Contents

1. INTRODUCTION .................................................................................................................. 1

2. GENERAL REQUIREMENTS .............................................................................................. 2

3. ELECTRICITY SUBSECTOR ............................................................................................... 3

4. FINANCIAL VIABILITY ASSESSMENT FOR PROJECT SPECIFIC APPLICATIONS .......... 5

5. PETROLEUM SUBSECTOR ................................................................................................. 7

6. ASSESSMENT OF THE FINANCIAL PERFORMANCE OF LICENCED UNDERTAKINGS .... 11

APPENDIX 1: COMPUTATION OF LICENCE FEE FOR NEW APPLICANT ............................. 14

APPENDIX 2: COMPUTATION OF LICENCE FEE FOR RENEWAL OF LICENCE ................. 15

APPENDIX 3: WORK FLOW CHART FOR LICENCE FEE ASSESSMENT .......................... 16

REFERENCES ......................................................................................................................... 18
1. INTRODUCTION

The Energy Regulation Board (ERB) is a statutory body created by the Energy Regulation Act of 1995 Chapter 436 of the Laws of Zambia, to regulate the energy industry. Among others, two of the specific functions of the ERB relates to licensing as provided under the ERB Act are as follows:

i. To issue licences;
ii. To monitor the efficiency and performance of the undertakings, having regard to the purposes for which they were established.

This manual has been prepared by the Department of Economic Regulation to guide the financial assessment of licence fees, financial performance review for licenced entities and review of project viability in the energy industry.

These guidelines apply to licencees in the electricity and petroleum subsectors for the following activities:

Electricity Subsector

i. Electricity Generation;
ii. Electricity Transmission;
iii. Electricity Distribution;
iv. Electricity Supply;
v. System Operator
vi. Manufacture, Wholesale Importation & Installation of Solar Energy Systems; and
vii. Off Grid Combined Generation and Supply of electricity.

Petroleum Subsector

i. Distribution, Import and Export of Petroleum Products;
ii. Distribution, Import and Export of Liquefied Petroleum Gas (LPG);
iii. Retailing of Petroleum Products;
iv. Retailing of Liquefied Petroleum Gas (LPG);
v. Transportation of Petroleum Products;
vi. Importation of petroleum lubricants;
vii. Importation of petroleum feedstock;
viii. Petroleum Consumer Facilities;
ix. Petroleum Bulk Storage;
x. Petroleum Wholesaling;
xi. Transportation Petroleum Products by Pipeline; and
xii. Refining of Petroleum Products.

The ERB assesses the financial viability of a licence applicant in order to protect the interests of the consumers, the Government and other stakeholders.

The manual is arranged in five major segments. The first section details the general requirements for licence fee assessment. The second segment outlines the financial assessment in the electricity subsector and the third part deals with financial viability of project specific applications. The fourth segment deals with assessment for petroleum subsector and the fifth part is for financial performance review for licenced entities.
2. GENERAL REQUIREMENTS

The financial assessment of the application for a licence requires that the applicant has submitted all the documents needed as follows:

i. Latest audited financial statements for either the applicant or parent company;
ii. Business plan (5 years for a new applicant and 3 years for renewal of a licence);
iii. Projected financial statements (income statement, projected balance sheet and cash flow statement) i.e. 5 years for a new applicant and 3 years for renewal of a licence;
iv. Six (6) months bank statement; and
v. Cost of investment.

If the applicant’s file does not have all the required documents, the file shall be referred back to the Legal Department. The Legal Department will formally request the applicant to submit the required documents. Once the requisite documents are submitted to the Legal Department, the file is returned to the ER Department for financial assessment.

Once the applicant submits the required documents the Department reviews the projected financial statements to ascertain whether they have been prepared according to General Accepted Accounting Practices (GAAP).

If a set of financial statements are prepared according to GAAP the following relationships will be evident among the income statement (profit and loss), statement of financial position (balance sheet) and statement of cash flows (cash flow statement):

i. The cash in the statement of financial position must agree with the closing cash balances in the statement of cash flows;
ii. The net profits in the income statement should agree with the reserves in the statement of financial position;
iii. The items in the income statement, statement of financial position and the statement of cash flows must agree with each other as they present three faces of the same business; and
iv. The balances in the income statement, statement of financial position and the statement of cash flows must be validated for accuracy and correctness.

The Analyst then analyses the audited financial statements of the company, examining the income statement, statement of financial position and statement of cash flows. The analyst then looks for the following:

i. The audited financial statement must be prepared by a ZICA registered member/firm;
ii. **Income statement** – the company must be in a profitable position for the last three years. However, special consideration will be given for startup and entities in losses depending on the scale and financial soundness of the sponsors;
iii. **Statement of financial position** – the company has maintained a positive net asset position. However, special consideration will be given for startup and entities in net liability position depending on the scale and financial soundness of the sponsors;
iv. **Statement of cash flows** – the company has maintained a positive cash balance. However, special consideration will be given for startup and entities with negative cash balances depending on the scale and financial soundness of the sponsors.

If the company is new, the assessment has to ensure that the company has proof of funds for its operations. If the company is sponsored by another company, the audited financial statements and the bank statement of the sponsoring company are analyzed to ensure that it has the financial capacity to render the sponsorship. In this case, the sponsoring company shall need to also submit correspondence and/or a board resolution stating that the sponsoring company will finance the licence applicant.
3. ELECTRICITY SUBSECTOR

3.1 Licence Fee Assessment

Statutory Instrument number 2 of 1998 Licensing Regulations states that "for an applicant of a licence to operate an undertaking, 0.1 per cent of the cost of an undertaking or the cost of establishing an undertaking must be paid to the ERB" or the minimum licence application fee applicable at a particular time whichever is higher as determined by the Board. For demonstration refer to appendix 1.

3.1.1 Determination of the Cost of Investment

The determination of the Cost of Investment (Col) of an Undertaking includes the direct costs of establishing the venture as well as costs incidental to that particular investment such as studies undertaken, legal fees, consultancy fees, architectural fee and all costs associated with bringing an asset to its commercial operational state. In this respect Total Cost of establishing an undertaking is all costs incurred for the operation of the core business of engaging in the licenced activity.

3.1.2 Assessment of Shared Assets between a Licenced or Regulated Activity and a Non-Regulated Activity

It is not uncommon for licencees to submit financial statements or present the consolidated Cost of Investment that covers both an activity eligible for licensing or currently licenced as well as an activity that does not qualify for licensing under the ERB Act. Where the foregoing is the case, the applicant will be requested to submit formal documentation that shows the boundary between the licenced activity and the non-licenced activity. The Analyst will then apportion the cost of investment between the licenced activity and the non-licenced activity on the basis of the bulk of infrastructure used between the two activities. The Analyst may also make reference to precedents or other sources of information already in the possession of the ERB on how the apportionment of costs was treated.

3.1.3 Assessment of Capital Expenditure works that may result in Inclusion of the costs in Tariffs

Where a licensee undertakes extensive Capital Expenditure (Capex) works that may result in the costs of such works to be included in the tariffs, the analyst will assess the application and charge applicable assessment fees on the portion of Capex Costs resulting from such works.

Licencees are required to meet their obligations under the Electricity Act by making prudent investments in the development and maintenance of the capacity of their systems to meet the demand of their customers for secure and efficient supplies of electricity.

The Analyst will make reference over such cases to Investment Endorsement (IE) Rules which specify the procedures for requesting and issuing an IE in assessing and including the costs of specified proposed works within the tariff framework of a licencee for the following types of material capacity installation or extension:

i. Cost of Construction of new or additional generation capacity;
ii. Cost of Upgrading or other significant modification of existing generation capacity;
iii. Cost of New interconnection to existing transmission or distribution networks; or
iv. Cost of Extension of existing transmission or distribution networks with special regard to proposed works where the licencee wishes to include the costs of such works in calculating its tariffs to customers.
Where there is no information regarding the exact costs of investment, the Analyst should request for Engineering, Procurement and Construction documents to ascertain the costs of such infrastructure. Further the Analysts may wish to undertake a physical audit of the infrastructure under consideration to have a full appreciation of the matter.

3.1.4 Assessment of Application for renewal of a licence

In assessing an application for renewal of a licence, the applicant must submit the audited financial statements for the existing licenced business. The analyst will evaluate the statements to ensure that they are correct and consistent. The net worth of the business will be computed and will form the basis for computing the 0.1% of the fees for the renewal of the licence. See the demonstration in appendix 2.

3.1.5 Treatment Of Cross Currency Transaction

For foreign denominated values, the exchange rate prevailing on the date the assessment is being done, as obtained from the Bank of Zambia will be used.
4. FINANCIAL VIABILITY ASSESSMENT FOR PROJECT SPECIFIC APPLICATIONS

The ERB receives applications for licences that are project specific especially for electricity generation projects from Independent Power Producers (IPPs). Most IPPs sell the power to ZESCO Limited (ZESCO) through a Power Purchase/Supply Agreement (PPA/PSA). The PPA is submitted to the ERB for regulatory approval. Further some IPPs operate isolated grids (micro or mini grids). Accompanying this type of applications are financial models detailing the cost structure of the investment which includes the Capital expenditure (capex), the operations and maintenance (O & M) costs, the tariff, revenue projections and the return on the investment (RoI). Further, the application also provides the projection of the quantum of energy to be generated over a given period. This is useful in computing the average tariff of the project.

This section outlines the guidelines that shall be applied in appraising the application in order to ensure that the business is financially viable to ensure security of supply and also make sure a reasonable return is allowed that will not lead to price (tariff) exploitation on the part of the purchaser and end-users as the case may be. In undertaking the financial appraisal of this type of applications, the discount methods are applied as hereby outlined.

4.1 Net Present Value

The Net Present Value (NPV) also referred to as Net Present Worth (NPW) is the difference between the present value of cash inflows and the present value of cash outflows over a period of time. NPV is used in investment appraisal to analyze the financial viability of a projected investment or project.

The following is the formula for calculating NPV:

\[ NPV = \sum_{t=1}^{T} \frac{C_t}{(1+r)^t} - C_0 \]

In this equation:

- \( C_t \) = net cash inflow during the period \( t \)
- \( C_0 \) = total initial investment costs
- \( r \) = discount rate, and
- \( t \) = number of time periods

A positive net present value indicates that the projected earnings generated by a project or investment (in present monetary terms) exceeds the anticipated costs (also in present monetary terms). Generally, an investment with a positive NPV will be profitable, and an investment with a negative NPV will result in a net loss.

Determining the value of a project is a challenging task because there are various ways to measure the value of future cash flows. Because of the time value of money, money in the present is worth more than the same amount in the future. This is both because of earnings that could potentially be made using the money during the intervening time and because of inflation. In other words, money earned in the future won’t be worth as much as one earned in the present. The discount rate element of the NPV formula is a way to account for this.

Firms often have different ways of identifying the discount rate. Common methods for determining the discount rate include using the expected return of other investment choices with a similar level of risk (rates of return investors will expect), or the costs associated with borrowing money needed to finance the project.

Due to the cash outlays that will require discounting, the analyst is advised to use Microsoft excel. The appraiser is therefore required to master NPV computation using excel as most financial models submitted to the ERB are presented in Microsoft excel.
4.2 Internal Rate of Return

Internal Rate of Return (IRR) is a metric used in investment appraisal to estimate the profitability of potential investments. Internal rate of return is a discount rate that makes the net present value (NPV) of all cash flows from a particular project equal to zero. IRR calculations rely on the same formula as NPV does.

To compute the IRR using the formula, the NPV is set equal to zero and solve for the discount rate (r), which is the IRR. Because of the nature of the formula, however, IRR cannot be calculated analytically and must instead be calculated either through trial-and-error or using software programmed to calculate IRR such as Microsoft excel.

IRR is sometimes referred to as "discounted cash flow rate of return." The use of "internal" refers to the omission of external factors, such as the cost of capital or inflation, from the calculation.

In theory, any project with an IRR greater than its cost of capital is a profitable one, and thus it is in a firm’s interest to undertake such projects. In appraising investment projects, firms will often establish a required rate of return (RRR) or Return on Investment (RoI) to determine the minimum acceptable return percentage that the investment in question must earn in order to be worthwhile. Any project with an IRR that exceeds the RRR will likely be deemed a profitable one. For the purposes of ensuring that the tariff is not exploitative, the ERB benchmarks its allowed rate of return with other regulators and electricity companies in the region. A higher RoI implies a higher tariff and vice-versa. The ERB allows for a reasonable rate of return to provide an incentive to investors while at the same time ensuring that the end-use customers are not exploited. A financially viable investment is integral to ensuring security of supply.

4.3 Payback Period

The Payback Period (PB) is the period of time taken for the future net cash inflows to match the initial cash outlay. The ERB is interested in knowing the licenced investment payback period because shorter payback period implies that the tariff being charged is very high and loaded upfront. Investors have less incentive to manage the project after they have recouped their initial investment and this has the potential to threaten security of supply.

4.4 Sensitivity Analysis

The analyst will conduct sensitivity analysis on some variables as delineate in the table. The analyst will conduct sensitivity analysis based on the low, medium and high case scenarios.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity factor</td>
<td>Conduct sensitivity analysis on the plated capacity of the plant to determine its impact on tariff and revenues</td>
</tr>
<tr>
<td>Life of Plant</td>
<td>Conduct sensitivity analysis on the life of the plant to determine its effect on the costs, tariff and revenues</td>
</tr>
<tr>
<td>Tariff</td>
<td>Conduct sensitivity analysis on the level of the tariff to determine its impact on the financial viability</td>
</tr>
<tr>
<td>Financing</td>
<td>Conduct sensitivity analysis on the financing structure to determine its impact on the tariff and financial viability (This could include debt structure, equity, market risk etc)</td>
</tr>
</tbody>
</table>
5. PETROLEUM SUBSECTOR

5.1 Determination of Petroleum Licence Application Fees

This section outlines the financial licence fee determination for the applications in the petroleum subsector.

5.1.1 Distribution, Import and Export Licence (Combined Licence)

A Distribution licence includes the entrepreneurial activities of distributing, importing and exporting of petroleum products. The following are considered when calculating the application fee to be paid by the applicant:

A) The cost of investment in the distribution business, i.e. this includes the value of the depot and other assets necessary in conducting the business of distributing petroleum products.

For a new business, the applicant should provide the value of their investment. However, if the value of the investment is lower than the minimum capital requirement of US$1,000,000 then the minimum capital requirement will be applied as determined by the ERB.

In the case of the renewal for an existing OMC, the net worth value from the latest audited financial statements should be used. However, if the Oil Marketing Company (OMC) is active in the retailing of petroleum products as well, then the net asset value will need to be adjusted. In this case, a percentage that represents the fraction of the distribution business against the whole business will need to be applied to obtain the net asset value for the distribution business. The percentage of the licenced distribution business can be obtained from either:

i) The applicant; or

ii) The volumes traded in the non-retail sector (commercial) versus the total volumes traded by the applicant as per the Petroleum Industry Volume Statistics which are submitted by the applicant to the ERB on a monthly basis.

B) The value of the fuel that will be imported per month. In this respect, the applicant needs to submit:

i) The monthly volume to be imported per fuel type;

ii) The landed import cost per fuel type. If this is not provided, then the wholesale price of fuel refined by Tazama Petroleum Products Limited can be applied.

These details should be completed by the applicant in the appropriate Schedule of the Licence application forms.

C) The value of the fuel that will be exported per month. In this respect, the applicant needs to submit:

i) The monthly volume to be exported per fuel type;

ii) The export price per fuel type. If this is not provided, then the wholesale price of fuel refined by Tazama Petroleum Products Limited can be applied.

These details should be completed by the applicant in the appropriate schedule of the licence application forms.

The values obtained in A, B and C are summed up to derive a Total cost of investment (TCI) after which 0.1% (as provided for in Statutory Instrument No. 2 of 1998) is applied to the TCI to compute the application fee.
5.1.2 Retail Licence

To determine the application fee for a Retail licence, 0.1% is applied to the cost of investment. The cost of investment mainly relates to the cost of setting up a retail service station and is determined as follows:

i) For a new retail service station site, the total cost of investment in the retail station, i.e. the cost of construction and other costs incidental to bring the service station into use, is used. This cost should be provided by the applicant and verified by the ERB from engineering, procurement and construction documents or any other formal company documents. The ERB has set a minimum capital investment of US$300,000 for the retail of petroleum products. Therefore, if the cost provided is lower than the minimum capital investment then the US$300,000 is used in the computation of the application fee.

ii) In the case of the renewal for an existing OMC, where the net asset value of the service stations are not readily available, a percentage that represents the retail business could be applied to the net asset value of the whole business as obtained from the applicant’s latest audited financial statements. This percentage could be obtained from either:

- The applicant; or
- The volumes traded in the retail sector verses the total volumes traded by the applicant as per the Petroleum Industry Volume Statistics which are submitted by the applicant to the ERB on monthly basis.

Alternatively, were the applicant is unable to provide the requisite documents, each site could be valued at US$300,000 per site and the resultant value charged at 0.1%.

Further, if the company has a negative net worth, then the US$300,000 should be applied per service station site.

The net asset value presented in the financial statements for an independent service station operator may not need to be adjusted if the sole business of the applicant is strictly the retailing of petroleum products.

It is important that the workings of the cost of investment are clear and attached to the licence assessment if necessary.

iii) Inclusion of a Retail Site after Refurbishment

When a service station has been refurbished, the application fee shall be assessed on the cost of investment for refurbishing the service station. Information on the Total Cost of investment (TCI) based on the amount spent in refurbishing the station shall be established after which 0.1% is multiplied by the TCI to compute the application fee.

5.1.3 Transport Licence

To determine the application fee for a licence to Transport petroleum products, 0.1% is applied to the cost of investment. The cost of investment is determined as follows:

i) For a new transporter, the total cost of investment in the business includes the cost of office accommodation, workshops and equipment, and the cost of fuel tankers. The cost of investment may be found in the applicant’s projected financial statements that are part of the business plan. The ERB, however, has set a minimum capital investment of US$200,000 for the setup of a fuel transportation business.

ii) If a licencee wishes to include a newly acquired fuel tanker to the existing licence, the cost of purchasing the tanker is used to determine the application fee. The cost of the tanker is determined as follows:

- If the tanker is imported, the value for duty purposes on the Zambia Revenue Authority (ZRA) Form CE20 and the total import duty paid are added to give the cost of the tankers. However, if the supplier invoice has been provided, it is important to ensure that it is in line with what has been used by ZRA to avoid understatements.
• If the tanker was purchased locally, an invoice or a letter of offer from the supplier is used;

• In instances, where the applicant has also provided values that are at variance with the supporting purchase documentation, it would be important to reconcile the differences. This is because it is possible that the additional works or repairs may have been undertaken on the fuel tankers that have not been shown on the purchase documents e.g. replacement of tyres.

It is important that the workings of the cost of the fuel tankers are supported and attached to the licence assessment.

iii) In the case of the renewal of the licence to transport petroleum products, the net worth of the business as obtained from the applicant’s latest audited balance sheet is used. However, in some cases transporters ferry both petroleum and dry cargo. In this case a percentage of the petroleum business in relation to the whole business is obtained from the applicant and applied to the total business net worth. The percentage could be obtained using the value of sales contributed, if available, or the number of trucks used in the two business streams, i.e. petroleum and dry cargo.

Note that the minimum capital requirement of US$200,000 is used in the computation, if the net worth obtained is lower than US$200,000.

5.1.4 Importation of Lubricants

The licence to import lubricants also includes the retail of the said lubricants. To determine the application fee to be paid by the applicant, the following are required:

i) The description and value of the lubricants that will be imported on a monthly basis. In this respect, the applicant needs to submit;

ii) The monthly volume to be imported per lubricant type; and

iii) The landed import cost per lubricant type.

These details should be completed by the applicant in the appropriate schedule of the licence application forms.

However, a minimum capital investment of US$70,000 has been set by the ERB.

5.1.5 Importation of Petroleum Feedstock

To determine the application fee to be paid by the importer of petroleum feedstock, the following are required:

i. The description and value of the petroleum feedstock that will be imported on a monthly basis. In this respect, the applicant needs to submit:

   • The monthly quantity of petroleum feedstock to be imported; and

   • The landed import cost of the petroleum feedstock.

These details should be completed by the applicant in the appropriate schedule of the licence application forms.

5.1.6 Consumer Facility Licence

To determine the application fee to be paid by the applicant, the cost of investment in the consumer facility or the monthly volumes to be traded per fuel type should be provided.

Consumer facilities could either be owned by the OMC or the consumer. The following could be used as guidance for an appropriate cost of investment:

i) Cost of the consumer facility (When the consumer facility is owned by the OMC and the OMC supplies the petroleum products); and

ii) Monthly fuel supply cost to the consumer facility (When the facility is owned by the consumer and the OMC supplies to the licensee),
5.1.7 Bulk Storage Licence

To determine the application fee to be paid by the applicant, the cost of investment in the bulk storage facility should be provided.

If the facility is an old site that has probably been fully depreciated, the following could be used as guidance for an appropriate cost of investment:

i) Cost of refurbishment (ideally these should form part of the costs in the financial statements); and
ii) A property valuation report from a Government registered valuator.

5.1.8 Wholesale Licence

To determine the application fee to be paid by a company that intends to wholesale petroleum products in the petroleum industry, the following are required:

i) The description and value of the petroleum products that will be wholesaled on a monthly basis. In this respect, the applicant needs to submit;
   - The monthly quantity of petroleum products to be sold; and
   - The cost to the wholesaler of the petroleum products that will be sold.

5.1.9 Licence to Transport Petroleum Products by Pipeline

To determine the application fee to be paid by an entity that wishes to engage in the entrepreneurial activity of transporting petroleum products by pipeline, the following are required:

i) For a new pipeline, the total cost of investment in the pipeline infrastructure and other capital costs necessary to operate the business;

ii) For an existing pipeline, the net worth of the business as per latest audited financial statements may be used to determine the entity’s cost of investment.

5.1.10 Licence to Refine Petroleum Products

To determine the application fee to be paid by an entity that wishes to engage in the entrepreneurial activity of refining crude oil into finished petroleum products, the following are required:

i) For a new refinery, the total cost of investment in the refinery infrastructure and other capital costs necessary to operate the business;

ii) For an existing refinery, the net worth of the business as per latest audited financial statements may be used to determine the entity’s cost of investment.

NOTE FOR ALL ASSIGNMENTS

i) The audited financial statements used should be for the past financial year. However, the previous past audited financial statements can be used if the application is being assessed in the first six months after the applicants financial year end;

ii) For foreign denominated values, the exchange rate prevailing on the date of the assessment is being done can be applied; and

iii) The minimum application fee has been set at K1,000 for all licence applications.
6. ASSESSMENT OF THE FINANCIAL PERFORMANCE OF LICENCED UNDERTAKINGS

The ERB in its mandate to regulate the energy sector is required to monitor the performance of energy undertakings. This includes performance of financial reviews of licenced entities. Financial reviews are normally conducted to check on the efficiency and effectiveness of licenced entities in the achievement of their set objectives which is to be profitable and deliver the intended services to the public efficiently.

Further in conducting the financial performance review the ERB will obtain reasonable assurance that no material modifications that need to be made to an entity's financial statements for them to be in conformity with the applicable financial reporting framework (such as International Financial Reporting Standards - IFRS).

The objectives of the financial review include:

i. To assess profitability and the liquidity of the licenced undertakings;
ii. To assess the efficiency of financial operations;
iii. To assess short term and long term solvency of licenced entity;
iv. To analyse the factors determining the behaviour of liquidity and Profitability;
v. To review the financial statements to see if they appear to conform with the applicable financial reporting framework; and
vi. To investigate findings in the financial statement that appear to be inconsistent.

The ERB will examine the following documents of the licenced entities:

i. Latest audited accounts;
ii. Latest company annual reports; and
iii. Any other relevant documents

In financial reviews, financial ratios are derived and used to measure how well the entity has performed. The financial ratios considered in the performance review are profitability ratios, liquidity ratios, efficiency ratios and solvency ratios. These ratios are considered together with financial and non-financial information in order to have a comprehensive review of the performance.

The ERB will use four (4) groups of ratios in conducting financial review:

i. Profitability ratios;
ii. Liquidity ratios;
iii. Efficiency ratios; and
iv. Solvency ratios.
The ratios are discussed in the table below:

<table>
<thead>
<tr>
<th>No.</th>
<th>Ratio</th>
<th>Definition of ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Return on capital employed.</td>
<td>The return on capital employed is the ratio of the earnings before interest and taxes to the total assets less current liabilities of a business.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>It is a ratio that indicates the profitability of business’ capital investments.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Return on Capital Employed Ratio = Net Profit after Taxes/ Gross Capital Employed X 100</strong></td>
</tr>
<tr>
<td>2</td>
<td>Gross profit margin.</td>
<td>The gross profit margin says how much gross profit a company makes for every K100 it generates in revenue or sales.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The business pays its administrative expenses and reserves funds for future use from the gross profit.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Gross Profit Ratio = Gross Profit/Net Sales X 100</strong></td>
</tr>
<tr>
<td>3</td>
<td>Net profit margin</td>
<td>The net profit margin depicts how much net profit a company makes for every unit of revenue or sales it generates.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Operating Cost Ratio = Operating Cost/Net Sales X 100</strong></td>
</tr>
<tr>
<td>4</td>
<td>Asset turnover</td>
<td>The asset turnover is the ratio of the sales to the total assets. The asset turnover measures how much revenue a business generates per unit of assets of the business.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>It is a measure of the efficiency of the business. The higher a firm’s asset turnover, the more efficiently its assets have been utilised.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Assets Turnover Ratio = Cost of goods Sold / Fixed Assets</strong></td>
</tr>
<tr>
<td>5</td>
<td>current ratio</td>
<td>The current ratio is a financial ratio that measures whether or not a firm has enough resources to pay its debts over the next 12 months.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>It compares a firm’s current assets to its current liabilities. A current ratio under 1 suggests that a firm may not be able to pay off its obligations if they came due at that point.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Since a business can access financing in many ways, a current ratio less than 1 does not mean that the business will not pay its debts off</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Current Ratio = Current Assets/Current Liabilities</strong></td>
</tr>
<tr>
<td>6</td>
<td>Quick ratio</td>
<td>The quick ratio is the ratio of the assets that can quickly be converted into cash to meet the current (payable within a year) liabilities as they become due. It shows how much cash could be found quickly when a business’ liabilities fall due. The quick ratio differs from the current ratio in that the quick ratio does not include stock because stock may not necessarily be converted into cash quickly.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>A ratio greater than 1 indicates that current liabilities can be met from current assets without having to liquidate stock. It indicates that current liabilities can be met without having to liquidate stock. The ratio should ideally be at least 1 for companies with a slow stock turnover.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Quick Ratio = Liquid Assets/Current Liabilities</strong></td>
</tr>
<tr>
<td>No.</td>
<td>Ratio</td>
<td>Definition of ratio</td>
</tr>
<tr>
<td>-----</td>
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<td>------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>7</td>
<td>Trade Debtor Days</td>
<td>Trade debtor days are a financial metric used to measure how long it takes for a business to be paid for its sells. The longer it takes for a company to collect, the more the debtor days. The lower the debtor days the better. A very high figure suggests inefficiency, potential bad debts, or a very powerful customer exerting its influence to improve its own cash position. The collection of receivables has a direct bearing on a company’s working capital. Debtors Days = (Account Receivables/ Total Sales) x 365 days</td>
</tr>
<tr>
<td>8</td>
<td>Debt-to-Equity Ratio</td>
<td>The debt-to-equity ratio is a measure of a company’s financial leverage and indicates what proportion of equity and debt the business is using to finance its assets. A ratio greater than one means assets are mainly financed with debt, less than one means equity provides a majority of the financing. If the ratio is high (financed more with debt) then the company is in a risky position – especially if interest rates are on the rise. An acceptable debt to equity ratio depends on the industry in which the company operates. Debt Equity Ratio = Total Long Term Debts / Shareholders Fund</td>
</tr>
<tr>
<td>9</td>
<td>Debt Ratio</td>
<td>The debt ratio is a measure of a company’s total debt to its total assets. The ratio indicates the proportion of debt a business has relative to its assets. A ratio less than one means that a company has more assets than debt, while a ratio of more than one means the opposite. Debt Ratio = Total debt/Total Assets</td>
</tr>
<tr>
<td>10</td>
<td>Interest Coverage Ratio</td>
<td>Measures the number of times the Company’s profit before interest and tax cover its interest payment. A ratio below one (1) indicates that the Company is having difficulties generating the cash necessary to pay its interest obligations. Interest Coverage Ratio = EBIT/Interest Expense</td>
</tr>
<tr>
<td>11</td>
<td>Creditor Days</td>
<td>Shows the average number of days the company takes to pay suppliers. Creditor Days = (Trade payables/Cost of sales) x 365 days</td>
</tr>
</tbody>
</table>
APPENDIX 1: COMPUTATION OF LICENCE FEE FOR NEW APPLICANT

<table>
<thead>
<tr>
<th>ENERGY REGULATION BOARD</th>
</tr>
</thead>
</table>

**Assessment of Application for a Licence**

<table>
<thead>
<tr>
<th>Name of Applicant:</th>
<th>SPAGRIS ZAMBIA LIMITED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business Premises:</td>
<td>SHOP 3</td>
</tr>
<tr>
<td></td>
<td>BUILDING 3</td>
</tr>
<tr>
<td></td>
<td>ACACIA PARK</td>
</tr>
<tr>
<td></td>
<td>ARCADES</td>
</tr>
<tr>
<td></td>
<td>LUSAKA</td>
</tr>
<tr>
<td>Sub Sector:</td>
<td>Other Forms of Energy</td>
</tr>
<tr>
<td>Activity to be Licenced:</td>
<td>Captive Power Generation</td>
</tr>
</tbody>
</table>

**Basis for Assessment:**

**Estimated Cost of Investment**

<table>
<thead>
<tr>
<th>Estimated Value of Investment</th>
<th>ZMW 7,500,000.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assessed fees at 0.1%</td>
<td>ZMW 7,500.00</td>
</tr>
</tbody>
</table>

**Recommended assessment fee**

| ZMW | 7,500.00 |

**PREPARED BY:** BESA CHIMBAKA  
**CHECKED BY:** ALFRED MWILA  
**APPROVED BY:** LANGIWE H. LUNGU  
**SIGN:**  
**DATE:**
APPENDIX 2: COMPUTATION OF LICENCE FEE FOR RENEWAL OF LICENCE

<table>
<thead>
<tr>
<th>ENERGY REGULATION BOARD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assessment of Application for a Licence</td>
</tr>
<tr>
<td>Name of Applicant: Kaystech Zambia Limited</td>
</tr>
<tr>
<td>Corner of Buchi/Lubambe Road</td>
</tr>
<tr>
<td>Lusaka</td>
</tr>
<tr>
<td>Business Premises: Plot No. 1750, Corner of Buchi/Lubambe Road</td>
</tr>
<tr>
<td>Northmead-Lusaka</td>
</tr>
<tr>
<td>Sub Sector: Other forms of energy</td>
</tr>
<tr>
<td>Activity to be Licenced: Manufacturing, Supply, Installation and Maintainance of Solar Systems</td>
</tr>
<tr>
<td>Basis for Assessment: Projected Financial Statement</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ZMW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Assets 2,191,560.00</td>
</tr>
<tr>
<td>Less Total Liabilities 884,543.00</td>
</tr>
<tr>
<td>Company Net Worth 1,307,017.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Computed Application fee on basis of Projected Statements @ 0.1% 1,307.02</th>
</tr>
</thead>
</table>

| Recommended Application fee 1,307.02 |

<table>
<thead>
<tr>
<th>PREPARED BY: BESA CHIMBAKA SIGNATURE: DATE:</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHECKED BY: ALFRED MWILA SIGNATURE: DATE:</td>
</tr>
<tr>
<td>APPROVED BY: LANGIWE H. LUNGU SIGNATURE: DATE:</td>
</tr>
</tbody>
</table>
APPENDIX 3: WORK FLOW CHART FOR LICENCE FEE ASSESSMENT

Start

Online Submission/Application

Legal

Verify

No

Yes

Validate/Assign

New Application

Determine

Renewal

Financially Compliant

Financial Assessment (ER)

Pass

Yes

Yes

Pass

Yes

1

2
REFERENCES

3. https://www.investopedia.com
ENERGY REGULATION BOARD

We Safeguard your interests...

Head Office
Plot No. 9330, Mass Media
Off Alick Nkhata Road,
P. O. Box 37631,
Lusaka, Zambia.
Tel: 260-211-258844 - 49
Fax: 260-211-258852

Copperbelt Office
Plot No. 332
Independence Avenue
P.O. Box 22281
Kitwe, Zambia
Tel: +260 212 220944
Fax: +260 212 220945

Livingstone Office
Plot No. 708
Chimwemwe Road
Nottie Broadie
P.O. Box 60292
Livingstone, Zambia
Tel: +260 213 321562-3
Fax: +260 213 321576

Chinsali Office
Plot No. 76
Maya Rd
P.O. Box 480052
Chinsali, Zambia
Tel: +260 214 565170
Fax: +260 214 565171

E-mail: erb@erb.org.zm  Website: www.erb.org.zm  Toll Free Line: 8484