

## **Accounting practices in renewable energy entities: The case of Masvingo Province**

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### **ABSTRACT**

There have been several players in the energy sector in Zimbabwe. Small to large enterprises have been clamouring on the energy sector due to the protracted shortages of energy in Zimbabwe. The larger impact has been on the rural areas, where energy has not been meaningful except for domestic uses. Both private sector and the government have been fighting for share in the energy sector. Failure and success stories have been narrated from different angles. This study sought to investigate accountability in small and large enterprises active in the energy sector. The major objective was to explore accountability in entities active in the energy sector in Masvingo and to investigate the accounting systems being applied at these entities in Masvingo. The literature related to this study was linked to various authors and researchers creating an empirical framework applied on this study. Due to the characteristics of the research, the qualitative research method was used on a population of all the 20 entities active in the energy sector in Masvingo. The data collection instruments used were the questionnaires and the interviews to formal entities and non-formal entities. Data gathered was presented through frequency tables and graphs extracted using the Microsoft Excel packages. The researchers found out that most organisations/entities active in the energy sector are small to medium scale enterprises. The researchers also found that these entities barely use any accounting system to account for their business activities. For those large corporates, their books are not properly administered. It was concluded by the researchers that accounting systems need to be put in place in entities active in the energy sector. The researchers recommended monitoring systems and policies in the energy sector.

**KEY WORDS:** Energy Sector, Accountability, Sustainability

### **1.0 Background/Introduction**

In 2009, about 1.4 billion people in the world lived without electricity, and 2.7 billion relied on wood, charcoal and dung for home energy requirements (European Commission, 2001). This lack of access to modern energy technology limits income generation, blunts efforts to escape poverty, affects people's health, and contributes to global deforestation and climate change (Bitsch, 2002). Small-scale renewable energy technologies and distributed energy options, such as onsite solar power and improved cook stoves, offer rural households modern energy services (GEF, Renewable Energy, 2013).

Technologies that promote sustainable energy include renewable energy sources, such as hydroelectricity, solar energy, wind energy, wave power, geothermal energy, bioenergy, tidal power and also technologies designed to improve energy efficiency (Bronicki, 2002). Costs have fallen dramatically in recent years, and continue to fall.

G8 Renewable Energy Task Force (2001) suggest that gadgets, libations, installations and even a documentary are proving that renewable energy entrepreneurs are working hard to make our lives better in every way possible.

Sustainable energy is energy that is consumed at insignificant rates compared to its supply and with manageable collateral effects, especially environmental effects (World Energy Outlook, 2000). Another common definition of sustainable energy is an energy system that serves the needs of the present without compromising the ability of future generations to meet their needs (Kantha & Leach, 2001).

Most of these technologies are either economically competitive or close to being so. Increasingly, effective government policies support investor confidence and these markets are expanding. Considerable progress is being made in the energy transition from fossil fuels to ecologically sustainable systems, to the point where many studies support 100% renewable energy (Bolinger, Wiser and Golove, 2001).

Renewable energy technologies are essential contributors to sustainable energy as they generally contribute to world energy security, reducing dependence on fossil fuel resources, and providing opportunities for mitigating greenhouse gases (Gawell, Reed, Wright, 2009).

Renewable energy technology has sometimes been seen as a costly luxury item by critics, and affordable only in the affluent developed world. This erroneous view has persisted for many years, but 2015 was the first year when investment in non-hydro renewables, was higher in developing countries, with \$156 billion invested (European Union, 2007).

Hassing & Varming (2001) suggest that most developing countries have abundant renewable energy resources, including solar energy, wind power, geothermal energy, and biomass, as well as the ability to manufacture the relatively labor-intensive systems that harness these. By developing such energy sources developing countries can reduce their dependence on oil and natural gas, creating energy portfolios that are less vulnerable to price rises. In many circumstances, these investments can be less expensive than fossil fuel energy systems (European Commission, 2001).

In isolated rural areas, electricity grid extensions are often not economical. Off-grid renewable technologies provide a sustainable and cost-effective alternative to the diesel generators that would be otherwise be deployed in such areas. Renewable technologies can also help to displace other unsustainable energy sources such as kerosene lamps and traditional biomass (Hall, Rosillo-Calle, Williams and Woods, 2003).

Renewable energy can be particularly suitable for developing countries. In rural and remote areas, transmission and distribution of energy generated from fossil fuels can be difficult and expensive. Producing renewable energy locally can offer a viable alternative.

Zimbabwe is a land-locked country in southern Africa with one of the best conditions for solar pv worldwide. Zimbabwe imports 41% of its power and has an estimated deficit of 2GW in generating capacity. In order to accelerate economic development in the country, and to decrease reliance on energy imports, Zimbabwe is attracting investors into its energy infrastructure (Bronicki, 2002).

Thus, this study seeks to investigate the record keeping and accountability in entities active in the renewable energy sector.

## **2.0 Objectives**

The objectives of this study are:

- 2.1 to proffer any existence of regulations in operations of the active renewable energy entities in Masvingo.
- 2.2 to explore accountability in entities active in the energy sector in Masvingo
- 2.3 to investigate the accounting systems being applied at these entities in Masvingo

## **3.0 Methods/Methodology**

This research was qualitative in nature due to its characteristics. Thus, a descriptive survey was used as a research design to support the qualitative research method.

### **3.1 Population**

The population of this study was the all the entities active in the renewable energy sector in Masvingo. There are many entities that are active in this sector. Varying from small scale informal operators, medium scale formal and large scale organisations.

The Power Company of Zimbabwe (PCZ), Rural Electrification Agency, medium scale Electricity Products Providers like Econet and Small Scale Flea Markets, are the classes of these entities.

In this research, the researchers travelled around Masvingo City enumerating entities that are active in Renewable Energy Products and they had a total of 20 entities fitting in these three classes.

### **3.2 Sample and Sampling Procedure**

In this study Stratified sampling was used to put the entities into stratum that is formal large scale entities, medium scale and small scale entities. Simple random sampling procedure was used to select the actual samples using the golden bowl technique for all the strata. Thus, 1 entity was selected from the large corporates, 1 from the medium scale enterprises and 5 from the informal sector. The total respondents became 7 participants from all the entities.

### **3.3 Research Instruments**

#### **3.3.1 Questionnaires**

Questionnaires were found to be appropriate in soliciting information from the large scale and medium scale entities. Questionnaires were suitable to these respondents because they are the ones who would easily understand questionnaires and have time to answer them without much disturbances unlike the small scale enterprises who would be busy always with their market stalls.

### 3.3.2 Interviews

The small scale enterprises which most of them are informal traders in flea markets were a larger group. The five who were selected were interviewed in a face to face situation. This was suitable for them because they would be busy on their stalls while the interviewer would be collecting his data. Data was collected and recorded immediately.

### 3.3.3 Data Presentation Procedures

The simple Microsoft Excel Computer package was used to tabulate frequency tables and graphs used to present the data that was collected from the field.

## 4.0 Results/Findings

### Existence of regulation

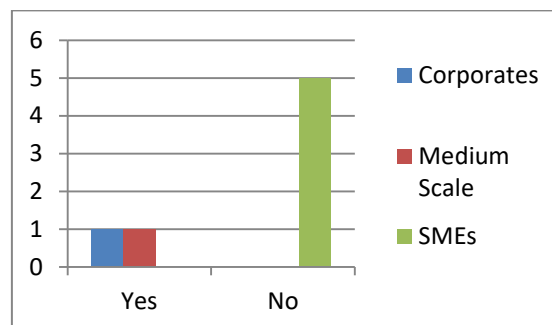


Figure 4.1 Regulations for operations

Fig 4.1 above shows that all the 5 (100%) SMEs, expressed that there are no regulations in their operations. They can acquire as many solar panels and batteries as their capital can allow and they can supply as they deem fit to their customers. However, the corporates and medium scale enterprises expressed that they are required to register first and there are regulations in their operations.

**Accountability**

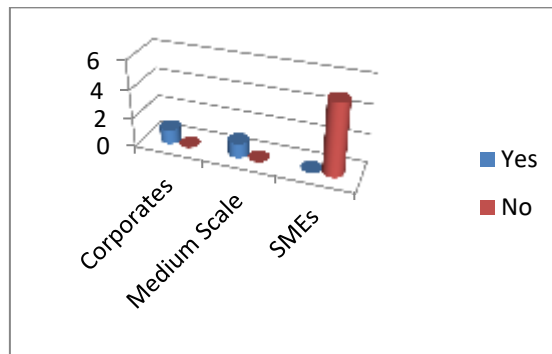


Figure 4.1 Accountability

Fig 4.1 above shows that all the SMEs (5) indicated during the interviews that there is no record keeping or accountability present in their operations. They expressed that each individual keeps in memory records of his business. It’s rare to find proper books unless one takes big orders and is required to obtain a loan.

However, the corporates and the medium scale enterprises indicated on their questionnaires that they are highly required to produce audited accounting statements or at least books of accounting.

**Accounting systems**

	Present	Not Present
Corporates	1	0
Medium Scale	1	0
SMEs	0	5
Total	2	5

Table 4.1 above shows that there are accounting systems in the large corporates. This is basically because some of the projects that they implement requires heavy machinery that would depreciate with time and even acquisition of the machinery needs strict accounting systems. Whereas, Medium scale enterprises require accounting systems especially on acquisition of stocks and selling it. There has to be some accounting systems in order to be able to trace items from manufacturers to the end users. However, SMEs indicated during the interviews that they do not need any accounting system or anyone to help them with accounting because they operate at small scale levels that an individual can do his or her own maths.

**5.0 Conclusion (s)**

5.1 From the research findings, the researchers concluded there are very few corporate players in the Renewable Energy Sector. Whilst there are accounting practices at corporate level, there is no record keeping at all at SME level where the majority of players are clamoured.

- 5.2 The researchers also concluded that there is not much accountability as to sources of money at corporate level basically because some of the corporates are government funded and accountability is problematic due to corruption and politics. At SME level, the researchers concluded that there is a non-existence of accountability at all.
- 5.3 The researchers also concluded that accounting systems exist at corporate level even though they are rendered useless due to corruption, but they exist. At SME level, there are no accounting systems at all or record keeping for that matter.

## **6.0 Recommendations**

- 6.1 Based on the research findings and conclusions above, the researchers recommend that good governance be part of large corporates in mitigating corrupt tendencies which eat into responsibility and accountability. At SME level, systems should be instituted that ensure record keeping and the institution of accounting systems.
- 6.2 The researchers also recommend that Monopolistic policies should be abolished in the Renewable energy sector because the large scale participants are very few even though it is a lucrative sector. The SMEs should be promoted so that they grow to be recognisable entities.
- 6.3 Strict accountability of governmental finances to renewable energy project. The power shortages could be curtailed if the government focuses on record keeping and accountability in the sector.
- 6.4 The researchers also recommend that private public partnerships should be instituted in order for sustainability and efficiency to be realised in the sector.

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