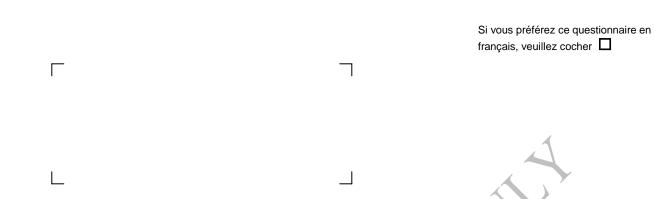
Science, Innovation and Electronic Information Division (SIEID)

Confidential when completed



Reporting unit name and address



Please correct any mistakes in name or address

## INFORMATION FOR RESPONDENTS

## **Survey Objective**

This survey collects data which are essential to assure the availability of pertinent statistical information to monitor science and technology related activities in Canada and to support the development of science and technology policy. Your data will be used, for instance, to plan and evaluate research and development (R&D) incentive programs and to complete national totals for scientific R&D expenditures and personnel. The results of this survey will be published in "Industrial Research and Development" (Cat. No. 88-202-, "E) and "Science Statistics" (Cat. No. 88-001-XIE).

## Authority

This survey is conducted under the authority of the Statistics Act, Revised Statutes of Canada, 1985, Chapter S19.

## Legal requirement

Completion of this questionnaire is a legal requirement under the Statistics Act.

### Confidentiality

Statistics Canada is prohibited from publishing any statistics that wou't divulge information relating to any identifiable organization without the previous written consent of that organization. The data reported on this creation will be treated in strict confidence, used for statistical purposes and published in aggregate form only. The Access to Information creation ary other legislation does not affect the confidentiality provisions of the Statistics Act.

## Federal / Provincial Agreement

In order to avoid duplication of enquiry, to reduce the cost of dama collection and to provide consistent statistics, an agreement has been made with the Institut de la statistique du Quebec, under Section 11 of the Statistics Act, Statutes of Canada, where data on firms located or having R&D activities in Quebec will be transmitted to the Institut de impact statistics act. The Statistics Act of Quebec includes the same provisions for confidentiality and penalties for disclosure of information as the Statistics Act.

## Reporting period and coverage

This questionnaire should be completed for the first al year ending in 2006. This report should exclude foreign operations. Please report all amounts in Canadian currency.

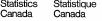
#### Planned Data Linkage

In order to enhance the analytic rost bilities of this survey, Statistics Canada intends to combine the information from the Research and Development in Canadian Industry Survey with the information your organization provided on the Energy R&D Expenditures by Area of Technology Survey, if applicable.

Please complete a separate questi innaire for each company performing research and development (R&D) activities in Canada.

- If your records do in t permit separate reporting, ensure that questions 1 to 8 and 12 only include data on companies performing R&D in Canada.
- If your company performs R&D activities, all questions should be completed.
- If your company does not perform but funds R&D, complete questions 2, 3, 4, 9, 10, 11, 13, 14 and certification.
- Please see **Instruction Guide** for definitions starting on page 8.

			CERI	IFICA	IION						
Name of person who completed this report (please print) 0001					iness a	ddress					0002
Official position	0003	Date	0004	Postal	Code	(	0005	Telephone	∋ No.	0006	Extension
								( )	-		0007
E-mail address:	0008	GST No.	(BN No.)			000	9 F	ax No.			0010
							(	)	-		
5-5300-402.1 2007-08-14 ST	C/SAT - 465-60	041									
Chatication Obstigations										-	



## Canadä

		GENER	AL CORPOR	ATE DATA (	questions 1 t	to 4)			
		nd 12 of this ques			panies performing the "Performs R8			anies will be	
b) If this reporting unit includes Canadian R&D activities performed in direct support of other Canadian related companies (i.e. parent, subsidiaries) which themselves do not perform R&D, list these R&D re Canadian companies and indicate "NO" in "Performs R&D" column. Yes or No Pare									
Names of companies (please print full legal name and attach additional sheet if necessary)									,
	0120 0130 0140								
						0121 01	31	0141	
						0122 01	32	0142	
						0123 01	33	0143	
c) Latest year for was filed with (							, 0139		0149
2. FISCAL YEAR EI	NDING IN 2006	FROM	0201 <b>2 0 0</b>	0202	0203	0	06	0205	0206
			year	month	day	ye	ar	month	day
3. REVENUES IN CA Indicate their appr (see Instruction C	roximate sales a	ind other revenue				d 1 b).	• 030	(CAN\$ thou 1	usanos)
4. NUMBER OF EM 1a) and 1b). Indic						questions	030	4	
		DATA	ON R&D PER	RFORMED (q	uestions 5 to	o 8)			
			RMED <u>WITHIN</u> al of question C			ollars)			
2006 total R&D	expenditures s		al of question C			penditures			
	expenditures s	hould equal tot	tal of question C tures		s of Canadian do		<sup>nt</sup> Tota capit		Total
	expenditures s C Wages and salaries*	hould equal tot urrent expendit Other current costs*	tal of question of tures	Land (CAN\$ t	s of Canadian do Capital exp Buildings housands)	Denditures Equipmer & other	capit	tal	
	expenditures s C Wages and salaries* 0504	hould equal tot urrent expendit Other	tal of question of cures	Land (CAN\$ t	s of Canadian do Capital exp Buildings housands) 0544	Denditures Equipmer & other	IOta	tal 0574	
(2006 total R&D a) Made in 2005	expenditures s C Wages and salaries*	hould equal tot urrent expendit Other current costs*	tal of question of tures	Land (CAN\$ t	s of Canadian do Capital exp Buildings housands)	Denditures Equipmer & other	capit	tal	
(2006 total R&D ) a) Made in 2005 b) Made in 2006 c) Planned for	expenditures s C Wages and salaries* 0504	hould equal tot urrent expendit Other current costs*	tal of question of cures	Land (CAN\$ t	s of Canadian do Capital exp Buildings housands) 0544	Denditures Equipmer & other	0564	tal 0574	-
(2006 total R&D a) Made in 2005 b) Made in 2006	expenditures s C Wages and salaries*	hould equal tot urrent expendit Other current costs*	tal of question of cures	Un tiousands Land (CAN\$ t 0534 0531	s of Canadian do Capital exp Buildings thousands) 0544 0541	0551	0564 0561	tal 0574 0571	1
(2006 total R&D) a) Made in 2005 b) Made in 2006 c) Planned for 2007 d) Forecast for	expenditures s C Wages and salaries* 0504 0501 0502 0503	hould equal tot urrent expendit Other current costs*	al of question C ures * Cu, rent 0524 0522 0523	Land (CAN\$ t 0534 0532 0533	s of Canadian do Capital exp Buildings thousands) 0544 0541 0542 0542 0543	Denditures Equipmer & other 0554 0551 0552 0553	0564 0561 0562 0563	tal 0574 0571 0572 0573 0573 0580	
<ul> <li>(2006 total R&amp;D)</li> <li>a) Made in 2005</li> <li>b) Made in 2006</li> <li>c) Planned for 2007</li> <li>d) Forecast for 2008</li> <li>e) If applicable, pleat development***</li> <li>f) If applicable, pleat biotechnology***</li> </ul>	expenditures s C Wages and salaries* 0504 0501 0502 0503 0503 ase e. timate the ase estimate the	hould equal tot urrent expendit Other current costs* 0514 0512 0512 0513 percentage of to	tal of question C tures * Cu, rent 0524 0521 0522 0523 otal R&D expend otal R&D expend	Land (CAN\$ t 0534 0531 0532 0533 litures (reported	s of Canadian do Capital exp Buildings bousands) 0544 0541 0542 0543 above for 2006) a above for 2006) a	Openditures       Equipmer       &       0554       0551       0552       0553	0564 0561 0562 0563 0563	tal 0574 0571 0572 0573 0580 0581 0581	
<ul> <li>(2006 total R&amp;D)</li> <li>a) Made in 2005</li> <li>b) Made in 2006</li> <li>c) Planned for 2007</li> <li>d) Forecast for 2008</li> <li>e) If applicable, plea development***</li> <li>f) If applicable, plea biotechnology***</li> <li>g) If applicable, plea treatment and read</li> </ul>	expenditures s C Wages and salaries* 0504 0501 0502 0503 0503 0503 0503 0503 0503 0503	hould equal tot urrent expendit Other current costs*	tal of question of the second	Land (CAN\$ t 0534 0531 0532 0533 litures (reported litures (reported litures (reported litures (reported	s of Canadian do Capital exp Buildings bousands) 0544 0541 0542 0543 above for 2006) a above for 2006) a above for 2006) a	Openditures       Equipmer       &       0554       0551       0552       0553	0564 0561 0562 0563 0563	tal 0574 0571 0572 0573 0580 0581 0581	
<ul> <li>(2006 total R&amp;D)</li> <li>a) Made in 2005</li> <li>b) Made in 2006</li> <li>c) Planned for 2007</li> <li>d) Forecast for 2008</li> <li>e) If applicable, pleat development***</li> <li>f) If applicable, pleat biotechnology***</li> <li>g) If applicable, pleat treatment and reat treatment and reat (apart from any R</li> </ul>	expenditures s Vages and salaries* 0504 0501 0502 0503 0503 ase e. timate the ase estimate the ase estimate the use of pollutants ant potential envi &D reported in the	hould equal tot urrent expendit Other current costs*	tal of question of the second	Land (CAN\$ t 0534 0531 0532 0533 litures (reported litures (reported litures (reported litures (reported aterial and energy	s of Canadian do Capital exp Buildings bousands) 0544 0541 0542 0543 above for 2006) a above for 2006) a above for 2006) a gy use***	Denditures Equipmer & other 0554 0551 0552 0553 attributable to attributable to attributable to	0564 0561 0562 0563 0 software	tal 0574 0571 0572 0573 0580 0581 0582	
<ul> <li>(2006 total R&amp;D)</li> <li>a) Made in 2005</li> <li>b) Made in 2006</li> <li>c) Planned for 2007</li> <li>d) Forecast for 2008</li> <li>e) If applicable, pleas development***</li> <li>f) If applicable, pleas biotechnology***</li> <li>g) If applicable, pleas treatment and reat (apart from any R</li> <li>i) If applicable, pleas materials***</li> </ul>	expenditures s C Wages and salaries* 0504 0501 0502 0503 0503 0503 0503 0503 0503 0503 0503 0503 0503 0503 0503 0503 0503 0503 0503 0503 0503 0504 0503 0504 0503 0504 0503 0505 0505 0505 0505 0505 0	hould equal tot urrent expendit Other current costs*	tal of question of the second	Land (CAN\$ t 0534 0531 0532 0533 litures (reported litures (reported litures (reported aterial and energy R&D reported for tures (reported for t	s of Canadian do Capital exp Buildings bousands) 0544 0541 0542 0543 above for 2006) a above for 2006) a above for 2006) a above for 2006) a	Equipmer       8       0554       0551       0552       0553       attributable to       attributable to       0583	0564 0561 0562 0563 0 software	tal 0574 0571 0572 0573 0580 0581 , 0582 , 0582	% % % 5584 <b>NoO</b> %
<ul> <li>(2006 total R&amp;D)</li> <li>a) Made in 2005</li> <li>b) Made in 2006</li> <li>c) Planned for 2007</li> <li>d) Forecast for 2008</li> <li>e) If applicable, pleas development***</li> <li>f) If applicable, pleas biotechnology***</li> <li>g) If applicable, pleas treatment and ret</li> <li>h) Are there importation (apart from any R)</li> <li>i) If applicable, please</li> </ul>	expenditures s C Wages and salaries* 0504 0501 0502 0503 0503 0503 0503 0503 0503 0503 0503 0503 0503 0503 0503 0503 0503 0503 0503 0503 0504 0503 0503 0504 0503 0505 0503 0505 0	hould equal tot urrent expendit Other current costs*	tal of question of the second	Land (CAN\$ t 0534 0531 0532 0533 litures (reported litures (reported litures (reported aterial and energy R&D reported for tures (reported for t	s of Canadian do Capital exp Buildings bousands) 0544 0541 0542 0543 above for 2006) a above for 2006) a above for 2006) a above for 2006) a	Equipmer       8       0554       0551       0552       0553       attributable to       attributable to       0583	0564 0561 0562 0563 0 software	tal 0574 0571 0572 0573 0580 0581 0582 0582 0585	% % % 5584 <b>NoO</b> %

	Professionals									ng staff*	
	Scientists and engineers					Senior R&D administrators				Other	Total R&D personne
	Bachelors Masters Doctorates Total Ba					Masters	Doctorates	Total	and techno- logists		
	0601	0611	0621	0631	0641	0651	0661	0671	0681	0691	0694
a) In 2006 (number of FTE)											
<b>b) Planned for</b> <b>2007</b> (number of FTE)	0602	0612	0622	0632	0642	0652	0662	0672	0682	0692	0693
									Average R&	D wages a	nd salaries**
<ul> <li>* See Instruct</li> <li>** Divide wages</li> </ul>			Question 5b)	by total R	&D personn	el.				AN\$ thousa	nds)
If the average R	&D wages a	nd salaries	s does not s	eem reas	onable, plea	ase review	the data		0699		
										/	
7. REGIONAL IN thousands of				IED <u>WITH</u>	<u>IIN</u> THIS RE	PORTING	UNIT IN 2006	; (E <sub>A</sub> rend	itures should	be reporte	d in
						R&D ex	openditures		Ra	&D person	nel
F	Region where	e R&D was	performed		(	Current	Uap	ital			Supporting staff
						1			10.11.		ont**)
						(CAN§	thouse nds)			ime equival	-
1. Newfoundlar	d and Labrad	dor			0701		071		0721	073	
		dor			0702		0711		0721	0732	2
2. Prince Edwa		dor			0702		071) 0712 0713		0721 0722 0723	073 <sup>2</sup> 0732 0733	2
2. Prince Edwa 3. Nova Scotia	rd Island	dor			0702 0703 0, 04	(CAN\$	0711 0712 0713 0714		0721 0722 0723 0724	073 <sup>4</sup> 0732 0733 0734	2
<ol> <li>Prince Edwa</li> <li>Nova Scotia</li> </ol>	rd Island ick		ion)		0702 0703 07.74 		071) 0712 0713		0721 0722 0723	073 <sup>2</sup> 0732 0733	2
<ol> <li>Prince Edwa</li> <li>Nova Scotia</li> <li>New Brunsw</li> </ol>	rd Island ick ept National (	Capital Reg			0702 0703 0, 04		0711 0712 0713 0714		0721 0722 0723 0724	073 <sup>4</sup> 0732 0733 0734	2
<ol> <li>Prince Edwa</li> <li>Nova Scotia</li> <li>New Brunsw</li> <li>Quebec (exc</li> <li>A) National C</li> </ol>	rd Island ick ept National ( apital Region	Capital Reg :* Quebec	(specify):	6	0702 0703 07.74 		0711 0712 0713 0714 0715		0721 0722 0723 0724 0725	073 <sup>2</sup> 0732 0733 0734 0734 0735	2
<ol> <li>Prince Edwa</li> <li>Nova Scotia</li> <li>New Brunsw</li> <li>Quebec (exc</li> <li>a) National C</li> <li>b) National C</li> </ol>	rd Island ick ept National ( apital Region apital Region	Capital Reg :* Quebec :* Ontario (	(specify): (specify);	6	0702 0703 0703 0704 		0711 0712 0713 0714 0715 0716		0721 0722 0723 0724 0725 0726	073 <sup>2</sup> 073 <sup>2</sup> 073 <sup>2</sup> 073 <sup>2</sup> 073 <sup>4</sup> 073 <sup>4</sup>	2
<ol> <li>Prince Edwa</li> <li>Nova Scotia</li> <li>New Brunsw</li> <li>Quebec (exc</li> <li>a) National Ci</li> <li>b) National Ci</li> <li>Ontario (exce</li> </ol>	rd Island ick ept National ( apital Region apital Region	Capital Reg :* Quebec :* Ontario (	(specify): (specify);		0702 0703 0. 14 7,5 		0711 0712 0713 0714 0715 0716 0717		0721 0722 0723 0724 0725 0726 0727	073 0732 0732 0734 0734 0734 0735	2 3 4 5 7
<ol> <li>Prince Edwa</li> <li>Nova Scotia</li> <li>New Brunsw</li> <li>Quebec (exc</li> <li>a) National Co</li> <li>b) National Co</li> <li>Contario (exce</li> <li>Manitoba</li> </ol>	rd Island ick ept National ( apital Region apital Region ept National (	Capital Reg :* Quebec :* Ontario (	(specify): (specify);		0702 0703 0, 74 		0711 0712 0713 0714 0715 0716 0717 0718		0721 0722 0723 0724 0725 0726 0727 0728	073 0732 0732 0734 0734 0735 0735 0736	2 3 4 5 5 7 8
<ol> <li>Prince Edwa</li> <li>Nova Scotia</li> <li>New Brunsw</li> <li>Quebec (exc</li> <li>a) National C</li> <li>b) National C</li> <li>b) National C</li> <li>Contario (exce</li> <li>Manitoba</li> <li>Saskatchewa</li> </ol>	rd Island ick ept National ( apital Region apital Region ept National (	Capital Reg :* Quebec :* Ontario (	(specify): (specify);		0702 0703 0703 0704 		0711 0712 0713 0714 0715 0716 0717 0718 0719		0721 0722 0723 0724 0725 0726 0726 0727 0728 0729	073 073 073 073 073 073 073 073 073 073	2 3 4 5 7 7
<ol> <li>Prince Edwa</li> <li>Nova Scotia</li> <li>New Brunsw</li> <li>Quebec (exc</li> <li>a) National C</li> <li>b) National C</li> <li>b) National C</li> <li>7. Ontario (exce</li> <li>Manitoba</li> <li>Saskatchewa</li> <li>Alberta</li> </ol>	rd Island ick ept National ( apital Region apital Region ept National C	Capital Reg :* Quebec :* Ontario (	(specify): (specify);		0702 0703 0. 74 - 7 75 - 0706 0707 0708 0709 0741		0711 0712 0713 0714 0715 0716 0717 0718 0719 0751		0721 0722 0723 0724 0725 0726 0726 0727 0728 0729 0761	073 073 073 073 073 073 073 073 073 073	2
<ol> <li>Prince Edwa</li> <li>Nova Scotia</li> <li>New Brunsw</li> <li>Quebec (exc</li> <li>a) National C</li> <li>b) National C</li> <li>b) National C</li> <li>Ontario (exce</li> <li>Manitoba</li> <li>Saskatchewa</li> </ol>	rd Island ick ept National ( apital Region apital Region ept National ( an	Capital Reg :* Quebec :* Ontario Capital Regi	(specify): (specify): ion)		0702 0703 0, 74 -> 75 0706 0707 0708 0709 0741 0742		0711 0712 0713 0714 0715 0716 0717 0718 0719 0751 0752		0721 0722 0723 0724 0725 0726 0727 0728 0729 0761 0762	073 <sup>2</sup> 073 <sup>2</sup> 073 <sup>2</sup> 073 <sup>2</sup> 073 <sup>2</sup> 073 <sup>3</sup> 073 <sup>3</sup> 073 <sup>3</sup> 073 <sup>3</sup> 073 <sup>3</sup> 073 <sup>3</sup> 077 <sup>3</sup>	2 3 4 5 5 7 7 8 9 9

\* See Instruction Guide for areas covered in the National Capital Region, page 10
 \*\* See Instruction Guide for definition of full time equivalent

Please complete Question 12 for each R&D unit identified above.

8. SOURCES OF FUNDS FOR R&D PERFORMED WITHIN THIS REPORTING UNIT IN 2006		adian Irces	Non- Canadian
6. SOURCES OF FUNDS FOR Rad FERFORMIED WITHIN THIS REPORTING UNIT IN 2000	300	(CAN\$ the	
	0801		0811
a) Reporting unit funding (include also funds from companies listed in question 1a)			
b) Parent, affiliated and subsidiary companies (only those not included in question 8a)		(	
Names of companies (please print full legal name and attach additional sheet if necessary)	0802	(CAN\$ tho	ousands) 0812
	0803		0813
	0804		0814
Sub-total (b)	0810		0819
c) Canadian Federal government:*			
(i) <b>R&amp;D grants</b> and the R&D portion <b>only</b> of any other grants		(CAN\$ the	ousands)
Industry Canada: Technology Partnership Program	0821		
National Research Council: Industrial Research Assistance Program	0822		
Atlantic Canada Opportunities Agency	0823		
Canada Economic Development (Quebec Regions)	0824		
Western Economic Diversification Office	C 325		
Other grant programs (specify):	0826		
(specify):	0827		
Sub total (c i)	0820		
Contracting departments: (Payments are often made through Public Works and Covernment Services Canada for other departments; please coecify contracting department)			
		(CAN\$ the	ousands)
Canadian Space Agency	0831		
National Defence	0832		
Other contracts (specify):	0833		
Sub-total (c ii)	0830		
d) Provincial government:*	00.44	(CAN\$ tho	ousands)
(specify province):	0841		
(specify province):	0842		
Sub-total (d)	0840		
e) R&D contract work or other companies			
Names of companies (please print full legal name and attach additional sheet if necessary)		(CAN\$ the	ousands)
	0851		0861
	0852		0862
	0853		0869
Sub-total (e)	0850		0860
f) Other organizations (i.e. universities, foreign government) Sub-total (f)	0870		0880
	0890		0895
Sub-totals (a to f)			L
Total (equal to the 2006 grand total expenditures of question 5b)		0800	
* Questions 8c) and 8d) – Do not include any funds or tax credits from tax incentives; these internal funding reported in question 8a).	should be	considered	part of your

## DATA ON PAYMENTS FOR R&D (questions 9 and 10)

9. PAYMENTS FOR R&D PERFORMED BY OTHER ORGANIZATIONS*						
(2006 should equal the total of question 10)						
a) Made in 2005		0904				
b) Made in 2006		0901				
c) Planned in 2007						
d) Forecast in 2008						
* Payments made outside Canada should be reported net of withholding taxes.						
10. RECIPIENTS OF PAYMENTS FOR R&D PERFORMED IN 2006 BY OTHER ORGANIZATIONS* (2006 should equal the total of question 9b)	In C∕nada	Outside Canada				
	(CAN\$ th	ousands)				
a) Parent, affiliated and subsidiary companies	1001	1011				
b) Other companies	1.72	1012				
c) Private non-profit organizations	1003	1013				
d) Industrial research institutes or associations	1004	1014				
e) Hospitals	1005	1015				
f) Universities	1006	1016				
g) Provincial research organizations	1007	1017				
h) Other (e.g.: individuals, non-university educational institutions, governments, etc.)	1008	1018				
Total of items (0e) to (0h)	1098	1099				
Total of items 10a) to 10h)	1000					
Total (equal to 2006 figure entered in question 9b)						
* Payments made outside Canada should be ret orted net of withholding taxes.						
DATA ON OTHER PAYMENTS MADE OR RECEIVED FOR TECHNOLOG	EV (question 11	١				
DATA ON OTHER PAYMENTS MADE OR RECEIVED FOR TECHNOLOG	or (question 11	)				
A company can acquire information base 1 on R&D performed in the past by other companies, organizations or						
information based on R&D it has performed in the past. In the preceding section, payments are reported in the s done. In this section, consider only payments or information and rights derived from R&D performed in the past		this R&D is being				
11. PAYMENTS MADE OR RELEINED IN 2006 BY THIS REPORTING UNIT FOR PATENTS	In Canada	Outside Canada				
(SALE/PURCHASE, LI CENSI, IG), KNOW-HOW (UNPATENTED), INVENTIONS, TRADEMARKS (INCLUDING FRAMCHIL 'NG), PATTERNS, DESIGN, AND R&D TECHNICAL ASSISTANCE*	(CAN\$ th					
a) Payments	1101	1111				
to parent, affiliated and/or subsidiary companies	1102	1112				
to other organizations and/or individuals						
	1100	1110				
Total	1121	1131				
b) Receipts from parent, affiliated and/or subsidiary companies						
	1122	1132				
from other organizations and/or individuals	1120	1130				
Total	1120					
* Payments made outside Canada should be reported net of withholding taxes.	1	I				
· · · · · · · · · · · · · · · · · · ·						

NATURE OF R&D	ACTIVITIES – 2006 (question 12)
Please complete the following question for each R&D unit please photocopy this section and complete for each R&D	t (previously identified in question 7). If you have more than one R&D unit, D unit.
12. R&D Unit No. (i.e. 1, 2, 3, 0	
Name of R&D unit:	
204	1202 12
Address of R&D unit: 1205	1206
Street 1207	City 1208
Province	Postal code
Contact:	
209	
Name	
1210	1211
Position title	Telephone no.
Position title	
What were the current (non-capital) R&D expenditures of this	
(the total amounts reported for all R&D units should equal to	(full time equivalent)
	1221
<ul> <li>How many scientists and engineers (full-time equivalent) were amounts reported for all R&amp;D units should equal Total Scient</li> </ul>	
<ul> <li>Please estimate, in terms of the percentage of the current R&amp; R&amp;D effort in 2006;</li> </ul>	
	1231
A. Basic research (no specific practical application in	view)
Â	1232
B. Applied research (with a specific practical application	
	1233
C. New * product development	1234
D. Existing ** product im; rov ement	
	1235
E. New * process de relopment	
	1236
F. Existing **proces > improvement	
	1237
G. New * technical services development	1238
L. Evipting ** toobalact increases	1200
H. Existing ** technical services improvement	
	100
elsewhere in the world but your R&D is not aided by this fact si the normal risks of development.	wn to the personnel of your R&D unit. The product, process or service may exist since your personnel do not have access to the information necessary to avoid any
** Please consider existing to mean that your staff would be impropried product/process/service need not already be provided by your	roving a product/process/service about which they have the basic information. The company.

2. PLEASE INDICATE HOW LONG IT TOOK YOU TO COMPLETE THIS QUESTIONNAIRE.		SURVEY COMPLETION TIME (question 13)
	. PLEASE INDI	CATE HOW LONG IT TOOK YOU TO COMPLETE THIS QUESTIONNAIRE.
DATA ON ENERGY R&D (question 14)  IN 2006, DID THIS REPORTING UNIT PERFORM OR FUND ANY ENERGY R&D:  Very Vers Please complete the enclosed "Energy R&D expenditures by area of technology" (green) questionnaire.  No Please complete the certification on page 2 of the enclosed "Energy R&D expenditures b, area of technology" (green) questionnaire and return with this questionnaire.  COMMENTS  DMMENTS: Reasons for major changes in reporting R&D expenditures and personal al – In order to eliminate the necessity to verify discrepantivement this report and your last return (2005) please explain any significant charges with he misconstrued as an error in reporting.  14 15 14 15 14 15 15 15 15 15 15 15 15 15 15 15 15 15		minutes
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## INSTRUCTION GUIDE RESEARCH AND DEVELOPMENT IN CANADIAN INDUSTRY

- This survey has been carried out since 1955; you may have file copies of your returns for earlier years which will help you now. If you are filling a
  consolidated return for two or more related companies please ensure that consolidated figures are used for all questions (e.g. revenues,
  employment, R&D expenditures, technology payments). "This reporting unit", as used in the questionnaire, covers groups of related companies
  when a consolidated return is filed.
- 2. Please answer all questions. Your best estimates are satisfactory when precise figures are not available. Your estimates will be better than ours.
- 3. Please return the completed questionnaire within 30 days of receipt. If you are unable to do so, please inform us of the expected completion date. If you receive more than one copy of this survey questionnaire for the same business, please complete one and attach and return the duplicate(s). If you require assistance in the completion of this questionnaire or have any questions regarding the survey please address all enquiries to:

Science and Technology Surveys Section Science, Innovation and Electronic Information Division Statistics Canada 150 Tunney's Pasture Driveway Ottawa, On K1A 0T6 Tel: 1-866-824-5893 Email: <u>sieidinfo@statcan.ca</u> Fax: 613-951-9920

## R&D Definition (equivalent to Canada Revenue Agency – see information Circular 86-4R3)

Research and development (R&D) is systematic investigation carried out in the natural and unteresting sciences by means of experiment or analysis to achieve a scientific or technological advance.

Research is original investigation undertaken on a systematic basis to gain new kn wledge.

Development is the application of research findings or other scientific knowledge is the creation of new or significantly improved products or processes. If successful, development will usually result in devices or processes which represent an improvement in the "state of the art" and are likely to be patentable.

# Research and development should be considered to be "Scientific Research and Experimental Development" as defined in Section 37, Regulation 2900 of the income Tax Act; this section specifically excluded the following:

- (i) market research, sales promotion,
- (ii) quality control or routine analysis and testing of me end is, devices or products,
- (iii) research in the social sciences or the humanities,
- (iv) prospecting, exploring or drilling for or pre-tucing minerals, petroleum or natural gas,
- (v) the commercial production of a new or improved material, device or product or the commercial use of a new or improved process,
- (vi) style changes, or routine data collection.

## Example:

The investigation of electrice co. duction in crystals was research. The application of this knowledge to the creation of a new amplifying device – the transistor – was development. The application of the device to the construction of new electrical circuits for television receivers was development. The formulation of new plastic cases for a television receiver is design, not development.

Research and develo, ment may be carried out either by a permanent R&D unit (e.g., R&D division) or by a unit generally engaged in any non-R&D activity such as engineering or production. In the first case, the R&D unit may spend part of its time on routine testing or trouble shooting or on some other activities which should not be included in R&D. In the second, only the R&D portion of such units' total activity should be considered.

#### Note:

Although the definition of "Scientific Research and Experimental Development" is considered to be the same as R&D, certain expenditures for scientific research and experimental development cannot be claimed for income tax purposes (e.g., land and buildings). All expenditures attributable to R&D are included in this report.

## Interpretation

Generally speaking, industrial R&D is intended to result in an invention which may subsequently become a technological innovation. An essential requirement is that the outcome of the work is uncertain, i.e., that the possibility of obtaining a given technical objective cannot be known in advance on the basis of current knowledge or experience. Hence much of the work done by scientists and engineers is not R&D, since they are primarily engaged in "routine" production, engineering, quality control or testing. Although they apply scientific or engineering principles their work is not directed towards the discovery of new knowledge or the development of new products and processes. However, work elements which are not considered R&D by themselves but which directly support R&D projects, should be included with R&D in these cases. Examples of such work elements are design and engineering, shop work, computer programming, and secretarial work.

If the primary objective is to make further technical improvements to the product or process, then the work comes within the definition of R&D. If however, the product, process or approach is substantially set and the primary objective is to develop markets, to do pre-production planning or to get a production, or control system working smoothly, then the activity can no longer be considered as part of R&D even though it could be regarded as an important part of the total innovation process. Thus, the design, construction and testing of prototypes, models and pilot plants are part of R&D. But when necessary modifications have been made and testing has been satisfactorily completed, the boundary of R&D has been reached. Hence, the costs of tooling (design and try-out), construction drawings and manufacturing blueprints, and production start-up are not included in development costs.

Pilot plants may be included in development only if the main purpose is to acquire experience and compile data. As soon as they begin operating as normal production units, their costs can no longer be attributed to R&D. Similarly, once the original prototype has been found satisfactory, the costs of other "prototypes" built to meet a special need or fill a very small order are not to be considered as part of R&D.

ITEM	TREATMENT	REMARKS
Economic research, market research, management studies	Exclude	All activities in the social sciences.
Quality control, routine testing, style changes, minor adaptation of a product to meet a customer's specific requirement	Exclude	Even if carried out by staff normally engaged in R&D.
Prospecting, exploratory drilling, development of mines, oil or gas wells	Exclude	Except for R&D projects concerned with new equipment or t chniques in these activities, such as in-situ and ter ary recovery research.
Engineering	Exclude	Engineer, unit ss it is in direct support of R&D.
Design and drawing	Exclude	Design an <sup>1</sup> drawing unless it is in direct support of R. D.
Prototypes, pilot plants	Include	As long as the primary objective is to make further improvements.
Contracts (questions 8(c)(ii) and 8(e))	Include	All contracts which require R&D. For contracts which include other work, report only the R&D costs.
Tooling up, trial production, trouble shooting	Exclude	Although R&D may be required as a result of these steps.
Patent and licence work	Exclude	All administrative and legal work connected with patents and licences.

Question 3 – Revenues in Canada - Represents the amount of revenues (in Canada) resulting from the sale of products and services (after deducting sales and excise taxes), and other revenues such as hose generated from investment and rental. All goods sold include consignments shipped outside Canada. Revenues should be reported in Carl, dian currency.

Question 5 (e) – Software Development – Software refers to the encoded instructions executed by electronic devices including computers for performing operations and functions. See Comparison Circular 97-1 "Administration Guidelines for Software Development\*.

**Question 5 (f)** – **Biotechnology** – Piotechnology is defined as the application of science and engineering in the direct or indirect use of living organisms in their natural or mode field forms in an innovative manner in the production of goods and services or to improve existing processes. Biotechnologies can be grouped in the tonowing types of biotechnology: DNA (the coding), Proteins and Molecules (the functional blocks), Cell and Tissue Culture and Engineering, horders Biotechnologies, Sub-Cellular Organisms, Other (Bioinformatics, Environmental biotechnology). Please report Nanobiotechnologies in Question 5(j).

Question 5 (g) – Environ, antal Protection – Environmental protection is defined as the field of work devoted to the reduction or elimination of pollutants and wastes (including prevention, treatment and reuse of pollutants and wastes, and reduction of material and energy use). Expenditures made in order to improve employee health and workplace safety are excluded.

Question 5 (h) – Environmental benefits – Environmental benefits include potential energy savings and the reduction in raw materials use or waste generation either from increased efficiency, recycling or closed-loop systems. They can also include design changes resulting in products that are less damaging to the environment in their use or disposal.

Question 5 (i) – R&D in advanced materials – R&D in advanced materials is defined as the systematic investigation carried out in the natural and engineering sciences by means of experiment or analysis in order to gain new knowledge and create new or significantly improved products or processes which use advanced materials such as metals (including superalloys or high purity metals), ceramics and carbon (including optoelectronics such as optical fibres and carbon and graphite products) and polymers (including high performance reinforced plastics and other high performance polymers).

**Question 5 (j) – Nanotechnology -** Nanotechnology is the manufacturing of devices and products from molecular or nano-scale components with extraordinary properties. Examples of nanotechnology include: nanoparticles, nanomaterials, nanostructures, nanosystems, nanophotonics, nanoelectronics, nanomedicine, nanobiotechnology.

Question 6 - Full Time Equivalent (FTE) - R&D may be carried out by persons who work solely on R&D projects or by persons who devote only part of their time to R&D, and the balance to other activities such as testing, quality control and production engineering. To arrive at the total effort devoted to R&D in terms of personnel, it is necessary to estimate the full-time equivalent of these persons working only part-time in R&D.

FTE = Number of persons who work solely on R&D projects + the estimate of time of persons working only part of their time on R&D.

Example calculation: If out of five scientists engaged in R&D work, one works solely on R&D projects and the remaining four devote only one quarter of their working time to R&D, then: FTE = 1 + 1/4 + 1/4 + 1/4 + 1/4 = 2 scientists.

## **Question 6 – Supporting Staff**

Technicians and technologists - Technically trained personnel who assist scientists and engineers in R&D, e.g. chemical technicians, draftspersons. They may be certified by either provincial educational authorities or by provincial or national scientific or engineering associations.

Other - Personnel directly engaged in the R&D program, e.g. machinists and electricians in construction of prototypes, or clerks, typists, accountants and storekeepers engaged in the administration or clerical support of R&D units.

Question 7 – Areas co	vered in the National C	apital Region:		. 1	
Alcove (QC)	Constance Bay (ON)	Gloucester (ON)	Larrimac (QC)	Orléans (ON)	Ste-Cécile-de Masham (QC)
Almonte (ON)	Corkery (ON)	Greely (ON)	Leitrim (ON)	Osgoode (CN)	Sarsfield (ON)
Angers (QC)	Cousineau (QC)	Halverson (QC)	Leonard (ON)	Ottawa (Oi !)	Shirley's Bay (ON)
Antrim (ON)	Cumberland (ON)	Harwood Plains (ON)	Limbour (QC)	Pakenham (ON)	South Gloucester (ON)
Appleton (ON)	Dalmeny (ON)	Hazeldean (ON)	Lucerne (QC)	Pamu (GN)	South March (ON)
Ashton (ON)	Davidson Corner (QC)	Herbert Corners (ON)	Luskville (QC)	Palicison (QC)	Spring Hill (ON)
Aylmer (QC)	Deschênes (QC)	Heyworth (QC)	MacLarens Landin y (200	Perkins (QC)	Stapledon (ON)
Barrhaven (ON)	Dirleton (ON)	Holland Mills (QC)	Malwood (ON)	Pointe-Gatineau (QC)	Stanley Corners (ON)
Baxters Corner (ON)	Duclos (QC)	Hull (QC)	Manion Chrne, 1 (ON)	Poltimore (QC)	Steel (QC)
Bearbrook (ON)	Dunrobin (ON)	Huntley (ON)	Maric <sup>i</sup> ck (ON,	Poupore (QC)	Stittsville (ON)
Beech Grove (QC)	Dwyer Hill (ON)	Ironside (QC)	Mansfielo 'ON)	Quinnville (QC)	Strathearn (ON)
Bells Corners (ON)	Eardley (QC)	Jeanne-d'Arc (QC)	Marai, un (ON)	Quyon (QC)	Tenaga (QC)
Blackburn Hamlet (ON)	Edwards (ON)	Jockvale (ON)	Marchhurst (ON)	Ramsayville (ON)	Twin Elm (ON)
Blakeney (ON)	Elm (ON)	Johnston Corners (ON)	Marvelville (ON)	Reevecraig (ON)	Val-des Monts (QC)
Breckenridge (QC)	Embrun (ON)	Kanata (ON,	Masson (QC)	Ribot (QC)	Val-du-Lac (QC)
Brisson (ON)	Fallowfield (ON)	Kars (ON)	Merivale (ON)	Richmond (ON)	Val-Paquin (QC)
Buckingham (QC)	Farm Point (QC)	Kenm⊾ ా (ON)	Metcalfe (ON)	Rideau (ON)	Vanier (ON)
Burnet (QC)	Fitzroy Harbour (ON)	Ki. maurs (ON)	Mohr Corners (ON)	Rupert (QC)	Vars (ON)
Cantley (QC)	French Hill (ON)	∵nburn (ON)	Munster (ON)	Russell (ON)	Wakefield (QC)
Carlsbad Springs (ON)	Galetta (ON)	Kirks Ferry (QC)	Navan (ON)	Ruthledge (QC)	Watterson Corners (ON)
Carp (ON)	Gatinear (Q、)	La Pêche (QC)	Nepean (ON)	St-François-de-Masham (QC)	Wilson's Corners (ON)
Carsonby (ON)	Glen Almon, ' (QC)	Lac-des-Loups (QC)	North Gower (ON)	St-Louis-de-Masham (QC)	Woodlawn (ON)
Cascades (QC)	Gl ncairn ( ON)	Lac-McGregor (QC)	North Onslow (QC)	St-Onge (QC)	Woodridge (ON)
Chelsea (QC)	Cieneagie (QC)	Lascelles (QC)	Old Chelsea (QC)	St-Pierre-de-Wakefield (QC)	Wyman (QC)
			Onslow Corners (QC)		

The results of this survey will be published in

"Industrial Research and Development" (Cat. No. 88-202-XIE) and "Science Statistics" (Cat. No. 88-001-XIE).

http://www.statcan.ca/cgi-bin/downpub/freepub.cgi?subject=193#193

## THANK YOU FOR YOUR CO-OPERATION

## **Questions:**

Science and Technology Survey Section Science, Innovation and Electronic Information Division Statistics Canada Tel: 1-866-824-5893 Email: sieidinfo@statcan.ca