

CAPITAL ALLOWANCES ON A POWER GENERATING PLANT

by

A Rajbansi

10665359

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STUDY LEADER:

Mrs. H. Du Preez

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ABSTRACT

CAPITAL ALLOWANCES ON A POWER GENERATING PLANT

South Africa emerged as a country that fought and overcame arduous oppression.. Following the democratic revolution of 1994, the new government regime embarked on an enormous electrification rollout with the mandate of ensuring all households in the country have access to electricity. This did not come without huge challenges and the electricity supply network was already under pressure. This led to load shedding and in turn impeded economic growth. Consequently South Africa requires significant investment in new electricity infrastructure. In order to ensure sustainable economic growth, the provision of reliable electricity is a critical strategic imperative. One of the objectives (according to the Electricity Regulation Act, No. 4 of 2006) is to facilitate investment in the electricity supply industry. To empower and encourage electricity producers, including foreign investors, to enter into the market, it is imperative to critically assess the current tax allowances available for the construction of power station assets within South Africa's domestic shores. In addition, the concept of load shedding is not limited to South Africa, but is a form of reducing demand on the energy generating system and is experienced internationally. To understand the tax incentives offered by international countries to reduce demand on the electricity supply network, will form part of this assessment. Benchmarking will be done on South Africa's domestic tax incentives offered to local electricity generators against international suppliers of electricity.

KEY WORDS

Process of manufacture

Machinery or plant

Auxiliary assets

Electricity generation

Environmental assets

International benchmarking

UITTREKSEL

KAPITAALKORTING VIR 'N KRAGOPWEKKINGSAANLEG

Suid-Afrika is 'n land wat teen onderdrukking geveg en dit oorkom het. Na die dramatiese revolusie van 1994, het die nuwe regering 'n enorme elektrifikasie veldtog geloods om te verseker dat alle huishoudings landwyd toegang tot elektrisiteit verkry. Dit het egter nie sonder reuse-uitdagings gebeur nie; die land se voorsieningsnetwerk was reeds onder geweldige druk. Dit het tot beurtkrag gelei en ekonomiese groei belemmer. Gevolglik het Suid-Afrika noemenswaardige beleggings in nuwe elektrisiteit infrastruktuur nodig. Die verskaffing van betroubare elektrisiteit is 'n kritiese strategiese noodsaaklikheid in die versekering van volhoubare groei. Een van die doelwitte (volgens die Wet op die Verskaffing van Elektrisiteit, No.4 van 2006) is om belegging in energieverkaffing te fasiliteer. Om elektrisiteitverskaffers, insluitend buitelandse beleggers, te bemagtig en aan te moedig om die mark te betree, is dit noodsaaklik om die huidige belastingkortings beskikbaar vir die oprigting van kragstasies in Suid-Afrika, krities te beoordeel. Boonop is die konsep van beurtkrag nie tot Suid-Afrika beperk nie, maar is 'n vorm van drukverlaging op die energie opwekkingsstelsel en word internasionaal toegepas. Om die belastingvoordele wat internasionaal aangebied word om die druk op die elektrisiteit verskaffingsnetwerk te verlaag, te verstaan, vorm deel van hierdie studie. Internasionale verskaffers van elektrisiteit sal as maatstaf gebruik word om Suid-Afrika se binnelandse belastingvoordele aan plaaslike energieverkaffers te meet.

SLEUTEL WOORDE

Proses van Vervaardiging
Elektrisiteit Genereer

Masjienerie of Aanleg
Omgewingsbates

Aanwinst
Internasionale Standaard

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CAPITAL ALLOWANCES ON A POWER GENERATING PLANT

CHAPTER 1

INTRODUCTION

1.1 BACKGROUND

In 2008, South Africa faced huge electricity supply shortages. This resulted in the introduction of the infamous words of “rolling blackouts” and “load shedding” to domestic households. A “rolling blackout” is when a power utility decides to discontinue the supply of electricity due to supply limitations (Energyvortex, 2013).

One of the root causes for the extreme stresses upon the electricity system can be traced back to the pre-1994 period. The government decommissioned certain coal power generating plants due to an excess of generation capacity at the time. With the downfall of apartheid in the 1990s, came massive investment and economic growth spiraled. This inevitably resulted in greater demand for electricity and with limited power generating capacity, South Africa was faced with a severe crisis (Eberhard, 2007).

South Africa's constricted electricity supply severely impedes the country's economic growth. Hence, South Africa is in dire need of significant investments in electricity infrastructure. The country's electricity demand and capacity choices made, will determine infrastructure demand. To ensure sustainable economic growth in South Africa, reliable electricity supply is vital.

In respond to the supply crisis, intervention was needed. The new government responded promptly by mandating power utility companies and independent power producers, including foreign investors, to construct new power generating plants to ensure the adequate and sustainable supply of electricity. This mandate includes the construction of coal based power stations. The budgeted expenditure for these capital projects are in excess of R300 billion (Eskom, 2008).

With the commitment of such a significant expenditure on the construction of coal power stations, these domestic and foreign power utility companies need to ensure that the expenditure incurred adheres to the requirements of existing tax legislation so as to qualify for maximum allowable tax deductions and allowances. However, a project of such magnitude often yields complications for tax treatment since a coal power generating plant can be either regarded as an individual standalone asset or alternatively broken down into multiple individual assets with diverse tax implications.

The majority of electricity produced in South Africa comes from thermal power stations, fuelled by coal. Barnett and Bjornsgaard (2002) state that the generation of electricity is really the conversion of kinetic energy (potential energy) into electrical energy. An individual who pays an electricity bill will always question what they are paying for. To answer this question, one needs to understand the source, origin and generation of electricity.

To obtain a holistic understanding of the functionality of a coal power generating plant, the fundamental components of the power station needs to be individually analysed and the purpose of such components needs to be understood. The coal power generating plant is a complex form of technology that has multiple assets interfacing with each other with the sole intention of generating electricity. A typical coal power plant comprises of six generating units, each unit having multiple components including a boiler, turbine, generator, auxiliary support systems and a vast array of auxiliary assets (Enercon, 2012).

South Africa's energy supply problem is not limited to our domestic shores. Internationally, many emerging economies are faced with similar energy supply limitations resulting in countries internationally embarking on mammoth construction projects with the priority of ensuring continuous and reliable electricity supply.

In the context of the South African tax law, one needs to assess the congruence of tax stimulation which takes the form of tax incentives implemented by the National Government in ensuring that the economic growth initiatives are achieved. This study will focus on the tax incentives offered to the local power generating sector and benchmarking of these tax stimulus incentives against tax incentives offered in international emerging

economies as well as international economies with robust economic frameworks. Figure 1 represents a pictorial overview of a coal power generating plant:

Figure 1: Coal Power Generating Plant



Source: Google images, 2012

1.2 PROBLEM STATEMENT

One of the tax issues emerging is the capital allowances available on a coal power generating plant as per the requirements of the South African Income Tax Act no 58 of 1962 (referred to as “the Act”). The Act has no specific provision dealing with the tax allowances on a power generating plant. This brings uncertainty regarding the tax treatment of the capital expenditure incurred on a power generating plant and the inconsistent tax treatment of such capital assets.

The Act fails to give a clear and concise definition of “*process of manufacture*” resulting in entities using individual interpretation and relevant case law to determine the range of capital allowances applicable to a coal power generating plant. Uncertainty arises due to

the vast number of multiple assets that forms part of the composite structure of a coal power generating plant. The various limitations in the current South African tax legislation follows the uncertainty of where the “*process of manufacture*” commences in the context of electricity generation.

Thus, it is unclear if a coal power generating plant is a single component asset and eligible for a section 12 C allowance as per the Act. An alternative is to divide the power station into multiple sub-component assets, where each sub-component is evaluated individually to determine the applicable capital allowance. Further, there are peripheral or auxiliary assets that form part of the generation of electricity and the tax treatment of these assets needs to be assessed in determining if they are integral assets to the “*process of manufacture*”.

The varying viewpoints may result in an incorrect tax treatment of the capital allowances applicable to a power generating plant.

The energy supply crisis is not limited to South Africa, but it is an international problem experienced by many emerging economies. Tax incentives to stimulate the growth in the energy supply sector seem not to be adequately considered by our local tax system to address or alleviate the electricity supply shortfall.

1.3 PURPOSE STATEMENT

The aim of this study is to present a critical assessment on the current tax practice adopted with regard to the capital allowances available to the energy sector in South Africa and to evaluate the adequacy of the industry practice against the requirements of the Act.

In addition, correlation and deviation of South African tax practice against international norms will be established by benchmarking against emerging and developed countries. The countries focused on in the benchmarking exercise are India and Australia.

India and South Africa form part of the BRICS countries and both are considered newly advanced economically developed countries. With economic growth spiraling, India has also undertaken electricity infrastructural build initiatives to reduce limitations on electricity supply.

The Australian tax system offers explicit guidelines for the supply of electricity. This results in a useful comparison, because South Africa and Australia incur similar capital cost components.

The importance and benefit of the study will be as follows:

- The Act has limitations and shortcomings governing the tax implications of establishing a coal power generating plant, therefore this study will provide an opportunity for the local sector to engage National Treasury in promulgating tax legislation dealing specifically with this issue.
- Currently in the pipeline, Government is urging local and foreign investors to construct power generating plants in the form of independent power producers. This research topic will assist investors in understanding the fundamental tax principles applicable to their capital investments and to identify the relevant tax benefits (Moneyweb, 2012).

1.4 RESEARCH OBJECTIVES

This study will be guided by the following research objectives:

- To provide an assessment of the tax treatment adopted by the local power generating companies with regard to the construction of a power generating plant by understanding the accounting treatment as well as the Act and domestic case law.
- To evaluate the tax treatment of auxiliary assets used in the generation of electricity.

- To evaluate the tax incentives offered by international countries (India and Australia) to power utility companies who are generating electricity.
- To provide an assessment of the tax incentives offered to domestic (South Africa) and international power generating companies (India and Australia) for the purpose of stimulating and sustaining electricity supply.

1.5 DELIMITATIONS

The following delimitations will form part of this study:

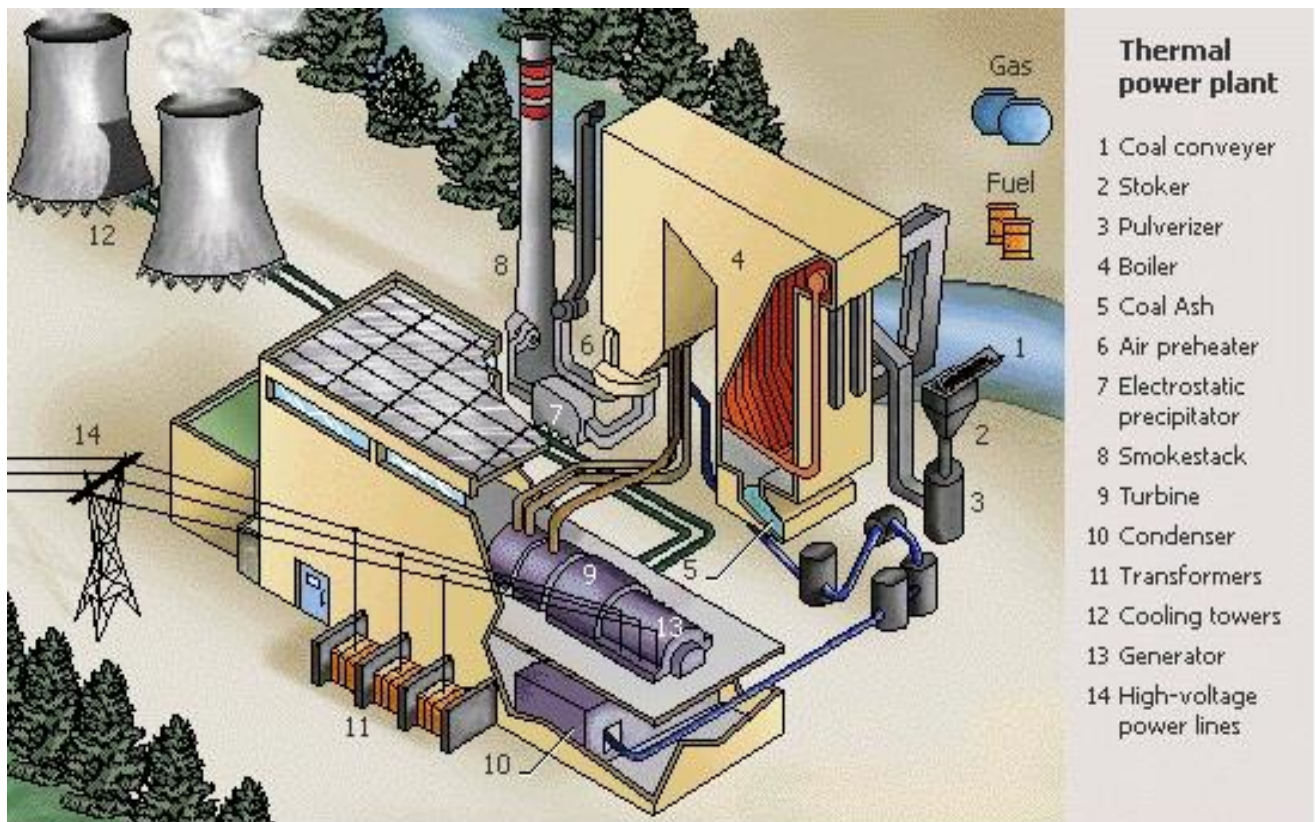
- The study will be an indicative measure of the relevant capital allowances applicable to the power generating plant. The study will be limited to the income tax consequences following the construction of a new coal power generating plant.
- Tax incentives were promulgated dealing with electricity generated from renewable energy; this study will not cover tax consequences of renewable energy assets. The focus of the study will be the tax incentives offered to non-renewable energy, in this case, electricity generated from thermal power fuelled by coal.
- The coal power generating plant comprises of multiple auxiliary assets that are not directly related to the process of manufacture. Due to the magnitude of such assets, this study will deal with the core and critical auxiliary assets only.
- The only two countries selected for the international benchmarking and comparison part of the study, are India and Australia.

1.6 DEFINITION OF KEY TERMS

In order to obtain a holistic perspective on the operations of a coal power generating plant, the key components of a coal-fired power station will be discussed in table 1 according to figure 2).

In addition, the key components of the auxiliary assets will be discussed in table 2.

Figure 2: Components of a Coal Power Generating Plant



Source: (Ustudy, 2012)

Table 1: Critical components in a coal power generating plant:

Key Component	Description
1 and 2 Coal conveyer and stoker	Coal is mined and placed on the mine stock-yard. Coal is then transported from the mine stock-yard on conveyor belts to a coal bunker.
3. Pulveriser	Conveyor belts dump coal into a pulveriser, which grinds the coal to a fine powder. Hot air from nearby fans blows the powdered coal into large boilers.
4. Boiler	The boiler walls are lined with many kilometers of pipe filled with water. As soon as the coal enters the boiler, it

	<p>instantly catches alight and burns with high intensity. The temperatures inside the furnace may climb to 1 300° C. This heat quickly boils the water inside the pipes, changing it into steam.</p>
5. Coal ash	<p>Ash is removed from the plant and hauled to disposal sites or ash lagoons. Fly ash is also sold for use in manufacturing cement.</p>
6, 7 and 8. Air preheater, electrostatic precipitators and smoke stack	<p>As the coal burns, it produces emissions (carbon dioxide, sulphur dioxide and nitrogen oxides) and ash. The gases, together with the lighter ash (fly ash), are vented from the boiler up the stack. Large air filters called electrostatic precipitators remove nearly all the fly ash before it is released into the atmosphere. The heavier ash (bottom ash) collects in the floor of the boilers and is removed. Scrubbers and other pollution control equipment are used to reduce emissions into the air.</p>
9&13. Turbine and generator	<p>Steam moves at high speed to the turbines. These massive drums have hundreds of blades turned at an angle, like the blades of a fan. As jets of high-pressure steam emerge from the pipes, they propel the blades, causing the turbine to spin rapidly. A metal shaft connects the turbine to a generator. As the turbine turns, it causes an electro-magnet to turn inside coils of wire in the generator. The spinning magnet puts electrons in motion inside the wires, creating electricity.</p>
10. Condenser	<p>The steam exits the turbines and passes over cool tubes in the condenser. The condenser captures the used steam and converts it back to water. The cooled water is then pumped back to the boiler to repeat the heating process. At the same time, water is piped from a reservoir or river to keep the condenser constantly cool. This cooling water, now warm from the heat exchange in the condenser, is released from the plant.</p>

11. Transformers	Transformers and transmission lines — Transformers increase the voltage of the electricity generated. Transmission lines then carry the electricity at high voltages from the plant to substations in cities and towns
12. Cooling towers	Cooling towers are heat removal devices used to transfer process waste heat to the atmosphere. Cooling towers may either use the evaporation of water to remove process heat and cool the working fluid to near the wet-bulb air temperature or, in the case of closed circuit dry cooling towers, rely solely on air to cool the working fluid to near the dry-bulb air temperature.
14.High-voltage power line	Transmission lines then carry the electricity at high voltages from the plant to substations in cities and towns.

In addition, per table 2, the following auxiliary assets to the power generating plant are also important components that need to be defined and the tax treatment will be evaluated in the study:

Table 2: Auxiliary Components

Ancillary Power Station Assets	Purpose/Definition
Water Treatment plant (environmental asset)	The plant produces demineralised water of sufficient quantity and quality to supply water to the steam cycle and for other miscellaneous uses.
Ash Dump (environmental asset)	During the combustion process each boiler produces up to 240 tons of coarse ash and 2400 tons of fly ash from the Fabric Filter Plant per day. The fly ash is conditioned to a moist cake form before being mixed with the coarse ash. The mixed ash is fed to an overland conveyer system which transports the ash to the ash dump.
Roads within the parameters of the power station	Move trading stock, goods and personnel within the power station.

Clean and Dirty water dams (environmental asset)	Clean water dam stores storm water and dirty water dam's stores water used in the power cycle and may be recycled.
Particulate Removal System- Dust handling and conditioning equipment (environmental asset)	The equipment collects particulate matter from the flue gas stream on filter bags. The particulate will be stored in hoppers until removed by the fly ash handling system.
Combustion Waste Handling System (environmental asset)	The equipment collects the boiler bottom ash from each unit submerged, the flue gas desulphurisation (FGD), and dewatered solids and transports these waste products to the ash dump area by overland conveyors.

Source :(Ustudy, 2012)

The following abbreviations will be used in the study and have been summarised in table 3 below:

Table 3: Abbreviations used in this document

Abbreviation	Meaning
Act	Income Tax Act no.58 of 1962
BRICS	Brazil, Russia, India, China and South Africa
IAS	International Accounting Standards
IFRS	International Financial Reporting Standards
ITL	Indian Tax Law
NEM	National Electricity Market
NEMA	The National Environmental Management Act (No. 107 of 1998)
SARS	South African Receiver of Revenue

1.7 SUMMARY OF CHAPTERS

The study consists of a total of six chapters. Chapter 1 highlights the magnitude of the electricity supply crisis and resolutions implemented to mitigate the gap between supply and demand of electricity.

Chapter 2 deals with the accounting treatment of a coal power generating plant by taking cognisance of the International Financial Reporting Standards. The chapter serves as a platform for the derivation of the technical accounting treatment of a coal power generating plant.

Chapter 3 and 4 deal with the tax treatment associated with expenditure incurred in the construction of a coal power generating plant.

Chapter 5 will focus on international benchmarking of tax incentives offered to power generating companies and making an objective comparison of such incentives. An evaluation will be done to determine the mechanism of using tax incentives for the encouragement and the enhancement of the electricity generation structures.

Chapter 6 is a conclusion of the preceding chapters and summary of research objectives and findings.

CHAPTER 2

INTERNATIONAL FINANCIAL REPORTING STANDARDS

2.1 INTRODUCTION

In order to obtain a holistic perspective on the tax treatment of a coal power generating plant, the accounting treatment which is governed by the International Financial Reporting Standards (2013) (IFRS) needs to be evaluated. The reason for this is that the wording used in the Act lacks definition and clarity, Thus, the intention is to understand the wording and terminology as used in the IFRS that is applicable to a coal power generating plant. This will create a platform for the technical discussion on the tax treatment of a coal power generating plant.

2.2 REQUIREMENTS AND APPLICATION OF ACCOUNTING PRINCIPLES

The International Accounting Standards No. 16 (2013) (IAS 16) of the International Financial Reporting Standards (IFRS)(2013) states that the cost of an asset comprises of the purchase price, any costs directly attributable to bringing the asset to its operating condition and the initial estimate of future dismantling costs.

The IAS 16 (2013) does not define costs that are “directly attributable” to an asset, however the costs of testing the asset to ensure that it is fully functional and the professional fees related to this are included as examples of costs that are directly attributable. Administration and other general overheads, including site selection activity and startup costs, are listed inter alia as costs that are not directly attributable to the cost of an asset.

The cost of property, plant and equipment for accounting purposes would not necessarily be the same as the cost for tax purposes. An example to illustrate the difference in the cost of a coal power plant between accounting and tax will be the treatment of interest and financing costs.

From an accounting perspective, the cost of property, plant and equipment may include the cost of financial loans for construction or buying. IAS 23 of IFRS (2013) requires such borrowing costs to be capitalised if the asset takes a substantial period of time to get ready for its intended use.

From a tax perspective, deduction of interest expenditure is, according to Section 24 J(2) of the Act, deemed as an amount of interest to have been incurred by a taxpayer during a year of assessment, in effect on a day to day basis over the term of the instrument, provided that income is derived from carrying-on any trade; and the interest expenditure is incurred in the production of income. The requirements of the general deduction formula comprising section 11(a) read together with 23(g) of the Act are not applicable, as it is no longer a requirement that the amounts claimed as a deduction should not be of a capital nature (insofar as interest could ever be of a capital nature), and that the amounts claimed should have been incurred for trade purposes.

IFRS (2013) has a specific requirement for component depreciation, as described in IAS 16 (2013), *Property, Plant and Equipment*. Each significant part of an item of property, plant and equipment depreciates separately. Significant parts of an asset that have similar useful lives and patterns of consumption can be grouped together, generating assets that might comprise of a significant number of components, many of which will have differing useful lives. The significant components of these types of assets must be separately identified.

The capital allowances (tax write-off) applicable to a coal power plant are significantly different compared to the depreciation charge derived by the application of IFRS (2013). Although the some terminology is interchangeable between the Act and IFRS (2013), the differences are acceptable due to divergence in intention. The depreciation charged on a coal power generating plant is derived by taking cognizance of the useful life of each component or sub-component of the coal power plant. This entails that the useful life of each component of the coal power generating plant needs to be established.

Plant assets which represent a major part of the coal power generating plant are broken down into significant components. The coal power plant is not regarded as a single asset

from an accounting perspective, but rather the plant is divided into multiple components, where each component is regarded as a standalone asset and the useful life of each component is assessed independently. This is a demanding task for the entities to dissect the coal power plant from an accounting perspective.

Based on discussion with the financial managers of the local power generating companies, a coal power generating plant can be divided into 114 components (sub assets) to form a power station.

The interpretation and application on the accounting treatment of a coal power generating plant per IFRS (2013) denotes that the guidance provided by the accounting standards will be significantly different compared to the taxation legislation (which will be discussed). From an accounting perspective, a coal power station will not be regarded as a single asset in which a standard depreciation will apply but rather a depreciation rate will be determined for each significant component of the power station. From a practical perspective, power utility companies will need to maintain separate asset registers for accounting and tax purposes. The asset registers will need to be reconciled and variances will need to be understood and explained as this is a requirement of IAS 12 (Taxes) of IFRS.

2.3 CONCLUSION

One can appreciate that accounting standards provide guidance on the depreciation charge on a coal power generating plant. Although similar terminology are used between IFRS (2013) and the Act, the intention of the relevant authorities differ. One is unable to solely use wording as in the IFRS (2013) and apply such interpretation to the wording depicted per the domestic tax legislation.

The understanding of the requirements and application of the accounting standards (IFRS) to a coal power generating plant provides a platform for the discussion of the tax treatment of a coal power generating plant. However, one is unable to use the accounting framework to derive detail guidance and application on the tax treatment applicable to a coal power generating plant.

CHAPTER 3

SOUTH AFRICAN ALLOWANCES ON CORE ASSETS

3.1 INTRODUCTION

The divergence between accounting and tax treatment on the cost of a coal power plant was previously discussed. This part of the study will focus on the determination whether the costs incurred are eligible for capital allowances in terms of Act.

Electrical generation is a process of converting kinetic (potential) energy, such as coal, into electrical energy. In order to implement such a process, a combination of multiple assets interfaces and integrates to generate electricity. It is imperative to provide a synopsis of the electricity generation process so that the critical components of the electricity generation process can be understood and evaluated against the tax requirements of claiming capital allowances (Barnett and Bjornsgaard, 2002).

The initial process for electricity generation starts at the coal stock yards. Coal is delivered to the power stations and stored in coal stockpiles. Subsequently, the coal is transported via conveyor belts. During this transportation process, the coal undergoes transformation. The coal's eventual destination is the coal silos. At this stage the coal is crushed and fabricated into smaller particles which will be ignited (Barnett and Bjornsgaard, 2002).

By igniting coal in the furnaces, the first conversion of energy takes place. The ignited coal produces heat which converts water located in the boiler into steam. The steam is then pumped into the turbine which impinges and expands across a number of sets of blades in the turbine. The impulse and the thrust created rotate the turbine (Barnett and Bjornsgaard, 2002).

The rotation of the turbine spins the generator rotor to produce electricity. This is where fossil fuels (coal) come into the equation. Energy is needed to turn the turbine, and that energy needs to be harvested from somewhere.

The coal which is burned in a furnace generates super-heated steam that turns turbines. The steam is then cooled in cooling towers and condensed back into water to be returned

to the boiler, reducing heat loss as much as possible. Some steam has to be released in the cooling process; that's the source of those big white clouds coming out of the power station cooling towers (Barnett and Bjornsgaard, 2002).

In terms of the Act, section 11(a) requires in order to claim a tax deduction, the expenditure or loss must be incurred in the production of income and not be of a capital nature. The difficulty in claiming a deduction on expenditure incurred in respect of the establishment of a coal power generating plant (as will be seen from the case law below), is that a power plant is usually regarded as part of the cost of establishing or enhancing the business income earning structure, as opposed to its income earning operations

In *New State Areas Ltd* case the court, in the obiter dictum, stated the following:

“...Expenditure may also occur in the acquisition by the taxpayer of the means of production, the property, plant, tools, etc., which he uses in the performance of his income-earning operations and not only for their acquisition but for their expansion and improvement. Both these forms of expenditure can be described as expenditure in the production of the income but the former is, as a rule, current or revenue expenditure, and the latter is, as a rule, expenditure of a capital nature.”

Another test was initially laid down in English case law which has been referred to the courts. The court stated the following in the *British Insulated and Helsby Cable Ltd*:
“...when expenditure is made, not only once and for all, but with a view to bring into existence an asset or advantage for the enduring benefit of a trade, I think that there is a very good reason (in the absence of special circumstances leading to an opposite conclusion) for treating such an expenditure as properly attributable not to revenue but to capital.”

The expenditure incurred on the construction of a coal power generating plant is clearly of a capital nature as it results in the establishment of an enduring benefit. Further, the expenditure incurred attributes to enhancing the permanent structure and thereby the expenditure will be of a capital nature. One needs to assess the relevant sections of the Act to determine the eligibility of claiming a capital allowance.

The Act has a vast array of sections that governs the eligibility of claiming capital allowances. Unlike some of the international tax systems, the domestic tax legislation does not have detailed guidance governing the generation process of electricity. One thereby needs to understand and ensure that the criteria are adhered to for claiming a capital allowance in terms of the relevant sections of the Act.

3.2 REQUIREMENTS OF SECTION 12C

Section 12C of the Act grants an annual allowance in respect of new or used machinery or plant brought into use for the first time by a taxpayer for the purposes of his trade and used by him directly in a process of manufacture or a similar process.

The allowance is based on the cash cost incurred during acquisition of the productive assets including the direct cost of erection or installation of such assets. This section does not further define the term direct costs.

Section 12C of the Act does not make specific reference to the costs incurred on foundations or supporting structures of the asset nor does it prohibit the inclusion thereof. However, based on the South African Services (SARS) Interpretation Note 16¹, Section 12C can apply to costs incurred in respect of the foundations and structures, provided the related assets also qualify in terms of Section 12C of the Act.

Section 12C (1) (a) of the Act provides that in respect of any:

"machinery or plant (other than machinery or plant in respect of which an allowance has been granted to the taxpayer under paragraph (b)) owned by the taxpayer or acquired by the taxpayer as purchaser in terms of an agreement contemplated in paragraph (a) of an „installment credit agreement“ as defined in section 1 of the Value-Added Tax Act, 1991 (Act No. 89 of 1991), and which was or is brought into use for the first time by the taxpayer for the purposes of his trade (other than mining or farming) and is used by him directly in a process of manufacture carried on by him or any other process carried on by him which in the opinion of the Commissioner is of a similar nature."

¹

In this regard, the intention is not to deal with all the requirements of Section 12C (1) (a), instead the key focus will be to expand on the meaning of "*machinery or plant*" and "*directly in a process of manufacture*".

3.2.1 THE MEANING OF "MACHINERY OR PLANT"

The terms "*machinery*" and "*plant*" are not defined in the Act. However, in determining whether the assets in question constitute machinery or plant the courts have formulated two tests, namely the "*functionality*" and "*durability*" tests.

In *Blue Circle Cement Ltd v CIR46 SATC 21*,² the taxpayer manufactured cement of which limestone was the raw material. The taxpayer constructed a railway line in order to transport the raw material from its quarries to its factory and claimed an allowance on the cost of the railway in terms of Section 12 (as it was then). The grounds for this claim were that the manufacturing process commenced in the quarry and the railway line was therefore used in the process of manufacture. The Commissioner conceded that the railway line was used in the process of manufacture but had disallowed the expenditure on the basis that it did not constitute "machinery or plant".

The court held that the functional test is a useful criterion to determine if an item constituted a plant. In addition, the court stated that the word "plant" implies some degree of durability and does not include articles which are quickly consumed or worn out in the course of a few operations. In discussing the meaning of the word "plant", the court held that the starting point of the enquiry has, almost without exception, been a dictum of Lindley LJ in *Yarmouth v France* (1887) 19 QBD 647, a case concerned with the meaning of the word plant, as it occurred in certain non-fiscal legislation, viz the Employers' Liability Act 1880. In this connection Lindley LJ stated (at 658):

"[t]here is no definition of plant in the Act: but, in its ordinary sense, it includes whatever apparatus is used by a business man for carrying on his business, not his stock-in-trade which he buys or makes for sale; but all goods and chattels, fixed or movable, live or dead, which he keeps for permanent employment in his business."

The court held that in order for an item to qualify as "plant" suggested some degree of durability and did not include articles which were quickly consumed or worn out in the course of a few operations.

In respect of the functionality test the court held that "*the distinction is that in the one case the structure is something through which the business activities are carried on; in the other case the structure plays no part in the carrying-on of those activities, but is merely the place within which they are carried on.*" It follows, that in terms of the functionality test, the enquiry was whether such item was employed to carry on or promote a taxpayer's business activities.

Plant may even encompass structures of a permanent nature such as a building, provided that the structure forms an integral part of the apparatus used in the process of manufacture, as opposed to merely the setting within which the process is carried out.

In summation, machinery is a narrower term, applying to particular machines for the application of mechanical power, while plant is a broad term encompassing all manner of durable assets acquired for carrying on business, but is unlikely to include buildings which merely house industrial equipment

3.2.2 INTERPRETATION OF "DIRECTLY USED IN A PROCESS OF MANUFACTURE"

The meaning of "directly" was examined in *ITC 1061, 1964 (26) SATC 317* where the court applied the ordinary meaning of the word. The court held that the use of the word "directly" indicated that the legislature intended a distinction to be drawn between plant or machinery directly used in the process of manufacture and plant or machinery which is only indirectly so used.

The court concluded that section 12C of the Act refers to plant or machinery used directly, that is, "without the intervention of some other medium or agency, in the process of manufacture etc." It was unnecessary for the court to decide whether or not the "direct" use in the relevant process is required to be the sole use to which the machinery or plant

is put. It did, however, express an opinion that the “direct” use should at least be its primary or dominant use.

The term ‘process of manufacture’ or a ‘process similar to manufacture’ is not defined in the Act nor does the Act provide guidance as to where such processes commence or cease. However, the terms have on occasions been considered by South African courts and there are a number of guiding principles established from these cases. SARS also provides guidance as to what it will accept as processes of manufacture or similar processes in Practice Note No. 42.

The general propositions that may be derived from the many cases on this issue were usefully summarised by Corbett JA, who delivered the dissenting judgment in *SIR v Safranmark (Pty) Ltd, 1982 (1) SA 113 (A) 43 SATC 235, that:*

The term "process of manufacture", in the context of Section 12, *“denotes an action or series of actions directed to the production of an object or thing which is essentially different from the materials or components which went into its making. The requirement of essential difference necessarily imports an element of degree; and there are no fixed criteria nor is there any precise universal test whereby it can be determined whether or not a change in the materials or components wrought by the process, be it as to the nature, form, shape or utility of the materials or components, has brought about an essential difference. This must be decided on the individual facts of each case.”*

In coming to its conclusion as to whether Safranmark is undertaking a "process of manufacture" the court examined the procedures and operations carried on by Safranmark and took into account the following factors:

- *” that plant and machinery is used and which in some respects is specialised”;*
- *” that the method of using the plant and machinery is standardised”;*
- *“that human effort and labour are used”;*
- *“that the volume of production is based on anticipated demand”;*
- *” that the volume of production is large”.*

The courts have established certain principles that can be applied to determine whether or not a process constitutes a process of manufacture. As a general principle, the process must be a complete and continuous process. There must be an essential change from the material introduced into the process and the end product (Stiglingh, 2013).

The essential change referred to would be in the form, nature and utility of the article. In *SIR v Hersamer (Pty) Ltd 1967 (3) SA 177 (A) 29 SATC 53* it was said that: "*the word "process" can relate to a multiple variety of operations whilst the word "manufacture", relates to making of any sort of article by physical labour or mechanical power.*"

In *COT v Processing Enterprises (Pvt) Ltd 1975 (2) SA 213 (RAD) 37 SATC 109* the Appellate Division of the High Court of Rhodesia held that a "*manufacturing process need not necessarily produce the end product provided it is an essential stage in the final production of that end product, or an important stage in the final production of that end product*". It also held that:

"There need be no change in the actual substance of the raw material before the process of dealing with it is regarded as a manufacturing process provided skill has been applied in some way to that raw material and to such dealing, and its actual character, as opposed to its mere substance, is changed. Its physical substance may remain the same, but the process of handling may none the less be regarded as a manufacturing process if the raw material has been cleaned and broken up into its components."

Once a taxpayer is satisfied that it is engaged in a "process of manufacture", the question often arises as to the actual starting point of the "process of manufacture". The basis of determining whether or not a process constitutes a process of manufacture depends on the facts of each individual case and the complete process must be reviewed as a whole (Stiglingh, 2013).

In *SIR v Cape Lime Company Ltd 1967 (4) SA 226 (A) 29 SATC 131* the taxpayer, a company engaged in the manufacture of lime, owned a limestone quarry situated some two and a half miles from its reduction plant. The limestone rock was blasted free from the quarry face and, where necessary, the freed rocks were again blasted on the quarry floor

in order to reduce them to a manageable size for transportation. The point in dispute was whether the process of manufacture commenced at the quarry or at the reduction plant. In this regard, Smit AJA said that *"one must distinguish between the acts performed in acquiring the raw material for the process of manufacture and those which commence the process."* Further Smit AJA agreed with the statement expressed of the court a quo on the meaning of the word "directly", that,

"generally speaking once the process of manufacture has commenced, the movement of material from one piece of plant to the next one in this way is an integral part of the process of manufacture and any plant or machinery used to effect such movement is used directly in such process of manufacture."

In the ITC1114 case, the court submitted that the degree of interdependence of the several objects will be an important factor in determining at what stage the process of manufacture commences. The court submitted the following key points:

- *"It does not always follow that the process commences only at the stage when the raw material begins to be altered to the shape or form which it is ultimately to assume, although in the majority of cases this may be the true commencement of the process of the manufacture."*
- *"The process may commence at an earlier stage than that where, for example, several pieces of machinery, each connected with the other and all together forming an integrated whole, are used for the processing of the raw material; it may truly be said in such a case that the process commences at the first machine, although it is only at a later stage that the raw material begins to undergo change."*

On this basis, the court found that a process of manufacture commenced at the point where the butadiene (raw material) entered the pipeline and therefore the pipeline was used directly in the process of manufacture.

Similarly, the taxpayer in *Blue Circle Cement v CIR 46 SATC 21* manufactured cement, of which the raw material is limestone. The taxpayer constructed a railway line in order to

transport the lime from its quarries to its factory and claimed an allowance under section 12C in respect of the cost of construction of the railway line on the basis that it constituted plant used "directly in a process of manufacture".

In the *CIR v Stellenbosch Farmers Winery (SA) Ltd*, the taxpayer was successful in its claim that its wine tankers (bulk container carriers) were used directly in a process of manufacture. The tankers transported so-called raw wine from the maturation tanks of the taxpayer's farm suppliers (towards whose efforts the taxpayer made a substantial contribution) to its premises for further processing. Essentially, consultation occurred between the taxpayer and the supplier, sometimes even before the vines were planted, regarding the quality and quantity of the raw wine. The taxpayer's representatives gave advice where necessary. The raw wine was subject to regular inspection by the taxpayer's representative and they also gave direction regarding temperature and other relevant matters to the taxpayer. The process was subject to the taxpayer's guidance until it was removed by the taxpayer's tankers to the winery.

The court submitted that what the taxpayer produced, on a large scale and by a continuous process (using human effort and specialised equipment), was substantially different from the raw wine, as well as a standardised product having a different utility and a greater value than the raw wine. Consequently, the taxpayer was maintaining a process of manufacture. That process commenced before or at the time the raw wine was placed in the tankers. The tankers, highly specialised vehicles, were therefore used directly in the application of the requirements of section 12C to the cost of a power generating plant.

Due to various limitations on the interpretations and definition of the meaning of "directly used in the process of manufacture", it becomes imperative to understand the outcome of the relevant case law dealing with the subject matter. The next element will be the application of the tax law and principles derived from tax case law to the generation process of electricity.

3.3 APPLICATION OF LEGISLATION REQUIREMENTS

The Act does not provide any guidelines as to when the process of manufacture commences or ceases. In general, once a process of manufacture or a similar process has commenced, items of plant or equipment which are used to convey materials from one step to the next would be regarded as being machinery or plant used in a process of manufacture, or a similar process for the purposes of section 12C of the Act.

In *ITC 1114*, it was held where a pipeline or conveyer is integrated into a plant which functions as an integrated whole, the pipeline or conveyor may be considered to be part of the plant used in the process of manufacture.

Before consideration is given to whether an entity will be entitled to claim a section 12C allowance on the expenditure incurred in establishing a coal power generating plant, it is noted that the production of electricity would constitute a "process of manufacture" for purposes of section 12C of the Act. As indicated in the *Safranmark* case, the term "process of manufacture" denotes an action or series of actions directed to the production of an object.

In order to qualify for an allowance in terms of section 12C of the Act, the important considerations are firstly, whether the power station assets constitutes "plant or machinery" and secondly, whether it is used "directly in a process of manufacture".

As mentioned, two tests have been established to determine whether an apparatus constitutes plant or machinery, namely the durability and functionality test. The functionality test enquires whether such apparatus was used to carry on or promote a taxpayer's business activities, while the durability test requires some degree of permanency and excludes items which are quickly consumed or worn out (Stiglingh, 2013)

Expenditure incurred on construction of a coal power generating plant would easily satisfy the durability test. This is mainly influenced by the technical design and the extended useful life of a power station which can last on average up to 50 years.

The question remains whether power stations are utilised in carrying on the activities of the taxpayer's business. In other words, the power station must be part of the business activities as opposed to merely a place or setting within which these activities are carried out.

However, certain assets used in and around the power station are not necessarily used in an essential stage in the final production of electricity. That is, the process of manufacture denotes a series of actions directed to the production of an object and, while the auxiliary assets are helpful in and around the coal power generating plant, they are not necessarily specifically directed at, and essential to, the production of electricity.

The important question therefore, is whether these auxiliary assets are used "directly" in a process of manufacture. "Direct" use was held to mean that the use should at least be the plant's primary or dominant use (*ITC 1114*).

In the Cape Lime case, Smit AJA was specifically referring to the transport of raw materials which were part of the process of manufacture. It follows that, in order to determine whether the auxiliary assets are used directly in the process of manufacture, the question is whether the auxiliary assets are an integral part of the process.

The power stations and the coal mines agree on the quality of the coal and the coal is tested at the mine for specifications. This process is conducted on behalf of the power station. After the mines beneficiation process (crushing of the coal), the mine conveyor belt transports the coal to the power station silo located at the mine. The function of this silo is to store the coal received from the mine conveyor belt and to simultaneously channel (via a funnel and hoppers) the correct amount of coal onto the overland coal conveyor which transports the coal directly to the coal stock yard (Barnett and Bjornsgaard, 2002).

The conveyor system passes under magnets which remove any metal fragments from the coal. The conveyor system is part of an integrated plant system in terms of which the coal is conveyed to the power generating units on a continuous basis. In view of the fact that there appears to be a quality review by the power station at the mine, that the conveyor

system facilitates an element of processing by removing metal and that the conveyor appears to be part of an entire integrated plant, it can be regarded that the process of manufacture commences with the selection or testing of coal on behalf of the power station (Barnett and Bjornsgaard, 2002).

Failing which, then the process of manufacture should commence when the coal is placed on the conveyor. Subsequent to this point all core assets defined in Chapter 3, such as the coal conveyor belt, boilers, turbines, generator, rotors, stators, transformers, and cooling towers would all constitute machinery and plant used in the process of manufacture. Transmission lines will be excluded from the Section 12C since Section 12D of the Act governs the tax treatment associated with lines.

3.4 CONCLUSION

Accordingly, the machinery used to break the coal into small chunks is to be regarded as “machinery” used “directly in a process of manufacture” as contemplated in section 12C(1)(a). Any machine or plant subsequently used to the completion of that breaking process, which is an integral part of the electricity producing process, will also be regarded as used “directly in a process of manufacture”.

The above information depicted the tax treatment applicable to the core assets associated with the generation of electricity. The next item of discussion will be the tax treatment of the auxiliary assets to the power station such as the environmental assets, foundation cost, support structures and roads.

CHAPTER 4

SOUTH AFRICAN ALLOWANCE ON AUXILIARY ASSETS

4.1 INTRODUCTION

Within the parameters of a coal power generating plant, a number auxiliary assets are located which are vital to the generation process of electricity. These auxiliary assets serve numerous purposes but indirectly support the process of electricity generation. Without these assets, the electricity generation process will be a cumbersome and inefficient process (Barnett and Bjornsgaard, 2002).

In addition, environmental laws per the National Environmental Management Act (No. 107 of 1998) places responsibility on companies engaged in electricity generation to reduce emissions and be environmentally friendly. As a result, one will find a vast array of environmental assets located within the coal power generating plant with the sole purpose of reducing the carbon footprint.

The argument to support that all capital assets located within the parameter of a coal power generating plant is directly used in the process of manufacture, may be ineffectual. This is evident, as there are assets that are not directly used in the process of manufacture.

This part of the study will focus on the evaluation of the tax treatment associated with the expenditure on auxiliary assets. Due to the magnitude of multiple sub-component auxiliary assets that form part of the coal power generating plant, this study will only focus on the key or core auxiliary assets.

The tax treatment of the following auxiliary assets will be specifically evaluated:

- Environmental Assets
- Buildings and supporting structures
- Roads

4.2 ENVIRONMENTAL ASSETS OF A COAL POWER GENERATING PLANT

Environmental assets at a coal power generating plant consist of:

- Water Treatment plants;
- Ash Dumps;
- Particulate Removal System;
- Dust handling and Conditioning Equipment; and
- Combustion Waste Handling System.

Environmental waste disposal assets are defined per the Act and means, *inter alia*, any air, water and solid waste disposal site, dam, dump, reservoir, or other structure of a similar nature if the structure is of a permanent nature

Environment treatment and recycling assets are defined per the Act means, *inter alia*, any air, water and solid waste treatment and recycling plant or pollution control and monitoring equipment.

These assets serve as a crucial component of the coal power generating plant and the objective of these assets are vital in the preservation of the environment. As technology improves, original equipment manufacturers have made significant leaps in enhancing the efficiency of environmental assets.

Section 37B of the Act grants a special allowance on environmental waste disposal assets as well as environmental treatment and recycling assets. It is noteworthy that the above assets need to be used in the course of the taxpayer's trade during a process that is supplementary to any process of manufacture or similar process, as determined by SARS. Such an environmental rehabilitation process is required by law.

The Section 37B allowance is based on the cost to the taxpayer in acquiring the asset provided that the asset is new and unused. Further, the environmental asset must be brought into use for the first time by the taxpayer. Section 37B(8) precludes a deduction

under Sections 11, 12C and 13 of the Act in respect of environmental expenditure. This means that even if the environmental asset is used directly in a process of manufacture or a similar process, a deduction would only be allowed under Section 37B and not under the aforementioned sections. The allowance granted in terms of this section is equal to the allowance granted under section 12C for assets which have been brought into use for the first time by the taxpayer (40% / 20% / 20% / 20%).

The largest environmental exposure from the coal power plant that the generation and transformation of electricity produces, is the dust arising from the crushing of coal and the resultant ash from the furnace used to burn coal. As a consequence of the use of coal in the generation and transformation of electricity, power generating companies are morally and legally obliged to treat and recycle its waste products. The National Environmental Management Act (No. 107 of 1998) (NEMA) states that all corporations must comply with the NEMA principles.

Section 37B of the Act would apply to all ash dump and treatment assets as the ash is used to fill up the areas excavated at the mine. All assets involved in environmental treatment and recycling qualify for an allowance under Section 37B. This will also apply to chimneys on the terrace as their function is to treat gases from the furnace to minimise atmospheric pollution.

4.3 BUILDINGS AND SUPPORTING STRUCTURES

Within the parameters of a coal power generating plant there are various buildings which serve different purposes. These buildings are used for administrative-, storage- and commercial purposes. Fortunately, the Act has relevant sections that govern the treatment of such buildings. However, the difficulty is determining which of these sections of the Act applies to these types of buildings. As a result, the purpose and intention of the buildings needs to be analysed and the determination of the correct capital allowance will follow.

Prior to the construction of the power generating plant, there is an enormous amount of workload involved in excavation, leveling of land and site preparation. In *ITC. 1137* the court disallowed a capital allowance on excavation cost and submitted the following

judgment: “*The underlying concept in all these definitions is the raising up of whatever is being erected. While the digging of trenches to take foundations is a necessary preliminary to the raising of the foundations themselves, I do not think that it could be said to be the commencement of the erection of the building which is to stand in those trenches. Excavation is preparatory to, but not part of, the process of erection.*”

However, based on British case law, there is a contradiction on the judgment as in case ITC 1137. Although British cases are not South African authority, they can be used as persuasive authority under the umbrella of international case law.

In *Cooke (Inspector of Taxes) v Beach Station Caravans Ltd [1974] 49 TC 514*, the taxpayer owned and operated a camping site, and incurred capital expenditure on the construction of heated swimming pools. A claim for capital allowances was accepted for the system of filtration, heating and reticulation, but the Inspector refused to accept that the costs of excavating and constructing the pools as constituting expenditure on the plant for the purposes of capital allowances. On appeal, Megarry J held that the whole expenditure did qualify as plant, basing his conclusion on the following factors:

- The pools could be considered as a unit.
- The pools should not be considered on its own, but in relation to the trade carried on.
- The function of the pools was to attract customers to the caravan site.
- The pools could not be considered as merely passive, but instead performed an active function and were part of the means of the trade carried on.

In the British case, *IRC v Barclay, Curle & Co Ltd [1969] 45 TC 221*, the taxpayer who carried on the trade of shipbuilding and repairing, constructed a dry dock. The taxpayer claimed not only the attendant machinery, but also the cost of excavation and concrete work. The Crown argued that the basin forming the dock be regarded as the setting in which the trade was carried on. The House of Lords ruled that the whole (excavation and concrete work) qualified as plant.

Although these cases are contrary to the *ITC 1137* judgment, there is a strong argument to suggest that the excavation and construction foundations of the coal power generating plant (similarly the pool and dry dock in *Cooke supra* and *IRC v Barclay, Curle supra*, respectively) can be considered as part of the relevant assets, and not a necessary preliminary to the raising of foundations as mentioned in *ITC 1137*.

The next element will be to evaluate the relevant capital allowances on buildings. Section 12C of the Act does not make specific reference to the cost incurred for foundations or supporting structures of machinery or plant, nor does it prohibit the deduction thereof. Based on the SARS Practice Note 16 (2013), Section 12C of the Act can apply to costs incurred in respect of the foundations and structures, provided the qualifying asset is mounted or affixed to the foundation or support structure and the foundation or support structure was designed for such asset.

A “supporting structure” is not defined in the Act. The Oxford dictionary defines “supporting” as “bear all or part of the weight of; hold up”. Accordingly, in order for a structure to fall within the ambit of the relevant requirements, the structure must bear all or some of the weight of the relevant “qualifying asset”

As in the case of *Blue Circle Cement v CIR 46 SATC 21*, a distinction was drawn between structures used to carry out business activities and structures that merely serve as a place within which business activities are carried out.

Thereby, plant may even encompass structures of a permanent nature, such as a building, provided that the structure forms an integral part of the apparatus used in the process of manufacture, as opposed to merely the setting within which the process is carried out.

Section 12C allowance cannot be claimed in respect of buildings which merely serve as structures to house the coal generating plant for security reasons or to protect assets and employees from the weather.

Buildings will qualify for a Section 12C allowance to the extent that it constitute a supporting structure as envisaged in Section 12C of the Act if, for example, its purpose is

to support the process of manufacture (Stiglingh, 2013). A typical example will be the monitors for the control and instrumentation systems for the boiler units which are mounted and fixed to the building and the set-up was necessitated by the nature of the system. In this case, if the building was required as a supporting structure it would qualify for an allowance in terms of section 12C of the Act. To motivate this further, the involvement of the structural engineers would be required to substantiate that the building is specifically designed as a supporting structure (Barnett and Bjornsgaard, 2002).

The foundation of the power station is the portion of the coal plant structure that transfers the weight of the building or asset into the ground strata (Barnett and Bjornsgaard, 2002). The foundation therefore forms part of the asset being built or is the space on which the asset is mounted. The work performed includes earthworks for the foundation, construction of the building foundations for all the assets and buildings themselves. Based on SARS Interpretation Note 16, Section 12C of the Act should apply to costs incurred in respect of the foundations and supporting structures of qualifying assets. The following are foundations of assets in question: turbine plant foundations, boiler plant foundations and air conditioning cooling plant foundations. These foundations should qualify for Section 12C allowances to the extent that the assets themselves qualify for Section 12C allowances.

Thereby, certain buildings and foundation cost will qualify for a deduction in terms of Section 12C of the Act as such buildings are supporting structures and not mere settings. Thus, power utility companies need to make a critical assessment of supporting structures (buildings) to be able to defend their position on claiming a Section 12C allowance.

To the extent that the building do not qualify for an allowance under Section 12C of the Act, Section 13 of the Act will apply for buildings within which a process of manufacture or similar process takes place.

Section 13 of the Act provides for a special allowance for buildings used in the process of manufacture or a similar process. In terms of Section 13 of the Act, the special allowance will apply for a building which is wholly or mainly used by the taxpayer for carrying out a manufacturing or similar process in the course of the taxpayer's trade. The allowance

granted under Section 13 is 5% of the cost of the building on an annual basis (provided erection commenced after 1 January 1989).

Alternatively, Section 13quin of the Act provides for an allowance in respect of the cost of any new and unused commercial buildings owned by a taxpayer and used wholly or mainly in the production of income for the purposes of his trade. The allowance granted under Section 13quin is 5% of the cost of the building on an annual basis. Section 13(5)quin of the Act precludes a deduction in terms of this section for any building which qualifies for a deduction under any other section of the Act. Therefore, a building qualifying for a Section 13 allowance cannot qualify for a Section 13quin allowance.

To the extent miscellaneous buildings may not house electricity generation or transformation related activities, but would nevertheless qualify for a Section 13quin allowance as the buildings are used in the course of trade.

4.4 ROADS

Roads located within the parameter of the power station serves as a vital medium in the transportation of commodities such as coal and ensure flexibility within the power station.

Section 11(a) of the Act requires that in order to claim a deduction an expenditure or loss must not be of a capital nature. The difficulty in claiming expenditure in respect of road construction, as will be seen from the case law below, is that a road is usually regarded as part of the cost of establishing or enhancing the businesses income earning structure.

In *Palabora Mining Co Ltd v Secretary for Inland Revenue* the taxpayer was allowed the loss it suffered in implementing a contract for the building of a plant providing water, which was constructed by a statutory water board. The taxpayer undertook the work because the board was behind schedule with the provision of the necessary water storage capacity and the taxpayer, by engaging subcontractors for its own account, expedited the provision of the water and thus accelerated its earning of profits from copper production. The court held that the mere fact that the taxpayer incurred expenditure in respect of work situated on the land of another does not preclude that expenditure from being expenditure of a

capital nature. Furthermore the circumstance that expenditure has neither created a new asset nor made any addition to an existing asset, while a relevant factor, is not necessarily conclusive in favour of the expenditure being of revenue in nature.

In *COT v Rhodesian Congo Border Timber Co* 24 SATC 60 the taxpayer claimed expenditure incurred in respect of roads built as a temporary measure to transport its timber. Wunsh J recognised, and so did Briggs FJ in the Rhodesian Congo case, that the findings in the Rhodesian Congo case are due to the particular facts of the case, and provide that,

"The method of construction and the durability of the roads were essential facts in arriving at the inferential finding of fact that their construction was not an improvement of the profit-making machine, but was part of its operation. No doubt a "permanent" road should usually be regarded as part of the capital structure, even if it is not a valuable asset . . ."

On the basis that an entity is not entitled to a deduction in respect of the expenditure incurred on the road within parameters of the Power Station in terms of Section 11(a) of the Act, the power utility companies may be entitled to claim an allowance in terms of Section 12C of the Act. However, the question is whether the roads would *inter alia* also form part of the "process of manufacture" for purposes of Section 12C of the Act. In order to qualify for an allowance in terms of Section 12C of the Act, in the current circumstances, the important considerations are firstly, whether the road constitutes "plant or machinery" and secondly, whether it is used "directly in a process of manufacture".

The road would satisfy the durability test and the question remains whether the roads are used in carrying out the activities of the business. In other words, the road must be part of the power utility business activities as opposed to merely a place or setting within which these activities are carried out.

The purpose of the road is to transport trading stock, goods and personnel in and around the power station. In this regard, despite the wide definition of "plant", the roads may not be regarded as "plant" for purposes of Section 12C on the basis that roads merely constitute a "setting" on which business is carried out. In other words, the roads in and

around the power station are not actively deployed in the process of manufacture, like, for instance, the railway line in the *Blue Circle Cement* case.

In addition, the roads in and around the power station are not an integral part in the final production of electricity. That is, the process of manufacture denotes a series of actions directed to the production of an object and, while the roads are helpful in and around the power station, it is not necessarily specifically directed at, and essential to, the production of electricity.

The roads' primary function is not part of the manufacture of electricity. On this basis the roads would probably not be used "directly" in the process of manufacture and would not be entitled to an allowance in terms of Section 12C.

However, to the extent the power utility company is able to demonstrate that the roads in and around the power station are an integral part of the manufacturing process, it may be possible to argue that the roads are used "directly" in a process of manufacture. For instance, to the extent that the electricity production process comes to a standstill due to the lack of the roads in and around the power station, it may be regarded as an integral part of the manufacturing process.

4.5 CONCLUSION

Auxiliary assets serve an important function in the generation of electricity. The current tax legislation system offers various limitations or does not allow a power generating company to claim a Section 12C allowance on these types of assets. Power utility companies therefore face the task of identifying the types of auxiliary assets that qualify for a Section 12C allowance or alternatively determining the eligibility of other types of capital allowances admissible as in the relevant proviso of the Act. Under international law, these power utility companies can successfully argue that certain assets can be regarded as an integral part in the process of manufacture.

CHAPTER 5

INTERNATIONAL BENCHMARKING ON CAPITAL ALLOWANCES

5.1 INTRODUCTION

This part of the study will focus on international norms associated with the capital allowances available on a coal power generating plant. The countries selected for international benchmarking purposes are India and Australia.

India's constrained electricity supply is a mirror image of the hindrances faced by South Africa. By benchmarking against a country faced with an energy supply dilemma equivalent to South Africa, one is able to assess the tax incentives offered by the foreign government to the energy sectors to encourage capital expansion in the energy sector and thereby ensuring economic growth stimulation.

Australia was selected as the developed country since the tax system of Australia has robust and well-illustrated guidelines on the tax treatment of a coal power generating plant. The Australian tax system provides a predefined cursor and provides admirable guidelines on the tax treatment associated with a coal power generating plant thereby reducing the risk of incorrect application of the Australian tax legislation.

5.2 TAX TREATMENT OF A COAL POWER GENERATING PLANT PER INDIAN TAX LAW

India's electricity industry is the fifth largest in the world in terms of a generation capacity of over 146,000 megawatt's and a consumer base of over 150 million people. India will need significant new investment in electricity infrastructure to meet the demands of a fast developing economy, and a population that is growing in size, income, and in expectations (PWC India, 2012).

The energy supply availability in India has increased by 5.6% in 2010-11, while the peak demand met has increased by 6% in the same period. Despite the increase in the supply availability of electricity, India faced an energy deficit of 8.5% and a peak deficit of 9.8% in 2010-11. It is expected that the energy deficit and peak deficit will rise to 10% and 13% respectively in 2011-12 (PWC India, 2012).

The policy landscape in India has progressively evolved since independence was achieved and the consequences of liberation led to radical changes in the power sector, especially in terms of competition, private sector involvement and focus on green energy over the last decade, commencing with the passing of the Indian Electricity Act 2003. Until the early 1990s, the power sector was shielded from any private sector involvement; however, the mounting pressure on the Indian Government resources to support capacity additions, repeated delays encountered by state utilities and the growing demand supply gap urged the Government of India to open the power generation sector to private participation along with country's globalisation policy. (PWC India, 2012).

Justifying the significant increase in the demand for electricity, there is an immediate need to strengthen electricity generation capacity in India. The industry has to invest large capital in the setting up of power plants to ensure uninterrupted power supply (E&Y Power Investment Outlook, 2012).

Indian tax laws, governing direct and indirect taxes, are very complex with multiple rates, duties and exemptions to achieve specific social and developmental goals. For the power utility and engineering companies, the tax system can prove a trap for the unwary (E&Y Anti-avoidance, 2012).

The Indian tax law applicable to a coal power generating plant is twofold. Firstly, India initially had a tax base system governing the tax treatment on coal power stations that was based on accelerated tax depreciation. Depreciable assets are grouped in blocks, and each block is eligible for depreciation at a prescribed rate. Additional depreciation of 20% on the cost of new plant and machinery is allowable in the year of commissioning for manufacture purposes (PWC Worldwide Tax Guide.2013).

With regards to the accelerated tax depreciation, one of the emerging tax issues India faced, was whether additional depreciation on assets installed at power plants, used for generation of electricity, was allowable under specific provisions of Indian Tax Law (ITL) which grant additional depreciation to a taxpayer engaged in the business of manufacture of production of any 'article' or 'object' (PWC Worldwide Tax Guide, 2013).

In the tax case, *N.T.P.C Ltd vs DCIT ITA No 1438/Del/2009* the issue before the tribunal was whether additional depreciation on assets installed at power plants, used for generation of electricity, was allowable under specific provisions of ITL. Under specific provisions of the ITL, in addition to regular depreciation, a taxpayer engaged in the manufacturing or production of an 'article' or 'object' is entitled to claim additional depreciation of 20% on the cost of new machinery or plant which are acquired and installed by the taxpayer after 31 March 2005 (E&Y Delhi Tribunal, 2012).

The tax authority contended that the taxpayer was not entitled to additional depreciation as the activity of power generation is not akin to the activity of the manufacturing or production of any article or thing. Generating power, which produces electrical energy as output, cannot be equated to the manufacturing or production of an 'article' or 'object'. An 'article' or 'object' as known in common language, has attributes such as weight, mass and volume. Electricity does not have any of these attributes. Reference to various provisions of the ITL support the power sector in being treated differently in the matter of granting of deductions/exemptions as distinguished from other activities including manufacture or production of articles or objects (E&Y Delhi Tribunal, 2012).

The Indian court stated broadly that manufacturing is a transformation of an article, which is commercially different from the original article. It brings into existence a product which is different from the one which originally existed and the new product is a different commodity, physically as well as commercially. One can apply a broad test to see if a change or series of changes was brought about by the application of a process, and if this took the commodity to a point where, commercially, it cannot be regarded as the original commodity but a distinct and new article. Only then can the process can be regarded as 'manufacture' (E&Y Delhi Tribunal, 2012).

The Delhi court ruled that electricity has all the attributes associated with constituting a 'good' in the context of indirect tax levies like sales tax. It can be abstracted, consumed and it can be transmitted, transferred and delivered like a 'good'. Merely because electric energy is not tangible or cannot be moved or touched, it does not cease to be a 'good'. Since electric energy has all the trappings of an article or good the process of power generation can be regarded as the manufacture or production of an article or object (E&Y Delhi Tribunal, 2012).

However, additional tax incentives were promulgated by the Indian government to address the limitation of electricity supply. To augment the flow of investment in the power sector, a 100% income-tax holiday for ten consecutive years is available to Indian companies engaged in generation, transmission or distribution of power, subject to the Minimum Alternative Tax provisions under the ITL. Under section 80IA of the ITL, an undertaking was eligible for the tax holiday only if it began to generate power by 31 March 2013.

To provide a continuous impetus this date may be extended for a few years. In the case where a tax payer opts for a generation based incentive scheme, then the entity is not entitled to claim accelerated tax depreciation. It is important to analyse the tradeoff between the two from a tax perspective. There is a case to graduate from an accelerated depreciation tax concessions to output based incentives being the generation, income-tax breaks (Times of India, 2013).

5.3 TAX TREATMENT OF A POWER GENERATING PLANT PER AUSTRALIAN LAW

Australia's electricity generation sector can be broken down into three systems (Electricity Generation, 2012):

- The National Electricity Market (NEM), which operates in the eastern states;
- The Wholesale Electricity Market, which operates in Western Australia; and
- The Northern Territory, which is serviced by an integrated electricity utility.

The NEM operates as a mandatory wholesale pool under the management of the Australian Energy Market Operator. Generators sell their electricity into the pool and retailers (and some large users) buy electricity from the pool to resell to residential and business consumers. Around two-thirds of electricity generation capacity in the NEM is government-owned. Generators make bids to supply electricity into the pool at five minute intervals, and bids are accepted in price order. Lowest-price bids are accepted first, up to the point where supply is equal to demand (Electricity Generation, 2012).

The majority of the electricity generated in Australia is derived from coal and gas. Hydroelectricity is the largest renewable energy source. Table 4 depicts the component split of Australian electricity generation supply.

Table 4: Component split of Australian electricity generation supply:

Australia, July 2008 – June 2009 <i>Fuel source</i>	<i>Total generation in terawatt hours</i>	<i>Proportion of total in percentage</i>
Black coal	143	55
Brown coal	57	22
Oil	3	1
Gas	39	15
Hydroelectricity	11.9	5
Wind	3.1	2
Solar	0.3	–
Biomass	1.5	1
Biogas	1.3	–

Source: E&Y. Power Investment Outlook, 2012

The demand for the development of electricity infrastructure assets in the Australian market is subdued, particularly for generation assets and renewable energy investment. Australian energy market operator data on future generation capacity requirements indicates medium term demand for new base load generation will remain subdued (E&Y. Power Investment Outlook, 2012).

Under the Australian income tax law, one is allowed to claim certain deductions for expenditure incurred in gaining or producing assessable income, for example, in carrying

on a business. Some expenditure, such as the cost of acquiring capital assets, is generally not deductible. Generally, the value of a capital asset that provides a benefit over a number of years declines over its effective life. Because of this, the cost of capital assets used in gaining assessable income can be written off over a period of time as tax deductions (Australian Tax Office, 2012).

The Australian Commissioner makes a determination of the effective life of a depreciating asset by estimating the period (in years, including fractions of years) the asset can be used by any entity for a taxable purpose (Australian Tax Office, 2012).

In making determinations of the effective life of depreciating assets under section 40-100 of the Australian Income Tax Assessment Act of 1997, the Australian Commissioner considers the numerous factors such as the physical life of the asset, engineering information, the manufacturer's specifications, etc. Where appropriate, each factor is considered on the basis of historical information and future expectations. No one factor is necessarily conclusive and the relative importance of each will vary depending on the nature of the asset. In considering these factors, the Commissioner only takes account of normal industry practices. The effective life of a depreciating asset is used to work out the asset's decline in value (Australian Tax Office, 2012).

The Australian Commissioner published a guide providing detail guidance on the capital allowances granted on a coal power generating plant. Table 5 displays the relevant allowances granted on a power generating plant as determined by the Australian Commissioner:

Table 5: Australian write-off periods for a coal power generating plant

Components of Power Station	Write-off period
Coal handling assets (including conveyors, slot bunker, transfer towers, and weighers).	30 years
Day bunkers and silos, concrete or steel (incorporating top side conveyor system).	30 years
On-site coal storage assets (including stacking and reclaiming assets).	30 years
On-site storage silos, concrete or steel.	30 years

Quality control assets (including coal sampling assets and secondary crushers).	30 years
Control and monitoring system.	15 years
Emergency power supply assets (including batteries and uninterruptible power supply assets).	15 years
Gas turbine generators.	30 years
Generator transformer and unit transformer in sub-tropical area.	30 years
Generator transformer and unit transformer in tropical area.	25 years
Miscellaneous assets.	30 years
On-site switchyard with conventional outdoor switchgear.	30 years
On-site switchyard with gas insulated switchgear.	30 years
Station and auxiliary electrical systems within the power station.	30 years
Steam turbine generator.	30 years
Condensing and feed heating assets.	30 years
Emergency power supply assets (including batteries and uninterruptible power supply assets).	15 years
Gas turbine generators.	30 years
Generator transformer and unit transformer in sub-tropical area.	30 years
Generator transformer and unit transformer in tropical area	25 years

Source: Australian Tax Office, 2012

5.4 COMPARISON BETWEEN THE TAX INCENTIVES AVAILABLE IN SOUTH AFRICA, INDIA AND AUSTRALIA

Table 6 depicts a comparison of the tax incentives offered to companies engaged in electricity generation. The purpose of the table is to highlight the differing tax treatment applicable to a coal power generating plant adopted by certain countries.

Table 6: Tax Incentives offered to electricity generators.

Country	South Africa	India	Australia
Tax Incentive	<p>An accelerated depreciation allowances is offered in terms of section 12C of the Act provided the assets are directly used in the process of manufacture.</p> <p>There are a plethora of tax write-offs applicable to auxiliary assets not directly used in the process of manufacture.</p>	<p>India offers an income-tax holiday for ten consecutive years to companies engaged in generation of electricity.</p>	<p>A depreciation allowance is available to generators of electricity. The allowance is calculated on the effective life of the depreciating asset.</p>

A vast array of provisions are made in the Act impacting on the South African tax system. These provisions allow a deduction from taxable income for the benefit of taxpayers investing in assets to be used in carrying on a trade. The sections that are most commonly applied include Section 11(e) (wear and tear allowance) and Section 12C (assets used in the process of manufacture).

There are other sections which are also applicable, but in most cases these are specific to a taxpayers' trade or very specific in terms of the nature of the asset.

Section 12C allowance offers an attractive tax write-off in the form of an accelerated depreciation allowance over a period of four years with the initial write-off being 40% on

the cost of the asset in the first year and a further 20% over three subsequent years of assessment. The major reason for the promulgation of this section is encouragement of fiscal stimulation in the South African economy by offering entities engaged in the process of manufacture a tax stimulus in the form of an accelerated wear and tear allowance.

During the electricity supply crisis which occurred in 2008, the government of South Africa approved one of South Africa's largest infrastructural development projects being the construction of a new coal power generating plant (Department of Energy, 2010). This was approved to ensure that South Africans have the right of access to electricity as stated in the Constitution of the Republic of South Africa 108 of 1996 (referred to the Constitution).

Government implemented their national energy plan to ensure adequate and reliable electricity supply (Department of Energy, 2010). However, there is an opportunity to look at the mechanism of implementing additional tax incentives to achieve the electricity supply mandate. This need to be critically assessed by the National Treasury and opportunities may arise for granting additional tax incentives to local generators for electricity production.

India is faced with a predicament of limited electricity generation capacity to meet an ever increasing demand for electricity. It is evident that the electricity shortage in India is a significant impediment to the smooth development of the economy. In this context, bridging the gap in demand and supply has become critical and consequently, large projects are being undertaken in different segments of the sector; generation, transmission and distribution. As India has not witnessed such a large scale of implementation before, there is a need to review and enhance project execution capabilities to help ensure that targets are met (KPMG, 2010).

As a result, the government of India is committed to mitigating the growing gap between supply and demand of electricity. The Indian government has a robust framework for sustaining electricity generation capacity and this framework is mainly driven by promulgating tax incentives for encouraging investors to commit to electricity infrastructure

development (Times of India, 2013). These tax incentives act as a fishing lure in attracting investment to the energy generating sector.

The tax incentives act as a fiscal stimulus to increase generation capacity thus resulting in growth and an improvement in the economy. In contrast, the Australian economy is robust and electricity generation capacity meets demand. The outlook for the development of additional power generator plants is subdued. Therefore, Australia does not use tax incentives to encourage growth in the electricity generation sector.

In addition, table 7 gives a detailed comparison of the capital allowances applicable to a coal power generating plant per component. The comparison will be limited to core assets.

Table 7: Capital Allowance offered to Power Generating Companies

Components of Power Station	Australian Write-off period	South African Write-off period	Indian Write-off period
Coal handling assets (including conveyors, slot bunker, transfer towers, and weighers).	30 years	40% on year 1 and a further 20% over the remaining three years.	No capital allowances applicable as power generating companies enjoys a tax holiday and exempt from Income Tax.
Quality control assets (including coal sampling assets and secondary crushers).	30 years	40% on year 1 and a further 20% over the remaining three years	No capital allowances applicable as power generating companies enjoys a tax holiday and exempt from Income Tax.
Control and monitoring system.	15 years	40% on year 1 and a further 20% over the remaining three years	No capital allowances applicable as power generating companies enjoys a tax holiday and exempt from Income Tax.
Emergency power supply assets (including batteries and uninterruptible power supply assets).	15 years	40% on year 1 and a further 20% over the remaining three years	No capital allowances applicable as power generating companies enjoys a tax holiday and exempt from Income Tax.
Gas turbine generators.	30 years	40% on year 1 and a further 20% over the	No capital allowances applicable as power

		remaining three years.	generating companies enjoys a tax holiday and exempt from Income Tax.
Generator transformer and unit transformer in sub-tropical area.	30 years	40% on year 1 and a further 20% over the remaining three years.	No capital allowances applicable as power generating companies enjoys a tax holiday and exempt from Income Tax.
Generator transformer and unit transformer in tropical area.	25 years	40% on year 1 and a further 20% over the remaining three years	No capital allowances applicable as power generating companies enjoys a tax holiday and exempt from Income Tax.
Miscellaneous assets.	30 years	Variety of capital allowances available	No capital allowances applicable as power generating companies enjoys a tax holiday and exempt from Income Tax.
On-site switchyard with conventional outdoor switchgear.	30 years	40% on year 1 and a further 20% over the remaining three years.	No capital allowances applicable as power generating companies enjoys a tax holiday and exempt from Income Tax.
On-site switchyard with gas insulated switchgear.	30 years	40% on year 1 and a further 20% over the remaining three years.	No capital allowances applicable as power generating companies enjoys a tax holiday and exempt from Income Tax.
Station and auxiliary electrical systems within the power station.	30 years	40% on year 1 and a further 20% over the remaining three years.	No capital allowances applicable as power generating companies enjoys a tax holiday and exempt from Income Tax.
Steam turbine generator.	30 years	40% on year 1 and a further 20% over the remaining three years.	No capital allowances applicable as power generating companies enjoys a tax holiday and exempt from Income Tax.
Condensing and feed heating assets.	30 years	40% on year 1 and a further 20% over the remaining three years.	No capital allowances applicable as power generating companies enjoys a tax holiday and

			exempt from Income Tax.
Emergency power supply assets (including batteries and uninterruptible power supply assets).	15 years	40% on year 1 and a further 20% over the remaining three years	No capital allowances applicable as power generating companies enjoys a tax holiday and exempt from Income Tax.
Gas turbine generators.	30 years	40% on year 1 and a further 20% over the remaining three years.	No capital allowances applicable as power generating companies enjoys a tax holiday and exempt from Income Tax.
Generator transformer and unit transformer in sub-tropical area.	30years	40% on year 1 and a further 20% over the remaining three years.	No capital allowances applicable as power generating companies enjoys a tax holiday and exempt from Income Tax.

Based on the above table, Australia adopted a conservative tax model which grants a capital allowance over the useful life of a coal power generating plant.

India's economy has been growing rapidly, and to maintain this momentum, the Government has strengthened focus on developing infrastructure. It has increased infrastructure spend as a percentage of India's GDP from 5.15% during the 2002–07 Tenth Five Year Plan to 7.55% during the 2007–12 Eleventh Five Year Plan, and an expected 9% during the 2012–17 Twelfth Five Year Plan (E&Y Power Investment Outlook, 2012).

India adopted an extremely lenient model of exempting power generating plants from income tax. There is a clear correlation between the tax incentives promulgated and the economic growth achieved.

South Africa adopted an intermediary tax model which grants tax incentives in the form of an accelerated capital allowance on a coal power generating plant.

The above information depicts that power generating companies located in India operate in a favorable tax environment aiming at stimulating and enhancing electricity generation capacity.

5.5 CONCLUSION

The South African energy sector with its inability to provide in the country's electricity demand, is a dilemma similar to that of India. The Indian government uses positive tax laws for stimulating fiscal growth and development of the energy sector. One can appreciate the correlation between tax incentives promulgated by the Indian tax authorities in bridging the gap between supply and demand for electricity.

South Africa needs to broaden its horizon and evaluate alternative stimulus packages that can be offered to the local energy generating sector with the aim of ensuring continuous and reliable supply with the inevitable intention of bolstering economic growth and thereby ensuring that all South Africans can prosper and improve their living conditions.

CHAPTER 6

CONCLUSION

6.1 EPILOGUE

South Africa has embarked and undertaken one of the most significant infrastructural development projects on the African continent, namely the construction of numerous new coal power generating plants. This endeavour was accepted by the local power generators. However, such a construction initiative does not come without obstacles, hindrances and challenges. The goal of this construction initiative is to enhance and ensure adequate supply of electricity to all South Africans.

6.2 REVIEW OF RESEARCH FINDINGS

The construction of a coal power generating plant comprises a plethora of assets which interfaces and produces the critical commodity being electricity. Unfortunately, the Act does not provide explicit guidance on the tax treatment of a coal power generating plant. Further, terminology used in the Act is not clearly defined and interpretations thereof varies widely. By understanding the electricity generation process which was defined and explained in Chapter 1 and Chapter 3, one is able to arrive at the conclusion that generation of electricity is a “process of manufacture”.

The accounting standards was interpreted to obtain an understanding of the terminology and wording applicable to the accounting treatment of a coal power generating plant. Although similar terminology are used between IFRS (2013) and the Act, the intention of the relevant authorities differ. One is unable to solely use wording as in the IFRS (2013) and apply such interpretation to the wording depicted per the domestic tax legislation.

The understanding of the requirements and the application of the accounting standards (IFRS) to a coal power generating plant provided a platform for the discussion of the tax treatment of a coal power generating plant. However, one is unable to use the accounting

framework to obtain detailed guidance and application on the tax treatment relevant to a coal power generating plant.

The next challenge was to determine at what stage the process of manufacture begins. This critical determination was made by using various case law reports and obtaining a holistic understanding of the electricity generation process. Based on the application of legal principles and on the technical design of a coal power generating plant, the process of manufacture begins when the coal undergoes changes. This conclusion was made based on the following important factors:

- The breaking of coal and the magnetic removal of unwanted material is an integral and continuous process in the generation of electricity;
- The machinery used is of a specialised nature aimed to produce the end product, being electricity; and
- The machinery (at the coal plant/conveyor belt) is used for the essential stage in the production of the end product (electricity).

Accordingly, any machine or plant used to complete the breaking process, an integral part of the electricity producing process, will also be regarded as used “directly in a process of manufacture”.

The tax treatment of auxiliary assets used in the generation of electricity was a key research objective. Because of the vast array of multiple auxiliary assets located within the parameters of a coal power generating plant, selection of assets for tax evaluation and assessment were limited the critical auxiliary assets. . Local power utility companies face a daunting task of determining which auxiliary assets comply with the requirements of Section 12C and if these auxiliary assets don't meet the accelerated depreciation allowance requirements, there are numerous of additional sections in the Act that will grant a tax allowance.

South Africa is not the only country in the world that is faced with such a daunting task of enhancing the electricity supply capacity. India, one of the emerging economies in the international sector has faced a similar dilemma. India's approach to mitigating the gap between supply and demand of electricity was to introduce tax incentives in the form of a

tax holiday to encourage domestic investment and attract foreign investment in the construction of new coal based power stations. These incentives acted as a fishing lure in attracting investment to the energy sector.

India has geared up to the challenge of enhancing its electricity supply capacity and there is a clear correlation between the tax incentives promulgated and the enhancement of the electricity supply capacity. Fortunately, South Africa has the opportunity of benchmarking and the option of adopting a tax system aligned to that of India for the purpose of achieving the mandate of continuous and reliable electricity supply.

The evaluation of the Australian tax system provided an opportunity to make an assessment between the correlation of infrastructural development and tax incentives implemented to achieve such objectives. Australia has a stable economy with robust electricity supply capacity. This resulted in a nil increase of tax incentives to encourage electricity supply growth.

The international comparison of tax incentives revealed that India is pre-dominantly using tax incentives to assist with the achievement of increasing the electricity supply capacity. Australia tend to allow a capital allowance on a coal power generating plant based on the useful life of the asset. South Africa offers an accelerated wear and tear allowance in form of a Section 12C deduction. However, an opportunity exists for South Africa to achieve its electricity generation targets by promulgating further tax incentives in the electricity generation sector.

6.3 CONCLUDING REMARKS

The aim of this study was to present a critical assessment on the current tax practice adopted with regard to the capital allowances available to the energy sector in South Africa and to evaluate the adequacy of the industry practice against the requirements of the Act.

The South African tax system provides some tax incentives to domestic generators of electricity and offers a platform for encouragement of economic growth. However, the current tax system needs to look at creative and ingenious ways in assisting South Africa

to reach desired economic growth. The tax system needs to move away from the notion and not solely be focused on maximisation of revenue collection. With implementation of tax incentives to encourage growth and assist Government in achieving its long term strategies, the revenue base will definitely increase thereby correlating to a greater fiscal contribution to the tax revenue base.

6.4 RECOMMENDATIONS

South Africa requires significant investment in infrastructural capital projects aimed at enhancing and stimulating economic growth. Thereby the social and economic welfare of all South Africans will be improved. The Constitution is a cornerstone of the South African democracy. It enshrines the rights of all people in the country. The state must respect, protect, promote and fulfill these rights (Bill of Right, 2013).

The Government of South Africa has a mammoth challenge of implementing the Bill of Rights and this requires significant amounts of investment. The current tax system has addressed some of the investment priorities by promulgation of tax incentives to encourage the achievement of the required infrastructural roll out.

However, the opportunity exist to use tax incentives to encourage domestic and foreign investment by implementing tax mechanisms to attract investments that is urgently required. A trade-off needs to be established between enhancing revenue collection from taxes and the offering of tax incentives in the form of a lucrative and favourable tax system with its main priority to achieve the desired infrastructural requirements.

There is no doubt that by enhancing tax incentives, foreign and private sector investment will increase, thereby reducing the burden on Government to solely roll out the desired infrastructural capital investment required in South Africa.

6.5 FUTURE RESEARCH

An opportunity exists to perform a comprehensive assessment on the implementation of tax stimulus by emerging economies and the interrelationship between tax stimulus and economic growth. In addition, a review of the domestic tax system can be done to

determine the adequacy of the tax system in achieving and assisting economic growth stimulus.

With the completion of such an interesting and thought invoking study, the closure of this study will be left to the following infamous quote by Nelson Mandela: “*It always seems impossible until it’s done*”.

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