



The CEA Financial Report 2019



Contents

MANAGEMENT REPORT

Implementation of the budget for the financial year	p. 1
Income	p. 2
Expenditure	p. 3
Staff numbers	p. 4
Funds to cover clean-up and dismantling costs	p. 6
Purchasing management	p. 6
Outlook for 2020	p. 7

ANNUAL FINANCIAL STATEMENTS

Income statement	p. 8
Balance sheet	p. 9
Reconciliation with the budget	p. 10
Cash flow schedule	p. 11
Notes to the Annual Financial Statements	p. 12
Auditors' Report	p. 31

Management Report

1. Implementation of the budget

The CEA's management accounts for 2019 showed a surplus of €13 million in the civil sector and of €35 million in the defence sector.

	2018	2019	Variation 2019/2018 %
Civil sector			
Total income	3,325	2,975	-11
Total expenditure	3,314	3,018	-9
Balance of civil-defence flow	-82	-56	-31
Total expenditure on civil programmes	3,233	2,962	-8
MANAGEMENT BALANCE - CIVIL SECTOR	92	13	ns
Defence sector			
Total income	1,950	1,993	+2
Total expenditure	1,843	1,902	+3
Balance of civil-defence flow	82	56	-31
Total expenditure on defence programmes	1,924	1,958	+2
MANAGEMENT BALANCE - DEFENCE SECTOR	25	35	+36

(in millions of €)

2. Income

In 2019, the CEA's income was €4,968 million, down by €306 million (-6%) compared to 2018.

Much of this decrease is explained by extraordinary transactions in 2018 to partly pay off the CEA's debt to ORANO Cycle (€541 million), by disposing of shares in ORANO Cycle and FT1CI and using extraordinary income from the State (paid in 2017 and 2018).

After offsetting these extraordinary transactions, the CEA's 2019 income increased by €235 million compared to 2018, mainly due to an increase in the subsidies for the defence sector (up by €179 million) and to a lesser extent the civil sector (Investment for the Future programme up €57 million and ITER project up €17 million).

The civil subsidy accounts for 45% of civil income and the defence subsidy for 92% of defence income.

Under France's Investment for the Future Programme, €169 million was paid to the CEA in 2019 for the Jules Horowitz Reactor (JHR), the ASTRID Gen IV programme and R&D on high-performance computing.

	2018		2019		Variation 2019/2018 %
	in millions of €	%	in millions of €	%	
Civil sector					
Subsidies other than under Investment for the Future Programme or for ITER	1,033	31	1,034	35	+ 0
ITER subsidy	133	4	150	5	+ 13
Investment for the Future subsidy	112	3	169	6	+ 51
External income	874	26	835	28	- 4
Funds for civil and defence clean-up operations	1,115	34	679	23	- 39
Use of CSA* funds	4	0	3	0	- 29
Carried over from previous year	55	2	105	4	ns
TOTAL CIVIL SECTOR	3,325	100	2,975	100	- 11
Defence sector					
Subsidy	1,653	85	1,831	92	+ 11
External income	72	4	78	4	+ 9
Funds for defence clean-up operations	160	8	58	3	- 64
Carried over from previous year	66	3	25	1	- 61
TOTAL DEFENCE SECTOR	1,950	100	1,993	100	+ 2

* CSA: Complementary Safety Assessments

a. Changes in State subsidies

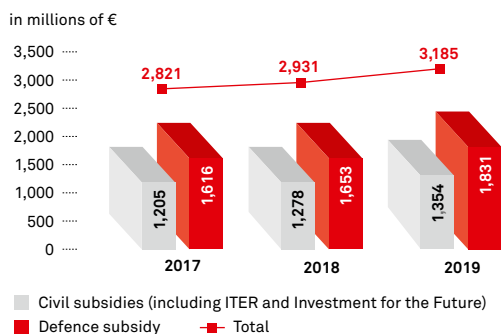
Civil sector:

The €75 million increase in civil subsidies between 2018 and 2019 breaks down as follows:

- a more or less equivalent State subsidy (up by €1 million) excluding funds under the Investment for the Future Programme and for ITER,
- an increase in the ITER subsidy of €17 million,
- an increase of €57 million in credits under the Investment for the Future Programme, which breaks down into increases of €51 million for the JHR project and €10 million for high-performance computing and a decrease of €4 million for ASTRID, since 2019 marked the end of the ASTRID project launched under the first Investment for the Future Programme.

Defence sector:

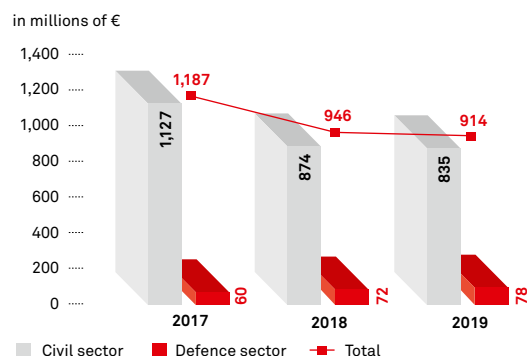
The 11% increase in the subsidy from 2018 to 2019 is linked to funds needed for various stages of progress on projects.



b. Changes in external income by sector

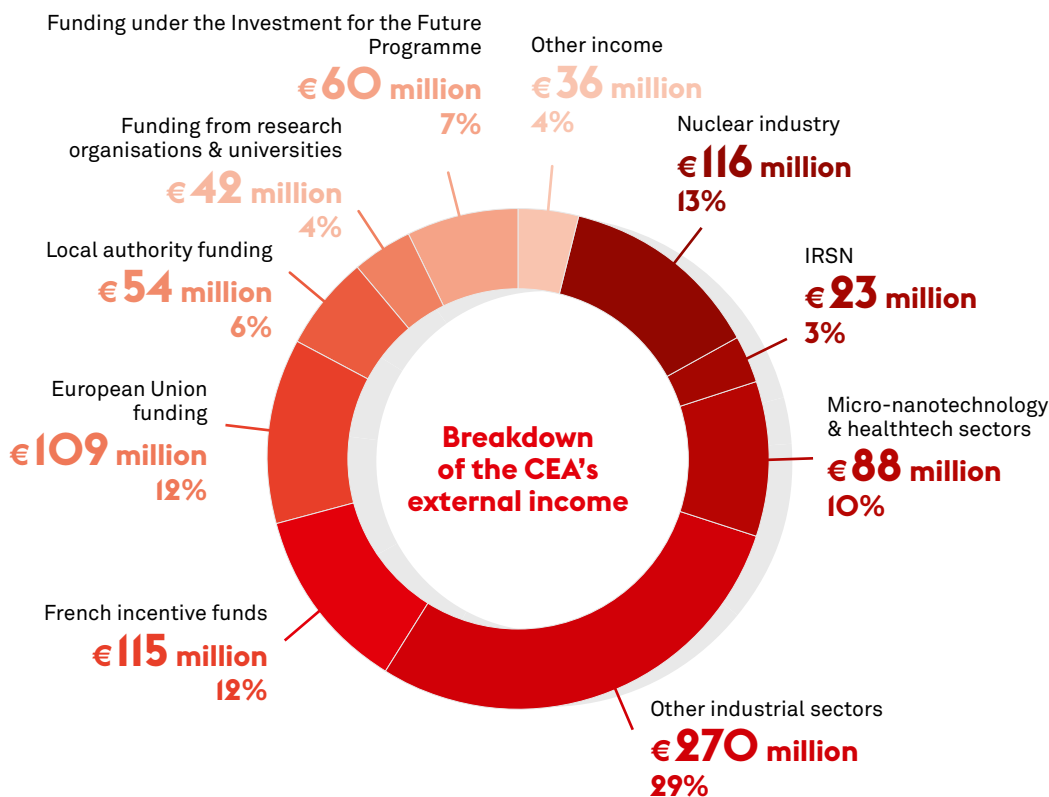
Total external income decreased by 3.4% between 2018 and 2019, with a 4.4% drop for the civil sector and a 9.2% increase for the defence sector. External income includes funding from industrial partners, local authorities, the European Union, French incentive funds, the Investment for the Future Programme (except where the CEA is the direct operator) and other research organisations.

Total income from industry fell by €30 million between 2018 and 2019, mainly due to a reduction in funding from industrial partners for construction of the JHR; other industrial income remained stable overall despite increases or decreases on the part of different partners.



c. External income by type of partner

External income comes from industrial partners (55%), and institutional partners (45%).



3. Expenditure

In 2019, CEA expenditure was €4,920 million, i.e. €237 million less than in 2018.

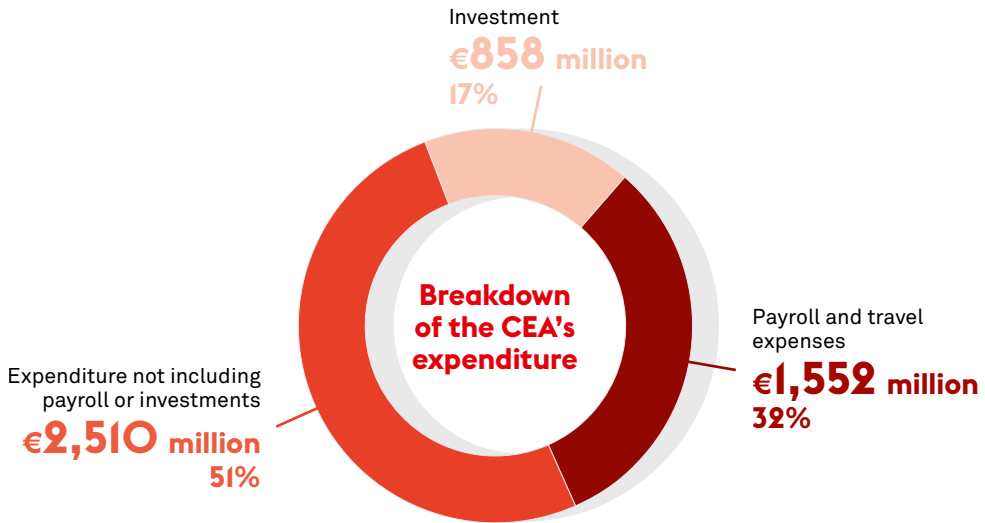
This decrease is primarily related to the extraordinary transactions that occurred in 2018 and 2019 to repay the CEA's debt to ORANO Cycle:

- at the end of 2018, €541 million was paid to ORANO Cycle,
- at the end of 2019, the debt balance was paid off (€177 million), as required by the Addendum to the 2004 Memorandum of Understanding signed with ORANO at the end of 2018.

After offsetting the impact of both these transactions, expenditure increased by €127 million between 2018 and 2019. This increase breaks down as follows:

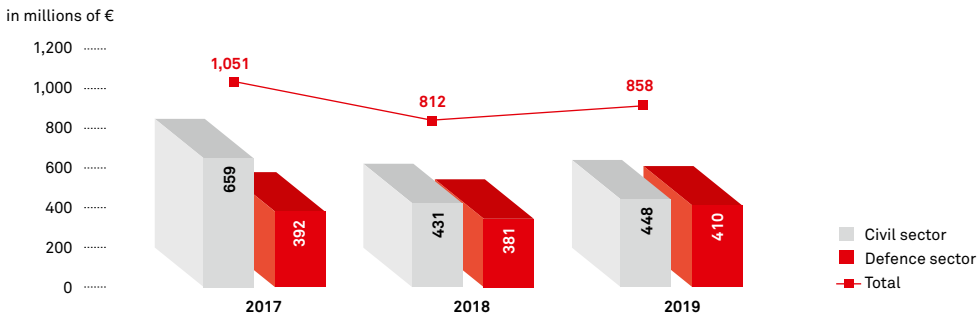
- an increase of €136 million in defence sector expenditure, excluding dedicated funds, in line with progress on programmes developed by the CEA's Military Applications Division (DAM);
- an increase of €47 million in civil sector expenditure, excluding dedicated funds, consisting of €16 million on the ITER project, €29 million on large projects (JHR, Astrid), €6 million on very large research infrastructure projects and €4 million less on other expenses;
- a reduction of €56 million in expenditure from funds set aside to cover end-of-cycle costs.

	2018		2019		Variation 2019/2018 %
	in millions of €	%	in millions of €	%	
Civil sector					
Payroll and travel expenses	1,144	35	1,134	38	- 1
Expenditure not including payroll or investments	1,740	54	1,437	49	- 17
Investments	431	13	448	15	+ 4
Balance of civil-defence flow	- 82	- 3	- 56	- 2	- 31
TOTAL CIVIL SECTOR	3,233	100	2,962	100	- 8
Defence sector					
Payroll and travel expenses	417	22	418	21	0
Expenditure not including payroll or investments	1,045	54	1,073	55	+ 3
Investments	381	20	410	21	+ 8
Balance of civil-defence flow	82	4	56	3	- 31
TOTAL DEFENCE SECTOR	1,924	100	1,958	100	+ 2



The structure of 2019 expenditure shows an increase in investments compared to 2018, particularly related to the progress of the JHR project.

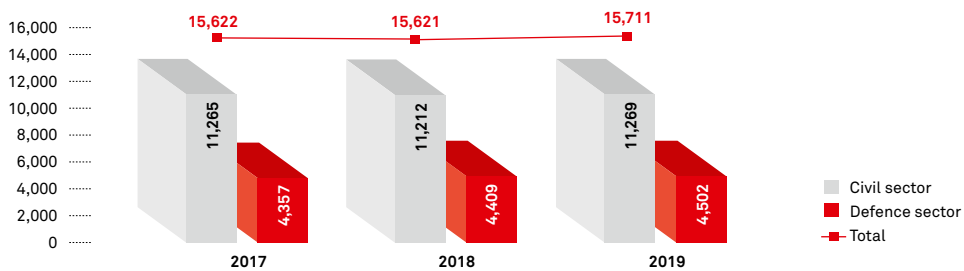
Investments



4. Staff numbers

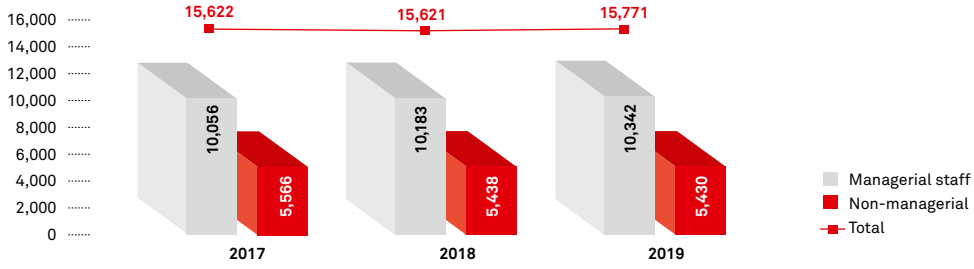
a. Changes in staff numbers by sector

In 2019, the CEA had a workforce of 15,771 FTE on permanent employment contracts, with 11,269 in the civil sector and 4,502 in the defence sector. The overall increase of 150 FTE compared to 2018 breaks down to increases of 57 FTE in the civil sector and 93 FTE in the defence sector.

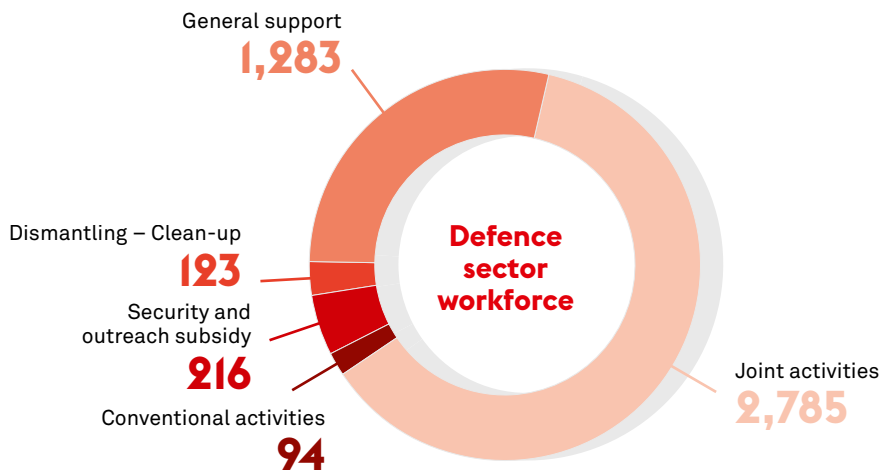
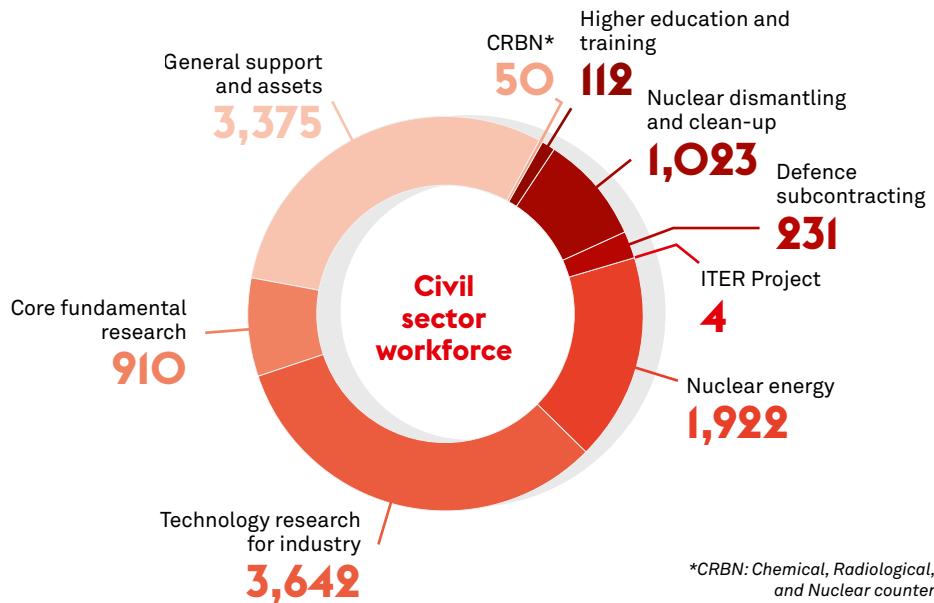


b. Changes in workforce by status

Managerial staff account for 65.6% of the workforce, slightly more than in 2018 (up by 0.6%).



c. Workforce by field in each sector



5. Funds to cover clean-up and dismantling costs

On 31 December 2019, the discounted value of funds committed for end-of-cycle operations came to €16,865 million and provision for retrospective adjustment of the Cigeo contribution was €16 million, a total of €16,881 million at discounted value. These commitments are covered by the dismantling funds under the Framework Agreement¹ to the amount of €16,733 million. The sum of €78 million as on 31 December 2018 representing the share payable by the State for non-recoverable VAT on civil facility projects was reassigned in 2019 to the Framework Agreement dismantling funds.

RECEIVABLES (IN MILLIONS OF €)	31.12.2019	31.12.2018	LIABILITIES (IN MILLIONS OF €)	31.12.2019	31.12.2018
Claims on the State	17,143	17,096	Provisions for end-of-cycle operations	16,865	16,727
of which Framework Agreement funds	17,143	17,018	of which Framework Agreement funds ¹	16,717	16,541
excluding above funds	-	78	Funds covering new civil facilities	21	22
Claims on the State relating to CIGEO financing adjustment	16	16	Funds covering new defence facilities	127	86
Dismantling assets Third parties	19	5	State	-	78
AREVA shares	-	-	Provision for CIGEO adjustment	16	16
WCR and liquid assets	- 257	- 338	TOTAL	16,881	16,743
TOTAL	16,921	16,779			

¹ On 31 December 2018, the former civil and defence funds were merged for accounting purposes

The above liabilities are covered by several types of receivable:

- a claim on the State worth €17,159 million;
- income from IRSN and the UK government of €7 million and €12 million respectively;
- a cash position of -€257 million, relating to WCR

and liquid assets including unrealised gains, which includes the CEA's advance to repay the balance of the ORANO Cycle debt (-€153 million).

On this basis, the CEA's receivables-to-liabilities coverage ratio was 100.2% as on 31 December 2019.

6. Purchasing management

Roughly half of the CEA's budget is spent on purchasing. As a public operator, the CEA must abide by the principles of free access to public procurement contracts, equal treatment of economic operators, and transparent procedures laid down by European Community legislation (Directive 2014/24/EU of 26 February 2014) and transposed into French law. These principles seek to guarantee efficient purchasing and proper use of public funds. CEA purchasing activities are subject to a regulatory framework comprising the French Public Procurement Code and its implementing instruments (orders and opinions). The Public Procurement Code came into force on 1 April 2019.

In terms of official oversight, an Advisory Committee for Procurements and Contracts, which is independent of the CEA, was set up by the Order of 6 December 1952 (amended). This Committee examines the CEA's major draft contracts and framework agreements against certain thresholds defined in the Order mentioned above. It publishes an annual activity report that is examined by the Audit Committee of the CEA's Executive Board, which reports its findings to the Executive Board. In 2019, 329 contracts worth a total of €1981.9 million were referred to the Advisory Committee's Chairperson for ex-ante examination. A further 414 procurement

procedures subsequently eligible for review, worth €248.8 million, were also examined. The opinions and recommendations issued by the Advisory Committee help to make the CEA's purchasing process more efficient and improve its procurement procedures. The Advisory Committee benefited from the implementation of a digital document exchange platform to facilitate interaction, including with its Chairperson, the Advisory Committee members and rapporteurs, and the examination of case files. The CEA's programmes are often highly complex. It therefore works to improve its contract drafting process by anticipating any endogenous or exogenous contingencies that might affect contract performance. This approach makes it possible to establish contract solutions designed to limit the need for amending contracts, and thereby ensure better control over project lead times and costs at completion. Suppliers are regularly reviewed to check that their skills and capabilities meet the CEA's strict requirements regarding safety and security, especially in the field of clean-up and dismantling in the nuclear industry.

According to Decree No. 2016-311 of 17 March 2016 relative to the organisation and operation of the French Alternative Energies and Atomic Energy Commission, the CEA is required (in paragraph 4) to contribute to boosting

France's competitiveness through technological development and the transfer of knowledge, skills and technology to industry, especially at regional level, and to transferring the results of its scientific research to industry. To this end, the CEA seeks to enable as many small and medium-sized businesses as possible to participate in the tendering process. Such economic operators are often highly innovative, and the CEA helps to stimulate this innovation capacity in order to meet its needs, thereby also meeting the French government's objectives for encouraging innovative growth. In 2019, the CEA awarded approximately 28% of its procurement contracts, worth around €750 million, to small and medium-sized businesses or to mid-caps. In 2010, the CEA committed itself to responsible relations with suppliers, by signing the "Relation fournisseurs responsables" (responsible supplier relations) charter.

Article L. 2111-1 of the Public Procurement Code requires that the nature and scope of needs must be precisely defined prior to the launch of procurement procedures, and that they take account of sustainable development goals in all their economic, social and environmental aspects.

The CEA has therefore undertaken to gradually improve its economic, environmental and social performance at the various stages of the procurement process wherever circumstances permit. In 2017 the CEA drew up a responsible procurement policy, which is reflected in the *framework to promote socially and environmentally responsible procurement by the CEA in accordance with Article L-2111-3 of the Public Procurement Code, published on the cea.fr website. The framework is*

monitored by means of quarterly indicators. In 2019, around 14% of contracts included environmental or social provisions.

The CEA's Purchasing and Strategic Partnerships Division also works constructively with the French government Directorate of Public Procurement (DAE), going well beyond its statutory obligations towards the DAE as a public body.

Under the DAE's procurement action plan, the CEA makes a significant contribution to the procurement performance of public bodies.

The CEA has adopted the State platform for paperless procurement processes (PLACE), which is operated by the DAE.

In December 2019, the Purchasing Division also installed a national computerised contract management tool (SAGA) adapted to the CEA's operational and statutory requirements. It facilitates procurement forecasting and planning, monitoring of the progress of procedures and purchasing sign-off circuits, and managing documents for audits and supplier evaluation. After a year establishing its use in 2020, it will become the purchasing contract reference database.

Under a permanent procurement pooling consortium agreement, the CEA can also take part in contracts initiated by the DAE, as well as other inter-ministerial contracts. For instance, it has taken an interest in contracts for assisting project owners and managers in IT service provision.

The CEA has been invited by the DAE a number of times to share information on its procurement procedures and performance assessment with some of the State's other public operators.

7. Outlook for the 2020 CEA Budget

In the CEA's budget for 2020, funding is down by 1.3% from the 2019 budget.

The State subsidy in the 2020 budget, including funding under the Investment for the Future Programme, accounts for 67% of all income, a 3.9% increase on the 2019 budget, mainly because of the needs of the 2020 programme of defence projects. External income is expected to be down 4.0% on the 2019 budget, with a reduction in particular in the funding expected under the Investment for the Future Programme, in line with the end of several Labex and Equipex projects. The two dismantling funds, one for civil and one for defence facilities, will account for 15% of the CEA's total income.

Expenditure in the civil sector is expected to fall by 5.5% compared to the 2019 budget, the higher expenditure in the 2019 budget compared to the 2020 budget mainly being due to the repayment of the CEA's debt to ORANO Cycle.

Payroll costs for staff who come under the collective

bargaining agreement should rise by 0.9% in the civil sector compared to the 2019 budget, based on an increase in staff numbers (+1.4%).

Staff numbers in the civil sector general support branches will remain stable (-0.2%) compared to the 2019 budget.

Expenditure in the defence sector is expected to rise by 4.4% compared to the 2019 budget, related to expected progress on projects.

Payroll costs for staff who come under the collective bargaining agreement should increase by 2.1% in the defence sector, compared to the 2019 budget, based on an increase in staff numbers of 2.7%.

Staff numbers in the defence sector general support branches will remain stable compared to the 2019 budget.

The increase in staff numbers across the CEA as a whole (up by 1.4% in the civil sector and 2.7% in the defence sector) is in line with the increase in the CEA's limit on posts in 2020.

Annual Accounts

I. Income Statement

The 2019 Income Statement shows a profit of €22 million, up by €393 million on the previous financial year (-€371 million in 2018 due to the partial repayment of the ORANO debt, which led to the writing off of claims receivable from the State). This variation is therefore mainly due to an improvement in financial income (+€59 million) and extraordinary income (+€334 million). The funds set aside to cover the costs of end-of-cycle operations as required under the Framework Agreement showed income of €1 million. This is due to an increase in operating income (+€5 million) linked to write-backs of provisions on completed projects (particularly STEMA), partially offset by a reduction in financial income (-€1 million) linked mainly to interest paid on the ORANO debt (€5 million) and to write-backs of provisions on investment securities (€3 million), and by a reduction in extraordinary income (-€3 million) due to the liquidation of a venture capital unit fund. The repayment of the CEA's debt to ORANO Cycle at the end of 2019 has no impact on the income statement but is reflected in the fund's balance sheet by a debt of €153 million on the CEA's general budget.

The balances of the civil and defence funds for new facilities were +€5 million and -€15 million respectively. The +€5 million in the "New Civil Facilities" (INC) fund mainly reflects the INC fund's financial result, which had financial income (financial income and write-backs of provisions on investment securities) slightly greater than its financial expenses (allocations to provisions resulting from non-application of discounts for the past year and discounting of provisions, interest). The -€15 million in the "New Defence Facilities" (IND) fund is the result of an operating loss (-€20 million) linked to the commissioning of facilities in 2019 (LMJ, EPURE), partially offset by a slightly positive financial result (+€5 million).

• General budget (excluding carry-overs).....	€29 m
• Funds set aside under the Framework Agreement ..	€1 m
• New Civil Facilities (INC).....	€5 m
• New Defence Facilities (IND)	-€15 m
• ITER	€1 m
• DSND1/I2EN	€1 m
• DDCG	-€ m
• AFNI	-€ m
• IRT	-€ m
	Soit au total + €22 m

The management figures for the general budget excluding carry-overs (€29 million) include the change in provisions for paid leave (-€10 million) and the change in provisions for time savings accounts (CET – *Compte Epargne Temps*) (-€5 million).

¹ DSND: Representative in charge of nuclear safety and radiation protection for defence-related activities and facilities.

	Reference Notes	2019	2018
Sales		15	12
Building works		271	286
Provision of services		192	179
INCOME	NOTE 3	478	477
Production added to inventory		136	45
Capitalised production		16	28
Budgeted operating income	NOTE 4	2,459	2,362
Write-backs of provisions	NOTE 8	738	779
Write-backs of equipment grants	NOTE 9	538	491
Other income		94	99
OPERATING INCOME		4,459	4,281
Year's expenditure	NOTE 5	- 2,088	- 2,025
Taxes, duties and similar payments	NOTE 6	- 232	- 222
Staff costs	NOTE 7	- 1,506	- 1,486
Allocations to depreciation and provisions	NOTE 8	- 619	- 538
Share of profits from joint operations	NOTE 10	-	-
Other expenditure		- 11	- 7
OPERATING EXPENDITURE		- 4,456	- 4,278
OPERATING INCOME/LOSS		3	3
Financial income		1,177	1,033
Financial expenses		- 1,162	- 1,077
NET FINANCIAL INCOME (LOSS)	NOTE 11	15	- 44
INCOME (LOSS) FROM OPERATIONS		18	- 41
Extraordinary income		38	371
Extraordinary expenses		- 34	- 701
EXTRAORDINARY INCOME (LOSS)	NOTE 12	4	- 330
CORPORATE INCOME TAX		-	-
NET INCOME (LOSS)		22	- 371

(in millions of €)

2. Balance sheet

Assets	Reference Notes	Amount as on 31.12.2019	Excluding dedicated funds	Dedicated funds	Amount as on 31.12.2018
INTANGIBLE FIXED ASSETS					
Gross amounts	NOTE 13	357	357		342
Depreciation		- 271	- 271		- 265
TANGIBLE FIXED ASSETS					
Other tangible assets	NOTE 13				
Gross amounts		16,391	16,391		15,644
Depreciation		- 8,077	- 8,077		- 7,683
DISMANTLING ASSETS - THIRD PARTIES	NOTE 14	7		7	5
FINANCIAL FIXED ASSETS					
Gross amounts	NOTE 15	210	210		212
Provisions					
FIXED ASSETS					
Gross amounts		16,965	16,958	7	16,203
Depreciation and provisions		- 8,348	- 8,348	-	- 7,948
NET AMOUNTS		8,617	8,610	7	8,255
INVENTORY AND WORK-IN-PROGRESS					
Gross amounts	NOTE 16	6,533	6,533		6,340
Provisions		- 17	- 17		- 17
NET AMOUNTS		6,516	6,516		6,323
ADVANCE PAYMENTS PAID ON ORDERS					
		28	28		47
OPERATING RECEIVABLES					
Gross amounts		844	825	19	875
Provisions		- 44	- 44		- 53
NET AMOUNTS		800	781	19	822
CLAIMS ON THE STATE	NOTE 18	17,159		17,159	17,112
MISCELLANEOUS RECEIVABLES	NOTE 19	722	711	11	734
CASH BALANCES AND SECURITIES					
Gross amounts	NOTE 20	207	52	155	285
Provisions		-	-	-	- 9
NET AMOUNTS		207	52	155	276
OTHER					
		22	22		21
FOREIGN EXCHANGE GAINS					
		-			-
REDUCTION IN CLAIMS ON THE STATE					
		-			-
GENERAL TOTAL		34,071	16,720	17,351	33,590

(in millions of €)

Liabilities	Reference Notes	Amount as on 31.12.2019	Excluding dedicated funds	Dedicated funds	Amount as on 31.12.2018
Special reserves	NOTE 21	14,941	13,948	993	14,547
Equipment grants received from third parties		1,305	1,305		1,187
Balance carried forward from previous financial years	NOTE 22	- 1,316	- 317	- 999	- 944
Balance for the year	NOTE 22	22	31	- 9	- 371
EQUITY CAPITAL		14,952	14,967	- 15	14,419
PROVISION FOR LIABILITIES AND CHARGES	NOTE 23	17,002	121	16,881	16,868
FINANCIAL DEBTS					
		173	173		225
ADVANCE PAYMENTS RECEIVED ON ORDERS					
		26	26		35
OPERATING PAYABLES					
		1,178	1,178		1,310
MISCELLANEOUS PAYABLES					
		675	675		655
OTHER		65	30	35	78
RECIPROCAL TRANSACTIONS ON DEDICATED FUNDS - CEA					
			- 450	450	
FOREIGN EXCHANGE LOSSES					
		-			-
INCREASE IN CLAIM ON THE STATE					
OVERALL TOTAL		34,071	16,720	17,351	33,590

(in millions of €)

The loss carried forward once again (-€1,316 million) is primarily due to management of the Framework Agreement dedicated funds, which initially produced a financial imbalance when they were set up.

3. Budget reconciliation

The accounting result for the financial year (operations and investment) and the budget balance are reconciled after eliminating non-budgeted transactions by type (change in supply inventories, allocations to and write-back of depreciations, allocations to and write-back of provisions on inventory, certain extraordinary expenses/income, write-back of equipment grants, capitalised production) and offsetting the supplementary budgets, funds for dismantling, the IRT, the AFNI (Agence France Nucléaire International), the DSND, DDCG, I2EN and ITER France Agency.

The 2019 budget balance shows a profit of €43 million not including carry-overs from previous financial years.

BUDGET EXPENDITURE	Total expenses (A)	Of which non-budgeted transactions (B)	Of which ancillary budgets (C)	Of which DSND (D)	Of which DDCG (E)	Of which AIF (F)	Of which dedicated funds (G)	Of which FNI (H)	Of which I2EN (I)	Of which IRT (J)	Total budgeted expenditure (A)-(B)-(C)-(D)-(E)-(F)-(G)-(H)-(I)-(J)
OPERATING ACTIVITIES (EXCL. VAT)	-	-	-	-	-	-	-	-	-	-	-
OPERATING EXPENDITURE	-	-	-	-	-	-	-	-	-	-	-
Purchases from third parties over the tax year	2,088	- 55	4	2	-	148	1	-	-	1	1,987
Taxes, duties and similar payments	232	-	-	-	-	-	-	-	-	-	232
Staff costs	1,506	14	3	4	1	2	-	-	-	-	1,482
Allocations for depreciation and provisions	619	546	-	-	-	-	39	-	1	2	31
Other expenditure	11	-	-	-	-	-	-	-	-	-	11
SHARE OF NET RESULTS FROM JOINT OPERATIONS	-	-	-	-	-	-	-	-	-	-	-
FINANCIAL EXPENSES	1,162	-	-	-	-	-	1,160	-	-	-	2
EXTRAORDINARY EXPENSES	34	23	-	-	-	-	3	-	-	-	8
Corporate income tax	-	-	-	-	-	-	-	-	-	-	-
ANNUAL ALLOCATION TO THE SPECIAL RESERVE	22	22	-	-	-	-	-	-	-	-	-
TOTAL FROM PROFIT AND LOSS ACCOUNT	5,674	550	7	6	1	150	1,203	-	1	3	3,753
Reassignment of expenses and income	- 56	-	-	-	-	- 151	- 8	-	-	-	103
Reassignment of Funds	-	-	-	-	-	-	686	-	-	-	- 686
TOTAL OPERATING ACTIVITIES	5,618	550	7	6	1	- 1	1,881	-	1	3	3,170
Investment activities (excl. VAT)	-	-	-	-	-	-	-	-	-	-	-
Class 1	2	-	-	-	-	-	-	-	-	-	2
Class 2: Acquisition of fixed assets	885	-	-	-	-	-	-	-	-	-	885
Class 4: Changes in advances	-	-	-	-	-	-	-	-	-	-	-
TOTAL INVESTMENT ACTIVITIES	887	-	-	-	-	-	-	-	-	-	887
OVERALL TOTAL	6,505	550	7	6	1	- 1	1,881	0	1	3	4,057

(in millions of €)

BUDGETED FUNDING	Total funding (A)	Of	Of	Of	Of	Of	Of	Of	Of	Of	Total budgeted funding (A)-(B)-(C)-(D)-(E)-(F)-(G)-(H)-(I)-(J)
		which non-budgeted transactions (B)	which ancillary budgets (C)	which DSND (D)	which DDCG (E)	which AIF (F)	which dedicated funds (G)	which FNI (H)	which I2EN (I)	Of IRT (J)	
OPERATING ACTIVITIES (EXCL. VAT)	-	-	-	-	-	-	-	-	-	-	-
OPERATING INCOME	3,089	148	6	6	1	0	1	0	1	1	2,925
Write-backs on depreciation and provisions	779	9	-	-	-	-	693	-	-	-	77
Write-backs on equipment grants and contributions received from third parties	538	536	-	-	-	-	-	-	-	2	-
Transfers of charges & other income	93	-	-	-	-	151	-669	-	-	-	611
FINANCIAL INCOME	1,176	-	-	-	-	-	1,169	-	-	-	7
EXTRAORDINARY INCOME	38	23	-	-	-	-	-	-	-	-	15
ANNUAL ALLOCATION TO THE SPECIAL RESERVE	-	-	-	-	-	-	-	-	-	-	-
TOTAL PROFIT AND LOSS ACCOUNT	5,713	716	6	6	1	151	1,194	-	1	3	3,635
Reassignment between income and expenditure	-56	-	-	-	-	-151	-8	-	-	-	103
Reassignment of funds	-	-	-	-	-	-	726	-	-	-	-726
TOTAL OPERATING ACTIVITIES	5,657	716	6	6	1	-	1,912	-	1	3	3,012
INVESTMENT ACTIVITIES (EXCL. VAT)	-	-	-	-	-	-	-	-	-	-	-
Class 1											
Changes in financial debts	1	-	-	-	-	-	-	-	-	-	1
Subsidies received from third parties during the financial year	96	-	-	-	-	1	-	-	-	-	95
National loan	106	-	-	-	-	-	-	-	-	-	106
Class 2: Movement in financial assets (receivables/ equity interests)	-	-	-	-	-	-	-	-	-	-	-
Class 4: Variation	-	-	-	-	-	-	-	-	-	-	-
Allocation of the State subsidy to the special reserve and equipment grants	886	-	-	-	-	-	-	-	-	-	886
TOTAL INVESTMENT ACTIVITIES	1,089	-	-	-	-	1	-	-	-	-	1,088
OVERALL TOTAL	6,746	716	6	6	1	1	1,912	-	1	3	4,100

(in millions of €)

4. Cash flow schedule

	31.12.2019	31.12.2018
Operating activities		
Cash from operations	-2,736	-2,170
• Carry-overs	-	29
• Changes in inventory	-187	-75
• Changes in accounts receivable including advance payments and deposits on fixed assets	535	3
• Changes in debt	-134	-785
CASH FROM OPERATING ACTIVITIES (A)	-2,522	-2,998
Investment activities		
• Proceeds from the disposal of tangible and intangible fixed assets	1	274
• Acquisition of tangible and intangible fixed assets	-917	-868
• Changes in financial assets	-2	-332
• Changes in Dismantling assets - Third Party	2	-
CASH FROM INVESTMENT ACTIVITIES (B)	-916	-926
CASH BALANCE AFTER INVESTMENT FINANCING (C = A + B)	-3,438	-3,924
Financing activities		
• Repayment of State advance	207	577
• Changes in financial debt	-1	-18
• Subsidies and contributions received from the State and third parties	3,204	2,962
CASH FROM FINANCING OPERATIONS (D)	3,410	3,521
NET CHANGE IN TOTAL LIQUIDITY (C + D)	-28	-403
Opening cash balance ^(*)	102	505
Closing cash balance ^(*)	74	102
Change in cash position ^(*)	-28	-403

^(*) incl. investment securities

(in millions of €)

5. Notes to the Annual Financial Statements

A – ACCOUNTING METHODS AND PRINCIPLES

Note 1 – General framework

• Status of the CEA

The provisions of Order No. 2004-545 of 11 June 2004 – incorporated in Articles L. 332.1 to 332.7 of the Research Code – which repealed Order No. 45-2563 of 18 October 1945, confirm that the CEA, the French Alternative Energies and Atomic Energy Commission, is a scientific, technical and industrial establishment with legal personality and administrative and financial autonomy, which falls within the category of public institutions with industrial and commercial activities (EPIC). The CEA is also authorised to conduct its own financial management and to present its accounts in accordance with business rules and practices.

• Operation of the CEA

In addition to the Order of 2004 and the provisions of the Order of 1945 which have been provisionally upheld, the operation of the CEA and its relations with the State are defined in various texts, in particular Decree No. 70-878 of 29 September 1970 and its implementing Decree No. 72-1158 of 14 December 1972.

In accordance with the Letter of Engagement of the CEA's Chairman signed by the Prime Minister on 20 April 2015 and the decisions made by the President of the French Republic at the meeting of the Nuclear Policy Council of 8 July 2015, Decree No. 2016-311 of 17 March 2016 pertaining to the organisation and operation of the CEA was adopted and published. This Decree aimed to:

- reform governance of the CEA to enhance strategic oversight of the organisation by its supervisory bodies,
- clarify the CEA's tasks and responsibilities,
- revise existing texts in order to simplify and coordinate with other research bodies.

• Key events of the financial year 2019

- In December 2018, the CEA and ORANO Cycle signed a second Addendum to the Memorandum of Understanding on the transfer to Cogema of liabilities relative to future clean-up and dismantling operations at the La Hague site and the CFCa facility at Cadarache, signed on 22 December 2004, which provided for early repayment by the CEA of the full debt owed to Orano Cycle by 31 December 2019. In 2018, the CEA made an early repayment of the sum of €541 million excluding VAT, which included a €25 million penalty payment. In 2019, the CEA repaid the balance of its debt, amounting to €172 million excluding VAT, without additional dedicated funds, by using short-term bank financing.
- The audit conclusions concerning the 2018-2027 medium and long-term plan on clean-up and dismantling were delivered in October 2019. Overall they validated the robustness of the data. The main recommendations concern methodological improvements, organisational adjustments and better reporting both internally and to the CEA's supervisory bodies.

- A €740 million subsidy was paid by the State to finance spending from the dedicated funds set up under the Framework Agreement.
- The claim on the State, which covers clean-up and dismantling liabilities from before 1 January 2010, was €1,7159 million at the end of 2019, compared to €1,7112 million at the end of 2018. This claim incorporates the effects of (i) accretion and the lower discount rate for the total sum of €305 million, (ii) budgeted credits paid by the State for the total sum of -€740 million, and (iii) revisions of estimates and payment schedules for the sum of -€462 million.
- Provisions relative to end-of-cycle costs (old and new funds) were €16,881 million at year closing, compared to €16,743 million at the end of 2018. The variation in provisions for end-of-cycle costs (+€138 million) is mainly due to (i) the effects of accretion and the lower discount rate (+€303 million), based on a discount rate reduction from 3.97% to 3.75% and a reduction in the forecast inflation rate from 1.65% to 1.32%, (ii) estimate revisions and commissioning operations at the end of 2019 (+€812 million), (iii) payment schedule revisions (-€304 million) and (iv) work done during the financial year (-€693 million).
- The assumptions used by the CEA to calculate staff-related commitments as at 31 December 2019 are as follows: a discount rate of 0.50% compared to 1.50% in 2018 and a forecast inflation rate of 1.50%, which is the same as in 2018.
- A study was launched in 2018 with the State on the Jules Horowitz Reactor, to assess the different scenarios relating to the future of this investment. The Prime Minister confirmed at the Atomic Energy Committee meeting in May 2019 that the project would continue, provided that the CEA deployed a plan in liaison with the nuclear industry stakeholders to bring the project under control. A project director, who would report to the Chairman, was appointed. The project funding was provided by an additional contribution to the CEA from industry and the State. Within this framework, a new agreement was signed between the ANR and the CEA in December 2019, which allocated €599 million in project funding under the Investment for the Future Programme. The first payment of €106 million was received in 2019.
- Following the observations made by the CEA's supervisory authorities in their letter of December 2018, primarily regarding the final state of facilities, the CEA will incorporate these impacts, which may be significant and which have, until now, been mentioned in the Notes, in its 2020 and subsequent accounts.

Note 2 – Accounting methods and principles

• General principles

The CEA's Annual Financial Statements are drawn up using the methods and principles set out in the general chart of accounts in accordance with Regulation No. 2014-03 of the French Accounting Standards Authority (ANC), as ratified by the Order dated 8 September 2014 and published in the Official Journal of the French

Republic on 15 October 2014. Exemptions have been allowed, if, in the valuation of certain assets and liabilities and their calculation, the application of the accounting regulations stipulated by these texts has been deemed unlikely to produce a true representation of the business and assets, given their specific nature (inventory and work-in-progress) or their financing method.

Funds received at the end of the financial year, intended for the funding of services that have not yet been performed, are entered under “Budgeted operating income”, and then placed in the “Special reserves” account.

Similarly, if, after appropriation of funds, the balance of transactions for the financial year exceptionally results in a negative balance, including in the event of cancellation of grants recorded over the financial year, in circumstances that do not allow a corresponding reduction in expenditure, because of commitments already performed, this balance is allocated to “Special reserves”.

• Accounting methods and principles applying as at year-end

a) Intangible assets

Intangible assets include patents and licences acquired, which are depreciated over the useful life of said assets or according to their likely conditions of use. These conditions correspond to the straight-line method and the depreciation rates applied to these asset categories, not exceeding a period of five years. They also include the pre-financing of Andra investments for the acquisition of waste disposal rights, for which depreciation is calculated in proportion to the actual use of these rights, compared to the reserved volume.

Research and development costs, whatever their outcome, are treated as expenditure for the financial year.

b) Tangible assets

Tangible assets are valued at the historical acquisition cost or production cost, excluding financial charges and administrative costs.

The CEA applies the component approach for each of its major investments.

Tangible assets are subject to depreciation schedules determined on the basis of their useful life, or their likely conditions of use. These conditions correspond to the straight-line method and the depreciation rates normally applied to these asset categories.

Depreciations entered under the “Land” line correspond to depreciation of developments on these investments.

The key depreciation periods applied are as follows:

- Buildings20 years
- Light constructions 10 years
- Technical installations 10 to 30 years
- Equipment and tools 3 to 10 years
- Transport equipment 4 years
- Furniture, office, and IT equipment 3 to 10 years

Investment subsidies received for the purchase of fixed assets are recorded under the heading “Equipment grants received from the State” or “Equipment grants received from third parties”.

c) Dismantling assets - third parties

The share of provisions for end-of-cycle operations corresponding to funding expected from third parties (IRSN) is entered under “Dismantling assets - third parties”.

These assets are valued symmetrically with the corresponding provisions, on discounted bases (see Note k (2)).

d) Financial assets

Financial assets are valued at their historical cost. Their book value is calculated on the basis of the share of the net worth of the subsidiary on the accounting date. A provision is set aside when this inventory value, calculated on a share-by-share basis, is lower than the historical cost.

e) Inventory

Inventories of raw materials, basic materials, and strategic materials are valued at their estimated weighted average cost.

Inventories of consumable materials are valued at their weighted average cost.

Work-in-progress, goods-in-process and finished products are valued at their cost price. Cost price corresponds to the purchase cost of goods and services or the production cost excluding overheads and financial charges.

For presentation purposes, the value applied to weapons systems and resources made available to the Armed Forces is the value of the materials alone, which will ultimately be recovered by the CEA.

As these materials were procured and funded under specific programs, they cannot be converted into realisable or disposable assets and do not give rise to any depreciation.

Inventories of consumable materials and basic materials are considered used once they have been made available to the end user, or have entered the reactor, or become part of a cycle involving exposure to radiation.

At the end of the financial year, the value of inventories of consumable materials is assessed on the basis of their value in use or the utility value of the materials.

f) Claim on the State

Under the provisions of Amendment 1 to the State/CEA Framework Agreement on the financing of the CEA's long-term nuclear costs, the total amount of the claim on the State as on 31 December 2019 was established (€17,159 million).

The accounting implications of this Agreement are explained in Note 18.

g) Impairment of trade receivables

Impairments are valued on a case-by-case basis according to the assessment of the risk involved.

Unless duly justified, a provision will be recognised on 31 December for any receivables still outstanding six months after their due date for which a provision has not yet already been made.

h) Investment securities

Investment securities are recorded in the balance sheet at their acquisition cost. Furthermore, as at the closure date, any unrealised gains or losses are calculated on the basis of the last known net asset value of the units or shares, in the case of UCITS, and, in the case of bonds, on the basis of the last rate for December. A provision is made for unrealised losses recorded at the end of the financial year.

i) Budget subsidy received from the State

The budget subsidy awarded by the State is entered under “Equipment grants”, “Special reserves” or “Budgeted operating income” depending on the nature of the expenditure it is being used to cover. Since the CEA’s activities are of national importance, these resources are allocated first and foremost to cover ongoing requirements, and the balance is used to finance net operating expenditure over the financial year.

The amount entered under “Equipment grants” corresponds to the residual value of intangible and tangible fixed assets, excluding non-budgeted transactions concerning advances and deposits paid on orders for fixed assets.

The amount entered under “Special reserves” mainly represents the financing of financial assets and inventories.

The amount entered under “Budgeted operating income” represents the share of the funds received from the State allocated to net operating expenditure over the financial year.

j) Equipment grants received from the State and third parties

These grants are recognised in the income statement according to the estimated life or duration of service of the fixed assets that they have helped to finance.

k) Provision for liabilities and charges

A provision is created where there is an obligation towards a third party on the year-closing date that the CEA is able to estimate with sufficient reliability, whether this obligation is legal, contractual or implicit, and whether or not it is the subject of a probable disbursement to a third party. No provision is made for contingent liabilities, corresponding to an obligation that is neither likely nor definite at year closing. A note is included in the Notes if these liabilities are significant.

1. Staff-related commitments

In view of the way in which the CEA is financed, its staff commitments, consisting of retirement benefits and other post-employment commitments, are not recognised as provisions but recorded as off-balance sheet commitments, with the exception of those actually invoiced to clients, which will be provided for in a provision for charges.

2. End-of-cycle commitments

a) Funds for dismantling nuclear facilities

The provisions associated with dismantling nuclear facilities correspond to the total cost of the operation in cases where the CEA is the nuclear facility operator, or to the share attributable to it through its past involvement in a programme, or as joint operator of a facility if the CEA is not considered to be the nuclear operator. As the deterioration is immediate, these provisions are set up as soon as the facility is commissioned for operation with radioactive materials.

The corresponding share of provisions to be financed by third parties is broken down into the following categories:

- entry in an account entitled “Dismantling assets to be financed by third parties”. Such assets are not subject to depreciation, but instead are converted into accrued income for the years in which decommissioning will take place, in order to represent the amounts owed to the Fund by third parties under the agreed contractual provisions;
- future funding expected from the State is now recognised in an account entitled “Claim on the State”, in accordance with the provisions of the State-CEA Framework Agreement. The liquidity of this claim is represented by rolling three-year agreements and, since 2016, through budget credits provided to Programme 190 of the CEA’s “Research and Higher Education” activities, which enables all State funding to the CEA for nuclear facility dismantling and clean-up to be grouped together under these activities.

In a letter dated 1 December 2008, the DGEC, which is the administrative authority that oversees coverage of dismantling provisions by nuclear operators, confirmed that this asset was acceptable as a “coverage” asset as defined in Article 20 of the Act of 28 June 2006 during the transition period provided for under said Act.

Similarly, the CEA has worked on the assumption that the cash provided by this asset will meet its cash needs.

b) Assessing the cost of dismantling nuclear facilities

The methods used to assess the costs of facility dismantling are designed to produce the best estimate of the costs and lead times of operations at any given time:

- in the earliest phases, from commissioning onwards, a technical-economic model is applied to the various types of facilities to be dismantled, based on an inventory of facility equipment, and its projected radiological conditions, and on models involving scenarios and elemental cost ratios. If this initial modelling has not been completed, a basic valuation is performed, based on 15% of the investment cost, which is consistent with the ratio used by EDF following the PEON advisory committee’s study on the cost of nuclear power, for the necessary investment projects. The same method is used at the investment phase in the case of facilities to be used

- solely for end-of-cycle operations (storage facilities, etc.);
 - given the wide variety of facilities to be dismantled and the resulting differences in situations from one facility to another, assessment models are based on baseline scenarios that take into account the dismantling of standard cells defined by function (pits, ponds, fabricated equipment and piping, conduits, etc.), together with radiation and contamination levels, accessibility and the means of intervention available (existence of handling equipment, equipment for cutting inside the cell, etc.);
 - once a dismantling project is launched, studies are conducted to assess clean-up and dismantling costs with a constantly decreasing margin of error;
 - finally, once dismantling work is under way, the costs at completion are regularly reviewed, based on current purchase orders and contracts.
- Provisions relating to the dismantling of nuclear facilities and waste recovery and conditioning are set up taking the following considerations into account:
- an inventory of the cost of bringing the site to the decommissioning stage, which, unless there are particular requirements to be considered, generally involves the total, unconditional release of the site, i.e. completely eliminating any areas presenting a radioactive hazard, while keeping any structural works in place;
 - commencement of operations immediately after the final withdrawal from “production”, which means that cost estimates do not take into account any projected site monitoring costs;
 - assessment of the expenditure on the basis of projected costs, taking into account the labour of operational staff (operators), managerial staff and radiation protection staff, consumables and facilities, and management of the resulting waste including final disposal. The assessment also takes into account a share of the technical support costs of the CEA units in charge of dismantling;
 - lastly, it takes into account the financial impact of the risk analyses carried out for each project. For ongoing projects, the analysis is based on a list of contingencies and risks, and an estimation of their impact in terms of cost and time, weighted according to the probability of their occurrence. If such an analysis is not available, the CEA has adopted a macro-level approach that takes into account the difficulty of the project and the level of knowledge of the remaining work, as determined by whether or not the following stages have been reached: internal conceptual designs, preliminary design, detailed design, tendering, work initiation or completion. This is an interim approach, pending the outcomes of risk analyses. For other projects, scheduled for completion in the medium and long term, the analysis is based on operating feedback from ongoing projects according to the type of facility (reactor, laboratory, etc.) and expenditure items (management of project and works, operation, waste);

- inclusion of VAT, calculated on the basis of the current VAT rate (20% as on 31 December 2019) and the flat-rate tax coefficient.

c) Long-term management of radioactive waste packages

- Up to the end of 2014, future expenditure related to deep geological disposal was assessed at the end of each financial year, based on the quantities of high- and intermediate-level waste produced (HLW-LL and ILW-LL) as stipulated in the law of 28 June 2006, and assuming that a deep geological disposal facility will be brought into service. Under the aegis of the DGEC, a working group was set up in 2004 with representatives from Andra, EDF, AREVA and the CEA, which submitted its conclusions in the second half of 2005. The CEA performed a reasonable assessment based on the working group’s findings and, until the end of 2014, to calculate unit costs for each waste category, adopted a total estimate of €14.1 billion (under 2003 economic conditions) for the deep geological disposal facility.
- The State initiated a review process after which a revised estimate was announced in mid-January 2016 by the Ministry for Ecology, Sustainable Development and Energy, establishing the costs relating to long-term management solutions for high- and intermediate-level long-lived waste (hereinafter referred to as the “Cigeo” project) at €25 billion (under 2011 economic conditions), covering a 140-year period from 2016. This cost, which was generated in the Cigeo project preliminary design phase, replaces the 2005 estimate of €14.1 billion (under 2003 economic conditions), on which the corresponding end-of-cycle provision had been based. Promulgation of this new Cigeo baseline cost led to the CEA setting aside an additional end-of-cycle provision of €858 million at discounted net value at the end of 2015. This provision covers the entire CEA inventory at completion. The historic calculation coefficient for splitting joint costs corresponds to the most likely estimated share and remains unchanged. It also includes a share of risks and contingencies that could increase the published estimate. The Cigeo project is funded by EDF, the CEA and AREVA, according to calculation coefficients based on each organisation’s share of the projected volume of waste for geological disposal. The key factors that could influence the level of this provision are the cost of the Cigeo project, the funding calculation coefficient, compliance with planned construction schedules and the discount rate. Provisions have also been made for interim multi-purpose storage facilities, taking into account the four-year delay before the first packages will be received at the Cigeo facility (2029 instead of 2025). In addition, a review of impacts from transport issues and packaging standards was under way at year closing.
- The provisions also incorporate the share of the monitoring costs of two disposal facilities (CSM and CSA), which accept or have accepted low-level,

short-lived waste, as well as expenses connected with the removal and anticipated sub-surface disposal of low-level, long-lived waste owned by the CEA (composed of graphite and radium-bearing waste).

d) Recognising end-of-cycle obligations in the accounts

As on 31 December 2019, the CEA applied a discount rate of 3.75%, which is the cap set under the regulations (compared to 3.97% at year closing 2018) and an inflation rate of 1.32%, corresponding to forecast inflation weighted according to expenditure (compared to 1.65% at year closing 2018).

The effects of accretion over time are taken into account each year in the balance sheet as an increase in the provisions for end-of-cycle operations, offset by the “Financial expenses” entry, while the part relating to financing to be received from third parties and the State is recorded as an increase in the claim on the State, and offset against the “Financial income” entry.

The changes in the assumptions regarding changes in estimates, discount rate and schedules are recorded in the accounts as follows:

- for obligations originating from before 1 January 2010, covered by Amendment 1 to the State/CEA Framework Agreement, and subject to a revised estimate approval process, the provisions will be increased, with a corresponding increase in the Claim on the State; des révisions de devis, par une augmentation des provisions avec pour contrepartie une augmentation de la créance sur l'État ;
- for obligations originating on or after 1 January 2010, the provisions will be increased, with a corresponding entry under Expenditure. These obligations are covered by an additional contribution to the CEA, recognised as an asset, with a corresponding entry under Income.

e) Systems and equipment made available to the French Armed Forces

The analyses carried out in 2012 cleared up uncertainties, enabling the end-of-cycle provisions for that year to take into account the irradiated fuel elements from Defence facilities.

The costs of dismantling weapon systems and equipment made available to the Armed Forces are not presented in the off-balance sheet commitments, as they are met by the Armed Forces themselves. The same applies to the costs of recovering related materials considered to be necessary to the CEA's business.

f) Main sources of uncertainty and of significant risks relating to year closing and contingent liabilities

The additional provisions entered in the accounts at year closing 2017 have made the provisions substantially more robust.

Nonetheless, the CEA remains exposed to certain

risks and uncertainties mentioned in the Notes to the financial statements, and which are recapped below. Such risks and uncertainties are chiefly due to the fact that the CEA facilities being dismantled and cleaned up are very old and have specific requirements due to the research activities carried out at them.

Recap of the main sources of uncertainty and of significant risks relating to year closing and contingent liabilities, as mentioned in the Notes to the CEA's Financial Statements.

The valuations used for the end-of-cycle provisions are the CEA's best estimates at the time of closing the accounts of the funds that will be required to fulfil its current and future facility dismantling and clean-up obligations (including waste recovery and conditioning).

Moreover, some of its obligations are likely to lead to disbursements, but given the information available at the time of closing, the CEA is unable to make a reliable estimate of their cost. Other obligations (contingent liabilities) are only potential by nature, and their existence will be recognised only if one or more uncertain future events occur, events which will not be totally under the CEA's control.

The end-of-cycle cost estimate thus includes significant uncosted uncertainties that need to be mentioned in the Notes to the Financial Statements, since they are inherent to the planned duration of operations (several decades). The main reasons are as follows:

- **inadequate knowledge of the initial state:** detailed knowledge of the physical condition of some older facilities sometimes requires supplementing with radiological inventory and characterisation studies, which will only become possible at future stages of dismantling. Dismantling scenarios need to be adapted as and when knowledge of the facilities and associated sites progresses (in particular the level of soil remediation required);
- **safety requirements and changes in the regulations:** safety, security and environmental protection requirements established by the government and the safety authorities may change, impacting work schedules and operations;
- **changes in the definition of final state:** the targeted final state of facilities and sites to be dismantled may change in line with requirements set by government and the safety authorities;
- **changes in the dates at which waste disposal facilities become available, and in disposal costs or waste conditioning specifications:**
 - the estimated future costs relating to the deep geological disposal of high- and intermediate-level waste is currently based on the French government's costing of €25 billion (under 2011 economic conditions) made in mid-January 2016, and based on preliminary designs. This estimate includes a

provision for risks and contingencies. Additional costings are currently being drawn up with regard to transport and logistics. Risks and uncertainties remain concerning the acceptability of packages, how the cost will be split between producers, and any potential future changes in the cost estimates and work schedule;

- end-of-cycle operations at nuclear facilities require ongoing coordination and negotiation between the various waste producers, in order to coordinate their individual scenarios with the financial needs, transport capabilities and the physical capacity of the waste disposal facilities to receive waste packages. The CEA may have to revise its own scenarios due to such constraints;
- the scope and conditions of future waste management by Andra at its LLW-LL and Cigeo disposal facilities.
- **financial resource planning:**
- the schedule for dismantling operations entails disbursement schedules that are included in the financial scenarios;
- a mid-to-long-term (10-year) plan established in late 2017, which is consistent with budgeted financial flows from the State up to 2022, has reduced this risk, and post-2022 scenarios are currently under examination with the State. However, the decisions made in this context have led to scheduling delays for some lower-priority projects, leading to additional fixed costs for which provision has had to be made;
- **technical issues not covered by contingency provisions, including:**
- potential developments in waste processing and waste and facility clean-up technologies could affect the final cost of end-of-cycle operations;
- since project schedules are often closely linked, any delay on one project could cause delays and additional costs for all end-of-cycle operations. For example, if waste disposal facilities are unavailable at the planned dates, this would have a significant impact on end-of-cycle scenarios, particularly on the waste recovery and conditioning programmes;
- early decommissioning of certain facilities or projects could imply clean-up and dismantling work much earlier than planned in the initial scenarios.

g) Outlook

Following the letter of 25 July 2015 from the safety authorities, a joint review was performed to redefine the priorities and general strategy for clean-up and dismantling operations.

On 16 December 2016, the CEA sent the French Nuclear Safety Authority (ASN) its general proposal, comprising:

- the decommissioning strategy for the next fifteen years, with clear priorities and consolidated, binding decommissioning programmes;
- an updated strategy for managing the radioactive materials and waste held by the CEA;
- an updated presentation of the resources the CEA is devoting to these projects and how they are being organised;

- a review of the annual funding required over the next 15 years for decommissioning and waste management operations, taking into account the updated decommissioning strategy and development of the Cigeo project;
- the safety authorities' examination of the decommissioning strategy priorities ended in June 2018 with meetings of the Advisory Committee and of the Laboratory, Plant and Waste Management Safety Commission (GSLUD, a group of experts that supports ASN and the DSND). The commitments undertaken by the CEA (in a letter sent to the authorities dated 28 July 2018) and the recommendations made by the safety authorities (follow-up letter sent on 27 May 2019) do not affect the decommissioning and waste recovery and conditioning priorities set out by the CEA.

l) Tax and social security payables

The commitments of the CEA towards its staff in respect of paid holiday due but not yet taken, and paid holiday accrued but not yet due, have been entered in the accounts as from the 2006 financial year.

In 2012, the CEA extended this to include rights to leave registered by the staff in time-savings accounts (CET).

B - COMMENTS ON THE ACCOUNTS

Note 3 – Operating income

Operating income represents research, work and services invoiced by the CEA to third parties in connection with its programmes or the provision of services.

Note 4 - Budgeted operating income

This entry corresponds to the balance of the State subsidy for the financial year allocated to the financing of operating expenditure for the year.

Note 5 - Expenditure of the financial year

Expenditure during the financial year breaks down as follows:

	2019	2018
Consumption of goods in inventory	1	12
Sub-contracting purchases	646	687
Purchases of non-inventory materials and supplies	391	346
External services:		
• Maintenance and repair	333	319
• General sub-contracting	377	316
• Travel – Work trips	51	51
• Payments to intermediaries and fees	84	85
• Temporary and seconded staff	30	33
• Transport of property and staff	30	27
• Internships	19	17
• General and technical documentation	7	7
• Telecommunications – Postal	5	5
• Leasing	34	35
• Other expenditure	80	85
TOTAL	2,088	2,025

(in millions of €)

Note 6 - Taxes, duties and similar payments

Taxes, duties and similar payments break down as follows:

	2019	2018
Non-recoverable VAT on goods and services	68	54
Payroll taxes	60	59
Tax on basic nuclear installations (INBs)	57	57
Other taxes	47	52
TOTAL	232	222

(in millions of €)

Note 7 - Staff costs

Staff costs break down as follows:

	2019	2018
Wages and salaries	1,061	1,038
Social security contributions	445	448
TOTAL	1,506	1,486

(in millions of €)

Note 8 - Allocations and write-back of operating depreciations and provisions

Allocations and write-back of depreciations and reserves break down as follows:

	2019	2018
Depreciation		
• Allocations	- 539	- 493
• Write-backs	0	0
Provisions for the impairment of assets		
• Allocations	- 15	- 20
• Write-backs	23	23
Provision for liabilities and charges		
• Allocations	- 65	- 25
• Write-backs	715	755
TOTAL	119	240

(in millions of €)

Allocation to depreciations concerns intangible and tangible assets (€539 million in 2019, up by €46 million). Write-backs to provisions for 2019 worth €738 million were mainly related to decommissioning nuclear facilities, waste treatment and processing fuel for which no further use is planned (€693 million).

depending on the lifetime or service life of the assets financed.

Write-backs for 2019 (€538 million) were mainly used to finance the allocations for depreciation recorded for the year on tangible and intangible assets (€539 million) after taking into account the write-back of provisions for impairment of fixed assets (-€1 million).

Note 9 – Write-backs of equipment grants and contributions from third parties

This item corresponds to the deduction applied to “Equipment grants received from the State” and “Equipment grants received from third parties”,

Note 10 - Share of the net result from joint operations

N/A for 2019.

Note 11 – Net financial income (or loss)

Net financial income of €14 million was recorded in 2019, compared to a net loss of €44 million in 2018. This breaks down as follows:

	2019	2018
Dividends	6	7
Investment income and interest on receivables	6	9
Accretion regarding claim on State	900	987
Write-backs of provisions	263	4
Other financial income	1	1
Write-back of provisions for loss in value of long-term securities	0	25
FINANCIAL INCOME	1,176	1,033
Interest and related expenses	553	45
Net loss on disposal of investment securities	-	-
Allocations to provisions	607	1,031
Other financial expenses	2	1
FINANCIAL EXPENSES	1,162	1,077

(in millions of €)

Allocations to provisions in 2019 (€607 million) are mainly due to:

- the impact of accretion concerning provisions for end-of-cycle operations (€604 million),
- the impact of the increase in provisions for end-of-cycle operations linked to payment schedule changes (€3 million).

Interest and related expenses (€553 million in 2019) mainly break down as follows:

- financial expenses related to repayment of the ORANO debt (€5 million),
- the impact on the claim on the State of the reduction in provisions for end-of-cycle operations linked to payment schedule variations (€253 million),
- the impact (+€19 million) of the reduction in the actual

inflation rate in 2019 (1.20%) compared to the 2018 inflation rate forecast (1.65%),

- the impact of a favourable change in assumptions concerning the net discount rate (€276 million).

Accretion regarding the claim on the State corresponds to accretion concerning provisions for decommissioning within the scope of the State – CEA Framework Agreement, and the impact of the change in the discount rate.

Write-back of provisions corresponds to the impact on the claim on the State of the revisions of the payment schedule for clean-up and dismantling projects (€255 million) and the write-back of provisions for potential loss on investment securities held by the CEA (€8 million).

Note 12 - Extraordinary income or loss

Net extraordinary income was €4 million in 2019, broken down as follows:

	2019	2018
Write-backs on equipment grants received from the State	23	81
Proceeds from the disposal of asset items	1	274
Write-back to provisions and transfers of charges	11	8
Other extraordinary income	3	7
EXTRAORDINARY INCOME	38	370
Management operations	11	349
Retirement of fixed assets	23	351
Allocations to depreciation and provisions	-	-
Other extraordinary expenditure	-	-
EXTRAORDINARY EXPENDITURE	34	700

(in millions of €)

Extraordinary income for the financial year 2019 was mainly write-backs on equipment grants received from the State corresponding to the net book value of asset items sold or otherwise retired during the financial year (€23 million);

Extraordinary expenditure for the financial year 2019 (€34 million) breaks down as follows:

- extraordinary expenditure on management operations worth €11 million, consisting mainly of subsidies granted, worth €7 million, and liquidation of a venture capital unit fund, worth €3 million;
- the net book value of assets sold or retired during the financial year, worth €23 million.

Note 13 - Intangible and tangible assets

Movements in intangible and tangible assets, together with the corresponding depreciations and provisions, were as follows:

GROSS VALUE	Balance as on 01.01.2019	Acquisitions and production 2019	Retirements 2019	Other transactions 2019⁽¹⁾	Balance as on 31.12.2019
Intangible assets	330	2	- 9	17	340
Land	208	0	0	8	216
Buildings	3,058	5	- 3	88	3,148
Specific installations and other tangible assets	9,402	23	- 136	397	9,686
Fixed assets under construction and advances	2,989	925	- 47	- 509	3,358
TOTAL	15,987	955	- 194	0	16,748

¹ Allocation of work-in-process to finished fixed assets, adjustments and transfers between accounts.

(in millions of €)

DEPRECIATIONS/PROVISIONS	Balance as on 01.01.2019	Allocations 2019	Write- backs and retirements 2019	Other transactions 2019	Balance as on 31.12.2019
Intangible assets	265	15	- 9	-	271
Land	127	6	-	-	133
Buildings	2,123	110	- 3	-	2,230
Specific installations and other tangible assets	5,433	416	- 135	-	5,714
TOTAL	7,948	547	- 147	-	8,348

(in millions of €)

Note 14 – Dismantling assets - third parties

For the sum of €7 million as on 31 December 2019, this item represents future funding by the IRSN expected for its share of the Cabri facility clean-up costs.

Note 15 - Financial assets

This breaks down as follows:

	31.12.2019	31.12.2018
Equity shares	190	190
Receivables from equity interests	14	15
Loans	3	4
Other long-term investments	3	3
TOTAL	210	212

(in millions of €)

With a net value of €190 million at year closing 2019, equity securities did not vary significantly compared with 2018.

The investments shown as assets at year closing 2019 mainly relate to holdings in Technicatome and CEA Investissement.

Receivables from equity interests and joint ventures came to €14 million at year-end 2019 compared to €15 million at year-end 2018, i.e. down by €1 million. This variation is due to the decrease in the receivables owed by the Ganil joint venture.

Note 16 – Inventory and work-in-progress

This breaks down as follows:

	31.12.2019	31.12.2018
Raw materials and other supplies	3,466	3,416
Work-in-progress and goods-in-process	1,900	1,725
Semi-finished and finished products	1,150	1,182
TOTAL	6,516	6,323

(in millions of €)

Note 17 – Payment schedule for receivables

At year closing, the situation was as follows:

	Payable within 1 year	Payable later than 1 year
Receivables on non-current assets	2	18
Receivables on current assets	2,303	16,472
TOTAL	2,305	16,490

(in millions of €)

Note 18 – Claims on the State

The method for valuing the claim on the State was established with the signature of a Framework Agreement between the State and the CEA, and its amendment in late 2011, concerning the financing of the CEA's long-term nuclear costs, ensuring the liquidity of the claim and guaranteeing coverage of provisions for end-of-cycle obligations in accordance with the requirements of the Law of 26 July 2006.

As on 31 December 2019, the balance of the CEA's nuclear costs for facilities commissioned before 31 December 2009 was guaranteed almost entirely by this claim entered in the assets of the former fund, since all the CEA's assets previously allocated to cover these decommissioning liabilities had been sold at the State's request.

Since 2016, the liquidity of this claim has been guaranteed solely by an annual budget allocation paid by the Ministry for Ecological and Inclusive Transition (Programme 190, action 15).

Note 19 – Miscellaneous receivables

"Miscellaneous receivables" decreased by €12 million, from €734 million at year-end 2018 to a net amount of €722 million at year-end 2019, mainly due to:

- a change in "Grants to be received from third parties" (-€21 million),
- a change in "Grants to be received from European funding" (-€3 million),
- a change in "Invoices pending" (+€2 million),
- a change in payment credits to be received from the State (-€1 million),
- a change in miscellaneous accounts receivable (+€12 million),
- a change in advances on current accounts (+€1 million).

Note 20 - Cash balances and investment securities

This entry shows the position of all bank accounts and investments, giving a gross value of €208 million as on 31 December 2019. Bank accounts with a credit balance are entered under “Financial debt”.

This breaks down as follows:

	31.12.2019	31.12.2018
Liquid assets and investments allocated to current activities	21	15
Liquid assets allocated to future investment	32	72
Liquid assets and investments committed to end-of-cycle operations	155	198
TOTAL	208	285

(in millions of €)

The portfolio to cover end-of-cycle operations breaks down as follows:

	31.12.2019	31.12.2018
At market value:		
• Stocks and shares funds	96	85
• Bond and cash funds	59	113
TOTAL	155	198
By geographical origin:		
• Euro zone	124	165
• World	31	33
• Other	-	-
TOTAL	155	198

(in millions of €)

PURPOSE OF THE DEDICATED PORTFOLIO

There are three Dedicated Funds: (i) the Fund for facilities commissioned before 31 December 2009, merging the Dedicated Civil Fund and the Dedicated Defence Fund, since 2019, bearing in mind the sole source of funding via Programme 190 Action 15, governed by the State-CEA Framework Agreement, and (ii + iii) since 1 January 2010, the New Civil Facilities Fund and the New Defence Facilities Fund, which are managed separately. The Dedicated Civil Fund and Dedicated Defence Fund were originally formed in line with the planned expenditure schedule, which is largely spread over a period up to 2040 and beyond, and the corresponding portfolios were initially managed with a long-term approach. Due to a lack of sufficient payments into the funds, the investment terms were shortened with the imminent drying-up of the two former Funds, in 2011 (Defence) and 2012 (Civil) respectively. These portfolios are now only made up of venture capital unit funds taken out at the start, which are still active, and cash funds

used to cover decommissioning expenses after annual grants have been paid out.

The New Civil Facilities and New Defence Facilities portfolios are invested in unit trusts and other similar funds, the management of which is outsourced. On 31 December 2019, they were made up of equity funds (41%), bond funds (39%), and money market funds (20%). These portfolios are dedicated to expenditure that will only be made several decades after the facilities are commissioned (from 2010) and are managed under a very long-term approach with a strategic investment allocation (55% shares/45% interest-bearing instruments), with room to manoeuvre of up to 20% in shares, in order to adapt to changing market contexts. The three dedicated Funds are valued at year-end on the basis of the net asset value (NAV) as on 31/12 of the financial year for each investment line in the portfolio.

Note 21 - Special reserve

The "Special Reserve" breaks down as follows:

	Amount as on 01.01.2019	Allocation 2019	Write-back 2019	Amount as on 31.12.2019
Special reserves received from the State	7,808	193	-	8,001
Equipment grants received from the State	6,738	701	- 499	6,940

(in millions of €)

Note 22 - Accumulated balance of the financial years

The accumulated balance of the financial years, after allocation of the 2019 balance (up €22 million), comes to -€1,294 million. This breaks down as follows:

• General budget	- 293
• Civil fund	- 995 ⁽¹⁾
• New Civil facilities	16
• New Defence facilities	- 29
• Supplementary budgets	1
• ITER	3
• DSND	2
• DDCG	-
• AFNI	-
• I2EN	1
• IRT	-
TOTAL	- 1,294

⁽¹⁾ After adjustment of cover to 100% clearing of decommissioning liabilities

The difference between 2018 and 2019 breaks down as follows:

	Situation as on 01.01.2019	After clearing Assets/Liabilities accruals	2019 Balance	Situation as on 31.12.2019
General Budget	- 322	-	29	- 293
Funds set aside under Framework Agreement	- 996	-	1	- 995
New Civil facilities fund	11	-	5	16
New Defence facilities fund	- 14	-	- 15	- 29
Supplementary budgets	1	-	-	1
ITER	2	-	1	3
DSND	2	-	-	2
DDCG	-	-	-	-
AFNI	-	-	-	-
I2EN	1	-	-	1
TOTAL	- 1,315	-	22	- 1,294

(in millions of €)

This negative balance is mainly due to management of the dedicated funds under the Framework Agreement, which initially produced a financial imbalance when they were set up.

This situation is not expected to jeopardise the future of the CEA as a going concern.

Note 23 - Provision for liabilities and charges

Provisions for liabilities and charges underwent the following changes during the financial year:

	Amount as on 01.01.2019	Allocations 2019	Write-backs 2019	Amount as on 31.12.2019
Provision for dismantling and processing of waste and fuel for which no further use is planned	16,727	831 ⁽¹⁾	- 693 ⁽¹⁾	16,865
Dismantling provision allocated to the financing of facilities	20	-	- 1	19
Provision for disputes	32	12	- 17	27
PROVISION FOR CIGEO ADJUSTMENT	16	-	-	16
Provision for normal waste treatment	24	-	- 2	22
Provision for retirement	26	-	- 3	23
Provision for service medals	7	-	-	7
Provision for recovering sources	-	-	-	-
Other	16	12	- 5	23
TOTAL	16,867	856	- 722	17,002

⁽¹⁾ Movements of provisions for clean-up and dismantling recorded in profit or loss: €39 million, corresponding to the allocations to the new Civil and Defence funds (excluding UK share of EPURE programme) and €693 million in write-backs of provisions for building works. (in millions of €)

In the provisions for liabilities and charges, provisions relating to dismantling and processing of waste and fuel for which no future use is planned came to the sum of €16,881 million at the end of 2019, i.e. 99% of the total amount. These break down as follows:

	Total	Former funds	New Civil facilities fund	New Defence facilities fund	Excluding funds
Situation as on 01.01.2019	16,743	16,556	22	86	78
Revaluation to economic conditions and accretion	584	580	1	3	-
Impact of changes in forecast assumptions	- 281	- 275	- 1	- 5	-
Estimate revisions/commissioning	812	769	1	42	-
Payment schedule revisions	- 304	- 305	-	1	-
2019 works	- 693	- 691	- 2	-	-
Reclassification of non-recoverable VAT	-	78	-	-	- 78
Impact of variation in VAT exemption ratio	20	20	-	-	-
Situation as on 31.12.2019	16,881	16,733	21	127	0

(in millions of €)

As on 31 December 2019, application of a discount rate 0.5% higher or lower than the rate used would have changed the value of the provisions for end-of-cycle operations by -€1,198 million or +€1,403 million respectively, resulting in the values of €15,667 million and €18,268 million respectively for all provisions (inside and outside the scope of the law).

As on 31 December 2019 and 2018, the provisions for the dismantling of facilities and processing of waste and fuel for which no future use is planned, within the scope of the Decree of 23 February 2007 on securing funding to cover nuclear costs, break down as follows:

Provisions shown under CEA liabilities (nomenclature in Art. 2 of Decree of 23 February 2007)

COST CATEGORY	Gross value		Discounted value	
	Year-end 2018	Year-end 2019	Year-end 2018	Year-end 2019
	Total cost	Total cost	Total cost	Total cost
1. DISMANTLING COSTS				
1.1 to 1.4 Facilities where the CEA is the nuclear operator	9,522	10,140	6,923	7,017
1.1 to 1.4 Share payable by the CEA for facilities where the operator is a third party	0	0	0	0
1.5 Third-party nuclear operators	180	156	151	135
SUB-TOTAL	9,702	10,296	7,074	7,152
2. FUEL MANAGEMENT COSTS				
2.1 Fuel that can be recycled in industrial facilities which already exist or are under construction	1,043	1,048	515	516
2.2 Other fuel	311	312	213	220
SUB-TOTAL	1,354	1,360	728	736
3. COST OF RECOVERY AND CONDITIONING OF LEGACY WASTE				
3.1 Operations to recover and condition waste stored at CEA facilities	4,453	4,385	3,132	3,041
SUB-TOTAL	4,453	4,385	3,132	3,041
4. RADIOACTIVE WASTE PACKAGE MANAGEMENT COSTS				
4.1 Waste package management by the CEA	3,678	3,791	2,676	2,729
4.2 Long-term management of waste packages	5,988	6,055	2,577	2,587
SUB-TOTAL	9,666	9,846	5,253	5,316
5. POST-CLOSURE MONITORING COSTS				
5.1 Post-closure monitoring costs	559	564	79	77
SUB-TOTAL	559	564	79	77
TOTAL PROVISIONS WITHIN SCOPE OF THE LAW EXCLUDING NON-DEDUCTIBLE VAT CHARGES	25,734	26,452	16,266	16,323
Non-deductible VAT within scope of the law	363	409	215	235
TOTAL PROVISIONS WITHIN SCOPE OF THE LAW OF 28 JUNE 2006	26,097	26,861	16,481	16,558@
Provisions for costs outside scope of the law (ICPE, etc.)	304	454	244	304
Non-deductible VAT outside scope of the law	2	5	1	4
TOTAL PROVISIONS OUTSIDE SCOPE OF THE LAW	306	459	245	308
TOTAL PROVISIONS WITHIN/OUTSIDE SCOPE OF THE LAW	26,038	26,906	16,511	16,627
Non-deductible VAT within/outside scope of the law	365	414	216	238
TOTAL PROVISIONS AS ON 31 DECEMBER	26,403	27,320	16,727	16,865

(in millions of €)

Note 24 - Schedule of debt repayables

At the end of the financial year the situation was as follows:

	Payable within 1 year	Payable later than 1 year
Financial debt	157	17
Debt to third parties	1,736	142
Accruals and charges	30	35

(in millions of €)

Note 25 – Cash provided by operations

EBITDA	- 654
Share of profits from joint operations	-
Financial charges payable	- 555
Collectable financial income	614
Extraordinary charges payable	- 11
Collectable extraordinary income	8
Budgeted operating income	- 2,138
Income tax	-
TOTAL	- 2,736

(in millions of €)

Note 26 - Off-balance sheet commitments as on 31 December 2019

COMMITMENTS RECEIVED	
Guarantees received from banks to cover retention payments to suppliers	64
Various bank guarantees	2
COMMITMENTS GIVEN	
Staff benefits ⁽¹⁾	972
Cost of pensions:	
• Retirement benefits	458
• Early retirement scheme	400
Pensioners' healthcare cover scheme	114
Foreign exchange hedging	1
Other commitments	23

⁽¹⁾ Of which provisioned commitments: €23 million

(in millions of €)

The commitments for staff benefits have been valued on a discounted basis at the rate of 2%, of which 1.5% for long-term inflation.

The discount rate applied to staff-related liabilities is defined under market conditions as at the end of November, based on government borrowing rates covering the same period as the staff-related liabilities in question. An average risk premium is then added, based on high-rated industrial and commercial corporate bonds.

The resulting rate is rounded up or down by 25 bp, taking into account the rate change trend (0.5% for 2019).

These commitments were up by €58 million on the financial year 2018 (€972 million at year-end 2019, as against €914 million at year-end 2018).

This increase is due to:

- pension rights acquired for the financial year/benefits paid out..... - €20 million
- the impact of the change in the discount rate.....€98 million
- the impact of population movements, scenario changes and experience variance.....-€20 million

Note 27 - Information on disputes and contingent liabilities

Risks for which no provision has been made for want of a definite obligation and/or because it has not been possible to produce a reliable valuation of the amount of the liability are set out below. As such, they are considered as contingent liabilities in accordance with accounting regulations.

These risks concern disputes arising in connection with direct local taxation.

The CEA considers that it is not liable for CET, the Territorial Economic Contribution (formerly known as business tax) since its defence-related activities are directly linked to national defence, and its civil activities comply with for-profit/not-for-profit criteria established by jurisprudence.

The CEA also considers that it is not liable for property tax because some of its sites are either listed on the French government property register (TGPE) or because the land is earmarked for a general interest service and is not income-producing.

At the end of the 1990s, some local authorities disputed this reasoning, bringing a vicarious liability action against the tax authorities. Further to this action, the tax authorities issued tax rolls.

In each case, the CEA brought claims to obtain total exemption from these tax contributions. Previous court decisions confirmed that the CEA's position is justified, both for the DAM centres and the civil centres. Decisions awarding full exemption from the former business tax and, since 2010, from corporate property tax, resulted in reimbursements and interest payments.

In 2009, an audit procedure was launched at several civil centres, covering business tax, property tax and the annual tax on offices in the Île-de-France region. After two years of audits at all civil sites, the French national and international tax audit department (DVNI) sent the CEA an adjustment proposal to sectorise activities subject to local taxes, which had been identified at the Saclay and Grenoble sites. Under this method, income-generating buildings used in for-profit activities were deemed to be subject to property tax on developed property (TFPB) and/or corporate property tax (CFE) contributions. In 2012, the DVNI initiated a new general audit of the CEA, resulting in further checks on DAM sites and an update of taxation requirements for the Saclay and Grenoble civil centres.

After three years of auditing, the DVNI identified income-generating buildings at the DAM Île-de-France and Valduc sites, leading to property tax for developed property (TFPB) being levied on these buildings. However, it was confirmed that these sites were not subject to corporate property tax (CFE) contributions.

In a letter dated 6 December 2016, the DVNI informed the CEA that it would initiate a new audit in order to

audit the tax bases resulting from the application of the principles defined following the 2012 audit. The 2017 audit operations focused on the 2016 property tax and the 2014, 2015 and 2016 corporate property tax contributions. The following centres were audited: Saclay, Grenoble, DAM Île-de-France and Valduc.

On 4 December 2017, the DVNI sent the CEA four "type 751" information letters. For civil centres, the assessment was based on a different taxation method than that agreed following the 2012 audit. The DAM Île-de-France centre was deemed to be subject to property tax and corporate property tax, unlike the Valduc site, which was deemed to be subject only to property tax. The CEA submitted its remarks to the tax authorities in four responses dated 20 December 2017. In a continuation of these discussions, a hierarchical review was held with the Head of Brigade on 16 October 2018 and a meeting with the Director of the DVNI was held on 11 April 2019. Following the audits and subsequent discussions, the tax authorities officially confirmed (1) which taxation method was to be used for the Grenoble and Saclay centres and (2) that the upward adjustments for the Valduc and DAM/Île-de-France centres had been abandoned. The provisions and write-backs of provisions entered as on 31 December 2019 were calculated using the tax bases notified by the DVNI in its letters dated 30 September and 29 and 30 October 2019.

Note 28 - Other information

Situation concerning corporate income tax

The CEA's corporate income tax regime is subject to Article 207-1-9° of the French General Tax Code (introduced into the Code by the Research Programming Act of 18 April 2006). This Article exempts public research organisations from paying corporate income tax on income derived from public research activities.

The tax authorities have commented on this tax regime, most recently in Official Tax Bulletin BOI-IS-CHAMP-50-10 of 4 April 2018.

Since the 2006 financial year, in accordance with the activity sectorisation principle established by the tax authorities, the CEA's earnings from equity securities are now subject to corporate income tax.

Policy on insurance

The CEA's policy concerning insurance is built on a set of clear, consistent, and coordinated principles resulting from regular dialogue between the Insurance Department and the various operational and functional divisions.

This dialogue has led to a consensus on the purposes of the CEA's policy on insurance and its implementation procedures. These have been set out in a series of documents (memoranda and circulars) that together form an insurance

charter that is distributed to those concerned at all levels of management to guide them in their management decisions and actions. Policy in this area is defined according to management level. The general principles are proposed by the Insurance Department and approved by the CEA's Senior Management team. Specific principles are approved by the Financial Division, the Human Resources and Industrial Relations Division, and the other divisions concerned.

The policy is implemented within a long-term perspective, based on a set of intentions and decisions that determine, coordinate and manage resources, and carry out actions to help achieve the policy's overarching objectives (e.g. site inspections to monitor the state of buildings and regulated facilities, and fire inspections). The CEA's policy on insurance is implemented as part of a general risk management approach, which has become standard practice in all high-risk sectors. This entails identifying risks, managing insurance programmes designed to cover damages, and keeping management charts to monitor efficiency. Wherever possible, to limit risks, the CEA transfers risks to contractors with which it does business. This applies only to risks relating to contractual liability. Furthermore, in order to reduce the financial impact of certain possible events, the CEA has decided to transfer some of its risks to insurers. In addition to the preventive aspect of this approach, insurance has the financial advantage of converting the unpredictable costs of potential incidents that might compromise its budget into fixed operating expenses (payment of insurance premiums). The CEA's decision to transfer the financial burden of cover for unpredictable risks to insurers reflects its desire to protect itself against the implications of damage to third parties and to safeguard its assets and employees.

a) Third-party liability insurance

1) Third party liability in the nuclear field

In light of the special regime governing third-party liability in the nuclear field, the CEA is required to take out coverage for financial liability, in accordance with the Paris Convention on Third Party Liability in the Field of Nuclear Energy and the obligations under Articles L. 597-1 and following of the French Environmental Code. Following publication in France's Official Gazette of the Order dated 24 December 2015 granting the CEA the State Guarantee to cover third-party liability in the field of nuclear energy, the CEA is now covered by the State Guarantee. The CEA also has insurance covering its liability as a holder and user of ionising radiation sources, and as a service provider, and for the transport of radioactive substances under its responsibility which are not covered by the Paris Convention.

2) Third-party liability in the conventional field

The CEA is covered by a third-party liability insurance programme that covers it against the financial consequences of any liability, pursuant to applicable law, for physical injury, material damage and intangible losses caused to third parties relating to actions committed in performing its activities, including contractual commitments.

3) Third-party liability relating to motor vehicles

To comply with motor vehicle third-party liability insurance obligations established by the Act of 27 February 1958, the CEA insures all the vehicles which it owns or leases on a long-term basis. Many of these vehicles are also covered by collision and comprehensive insurance. In addition, to manage risks and to save money, the CEA has implemented a "retention" mechanism. The insurance policy covering the CEA's fleet of vehicles (whether owned or leased) generally applies beyond an annual "retention" deductible. This mechanism allows the CEA to retain part of the third-party liability and damage costs arising from accidents involving its vehicles. The insurer manages the amount paid for the "retention" insurance. It then uses this reserve amount primarily to pay out for claims under the same conditions as if the vehicles were fully insured, until the reserve has been used up. If the annual cost of claims remains below the amount of the reserve paid at the beginning of the financial year, the remaining balance is automatically reimbursed to the CEA. This system significantly reduces insurance tax as the retention mechanism is tax-exempt.

b) Insurance covering the CEA's assets

Given the extensive security and preventive measures in place at its centres, particularly in relation to nuclear safety requirements, the CEA has opted not to systematically insure all its equipment, buildings and facilities. Instead, it has insured some identified risks for partial coverage with insurers.

By retaining some or part of the risks when it considers insurance costs too high, it optimises management of the financial benefits of its insurance programmes for material damage. The CEA's policy on insurance distinguishes between damage caused to its assets during construction of a structure, damage of any kind during operating, and damage resulting from decommissioning work.

1) Material damage caused during construction

The CEA takes out insurance to cover risks associated with construction or civil engineering works, whether or not the works concern nuclear activities. This cover gives the CEA the assurance that, in the event of an accident, it will quickly receive financial compensation.

It has therefore decided to take out a Contractor's All Risks policy on behalf of all those participating in the work, if the construction operation exceeds the sum of €2 million.

This kind of policy covers accidental property damage affecting building work, civil engineering or process work during the construction period and up to acceptance. It also covers, as an option, damage caused to existing structures during renovation work, for example, or to any neighbouring buildings. For operations costing over €2 million, to cover damage occurring after acceptance, CEA has insurance covering structural property damage, as well as ten-year inherent defects insurance covering civil engineering structures.

2) Damage caused to assets during operating

The CEA has comprehensive industrial insurance covering all moveable and immovable assets (buildings, plant, machinery and equipment, including basic nuclear installations) which the CEA owns, leases, uses or holds under any arrangement whatsoever.

Under the clauses and conditions of this policy, material damage resulting from events such as fire, lightning, explosion, collapse, natural disaster, water damage, acts of terrorism and sabotage are covered, as well as, under certain conditions, nuclear damage resulting from a criticality accident, contamination or irradiation.

The Insurance Department organises fire and related risk prevention inspections of CEA facilities, which are conducted in liaison with its insurers. The purpose of these inspections is to identify the main potential risks and assess fire detection systems, particularly with regard to their compliance with current standards. Risk prevention engineers from the insurance companies issue recommendations for improving the state of facilities with respect to the identified risks. The comprehensive industrial insurance also covers all clean-up and decommissioning operations carried out under the operating safety reference framework, prior to publication in the Official Gazette of the facility decommissioning decree for civil facilities, or an equivalent decree for military facilities.

The CEA's insurance programme also includes insurance policies specially designed to cover its plant, machinery and equipment. This includes policies to cover nuclear and non-nuclear machinery breakage, all risks IT insurance (covering equipment owned, leased or rented by the CEA) and all risks transport insurance.

3) Material damage caused during decommissioning

The CEA has insurance to cover risks associated with decommissioning operations following publication in the Official Gazette of a facility decommissioning

decree or a change to the safety reference framework. It therefore has an all-risks insurance policy for decommissioning operations over €2 million, taken out on behalf of all those participating in the work, holding them harmless against any claims from the insurer. This guarantees the CEA rapid and comprehensive financing in the event of an incident.

c) Employee insurance

The CEA has taken out invalidity and death benefit insurance for its staff, with optional or compulsory participation. As far as compulsory cover is concerned, the main purpose of the insurance taken out is to provide:

- a lump-sum payment to the beneficiary (or beneficiaries) in the event of an employee's death,
 - an educational annuity for any dependent children,
 - payment of an invalidity pension, payable to the employee in addition to Social Security benefits.
- Coverage and assistance is also provided, including a lump-sum payment, in the event of personal injury resulting from accidents during assignments in France or abroad.

The CEA also offers optional schemes such as insurance for loans, death/invalidity insurance and insurance for pensioners, expatriates and foreigners working in France. The insurance for expatriates/foreigners covers the healthcare costs of CEA employees working abroad and of foreigners coming to work for the CEA in France. The CEA has two types of cover: one for short assignments (less than 3 months) and one for long assignments (more than 3 months).

Note 29 - Staff numbers

No. of staff employed as on 31.12.2019:

• managerial	10,679
• non-managerial	5,594
TOTAL	16,273

Note 30 – Events after closing of the accounts

On 11 March 2020, the World Health Organization declared that the COVID-19 coronavirus epidemic was a pandemic in recognition of its rapid spread across the world, with more than 150 countries affected. Many governments (particularly in France) are imposing increasingly strict measures to contain the spread of the virus.

The CEA's activities were first affected by COVID-19 in mid-March 2020, with a probable impact on its financial statements in 2020. However, because

the epidemic is so recent, the CEA's Management cannot yet give any estimate of the potential impact. However, at the time of approving the accounts for 2019, the CEA's Management is not aware of any significant uncertainties that might jeopardise its ability to continue its activities in accordance with the public service continuity principle. The CEA will regularly analyse the impact of the situation created by the pandemic, particularly on the running of its projects and on the external funding of some of its activities.

C - INFORMATION ON SUBSIDIARIES AND HOLDINGS AS AT 31 DECEMBER 2019

COMPANY	Capital	Reserves ⁽¹⁾ and balance brought forward before allocation of income	Share of capital held (%)	Book value of shares held		Loans and advances granted by the company and not repaid	Guarantees and surety granted by the company	Sales in the last financial year excl. VAT	Net income (loss) in the last financial year ⁽²⁾	Dividends collected by the company during the financial year	Observations on provisions for impairment of receivables
				Gross	Net						
1) FRENCH SUBSIDIARIES (DETAILED INFORMATION)											
ORANO											
1 Place Jean Miller Tour AREVA 92400 COURBEVOIE		-	pm	pm	pm	-	-	-	-	0	-
TECHNICATOME											
Route de Saint-Aubin 91190 VILLIERS LE BÂCLE	22.1	-	20	113.6	113.6	-	-	419.5 ⁽²⁾	50.6 ⁽²⁾	5.2	-
CO-COURTAGE											
NUCLÉAIRE											
(389518853) Le Ponant D 25 rue Leblanc 75015 PARIS	ns	-	90	ns	ns	-	-	-	-	0.3	-
CEA-INVESTISSEMENT⁽²⁾											
(423426899) Le Ponant D 25 rue Leblanc 75015 PARIS	72.2	15.9	100	72.2	72.2	-	-	(3)	(3)	-	-
2) FRENCH HOLDINGS (DETAILED INFORMATION)											
MINATEC⁽³⁾											
Hôtel du Département 7 rue Fantin Latour BP 1096 38022 GRENOBLE Cedex 1	6.9	4.3	22	1.5	1.5	-	-	(3)	(3)	(3)	-
SEML Route des Lasers⁽³⁾											
20, rue de Suson 33830 BELIN BELIET	15.5	(3)	11.6	1.8	1.8	-	-	(3)	(3)	-	-
GIE III V LAB⁽²⁾											
Route de Nozay 91460 MARCOUSSIS	5	0	20	1	1	-	-	(3)	(3)	-	-

(in millions of €)

⁽¹⁾ Including statutory provisions and investment subsidies

⁽²⁾ Net income (loss) before approval of the 2019 accounts

⁽³⁾ Data from the last financial year not available

Auditors' report on the annual financial statements

Financial year ending 31 December 2019

Dear Sir/Madam,

Opinion

In fulfilment of the task entrusted to us by the French Minister for Economy and Finance, we carried out the audit of the French Alternative Energies and Atomic Energy Commission's annual financial statements for the financial year ending on 31 December 2019, as appended to this report. These financial statements were approved by the Executive Board on 25 March 2020 based on the information available on that date in the changing context of the health crisis linked to Covid-19.

We hereby certify that, under French accounting standards and rules, the annual financial statements are a faithful and honest reflection of the income from the past financial year and the institution's financial position and assets at the end of this financial year.

Basis of the opinion

Reference framework for the audit

We conducted our audit in accordance with the professional standards applicable in France. We believe that the evidence we collected constitutes a sufficient and appropriate basis for our opinion. Our responsibilities under these standards are indicated in the section entitled "Auditors' responsibilities in auditing the annual financial statements" hereunder.

Independence

We conducted our audit in accordance with the applicable rules concerning independence, for the period from 1 January 2019 to the date of issuing our report. Furthermore, we have not provided any services prohibited by the Code of Ethics of the auditing profession.

Observations

Without prejudice to the opinion expressed above, we would draw your attention to the following points:

- Note 2.f "Accounting methods and principles – Claim on the State" in the Notes on Accounting Principles, which mention the accounting implications of the signature of the Framework Agreement and its Amendment 1 concerning the financing of long-term nuclear costs, by which the State agrees to ensure the general balance of the CEA's long-term nuclear costs
- Paragraphs a) and f) of Note 2.k.2 "Accounting methods and principles – Provision for liabilities and charges – End-of-cycle commitments" in the Notes, which restate the key assumption adopted in drawing up the 2019 accounts, whereby the CEA's cash resources will coincide with the schedule of decommissioning operations, as currently planned.
- Paragraphs c) and f) of Note 2.k.2 "Accounting methods and principles – Provision for liabilities and charges – End-of-cycle commitments" of the accounting principles in the Notes, and the paragraph "Key events of the financial year 2019" in the Notes, which state the main sources of uncertainty and judgment inherent in assessing end-of-cycle costs, including costs related to long-term management of radioactive waste packages, the planned final state of facilities to be decommissioned and the physical and radiological characterisation of facilities to be decommissioned. Following the observations made by the CEA's supervisory authorities in their letter of December 2018, primarily regarding the final state of facilities, the CEA will incorporate the impact related to these uncertainties, which may be significant, in its accounts for 2020 and thereafter.

Justification of our assessments

In accordance with the provisions of Articles L. 823-9 and R.823-7 of the French Commercial Code relating to the basis for our opinions, we would like to draw your attention to the following points, which, in our professional opinion, were the most important for the audit of the annual financial statements for the financial year.

• **Accounting rules and methods**

As part of our assessment of the accounting rules and principles applied by the CEA, we verified the relevance of the accounting principles used to present the CEA's activities and assets as accurately as possible.

• **End-of-cycle commitments**

The provisions for decommissioning and waste recovery, an amount of €16,881 million on the balance sheet, were calculated in accordance with the accounting methods, valuation rules and principles described in Notes 2.k.2 "Accounting methods and principles – Provision for liabilities and charges– End-of-cycle commitments" in the Accounting Methods and Principles, and Note 23 "Provision for liabilities and charges – Commitments for end-of-cycle operations" in the Notes.

To offset these provisions, to cover liabilities, and according to the provisions set forth in the Framework Agreement with the State, the CEA recognises a Claim on the State, as stated in Note 2.k.2 a) "Accounting methods and principles – Provision for liabilities and charges– End-of-cycle commitments – Funding for decommissioning of nuclear facilities" in the Accounting Methods and Principles, and Note 18 "Claims on the State" in the Notes, this asset constitutes the claim that will be reimbursed by the State.

During our audit, we reviewed the estimated decommissioning liabilities and the share to be financed by the State, assessing whether the assumptions made were reasonable, and taking into account, in particular, the change in estimates and ongoing negotiations with the authorities.

• **Financial fixed assets**

Note 2.d "Financial assets" in the Accounting Methods and Principles in the Notes sets out the method used to value equity securities. We have analysed the methods used by the CEA to ensure that the asset value of the securities on the balance sheet is at least equivalent to their net book value.

• **Subsidies**

Notes 2.i "Budget subsidy received from the State" and 2.j "Equipment grants received from the State and third parties" in the Accounting Methods and Principles in the Notes set out the accounting methods used for grants received from the State and

its partners. During our audit, we verified that this method had been applied correctly and checked its presentation.

• **Pension commitments**

Note 2.l "Tax and social security payables" in the Accounting Methods and Principles and Note 26 "Off-balance sheet commitments" in the Notes set out the methods used to estimate pension commitments and the scenarios applied to calculate them. As part of our audit, we have verified that this method had been applied correctly and checked its presentation. These evaluations are part of the audit of the annual financial statements taken as a whole, which were approved under the conditions described above, and they therefore have an impact on the opinion we expressed in the first part of this report. We will not express any opinion on any individual items in these annual financial statements taken separately.

• **Specific checks**

In accordance with the standards of professional practice applicable in France, we also carried out the specific checks required by law.

We do not have any particular observations to make regarding the faithfulness and consistency with the annual financial statements of the information contained in the Executive Board's Management Report approved on 25 March 2020 and in the other documents regarding the financial position and annual financial statements.

Responsibilities of Management and corporate governance regarding the annual financial statements

Management is responsible for drawing up faithful and reliable annual financial statements in accordance with French accounting rules and principles, and for implementing the internal controls required to draw up annual financial statements that are free of any significant anomalies, whether as a result of fraud or error.

When drawing up the annual financial statements, Management must assess the organisation's ability to continue operating, and where applicable, present information relevant to its continuing operation in the financial statements, and implement the accounting policy for a going concern, unless there are plans to liquidate or wind up the organisation.

The annual accounts have been approved by the Executive Board.

Auditors' responsibilities in auditing the annual financial statements

The auditors' task is to issue a report on the annual financial statements. Our aim is to obtain reasonable assurance that the annual financial statements as a whole contain no significant anomalies. Reasonable

assurance implies a high level of assurance. However, there is no guarantee that an audit conducted in accordance with professional standards can systematically identify every significant anomaly. Anomalies may arise as a result of fraud or error and are considered to be significant if it can reasonably be expected that individually or jointly, they could influence the economic decisions made by the users of the financial statements.

As stated in Article L.823-10-1 of the French Commercial Code, our work to certify the financial statements does not involve guaranteeing the viability of your organisation or the quality of its management. When conducting an audit in compliance with the professional standards applicable in France, auditors exercise their professional discretion throughout the auditing process.

Furthermore:

- they identify and assess the risk that the annual financial statements may contain significant anomalies, whether as a result of fraud or error. They establish and implement auditing procedures to address these risks and gather evidence they deem sufficient and appropriate to form their opinion. The risk of failing to detect a significant anomaly resulting from fraud is higher than the risk of failing to detect a significant anomaly resulting from error, since fraud can involve collusion, falsification, voluntary omissions, false statements or the circumventing of internal controls;
- they familiarise themselves with the internal

control processes relevant to the audit in order to establish appropriate auditing procedures under the circumstances at hand, and not to express an opinion on the effectiveness of internal control;

- they assess the appropriate nature of the accounting methods used and the reasonableness of accounting projections made by Management, and the relevant information provided in the annual financial statements;
- they assess whether Management's implementation of the accounting policy for a going concern is appropriate and, depending on the information gathered, whether there is significant uncertainty related to events or circumstances which could jeopardise the ability of the organisation to continue operating. Their assessment is based on information gathered up to the date of the report. Notwithstanding, subsequent events or circumstances may jeopardise the organisation as a going concern. If the auditors find that there is reason for significant uncertainty, they draw the reader's attention to the information provided in the annual financial statements regarding that uncertainty or, if the information is not provided or is irrelevant, they may either issue the certification with reservations or refuse certification;
- they assess the overall presentation of the annual financial statements and assess whether they reflect the underlying operations and events in such a way as to convey an accurate picture.

Signed in Paris-La Défense and Courbevoie, on 17 April 2020

KPMG AUDIT



Laurent Genin
Auditor

MAZARS



Thierry Blanchetier
Auditor

10 CEA centres in France

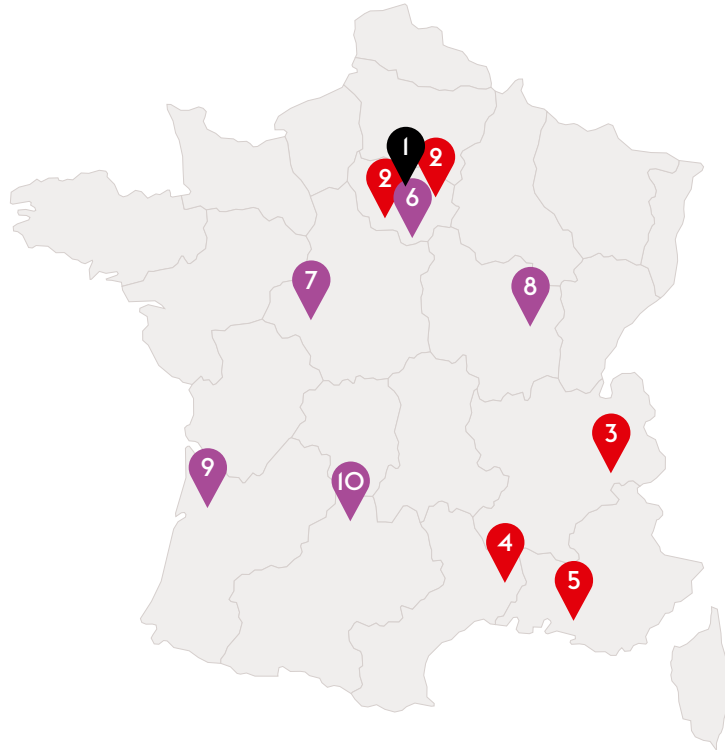
1 Headquarters

Civil research centres

- 2 Paris-Saclay
Fontenay-aux-Roses and
Saclay sites
- 3 Grenoble
- 4 Marcoule
- 5 Cadarache

Centres for military applications

- 6 DAM Île-de-France
 - 7 Le Ripault
 - 8 Valduc
 - 9 Cesta
 - 10 Gramat
-



**French Alternative Energies and
Atomic Energy Commission**
91191 Gif-sur-Yvette cedex

www.cea.fr