact on accommodation sector turnover examines the overall change seen by businesses measured by the turnover increase induced by visitor levy funded investment in the sector plus levy retention less the magnitude of turnover decrease due to price rises caused by a visitor levy.

**Table 6** presents the net impact on the accommodation sector for each visitor levy structure.

**Table 6: Net accommodation sector turnover**

| Visitor levy structure | Rate | Average Annual Net Turnover Impact | Present value |
|---|---|---|---|
| Percentage rate | 3% | £420,000 | £2,680,000 |
| | 5% | £780,000 | £4,970,000 |
| | 7% | £1,140,000 | £7,290,000 |
| Fixed rate | £1.00 | £50,000 | £320,000 |
| | £2.50 | £250,000 | £1,560,000 |
| | £5.00 | £570,000 | £3,650,000 |
| | £7.00 | £840,000 | £5,340,000 |

Note: Figures rounded to nearest ten thousand. Present Values discounted at 3.5% annually.

## Socioeconomic benefits – net additional GVA

To estimate the net additional impact on the regional overnight visitor sector economy we have converted net turnover occurring within the wider visitor economy (which includes additional activity in food and drink, recreation and leisure, and transport sectors) to net additional GVA[2] by applying average sector economic coefficients based on Scottish Government Sustainable Tourism sector data[3], applying the additionality factors of leakage and displacement and applying economic multipliers[4] associated with supply chain and income effects.

The following economic additionality factors have been applied:

- turnover to GVA ratio: 55%.
- leakage: 5% to account for the outward flow of profits from national or internationally headquartered businesses operating in the region.
- displacement: 10% to account for the potential redistribution of visitors from one area in Falkirk to another depending on the location of investment and the potential for new roles in the sector to be filled by those who are already employed elsewhere in the economy and are switching roles.
- type-2 GVA multiplier: 1.3. Assumed to be 50% of the Scotland level multiplier to account for the smaller economy and geographic reach of Falkirk. In economic impact analysis, Type II multipliers include both:
    - indirect effects (business-to-business supply chain spending).
    - induced effects (spending by employees from wages).

**Table 7** summarises the estimated net additional GVA generated in the Falkirk overnight visitor economy as a result of a visitor levy.

[2] GVA is a measure of economic output that considers the value of goods and services produced before allowing for depreciation or capital consumption. GVA measures the income generated by businesses after the subtraction of input costs, but before costs such as wages and capital investment. This is Scottish and UK government standard approach to measurement.
[3] Scottish Annual Business Statistics 2023
[4] Type-2 multipliers sourced from Scotland Input/Output Tables.

**Table 7: Net additional GVA – overnight visitor sector (£millions)**

| Visitor levy structure | Rate | Average Annual Net Additional GVA Impact | Present value |
|---|---|---|---|
| Percentage rate | 3% | £1.0 | £6.2 |
| | 5% | £1.8 | £11.5 |
| | 7% | £2.6 | £16.8 |
| Fixed rate | £1.00 | £0.1 | £0.7 |
| | £2.50 | £0.6 | £3.7 |
| | £5.00 | £1.4 | £8.7 |
| | £7.00 | £2.0 | £12.7 |

Note: Figures rounded to nearest £0.1m. Present Values discounted at 3.5% annually.

# 1.4 Cost-benefit analysis

EKOS has assessed the cost and benefits associated with a visitor levy through three distinct cost benefit analyses (CBA). These CBAs consider the following:

1. A financial cost benefit analysis from the perspective of Falkirk measuring the tax revenue generated against the public sector cost of implementing and operating a visitor levy.
2. A financial cost benefit analysis from the perspective of Falkirk accommodation sector businesses who would act as collecting agents and be responsible for remitting these funds to the council. This considers the benefit (additional business turnover/income to the sector associated with direct visitor economy investment by Falkirk Council using funds collected from a visitor levy plus levy value retained) assessed against the direct cost to accommodation businesses (implementation and ongoing administrative costs) and indirect costs, including business turnover/income change due to consumer behavioural changes in response to price increases.
3. A socioeconomic cost benefit analysis from a regional economic development perspective assessing the net additional economic impacts (GVA) generated through visitor levy funded visitor economy investment against the public sector costs of implementing and operating a visitor levy. Note that the indirect cost of lost turnover is included within the calculation of Net Additional GVA as this itself is based on the net effect a visitor levy has on accommodation sector and overnight visitor sector turnover.

The analysis presents two results metrics:

- Net Present Value (NPV) – is a measure of the **absolute** magnitude of impact attributed to a visitor levy. NPV measures the present value benefits minus the present value costs.

- Benefit to Cost Ratio (BCR) – is a measure of the **relative** magnitude of impact attributed to a visitor levy. The BCR measures the present value benefits divided by the present value costs

## Falkirk Council financial cost benefit analysis

This analysis measures the net present value of gross tax receipts received as a result of a visitor levy against the net present value of the council's set-up/implementation costs and ongoing administration costs and levy revenue which is retained by businesses over the 10-year appraisal period. Results are presented in **Table 8**.

**Table 8: Falkirk financial cost benefit analysis results (£millions)**

| Visitor levy structure | Rate | Gross tax revenue generated | Cost of set-up and admin and levy revenue retained by business | NPV | BCR |
|---|---|---|---|---|---|
| Percentage rate | 3% | £6.9 | £1.8 | £5.1 | 3.8 |
| | 5% | £11.7 | £1.9 | £9.7 | 6.0 |
| | 7% | £16.5 | £2.0 | £14.5 | 8.1 |
| Fixed rate | £1.00 | £1.7 | £1.2 | £0.5 | 1.6 |
| | £2.50 | £4.4 | £1.3 | £3.1 | 3.5 |
| | £5.00 | £8.8 | £1.3 | £7.5 | 6.6 |
| | £7.00 | £12.4 | £1.4 | £11.0 | 8.8 |

Note: Figures rounded to nearest £0.1m. Present Values discounted at 3.5% annually.

All charging structure and rates shown here are expected to generate positive returns for Falkirk Council, though the magnitude of these returns depends on the rates set, with higher rates generating greater returns.

## Falkirk accommodation sector businesses CBA

This analysis measures the net present value of the turnover benefit to businesses as a result of public investment in the visitor economy using visitor levy generated funds plus levy revenue retained, against the present value direct costs to accommodation business and indirect costs (the value of lost turnover due to price increases brought on by a visitor levy) over the 10-year appraisal period. Results are presented in **Table 9**.

**Table 9: Accommodation sector businesses financial cost benefit analysis results (£millions)**

| Visitor levy structure | Rate | Turnover uplift | Retention | Set-up and admin costs | Turnover lost | Total cost | NPV | BCR |
|---|---|---|---|---|---|---|---|---|
| Percentage rate | 3% | £2.6 | £0.1 | £1.3 | £0.0 | £1.3 | £1.4 | 2.1 |
| | 5% | £4.8 | £0.2 | £1.3 | £0.1 | £1.3 | £3.7 | 3.8 |
| | 7% | £7.0 | £0.3 | £1.3 | £0.1 | £1.3 | £6.0 | 5.5 |
| Fixed rate | £1.00 | £0.3 | £0.0 | £0.5 | £0.0 | £0.5 | -£0.1 | 0.7 |
| | £2.50 | £1.5 | £0.1 | £0.5 | £0.0 | £0.5 | £1.1 | 3.1 |
| | £5.00 | £3.5 | £0.2 | £0.5 | £0.0 | £0.5 | £3.2 | 6.9 |
| | £7.00 | £5.2 | £0.2 | £0.5 | £0.1 | £0.6 | £4.9 | 9.8 |

Note: Figures rounded to nearest £0.1m. Present Values discounted at 3.5% annually.

Accommodation sector businesses could face higher costs under the percentage rate structure, though they could gain greater benefits in additional turnover as a result of visitor levy funded investment. However, in terms of BCR, the fixed rate structure generates a higher BCR from the perspective of Falkirk accommodation sector businesses.

## Socioeconomic cost benefit analysis

This analysis measures the present value of the net additional GVA retained in Falkirk as a result of investment of visitor levy generated funds against the present value of the direct costs to the council plus the direct costs to accommodation business over the 10-year appraisal period.[5] Note that levy revenues retained by businesses are excluded from this analysis as these are a cost from the Falkirk Council perspective and a benefit from the accommodation sector perspective. Results are presented in **Table 10**.

[5] Note that here we do not include indirect costs (the cost of decline in turnover for businesses) as this is already accounted for in the net additional GVA benefit which is derived from net additional turnover. Net additional turnover considers the turnover generated from investment in the visitor economy using visitor levy funds minus lost turnover from price increases as described earlier.

**Table 10: Socioeconomic cost benefit analysis results (£millions)**

| Visitor levy structure | Rate | Net additional GVA | Council Cost of set-up and admin | Business cost of set-up and admin | Total cost | NPV | BCR |
|---|---|---|---|---|---|---|---|
| Percentage rate | 3% | £6.2 | £1.7 | £1.3 | £3.0 | £3.2 | 2.1 |
| | 5% | £11.5 | £1.7 | £1.3 | £3.0 | £8.5 | 3.9 |
| | 7% | £16.8 | £1.7 | £1.3 | £3.0 | £13.9 | 5.7 |
| Fixed rate | £1.00 | £0.7 | £1.2 | £0.5 | £1.7 | -£0.9 | 0.4 |
| | £2.50 | £3.7 | £1.2 | £0.5 | £1.7 | £2.0 | 2.2 |
| | £5.00 | £8.7 | £1.2 | £0.5 | £1.7 | £7.0 | 5.2 |
| | £7.00 | £12.7 | £1.2 | £0.5 | £1.7 | £11.1 | 7.7 |

Note: Figures rounded to nearest £0.1m. Present Values discounted at 3.5% annually.

In general, the fixed-rate structure results in a greater benefit to cost ratio, driven by the lower overall costs associated with this levy structure. However, the percentage rate structure, in general, generates a higher net present value and overall magnitude of benefit despite higher costs.