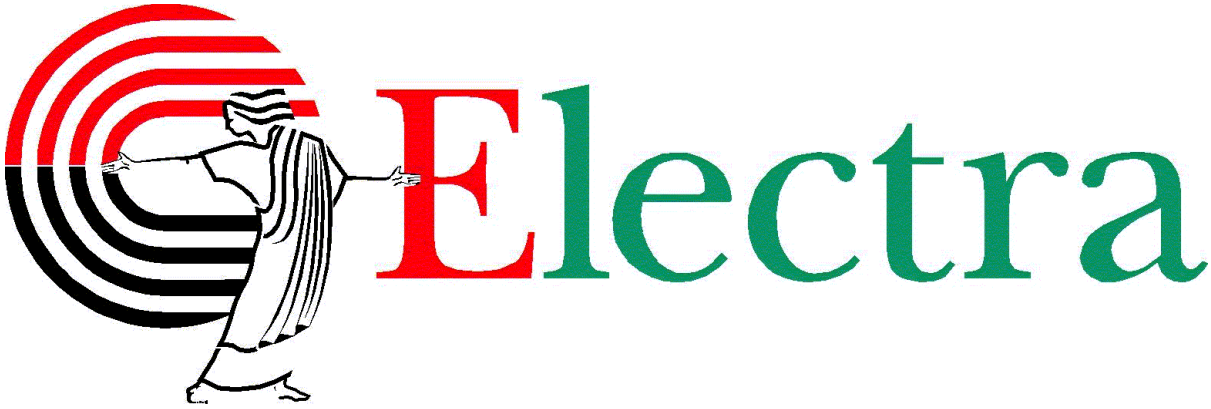

Review of Asset Valuation Methodologies: Electricity Lines Businesses' System Fixed Assets

Electra's submission on the Commerce Commission Discussion Paper

Date: 1 November 2002

Electra

Submission

Executive Summary

Electra supports the constructive consultative approach taken by the Commerce Commission (Commission) in reviewing the asset valuation methodology for the Electricity Lines Companies. We note that this is one of many related work-streams being undertaken in the electricity industry at this time. This lends some difficulty in making submissions on the asset valuation methodology when the links between the outcomes of the work-streams are not clearly defined.

As the asset valuation directly impacts on shareholder value in a company, Electra supports the overall retention of the ODRC methodology, with some modifications and updates, as the most equitable option in your discussion paper. Our recommended modifications and updates are as below.

- Update unit values and asset lives in asset tables as these have not been updated since at least 1994.
- Include ancillary equipment – such as electronic data systems – which are required by any modern electricity lines company to manage and control its assets.
- Improve consistency in treatment of refurbishment of assets and capital and operating expenditure categorisation.
- Allow fully depreciated assets, that are still serviceable and generating a return to the lines company to have a value and include methodology for determining that value.
- Remove requirement for EV analysis as economic assessment is subjective and, as lines companies are required to service even uneconomic lines until 2013, they should be able to make a return on these lines.
- Require annual ODRC updates to be audited and be the opening balance of the asset value each financial year.
- Review and update, as required, on a 3-year basis, asset lives, standard costs, multiplication factors and optimisation rules.
- Include streetlighting as a separate asset. The present ODV handbook assumes that independent streetlighting assets can be replaced with a connection to the 400V network. However, this does not take into account the additional circuit size and transformer capacity that would be needed to replace these assets.
- Zone substation equipment should be left as is. This equipment can be quite specific to a locale and, by being too prescriptive in what is a large value asset, limits innovation and results in increased values.

The Commerce Commission will be aware that the lines charges for the Trust owned companies are among the lowest in New Zealand reflecting the extensive efficiency gains already made by the lines companies.

Electra is concerned that, with an ageing infrastructure, efficiency gains will be limited in future as investment in the electricity infrastructure – both transmission and distribution – is needed to maintain and increase capacity and increase reliability for consumers. Safeguarding the future supply of electricity to consumers in New Zealand depends on safeguarding the investment in all the electricity infrastructure; excessive regulation and restrictive asset valuation methodology will limit such necessary investment.

The Commission needs to clearly understand and disclose to the industry why these valuations are being carried out – and, as far as possible, remove the link between investment, asset valuation, pricing and regulation that is evident through the discussion document. Electra would recommend that the thresholds regime should not focus on ROI on a regulated asset base. Rather, it should focus on outputs – price and quality, particularly if "excessive profits" are a real concern.

Who is Electra?

Electra, a Consumer Trust, is the Lines Company based in the Horowhenua and Kapiti Coast.

Electra delivers its surpluses, via 6-monthly electricity sales discounts, directly to our ultimate owners – the consumers connected to our electricity network. These sales discounts act as a driver for the efficient performance and operation of our company

Electricity sector reforms

Electra is the successor to the Horowhenua Electric Power Board – established under the Electricity Act 1923.

Before 1990, Governments adopted a very hands-off stance on the electricity industry – generally recognising the extensive role that the Government has played over the last 80 years in the co-ordinated development of national transmission and generation assets and supporting the power boards in the development of the distribution infrastructure within each franchise area. The end result of this investment in a partnership between Government and the distribution industry was the reticulation of electricity to most New Zealanders.

Since 1990, Electra, with other lines companies, has been through at least two major reforms – the incorporation as a private company and the retail/lines split to become a Lines company. Other Lines companies have had further reforms through sale and merger with other lines companies. This lends difficulty in comparing Lines Companies except through an artificial benchmarking exercise – which may bear little relation to the real value of an electricity distribution network to consumers in a region.

Generally, the electricity sector reforms were stated to provide more efficiency and lower prices to consumers – with little supporting proof that consumers were not already enjoying these benefits. After all, the Government and other industry commentators repeatedly refer to New Zealand's comparatively low energy prices in the developed world. Yet, the reforms of the electricity sector continue and focus on the lines companies – with no evidence produced that the Lines companies are raking excessive profits or continuing inefficient practices.

Electra is an efficient and effective lines company. It is concerned that the continued reforms and additional regulation of lines companies will increase costs to consumers for little benefit – contrary to the expected outcome from the Government Policy Statement.

Electra notes that the Government is playing a more significant role in the electricity industry today – through legislation and regulation of the industry and in owning and operating generators and retail companies.

Efficiency gains

The electricity industry in New Zealand has been under review or re-structuring since the early 1990's. An essential part of the restructuring has been the improvement in efficiencies.

The discussion paper calls for these to continue, but does not acknowledge that there will reach a point where limited or no further efficiency gains can be made without:

- Compromising the quality of the provision of electricity in an area;
- Over-ride the ownership structure of a company; or
- Discourage investment in the electricity network.

Any valuation methodology, and associated industry regulation, should acknowledge the efficiency gains already achieved and not set unrealistic expectations on further efficiency gains. When efficiency has been improved over time, the effectiveness of investment in improving efficiency decreases and the question needs to be asked "When is enough enough".

Any valuation methodology should also acknowledge that technological change in the electricity industry is not anticipated to be significant – simply put, poles and wire have been used for over 100 years in reticulating electricity and the use of super-conductors is but the dream of engineers.

For example, Electra has decreased the average outage minutes for its consumers from 1995 to 2002 as in the table below. Even minor improvements in these outage minutes will not be achieved without significant capital investment – the easy ones have already been done.

Year	SAIDI (minutes)	SAIFI (number)	No of interruptions
1996	169.7	4.1	361
1997	115.5	3.47	312
1998	93.8	2.3	223
1999	66.3	1.52	231
2000	99.5	2.06	169
2001	104.4	2.12	201
2002	65.8	1.31	153

Table 1: Electra reliability values (excluding Transpower)

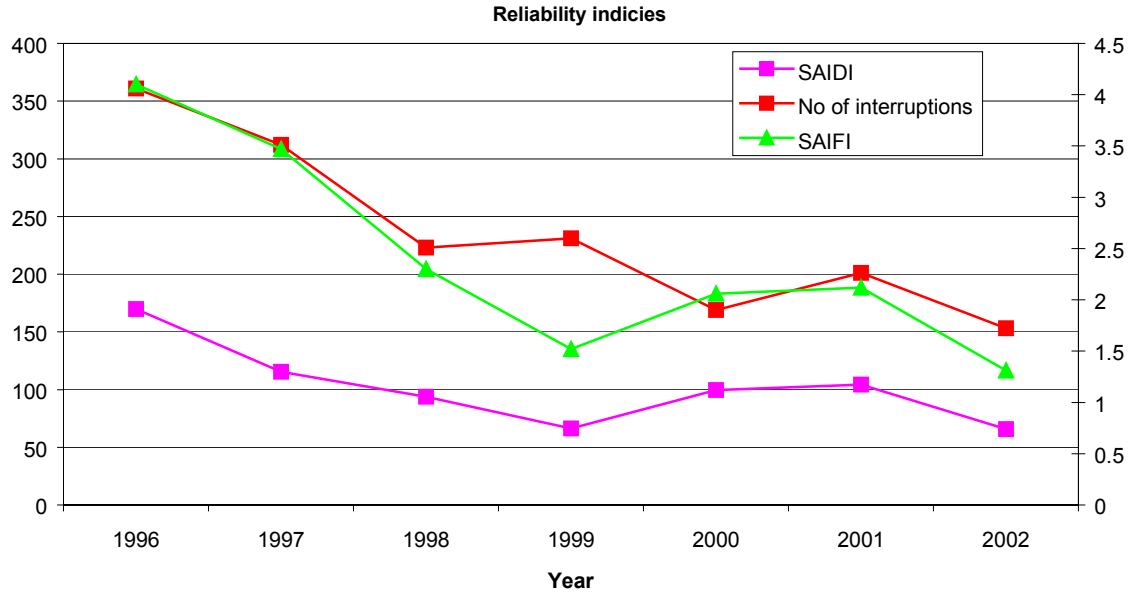

Fig 1: Electra reliability values (excluding Transpower)

Electricity Supply Chain

Electra, as with other electricity lines companies, is but one of four elements of the electricity supply chain – the other three being Transpower, the generators and the various energy retailers. By far the majority of these other three are owned and operated by the Government or overseas owned companies.

For example, in the Kapiti Coast and Horowhenua (using our incumbent retailer Contact). 67% of the average electricity account is paid to the Retailer, Generator or Transpower. Only 33% of the electricity account will be paid to the local lines company.

Your discussion paper links asset valuations with line price methodology. As most consumers have a direct contract with a Retailer, Line companies charges are generally repackaged to better suit the Retailer's own price options. The Commission must ensure that Retailers pass any benefits onto the end consumer; unfortunately equivalent regulation or asset valuation methodology has not been proposed for 67% of the electricity supply chain.

Your discussion paper refers to "excessive profits" and the concern that the asset valuation methodology will lock in these profits. No evidence has been, or is in your paper, proving that "excessive profits" are being extracted by Lines Companies – most of which are locally owned. We would refer you to the price freezes and below inflation increases by the Lines companies since the 1999 Retail/Lines split. Where savings have been made, these have been passed onto consumers; an example of which is the rental rebates from Transpower that are passed to consumers either in lower prices or by way of the sales discount.

The electricity lines sector has been very effective in delivering efficiencies and low prices. Electra has seen little evidence in this discussion paper to suggest that consumers will benefit significantly, either by way of price or quality, over and above what might be expected under the status quo where real performance gains continue to be delivered.

What should an Asset Valuation be?

Electricity assets are long lived – often in excess of 40 years. Any asset valuation methodology needs to reflect this fact. If not, inappropriate investments or operating policies would be encouraged compromising the long-term supply of electricity to consumers that would be contrary to the Government's Policy Statement.

Any asset valuation methodology should be fair and equitable to all concerned – even those that are not directly related through contract with the asset owner.

In general, expectations are:

- Asset Owner/Investor: a fair return on their investment;
- Lines Company: a safe and effective supply of electricity to Retailers and consumers;

- Retailer: a fair charge for the use of the asset owner(s) network to make a fair return on their investment in a retail consumer base;
- Consumer: a reliable supply of electricity at a reasonable cost;
- General public: a safe environment to work or play in requiring the asset owner/investor to invest sensibly in well-built, safe and reliable assets.
- Regulators: A safe and efficient operation requiring the asset owner/investor to invest sensibly in the assets.

These requirements are not opposed. Indeed, all require the asset owner/investor to make sound investments in long life assets, but with only the asset owner bearing the risk in that investment. The asset owner should be allowed to make an equitable/fair return on this investment, given that without this investment there would be no electricity connection to consumers. Surely the common argument of investing in new generation as a reason for price increases is reflected in the required investment in the distribution network to transport the generated electricity to consumers.

What is an Asset Valuation for?

The Government Policy Statement focuses on efficiency gains and delivering "benefit to consumers". As such, the Commission should be convinced and disclose from the outset what outcomes are required from the valuation of any lines company's assets and what an alteration to the existing asset valuation methodology would deliver in value to consumers that outweigh the additional costs of regulation.

We applaud anything that ensures efficiency gains and "benefits to consumers" (small though they may be). However, an over-emphasis on "getting it right" in an asset valuation methodology is probably not the most effective method in getting those benefits to consumers – particularly with the inequity of imposing such a valuation methodology review on but one part of the supply chain.

An asset valuation methodology should support a regulatory framework by providing a benchmark both over years and between individual companies. It should not be a key component of that regulatory regime, particularly as a vehicle to drive line charges down – either to benefit consumers or to cross-subsidise other sectors of the industry such as distributed generation.

Line charges should rather reflect revenue requirements – such as Transpower connection charges, maintenance of existing assets and the capital costs of enhancing the service to consumers, reliability improvements and a fair and equitable return on investments.

Rates of return set on asset valuations – which often do not reflect the real costs of providing the standard of electricity required by any given consumer – may not be equitable to the provider of the equity in the assets being valued.

Investment in the electricity lines companies

Electricity assets are long lived and distributed over, often large, geographical areas. Electra operates a network and, as long as that network is maintained as a whole, the network can be seen as not ageing. As such, the value of the network does not decrease and arguments for depreciation are spurious. Investment in the electricity network is to meet and increase service potential and improve reliability of the existing networks.

The assets involved in a electricity lines network can usually be broken down into discrete capacity components (eg transformers) and distributed lines to connect the capacity components together. The latter are generally maintained over their economic lives; investment in transformers and similar are usually a step function and using standard sized equipment - the “surplus” capacity being provided ahead of schedule is not truly surplus, rather to minimise the investment in labour and other peripherals in replacing the discrete components and improve efficiency in employment of capital.

The electricity industry in New Zealand, in all sectors, is now either at or reaching the point where significant investment is required to replace assets installed in the 1950’s and 60’s that can no longer be maintained or are not adequate in capacity for the consumers. The Asset Valuation Methodology strikes to the heart of this re-investment requirements and needs to ensure that such re-investment proceeds.

Any asset valuation methodology needs to reflect the long life and maintenance cycles of the assets involved. If not, inappropriate investments or operating policies would be encouraged compromising the long-term supply of electricity to consumers that would be contrary to the Government’s Policy Statement.

The Commission must ensure that any asset valuation methodology allows an economic return to shareholders to ensure ongoing investment in networks to meet the consumers

(often the owners) requirements. Simply put, the lines companies are commercial entities and commercial entities should make profits to return to their investors to cover the inherent risks of that investment.

The Commission must understand that not all consumers have the same expectation for electricity supply that industry commentators might suggest. A rural consumer, for example, in the Kapiti Coast may be a dairy farmer, a live stock breeder, a horticulturist or on a small residential block in a rural setting. All of these can be within a very small distance from each other. The Asset Valuation Methodology must acknowledge these requirements through either optimisation rules or construction techniques.

The Commission also needs to ensure that the Asset Valuation Methodology permits an equitable return on assets that, although uneconomic, the lines company must continue to service until 2013.

Airports Investigation

Your discussion paper refers to the Commerce Commission's recent investigation into Airports at Wellington, Christchurch and Auckland.

Our understanding is that this investigation dealt with the landing charges at these airports and the valuation method used considered alternative uses for that land such as housing.

The electricity lines industry cannot be compared easily with Airports, except that each industry could be considered as a quasi-monopoly. Electricity, and by inference the distribution of that energy, is considered an essential service; there are alternative transport means to the airports. Electricity distribution assets also do not have any alternative use, as the land under airports does.

Asset Valuation and Line Charges

The Commission, in this discussion paper, has combined asset valuation methodology with line charges. This reflects the present dichotomy facing the electricity industry – the Government Policy Statement on improving efficiency and reliability and the Government's desire to maintain low electricity prices to consumers through regulating the lines companies by setting returns based on asset valuations.

Simply put, if the asset valuations are driven down, and acceptable returns set on those valuations, short-term investment in improving reliability simply will not happen as there would be no equitable return. In the medium to long term, the networks will be run closer to the edge than is perhaps prudent and incidents similar to Auckland CBDs could result.

Short-term (3 year) investment and regulatory decisions do not make for a prudent investment strategy in assets where economic lives in excess of 40 years are common. A suitable corollary could be the investment in roads by successive New Zealand Governments.

If the Commission mixes up the asset valuation methodology with setting a rate of return in the regulatory matrix, then universal price control is being sought almost by the back door. The rate of return is fundamental to the setting of prices – regardless of what industry is being reviewed.

Neutrality of Asset Valuation Methodology

Any Asset Valuation Methodology regime should be neutral in respect to company size or ownership.

The Commission must ensure that any asset valuation methodology is even-handed and applied equitably. Any push to either lessen the number of lines companies or change ownership structures should come from the owners of those companies seeking either increased returns (through either increased efficiencies or extraction of capital) or reducing their exposure to business risks and not from the detailed workings of a regulation model.

The Commission should encourage long-term efficiency gains in the electricity industry using the industry's present structure rather than through regulation based on the perceptions of various pressure groups both within and outside of the electricity industry. Such policies and perceptions do not have any place in sound business decisions made to improve business efficiencies by either the Commission or the lines companies.

A very significant part of the industry is Trust owned and where profits are returned directly to the consumers in a lines company area either by way of tax-paid dividend or sales discount. Many communities, particularly in known retirement or rural regions of New Zealand, are becoming disillusioned with the continual electricity reforms and are

overwhelming in support of retaining local ownership and control of their local lines companies.

The Commission needs to ensure that monopoly powers are not abused by the Lines Companies; non private company ownership is probably the strongest hedge against this abuse. Self-regulation is imposed that encourages the lowest sustainable long term prices and costs with the highest quality service delivery equivalent to consumer demand and willingness to pay and without over-investment. Such self-regulation is backed by Statements of Corporate Intent between a line company and its trust – especially as the Trustees are required to put the interests of their beneficiaries (consumers) first.

Difficulties in asset valuation

All asset valuation methodologies, including the present ODV methodology, have difficulties in application to distributed infrastructure. This is generally because they attempt to value assets that spread across disparate and different geographic and climatic conditions, varying ages and maintenance history, as well as regions with differing consumers expectations. As such, they have always been presented with difficulties in achieving that aim of standard values.

The present ODV manual recognises this issue with the various multiplication factors and optimisation allowances for the distributed assets that reflect the differing geographical and climatic conditions throughout New Zealand and the often inhospitable areas that the various lines companies reticulate. Such recognition needs to continue in any review or change to the asset valuation methodology.

Assets to be included

Any asset valuation methodology should also be very specific about the assets being valued – that of the electricity lines network only.

These assets should also include any office based electronic systems or spares specifically held for the recording, operation and maintenance of those electricity assets. This would include Asset Information Management Systems – usually based on GIS or similar products – and the SCADA system.

Preferred Asset Valuation Methodology – Modified ODRC

Background

The Commission's discussion paper has limited the review on Asset Valuation Methodology to either ODV or Historical costs.

Electra considers that any asset valuation methodology should be, as far as possible, standard, firm, industry specific and minimise areas open to interpretation, given that it will be used only for benchmarking and not for setting of rates of return.

ODV Asset Valuation Methodology

Electra considers that the present ODV Asset valuation methodology, although far from ideal, provides a reasonable basis for the asset valuation of the electricity lines companies.

- ODV is equitable in that standard costs and optimisation rules are used across all lines companies allowing effective benchmarking between companies in any regulatory regime.
- ODV is independently audited by suitably qualified engineering and accounting auditors.
- The Lines Companies have a significant history and experience with ODV. The Commission's own investigation clearly demonstrated that the Line Companies were applying the ODV Handbook correctly, which should give confidence in this method. Benchmarking would also be possible between ODVs carried out by individual companies.
- ODV is also used for other purposes such as for rating valuations.

Electra is, however, concerned that the existing ODV Handbook under-values the lines companies electricity assets. This review would provide an ideal opportunity to update and revise the ODV Handbook.

- The Replacement Costs have not been updated since at least 1994. These costs have not kept track with the cost of materials and labour in this industry, especially as many assets or their components are sourced from off-shore.
- The standard lives have also not been updated or revised since 1998. These should be reviewed by the electricity supply industry (not consultants) as we have the most experience in assessing and extending the life of the network assets.
- The ODV Handbook understates the remaining lives of assets through inconsistent treatment of refurbishment; further it should be more prescriptive around capital and operating expenditure categorisation.

- The ODV Handbook also assumes that fully depreciated assets have no value, even if these same assets are still serviceable and generating a return to the lines company. The ODV Handbook should be revised to allow either a minimum remaining life (say 3 years) or an economic assessment of the revenue generated by that fully depreciated asset. Economic re-investment in electricity assets is more efficient where that investment is made when it is actually needed and not driven by an artificial life in a valuation handbook.
- The ODV Handbook should be reviewed and updated, as required, on a 3-year basis for asset lives, standard costs, multiplication factors and optimisation rules.
- The ODV Handbook should include asset information and SCADA electronic systems in the ODRC. These are cost-intensive items that are only required to maintain an effective and efficient lines company operation. If these were not available in some form, the overall costs of the business, including compliance and auditing of asset valuations, would be increased significantly.
- Streetlighting should be included as a separate asset. The present ODV handbook assumes that independent streetlighting assets can be replaced with a connection to the 400V network. However, this does not take into account the additional circuit size and transformer capacity that would be needed to replace these assets.
- The ODV Handbook should not include zone substation equipment as this equipment can be quite specific to a locale and, by being too prescriptive in what is a large value asset, limit innovation and results in increased values.

Opening balance

The Commission has suggested that the opening balance should be the ODV audited in 2001/02. However, this will not reflect any alterations to the asset base since that ODV was carried out, which may have been up to 2 years prior to the new valuation methodology being adopted.

To minimise compliance costs, the opening balance should be that disclosed in the asset revaluation by each company for 31 March 2003 as required by the Electricity (Information Disclosure) Regulations 1999.

If this is unacceptable, the Commission should require a complete ODRC to be completed for the year ending 31 March 2003. This should be audited, not by the Commission, but by the standard auditors used in this process as the Commission has accepted that the ODV handbook was being correctly applied.

Asset revaluations

Assets added to the valuation should be completed based on standard ODRC costs regardless of the costs of acquiring those assets. These costs will be based on company-specific policies as well as differing local and national government requirements.

This is also the utility industry standard. For example, district councils take over roading and water infrastructure in new subdivisions for nothing, but bring into their accounting books at full value because of the future liability for maintenance and replacement.

Removal of EV component

Electra considers that the EV component of the ODV analysis needs to be eliminated.

- The ODRC rules are clear and firm. The EV rules are far more open to interpretation as it is based on revenues and the apportionment of those revenues to parts of the network.
- The data for the EV rules is, in part, supplied by others (Retailers). The EV is, therefore, carried out with data that may not be accurate due to Retailer meter reading routes and normalisation practices.
- The EV rules are also dependent on interpretation of other fuel alternatives and the maximum possible tariffs that might be possible.

Non preferred Asset Valuation Methodology – Historical Cost

Electra does not support the use of historical cost – either in the setting of initial values under any asset valuation methodology or the ongoing annual revaluations.

Historical costs would not support an equitable comparison or benchmarking between various lines companies. This is for the reasons outlined below.

- There would be huge discrepancies between those companies that have been bought/sold and those that have been retained in broadly similar ownership since the start of the de-regulation process. Many of those networks have been purchased at multiples of ODV and have validly used this as the basis for the book value of those assets.
- In many cases, historical costs simply do not exist or was considered by the IRD to be originally unreliable or understated the true value of the assets. In the past, many companies expensed, not capitalised, work that extended the life of the assets.

- Historical values could also be considered unreliable, as detailed asset records were not readily accessible. Many lines companies undertook extensive data capture projects to supplement or replace original records when adopting GIS systems.
- Historical costs are a reflection of construction standards, ease of access to finance, historical operating policies, geographical or climatic influences, and shareholder requirements. These may differ from company to company for valid reasons but will also ensure that costs are not standard across the industry.
- Historical costs also do not reflect modern equivalent assets – including alterations to local government plans and access to private land routes that may reflect higher costs if building today.
- Historical costs do not equitably address the issues of capital contributions as the long term asset maintenance and replacement implications are not factored into the value of these contributions.
- Historical costing is not precise and prescriptive. Any accounting standard is a core basis of how activities should be carried out but does not rule out differing interpretations of, for example, capital, maintenance and revenue. A classic example of this is in the recent collapse of Enron and other such companies in USA.
- Doubt can be expressed as whether historical costing would be acceptable to accounting auditors under FRS3. Prior to the introduction of FRS3, accounting standards provided only limited guidance on the valuation of infrastructure assets.
- Historical costs do not encourage efficiency or consistency on an on-going basis as there is no explicit requirement to invest on a prudent basis. It will also result in the divergence of costs between line companies and reduce the comparability of the asset valuations.