

R&D tax incentives – how does the UK compare internationally?

By Anne Fairpo, Director, Rawlinson & Hunter

Tax incentives to drive and promote R&D expenditure have been available internationally for decades; studies over the same period have not indicated conclusively that these incentives do actually produce measurable increases in R&D expenditure – gaining a tax advantage equivalent to, say, 30% of expenditure still requires spending 100% of that expenditure in the first place. Tax incentives alone will not increase R&D unless the business spending the money has a need for the R&D in the first place; a tax incentive may, however, persuade a multinational to carry out that R&D in a particular location. This article provides an overview of the R&D tax incentives of several OECD countries which have established incentives, comparing those to the UK tax incentive.

United States

The USA introduced an R&D tax incentive (known as *research and experimentation*, or R&E, in the US) in 1981. This is technically a temporary incentive which has been extended a number of times; the most recent extension in fact expired on December 31, 2005 but the incentive is expected to be extended again, with retrospective effect – a bill presently before Congress proposes a one year extension; a bill before the Senate proposes a two year extension and the Budget proposals from the White House for 2007 propose making the incentive permanent.

The USA generally treats R&D expenditure as capital expenditure but the incentive allows businesses to choose to deduct the expenditure as revenue expenditure.

A business can use one of two methods of tax deduction for qualifying R&D expenditure:

- deduct from income in the period in which paid or incurred; or
- amortise over at least 5 years

Qualifying expenditure includes labour costs, supplies and computer use charges, together with 65% of amounts paid or incurred for research done by a person other than an employee of the company. Where research is carried out on behalf of the company by a qualified research consortium, 75% of the amounts paid to the consortium can be deducted.

This deduction is reduced by the tax credit (below), although a business can elect to take a reduced tax credit in order to claim the full deduction. On election, the credit is reduced by 35% (the US federal corporate tax rate).

There are two tax credits available in the USA, both somewhat complex to calculate, and businesses need to choose between them:

The 'ordinary R&E tax credit'

The ordinary R&E tax credit allows a credit of 20% of the amount by which qualifying expenditure exceeds a 'base amount'. The base amount is calculated as a percentage (not more than 16%) of the gross receipts of the business in the preceding four periods.

The 'alternative incremental computation' (also known as the AIRC)

This was introduced in 1996 and has been taken up by many companies, as it generally provides a better credit for companies with sales performance increasing faster than R&D expenditure – including those which have reduced their R&D budgets to cut costs. An election to use the AIRC applies for all subsequent periods and can only be revoked with the consent of the IRS.

The AIRC is a tiered credit, providing between 2.65% and 3.75% of qualifying expenditure in excess of between 1% and 2% of the base amount.

As the incentive is a non-repayable tax credit, set against tax payable, and not an enhanced deduction, there is provision for the credit to be carried forward where the business is not yet profitable; the credit can be carried for up to 20 years.

Qualifying R&D

The US does not use the OECD Frascati Manual definition of R&D; instead, 'research' includes substantially of the activities that constitute elements of an experimentation process related to a new or improved function, performance, reliability or quality. It generally relates to technology and does not include research after the beginning of commercial production, or adaptation of existing business components.

The research must be carried out in the USA to qualify for the incentive.

Note: the individual US states also have R&D tax incentives, often a percentage of the federal incentive claimed – due to shortage of space, these are outside the scope of this article.

Canada

The Canadian R&D tax incentive was introduced in 1986 and, like the USA, provides a tax deduction and tax credit.

Expenditure on qualifying R&D is fully deductible in the period in which it is incurred.

Scientific Research and Experimental Development (SR&ED) credit

The SR&ED investment tax credit is available for expenditure on labour costs, materials, machinery and equipment, and some overheads and contracts. The research and development must be carried out in Canada.

The credit given is 20% of qualifying expenditure, increased to 35% of the first C\$2m of expenditure for Canadian-controlled private companies ('CCPC'). Some of the credit can be repaid to a CCPC where it does not pay enough tax to use the whole credit.

Qualifying R&D

Canada has its own definition of qualifying R&D for the SR&ED credit, including experimental development to achieve technological advancement and research to advance scientific knowledge (together with some support functions to that research and development). In common with other countries, Canada does not include expenditure that takes place once commercial production has begun.

Note: the individual Canadian provinces also have R&D tax incentives, often a percentage of the federal incentive claimed – due to shortage of space, these are outside the scope of this article.

Japan

Japan has had an R&D tax incentive in place for a number of years but this was substantially changed between 2003 and 2005, in an effort to boost the Japanese economy and further changes came into effect from April 1, 2006.

Under the 2006 Tax Reform, the new R&D incentive applicable to tax years beginning on or after April 1, 2006 is a credit against corporation tax as follows:

Large corporations

In the case of large corporations, the R&D tax credit will be equal to the sum of the following

- total R&D expenses up to the 'base amount' × a percentage between 8% and 10% (the exact percentage depends upon the 'R&D ratio'); and
- total R&D expenses over the 'base amount' × the tax credit ratio expressed as a percentage + 5%

so that the range is between 13% to 15%.

SMEs

In the case of small and medium sized corporations (those whose capital is ¥100,000,000 or less) the R&D tax credit will be equal to the sum of the following:

- total R&D expenses up to the 'base amount' x 12%; and
- total R&D expenses in excess of the 'base amount' x 17%

The 'base amount' is defined as the average of research expenditure for the three years out of the five years prior to the current year which have the largest such expenditure.

The 'R&D ratio' is calculated as total R&D expenditure divided by average sales for the last 4 years (up to and including the current year).

The maximum amount of the R&D tax credit, regardless of the size of the corporation, is limited to 20% of the business' corporation tax liability, with any excess tax credit being eligible for a one year carry forward, subject to certain conditions.

This new system applies for fiscal years beginning from April 1, 2006 to March 31, 2008

Netherlands

The Netherlands R&D incentive is unusual in that it is applied to labour costs directly, rather than as an enhanced deduction or credit for corporation tax purposes.

The R&D deduction is applied to wages paid in respect of staff employed to conduct R&D, reducing the wage taxes and national insurance contributions paid by the company. Institutes and foundations are also eligible for the deduction, but the benefits of the deduction are to be passed on to the customer for whom they carry out the R&D.

The deduction is 42% of the relevant staff remuneration for the €110,000 of annual wage costs, and 14% of the rest. The deduction is enhanced for new companies so that they can deduct 60% of the first €110,000 of wage costs. For each company, new or existing, there is a maximum annual deduction of approximately €8 million.

Qualifying projects

R&D projects need to be approved by the Netherlands government before the deduction can be given. Application needs to be made in advance to an independent agency, SENTER, and a company can apply twice a year – projects can be submitted for approval even if the company is not certain that it will carry them out. The expenditure must be new to qualify, but the R&D only needs to be new from the point of view of the company, as the view is that redoing R&D originally carried out by another company can still create improvements. Projects must be carried out in the Netherlands to qualify.

Australia

Australia began providing an R&D tax incentive in 1985, to improve overall expenditure on R&D within Australia. To qualify for the enhanced deduction, a business must spend at least A\$20,000 annually (combined revenue and capital expenditure) on R&D. To be able to claim the R&D incentives, a company must be registered with the Industrial R&D Board in Australia.

Expenditure met by government grant does not qualify for the enhanced deduction; there is a clawback if a grant is later made. A company can only claim for expenditure on R&D carried out directly, or on its behalf; where the

company carries out R&D for other companies, no enhanced deduction is available.

Revenue expenditure

The revenue expenditure deduction was planned to last for 6 years, until 1991, but has been extended and currently provides a deduction of 125% of expenditure on R&D.

Qualifying revenue expenditure includes labour costs and contracted R&D (with registered research agencies).

Capital expenditure

125% of capital expenditure on R&D can be written off over three years on a straight-line basis. Expenditure on a 'pilot plant' (research facility) also has a deduction of 125%, but over its useful life rather than three years.

Qualifying R&D

The Australian definition of R&D generally follows the OECD Frascati Manual definition, and is further referred to by Australia as relating to technology that is core to the business, or part of the core activity of the business. There is an expectation that some of the incentive is to be used for further R&D, although this is not specifically stated in the legislation.

There must be substantial technical risk in the R&D, with uncertainty over the results of the processes involved. There must also be some innovation, or novelty, to the R&D.

'Adequate' Australian content to the R&D is required – most of the work must be carried out in Australia, and the key personnel, plant and equipment should be Australian.

Incremental R&D bonus

An incremental bonus deduction is available to reward increases in R&D – an additional 50% can be deducted if the incremental level of R&D in one year is greater than the average for the preceding three years; this additional deduction was introduced in 2001 to reward long term strategic R&D.

Summary

As might be expected, R&D tax incentives globally provide varying degrees of incentive – and vary in application, from the Netherlands' wage deduction to the UK's flat volume-based deduction.

For SMEs, the UK system is widely regarded as the most generous and the simplest to administer; for larger companies, the Canadian and Australian R&D incentives can be marginally more generous but tend to be more complex to calculate and administer than the UK incentive, as both feature an incremental system requiring businesses to keep track of levels of R&D expenditure.

The Netherlands system is interesting for the cashflow benefit: as the incentive is applied to wage costs, the deduction is effectively given monthly with each payroll payment to the tax authorities.

However, whether the Netherlands will retain its unique R&D tax incentive will depend on the EU, which is becoming increasingly concerned with the levels of R&D expenditure within the EU. The Commission has proposed guidelines on R&D tax incentives to increase and improve R&D investment within Europe. These guidelines (currently intended to be voluntary) would:

- set out the key EU legal conditions for such tax incentives;
- highlight best practices as regards R&D tax treatment and incentives in some Member States;
- set out the political message and contents of possible future initiatives directed to Member States

Summary comparison

	UK	USA	Canada	Japan	N'lands	Australia
Introduced	2000	1981	1986	2006	1995	1986
Revenue deduction rate for qualifying expenditure	125%/150%	100%	100%	100%	100%	125% plus 50% for increment
Additional credit	None	Up to 20% of expense 'increment'	20%/35% for SR&ED	13%+	14%-60% of wages	None
Repayment available?	For SMEs only	No	For SMEs only	No	No	No
Carry forward of incentive?	Standard loss carry forward	Up to 20 years	Up to 10 years	1 year	N/A	Standard loss carry forward
Carry back of incentive?	No	1 year	Up to 3 years	No	N/A	No
Govt registration needed?	No	No	No	No	Yes	Yes

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