INTRODUCTION

Hydro is required to provide reliable service to its customers, through the provisions of the Hydro Corporation Act, the Electrical Power Control Act, 1994, and the Public Utilities Act. The provision of a safe, reliable, least cost supply of electricity requires that Hydro continuously renew, expand and modify its generation, transmission and distribution assets, and the assets that support those systems. Hydro must also address changing environmental and other regulatory requirements, challenges which often require the acquisition of new assets or improvement to existing assets. Hydro’s long term planning initiatives are framed in the context of the following key drivers: current review of the Lower Churchill Project, the shift in load centers, such as the closure of a paper mill, the expected startup of a nickel processing facility, and continued load growth on the Avalon Peninsula. This Overview will discuss the projects proposed for 2012. Discussion of the draft five year plan is contained in the section entitled “2012 Capital Plan”. As noted there, the five year plan and beyond is under substantive review.

INTERNATIONAL FINANCIAL REPORTING STANDARDS (IFRS)

Background

The Accounting Standards Board (AcSB) requires publicly-accountable enterprises to adopt IFRS for interim and annual financial statements for fiscal years beginning on or after January 1, 2011. As a result of changes to Part I of the Canadian Institute of Chartered Accountants (CICA) Handbook — Accounting, by the AcSB, certain rate-regulated entities can defer the adoption of IFRS by one year to January 1, 2012. Hydro met the criteria for deferral and as such has chosen to adopt IFRS effective January 1, 2012.

Hydro commenced its IFRS conversion project in 2008 and established a formal project governance structure which includes a steering committee consisting of senior levels of management from various disciplines as appropriate. Regular reporting is provided to the Audit Committee and the Board of Directors. Beginning in March 2010, Hydro has also provided monthly updates to the Public Utilities Board outlining the status of the IFRS transition.

Effective January 1, 2012 Hydro’s financial statements will be prepared in accordance with IFRS and, as a result, Hydro has to make recommendations as to whether changes to its accounting methods and policies are warranted. In the case of its capital asset records, which Hydro primarily maintains at an individual asset (e.g. distribution transformer) level, there are several items to be considered in transitioning to IFRS, as discussed below. Calculating separate capital costs, and the resultant depreciation variances, and
reconciling the two sets of records for the foreseeable future would require additional investment in both personnel and systems. Additionally, it would impair transparency when parties, including the Board, review external and regulatory records, including financial reports.

Hydro recognizes that the move to IFRS is a significant issue in the regulated utility industry. Hydro intends to engage in a more comprehensive discussion with the Public Utilities Board in the future regarding its overall proposed approach to implementing IFRS. However, in preparing its 2012 Capital Budget Application, Hydro encountered a number of IFRS-related issues that required treatment prior to the full IFRS discourse. The issues and rationale for their treatment are provided herein.

Table 1 below identifies the five areas of the 2012 Capital Budget Application that are affected by the move to IFRS. The changes that have resulted from the transition to IFRS are consistent with those communicated previously to the Public Utilities Board.

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Major Overhauls and Inspections

International Accounting Standard (IAS) 16 (Appendix A) states that a condition of continuing to operate an item of property, plant and equipment may be performing regular major inspections or overhauls. The cost of these inspections or overhauls should be recognized in the carrying amount of the asset.

Hydro has adopted the following policies and guidelines with respect to capitalizing Major Inspections and Overhauls:
1) The overhaul or inspection will occur at regular intervals throughout the life of the asset, and would occur on a frequency of greater than one year;
2) The total cost of the overhaul or inspection will be greater that $50,000; and
3) Any remaining carrying amount of the previous overhaul or inspection will be derecognized when a new overhaul or inspection occurs.

Hydro believes that it is appropriate to capitalize Major Inspections and Overhauls under these conditions as they represent a benefit that will last over periods of greater than one year and to include the full cost in the year the work was performed would result in volatility in operating costs.

The projects capitalized in the Hydro 2012 Capital Budget Application as Major Inspections and Overhauls under IAS 16 are as follows:

1) Major Overhaul of a turbine at Holyrood generating station $4.2 million
2) Major Overhaul of diesel generators $1.0 million
3) Major Overhaul of Hydro generators $0.4 million
4) Major Inspection of Holyrood plant $1.2 million

These major overhauls or inspections will deliver economic benefit over future years and meet the IFRS capital recognition criteria.

Training Costs

Under Generally Accepted Accounting Principles (GAAP), Hydro included training costs associated with capital projects in the cost of those projects. IFRS no longer allows the capitalization of training costs. This does not represent a material change and therefore Hydro proposed to include training costs in operating rather than capital expenditures for 2012 and beyond.

Allowance for Funds Used During Construction (AFUDC)

Under GAAP, Hydro capitalized borrowing costs using AFUDC which includes both the cost of debt and equity. IAS 23 (Appendix B) only allows the capitalization of borrowing costs based on the cost of debt. Hydro’s AFUDC, based on the 2007 approved Test Year Weighted Average Cost of Capital is 7.59%, compared to the forecast interest rate of 8.2% included in this Application. As shown in Table 1, this does

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1 The actual interest rate will be used for the actual capital expenditures.
not result in a material change and therefore Hydro proposes to include interest at the cost of debt in its capital expenditures, rather than AFUDC.

Capital Overheads

IAS 16 specifically disallows the capitalization of administrative and general overheads. Previously, Hydro included in the cost of property, plant and equipment an allocation of two types of overheads.

The first overhead allocation consisted of Engineering Managers and Supervisors who did not charge directly to capital work orders. An overhead of 10% and 20% was applied to labour charged to capital by individuals working in the corporate office and individuals working in the field respectively. This overhead was intended to capture costs of management which could not be easily identified with a specific project. As a result of a re-alignment of the Project Execution and Technical Services group, specifically the establishment of the Project Execution responsibilities, discussed in more detail in the 2012 Capital Plan section of this Application, Hydro is now able to more accurately capture the hours of all engineers that work on capital. Hydro is therefore proposing to replace this overhead allocation by including hours directly charged to capital. This change is also reflected in the estimate for each project.

The second overhead allocation consisted of an allocation of time for support business units that did not charge directly to capital (e.g. Accounts Payable, Inventory and Purchasing services). Under IFRS, Hydro is only able to capitalize an allocation of labour for individuals who would be incremental due to the capital program. Hydro has not identified any of the costs of these support services as incremental costs due solely to the capital programs, as the personnel in these areas provide the same services for capital and operating programs. As a result, has included no allocation of overhead labour to capital in the 2012 estimates.

IFRS Summary

Hydro’s 2012 Capital Budget Application has been prepared in accordance with IFRS. Aligning Hydro’s regulatory reporting and external reporting will eliminate administrative costs associated with duplicate accounting records and will allow for greater comparability and transparency in Hydro’s financial statements. Hydro has assessed each area impacted by IFRS to determine if it was prudent to align regulatory and external financial reporting. This assessment process will be ongoing as changes are made to IFRS.
2012 PLAN CONSIDERATIONS

Maintaining Hydro's systems in reliable operating condition is accomplished through a combination of planned maintenance, renewal, and rehabilitation of existing assets, and replacement of assets which have reached the end of their useful lives and are worn beyond the point of economic repair. Assets may also be replaced by ones which will result in lower life cycle costs or improved operational characteristics (repair, renewal, and replacement within the long-term Asset Management Strategy).

The large portion of Hydro's installed assets is approximately forty years old. This is true of Hydro's largest hydro installation at Bay d'Espoir, Holyrood Thermal Generating Station, and much of Hydro's transmission and distribution systems. In addition, many other generation assets, such as Stephenville Gas Turbine, Hardwoods Gas Turbine and Hinds Lake Generating Station are more than 30 years old.

The sustaining capital portion contained in this, and previous capital budget applications, linked the age and condition of Hydro's assets, which are approaching full life cycle and require replacement. The quantity and value of these sustaining capital proposals can be expected to continue to be a major factor as the assets age and condition continues to be assessed, where they impact reliability and customer service. In other cases, the introduction of newer, more efficient technologies justifies the replacement of old equipment.

The age of Hydro's assets also has implications for efficient operating methods and safety. Some of Hydro's generating plants were constructed at a time when most systems and auxiliary equipment were manually operated. Today, most equipment is automated or remotely controlled, which permits the operators to spend more time focused on maximizing efficiency and equipment monitoring. This application contains proposals to improve the safety of Hydro's workplaces, and to implement automation or improvements in the control of equipment that enable the efficient operation of assets.

During 2007, Hydro initiated an internal review of its major assets to develop a long term asset refurbishment and replacement plan. This process resulted in the production of a 20-Year Capital Plan which identifies the major capital expenditures which will be required to maintain the existing assets in safe, reliable operating condition to serve our customers. This 2007 initiative marked the first time Hydro consciously considered the long term requirements of its existing assets. Prior to this Hydro had the luxury of operating assets which were relatively new, but now that many assets have reached, or are about to reach, maturity it has required Hydro to look much further into the future to plan the long term effective...
management of these assets to their impending retirement or refurbishment dates. The plan takes into consideration the condition of assets, reliability criteria and updated system load growth forecast. On an ongoing basis, Hydro has continued to strategically adjust the five year plan based on the updated inputs of condition assessments and system load requirements. The plan continues to be a living document which will be reviewed and revised annually as new information about the condition of Hydro’s assets and the operating demands placed on them becomes available. General revisions will be made annually and major reviews will occur in years three and five.

Consideration in the development of a capital proposal is given to:

- System performance and reliability criteria
- Long term asset management strategy
- Load growth and system planning criteria
- Maintenance history
- Condition assessment
- Performance assessment
- Legislative requirements
- Cost efficiencies
- Operating experience
- Changing operating conditions
- Discussions between Regulated Operations and Technical Services
- Familiarity with equipment
- Operating and Maintenance cost; and,
- Professional judgment.

There are three broad categories of replacement criteria:

- Time and condition based, such as diesel generators (100,000 hours of operation) and vehicles (combination of years and operating hours for some classes);
- Condition based, such as transmission line wood poles and turbine bushings and seals; and
- Technical assessment based, where an evaluation of reliability, performance, condition, costs and other factors results in a capital proposal.
In summary, this Application contains a capital plan in which the overriding consideration is least cost reliable generation, transmission and distribution of electricity while maintaining and enhancing safety and environmental performance.

Chart 1 shows the breakdown of the 2012 Capital Budget by major classification. The classifications, other than the contingency fund, which represents only 1 percent of the 2012 budget, are then discussed further.

**Chart 1: 2012 Capital Budget - Summary**

GENERATION ASSETS

On the Island Interconnected System, power and energy are provided by Hydro through a mix of hydroelectric and fossil-fired generation, as well as some power purchases. This production, along with the transmission system, is managed by Hydro’s Energy Control Centre to ensure economic and reliable dispatch of available resources. At the end of 2010, Hydro’s Island Interconnected production facilities consisted of 15 generating stations varying in size from 360 kW to 592 MW, with a total 1,517 MW of net capacity. Additionally, tools and equipment are required for the operating and maintenance of these generation assets.

The division of the 2012 Capital Budget for Island Interconnected generation among Hydraulic Plant, Thermal Plant, Gas Turbines and Tools and Equipment expenditures is shown in Chart 2.
The five-year (2006 to 2010) average is shown in Chart 3. For 2012, thermal plant represents 51 percent of the Island Interconnected generation budget, compared with 52 percent over the past five years. Thermal plants continue to require major capital expenditures as the majority of the plants have reached the age of maturity and significant expenditures are required to ensure that these important generating assets can continue to operate reliably.
Hydraulic Plant

Hydro's hydraulic generating plants range from less than 10 years to more than 40 years of age. Capital expenditures are required to ensure reliability and to maximize the potential useful operating lives of these assets, of which many components have reached or are coming to the end of their expected service lives. This application includes proposals for the rewind of the stators on Units 1, 3, and 4 at Bay d'Espoir and for the refurbishment of the Burnt Dam Spillway.

Thermal Plant

The three units of the Holyrood Thermal Generating Station have now reached or exceeded their generally expected service life of 30 years. Condition assessment and selective life extension will permit them to operate reliably until 2020. Holyrood remains critical to the reliable supply of power to the Island Interconnected System, as it serves the base load of the system and will be required to do so in the short to medium term. The long term operational plan for this facility has been developed in the context of the proposed Labrador Interconnection, as Hydro has investigated the feasibility of developing the Lower Churchill River and importing electricity from Labrador to the island. Should that project proceed, Holyrood will remain a critically important facility prior to completion of the Lower Churchill Project. Following completion of the Lower Churchill project, the Holyrood plant will continue to be an essential component of the Provincial electrical grid as a synchronous condensing facility. Additionally, the plant will function as a standby facility during the early years of operation of the Lower Churchill generating plant and direct current link between Labrador and Newfoundland, until 2020, when it will be converted and repositioned for new use in synchronous condensing configuration.

The challenges faced by Hydro are complex because circumstances require that Holyrood must operate in a manner quite different than the norm for thermal plants. Conventional practice is that a thermal plant is base loaded throughout its career until it reaches maturity and then the plant is operated as a peaking or standby facility in its final years, thus operating at a very low capacity factor, often less than 10 percent. This thermal plant has passed the age at which other utilities have performed condition assessment and life extension studies and have either retired the facilities or have initiated life extension projects. However, until the Lower Churchill Project is completed and power is brought to the Island Interconnected System via a HVDC link, the Holyrood plant must continue to operate at, or near, its historical average capacity factor of 40 percent to 50 percent annually and much higher through the critical winter period. The closure of the
paper mill at Grand Falls has reduced demand on Holyrood in the short term. However, when the nickel processing plant being constructed at Long Harbour begins commissioning and operation in 2011 demand on Holyrood will increase. The capital projects contained in this application are necessary to replace assets which are at the end of their useful lives, and which must be replaced to maintain reliability through to the completion of the HVDC link to the Lower Churchill development.

The Holyrood Projects for 2012 are listed below:

- Rewind generators, Units 1 and 2
- Upgrade marine terminal
- Upgrade stack breeching units 2 and 3
- Upgrade fuel oil heat tracing
- Install Plant Operator Training Simulator
- Upgrade Forced Draft Fan Ductwork Units 2 and 3
- Replace Beta Attenuation Monitoring Analyzers

Gas Turbines

Hydro's gas turbine plants at Stephenville, Hardwoods and Holyrood are more than thirty years old. The generally accepted life expectancy for gas turbine plants is between twenty-five and thirty years. A complicating factor in Hydro's case is that the manufacturer of the power turbines at the Stephenville and Hardwoods plants, one of the key components, went out of business years ago, eliminating the availability of factory technical support and spare parts. Also, the manufacturer of the gas generators (jet engines) at the Stephenville and Hardwoods plants, another key component, has declared them obsolete and the supply of spare parts, technical support and repair facilities continues to diminish.

During 2007, Hydro engaged a consultant to perform a condition assessment of the Hardwoods and Stephenville gas turbines. Their findings and recommendations were used to prepare plans for refurbishment of these facilities to ensure that they can operate reliably and that their useful service lives can be extended as long as can be financially justified. Gas turbines will continue to play an important role within Hydro's integrated generation plan.
TRANSMISSION AND RURAL OPERATIONS ASSETS

Hydro owns and operates thermal generation with 39 MW of net capacity on the Labrador Interconnected system and owns and operates diesel generation assets with 31 MW of net capacity in 21 isolated rural systems. On the Island Interconnected System, Hydro owns and operates 3,473 kilometers of transmission lines and 53 high voltage terminal stations operating at voltages of 230, 138 and 69/66 kV. On the Labrador Interconnected system, Hydro owns and maintains 269 km of 138 kV transmission line and the associated terminal stations interconnecting Happy Valley/Goose Bay to Churchill Falls. In addition, Hydro owns and operates approximately 3,397 km of distribution lines, principally in rural Newfoundland and Labrador.

Hydro’s Transmission and Rural Operations assets are replaced based on age and condition, and require ongoing capital expenditures to maintain reliable service, to comply with environmental guidelines, and to ensure the safety of employees, contractors, and the general public.

The division of the 2012 Capital Budget for Transmission and Rural Operations is shown in Chart 4. These breakdowns are generally consistent with the five-year (2006-2010) average as shown in Chart 5 below. The Labrador City voltage conversion project is a very large multi year project involving the construction of new terminal stations and the reconfiguration of the entire Labrador City system, which has a significant effect on the pattern of expenditures during its implementation.
Terminal Stations and Transmission

Many of Hydro's transmission lines were constructed in the 1960s with expected useful lives in the 40-year range. Annual reconstruction and general upgrades are needed to ensure that Hydro can continue to provide our customers with reliable electrical service. Regular capital replacement and upgrading is required to ensure that the maximum useful economic life is extracted from these assets to ensure the supply of reliable, least cost energy to our customers.
The terminal station and transmission proposals for 2012 are:

- Installing an additional 230kV transformer at Oxen Pond;
- Upgrading aging power transformers;
- Replacing failing insulators at various locations;
- Replacing surge arrestors at various locations;
- Replacing instrument transformers;
- Upgrading aging circuit breakers;
- Replacing aging disconnect switches at various locations;
- Replacing compressed air piping and installing a dew point monitor at Buchans;
- Upgrading the transmission line corridor between Bay d’Espoir and Western Avalon; and,
- Upgrading transmission line access trails.

Distribution and Diesel Generation

The 21 remote electrical systems along the coasts of Labrador and the Island are served by diesel generation. Providing service to customers in these communities requires that the fuel storage, diesel generating units and distribution systems all be kept in safe, reliable and environmentally responsible working order. This application includes projects specifically directed towards meeting these requirements, such as upgrading of fuel storage at St. Lewis and increasing generation capacity at Mary’s Harbour.

Hydro also provides service to residential and general service customers on the Island Interconnected System. Hydro has included projects in this application that are intended to ensure that distribution lines and equipment that require replacement due to age are replaced prior to failure, thereby reducing the probability of interrupting service to our customers. These projects include the replacement of recloser control panels.

Aside from projects that are designed to ensure reliable service, this application also includes projects to provide distribution upgrades and service extensions to new customers throughout Hydro’s service area.

GENERAL PROPERTIES ASSETS

The General Properties category includes projects related to Hydro’s Information Systems, where technology is strategically deployed in a wide variety of business applications. This section of the application
also includes proposals for vehicle replacements and telecommunications system replacements which are all necessary for the provision of reliable and cost effective service to customers.

Charts 6 and 7 show the breakdown of the General Properties Capital Budget for 2012 and the previous five year average, respectively.
Information Systems
The Information Systems proposals include ongoing capital expenditures, and are directed towards maintaining Hydro's computing capacity and associated infrastructure ensuring that it remains current and reliable. Projects include upgrades to the software applications used throughout the Hydro system, the replacement of personal computers, and the replacement of peripheral infrastructure.

Telecontrol
Operating an integrated electrical system requires reliable communication systems across Hydro's province-wide facilities and among its employees, many of whom work in remote locations. The 2012 capital budget proposals in this category include infrastructure replacements and, in some cases, ongoing replacement or refurbishment programs, for such items as:

- Radome replacements;
- Replacing network communications equipment; and,
- Replacing battery banks and battery chargers.

In summary, Hydro's Capital Budget Application for 2012 contains various projects designed to provide cost effective and reliable power and energy to the residents and businesses of the province while ensuring employee and public safety and enabling Hydro to fulfill its environmental obligations.
APPENDIX A

International Accounting Standard 16 - Property, Plant And Equipment
INTernational Accounting Standard 16
property, plant and equipment

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Objective

1. The objective of this Standard is to prescribe the accounting treatment for property, plant and equipment so that users of the financial statements can discern information about an entity's investment in its property, plant and equipment and the changes in such investment. The principal issues in accounting for property, plant and equipment are the recognition of the assets, the determination of their carrying amounts and the depreciation charges and impairment losses to be recognised in relation to them.

Scope

2. This Standard shall be applied in accounting for property, plant and equipment except when another Standard requires or permits a different accounting treatment.
3 This Standard does not apply to:

(a) property, plant and equipment classified as held for sale in accordance with IFRS 5 *Non-current Assets Held for Sale and Discontinued Operations*;

(b) biological assets related to agricultural activity (see IAS 41 *Agriculture*);

(c) the recognition and measurement of exploration and evaluation assets (see IFRS 6 *Exploration for and Evaluation of Mineral Resources*); or

(d) mineral rights and mineral reserves such as oil, natural gas and similar non-regenerative resources.

However, this Standard applies to property, plant and equipment used to develop or maintain the assets described in (b)–(d).

4 Other Standards may require recognition of an item of property, plant and equipment based on an approach different from that in this Standard. For example, IAS 17 *Leases* requires an entity to evaluate its recognition of an item of leased property, plant and equipment on the basis of the transfer of risks and rewards. However, in such cases other aspects of the accounting treatment for these assets, including depreciation, are prescribed by this Standard.

5 An entity using the cost model for investment property in accordance with IFRS 40 *Investment Property* shall use the cost model in this Standard.

**Definitions**

6 The following terms are used in this Standard with the meanings specified:

*CARRYING AMOUNT* is the amount at which an asset is recognised after deducting any accumulated depreciation and accumulated impairment losses.

*Cost* is the amount of cash or cash equivalents paid or the fair value of the other consideration given to acquire an asset at the time of its acquisition or construction or, where applicable, the amount attributed to that asset when initially recognised in accordance with the specific requirements of other IFRSs, eg IFRS 2 *Share-based Payment*.

*Depreciable amount* is the cost of an asset, or other amount substituted for cost, less its residual value.

*Depreciation* is the systematic allocation of the depreciable amount of an asset over its useful life.

*Entity-specific value* is the present value of the cash flows an entity expects to arise from the continuing use of an asset and from its disposal at the end of its useful life or expects to incur when settling a liability.

*Fair value* is the amount for which an asset could be exchanged between knowledgeable, willing parties in an arm's length transaction.

*An impairment loss* is the amount by which the carrying amount of an asset exceeds its recoverable amount.

*Property, plant and equipment* are tangible items that:

(a) are held for use in the production or supply of goods or services, for rental to others, or for administrative purposes; and

(b) are expected to be used during more than one period.
Recoverable amount is the higher of an asset's fair value less costs to sell and its value in use.

The residual value of an asset is the estimated amount that an entity would currently obtain from disposal of the asset, after deducting the estimated costs of disposal, if the asset were already of the age and in the condition expected at the end of its useful life.

Useful life is:

(a) the period over which an asset is expected to be available for use by an entity; or
(b) the number of production or similar units expected to be obtained from the asset by an entity.

Recognition

7 The cost of an item of property, plant and equipment shall be recognised as an asset if, and only if:

(a) it is probable that future economic benefits associated with the item will flow to the entity; and
(b) the cost of the item can be measured reliably.

8 Spare parts and servicing equipment are usually carried as inventory and recognised in profit or loss as consumed. However, major spare parts and stand-by equipment qualify as property, plant and equipment when an entity expects to use them during more than one period. Similarly, if the spare parts and servicing equipment can be used only in connection with an item of property, plant and equipment, they are accounted for as property, plant and equipment.

9 This Standard does not prescribe the unit of measure for recognition, i.e. what constitutes an item of property, plant and equipment. Thus, judgement is required in applying the recognition criteria to an entity's specific circumstances. It may be appropriate to aggregate individually insignificant items, such as moulds, tools and dies, and to apply the criteria to the aggregate value.

10 An entity evaluates under this recognition principle all its property, plant and equipment costs at the time they are incurred. These costs include costs incurred initially to acquire or construct an item of property, plant and equipment and costs incurred subsequently to add to, replace part of, or service it.

Initial costs

11 Items of property, plant and equipment may be acquired for safety or environmental reasons. The acquisition of such property, plant and equipment, although not directly increasing the future economic benefits of any particular existing item of property, plant and equipment, may be necessary for an entity to obtain the future economic benefits from its other assets. Such items of property, plant and equipment qualify for recognition as assets because they enable an entity to derive future economic benefits from related assets in excess of what could be derived had those items not been acquired. For example, a chemical manufacturer may install new chemical handling processes to comply with environmental requirements for the production and storage of dangerous chemicals; related plant enhancements are recognised as an asset because without them the entity is unable to manufacture and sell chemicals. However, the resulting carrying amount of such an asset and related assets is reviewed for impairment in accordance with IAS 36 Impairment of Assets.

Subsequent costs

12 Under the recognition principle in paragraph 7, an entity does not recognise in the carrying amount of an item of property, plant and equipment the costs of the day-to-day servicing of the item. Rather, these costs are recognised in profit or loss as incurred. Costs of day-to-day servicing are primarily the costs of labour and consumables, and may include the cost of small parts. The purpose of these expenditures is often described as for the 'repairs and maintenance' of the item of property, plant and equipment.
13 Parts of some items of property, plant and equipment may require replacement at regular intervals. For example, a furnace may require relining after a specified number of hours of use, or aircraft interiors such as seats and galleys may require replacement several times during the life of the airframe. Items of property, plant and equipment may also be acquired to make a less frequently recurring replacement, such as replacing the interior walls of a building, or to make a nonrecurring replacement. Under the recognition principle in paragraph 7, an entity recognises in the carrying amount of an item of property, plant and equipment the cost of replacing part of such an item when that cost is incurred if the recognition criteria are met. The carrying amount of those parts that are replaced is derecognised in accordance with the derecognition provisions of this Standard (see paragraphs 67–72).

14 A condition of continuing to operate an item of property, plant and equipment (for example, an aircraft) may be performing regular major inspections for faults regardless of whether parts of the item are replaced. When each major inspection is performed, its cost is recognised in the carrying amount of the item of property, plant and equipment as a replacement if the recognition criteria are satisfied. Any remaining carrying amount of the cost of the previous inspection (as distinct from physical parts) is derecognised. This occurs regardless of whether the cost of the previous inspection was identified in the transaction in which the item was acquired or constructed. If necessary, the estimated cost of a future similar inspection may be used as an indication of what the cost of the existing inspection component was when the item was acquired or constructed.

Measurement at recognition

15 An item of property, plant and equipment that qualifies for recognition as an asset shall be measured at its cost.

Elements of cost

16 The cost of an item of property, plant and equipment comprises:

(a) its purchase price, including import duties and non-refundable purchase taxes, after deducting trade discounts and rebates.

(b) any costs directly attributable to bringing the asset to the location and condition necessary for it to be capable of operating in the manner intended by management.

(c) the initial estimate of the costs of dismantling and removing the item and restoring the site on which it is located, the obligation for which an entity incurs either when the item is acquired or as a consequence of having used the item during a particular period for purposes other than to produce inventories during that period.

17 Examples of directly attributable costs are:

(a) costs of employee benefits (as defined in IAS 19 Employee Benefits) arising directly from the construction or acquisition of the item of property, plant and equipment;

(b) costs of site preparation;

(c) initial delivery and handling costs;

(d) installation and assembly costs;

(e) costs of testing whether the asset is functioning properly, after deducting the net proceeds from selling any items produced while bringing the asset to that location and condition (such as samples produced when testing equipment); and

(f) professional fees.
18 An entity applies IAS 2 Inventories to the costs of obligations for dismantling, removing and restoring the site on which an item is located that are incurred during a particular period as a consequence of having used the item to produce inventories during that period. The obligations for costs accounted for in accordance with IAS 2 or IAS 16 are recognised and measured in accordance with IAS 37 Provisions, Contingent Liabilities and Contingent Assets.

19 Examples of costs that are not costs of an item of property, plant and equipment are:

(a) costs of opening a new facility;
(b) costs of introducing a new product or service (including costs of advertising and promotional activities);
(c) costs of conducting business in a new location or with a new class of customer (including costs of staff training); and
(d) administration and other general overhead costs.

20 Recognition of costs in the carrying amount of an item of property, plant and equipment ceases when the item is in the location and condition necessary for it to be capable of operating in the manner intended by management. Therefore, costs incurred in using or redeploying an item are not included in the carrying amount of that item. For example, the following costs are not included in the carrying amount of an item of property, plant and equipment:

(a) costs incurred while an item capable of operating in the manner intended by management has yet to be brought into use or is operated at less than full capacity;
(b) initial operating losses, such as those incurred while demand for the item's output builds up; and
(c) costs of relocating or reorganising part or all of an entity's operations.

21 Some operations occur in connection with the construction or development of an item of property, plant and equipment, but are not necessary to bring the item to the location and condition necessary for it to be capable of operating in the manner intended by management. These incidental operations may occur before or during the construction or development activities. For example, income may be earned through using a building site as a car park until construction starts. Because incidental operations are not necessary to bring an item to the location and condition necessary for it to be capable of operating in the manner intended by management, the income and related expenses of incidental operations are recognised in profit or loss and included in their respective classifications of income and expense.

22 The cost of a self-constructed asset is determined using the same principles as for an acquired asset. If an entity makes similar assets for sale in the normal course of business, the cost of the asset is usually the same as the cost of constructing an asset for sale (see IAS 2). Therefore, any internal profits are eliminated in arriving at such costs. Similarly, the cost of abnormal amounts of wasted material, labour, or other resources incurred in self-constructing an asset is not included in the cost of the asset. IAS 23 Borrowing Costs establishes criteria for the recognition of interest as a component of the carrying amount of a self-constructed item of property, plant and equipment.

**Measurement of cost**

23 The cost of an item of property, plant and equipment is the cash price equivalent at the recognition date. If payment is deferred beyond normal credit terms, the difference between the cash price equivalent and the total payment is recognised as interest over the period of credit unless such interest is capitalised in accordance with IAS 23.

24 One or more items of property, plant and equipment may be acquired in exchange for a non-monetary asset or assets, or a combination of monetary and non-monetary assets. The following discussion refers simply to an exchange of one non-monetary asset for another, but it also applies to all exchanges described in the preceding sentence. The cost of such an item of property, plant and equipment is measured at fair value unless (a) the
exchange transaction lacks commercial substance or (b) the fair value of neither the asset received nor the asset given up is reliably measurable. The acquired item is measured in this way even if an entity cannot immediately derecognise the asset given up. If the acquired item is not measured at fair value, its cost is measured at the carrying amount of the asset given up.

25 An entity determines whether an exchange transaction has commercial substance by considering the extent to which its future cash flows are expected to change as a result of the transaction. An exchange transaction has commercial substance if:

(a) the configuration (risk, timing and amount) of the cash flows of the asset received differs from the configuration of the cash flows of the asset transferred; or

(b) the entity-specific value of the portion of the entity's operations affected by the transaction changes as a result of the exchange; and

(c) the difference in (a) or (b) is significant relative to the fair value of the assets exchanged.

For the purpose of determining whether an exchange transaction has commercial substance, the entity-specific value of the portion of the entity's operations affected by the transaction shall reflect post-tax cash flows. The result of these analyses may be clear without an entity having to perform detailed calculations.

26 The fair value of an asset for which comparable market transactions do not exist is reliably measurable if (a) the variability in the range of reasonable fair value estimates is not significant for that asset or (b) the probabilities of the various estimates within the range can be reasonably assessed and used in estimating fair value. If an entity is able to determine reliably the fair value of either the asset received or the asset given up, then the fair value of the asset given up is used to measure the cost of the asset received unless the fair value of the asset received is more clearly evident.

27 The cost of an item of property, plant and equipment held by a lessee under a finance lease is determined in accordance with IAS 17.

28 The carrying amount of an item of property, plant and equipment may be reduced by government grants in accordance with IAS 20 Accounting for Government Grants and Disclosure of Government Assistance.

Measurement after recognition

29 An entity shall choose either the cost model in paragraph 30 or the revaluation model in paragraph 31 as its accounting policy and shall apply that policy to an entire class of property, plant and equipment.

Cost model

30 After recognition as an asset, an item of property, plant and equipment shall be carried at its cost less any accumulated depreciation and any accumulated impairment losses.

Revaluation model

31 After recognition as an asset, an item of property, plant and equipment whose fair value can be measured reliably shall be carried at a revalued amount, being its fair value at the date of the revaluation less any subsequent accumulated depreciation and subsequent accumulated impairment losses. Revaluations shall be made with sufficient regularity to ensure that the carrying amount does not differ materially from that which would be determined using fair value at the end of the reporting period.

32 The fair value of land and buildings is usually determined from market-based evidence by appraisal that is normally undertaken by professionally qualified valuers. The fair value of items of plant and equipment is usually their market value determined by appraisal.
If there is no market-based evidence of fair value because of the specialised nature of the item of property, plant and equipment and the item is rarely sold, except as part of a continuing business, an entity may need to estimate fair value using an income or a depreciated replacement cost approach.

The frequency of revaluations depends upon the changes in fair values of the items of property, plant and equipment being revalued. When the fair value of a revalued asset differs materially from its carrying amount, a further revaluation is required. Some items of property, plant and equipment experience significant and volatile changes in fair value, thus necessitating annual revaluation. Such frequent revaluations are unnecessary for items of property, plant and equipment with only insignificant changes in fair value. Instead, it may be necessary to revalue the item only every three or five years.

When an item of property, plant and equipment is revalued, any accumulated depreciation at the date of the revaluation is treated in one of the following ways:

(a) restated proportionately with the change in the gross carrying amount of the asset so that the carrying amount of the asset after revaluation equals its revalued amount. This method is often used when an asset is revalued by means of applying an index to determine its depreciated replacement cost.

(b) eliminated against the gross carrying amount of the asset and the net amount restated to the revalued amount of the asset. This method is often used for buildings.

The amount of the adjustment arising on the restatement or elimination of accumulated depreciation forms part of the increase or decrease in carrying amount that is accounted for in accordance with paragraphs 39 and 40.

If an item of property, plant and equipment is revalued, the entire class of property, plant and equipment to which that asset belongs shall be revalued.

A class of property, plant and equipment is a grouping of assets of a similar nature and use in an entity's operations. The following are examples of separate classes:

(a) land;
(b) land and buildings;
(c) machinery;
(d) ships;
(e) aircraft;
(f) motor vehicles;
(g) furniture and fixtures; and
(h) office equipment.

The items within a class of property, plant and equipment are revalued simultaneously to avoid selective revaluation of assets and the reporting of amounts in the financial statements that are a mixture of costs and values as at different dates. However, a class of assets may be revalued on a rolling basis provided revaluation of the class of assets is completed within a short period and provided the revaluations are kept up to date.

If an asset's carrying amount is increased as a result of a revaluation, the increase shall be recognised in other comprehensive income and accumulated in equity under the heading of revaluation surplus. However, the increase shall be recognised in profit or loss to the extent that it reverses a revaluation decrease of the same asset previously recognised in profit or loss.
If an asset's carrying amount is decreased as a result of a revaluation, the decrease shall be recognised in profit or loss. However, the decrease shall be recognised in other comprehensive income to the extent of any credit balance existing in the revaluation surplus in respect of that asset. The decrease recognised in other comprehensive income reduces the amount accumulated in equity under the heading of revaluation surplus.

The revaluation surplus included in equity in respect of an item of property, plant and equipment may be transferred directly to retained earnings when the asset is derecognised. This may involve transferring the whole of the surplus when the asset is retired or disposed of. However, some of the surplus may be transferred as the asset is used by an entity. In such a case, the amount of the surplus transferred would be the difference between depreciation based on the revalued carrying amount of the asset and depreciation based on the asset's original cost. Transfers from revaluation surplus to retained earnings are not made through profit or loss.

The effects of taxes on income, if any, resulting from the revaluation of property, plant and equipment are recognised and disclosed in accordance with IAS 12 Income Taxes.

Depreciation

Each part of an item of property, plant and equipment with a cost that is significant in relation to the total cost of the item shall be depreciated separately.

An entity allocates the amount initially recognised in respect of an item of property, plant and equipment to its significant parts and depreciates separately each such part. For example, it may be appropriate to depreciate separately the airframe and engines of an aircraft, whether owned or subject to a finance lease. Similarly, if an entity acquires property, plant and equipment subject to an operating lease in which it is the lessor, it may be appropriate to depreciate separately amounts reflected in the cost of that item that are attributable to favourable or unfavourable lease terms relative to market terms.

A significant part of an item of property, plant and equipment may have a useful life and a depreciation method that are the same as the useful life and the depreciation method of another significant part of that same item. Such parts may be grouped in determining the depreciation charge.

To the extent that an entity depreciates separately some parts of an item of property, plant and equipment, it also depreciates separately the remainder of the item. The remainder consists of the parts of the item that are individually not significant. If an entity has varying expectations for these parts, approximation techniques may be necessary to depreciate the remainder in a manner that faithfully represents the consumption pattern and/or useful life of its parts.

An entity may choose to depreciate separately the parts of an item that do not have a cost that is significant in relation to the total cost of the item.

The depreciation charge for each period shall be recognised in profit or loss unless it is included in the carrying amount of another asset.

The depreciation charge for a period is usually recognised in profit or loss. However, sometimes, the future economic benefits embodied in an asset are absorbed in producing other assets. In this case, the depreciation charge constitutes part of the cost of the other asset and is included in its carrying amount. For example, the depreciation of manufacturing plant and equipment is included in the costs of conversion of inventories (see IAS 2). Similarly, depreciation of property, plant and equipment used for development activities may be included in the cost of an intangible asset recognised in accordance with IAS 38 Intangible Assets.

Depreciable amount and depreciation period

The depreciable amount of an asset shall be allocated on a systematic basis over its useful life.
51 The residual value and the useful life of an asset shall be reviewed at least at each financial year-end and, if expectations differ from previous estimates, the change(s) shall be accounted for as a change in an accounting estimate in accordance with IAS 8 Accounting Policies, Changes in Accounting Estimates and Errors.

52 Depreciation is recognised even if the fair value of the asset exceeds its carrying amount, as long as the asset's residual value does not exceed its carrying amount. Repair and maintenance of an asset do not negate the need to depreciate it.

53 The depreciable amount of an asset is determined after deducting its residual value. In practice, the residual value of an asset is often insignificant and therefore immaterial in the calculation of the depreciable amount.

54 The residual value of an asset may increase to an amount equal to or greater than the asset's carrying amount. If it does, the asset's depreciation charge is zero unless and until its residual value subsequently decreases to an amount below the asset's carrying amount.

55 Depreciation of an asset begins when it is available for use, i.e., when it is in the location and condition necessary for it to be capable of operating in the manner intended by management. Depreciation of an asset ceases at the earlier of the date that the asset is classified as held for sale (or included in a disposal group that is classified as held for sale) in accordance with IFRS 5 and the date that the asset is derecognised. Therefore, depreciation does not cease when the asset becomes idle or is retired from active use unless the asset is fully depreciated. However, under usage methods of depreciation the depreciation charge can be zero while there is no production.

56 The future economic benefits embodied in an asset are consumed by an entity principally through its use. However, other factors, such as technical or commercial obsolescence and wear and tear while an asset remains idle, often result in the diminution of the economic benefits that might have been obtained from the asset. Consequently, all the following factors are considered in determining the useful life of an asset:

(a) expected usage of the asset. Usage is assessed by reference to the asset's expected capacity or physical output.

(b) expected physical wear and tear, which depends on operational factors such as the number of shifts for which the asset is to be used and the repair and maintenance programme, and the care and maintenance of the asset while idle.

(c) technical or commercial obsolescence arising from changes or improvements in production, or from a change in the market demand for the product or service output of the asset.

(d) legal or similar limits on the use of the asset, such as the expiry dates of related leases.

57 The useful life of an asset is defined in terms of the asset's expected utility to the entity. The asset management policy of the entity may involve the disposal of assets after a specified time or after consumption of a specified proportion of the future economic benefits embodied in the asset. Therefore, the useful life of an asset may be shorter than its economic life. The estimation of the useful life of the asset is a matter of judgement based on the experience of the entity with similar assets.

58 Land and buildings are separable assets and are accounted for separately, even when they are acquired together. With some exceptions, such as quarries and sites used for landfill, land has an unlimited useful life and therefore is not depreciated. Buildings have a limited useful life and therefore are depreciable assets. An increase in the value of the land on which a building stands does not affect the determination of the depreciable amount of the building.

59 If the cost of land includes the costs of site dismantlement, removal and restoration, that portion of the land asset is depreciated over the period of benefits obtained by incurring those costs. In some cases, the land itself may have a limited useful life, in which case it is depreciated in a manner that reflects the benefits to be derived from it.

Depreciation method
60 The depreciation method used shall reflect the pattern in which the asset's future economic benefits are expected to be consumed by the entity.

61 The depreciation method applied to an asset shall be reviewed at least at each financial year-end and, if there has been a significant change in the expected pattern of consumption of the future economic benefits embodied in the asset, the method shall be changed to reflect the changed pattern. Such a change shall be accounted for as a change in an accounting estimate in accordance with IAS 8.

62 A variety of depreciation methods can be used to allocate the depreciable amount of an asset on a systematic basis over its useful life. These methods include the straight-line method, the diminishing balance method and the units of production method. Straight-line depreciation results in a constant charge over the useful life if the asset's residual value does not change. The diminishing balance method results in a decreasing charge over the useful life. The units of production method results in a charge based on the expected use or output. The entity selects the method that most closely reflects the expected pattern of consumption of the future economic benefits embodied in the asset. That method is applied consistently from period to period unless there is a change in the expected pattern of consumption of those future economic benefits.

Impairment

63 To determine whether an item of property, plant and equipment is impaired, an entity applies IAS 36 Impairment of Assets. That Standard explains how an entity reviews the carrying amount of its assets, how it determines the recoverable amount of an asset, and when it recognises, or reverses the recognition of, an impairment loss.

64 [Deleted]

Compensation for impairment

65 Compensation from third parties for items of property, plant and equipment that were impaired, lost or given up shall be included in profit or loss when the compensation becomes receivable.

66 Impairments or losses of items of property, plant and equipment, related claims for or payments of compensation from third parties and any subsequent purchase or construction of replacement assets are separate economic events and are accounted for separately as follows:

(a) impairments of items of property, plant and equipment are recognised in accordance with IAS 36;

(b) derecognition of items of property, plant and equipment retired or disposed of is determined in accordance with this Standard;

(c) compensation from third parties for items of property, plant and equipment that were impaired, lost or given up is included in determining profit or loss when it becomes receivable; and

(d) the cost of items of property, plant and equipment restored, purchased or constructed as replacements is determined in accordance with this Standard.

Derecognition

67 The carrying amount of an item of property, plant and equipment shall be derecognised:

(a) on disposal; or

(b) when no future economic benefits are expected from its use or disposal.
68 The gain or loss arising from the derecognition of an item of property, plant and equipment shall be included in profit or loss when the item is derecognised (unless IAS 17 requires otherwise on a sale and leaseback). Gains shall not be classified as revenue.

68A However, an entity that, in the course of its ordinary activities, routinely sells items of property, plant and equipment that it has held for rental to others shall transfer such assets to inventories at their carrying amount when they cease to be rented and become held for sale. The proceeds from the sale of such assets shall be recognised as revenue in accordance with IAS 18 Revenue. IFRS 5 does not apply when assets that are held for sale in the ordinary course of business are transferred to inventories.

69 The disposal of an item of property, plant and equipment may occur in a variety of ways (eg by sale, by entering into a finance lease or by donation). In determining the date of disposal of an item, an entity applies the criteria in IAS 18 for recognising revenue from the sale of goods. IAS 17 applies to disposal by a sale and leaseback.

70 If, under the recognition principle in paragraph 7, an entity recognises in the carrying amount of an item of property, plant and equipment the cost of a replacement for part of the item, then it derecognises the carrying amount of the replaced part regardless of whether the replaced part had been depreciated separately. If it is not practicable for an entity to determine the carrying amount of the replaced part, it may use the cost of the replacement as an indication of what the cost of the replaced part was at the time it was acquired or constructed.

71 The gain or loss arising from the derecognition of an item of property, plant and equipment shall be determined as the difference between the net disposal proceeds, if any, and the carrying amount of the item.

72 The consideration receivable on disposal of an item of property, plant and equipment is recognised initially at its fair value. If payment for the item is deferred, the consideration received is recognised initially at the cash price equivalent. The difference between the nominal amount of the consideration and the cash price equivalent is recognised as interest revenue in accordance with IAS 18 reflecting the effective yield on the receivable.

Disclosure

73 The financial statements shall disclose, for each class of property, plant and equipment:

(a) the measurement bases used for determining the gross carrying amount;

(b) the depreciation methods used;

(c) the useful lives or the depreciation rates used;

(d) the gross carrying amount and the accumulated depreciation (aggregated with accumulated impairment losses) at the beginning and end of the period; and

(e) a reconciliation of the carrying amount at the beginning and end of the period showing:

(i) additions;

(ii) assets classified as held for sale or included in a disposal group classified as held for sale in accordance with IFRS 5 and other disposals;

(iii) acquisitions through business combinations;

(iv) increases or decreases resulting from revaluations under paragraphs 31, 39 and 40 and from impairment losses recognised or reversed in other comprehensive income in accordance with IAS 36;

(v) impairment losses recognised in profit or loss in accordance with IAS 36;
(vi) impairment losses reversed in profit or loss in accordance with IAS 36;

(vii) depreciation;

(viii) the net exchange differences arising on the translation of the financial statements from the functional currency into a different presentation currency, including the translation of a foreign operation into the presentation currency of the reporting entity; and

(ix) other changes.

74 The financial statements shall also disclose:

(a) the existence and amounts of restrictions on title, and property, plant and equipment pledged as security for liabilities;

(b) the amount of expenditures recognised in the carrying amount of an item of property, plant and equipment in the course of its construction;

(c) the amount of contractual commitments for the acquisition of property, plant and equipment; and

(d) if it is not disclosed separately in the statement of comprehensive income, the amount of compensation from third parties for items of property, plant and equipment that were impaired, lost or given up that is included in profit or loss.

75 Selection of the depreciation method and estimation of the useful life of assets are matters of judgement. Therefore, disclosure of the methods adopted and the estimated useful lives or depreciation rates provides users of financial statements with information that allows them to review the policies selected by management and enables comparisons to be made with other entities. For similar reasons, it is necessary to disclose:

(a) depreciation, whether recognised in profit or loss or as a part of the cost of other assets, during a period; and

(b) accumulated depreciation at the end of the period.

76 In accordance with IAS 8 an entity discloses the nature and effect of a change in an accounting estimate that has an effect in the current period or is expected to have an effect in subsequent periods. For property, plant and equipment, such disclosure may arise from changes in estimates with respect to:

(a) residual values;

(b) the estimated costs of dismantling, removing or restoring items of property, plant and equipment;

(c) useful lives; and

(d) depreciation methods.

77 If items of property, plant and equipment are stated at revalued amounts, the following shall be disclosed:

(a) the effective date of the revaluation;

(b) whether an independent valuer was involved;

(c) the methods and significant assumptions applied in estimating the items' fair values;
(d) the extent to which the items' fair values were determined directly by reference to observable prices in an active market or recent market transactions on arm's length terms or were estimated using other valuation techniques;

(e) for each revalued class of property, plant and equipment, the carrying amount that would have been recognised had the assets been carried under the cost model; and

(f) the revaluation surplus, indicating the change for the period and any restrictions on the distribution of the balance to shareholders.

78 In accordance with IAS 36 an entity discloses information on impaired property, plant and equipment in addition to the information required by paragraph 73(e)(iv)-(vi).

79 Users of financial statements may also find the following information relevant to their needs:

(a) the carrying amount of temporarily idle property, plant and equipment;

(b) the gross carrying amount of any fully depreciated property, plant and equipment that is still in use;

(c) the carrying amount of property, plant and equipment retired from active use and not classified as held for sale in accordance with IFRS 5; and

(d) when the cost model is used, the fair value of property, plant and equipment when this is materially different from the carrying amount.

Therefore, entities are encouraged to disclose these amounts.

Transitional provisions

80 The requirements of paragraphs 24–26 regarding the initial measurement of an item of property, plant and equipment acquired in an exchange of assets transaction shall be applied prospectively only to future transactions.

Effective date

81 An entity shall apply this Standard for annual periods beginning on or after 1 January 2005. Earlier application is encouraged. If an entity applies this Standard for a period beginning before 1 January 2005, it shall disclose that fact.

81A An entity shall apply the amendments in paragraph 3 for annual periods beginning on or after 1 January 2006. If an entity applies IFRS 6 for an earlier period, those amendments shall be applied for that earlier period.

81B IAS 1 Presentation of Financial Statements (as revised in 2007) amended the terminology used throughout IFRSs. In addition it amended paragraphs 39, 40 and 73(e)(iv). An entity shall apply those amendments for annual periods beginning on or after 1 January 2009. If an entity applies IAS 1 (revised 2007) for an earlier period, the amendments shall be applied for that earlier period.

81C IFRS 3 Business Combinations (as revised in 2008) amended paragraph 44. An entity shall apply that amendment for annual periods beginning on or after 1 July 2009. If an entity applies IFRS 3 (revised 2008) for an earlier period, the amendment shall also be applied for that earlier period.

81D Paragraphs 6 and 69 were amended and paragraph 68A was added by Improvements to IFRSs issued in May 2008. An entity shall apply those amendments for annual periods beginning on or after 1 January 2009. Earlier application is permitted. If an entity applies the amendments for an earlier period it shall disclose that fact and at the same time apply the related amendments to IAS 7 Statement of Cash Flows.
81E Paragraph 5 was amended by Improvements to IFRSs issued in May 2008. An entity shall apply that amendment prospectively for annual periods beginning on or after 1 January 2009. Earlier application is permitted if an entity also applies the amendments to paragraphs 8, 9, 22, 48, 53, 53A, 53B, 54, 57 and 85B of IAS 40 at the same time. If an entity applies the amendment for an earlier period it shall disclose that fact.

Withdrawal of other pronouncements

82 This Standard supersedes IAS 16 Property, Plant and Equipment (revised in 1998).

83 This Standard supersedes the following Interpretations:

(a) SIC-6 Costs of Modifying Existing Software;

(b) SIC-14 Property, Plant and Equipment — Compensation for the Impairment or Loss of Items; and

(c) SIC-23 Property, Plant and Equipment — Major Inspection or Overhaul Costs.
APPENDIX B

International Accounting Standard 23 - Borrowing Costs
1. Borrowing costs that are directly attributable to the acquisition, construction or production of a qualifying asset form part of the cost of that asset. Other borrowing costs are recognised as an expense.

Scope

2. An entity shall apply this Standard in accounting for borrowing costs.

3. The Standard does not deal with the actual or imputed cost of equity, including preferred capital not classified as a liability.

4. An entity is not required to apply the Standard to borrowing costs directly attributable to the acquisition, construction or production of:
   
   (a) a qualifying asset measured at fair value, for example a biological asset; or  
   
   (b) inventories that are manufactured, or otherwise produced, in large quantities on a repetitive basis.

Definitions

5. This Standard uses the following terms with the meanings specified:
Borrowing costs are interest and other costs that an entity incurs in connection with the borrowing of funds.

A qualifying asset is an asset that necessarily takes a substantial period of time to get ready for its intended use or sale.

6 Borrowing costs may include:

(a) interest expense calculated using the effective interest method as described in IAS 39 Financial Instruments: Recognition and Measurement;

(b) [deleted]

(c) [deleted]

(d) finance charges in respect of finance leases recognised in accordance with IAS 17 Leases; and

(e) exchange differences arising from foreign currency borrowings to the extent that they are regarded as an adjustment to interest costs.

7 Depending on the circumstances, any of the following may be qualifying assets:

(a) inventories

(b) manufacturing plants

(c) power generation facilities

(d) intangible assets

(e) investment properties.

Financial assets, and inventories that are manufactured, or otherwise produced, over a short period of time, are not qualifying assets. Assets that are ready for their intended use or sale when acquired are not qualifying assets.

Recognition

8 An entity shall capitalise borrowing costs that are directly attributable to the acquisition, construction or production of a qualifying asset as part of the cost of that asset. An entity shall recognise other borrowing costs as an expense in the period in which it incurs them.

9 Borrowing costs that are directly attributable to the acquisition, construction or production of a qualifying asset are included in the cost of that asset. Such borrowing costs are capitalised as part of the cost of the asset when it is probable that they will result in future economic benefits to the entity and the costs can be measured reliably. When an entity applies IAS 29 Financial Reporting in Hyperinflationary Economies, it recognises as an expense the part of borrowing costs that compensates for inflation during the same period in accordance with paragraph 21 of that Standard.

Borrowing costs eligible for capitalisation

10 The borrowing costs that are directly attributable to the acquisition, construction or production of a qualifying asset are those borrowing costs that would have been avoided if the expenditure on the qualifying asset had not been made. When an entity borrows funds specifically for the purpose of obtaining a particular qualifying asset, the borrowing costs that directly relate to that qualifying asset can be readily identified.
11 It may be difficult to identify a direct relationship between particular borrowings and a qualifying asset and to
determine the borrowings that could otherwise have been avoided. Such a difficulty occurs, for example, when
the financing activity of an entity is co-ordinated centrally. Difficulties also arise when a group uses a range of
debt instruments to borrow funds at varying rates of interest, and lends those funds on various bases to other
entities in the group. Other complications arise through the use of loans denominated in or linked to foreign
currencies, when the group operates in highly inflationary economies, and from fluctuations in exchange rates. As
a result, the determination of the amount of borrowing costs that are directly attributable to the acquisition of a
qualifying asset is difficult and the exercise of judgement is required.

12 To the extent that an entity borrows funds specifically for the purpose of obtaining a qualifying asset, the entity shall
determine the amount of borrowing costs eligible for capitalisation as the actual borrowing costs incurred on that
borrowing during the period less any investment income on the temporary investment of those borrowings.

13 The financing arrangements for a qualifying asset may result in an entity obtaining borrowed funds and incurring
associated borrowing costs before some or all of the funds are used for expenditures on the qualifying asset. In
such circumstances, the funds are often temporarily invested pending their expenditure on the qualifying asset.
In determining the amount of borrowing costs eligible for capitalisation during a period, any investment income
earned on such funds is deducted from the borrowing costs incurred.

14 To the extent that an entity borrows funds generally and uses them for the purpose of obtaining a qualifying asset,
the entity shall determine the amount of borrowing costs eligible for capitalisation by applying a capitalisation rate
to the expenditures on that asset. The capitalisation rate shall be the weighted average of the borrowing costs
applicable to the borrowings of the entity that are outstanding during the period, other than borrowings made
specifically for the purpose of obtaining a qualifying asset. The amount of borrowing costs that an entity
capitalises during a period shall not exceed the amount of borrowing costs it incurred during that period.

15 In some circumstances, it is appropriate to include all borrowings of the parent and its subsidiaries when computing
a weighted average of the borrowing costs; in other circumstances, it is appropriate for each subsidiary to use a
weighted average of the borrowing costs applicable to its own borrowings.

Excess of the carrying amount of the qualifying asset over recoverable amount

16 When the carrying amount or the expected ultimate cost of the qualifying asset exceeds its recoverable amount or
net realisable value, the carrying amount is written down or written off in accordance with the requirements of
other Standards. In certain circumstances, the amount of the write-down or write-off is written back in accordance
with those other Standards.

Commencement of capitalisation

17 An entity shall begin capitalising borrowing costs as part of the cost of a qualifying asset on the commencement
date. The commencement date for capitalisation is the date when the entity first meets all of the following
conditions:

(a) it incurs expenditures for the asset;

(b) it incurs borrowing costs; and

(c) it undertakes activities that are necessary to prepare the asset for its intended use or sale.

18 Expenditures on a qualifying asset include only those expenditures that have resulted in payments of cash,
transfers of other assets or the assumption of interest-bearing liabilities. Expenditures are reduced by any
progress payments received and grants received in connection with the asset (see IAS 20 Accounting for
Government Grants and Disclosure of Government Assistance). The average carrying amount of the asset during
a period, including borrowing costs previously capitalised, is normally a reasonable approximation of the
expenditures to which the capitalisation rate is applied in that period.
The activities necessary to prepare the asset for its intended use or sale encompass more than the physical construction of the asset. They include technical and administrative work prior to the commencement of physical construction, such as the activities associated with obtaining permits prior to the commencement of the physical construction. However, such activities exclude the holding of an asset when no production or development that changes the asset's condition is taking place. For example, borrowing costs incurred while land is under development are capitalised during the period in which activities related to the development are being undertaken. However, borrowing costs incurred while land acquired for building purposes is held without any associated development activity do not qualify for capitalisation.

Suspension of capitalisation

An entity shall suspend capitalisation of borrowing costs during extended periods in which it suspends active development of a qualifying asset.

An entity may incur borrowing costs during an extended period in which it suspends the activities necessary to prepare an asset for its intended use or sale. Such costs are costs of holding partially completed assets and do not qualify for capitalisation. However, an entity does not normally suspend capitalising borrowing costs during a period when it carries out substantial technical and administrative work. An entity also does not suspend capitalising borrowing costs when a temporary delay is a necessary part of the process of getting an asset ready for its intended use or sale. For example, capitalisation continues during the extended period that high water levels delay construction of a bridge, if such high water levels are common during the construction period in the geographical region involved.

Cessation of capitalisation

An entity shall cease capitalising borrowing costs when substantially all the activities necessary to prepare the qualifying asset for its intended use or sale are complete.

An asset is normally ready for its intended use or sale when the physical construction of the asset is complete even though routine administrative work might still continue. If minor modifications, such as the decoration of a property to the purchaser's or user's specification, are all that are outstanding, this indicates that substantially all the activities are complete.

When an entity completes the construction of a qualifying asset in parts and each part is capable of being used while construction continues on other parts, the entity shall cease capitalising borrowing costs when it completes substantially all the activities necessary to prepare that part for its intended use or sale.

A business park comprising several buildings, each of which can be used individually, is an example of a qualifying asset for which each part is capable of being usable while construction continues on other parts. An example of a qualifying asset that needs to be complete before any part can be used is an industrial plant involving several processes which are carried out in sequence at different parts of the plant within the same site, such as a steel mill.

Disclosure

An entity shall disclose:

(a) the amount of borrowing costs capitalised during the period; and

(b) the capitalisation rate used to determine the amount of borrowing costs eligible for capitalisation.

Transitional provisions

When application of this Standard constitutes a change in accounting policy, an entity shall apply the Standard to borrowing costs relating to qualifying assets for which the commencement date for capitalisation is on or after the effective date.
28 However, an entity may designate any date before the effective date and apply the Standard to borrowing costs relating to all qualifying assets for which the commencement date for capitalisation is on or after that date.

Effective date

29 An entity shall apply the Standard for annual periods beginning on or after 1 January 2009. Earlier application is permitted. If an entity applies the Standard from a date before 1 January 2009, it shall disclose that fact.

29A Paragraph 6 was amended by Improvements to IFRSs issued in May 2008. An entity shall apply that amendment for annual periods beginning on or after 1 January 2009. Earlier application is permitted. If an entity applies the amendment for an earlier period it shall disclose that fact.

Withdrawal of IAS 23 (revised 1993)

30 This Standard supersedes IAS 23 Borrowing Costs revised in 1993.