

New Tax Court Rulings Clarify "Uncertainty" Criterion for SR&ED Claim Eligibility

In this bulletin we discuss how court rulings on taxpayer appeals of SR&ED have shaped the meaning of technological uncertainty.

In broad simplistic terms the three criteria that must all be present for an R&D activity to be eligible to qualify as experimental development for Canada's Scientific Research and Experimental Development ("SR&ED") investment tax credit are: 1) A technological ADVANCEMENT is sought, 2) Some TECHNOLOGICAL UNCERTAINTY poses an obstacle to that advancement, AND 3) A SYSTEMATIC INVESTIGATION is undertaken to test one or more "hypothesis" ideas for eliminating or reducing that uncertainty.

Unlike "advancement" and "systematic investigation" the term technological uncertainty is not found anywhere in Canada's Income Tax Act; rather it was introduced into the SR&ED regime by the courts.

These court rulings establish that for a claim made under § c) "experimental development"¹, the SR&ED ITCs are allowed to a taxpayer for costs incurred in overcoming or resolving a technological uncertainty that poses an obstacle to the creation of a new product or process. SR&ED was never intended to subsidize the costs of routine product or process development no matter how novel or commercially viable it may be. SR&ED does however allow for "incremental improvements to existing products or processes" providing there is some technological uncertainty entailed in that improvement.

So, what do Canadian courts say technological uncertainty is and how does a taxpayer prove its existence:

PART 1 – As Historically Defined by the Courts

There are two “foundational” Tax Court Canada rulings – Northwest Hydraulic (in TCC 1998) and CW Agencies (in TCC 2000 and FCA 2001) – that to this day are cited in essentially every SR&ED-related court ruling. These clearly establish that for purposes of SR&ED eligibility, technological uncertainty is framed in a sociological context i.e. as knowledge (or lack thereof) available to the taxpayer from within a “community” of appropriately qualified professionals. Since both of these rulings have been directly or indirectly “affirmed” in higher court rulings (i.e. Canadian Federal Court of Appeal) despite their age they remain highly “durable”. The salient excerpts from these rulings are:

per Northwest Hydraulics Inc. May 1998

[16] 1-(a) Implicit in the term "technical risk or uncertainty" in this context is the requirement that it be a type of uncertainty that cannot be removed by routine engineering or standard procedures. I am not talking about the fact that whenever a problem is identified there may be some doubt concerning the way in which it will be solved. If the resolution of the problem is reasonably predictable using standard procedure or routine engineering there is no technological uncertainty as used in this context.

[16] 1-(b) What is "routine engineering"? It is this question, (as well as that relating to technological advancement) that appears to have divided the experts more than any other. Briefly it describes techniques, procedures and data that are generally accessible to competent professionals in the field.

[82] The technological uncertainty is something that exists in the mind of the specialist such as the appellant, who identifies and articulates it and applies its methods to remove that uncertainty.

per CW Agencies² August 2000:

[32] As would be expected from routine information systems development, all projects demonstrate the use of "systematic investigation or search" and use of "experiment or analysis". The focus of their investigations are primarily (i) defining requirements, (ii) evaluating commercial products, (iii) testing hardware configurations, or (iv) routine software testing. This is in contrast to systematic investigation in computer science, which is focused primarily on new concepts, principles, technologies or techniques. I characterize these investigations as those of competent and prudent users of complex, commercially available technologies rather than those of researchers seeking to discover new knowledge, concepts or principles.

PART 2 – Recently Defined by the Courts

Several recent Tax Court Canada rulings amplify these historic definitions of technological uncertainty. While some of these are “informal” (vs. “general”) procedures they give perfectly valid insight into how taxpayers can expect the “technological uncertainty” criterion to be applied:

per Paveit Construction Inc. September 2025

[33] The onus is on an appellant to establish that an uncertainty could not be resolved using routine engineering or standard procedure. An appellant should also demonstrate that the uncertainty in question is a gap within existing scientific or technological knowledge, and not simply a matter unknown to the appellant.

[38] ...the mere fact that a product does not exist does not necessarily support the inference that its development involves technological or scientific uncertainty.

[46] “The evidence in this case does not support the conclusion that any technological risk or uncertainty was identified”

per Dave's Diesel Inc. June 2022

[28] The Appellant rests its case on the subjective knowledge of the four non-engineers and non-mechanics who worked on the project. To them, every aspect of the project was a “technological uncertainty”. The “technological uncertainty” standard, however, is not subjective. If it were subjective, a grade school student trying to build a simple electric motor would meet the test.

per Logic Data Products Inc. May 2021

[69] ... the persons involved in the [SR&ED] activity need the requisite relevant experience or knowledge in the area to be able to identify whether there is a technological uncertainty. Technological uncertainty does not arise simply because the Appellant does not have the requisite knowledge. The question is whether the uncertainty identified by the Appellant is an uncertainty to those knowledgeable and experienced in the relevant field.

per Kam-Press Metal Products October 2019

[27] The issues identified and addressed by the Appellant were routine technical issues associated with the design and construction of an existing product using different materials. As stated by Judge Bowman in Northwest Hydraulic, the fact that there may have been some doubt as to the way in which the technical issues would be resolved does not amount to the existence of technological uncertainty.

per Joel Theatrical Rigging 2017

[17] To constitute SR&ED, a particular project must address a problem or a type of uncertainty (typically described in the jurisprudence as “technical risk or uncertainty” or “technological uncertainty”) that cannot be resolved by routine engineering or standard procedures. While there may not be a definitive definition of the term “routine engineering,” the term typically “describes techniques, procedures and data that are generally accessible to competent professionals in the field.”

PART 3 – Proving Uncertainty

Given the courts have defined “technological uncertainty” as hinging on the availability of knowledge from within a community of appropriately qualified professionals, the only sure-fire way of rebutting an SR&ED claim that has been denied for lack of uncertainty is to provide evidence to the contrary from a qualified professional i.e. an “expert witness”. It is important to note that the expert witness be impartial and independent; furthermore, the expert must not tell the court whether something is SR&ED or not but rather only if uncertainty, advancement and systematic investigation existed. This might not help much with the CRA, but it can be decisive in court. Even a cursory review of SR&ED-related tax court cases (e.g. at <https://www.scitax.com/courtcases.html>) will show that taxpayers who present an independent expert witness at trial almost always win, while those who don't almost always lose. Consider the following:

per Paveit Construction Inc. September 2025 (taxpayer loses)

[40] “No expert evidence was led in this case and, as a result, it was somewhat challenging to be certain about what precisely might constitute system uncertainty, routine engineering or standard procedures.”

per JEC Distributors Inc. December 2022 (taxpayer loses)

[22] However, it is not enough for the Appellant to prove that it could not remove the risks and uncertainties through routine engineering or standard procedures. The test is an objective test, not a subjective test. The Appellant must show that the risks could not be overcome by routine engineering or standard procedures generally accessible to competent professionals in the field. The Appellant did not do so.

[23] The Appellant's expertise is in welding technology. I have no way of knowing, for example, whether an electrical engineer or even a skilled electrician could have proposed a routine solution to prevent the electric noise from reaching the sensors. Similarly, I have no way of knowing whether a computer engineer or a technician with networking expertise could have employed standard networking procedures to connect the sensors to the Appellant's customers' networks.

per Dave's Diesel Inc. June 2022 (taxpayer loses)

[30] But even if I had found the requisite "technological uncertainty", I would still have no basis on which to decide whether the steps taken by the Appellant were anything other than "routine engineering" for a competent professional in the field. There was no evidence that taking a fuel injector apart without breaking it was anything other than "routine engineering" for such a professional. Similarly, there was no evidence that understanding how the fuel injectors worked was anything but "standard procedure" for a competent professional in the field.

per Logic Data Products Inc. 2021 (taxpayer loses)

[68] Knowledge or experience in the solar power industry with respect to solar shingles is relevant to determining whether there was a technological uncertainty. If knowledgeable competent professionals in the field would state that the uncertainties identified by Mr. Baird were not uncertain, then there is no technological uncertainty.

per Joel Theatrical Rigging 2017 (taxpayer loses)

[17] The difficulty that I have is that no scientists or engineers testified, with the result that I was given no authoritative evidence as to the techniques, procedures and data in respect of theatrical rigging that were generally accessible to mechanical engineers in 2008 and 2009.

per Allegro Wireless Canada Inc March 2021 (taxpayer win)

[200] Doctor Penn concluded that these experiments as they related to the three projects constituted scientific research and resulted in a technological advancement. Doctor Penn was eminently qualified to make these conclusions based upon his education, experience and knowledge of the Appellant's business. His conclusions are consistent with the evidence before me.

per Abeilles Inc. October 2014 (taxpayer win)

[79] The appellant called Martin Gariépy as an expert witness. Mr. Gariépy has a bachelor's degree in pure mathematics, a master's degree in aerospace engineering and a doctoral degree in mechanical engineering. He taught some courses at the École polytechnique de Montréal and carried out various work related, inter alia, to aerodynamics.

Footnotes

¹ Subsection 248(1) of the Income Tax Act also defines two other forms of R&D work - § a) Basic Research and § b) Applied Research where the principal requirement is for the advancement of scientific knowledge. Since essentially all SR&ED related tax court cases have been for claims made under § c)

experimental development the application to the technological uncertainty to those variants may be more tenuous.

² This wording likely originated from the hand of CRA's expert witness Dr. Ken Takagaki, but at footnote 3 of the ruling Justice M. J. Bonner explicitly highlighted his concurrence with them.

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Northwest Hydraulic Consultants Ltd. in Tax Court Canada May 1998

https://www.scitax.com/pdf/Dckt_97-531-IT-G_1-May-1998.pdf

CW Agencies in Federal Court of Appeal December 2001

https://www.scitax.com/pdf/Dckt_A-601-00_11-Dec-2001.pdf

CW Agencies in Tax Court of Canada August 2000

https://www.scitax.com/pdf/Dckt_98-1324-IT-G_30-Aug-2000.pdf

Paveit Construction Inc. v. The King in Tax Court Canada of Canada September 2025

https://www.scitax.com/pdf/Dckt_2019-3604-IT-I_2025-09-25.pdf

Vortex Energy Services Ltd. v. The King in Tax Court Canada of Canada May 2025

https://www.scitax.com/pdf/Dckt_2019-894-IT-G,2021-147-IT-G_2025-05-02.pdf

Logix Data Products Inc. v. The Queen in Tax Court Canada of Canada

<https://decision.tcc-cci.gc.ca/tcc-cci/decisions/en/item/497156/index.do>

Dave's Diesel Inc. v. The Queen in Tax Court Canada of Canada June 2022

https://www.scitax.com/pdf/Dckt_2018-1618-IT-G_10-Jun-2022.pdf

Kam-Press Metal Products Ltd. in Tax Court Canada October 2019

https://www.scitax.com/pdf/Dckt_2016-4880-IT-G_30-Oct-2019.pdf

JEC Distributors Inc. v. The King in Tax Court Canada of Canada December 2022

https://www.scitax.com/pdf/Dckt_2019-1422-IT-I_28-Dec-2022.pdf

Joel Theatrical Rigging in TCC January 2017

https://www.scitax.com/pdf/Dckt_2015-125-IT-I_17-Jan-2017.pdf

Abeilles Inc. in Tax Court Canada October 2014

https://www.scitax.com/pdf/Dckt_2011-2054-IT-G_23-Oct-2014_Official_Translation.pdf

Allegro Wireless Canada Inc v. The Queen in Tax Court of Canada March 2021

https://www.scitax.com/pdf/Dckt_2014-1690-IT-G_31-Mar-2021.pdf

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