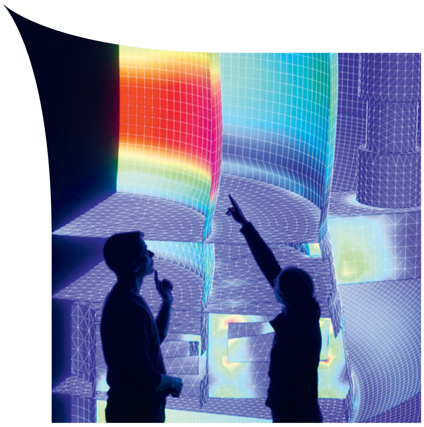
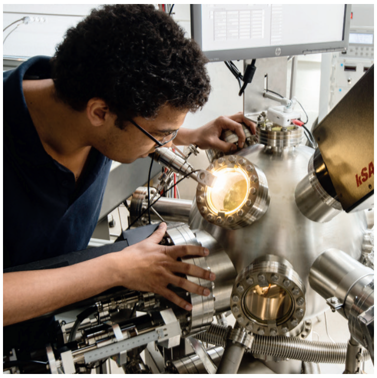
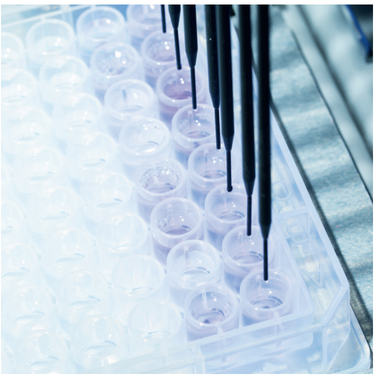
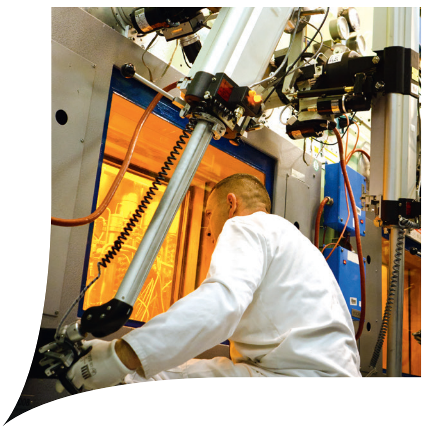


THE CEA FINANCIAL REPORT 2016







FROM RESEARCH TO INDUSTRY
cea

CONTENT

MANAGEMENT REPORT

ANNUAL FINANCIAL STATEMENTS

MANAGEMENT REPORT

1. IMPLEMENTATION OF THE BUDGET

The CEA's management balance for 2016, excluding dedicated funds, shows a surplus of +€56 million posted by the civil sector; the balance posted by the civil sector for 2016 dedicated funds included shows a -€336 million deficit.
The 2016 management balance shows a surplus of +€82 million posted by the defence sector.

	2015	2016	2016–2015 change by %
Civil sector			
Total income	2,357	2,307	- 2
Total expenditure	2,698	2,693	0
Balance of civil-defence flows	- 45	- 50	+ 10
Total expenditure on civil programmes	2,653	2,644	0
MANAGEMENT BALANCE – CIVIL SECTOR	**- 297**	**- 336**	***ns***
Defence sector			
Total income	1,757	1,830	+ 4
Total expenditure	1,670	1,699	+ 2
Balance of civil-defence flows	45	50	+ 10
Total expenditure on defence programmes	1,715	1,749	+ 2
MANAGEMENT BALANCE – DEFENCE SECTOR	**42**	**82**	***ns***

(in € million)

Highlights in 2016 included:

- Launch of the final design package ("APD") phase of the Astrid project, a generation-IV fast breeder reactor tech demonstrator;
- Publication of the new decree governing the organisation and operation of the CEA;
- The CEA filing more patents than any other public research organisation in France;
- Publication of the decree concerning authorisation to dismantle the Phénix reactor;
- Inauguration of the Spiral2 linear particle accelerator.

2. INCOME

CEA's income was up +1% over 2015.
The civil subsidy accounts for 51% of civil income and the defence subsidy for 85% of defence income.
€84 million were included as part of the Investments for the Future Programme (under Jules Horowitz reactor action, 4th-generation Astrid reactor action, and Supercomputer action).

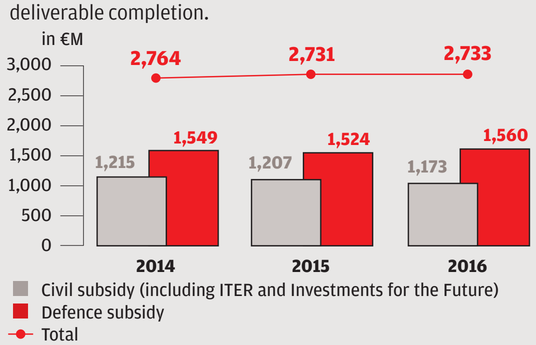
	2015		2016		2016–2015 change by %
	in €M	%	in €M	%	
Civil sector					
Government subsidy excluding Investments for the Future and excluding ITER	1,005	43	999	43	- 1
Government subsidy under the ITER	102	4	90	4	- 12
Government subsidy under Investments for the Future	99	4	84	4	- 15
External income	846	36	852	37	+ 1
Dedicated clean-up fund - Civil & Defence	207	9	207	9	0
Mobilization of ECS* funds	7	0	5	0	*ns*
Balance year N-1	89	4	70	3	- 21
TOTAL - CIVIL SECTOR	**2,357**	**100**	**2,307**	**100**	**- 2**
Defence sector					
Subsidies	1,524	87	1,560	85	+ 2
External income	39	2	57	3	+ 46
Dedicated clean-up fund - Defence	169	10	172	10	+ 1
Balance year N-1	24	1	42	2	+ 72
TOTAL - DEFENCE SECTOR	**1,757**	**100**	**1,830**	**100**	**+ 4**
Civil & Defence sector					
Government subsidy excluding Investments for the Future and excluding ITER	2,530	61	2,558	62	+ 1
Government subsidy under the ITER	102	2	90	2	- 12
Government subsidy under Investments for the Future	99	2	84	2	- 15
External income	885	22	909	22	+ 3
Dedicated clean-up fund - Civil & Defence	377	9	379	9	+ 1
Mobilization of ECS* funds	7	0	5	0	*ns*
Balance year N-1	114	3	113	3	- 1
GRAND TOTAL	**4,114**	**100**	**4,138**	**100**	**+ 1**

*ECS: Additional Safety Assessments

a. Changes in the Government subsidy

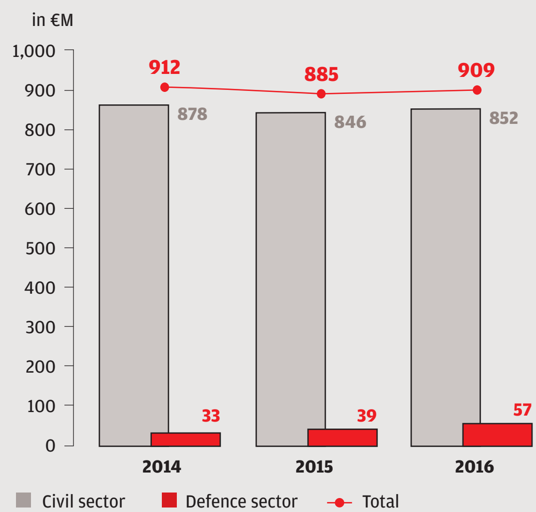
Civil sector:
The -€33 million drop in the subsidy between 2015 and 2016 breaks down as:
- a -€6 million drop in Government subsidy excluding Investments for the Future and excluding ITER;
- a -€12 million drop in Government subsidy under the ITER;
- a -€15 million drop in Government subsidy under Investments for the Future.

Defence sector:
The +2% increase in Government subsidy between 2015 and 2016 is in phase with the needs tied to advancing project deliverable completion.



b. Changes in external income per sector

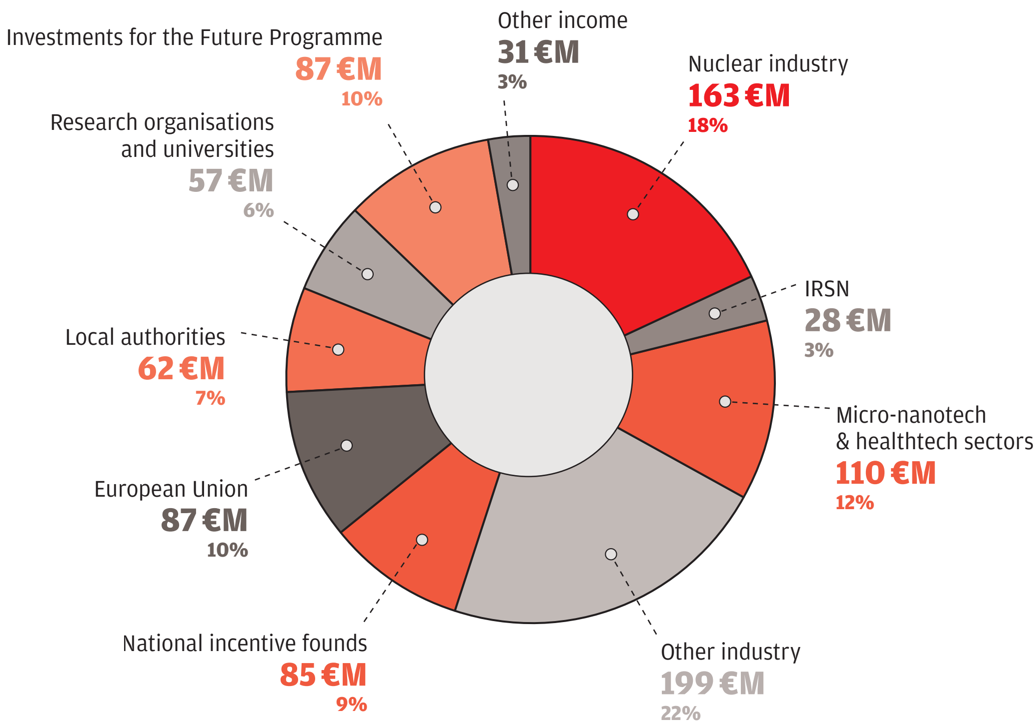
External income saw a net increase over 2015 (+2.7%), reflecting a +0.7% increase for the civil sector and a +46% increase for the defence sector.



c. External income per partner

External income breaks down into an 55%/45% split between industry and institutional partners.

Breakdown of the CEA's external income



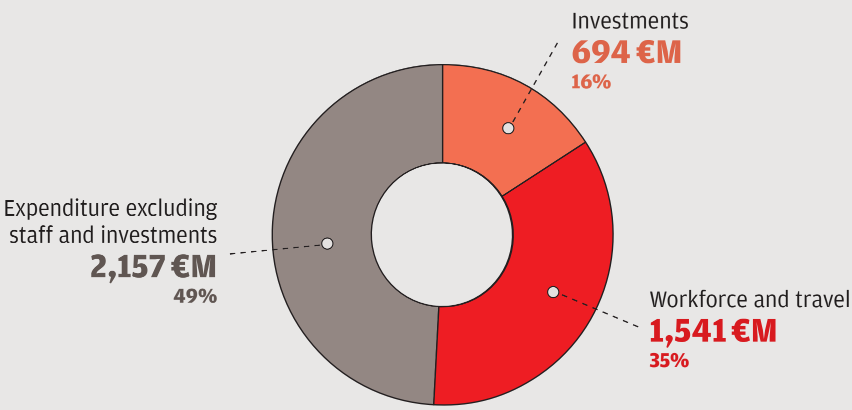
3. EXPENDITURE

Expenditure in 2016 rose by +1% across the CEA compared to 2015, with civil-sector expenditure holding practically steady, and a +2% rise on defence-sector investment (commissioning a new supercomputer to operational service for the CCRT: Research and Technology Computing Centre).

	2015		2016		2016–2015 change by %
	in €M	%	in €M	%	
Civil sector					
Workforce and travel	1,132	43	1,134	43	0
Expenditure excluding staff and investments	1,197	45	1,198	45	0
Investments	370	14	362	14	- 2
Balance of civil-defence flows	- 45	- 2	- 50	- 2	+ 10
TOTAL – CIVIL SECTOR	**2,653**	**100**	**2,644**	**100**	**0**
Defence sector					
Workforce and travel	408	24	407	23	0
Expenditure excluding staff and investments	977	57	960	55	- 2
Investments	285	17	332	19	+ 17
Balance of civil-defence flows	45	3	50	3	+ 10
TOTAL – DEFENCE SECTOR	**1,715**	**100**	**1,749**	**100**	**+ 2**

Breakdown of the CEA's expenditure

The 2016 expenditure breaks down exactly the same as 2015 expenditure structure.

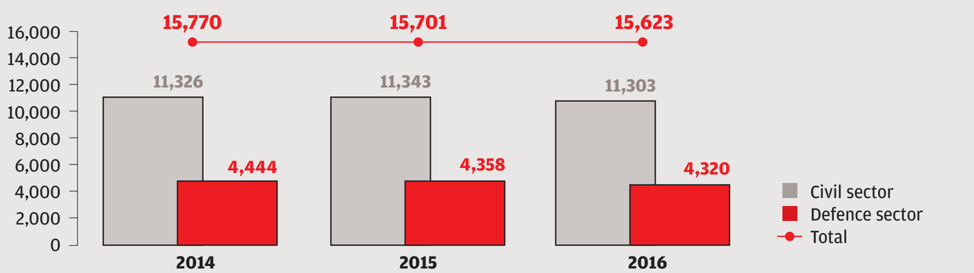


4. STAFF

a. Change in workforce numbers by sector

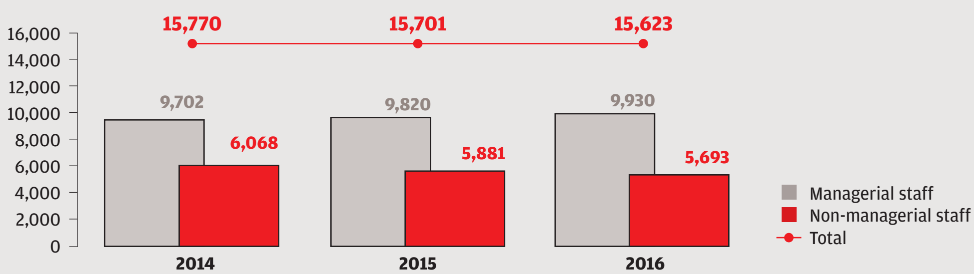
The CEA had a workforce of 15,623 in 2016, of which 11,303 for the civil sector and 4,320 for the defence sector, i.e. a -0.5% drop compared to 2015.

Numbers are down -0.4% in the civil sector and -0.9% in the defence sector, chiefly in support functions on both sides.

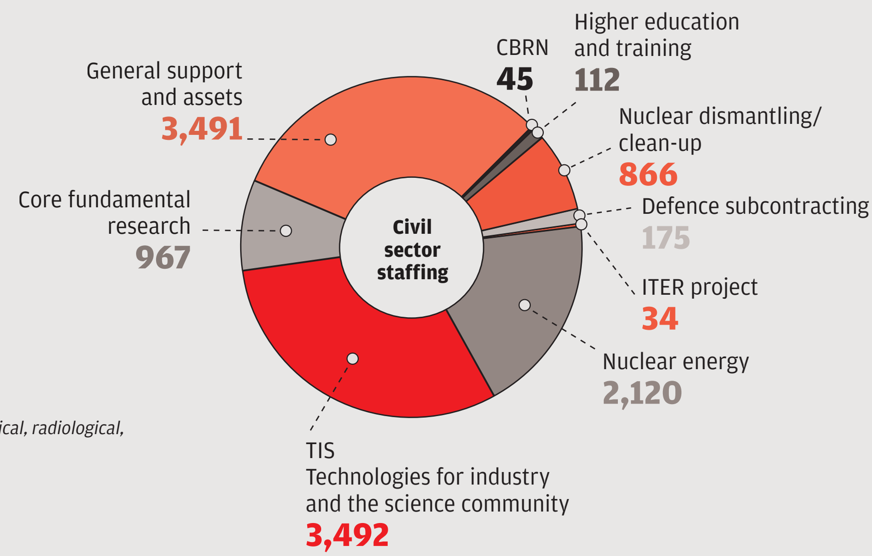


b. Change in workforce numbers by status

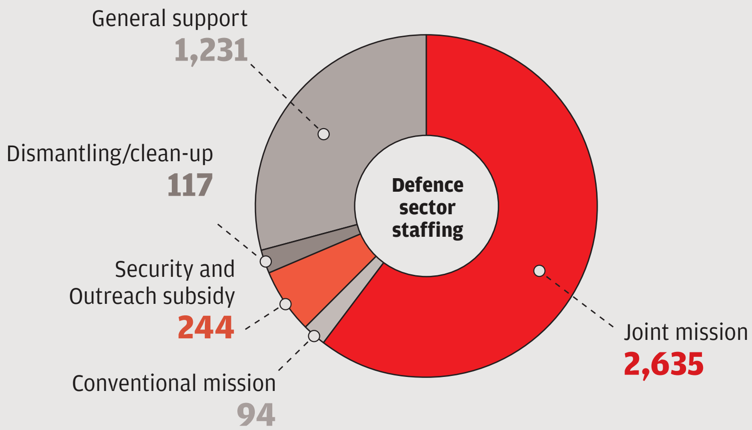
Managerial staff accounts for 63.5% of the workforce, a figure that is slightly up on 2015 (+1.1%).



c. Change in workforce numbers by field per sector

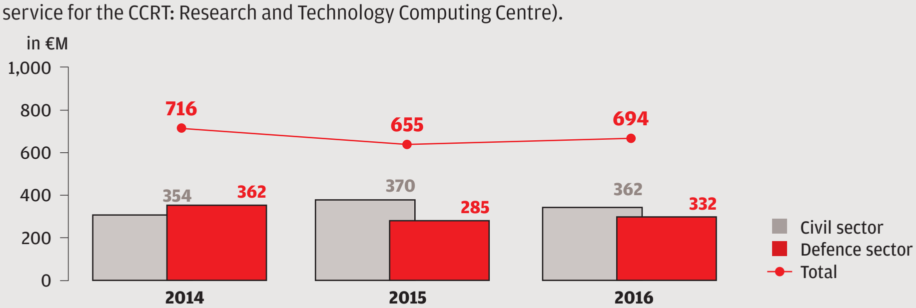


CBRN: Chemical, biological, radiological, and nuclear defence.



5. INVESTMENTS

Investment rose +6% in 2016, including a 17% rise on defence-sector investment (commissioning a new supercomputer to operational service for the CCRT: Research and Technology Computing Centre).



6. COVERAGE OF DISMANTLING AND CLEAN–UP COSTS

Commitments for end-of-cycle operations totalled €13,531 million at year-end 2016 in discounted value, with the provision for Cigeo back-readjustment at €16 million.
These commitments are covered by the four civil and defence dismantling funds to €13,469 million, the difference representing the share payable by the Government of €78 million for non-recoverable VAT on civil centre projects not financed by the Civil Fund.

ASSETS (IN € MILLION)	31.12.2016	31.12.2015
Claims on Government	**14,555**	**14,313**
of which Civil Fund	4,909	5,316
Defence Fund	9,568	8,898
Non-fund	78	99
Claims on Government for Cigeo financing readjustment	**16**	**16**
of which Civil Fund	9	9
Defence Fund	7	7
Dismantling assets – Third parties	**5**	**2**
AREVA shares	**197**	**236**
WCR and liquid assets	**-1,191**	**-1,204**
TOTAL	**13,582**	**13,363**

LIABILITIES (IN € MILLION)	31.12.2016	31.12.2015
Provisions for end-of-cycle operations	**13,531**	**13,307**
of which Civil Fund	5,919	5,974
Civil Fund – New facilities	29	29
Defence Fund	7,435	7,185
Defence Fund – New facilities	70	20
Government	78	99
Provisions for Cigeo readjustment	**16**	**16**
of which Civil Fund	9	9
Defence Fund	7	7
TOTAL	**13,547**	**13,323**

These liabilities are covered by several types of asset:
- a claim on the Government amounting to €14,571 million, of which €9,575 million under the Defence Fund, €4,918 million under the Civil Fund and €78 million for non-recoverable VAT on civil projects;
- assets of €5 million with IRSN;
- Areva shares worth 9.09% of the capital allocated to the civil and defence funds (7.45% for the civil fund and 1.64% for the defence fund), valued at €197 million on the basis of the price of the last 90 sessions of 2016;
- a liquidity position (WCR and cash including unrealised gains and net of the CEA's debt to Areva NC) at -€1,191 million.

On this basis, the CEA's assets-to-liabilities coverage ratio is 100.3% as at 31 December 2016.

7. PURCHASING MANAGEMENT

Roughly half of the CEA's budget is devoted to purchases.
As a Government-owned public organisation, the CEA is governed, for its purchases, by the principles of free access to public procurement contracts, equal treatment of economic operators, and transparency of procedures, established by European legislation and transposed into French law. These principles seek to guarantee efficient purchasing and proper use of public funds.
The regulatory framework governing the CEA's rules on public procurement is now built around the legislation transposing EU directive 2014/24/EC, adopted 26 February 2014, into French law, i.e.
- government order No. 2015-899 of 23 July 2015 on public procurement,
- implementing decree No. 2016-360 of 25 March 2016 on public procurement,

which came into effect on 1st April 2016.
An Advisory Committee on Procurements, a regulatory body independent of the CEA, was established by an Order of 6 December 1952 (amended). The Committee examines, on the basis of a number of thresholds defined in the above-mentioned Order, the CEA's largest contracts or Framework agreements. It prepares an annual activity report which is examined by the Executive Board's Audit Committee, and the latter reports its findings to the Board.
During the year 2013, the Advisory Committee was asked by its Chairperson to examine 229 planned contracts, worth a total of €1,309.5 million ex-VAT. Of these 229 contracts, one planned contract

was turned down. Through its opinions and recommendations, the Committee helps to improve the efficiency of CEA's purchases and the quality of procedures used.

As the CEA's programmes are often highly complex, the entity strives to anticipate contingencies more effectively. Via this approach, contractual solutions can be introduced to restrict use of amendments and thus improve time and termination cost management. For example, owing to their specific features, nuclear-related contracts are awarded to industrial players whose skills are regularly re-assessed against the CEA's stringent requirements on security/safety. For R&D programmes involving prototype facility design or the use of advanced technology, the CEA strives to give contract opportunities to small and medium-sized enterprises and industries (SMEs/SMIs). CEA signed, on end-2004, the SME Pact. The CEA's Chairman renewed this commitment in 2011 by joining a newly-founded association established to support the SME Pact; these economic operators have extensive capacities for innovation, which CEA helps to stimulate to meet its needs: This also responds to the objective set by the Government in terms of expanding the scope of innovation.

8. OUTLOOK FOR 2017 – CEA BUDGET

The CEA's 2017 budget resourcing is set to increase (+1.7%) compared to the 2016 budget.

The Government subsidy posted in the 2017 budget, including Investments for the Future programmes, accounts for 63% of CEA's total funding and is projected to rise +4.8% compared to the 2016 budget, driven by the 2017 schedule for defence project programmes and financing needs connected to VLRI (Very large research infrastructures).

External income is projected to drop by -1.0% compared with the 2016 budget, mainly income through institutional partners due to the adjustment of programme expenditures scheduling on certain projects.

The two dismantling funds, one civil and one defence-related, will represent 16% of CEA's total funding.

Expenditure in the civil sector is set to edge up by +0.4% compared with the 2016 budget. The total payroll of staff governed by the Labour Agreement will climb by +0.4% in the defence sector, with a -0.6% decrease in staff numbers.

In the civil sector, numbers of general support staff will continue to fall (-0.3%) compared to the 2016 budget. Defence-sector expenditure is set to rise 6% compared to the 2016 budget, chiefly expenditure excluding staff and investments, in sync with scheduled completion of project deliverables.

The total payroll of staff governed by the Labour Agreement is set to climb by +1.4% in the defence sector, with a -0.5% dip in staff numbers.

In the defence sector, numbers of general support staff will continue to fall (-0.9%) compared to the 2016 budget.

ANNUAL FINANCIAL STATEMENTS

1. INCOME STATEMENT

2016 registered a net deficit of -€75 million, losing a further €41 million on the previous year, essentially driven by a €186 million drop in value-added income and the €14 million financial loss only part-covered by a €155 million rise in budgetary operating income.
The Civil Fund result (-€22 million) is primarily related to dismantling work not covered by reversal of provisions (-€5 million) and the financial burden of the revalued Areva NC debt (-€19 million).
The Defence Fund result (-€4 million) is essentially related to dismantling work not covered by reversal of provisions.
The Defence Fund–New facilities result (-€11 million) is mainly explained by the drop in discount rate.

- General budget (excluding carry-over) ____ 20 M€
- Stake in CEA Inv capital ____ - 45 M€
- Civil Fund ____ - 22 M€
- Defence Fund ____ - 4 M€
- INC (New civil facilities) ____ - M€
- IND (New defence facilities) ____ - 11 M€
- ITER ____ - 12 M€
- DSND[1] ____ - 1 M€
- DDCG ____ - M€
- AFNI ____ - M€
- I2EN ____ - M€
- IRT ____ - M€

The management balance of CEA's general budget excluding carry-over (€20 million) includes the -€2 million variation in the provision for paid leave and the €2 million variation in the provision for the time-savings account.

[1] *DSND: Delegate for nuclear safety and radiation protection for activities and facilities concerning defence.*

	Notes	2016	2015
Sales		5	5
Work		346	368
Services		208	189
INCOME	**NOTE 3**	**559**	**562**
Stored production		76	202
Self-constructed assets		37	41
Budgetary operating revenue	NOTE 4	2,268	2,102
Reversal of provisions	NOTE 8	822	729
Reversal of equipment grants	NOTE 9	456	423
Other income		37	33
OPERATING INCOME		**4,255**	**4,092**
Year's expenditure	NOTE 5	- 2,025	- 1,961
Taxes other than on income	NOTE 6	- 227	- 233
Payroll expenses	NOTE 7	- 1,481	- 1,473
Depreciation and provisions	NOTE 8	- 585	- 487
Income from joint-led operations	NOTE 10	-	-
Other expenses		- 4	- 2
OPERATING EXPENDITURE		**- 4,322**	**- 4,157**
OPERATING INCOME/LOSS		**- 67**	**- 65**
Financial income		1,112	469
Financial expenses		- 1,126	- 469
FINANCIAL INCOME/LOSS	**NOTE 11**	**- 14**	**-**
INCOME (LOSS) FROM OPERATIONS		**- 81**	**- 65**
Non-operating income		81	64
Non-operating expenses		- 75	- 33
NON-OPERATING INCOME/LOSS	**NOTE 12**	**6**	**31**
CORPORATE INCOME TAX		**-**	**-**
NET INCOME/LOSS		**- 75**	**- 34**

(in € million)

2. BALANCE SHEET

The balance carried forward shows a deficit of -€3,133 million due to the funds set aside for dismantling CEA facilities.

Assets	Notes	Value as at 31.12.2016	Excluding dedicated funds	Dedicated funds	Value as at 31.12.2015
INTANGIBLE ASSETS	**NOTE 13**				
Gross amounts		321	321	-	316
Depreciation		- 240	- 240	-	- 231
PROPERTY, PLANT & EQUIPMENT					
Other property, plant & equipment	**NOTE 13**				
Gross amounts		14,372	14,372	-	13,816
Depreciation		- 7,073	- 7,073	-	- 6,768
DISMANTLING ASSETS – THIRD PARTIES	**NOTE 14**	**5**	**1**	**4**	**2**
LONG-TERM INVESTMENTS	**NOTE 15**				
Gross amounts		1,032	886	146	1,178
Provisions		- 32	- 32	-	- 112
FIXED ASSETS					
Gross amounts		15,730	15,580	150	15,312
Depreciation and provisions		- 7,345	- 7,345	-	- 7,111
NET FIGURES		**8,385**	**8,235**	**150**	**8,201**
INVENTORY AND WORK-IN-PROCESS	**NOTE 16**				
Gross amounts		6,257	6,257	-	6,174
Provisions		- 19	- 19	-	- 17
NET FIGURES		**6,238**	**6,238**	**-**	**6,157**
ADVANCES AND DEPOSITS ON ORDERS		**25**	**25**	**-**	**34**
TRADE RECEIVABLES					
Gross amounts		868	843	25	1,063
Provisions		- 52	- 52	-	- 58
NET FIGURES		**816**	**791**	**25**	**1,005**
NET CLAIMS ON GOVERNMENT	**NOTE 18**	**14,570**	**77**	**14,493**	**14,329**
OTHER RECEIVABLES	**NOTE 19**	**466**	**466**	**-**	**631**
CASH BALANCES AND SECURITIES	**NOTE 20**				
Gross amounts		1,175	999	176	681
Provisions		- 4	-	- 4	- 6
NET FIGURES		**1,171**	**999**	**172**	**675**
OTHER		**15**	**15**	**-**	**16**
TRANSLATION EXCHANGE GAIN OR LOSS – ASSETS		**-**	**-**	**-**	**-**
DROP IN CLAIMS ON GOVERNMENT – ASSETS – ACCRUALS		**64**	**-**	**64**	**75**
GRAND TOTAL		**31,750**	**16,846**	**14,904**	**31,123**

(in € million)

Liabilities	Notes	Value as at 31.12.2016	Excluding dedicated funds	Dedicated funds	Value as at 31.12.2015
Special fund	NOTE 21	13,978	13,533	445	13,665
Equipment grants received from third parties		1,048	1,048	-	939
Balance from previous financial years	NOTE 22	- 3,133	- 5	- 3,128	- 3,099
Balance for the year	NOTE 22	- 75	- 38	- 37	- 34
SELF-GENERATED EQUITY		**11,818**	**14,538**	**- 2,720**	**11,471**
PROVISIONS FOR CONTINGENCIES & CHARGES	**NOTE 23**	**13,698**	**229**	**13,469**	**13,467**
FINANCIAL DEBTS		**259**	**259**	**-**	**579**
ADVANCES AND DEPOSITS RECEIVED ON ORDERS		**74**	**74**	**-**	**147**
ACCOUNTS PAYABLE		**1,861**	**463**	**1,398**	**1,869**
OTHER LIABILITIES		**1,229**	**1,229**	**-**	**835**
OTHER		**89**	**54**	**35**	**87**
TRANSLATION EXCHANGE GAIN OR LOSS – LIABILITIES		**-**	**-**	**-**	**-**
INCREASE IN CLAIMS ON GOVERNMENT – LIABILITIES		**2,722**	**-**	**2,722**	**2,668**
GRAND TOTAL		**31,750**	**16,846**	**14,904**	**31,123**

(in € million)

3. RECONCILIATION WITH THE BUDGET

The accounting transactions for the financial year (operations and investment) and the budget balance are reconciled after eliminating off-budget operations (changes in supply inventories, depreciation/reversals, provisions/reversals of provisions on inventory, certain non-operating expenses/income, reversals of equipment grants, self-constructed assets) and neutralising the supplementary budgets, the dismantling funds, the IRT, AFNI (France International Nuclear Agency), DSND, DDCG, I2EN and ITER France Agency.
The budget balance for 2016 was €20 million.

BUDGET EXPENDITURE	Total expenditure (A)	Of which nonbudget operations (B)	Of which supplementary budgets (C)	Of which DSND (D)	Of which DDCG (E)	Of which AIF (G)	Of which dedicated funds (H)	Of which AFNI (J)	Of which I2EN (K)	Of which IRT (L)	Total budgeted expenditure (A)-(B)-(C)-(D)-(E)-(F)-(G)-(H)-(I)-(J)-(K)-(L)
OPERATING ACTIVITIES (BEFORE TAX)	-	-	-	-	-	-	-	-	-	-	-
OPERATING EXPENDITURE	-	-	-	-	-	-	-	-	-	-	-
Year's expenditure from third parties	2,029	58	6	2	-	123	-	-	1	1	1,838
Other tax	227	-	1	-	-	-	-	-	-	-	226
Payroll expenses	1,481	-	2	4	1	2	-	-	-	-	1,472
DEPRECIATION AND PROVISIONS	585	497	-	-	-	1	47	-	-	1	39
INCOME FROM JOINT-LED OPERATIONS	-	-	-	-	-	-	-	-	-	-	-
FINANCIAL EXPENSES	1,126	92	-	-	-	-	1,031	-	-	-	3
NON-OPERATING EXPENSES	75	60	-	-	-	-	-	-	-	-	15
CORPORATE INCOME TAX	-	-	-	-	-	-	-	-	-	-	-
YEAR'S ALLOCATION TO THE SPECIAL FUND	-	-	-	-	-	-	-	-	-	-	-
INCOME STATEMENT TOTAL	5,523	707	9	6	1	126	1,078	-	1	2	3,593
Reclassification between income and expenses	- 21	-	-	-	-	- 78	- 6	-	-	-	63
TOTAL OPERATING ACTIVITIES	5,502	707	9	6	1	48	1,072	-	1	2	3,656
Investment operations (before tax)	-	-	-	-	-	-	-	-	-	-	-
Class 1	5	-	-	-	-	-	-	-	-	-	5
Class 2: Acquisitions of fixed assets	764	45	-	-	-	3	-	-	-	-	716
Class 4: Variation in advances	-	-	-	-	-	-	-	-	-	-	-
TOTAL INVESTMENT OPERATIONS	769	45	-	-	-	3	-	-	-	-	721
GRAND TOTAL	6,271	752	9	6	1	51	1,072	-	1	2	4,377

(in € million)

BUDGET INCOME	Total expenditure (A)	Of which nonbudget operations (B)	Of which supplementary budgets (C)	Of which DSND (D)	Of which DDCG (E)	Of which AIF (G)	Of which dedicated funds (H)	Of which AFNI (J)	Of which I2EN (K)	Of which IRT (L)	Total budgeted expenditure (A)-(B)-(C)-(D)-(E)-(F)-(G)-(H)-(I)-(J)-(K)-(L)
OPERATING ACTIVITIES (BEFORE TAX)	-	-	-	-	-	-	-	-	-	-	-
OPERATING INCOME	**2,977**	**111**	**9**	**5**	**1**	**115**	**-713**	**-**	**1**	**1**	**3,447**
Reversals of depreciation and provisions	822	41	-	-	-	-	746	-	-	-	35
Reversals of equipment grants and contributions received from third parties	456	455	-	-	-	-	-	-	-	1	-
FINANCIAL INCOME	**1,112**	**90**	-	-	-	-	**1,008**	-	-	-	**14**
NON-OPERATING INCOME	**81**	**60**	-	-	-	-	-	-	-	-	**21**
YEAR'S ALLOCATION TO THE SPECIAL FUND	**75**	**75**	-	-	-	-	-	-	-	-	-
INCOME STATEMENT TOTAL	**5,523**	**832**	**9**	**5**	**1**	**115**	**1,041**	**-**	**1**	**2**	**3, 517**
Reclassification between income and expenses	-21	-	-	-	-	-78	-6	-	-	-	63
TOTAL OPERATING ACTIVITIES	**5,502**	**832**	**9**	**5**	**1**	**37**	**1,035**	**-**	**1**	**2**	**3,580**
Investment operations (before tax)	-	-	-	-	-	-	-	-	-	-	-
Class 1											
Financial debts	7	-	-	-	-	-	-	-	-	-	7
Subsidies received from third parties in the year	111	-	-	-	-	1	-	-	-	-	110
Allocation of the Government subsidy to the special fund and equipment grants	703	-	-	-	-	3	-	-	-	-	700
TOTAL INVESTMENT OPERATIONS	**821**	**-**	**-**	**-**	**-**	**4**	**-**	**-**	**-**	**-**	**817**
GRAND TOTAL	**6,323**	**832**	**9**	**5**	**1**	**41**	**1,035**	**-**	**1**	**2**	**4,397**

(in € million)

4. CASH FLOW SCHEDULE

	Notes	2016	2015
Operating activities			
Self-financing capacity	NOTE 24	-2,711	-2,511
Charge to balance brought forward, New facilities – Defence		125	-
Change in inventories		-19	-229
Change in accounts receivable including advances and deposits on fixed assets		1,052	-1,211
Change in liabilities		542	1,136
CASH FLOW FROM OPERATING ACTIVITIES (A)		**-1,011**	**-2,815**
Investment operations			
Income from the disposal of fixed assets (tangible and intangible)		1	4
Acquisitions of fixed assets (tangible and intangible)		-747	-713
Change in long-term investments		-255	-2
Change in Dismantling assets-Third parties		3	-
CASH FLOW FROM INVESTMENT OPERATIONS (B)		**-998**	**-711**
OPERATING CASH FLOW AFTER FINANCING OF INVESTMENTS (C=A+B)		**-2,008**	**-3,527**
Financing operations			
Change in financial debts		-3	2
Subsidies and contributions received from the Government and third parties		2,821	2,746
CASH FLOW FROM FINANCING OPERATIONS (D)		**2,818**	**2,748**
NET CHANGE IN TOTAL CASH POSITION (C+D)		**810**	**-779**
Cash position at start of year		159	937
Cash position at year-end		969	159
Change in net cash flow		810	-778

(in € million)

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 L332.1 to L332.7 of the French Research Code—which repealed Order No. 45-2563 of 18 October 1945, confirm that the CEA (*Commissariat à l'énergie atomique et aux énergies alternatives*, the French Alternative Energies and Atomic Energy Commission) is a scientific, technical and industrial entity with legal personality and administrative and financial autonomy, falling within the category of public undertakings 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 industry-norm business rules and practices.

• Operation of the CEA

In addition to the Order of 2004 and the provisions of the 1945 Order temporarily maintained, the operation of the CEA and its relations with the Government are defined by various pieces of legislation, in particular decree No. 70-878 of 29 September 1970 and its implementing decree No. 72-1158 of 14 December 1972.
Pursuant to the Chairman's letter of engagement signed by the Prime Minister on 20 April 2015 and to decisions taken by the President of France at the Nuclear Policy Council of 8 July 2015, decree No.2016-311 of 17 March 2016 concerning the organisation and operation of the CEA has been adopted and officialised. The purpose of this decree is to:
• reform the governance of the CEA to assert tighter strategic planning and agency coordination by its ministerial authorities;
• clarify the CEA's missions;
• tidy up the legislation as part of a simplification drive and bring it into line with other public research organisations.

• Key events of the 2016 financial year

• On the basis of the framework agreement, and its amendment No. 1, on the financing of long-term nuclear costs, the claim on the Government was revalued by +€241 million over the year, i.e. a total amount of €14,570 million as at 31 December 2016.
• Provisions for end-of-cycle operations amounted to €13,547 million as at 31 December 2016, which also factors in the financial impacts stemming from the projected rate changes for +€525 million (change in discount rate, which fell from 4.5% to 4.1%, and change in projected inflation rate, which fell from 1.75% to 1.65%) and from estimate and scope changes for €112 million (including a €47 million scope effect on the new Funds).
• As the distribution option for €376 million initially-planned under the 2015–2017 three-year agreement could not be exercised, the French government granted a cash reserve in 2016 for the same amount. The CEA is to reimburse this advance cash reserve once this distribution option can be exercised under the requisite set of conditions, and no later than 1st December 2017. CEA's stake in Areva's share capital remains 54.37% at year-end closing, and therefore remains unchanged from 2015.
• The dedicated funds and now financed by an annual subsidy of €740 million under government budget. This new financing mechanism had been voted in by the *Assemblée Nationale* on 27 October 2015. The legal framework government payment of this subsidy needs to be defined to guarantee that this subsidy will not get cut and thus ensure the liquidity of this claim on Government.
• In response to a memo from the nuclear safety authorities dated 25 July 2015, a joint review process was conducted to redefine the priorities and overarching strategy guiding clean-up and dismantling operations. On 16 December 2016, CEA submitted its proposals package to the ASN, said package setting out:
  - overarching strategy guiding dismantling operations for the next fifteen years with importance-ranked priorities and consolidated commitment-indexed dismantling programmes;
  - updated strategy on the management of radioactive materials and waste held by the CEA;
  - realignment of the organisation adopted and resources invested by the CEA to address these projects;
  - revision of the allied financials for the next fifteen years with breakdowns for facility dismantling and waste and spent fuel management operations factoring in the re-updated dismantling operations strategy and development of the Cigeo project.

On this basis, discussions with the nuclear safety authorities are set to continue into 2017 to get this proposal validated. Note that the inputs to the dossier as it stands do not jeopardise the advance smoothing measures pre-planned in late 2015.
• On 24 February 2016, the CEA completed a share capital increase in cash of its (100%-owned) subsidiary CEA Investissement for an amount of €45 million.
• The CEA and DCNS co-signed a memorandum of settlement on 24 June 2016 under the RJH programme framework, under which DCNS was led to make a €121 million payout settlement to the CEA.
• The CEA divested 76.45% of its equity stake in FT1CI to BPI France Participations on 16 November 2016, for a transfer price of €123 million. The assumptions used by the CEA to calculate commitments relating to staff as at 31 December 2016 have been revised to account for the change in discount rate, which fell from 2.15% to 1.50%, as forecast inflation rate which fell from 1.65% to 1.5%.
• In 2017, the Ganil is to secure clearance from the authorities to commission Spiral2 into active operational service. This will mean that at year-end closing 2017, the amount of the provision for dismantling will need to be re-adjusted to accommodate the impacts of the new INB (basic nuclear installation) scope and the 30-year extension of the grouping's term (i.e. running up to 01/01/2046).

• In 2017, Soleil reevaluated its decommissioning liabilities provision. The CEA addressed Soleil a letter of comfort to materialise its commitment (€8 million).

Note 2 - Accounting methods and principles

• General principles

The annual financial statements of the CEA have been drawn up according to the methods and principles of the general chart of accounts in compliance with the French accounting standards setter (ANC) regulation No. 2014-03 ratified by the Order of 8 September 2014 published in the *Journal Officiel* of 15 October 2014.

Exemptions have been granted if, in the valuation of certain assets and liabilities and their calculation, the application of the accounting regulations laid down by these texts was deemed unlikely to produce a true representation of the business and assets, given their specialised nature (stock and work in progress) or their method of financing.

Financing received at the end of the year, for services that have not yet been provided, is posted under "Budgetary operating income" then allocated to the "Special Fund" item. Similarly, if, after allocation of income, the balance of transactions for the year results in a negative balance, namely as a result of cancellations of grants recorded over the year, in circumstances that do not allow a corresponding reduction in expenditure owing to commitments already fulfilled, this balance is allocated to the "Special Fund".

• Accounting methods and principles in force at year-end closing

a. Intangible assets

Intangible assets consist of patents and licences acquired, which are depreciated over the useful economic life of the said assets or their likely conditions of use.

These correspond to the straight-line method and the 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 disposal rights the depreciation of which is calculated in proportion to the effective use of the rights compared to the reserved volume.

R&D costs, whatever the outcome, are stated as expenditure for the year.

b. Property, plant & equipment

Property, plant and equipment is valued at the historical acquisition cost or production cost, excluding financial and administrative expenses.

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

Depreciation schedules are determined for these assets on the basis of the useful economic life or the likely conditions of use thereof. These correspond to the straight-line method and the rates normally applied to these asset categories.

Depreciation booked on the "Land" line corresponds to depreciation of the developments made on these investments.

The principal life terms applied are as follows:

• Buildings _______________ 20 years
• Light constructions _______________ 10 years
• Technical facilities _______________ 10 to 30 years
• Equipment and machinery _______________ 3 to 10 years
• Transport equipment _______________ 4 years
• Furniture, office equipment and computer hardware _ 3 to 10 years

Investment subsidies received for fixed asset purchases are posted under "Equipment grants received from the State" and "Equipment grants received from third parties".

c. Dismantling assets

The portion of provisions for end-of-cycle operations corresponding to funding expected from third parties (IRSN) is recognised in an account called "Dismantling assets–Third parties".

These assets are valued symmetrically to the corresponding provisions, on a discounted basis (cf. note 2k (2)).

d. Long-term investments

Long-term investments are valued at their historical cost. Their inventory value is calculated on the basis of the share of the net worth of the subsidiary on the closing date. A provision is booked when this inventory value, calculated on a share-by-share basis, is lower than the historical cost.

e. Inventory

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

Work-in-process, 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 expenses.

For presentation purposes, the value applied to arms systems and resources made available to the Armed Forces corresponds to the value of the materials alone, which will ultimately be recovered by the CEA. As these materials were procured and funded under specific programmes, they cannot be converted into realisable or disposable assets and are not therefore depreciated.

Inventories of consumables and basic inputs 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 year-end closing, the value of inventories of consumables is assessed on the basis of their value in use or the utility value of the materials.

f. Claims on Government

The provisions of amendment 1 to the Government/CEA framework agreement on the funding of the CEA's long-term nuclear costs set the amount of the claim on Government as at 31 December 2016 (€14,570 million).

The impacts of this agreement on the accounts are explained in note 18.

g. Impairment of trade receivables

This is valued on a case-by-case basis according to the assessment of the risk. Barring exceptional and duly justified scenarios, a provision is booked on 31 December for any trade receivable still unpaid six months after the due date.

h. Short-term investments

Short-term investments are posted in the balance sheet at their acquisition cost.
Furthermore, on the closing date, unrealised gains or losses are calculated on the basis of the last known net asset value of the units for UCITSs, and on the basis of the last price in December for bonds.
A provision is booked for unrealised losses recognised at year-end closing.

i. Budget subsidy received from Government

The budget subsidy notified by the Government is successively entered in "Equipment grants", "Special fund" or "Budgetary operating income" depending on the type of expenditure it is used to finance.
In the accounts, given the national importance of the CEA's activity, these revenues are allocated first to financing ongoing needs, and the balance is allocated to financing net operating expenses of the year.
The amount entered in "Equipment grants" corresponds to the residual value of intangible and tangible fixed assets, excluding non-budget transactions concerning advances and deposits paid on orders for fixed assets. The amount entered in "Special reserves" essentially represents the financing of financial assets and stock. The amount entered in "Budgetary operating income" represents the portion of funds received from the Government allocated to net operating expenditure of the year.
As regards the dedicated funds, French budget appropriation is booked as a reduction in the claims to government item.

j. Equipment grants received from Government and third parties

These are credited to the income statement according to the estimated service life or length of use of the fixed assets that they were used to finance.

k. Provisions for contingencies and charges

A provision is booked where there is an obligation to a third party on the closing date, whether legal, contractual or implicit, that will probably give rise to an outflow to the third party which the CEA is able to estimate with sufficient reliability.
No provisions are booked for any liabilities corresponding to an obligation that is neither likely nor definite on the closing date. These liabilities, if significant, are mentioned in the Notes.

1. Commitments relating to staff

In view of how the CEA is financed, its commitments to its staff, consisting of leave banks for retirement benefits and other postemployment commitments are not provisioned, but posted in off-balance sheet commitments, with the exception of those actually invoiced to customers, for which a provision for expenses is booked.

2. End-of-cycle commitments

a) Nuclear facility dismantling financing

Provisions relating to the dismantling of nuclear facilities correspond to the total cost of the operation when the CEA is the nuclear operator of the facility, or to the share attributable to it through its past involvement in a programme, or the joint operation of a facility where the CEA is not considered to be the nuclear operator. As the deterioration is immediate, these provisions are booked as soon as the facility is commissioned for active operation.
The corresponding entry of the portion of provisions to be funded by third parties is broken down into the following items:

- posting in a "Dismantling assets to be financed by third parties" account. This asset is not depreciated but converted into accrued income over the years the facility in question is dismantled, to reflect the Fund's claim in relation to the third party in accordance with the agreed contractual provisions;
- future financing expected from the Government is now posted in a "Claims on the Government" account, in accordance with the provisions of the Government-CEA framework agreement. The liquidity of this claim first materialised as rolling three-year agreements then, starting from the 2016 fiscal year, budget appropriation to programme #190 ("sustainable energy, development and mobility") of the "Higher Education and Research" mission so that it can pool all Government funding for CEA–French Alternative Energies and Atomic Energy Commission nuclear facility dismantling and clean-up.

In a letter dated 1st December 2008, the DGEC, which is the administrative authority that controls the hedging of nuclear operators, confirmed that these assets were eligible as hedging assets within the meaning of Article 20 of the Law of 28 June 2006 during the transition period provided for under that Law.
Similarly, the CEA holds the assumption that the cash provided by these assets will meet its cash flow requirements, and consequently works on prioritising the execution of its operations.

b) Evaluation of nuclear facility dismantling costs

Facility dismantling costs are assessed using a method designed to produce the best estimate of the costs and lead-times of operations at any given time:

- upstream, from the commissioning phase, a technical-economic model is applied to the various types of facilities to be dismantled (ETE-EVAL sofware co-developed with Areva), based on an inventory of the equipment, and its projected radiological situation, and on models involving scenarios and elementary cost ratios. Given the variety of facilities to be dismantled and the resulting variation from one facility to another, assessment models are based on standard scenarios applied to the dismantling of standard units corresponding to functions (spent fuel pool, ponds, fabricated equipment and pipework, trenches, etc.) and associated with radiation and contamination levels, accessibility and the possibility of carrying out work (existence of materials handling equipment, equipment for cutting inside the cell, etc.);

- until this first modelling package has been completed, a rough evaluation is put together on the basis of 15% of investment made, in line with the ratio borrowed by EDF, following work led by the French Nuclear Power Advisory Committee (PEON) on the cost of nuclear electricity generation;
- once the dismantling project is initiated, studies are successively conducted to assess clean-up and dismantling costs with a consistently smaller margin of error;
- finally, during the work, termination costs are regularly reviewed based on orders and contracts in progress.

Provisions for the dismantling of nuclear facilities and for waste retrieval and conditioning are booked on the following bases:

- an inventory of the cost of bringing the site to the decommissioning level which, unless there are any particular requirements to be considered, generally involves the total, unconditional release of the site, i.e. aiming to completely eliminate all areas with a radioactive risk, keeping the civil engineering structures in place.
- the commencement of operations immediately after the final shutdown of "production", which means that assessments do not take projected monitoring costs into account;
- assessment of expenditure based on projected costs, including labour costs of operational staff (operators), managerial staff and radiation protection staff, consumables and equipment, the treatment of the resulting waste, including final disposal. The valuation also takes into account a share of the technical support costs of the CEA units in charge of decommissioning. Lastly, it takes into account the financial impact resulting from the risk analyses carried out for each project. For projects in progress, 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 their likelihood of occurrence. When this analysis is not available, the CEA uses a macroscopic approach taking into account the difficulty of the project and the extent of knowledge of what remains to be done depending on the achievement, or otherwise, of the following steps: internal drawings, preliminary design, final design, RFPs, phase completions. This approach is transitional pending the results of risks analyses. For other projects, scheduled for completion in the medium and long term, the analysis is based on feedback from ongoing projects according to the type of facility (reactor, laboratory, etc.) and the expense items (project and works management, operation, waste);
- inclusion of VAT, calculated on the basis of the applicable VAT rate (20% as at 31 December 2016) and of the flat taxation rate.

c) Long-term management of radioactive waste packages

- Up to year-close 2014, future expenses relating to deep disposal were assessed at the end of each year, based on the quantities of high- and intermediate-level waste produced (HLW-LL and ILW-LL) governed by the Law of 28 June 2006, and the assumption that a deep geological repository will be used. Under the stewardship of the DGEC, a working group was set up in 2004, made up of representatives from Andra, EDF, Areva and the CEA. The group submitted its report in the second half of 2005. The CEA appropriately applied the working group's findings and, up to year-close 2014, calculated unit costs per waste category based on a total estimate of €14.1 billion (under 2003 economic conditions) for the deep geological repository.
- In the wake of the Government-initiated process to update this assessment, the Ministry for Ecology, Sustainable Development and Energy announced in mid-January 2016 that the estimate had been revised upwards and put a €25 billion figure (baselined on 2011 economic conditions) on the cost of deploying long-term containment solutions for high- and intermediate-level long-lived wastes (a project now referred to as "Cigeo") for a period of 140 years from 2016. This cost—an output from the preliminary design phase of the Cigeo project—overrides the 2005 estimate of €14.1 billion (baselined on 2003 economic conditions) on which the provisions for end-of-cycle operations had been grounded. The now-promulgated new reference baseline cost of Cigeo prompted CEA to move late-2015 and commit an additional net provision for end-of-cycle cost of €858 million in discounted value. This provision integrates the full CEA termination cost inventory. The original cost apportionment formula fits the most likely quota-share estimate and remains unchanged. It also includes a quota share of risks and contingencies on top of provision for the up-grossed estimate. Remember that Cigeo is co-financed by EDF, CEA and Areva, via a cost apportionment formula factored on volume of waste for deep geological disposal. The big factors liable to shape the amount of the provision are Cigeo project cost, funding apportionment formula, schedule overrun and discount rate. Consolidated interim storage ("EIP") resources have also been provisioned to cover the four-year lag until the first waste packages are checked into the Cigeo facility (now 2029 instead of 2025). Note too that examination of the impacts in terms of the shipment packing and transport is still ongoing at year-end closing.
- The provisions also incorporate the share of costs of monitoring two disposal facilities, one in La Manche and one in the Aube, which have received or receive low-level, short-lived waste, as well as the expenses for the removal and planned sub-surface disposal of low-level, long-lived waste owned by the CEA (composed of graphite and radium-bearing waste).

d) Accounting for end-of-cycle obligations

End-of-cycle provisions are booked on a discounted basis by applying a rate of inflation and a discount rate to the projected cash flows positioned by maturity. These rates are estimated according to the following principles:

- the rate of inflation corresponds to the long-term objective of the European Central Bank;
- the discount rate is obtained taking into account:
  - → the rolling average over ten years of the 30-year constant maturity rate fungible Treasury bonds ("TEC 30") upped by 100 basis points in

accordance with regulations in force (limit set by Order of 24 March 2015 amending the order of 21 March 2007 of the Ministry of the Economy and Finance);

→ On this basis, as at 31 December 2016, the discount rate applied was 4.1% (down from 4.5% at year-close 2015) with a projected inflation rate of 1.65% (down from 1.75% at year-close 2015), below the regulatory ceiling rate given the market situation at year-end closing;

→ The CEA has been informed by the DGEC that the decree setting the ceiling discount rate is tabled for amendment.

– The effects of accretion over time are accounted for each year in the balance sheet by increasing the provisions for end-of-cycle operations with a corresponding entry in “Financial expenses”, the part relating to financing to be received from third parties and the government being recognised by increasing the claim on the Government with a corresponding entry in “Financial income”.

- The changes in assumptions concerning changes in estimates, discount rates and payment schedules are factored into the accounts:

→ for facilities commissioned on the assets side of the balance sheet, these changes in assumptions modify the assets entries;

→ for obligations accrued before the 1st January 2010, governed by amendment No.1 to the Government/CEA framework agreement and conditioned by a process effectively validating changes in estimates, by an increase in the provisions with, as a corresponding entry, an increase in claims on government. It also enables CEA to hedge the variations in other items under the Funds balance sheet outside of provisions, and thus guarantee that the CEA has the all-round liability coverage needed, in compliance with the waste law of 28 June 2006. In this scenario, variation in the claims to government item has a corresponding accruals account;

→ for obligations accrued as from the 1st January 2010, by an increase in the provisions, which has a corresponding endowments account. Coverage is ensured by the ringfenced CEA contributions posted as assets, which have a corresponding revenue account.

e) Systems and means made available to the Armed Forces

Analyses carried out during the year 2012 dispelled uncertainties and led the CEA to include irradiated fuel elements of defence facilities in the end-of-cycle provisions for the year.

The costs of dismantling weapons systems and means made available to the Armed Forces are not presented as off-balance sheet commitments, as they are met by the Armed Forces themselves. The same applies to the cost of retrieving the corresponding materials which are considered necessary for the CEA’s operations.

f) Main sources of uncertainty and judgment required on close of accounts

On the closing date of the year’s accounts, the assessments used for end-of-cycle provisions are the CEA’s best estimation of the resources required to perform its current dismantling and clean-up obligations in respect of its facilities (including RCD).

Furthermore, certain obligations will probably give rise to an outflow that the facility cannot reliably estimate given the information available at the date of year-end closing. Other obligations (contingent liabilities) remain only potential at this stage and are contingent on one or more uncertain future events not fully within the CEA’s control actually occurring or not occurring.

These end-of-cycle costs are thus estimated making allowance for significant uncertainties that, being inherent in the expected duration of operations (several tens of years), warrant being stated in the Notes. The chief factors here are:

– insufficient knowledge of the initial condition:

→ detailed knowledge of the actual condition of certain aging facilities must sometimes be reinforced by inventory and radiological characterisation operations which will only be possible during future dismantling operations. It will be necessary to adapt the dismantling scenarios in response to subsequent knowledge progressively acquired on the facilities.

– Nuclear safety requirements and new regulatory developments:

→ the safety, security and environmental requirements laid down by public and nuclear safety authorities may change, and thus impact the schedule and performance of work and the target clean-up levels, especially ground remediation targets;

– Changes in the definition of target end-state:

→ the target end-state of facilities and sites to be dismantled may change according to demands from public and nuclear safety authorities.

– Change in the date-windows for waste disposal, the costs for waste disposal or the specifications for waste conditioning:

→ the estimation of future expenses for deep disposal of high- and intermediate-level waste is now based on the €25 billion cost figure baselined on year-2011 economic conditions, which the Government set mid-January 2016 on the basis the project brief-phase assessment. It also includes a provision for risks and contingencies. Further cost estimates are currently being tested out for the transport and allied logistics strands of the project. There are still known-unknown cost contingencies over the acceptability of the waste packages, the apportionment of applied costs between waste producers, and potential shift or drift in schedule and/or cost of project work;

→ nuclear facility end-of-cycle operations require ongoing coordination and negotiations between the various waste producers, in order to coordinate their individual scenarios with financial needs, transport capacities and the actual capacities of waste disposal facilities. The CEA may even be required to amend its own scenarios to allow for these factors;

→ the scope and conditions of the future waste handling by Andra in its LL-LL and Cigeo disposal facilities.

– The scoping of financial resources:

→ the time-phasing of dismantling operations results in schedules of outflows integrated into the financial scenarios. To stay aligned to the funds allocated, they integrate risk smoothing measures at end-year 2015 along with the allied incremental fixed costs, all of which will require further consolidation after joint discussions with the nuclear safety authorities before being transposed into the technical-financial project scenarios;

→ the smoothing measures identified, as they stand, are still unable to close the gap to the payment schedule for the new Cigeo deep repository storage project cost estimate decreed mid-January 2016, especially from 2021 when construction work is due to start;

→ the CEA works on the assumption that at this time-horizon, the outflows scheduled will be consistent with the funding that will be effectively made available to it, and thus effectuates, on that basis, its prioritisations, the results of which—if cleared by the French Nuclear Safety Authority—will have fairly tangible knock-on effects on the rough-draft and revised estimates of the facilities concerned (see under §g below).

- The technical issues not covered by the contingencies provisions:

→ possible changes to waste and facility treatment and clean-up technologies could impact the final cost of end-of-cycle operations;

→ project schedules are often interlinked, such that any late performance on one project can cause delays and extra costs on all end-of-cycle operations.

As an example, the non-availability of disposal facilities on the due dates would have a significant impact on end-of-cycle scenarios, particularly on waste retrieval and conditioning programmes;

→ the premature stoppage of certain facilities or certain projects may lead to clean-up and dismantling work being launched much earlier than planned in the initial scenarios;

→ the technical scenario implemented for the UP1/plant project schedules validation of the programme pilot phase for 2025, which will make a major milestone for right-sizing subsequent project waves.

g) Outlook

- In response to a memo from the nuclear safety authorities dated 25 July 2015, a joint review process was conducted to redefine the priorities and overarching strategy guiding clean-up and dismantling operations.

On 16 December 2016, CEA submitted its proposals package to the ASN, said package setting out:

→ overarching strategy guiding dismantling operations for the next fifteen years with importance-ranked priorities and consolidated commitment-indexed dismantling programmes;

→ updated strategy on the management of radioactive materials and waste held by the CEA;

→ realignment of the organisation adopted and resources invested by the CEA to address these projects;

→ revision of the allied financials for the next fifteen years with breakdowns for facility dismantling and waste and spent fuel management operations factoring in the re-updated dismantling operations strategy and development of the Cigeo project.

On this basis, discussions with the nuclear safety authorities are set to continue into 2017 to get this proposal validated. This prioritisation work will result in very significant revisions of the estimates in 2017 and 2018.

- In 2016, work to re-update the position report (“*Dossier d’Orientation*”) on the fate of spent fuel from nuclear facilities in France. The result of this work will be submitted in first-half 2017 with a decision expected sometime later in 2017. A final design package (“APD”) contract initially planned for 2016 has been pushed back to 2017.
- In 2017, Spiral2 is due to be commissioned to active operation at the Ganil facility. This will mean that the amount of the provision for dismantling will need to be re-adjusted to accommodate the impacts of the new INB (basic nuclear installation) scope and the 30-year extension of the grouping’s term (i.e. running up to 01/01/2046).

h) Tax and social security liabilities

The CEA’s commitments to staff in respect of paid holiday due but not yet taken, and paid holiday accrued but not yet due, have been recognised since 2006.

In 2012, the CEA extended recognition to the leave entitlement recorded by staff in a leave bank (CET-Perco).

B - COMMENT ON THE FINANCIAL STATEMENTS

Note 3 - Operating income

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

Note 4 - Budgetary operating income

This item corresponds to the balance of the Government subsidy for the financial year allocated to the financing of operating expenditure for the year.

Note 5 - Expenditure for the year

The year’s expenditure breaks down as follows:

	2016	2015
Inventory purchases	**76**	**- 2**
Subcontracting	**664**	**666**
Non-inventory materials and supplies	**325**	**364**
External services:		
Maintenance and repair	311	318
General subcontracting	313	288
Travel - Assignments	51	51
Intermediaries and fees	76	69
Temporary and seconded staff	39	40
Transport of property and personnel	24	29
Training courses	16	15
General and technical documentation	7	7
Telecommunications - Postal costs	7	7
Rentals	36	34
Other expenses	77	75
TOTAL	**2,025**	**1,961**

(in € million)

Note 6 – Tax other than on income

The “tax other than on income” item breaks down as follows:

	2016	2015
Non-recoverable VAT on goods and services	56	76
Payroll tax	60	57
Tax on basic nuclear facilities	60	58
Other tax	51	42
TOTAL	**227**	**233**

(in € million)

Note 7 – Payroll expenses

Payroll expenses break down as follows:

	2016	2015
Wages and salaries	1,025	1,015
Social security contributions	456	458
TOTAL	**1,481**	**1,473**

(in € million)

Note 8 – Allocations and reversals of depreciation and provisions

Depreciation and provisions and reversals thereof break down as follows:

	2016	2015
Depreciation		
Allocations	- 484	- 417
Reversals	-	-
Provisions for impairment of assets		
Allocations	- 26	- 35
Reversals	56	18
Provisions for contingencies and charges		
Allocations	- 75	- 35
Reversals	766	711
TOTAL	**237**	**242**

(in € million)

The depreciation booked concerns intangible assets and property, plant and equipment (€484 million in 2016). The reversal of provisions in 2016 of €822 million mainly relates to the dismantling of nuclear facilities and the treatment of waste and unused fuel (€747 million).

Note 9 – Reversals of equipment grants and contributions received from third parties

This item corresponds to the deduction made from the “Equipment grants received from the Government” and “Equipment grants received from third parties” items, according to the useful or service life of the assets financed.
Reversals in 2016 (€456 million) mainly financed depreciation booked for the year on fixed assets (€484 million) after taking into account a reversal of provisions for impairment of fixed assets.

Note 10 – Income from joint operations

None to post for 2016.

Note 11 – Financial income/loss

The financial loss stands at -€14 million in 2016, against zero in 2015, and breaks down as follows:

	2016	2015
Dividends	8	8
Investment income and interest on receivables	6	10
Revaluation of the “Provision for dismantling”	945	321
Reversals of provisions	67	123
Other financial income	4	4
Reversal of provisions for depreciation in shares	82	3
FINANCIAL INCOME	**1,112**	**469**
Interest on borrowings and debts	85	137
Net charges on the disposal of short-term investments	-	-
Provisions	1,040	330
Other financial expenses	1	2
FINANCIAL EXPENSES	**1,126**	**469**

(in € million)

Provisions booked for the year 2016 (€1,040 million) break down into €951 million to cover the impact of the accretion of provisions for end-of-cycle operations (effect of inflation and accretion), €84 million for impairment of long-term investment, €53 million for decreased interest payable and similar charges driven essentially by schedules variance, €4 million for the impairment of short-term investment booked as unrealised losses at year-end closing, and €82 million corresponding to the additional special-fund allocation for the reversal of provisions for impairment of shares.

In financial income, the revaluation of the “Provision for dismantling” item includes all provisions for dismantling facilities and treating waste on discounted bases (effect of inflation and accretion).

The reversals of provisions amounting to €67 million mainly covers these same provisions: €61 million for the impact of changes in discount rate and payment schedules and €6 million for the reversal of short-term investment booked as unrealised losses.

Note 12 – Non-operating income/loss

Non-operating income amounted to €6 million in 2016 and breaks down as follows:

	2016	2015
Reversals of equipment grants received from the Government	60	24
Income from the disposal of assets	1	4
Reversals of provisions, transfer of charges	12	27
Other non-operating income	8	9
NON-OPERATING INCOME	**81**	**64**
Management operations	14	4
Retirement of fixed assets	60	24
Depreciation and provisions	-	-
Other non-operating expenses	1	5
NON-OPERATING EXPENSES	**75**	**33**

(in € million)

The “Reversals of equipment grants received from the Government” item (€60 million) corresponds to the net book value of retirement of assets during the year.

The “Reversals of provisions, transfer of charges” item (€12 million) essentially corresponds to transfers of non-operating charges for insurance payouts received in the wake of the CEA-Leti damage claim.

The “Retirement of fixed assets” item corresponds to the net book value of the assets disposed of or scrapped over the year for €60 million (€24 million in 2015).

Note 13 – intangible assets and property, plant & equipment

Movements in intangible and tangible assets, together with the corresponding depreciation and provisions, are as follows:

GROSS AMOUNTS	Balance as at 31.12.2015	Acquisitions and productions 2016	Retirements 2016	Other operations 2016[1]	Balance as at 31.12.2016
Intangible assets	308	3	10	12	313
Land	194	-	-	1	195
Constructions	2,794	5	8	70	2,861
Specific facilities and other property, plant & equipment	7,803	33	130	321	8,027
Construction work in progress and advances	3,032	709	53	- 391	3,297
TOTAL	**14,131**	**750**	**201**	**13**	**14,693**

[1] *Allocation of work-in-progress as completed assets, adjustments and account-to-account transfers.*

(in € million)

DEPRECIATION/PROVISIONS	Balance as at 31.12.2015	Depreciation and provisions allocation 2016	Reversals of provisions and retirements 2016	Other operations 2016	Balance as at 31.12.2016
Intangible assets	231	19	10	-	240
Land	110	6	-	-	116
Constructions	1,814	110	8	-	1,916
Specific facilities and other property, plant & equipment	4,844	360	163	-	5,041
TOTAL	**6,999**	**495**	**181**	**-**	**7,313**

(in € million)

Note 14 – Third-party dismantling assets

Amounting to €5 million as at 31 December 2016, this item represents future financing expected from the IRSN in respect of its contribution to the clean-up costs of the Cabri facility.

Note that an estimate revision of €18 million in discounted value impacted the 2016 accounts, creating the grounds for increasing this item (+€2 million in discounted value).

Note 15 - Long-term investments

This item breaks down as follows:

	31.12.2016	31.12.2015
Equity interests	1,010	1,164
Investment-related receivables	13	8
Loans	5	5
Other long-term investments	4	1
TOTAL	**1,032**	**1,178**

(in € million)

Equity interests primarily consist of the CEA's stake in the capital of Areva, a holding that holds the CEA's equity interests, worth €872 million, a €61 million stake in the capital of FT1CI, a €72 million stake in CEA Investissement, and a €1 million stake in Minatec, a local semi-public company.

Receivables relating to investments and GIEs stand at €13 million at year-end 2016, up €6 million compared to 2015 (GIE Ganil).

The "Loans" item represents a net balance of €5 million at the end of 2016, which is the same figure as at year-end 2015.

This item breaks down as follows:

- loans to personnel: €3 million, identical to 2015;
- full discharge loans to collecting organisations: €2 million, identical to 2015.

Note 16 - Inventory and work-in-process

This item breaks down as follows

	31.12.2016	31.12.2015
Raw materials and other supplies	3,455	3,512
Work-in-process	1,577	1,471
Semi-finished and finished products	1,225	1,191
TOTAL	**6,257**	**6,174**

(in € million)

Note 17 - Maturities of receivables

At year-end closing, the situation was as follows:

	Maturing in < 1 year	Maturing in > 1 year
Fixed asset receivables	10	12
Current asset receivables	2,034	13,895
Accruals	13	2
TOTAL	**2,057**	**13,909**

(in € million)

Note 18 - Claims on Government

The signing of a Framework Agreement between the Government and the CEA and end-2011 rider on the financing of the CEA's LT nuclear costs CEA served to define the valuation methods used for this item;

Several sources explain the change in this item in addition to the transfer on 1st January 2011 of the amounts posted in the "Dismantling assets, own-share and Government" item, including mainly:

- variation in the Areva share price;
- impacts tied to the dismantling provisions;
- lastly, the change in WCR and amounts required to hedge liabilities.

Note 19 - Other receivables

The "Other receivables" item stands at a net amount of €466 million at year-end 2016 compared to €631 million at year-end 2015, i.e. a €165 million increase primarily due to:

- subsidies to be received from third parties, €208 million in 2016 compared to €140 million at year-end 2015, representing a €68 million decrease;
- subsidies to be received from EU funding (€34 million);
- the change in the "Invoices receivable" item (€5 million);
- the change in payment credits to be received from the Government (-€214 million);
- the change in the accounts receivable item (-€52 million);
- the change in advance on current account (-€1 million).

Note 20 - Cash and short-term investments

This item covers the position of all bank accounts and investments, representing a gross value of €1,175 million as at 31 December 2016. Bank accounts in credit are posted under "Financial debts". This item breaks down as follows:

	31.12.2016	31.12.2015
Liquid assets and investments allocated to ongoing operations	715	189
Liquid assets allocated to the national loan	284	369
Liquid assets and investments committed to end-of-cycle operations	176	123
TOTAL	**1,175**	**681**

(in € million)

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

	31.12.2016	31.12.2015
In market value:		
Equity investment funds	80	62
Bonds and money market funds	96	61
TOTAL	**176**	**123**
By geographic area:		
Euro zone	137	109
World	39	14
Other	-	-
TOTAL	**176**	**123**

(in € million)

OBJECTIVE OF THE DEDICATED PORTFOLIO

As an operator of nuclear facilities, the CEA has a legal obligation to secure and dismantle its facilities once they have been fully or partly decommissioned. When it is not the nuclear operator of a facility, the CEA must still contribute to financing these operations in proportion to its use of the facility in question, or its participation in a programme involving the operation of nuclear facilities.

Similarly, it must sort and condition the waste and scrap materials induced by its research activities and the dismantling of its facilities, in accordance with standards in force, with a view to the final disposal of this waste.

The CEA has several sources of funding to meet its commitments:

- Civil Fund: commitments concerning civil centres, excluding nondeductible VAT;
- Defence Fund: commitments under the UP1 programme in Marcoule and the Military Applications Division units;
- The Government, excluding funds: non-deductible VAT burden on civil centre commitments.

Part of the CEA's liquid assets is allocated to the civil and defence dismantling funds and committed to future expenditure on facility dismantling and waste and spent fuel management.

There are four Dedicated Funds, two for the civil sector and two for the defence sector, facilities commissioned before 31 December 2009 ("FDC" and "FDD") and after 1st January 2010 ("INC" and "IND") being monitored separately.

Based, at the outset, on the expenditure payment schedule, which mostly covers a period up to 2040 and beyond, the portfolios of the civil and defence dismantling funds (FDC and FDD) were initially managed with long-term prospects. In the absence of sufficient contributions, investment horizons were shortened when the two Funds neared depletion, respectively in 2011 (FDD) and 2012 (FDC). These portfolios currently comprise venture capital funds subscribed at the outset and still active, as well as money market portions to meet dismantling costs after the annual supplementary contributions.

The INC and IND portfolios are invested via open-end mutual investment funds, the management of which is outsourced. As at 31 December 2016, they comprise 50% of equity funds, 50% of bond funds, and 0% of money-market funds. Dedicated to expenditure that will only be made several decades after the commissioning of facilities starting in 2010, these portfolios are managed with very long-term prospects and will soon be 55% invested in equity and 45% in interest rates.

All four Dedicated Funds are revalued at year close based on the net asset values of the on-portfolio holdings at the 31 December fiscal year-end.

Note 21 - Special allocation fund

Changes to the "Special allocation fund" break down as follows:

	Value as at 31.12.2015	Allocation 2016	Reversal 2016	Value as at 31.12.2016
Allocation funds received from the Government	7,540	137	-	7,677
Equipment grants received from the Government	6,125	636	459	6,302

(in € million)

Note 22 - Accumulated balance of the financial years

The accumulated balance of the financial years, after recognition of the 2016 balance (-€75 million), comes to -€3,208 million. It breaks down as follows:

- General budget ______ - 47
- Civil Fund ______ - 3,264
- Defence Fund ______ 99
- New facilities-Civil ______ 10
- New facilities-Defence ______ - 11
- Supplementary budgets ______ 1
- ITER ______ 2
- DSND ______ 1
- DDCG ______ -
- AFNI ______ -
- I2EN ______ 1
- IRT ______ -

Total **- 3,208**

The change between 2015 and 2016 breaks down as follows:

	Value as at 31.12.2015	Allocation to balance brought forward	2016 balance	Situation as at 31.12.2016
General budget	- 22	-	- 25	- 47
Civil Fund	- 3,241	-	- 23	- 3,264
Civil Fund – New facilities	10	-	-	10
Defence Fund	103	-	- 4	99
Defence Fund – New facilities	-	-	- 11	- 11
Supplementary budgets	1	-	-	1
ITER	14	-	- 12	2
DSND	2	-	- 1	1
DDCG	-	-	-	-
AFNI	-	-	1	1
I2EN	-	-	-	-
TOTAL	**- 3,133**	**-**	**- 75**	**- 3,208**

(in € million)

This negative balance has mainly arisen from the management of the civil fund which initially produced a financial imbalance when it was set up. This imbalance is due to the difference between the book value of the Areva interest, posted in the CEA accounts at its historical acquisition value, and its estimated present value. It should be cancelled out particularly by the disposal of the Areva shares allocated to the civil fund.

This situation should not jeopardise the CEA's continuation as a going concern.

Note 23 - Provisions for contingencies and charges

Provisions for contingencies and charges changed over the year as shown below:

	Value as at 31.12.2015	Dotations 2016	Write backs 2016 [2]	Value as at 31.12.2016
Provision for dismantling and treatment of waste and unused fuel	13,306	1,186 [1]	961	13,531
Provision for dismantling allocated to facilities financing	23	-	1	22
Provision for litigation	47	25	12	60
Provision for Cigeo readjustment	16	-	-	16
Provision for normal waste treatment	27	2	4	25
Provision for retirement obligations	38	1	5	34
Provision for service medals	7	-	-	7
Provision for retrieval of sources	-	-	-	-
Other	3	1	1	3
TOTAL	**13,467**	**1,215**	**984**	**13,698**

(in € million)

[1] Operations with the "Claim on Government" item: €915 million (allocation: €1,103 million; write back: €215 million).
[2] Including a reversal of unused provisions: operating = €1 million

In provisions for contingencies and charges, provisions for dismantling and treatment of waste and unused fuel amount to €13,547 million at year-end 2016, i.e. 99 % of these provisions. They break down as follows:

	Total	Civil Fund and CEA	INC	Defence Fund	IND	Excluding Government /third-party funds
SITUATION AS AT 01.01.2016	**13,323**	**5,984**	**29**	**7,191**	**20**	**99**
Impact of inflation and accretion	427	192	1	231	1	2
Impact of projected rate changes	524	231	2	285	3	3
Change in VAT-indexed flat taxation rate	- 30	-	-	-	-	- 30
Reversal on 2015 works	- 746	- 336	- 3	- 407	-	-
Change in estimates and scope effects	110	- 121	-	178	46	7
Change in schedules and forecast inflation	- 61	- 22	-	- 36	-	- 3
SITUATION AS AT 31.12.2016	**13,547**	**5,928**	**29**	**7,442**	**70**	**78**

(in € million)

At 31 December 2016, the application of a discount rate 0.5% higher or lower than the rate used would have altered the value of provisions for end-of-cycle operations falling within the scope of the decree by -€869 million or +€1,033 million, respectively, which on total provisions (on and off scope of the law) would lead to values of €12,662 million and €14,564 million, respectively.

As at 31 December 2016 and 2015, provisions for the dismantling of facilities and treatment of waste and unused fuel, within the scope of the Decree of 23 February 2007 on securing funding for nuclear costs break down as follows:

CATEGORY OF COSTS	Cost in gross value		Cost in discounted value	
	Total cost 2015	Total cost 2016	Total cost 2015	Total cost 2016
1. DISMANTLING				
1.1 to 1.4 facilities where CEA is nuclear operator	9,689	9,541	6,790	6,871
1.1 to 1.4 CEA share in facilities operationally under third-party operation	36	28	34	27
1.5 Third-party nuclear operator	358	318	296	268
SUB-TOTAL	**10,083**	**9,887**	**7,120**	**7,166**
2. FUEL MANAGEMENT				
2.1 Recycling in built or build-in-progress industrial facilities	1,120	1,114	504	524
2.2 Other fuels	232	217	198	188
SUB-TOTAL	**1,352**	**1,331**	**702**	**712**
3. RETRIEVAL AND CONDITIONING OF LEGACY WASTE				
3.1 Retrieval and conditioning operations on waste held at a CEA-facility repository	3,626	3,207	2,646	2,424
SUB-TOTAL	**3,626**	**3,207**	**2,646**	**2,424**
4. CENTRALISED MANAGEMENT OF RADIOACTIVE WASTE PACKAGES				
4.1 CEA-led management of waste packages	445	724	308	540
4.2 Long-term management of waste packages	5,478	5,452	2,139	2,315
SUB-TOTAL	**5,923**	**6,176**	**2,447**	**2,855**
5. MONITORING OF DISPOSAL FACILITIES AFTER CLOSURE				
5.1 Monitoring of disposal facilities after closure	582	583	70	79
SUB-TOTAL	**582**	**583**	**70**	**79**
TOTAL PROVISIONS IN SCOPE OF THE LAW EXCLUDING NON-DEDUCTIBLE VAT	**21,566**	**21,184**	**12,985**	**13,236**
Non-deductible VAT in scope of the law	178	140	97	76
TOTAL PROVISIONS ON SCOPE OF THE LAW OF 28 JUNE 2006	**21,744**	**21,324**	**13,081**	**13,312**
Provisions for costs off scope of the law (“ICPE” facilities classified for environment policing, etc.)	279	263	223	217
Non-deductible off scope of the law	3	2	2	2
TOTAL PROVISIONS OFF SCOPE OF THE LAW	**282**	**265**	**226**	**219**
TOTAL PROVISIONS IN/OFF SCOPE OF THE LAW	**21,845**	**21,447**	**13,208**	**13,453**
Nondeductible VAT in/off scope of the law	181	142	99	78
TOTAL PROVISIONS AS AT 31 DECEMBER	**22,026**	**21,589**	**13,307**	**13,531**

(in € million)

Note 24 - Schedule of debt maturities

At year-end closing, the situation was as follows:

	Maturing in < 1 year	Maturing in > 1 year
Financial debts	220	39
Debts to third parties	2,218	946
Accruals	49	40

(in € million)

Note 25 - Cash flow from operations

EBITDA	- 761
Income from joint-led operations	-
Financial expenses payable	- 6
Collectible financial income	18
Non-operating expenses payable	- 15
Collectible non-operating income	9
Budgetary operating revenue	- 1,956
Income tax	-
TOTAL	**- 2,711**

(in € million)

Note 26 - Off-balance sheet commitments as at 31.12.2016

COMMITMENTS IN	
Guarantees received from banks to cover holdbacks paid to suppliers	111
Various bank guarantees	2
COMMITMENTS OUT	
Staff benefits[1]	**951**
Retirement liabilities:	
- Retirement benefits	407
- Early retirement scheme	423
Pensioners' health scheme	121
Exchange cover	**5**
Other commitments	**21**

(in € million)

[1] *Including €34 million in commitments provisioned.*

Commitments for staff benefits are valued on bases discounted at 3% as at 31 December 2016, including 1.50% for LT inflation.

The discount rate applied to social liabilities is defined on the basis of market conditions at the end of November, based on Government borrowing rates covering a period equivalent to the social liabilities in question. An average risk premium is then added, based on first-rate industrial and commercial corporate bonds.

The resulting rate is rounded up or down in 25 bp steps, taking into account the trend in interest rates:

- for the Euro zone, the resulting rate is 1.50%. Compared to 2015, these commitments are up by €95 million (€951 million at year-end 2016 compared with €856 million at year-end 2015).

This change breaks down as follows:

- rights acquired through the year/benefits received _______ - 14 M€
- impact stemming from the change in discount rate _______ + 49 M€
- impact of labour-force moves and experience gaps _______ + 60 M€

MEMORANDUM OF UNDERSTANDING BETWEEN THE *CAISSE DES DÉPÔTS ET CONSIGNATIONS* (CDC; FRENCH DEPOSIT AND CONSIGNMENT OFFICE) AND THE CEA

On 28 December 2001, the CDC and the CEA signed an agreement in principle whereby the parties agreed, in particular, that in the event of Areva shares being admitted for trading on a regulated market through the disposal of Areva shares held by the CEA, the CEA undertook to ensure that CDC could, if it wished, sell a number of Areva shares in the course of the operation, equivalent to the number put up for sale by the CEA. The CEA also undertook to endeavour to enable the CDC to sell its shares should it wish to withdraw from the capital of Areva, and in certain specific circumstances, in particular if:

- the shares of a company in which Areva holds more than half the capital and voting rights (other than FCI, which Areva sold on

3 November 2005) were to be admitted for trading on a regulated market in France,
- the CEA ceased to hold a majority stake in the capital of Areva or its voting rights.

The CDC did not wish to dispose of its stake in Areva's capital and remains an Areva shareholder with 3.59% of the capital.

MEMORANDUM OF UNDERSTANDING OF 12 MARCH 1993 CONCERNING AREVA TA

Under this memorandum, the capital of Areva TA was held as follows: 24.89% by Areva and 65.1% by CEDEC, with the remaining 10.10% of shares held by the EDF group.

The memorandum stated in particular that should the CEA's interest in Areva fall below 51%, then the CEA was to take over any CEDEC or Areva TA shares held by Areva (i.e. 90.14% of CEDEC's registered capital or 83.56% of that of Areva TA).

Planning forward to the Areva group restructuring operation engaged in early 2016 in the wake of work led by the French "SGDSN" defence council working party, and in an effort to simplify the allied arrangements, Areva SA had tabled pre-operation commitments to:

- Takeover CEDEC via merger—a transaction that was completed on 14 December 2016
- To terminate the shareholders agreement signed 12 March 1993 and amended 5 October 2000 between Areva SA and CEDEC—an agreement that was terminated 29 March 2017, the day Areva TA was transferred to state/CEA/DCNS ownership.

GOVERNMENT/CEA/KUWAIT INVESTMENT AUTHORITY (KIA) SHAREHOLDERS' AGREEMENT

This shareholders' agreement was entered into for a term of ten years starting from the reserved capital increase of Areva. Under its provisions, the Government and the CEA undertake not to sell Areva shares for a price below the KIA's subscription price for 18 months, except for disposals of shares on the market and sales to a public body or a subsidiary fully owned by the Government.

Note 27 - Information about disputes and contingent liabilities

The presentation below concerns risks for which no provision has been booked for want of a definite obligation and/or because the liability cannot be reliably valued. As such, they are considered contingent liabilities in accordance with the governing accounting regulations.

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

The CEA considers that it is not liable for the *Contribution économique territoriale* (ex-local business tax) whether on its defence-related activities, which are of direct concern to national security, or its civil activities focus on fundamental research, in line with consistent legal precedents.

Equally, as some of its sites are listed on the French government property register (TGPE) or else the plots are assigned to public-interest missions that serve the community without generating revenue, the CEA considers that it is not liable for property tax either.

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 relief from these taxes. Court decisions on the first cases confirm that the CEA's position is justified, particularly at Military Applications Division centres. These decisions led to exemptions from business tax and in 2010, to reimbursements and interest on overpayments.

Now that it is liable for corporate income tax and must file its corporate income tax return since 2006, the CEA also intends to claim the benefit of the value-added tax ceiling.

The year 2009 saw the beginning of an audit procedure at several civil centres covering business tax, property tax and annual tax on offices in the Île-de-France region.

Following two years of audit spanning all our civil-sector sites, the French national-international tax inspectorate [DVNI] sent CEA a framework rectification proposal that sectorises activities taxable under local tax, which includes the Saclay and Grenoble sites.

Under the proposed method, premises that generate revenue become eligible for French property tax on developed property (acronymed "TFPB") and premises assigned to for-profit activity become eligible for the French tax on corporate tenure (acronymed "CFE").

In 2012, the DVNI engaged a CEA-wide tax audit leading to further investigations on DAM-scope sites and a reappraisal of the taxable burden of the civil-sector Saclay and Grenoble sites.

Following three years of audit, the DVNI concluded that the DAM's Bruyères-le-Châtel and Valduc sites had buildings that generate revenue and are therefore TFPB-liable. That said, there was no challenge on these sites as non-CFE-liable.

The DVNI issued the CEA written notice, dated 6 December 2016, that it was proceeding with a fresh tax inspection in order to audit the tax bases resulting from applying the principles defined in the wake of the 2012 inspection.

The audit is scoped to investigate TFPB-liable tax for 2016 and CFE-liable tax for 2014, 2015 and 2016.

However, as an interim measure, the DVNI has issued notices of assessment of TFPB-liable tax for 2015 and CFE-liable tax for 2013 on stepped-up bases.

Therefore, provisions at 31/12/2016 are posted for amounts already notified by the DVNI, which cover CFE-liable tax up to 2013 and TFPB-liable tax up to 2015.

Note 28 - Other information

• Situation concerning corporate income tax

The CEA's position with regard to corporate income tax was clarified with the publication of an Instruction (Instruction 4H-4-08 of 30 May 2008), explaining Article 28 of the research programme law. This law exempts public research organisations from paying tax on income derived from public research activities (No. 2006-450 of 18 April 2006 - Article 207-1-9° of the French General Tax Code).
As these new provisions concern financial years closed after 20 April 2006, the CEA has filed its corporate income tax returns as of 2006.
The Instruction also provides for the sectorisation of activities. In accordance with this principle, the CEA's earnings from equity interests have been allocated to the taxable sector.

• Policy on insurance

The CEA's policy concerning insurance consists of a set of clear, consistent and coordinated principles that result from regular discussions between the Insurance Department and the various operational and functional divisions.
These discussions have led to a consensus on the aims of the CEA's insurance policy and the implementation thereof. They have been set out in a series of documents (memos and circulars) that together form the "insurance baseline" communicated to those concerned at all levels of management to guide them in their management decisions and activities. Policy in this area is defined in order of management level. The overall principles are approved by the CEA's Senior Management based on proposals from the Insurance department.
The specific principles are approved, based on the areas in question, by Finance, Human Resources and Industrial Relations, and the other divisions concerned.
Implementation of this policy, defined from a long-term perspective, is based on a set of studies and decisions aimed at selecting, coordinating and managing resources, and taking measures to meet general objectives in accordance with the policy defined (site inspections for building and regulated facility status monitoring).
Implementing the CEA's policy on insurance is part of a risk management initiative, now a standard practice in all high-risk sectors of industry. This entails identifying risks, managing insurance programmes to cover the consequences of their occurrence and keeping dashboards to monitor efficiency.
Furthermore, to limit risks, the CEA transfers them whenever possible to contractors with which it does business. Such transfers are only possible for risks for which it is contractually liable.
In addition, to reduce the financial impact of certain potential events, the CEA has decided to transfer some of its risks to insurers. Above and beyond the preventive aspect, insurance offers an economic advantage consisting, by paying insurance premiums, in converting into a fixed operating expense the unpredictable burden induced by certain potential occurrences that could compromise its budget.
By covering fortuitous risks, the financial burden of which has been transferred to its insurers, the CEA asserts its undertaking to safeguard itself against the consequences of damage caused to third parties, to respect the environment, and to protect its assets and its staff.

a. Third-party liability Insurance

1. Nuclear third-party liability

Given the special provisions applicable to nuclear third-party liability, the CEA has taken out nuclear operator, nuclear transport and arms and weapons third-party liability insurance in accordance with the Paris Convention on Third-party Liability in the Field of Nuclear Energy and the provisions of Law No. 68-943 of 30 October 1968.

2. Conventional third-party liability

The CEA is covered by a third-party liability insurance policy for the financial consequences of the liability it may incur owing to physical injury, material damage and consequential losses caused to third parties, under applicable law, including contractual commitments, and resulting from an act committed in the performance of its activities.
Furthermore, in order to comply with Law no. 2008-757 of 1st August 2008 on environmental responsibility and various provisions for adaptation to Community law, the CEA is insured for its third-party liability within the framework of environmental damage liable to occur in performance of its various activities.

3. Motor vehicle liability insurance

To meet the motor vehicle third-party liability insurance obligations introduced by the Law of 27 February 1958, the CEA has insurance for all 1,596 vehicles (2012 data) which it either owns or leases. Many of these vehicles are also governed by damage insurance. In addition, out of concern to control risks and make savings, the CEA has introduced a so-called retention system. The insurance Policy covering the CEA's vehicle fleet, whether it owns or leases such vehicles, generally applies above an annual "retention" deductible. This system means that the CEA remains liable for a portion of expenses arising in the event of claims involving its vehicles, whether under the third-party liability or the damage insurance cover. The insurance manages the amount paid in respect of the retention and uses the reserve primarily to settle claims in the same way as if they were fully insured, until such reserve has been fully used up. Where applicable, if the annual cost of claims is less than the reserve paid at the start of the year, the remaining balance is returned to the CEA. This system substantially reduces insurances taxes as the retention reserve is exempt therefrom.

b. Insurance covering the CEA's assets

In view of the significant security and preventive measures in place at its centres to respond in particular to nuclear security requirements, the CEA has opted not to automatically insure its equipment, buildings and facilities, and to partially outsource the risks identified (in amount) to its insurers.

By retaining some or part of the risks when it considers insurance costs too high, it financially optimises management of its insurance policies for material damage.

The CEA's policy on insurance distinguishes between damage caused to its assets during construction, then during any operating phase, and lastly damages occurring during dismantling work.

1. Material damage caused during construction

As a contracting authority, the CEA takes out insurance to cover risks involved in construction or civil engineering work, whether or not concerning nuclear activities. With this insurance cover, the CEA is sure to swiftly secure financing in the event of loss.

The CEA therefore has a comprehensive Contractor's, Assembly and Testing policy, on behalf of all those participating in the work, if the construction operation exceeds an amount set at €2 million.

This type of policy covers accidental property damage affecting building, civil engineering or process work during the construction period through to acceptance.

It also covers, as an option, damage caused to existing structures during renovation work for example or to any neighbouring buildings.

Regarding insurance for damage occurring after acceptance of the structure, the CEA takes out Construction Damage insurance for projects in excess of €2 million or, for civil engineering projects, a ten-year liability policy.

2. Material damage during operation

The CEA has a comprehensive industrial insurance policy covering all movable assets and real estate (buildings, plant, machines and equipment including basic nuclear facilities) of which the CEA is the owner, tenant, user, or holder in any capacity whatsoever.

According to the clauses and conditions of the contract, it covers material damage caused by events such as fire, lightning, explosion, subsidence, natural disasters, water damage, acts of terrorism and sabotage and, under certain conditions, nuclear damage resulting from a criticality accident, contamination or a radiation incident.

Fire and related hazard prevention inspections are organised by the Insurance Department in connection with the insurance companies on the CEA's facilities. These inspections are organised to identify the main potential dangers and to assess fire alarm systems particularly with regard to standards in force. The insurance company's prevention engineers make recommendations to improve the status of facilities based on the risks identified.

The comprehensive industrial policy also covers all clean-up and dismantling operations performed under the operating safety standards, prior to the publication in the French Journal Officiel of the facility decommissioning and dismantling decree for civil facilities or the equivalent for military facilities. The CEA's insurance programme also includes insurance policies specially designed to cover its plant, machinery and equipment.

These are mainly policies to cover nuclear and non-nuclear machinery breakage, comprehensive computer insurance (hardware either owned or leased by the CEA) and comprehensive transport insurance.

3. Material damage caused during dismantling

The CEA takes out insurance to cover risks involved in dismantling operations following the publication in the French Journal Officiel of a facility decommissioning and dismantling decree or a change to the safety standards.

The CEA therefore has a comprehensive dismantling work insurance policy, where the dismantling operation exceeds €2 million, on behalf of all those participating in the work, without recourse by the insurer. This guarantees fast, comprehensive financing in the event of a claim.

c. Personal insurance

The CEA has taken out death and disability insurance for its staff, with optional or compulsory participation.

As far as compulsory cover is concerned, the insurance taken out primarily provides:

- a capital payment to the beneficiary/ies in the event of the employee's death;
- payment of an educational grant for dependent children;
- payment of an invalidity pension to the employee in addition to Social Security benefits.

Provision is also made for assistance services and additional payments in the event of bodily harm suffered during accidents occurring in the course of assignments in France or abroad.

The CEA also offers optional schemes such as loan insurance, death/disability insurance and insurance for pensioners and expatriates.

Note 29 - Staff

Staff as at 31.12.2016:

• managerial staff	10,187
• non-managerial staff	5,753
Total	**15,940**

Note 30 – Post-closing events

Nil.

C – DISCLOSURES ON SUBSIDIARIES AND HOLDINGS AS AT 31 DECEMBER 2015

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 granted by the company	Sales ex-VAT of the last year closed	Profit/loss of the last year closed [2]	Dividends collected by the company in the year	Observations on provisions for impairment of receivables
				Gross	Net						
1) FRENCH SUBSIDIARIES (DETAILED INFORMATION)											
AREVA SA 33 rue la Fayette 75442 PARIS Cedex 09	1,456.2	- 3,017.1	54.37	872.1	872.1	-	-	416.7	69.7	-	-
CO-COURTAGE NUCLEAIRE (389518853) Le Ponant D 25 rue Leblanc 75015 PARIS	*ns*	-	90	*ns*	*ns*	-	-	-	-	-	-
CEA-INVESTISSEMENT [2] (423426899) Le Ponant D 25 rue Leblanc 75015 PARIS	72.2	- 8	100	72.2	66	-	-	0.9	- 1	-	-
FT1CI [2]	68.2	[3]	4.89	61,3	35.9	-	-	[3]	[3]	8.4	-
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	-	-	7.5	0.9	-	-
SEML Route des Lasers 20, rue de Suson 33830 BELIN BELIET	15.5	[3]	11.6	1.8	1.8	-	-	[3]	[3]	-	-
GIE III V LAB Route de Nozay 91460 MARCOUSSIS	5	[3]	20	1	1	-	-	7.5	4.1	-	-

(in € million)

[1] *Including regulated provisions and investment subsidies.*
[2] *Income/loss before approval of the 2015 accounts.*
[3] *Figures from the last year not available.*

STATUTORY AUDITORS' REPORT ON THE ANNUAL FINANCIAL STATEMENTS

YEAR ENDED ON 31 DECEMBER 2016

Ladies and Gentlemen,

In accordance with the assignment entrusted to us by the Minister of the Economy and Finance, we hereby present our report for the financial year ending 31 December 2016, on:
- the audit of the annual financial statements of the French Alternative Energies and Atomic Energy Commission, as appended hereto;
- the grounds for our opinions;
- the specific control-checks and information required by law.

As the Executive Board has approved the annual accounts, it is our duty on the basis of our audit, to express our opinion of these accounts.

1 – Opinion of the annual accounts

We conducted our audit in accordance with professional standards applicable in France requiring the performance of procedures sufficient to provide reasonable assurance that the annual accounts do not contain any significant anomalies. An audit consists in examining, by selective tests or other selective methods, the evidence supporting the amounts and information presented in the accounts. It also involves an assessment of the accounting principles applied, of significant estimations used to establish accounts, and of the general presentation of information. We consider that the information we gathered provides a reasonable basis for the opinion stated below.
We certify that, having regard for accounting principles and rules applicable in France, the annual financial statements present a true and fair view of the results of business over the past year and of the entity's assets and financial position at the end of the year.

Without detracting from the opinion expressed above, we would like to draw your attention to the following points:

- The first paragraph of Note 1 "General framework – Key events of the financial year 2016" of the notes on the accounting methods and principles which refers to the effects on the accounts of amendment 1 to the Government/CEA framework agreement on the financing of long-term nuclear costs whereby the Government undertakes to balance the CEA's long-term nuclear costs burden.
- Paragraphs a) and f) of note 2 k-2 "Accounting methods and principles – Provisions for contingencies and charges – End-of-cycle

commitments" of the notes on the accounting methods and principles referring to a structuring assumption adopted to draw up the 2016 accounts, whereby the CEA's cash funds will be compatible with the schedule of dismantling operations currently planned. This assumption is supported by the French Government's decision to confirm its undertaking to contribute to the CEA's dedicated funds, by signing agreements stipulating, on a three-year basis, the manner in which the Government will provide the necessary cash. However, the governing legal framework as set under the "Key events" section of the notes needs to be defined to guarantee that this subsidy will not get cut and will thus ensure the principle of enough fund backing to cover the liquid assets needed to honour our commitments.

- Paragraphs c) and f) of note 2 k-2 "Accounting methods and principles – Provisions for contingencies and charges – End-of-cycle commitments" of the notes referring to the main sources of uncertainty and judgment inherent to the valuation of end-of-cycle costs, including the costs of long-term management of radioactive waste packages, the target end-state of sites to be dismantled and the physical and radiological characterisation of facilities to be dismantled.
- Paragraph g) of note 2 k-2 "Accounting methods and principles – Provisions for contingencies and charges – End-of-cycle commitments" of the notes referring to the redefinition of the overarching strategy guiding dismantling operations for the next fifteen years with importance-ranked priorities and consolidated commitment-indexed dismantling programmes, and revision of the allied financials for the next fifteen years with breakdowns for facility dismantling and waste and spent fuel management operations factoring in the re-updated dismantling operations strategy and development of the Cigeo project. Note g) effectively specifies that talks and negotiations pursuant to this strategic analysis and the allied prioritisation work are due to continue and will result in very significant revisions of the estimates in 2017 and 2018.

2 – Explanation of assessments

In accordance with the provisions of Article L. 823-9 of the French Commercial Code on the explanation of our assessments, we draw your attention to the following points:

- **Accounting methods and rules applied**

As part of our assessment of the accounting methods and principles applied by the CEA, we satisfied ourselves that the accounting principles used and the exemptions applied are appropriate to present the entity's activities and assets as accurately as possible.

- **End-of-cycle commitments**

The provisions for dismantling and waste retrieval, amounting to €13,531 million and posted in the balance sheet, were calculated in accordance with the accounting rules and methods and valuation principles described in note 2 k-2 "Accounting methods and principles – Provisions for contingencies and charges – End-of-cycle commitments" to the accounting methods and principles and 23 "Provisions for contingencies and charges" of the Notes.
As the corresponding entry for these provisions, the CEA posts, in respect of liability coverage and in accordance with the Government/CEA Framework Agreement, a claim on Government and a liabilities/assets differential pursuant to the above-mentioned agreement. As stated in notes 2 k-2 a) "Accounting methods and principles – Provisions for contingencies and charges – End-of-cycle commitments – Nuclear facility dismantling financing" to the accounting methods and principles and 18 "Claims on Government" of the Notes, these assets correspond to the claim to be reimbursed by the Government.
As part of our audit, we reviewed the estimations of dismantling liabilities and the share to be financed by the Government, assessing whether the assumptions made were reasonable and taking into account, in particular, the change in estimates and negotiations in progress.

• **Long-term investments**

Note 2 D "Long-term investments" of the notes on the accounting methods and principles presents the method applied to value equity interests. We assessed the approaches used by the CEA to justify that the inventory values of the shares are at least equal to their net book values.

• **Subsidies**

Notes 2 I "Budgetary subsidy received from the Government" and 2J "Equipment grants received from Government and third parties" of the notes on the accounting methods and principles explain the method of accounting for subsidies received from the Government and partners. As part of our audit, we satisfied ourselves that this method has been correctly applied and presented.

• **Off-balance-sheet commitments**

Notes 2L "Tax and social security liabilities" of the accounting methods and principles and 26 "Off-balance sheet commitments" of the notes thereto explain the methods used to assess the retirement commitments and the assumptions used to calculate them. As part of our audit, we satisfied ourselves that this method had been correctly applied and presented.

The assessments thus made are in line with our audit procedure which concerns the annual accounts taken as a whole and are used to form the opinion given in the first part of this report.

3 – specific control-checks and information

We also performed, in accordance with professional standards applicable in France, the specific control-checks required by law.

Except for the impact of the information given in the first part of this report, we have no other comments to make as to the fairness and consistency with the annual accounts of the information presented in the Executive Board's report and in the documents sent to the Executive Board concerning the financial position and the annual financial statements.

Signed at Courbevoie, on 20 June 2017

KPMG AUDIT

Denis Marangé
Associate

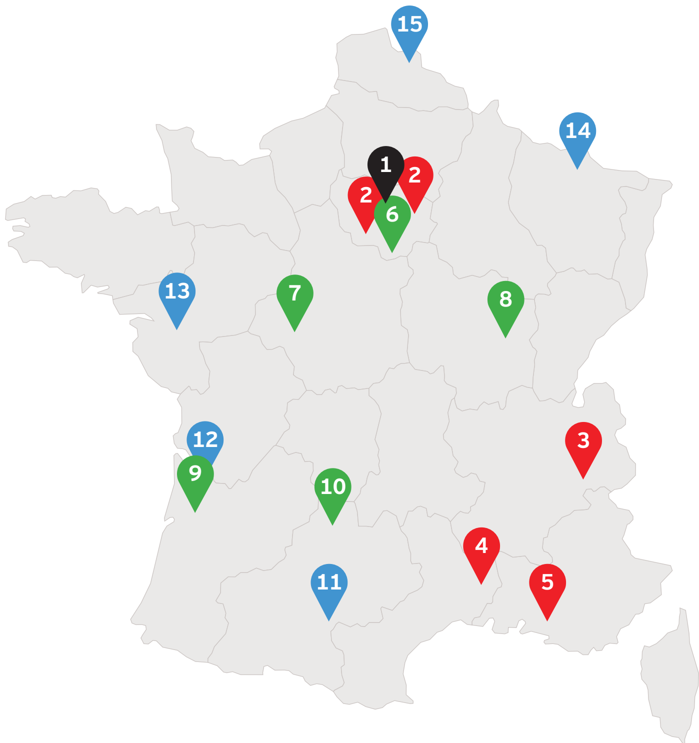
Laurent Genin
Associate

MAZARS

Thierry Blanchetier
Associate

David Chaudat
Associate

9 CEA CENTRES IN FRANCE



1 HEAD OFFICE

CIVIL APPLICATIONS CENTRES

2 PARIS–SACLAY
Fontenay–aux–Roses and Saclay sites

3 GRENOBLE

4 MARCOULE

5 CADARACHE

MILITARY APPLICATIONS CENTRES

6 DAM Île–de–France

7 LE RIPAULT

8 VALDUC

9 CESTA

10 GRAMAT

REGIONAL TECHNOLOGY TRANSFER PLATFORMS

11 TOULOUSE

12 BORDEAUX

13 NANTES

14 METZ

15 LILLE

CEA / French atomic energy and alternative energy commission
91 191 Gif–sur–Yvette cedex

www.cea.fr

Cover photos: Left to right and top to bottom: Astrid reactor conceptual design modelling on a video wall - Outdoor test platform for concentrated solar photovoltaics systems - Nanomagnetism experiment - Automated sample preparation in proteomics - Tera 1000-1 supercomputer - Micro-nanosystems and nanoelectronics platform - Remote manipulator work in a shielded process line - Cyceron 3-Tesla whole-body MRI. **Design and production:** EFIL - efil.fr - Printed with an Imprim'Vert printer on paper sourced from sustainably managed forests - 2017