Expert Panel Review of Canada's Research & Development System

Submission by

Canadian Steel Producers Association

Introduction

The Canadian Steel Producers Association (CSPA) is the national voice for Canada's steel and steel pipe and tube industry. CSPA companies employ over 25 thousand people in Canada, and manufacture a wide range of steel products. Steelmaking requires continuous investment in new technologies, product and process innovation, and workforce skills. Government policies to encourage innovation and improved productivity are important to the steel sector and to its industrial customers.

CSPA welcomes this opportunity to contribute to the review of federal programs that support business innovation being conducted by the Expert Panel on Research and Development (R&D). Our submission advances specific proposals aimed at better leveraging the considerable private and public sector resources devoted to R&D in Canada. More effective support for industrial innovation can help enable Canadian industry to achieve stronger commercial success, in turn generating wealth and building a more prosperous economy.

CSPA recognizes the significant support of the federal government over the past several years to boost funding for basic research in universities and colleges by directly funding both researchers and research infrastructure. As many studies have pointed out, however, Canada needs to do better to encourage more industrial R&D, and to attain stronger commercial impact from the government's R&D support system.

Basic and curiosity-driven research may ultimately translate to commercial success, but the innovation challenge requires in large measure more market-driven, applied R&D across the industrial spectrum. Studies confirm that the outputs of such innovation return significant value over the investment of tax dollars. Placing additional emphasis on stimulating industrial R&D -- whether performed solely by industry, or in collaboration with universities and government laboratories -- is a sound public policy goal.

Context

Investing in innovation is a global phenomenon, and a global competition for capital and skills. Whether such investments take place in Canada or elsewhere depends on many factors, including market size (always a challenge for Canada), the knowledge/skills base,

and infrastructure. The scope and nature of public sector support for innovation is also a very significant element, as developed and developing countries alike have recognized. Competing for new investment is certainly the norm within large global enterprises, but Canada must also offer competitive conditions for R&D to be performed by domestcially-based companies, including SMEs.

As globalization intensifies, innovation becomes increasingly important to marketplace success. Industry must, and does play a lead role in driving commercial innovation, by attracting or reinvesting capital. As studies demonstrate, however, the private sector cannot appropriate all the gains from its research investments. Government support, programs, whether direct or indirect, must play an important complementary role. While existing instruments have achieved a certain measure of success, changes to their design and administration would increase their utility to and uptake by Canadian manufacturers. This submission offers views on how better to do this.

The scope of the Panel's enquiry is broad. In commenting on the review, CSPA does not seek to offer comprehensive commentary on all questions being posed, many of which are most relevant to SMEs. Further, this submission does not comment on whether particular instruments (tax credits, program spending, regulations or procurement) offer the 'best' way to stimulate R&D. A range of instruments is undoubtedly required. That said, the very long list of measures identified by the Panel raises the question whether consolidation of programs would be beneficial. CSPA encourages the Panel to consider opportunities to improve efficiency across programs, not just to 'save money', but to ensure funding is directed to maximizing outcomes and not to excessive, overlapping administrative expense nor to narrowly-differentiated criteria. Simpler, often, is better.

Multiple purposes are served by different types of public policy measures. This submission does not recommend specific reallocation across programs, but does imply some rebalancing toward measures that strengthen R&D by industry. This requires, in our view, more focus towards near-to-market support, and the recognition that companies operating and competing in the marketplace are especially well-positioned to determine R&D needs that will generate economic growth and jobs.

We further observe, but do not address herein, the critical need to invest in the development of highly-qualified personnel and advanced industrial workforce skills that are necessary for the increasingly complex production systems of the 21st century. Financing, e.g. venture capital, is another key dimension to the innovation system. Clearly, a comprehensive innovation policy must incorporate these additional factors as well as R&D support.

In this context, CSPA wishes to highlight certain specific measures that are within the purview of the Panel's review:

- Scientific Research & Experimental Development Programs (SR&ED);
- Accelerated Capital Cost Allowance (ACCA);
- Government research infrastructure, including the CANMET laboratories

1. Scientific Research and Experimental Development (SR&ED)

The most broadly-applicable form of support to industrial innovation is the SR&ED program under which:

- Small Canadian controlled private corporations (CCPCs) can earn a *refundable* tax credit up to 35% against eligible SR&ED expenditures. If the tax credits exceed the company's federal tax payable, the difference is refunded in cash.

- Larger Canadian-controlled firms and subsidiaries of foreign-owned enterprises can qualify for a *non-refundable* tax credit of 20% against eligible expenses.

To be as effective as possible, the SR&ED tax credit must:

- make a significant financial difference to the performing company,
- be competitive with other jurisdictions where the company could perform the same R&D;
- be broadly applicable
- have a timely and efficient process;
- be predictable to the claimant.

The main elements of the SR&ED program, including eligibility criteria and basic credit rates, have remained largely unchanged since its introduction. CSPA submits that several aspects of its design and current administration warrant review and modification.

a) Program objective

The starting point for the SR&ED is a fundamental premise: the SR&ED should be viewed in both policy and administrative terms as an incentive to industrial innovation. The design and administration of the SR&ED must be oriented to support this fundamental public policy goal. While proper and fair administration of the tax system is essential, it is important to do so in a manner that supports the national imperative to incentivize increased industrial innovation.

b) Science vs. Commercialization

As currently structured, the SR&ED is heavily focused on the 'science' portion of the R&D spectrum; it is not as effective as possible in supporting market-oriented development and commercialization. It can be made more effective by including broader coverage of key elements of the innovation process including customization, compliance with standards, and testing. Extending coverage to selected 'go-to-market' development activities would be of particular benefit to manufacturing SMEs.

> ***Recommendation: Re-orient the SR&ED program to encompass additional expenses required for the commercial implementation of industrial R&D.***

c) Access

Companies operating in Canada must fall into 3 categories to be SR&ED-eligible:

1. Canadian Controlled Private Companies (CCPCs) that are entitled to a fully refundable credit.
2. Taxable Canadian corporations (private or private), with sufficient tax payable to make use of the credits.
3. Profitable Canadian subsidiaries of multi-nationals for whom the tax credit does not simply result in higher domestic tax payable by the parent company.

Thus, the SR&ED program is not of equal value to all companies that conduct or might otherwise undertake more R&D in Canada. This includes companies experiencing tax loss carry-forwards due to recent market conditions, thus eroding or eliminating the value of the SR&ED incentive. Even when such firms are able to regain profitability, it can be a very long period before returning to a tax position which would enable them to utilize earned tax credits. The result is less industrial R&D than would otherwise occur.

For foreign-controlled performers in Canada, the value of the SR&ED tax credits is greatly reduced since a reduction in Canadian tax is generally 'offset' by an increase in foreign tax - resulting in no 'net' incentive for the parent to place investments in Canada. Were the SR&ED tax credit made fully refundable for Canadian subsidiaries of foreign-controlled companies, their governments could be expected to treat this as 'domestic government assistance' and not as a reduction of Canadian tax payable. In such cases, the foreign owner (investor) could claim a foreign business tax credit on the gross amount of the Canadian taxes paid.

All firms performing innovation in Canada bring economic and broader social benefits to the country. As such, there is not a sound public policy basis for denying them access to the SR&ED tax credit based a temporary downturn in financial performance or on the basis of their ownership status.

> R***ecommendation: All companies undertaking qualifying expenses in Canada should have access to fully refundable SR&ED tax credits.***

d) International R&D Collaboration

With limited exceptions, to qualify under the SR&ED program, the R&D activities must be carried out in Canada. Increasingly, however, larger-scale or more fundamental R&D takes place collaboratively across national boundaries. An excellent example, in the steel industry, is the multinational collaboration under the World Steel Association umbrella to develop "breakthrough" technologies that would fundamentally change the CO2 intensity of steelmaking, thus serving public policy goals related to climate change. Developing and commercializing such technologies requires the sharing of research expenses, research projects, and know-how with non-Canadian performers. Especially for a small, open country like Canada, the ability to participate in leading-edge global research is important. Some other countries permit work carried on outside of the country to qualify

to some extent for innovation tax credits. This allows participating firms not only to leverage their research capacity. Sharing in related technological know-how also increases the likelihood of attaining a successful outcome.

CSPA recognizes that designing tax credits to encompass this goal, while maintaining other important tax policy and R&D principles is complex and requires further work. However, the essential idea is one that CSPA recommends for consideration by the Panel.

> ***Recommendation: A proportion of Canadian- funded collaborative industrial R&D project work that is carried on outside Canada, be made eligible for the SR&ED tax credit. This could be made conditional on the resultant intellectual property being exploited commercially in Canada.***

f) Administration

The value of a tax credit to the performing firm can be lessened by process complexity, cost, and uncertainty as to the ultimate eligibility of associated expenses. While the government has made efforts to improve the process, more needs to be done. To companies preparing, filing and seeking approval, the SR&ED rules are very detailed and complex, with a number of 'grey areas'. Combined with variability of treatment of their claims - across different CRA offices and by different officials - this can discourage companies from accessing the SR&ED program.

CRA's administration of the SR&ED program is still too often characterized by companies as being focussed on "compliance" versus effective "delivery" of the tax incentive. The cost to companies to assemble documentation, prepare paperwork, file, and (often) defend their SR&ED tax credit claims, can be significant. They may need to draw excessively on highly skilled and expensive employees, or to outsource these requirements thus adding additional expense. CSPA believes that further steps can be taken to streamline and simplify the SR&ED application process and to expedite the assessment of claims.

The *post facto* nature of the SR&ED claims process can be a significant disincentive to securing project approvals within performing companies due to the uncertainty as to whether CRA will approve the presumed credits. A system with advanced rulings (with appropriate after-the-fact verification) would provide important certainty as projects are evaluated against internal hurdle rates, particularly where companies are evaluating different jurisdictions for placing their investment.

> ***Recommendation: That the SR&ED program be adjusted to allow companies to seek 'pre-approval' of their industrial research projects in order to provide greater certainty in calculating costs.***

2. Accelerated Capital Cost Allowance (ACCA)

SR&ED incentives are only one component of a policy and program 'tool kit' that targets not only the development of technology but its commercial adoption and adaptation as well. Manufacturers often lack the cash flow to finance complementary investments in technologically-advanced equipment with which to expolit new technologies.

Capital cost allowances provide companies with a stream of deductions over the life of an asset. Technological change is rapidly reducing the useful life of the machinery and equipment possessed by Canadian manufacturers. It can take several years for large companies to plan, design, obtain regulatory approvals, take delivery of, and bring new equipment into production. Accelerating the pace at which such investments can be written off for tax purposes would strengthen the commercialization of R&D results...

Recent studies have demonstrated the high correlation between corporate tax flow and investment. The introduction of the current accelerated two-year write off (ACCA) in 2007 recognized this relationship. However, that measure is slated to end in 2011. The CSPA and other manufacturing sectors have called on the federal government to extend the ACCA for at least five more years, to provide the certainty necessary for the tax treatment of qualifying investments. This is especially important in the high currency environment facing Canadian companies. To the extent such investments improve industrial process efficiencies, they further contribute to attaining additional public policy goals, such as the reduction of greenhouse gas emissions.

While not considered an R&D incentive *per se*, extending the ACCA would complement the goal to stimulate more commercialization of R&D and new processes.by industry..

> ***Recommendation: The Accelerated Capital Cost Allowance be extended a further 5 years to provide certainty for Canadian manufacturers to plan and execute projects that will strengthen innovation by Canadian industry..***

3. CANMET - Industry-Academic Collaboration

Successful innovation is often driven by multi-party collaboration that engages and capitalizes on the research skills and scientific know-how resident in universities and government laboratories with the technology application skills possessed by companies. Governments can play an important role in developing technology infrastructure and undertaking or partnering in market-driven research focused on new technologies needed by existing industrial clusters.

The metal-product manufacturing industries -- the customers of steel producers -- are critical to Canada's long-term economic prosperity. Research and development of new amterials for the automotive, energy, construction and other industries will help assure the competitive position of these steel and other metallic industries, and their customers, thus helping ot secure highly-paid jobs in Canada.

The federal government has played a key role in advancing metallurgical research in Canada. The new, state-of-the-art CANMET–MTL lab in the McMaster Innovation Park in Hamilton will help to create a world-leading materials innovation cluster. Already serving manufacturing industries and research organizations with expertise in next-generation automotive, steels and other advanced materials, CANMET-MTL can stimulate greater collaboration among supplier, customer, and government researchers. This leverages collective resources and strengthens commercialization prospects..

Effective implementation and the associated resource commitment of the government are important to the success of CANMET-MTL. CSPA recommends that such models be applied in other sectors and regions, including the possibility of a similar project for materials and technologies essential to Canada's energy sector..

> ***Recommendation: The federal government can actively facilitate the establishment of centers around which to develop innovation clusters centered on the technology needs of established industries. This includes sustaining the necessary funding for CANMET-MTL to ensure that it can play a leading, pivotal role in advancing metallurgical research and development in Canada.***

Summary

The CSPA welcomes the federal government's review of its business R&D support system.

The central theme of this submission is the need to recalibrate Canada's R&D support system to focus more on supporting industry-led innovation. The goal must be to implement changes that will lead to more globally competitive industries and firms in Canada. As the Expert Panel on Commercialization observed in its 2006 Final Report:

> "An important element of Canada's productivity challenge is its inability to capitalize on innovation and discover new and better ways to add value to what its sells. The key to solving this is in commercializing knowledge – the surest path to enhancing productivity and sustaining economic prosperity". *(Expert Panel on Commercialization, Volume I: Final Report (April 2006), p6.)*

The CSPA and Canada's steel producers look forward to a continuing dialogue with the Expert Panel, and other entities, on specific proposals that will achieve greater returns from the substantial private and public sector investments in innovation.

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