

Translation



The following document is the 2019 budget for the Chinese Academy of Engineering, a PRC government body responsible for scientific research and for providing strategic scientific and technological input to PRC decision-makers.

Title

Chinese Academy of Engineering 2019 Budget
中国工程院2019部门预算

Author

Chinese Academy of Engineering (CAE; 中国工程院)

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Etcetera Language Group, Inc.

Editor

Ben Murphy, CSET Translation Lead

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1. Departmental Overview

(1) Functions of the Chinese Academy of Engineering (CAE) (中国工程院)

The CAE is the highest honorable and advisory academic institution in the field of engineering science and technology in China. It is a ministerial-level institution directly under the State Council and is committed to promoting the development of engineering S&T. According to the *Chinese Academy of Engineering Charter*, it mainly performs the following duties:

1. To implement the basic theories, basic line, and basic strategies of the Communist Party of China (CPC) and major strategic deployments of the country, to organize research and discuss major, key issues in the field of engineering S&T, to combine national economic and social development schemes and plans, to develop and apply engineering S&T, and to submit reports and recommendations;
2. To organize and carry out strategic research on important national engineering S&T issues, provide consultation on decision-making, accept commissions from the government and relevant parties, and provide consultation on major engineering S&T development schemes, plans, programs, and their implementation;
3. To promote the unity and cooperation of national engineering S&T circles, promote the sustained improvement of China's level of engineering S&T and the construction of engineering S&T teams, and encourage the growth of outstanding talents;
4. To organize and carry out academic exchanges and cooperation in the field of engineering S&T, represent the Chinese engineering S&T community, and participate in corresponding international organizations and related international academic activities;
5. To carry forward the spirit of science, disseminate scientific ideas, advocate for advanced scientific culture, maintain the morality and dignity of science, and popularize S&T knowledge.

(2) Organizational Structure of CAE

CAE is composed of academicians. The Conference of Academicians (院士大会) is the highest authority of the Chinese Academy of Engineering and is held every other June. The permanent leading body during the period when the Conference is not in session is the CAE presidium. Executive meetings of the academy under the leadership of the presidium preside over and handle day-to-day work. The administrative office of the Chinese Academy of Engineering is a CAE institution that comprises a general office, a first bureau, a second bureau, a third bureau, and an international cooperation bureau. The CAE Strategic Consulting Center (中国工程院战略咨询中心) is set up under CAE and is a category-2 public welfare legal institution under CAE.

The departmental budget of CAE is composed of the two second-level budgetary units of CAE itself (a public institution managed with reference to the Civil Servant Law¹) and the

¹ Translator's note: A "public institution managed with reference to the Civil Servant Law" (参照公务员法管理事业单位; 参公管理事业单位; 参公事业单位) is, like other "public institutions" (事业单位), a non-government organization that is controlled by the government, typically receives some or all of its funding from the state, and provides public services. Public institutions managed with reference to the Civil Servant Law differ from "ordinary public institutions" (一般事业单位) in that their employees, although not civil servants, are managed in

Strategic Consulting Center (a self-financed public institution²).

2. CAE 2019 Departmental Budget

2019 is a critical year for forming a well-off society in an all-round way and realizing the first centennial objective.³ It is also the 25th anniversary of the founding of CAE. CAE will thoroughly implement Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era and the spirit of the 19th Party Congress, adhere to the party's leadership of academicians and engineering S&T, resolutely implement the decisions and deployments of the CPC Central Committee, fully implement the *Chinese Academy of Engineering Work Outline for 2018-2022*, earnestly do a good job in the selection of academicians, strengthen the construction of the academician ranks, steadily promote the construction of CAE into a national high-end think tank, and strive to make new and greater contributions to accelerating the construction of an innovation-oriented country and to making China into an S&T superpower (科技强国), and to greet the 70th anniversary of the founding of the People's Republic of China with outstanding achievements.

The 2019 departmental budget of CAE reflects the basic operating funds of the academy and its affiliates, as well as project funds for consulting and research, academic activities, and international cooperation and exchanges.

Departmental Disclosures Table 1

(1) Summary of Government Fiscal Appropriation Revenue and Expenditures

Units: Chinese Yuan Renminbi (RMB) 10,000

Revenue		Expenditures	
Item	Budgeted amount	Item	Budgeted amount
I. Current year revenue	66,337.24	I. Current year expenditures	82,106.60
(i) General public budget appropriations	66,337.24	(i) Diplomacy expenditures	4.30
(ii) Government fund budget appropriations		(ii) S&T expenditures	81,428.26
		(iii) Social security and employment expenditures	341.04
II. Balance carried forward from previous year	15,769.36	(iv) Energy conservation and environmental protection expenditures	100.00

accordance with the PRC Civil Servant Law.

² Translator's note: "Public institutions" (事业单位) are organizations created and led by PRC government departments that provide social services. Unlike state-owned enterprises (SOEs), public institutions do not create material products and do not generate income. Public institutions are not considered government agencies, and their employees are not civil servants. Most public institutions are fully or partially government-funded, but some fully privately funded (but still government-led) public institutions exist. Public institutions typically provide services in areas such as education, science and technology, culture, health, and sanitation.

³ Translator's note: The first of the CPC's "two centennial objectives" (两个百年奋斗目标) is to form a well-off society in an all-round way (全面建成小康社会) by the centennial (2021) of the founding of the CPC.

(i) General public budget appropriations	15,769.36	(vi) Housing expenditures	233.00
(ii) Government fund budget appropriations			
		II. Balance carried over to following year	
Total revenue	82,106.60	Total expenditures	82,106.60

(ii) General Public Budget Expenditure Table

Units: RMB 10,000

Functional classification item		2018 executed amount		2019 budgeted amount				2019 to 2018 YoY Comparison		2019 to 2018 YoY Comparison (excluding National Development and Reform Commission (NDRC) infrastructure construction)	
Item code	Item name	Actual amount	Actual amount after deducting NDRC infrastructure	Initial Annual Budget			Budgeted amount after deducting NDRC infrastructure	Increase amount	Increase %	Increase amount	Increase %
				Subtotal	Basic expenditures	Project expenditures					
202	Diplomacy expenditures	4.00	4.00	4.30		4.30	4.30	0.30	7.50%	0.30	7.50%
20204	International organizations	4.00	4.00	4.30		4.30	4.30	0.30	7.50%	0.30	7.50%
2020401	International organization membership fees	4.00	4.00	4.30		4.30	4.30	0.30	7.50%	0.30	7.50%
206	S&T expenditures	61,368.09	60,032.09	65,681.90	1,559.05	64,122.85	65,681.90	4,313.81	7.03%	5,649.81	9.41%
20601	S&T management	61,368.09	60,032.09	65,681.90	1,559.05	64,122.85	65,681.90	4,313.81	7.03%	5,649.81	9.41%
2060199	Other S&T administrative affairs expenditures	61,368.09	60,032.09	65,681.90	1,559.05	64,122.85	65,681.90	4,313.81	7.03%	5,649.81	9.41%
208	Social security and employment expenditures	15.90	15.90	341.04	341.04			325.14	2044.91%	325.14	2044.91%
20805	Administrative public institution (行政事业单位) pensions	15.90	15.90	341.04	341.04			325.14	2044.91%	325.14	2044.91%
2080505	Expenditures on basic pension insurance contributions of state organ public institutions (机关事业单位)	15.90	15.90	256.03	256.03			240.13	1510.25%	240.13	1510.25%
2080506	Expenditures on occupational annuity contributions of state organ public institutions			85.01	85.01			85.01		85.01	
211	Energy conservation and environmental protection expenditure			100.00		100.00		100.00		100.00	
21110	Energy conservation and use			100.00		100.00		100.00		100.00	
2111001	Energy conservation and use			100.00		100.00		100.00		100.00	
221	Housing expenditures	256.11	256.11	210.00	210.00		210.00	-46.11	-18.00%	-46.11	-18.00%
22102	Housing reform expenditures	256.11	256.11	210.00	210.00		210.00	-46.11	-18.00%	-46.11	-18.00%
2210201	Housing provident fund	169.11	169.11	140.00	140.00		140.00	-29.11	-17.21%	-29.11	-17.21%
2210202	Rent subsidies	14.00	14.00	12.00	12.00		12.00	-2.00	-14.29%	-2.00	-14.29%
2210203	Home purchase subsidies	73.00	73.00	58.00	58.00		58.00	-15.00	-20.55%	-15.00	-20.55%
	Total	61,644.10	60,308.10	66,337.24	2,110.09	64,227.15	66,337.24	4,693.14	7.61%	6,029.14	10.00%

(iii) General Public Budget Basic Expenditure Table

Units: RMB 10,000

Departmental budget expenditures – economic classification items		2019 Basic Expenditures		
Item code	Item name	Total	Personnel expenses	Public expenses
301	Salary and benefits expenditures	1,500.59	1,500.59	
30101	Basic salaries	153.25	153.25	
30102	Subsidies and allowances	800.43	800.43	
30103	Bonuses	38.85	38.85	
30108	Basic pension insurance contributions of state organ public institutions	256.03	256.03	
30109	Occupational annuity contributions	85.01	85.01	
30112	Other social security contributions	25.00	25.00	
30113	Housing provident fund	140.00	140.00	
30199	Other salary and benefits expenditures	2.02	2.02	
302	Goods and services expenditures	461.67		461.67
30201	Office expenses	35.00		35.00
30202	Printing expenses	60.00		60.00
30203	Consulting fees	18.00		18.00
30204	Service charges	0.17		0.17
30207	Postage and cable fees	65.00		65.00
30211	Travel expenses	45.00		45.00
30213	Repair and maintenance costs	3.00		3.00
30214	Rental fees	1.00		1.00
30216	Training fees	2.00		2.00
30226	Labor costs	8.00		8.00
30227	Outsourcing fees	10.00		10.00
30228	Trade union funds	26.00		26.00
30229	Welfare expenses	15.00		15.00
30231	Official vehicle operation and maintenance costs	87.00		87.00
30239	Other transportation expenses	85.00		85.00
30299	Other goods and services expenditures	1.50		1.50
303	Assistance for individuals and families	20.63	20.63	
30302	Pension costs	18.88	18.88	
30399	Other assistance for individuals and families	1.75	1.75	
310	Capital expenditures	127.20		127.20
31002	Office equipment procurement	117.20		117.20
31022	Acquisition of intangible assets	10.00		10.00
	Total	2,110.09	1,521.22	588.87

(iv) General Public Budget Expenditure Table for the "Three Public" Expenses⁴

Units: RMB 10,000

Early 2018 budgeted amount					Adjusted 2018 budgeted amount						2019 budgeted amount						
Total	Expenses for official travel abroad	Official vehicle acquisition and operation costs			Official reception expenses	Total	Expenses for official travel abroad	Official vehicle acquisition and operation costs			Official reception expenses	Total	Expenses for official travel abroad	Official vehicle acquisition and operation costs			Official reception expenses
		Subtotal	Official vehicle acquisition	Official vehicle operations				Subtotal	Official vehicle acquisition	Official vehicle operation costs				Subtotal	Official vehicle acquisition	Official vehicle operation costs	
284.37	162.62	96.55		96.55	25.20	284.37	162.62	96.55		96.55	25.20	262.40	155.00	87.00		87.00	20.40

⁴ Translator's note: The "three public" expenses ("三公"经费) refer to spending on (1) foreign travel, (2) cars and chauffeurs, and (3) official receptions. Chinese auditors pay close attention to these three categories of expenditures because they are often the most visible examples of corruption and waste of public funds.

(v) Government Fund Budget Expenditure Table

Units: RMB 10,000

Item code	Item name	Unit code	Current Year Government Fund Budget Expenditures		
			Total	Basic expenditures	Project expenditures
	Total				

(vi) Summary of Departmental Revenue and Expenditures

Units: RMB 10,000

Revenue		Expenditures	
Item	Budgeted amount	Item	Budgeted amount
I. General public budget appropriations	66,337.24	I. Diplomacy expenditures	4.30
II. Government fund budget appropriations		II. S&T expenditures	92,156.09
III. Business revenue	11,025.63	III. Social security and employment expenditures	341.04
IV. Public institution operating revenue		Energy conservation and environmental protection expenditures	100.00
V. Other revenue		VI. Housing expenditures	530.80
Total current year revenue	77,362.87	Total current year expenditures	93,132.23
Business funds used to make up the balance of revenue and expenditures		Balance carried over to following year	
Balance carried forward from previous year	15,769.36		
Total revenue	93,132.23	Total expenditures	93,132.23

(7) Summary of Departmental Revenue

Units: RMB 10,000

Account item		Total	Balance carried forward from previous year	General public budget appropriations	Government fund budget appropriations	Business revenue		Public institutions	Subsidy revenue from higher levels	Revenue from payments by lower-level units	Other revenue	Business funds (事业基金) used to make up the balance of revenue and expenditures
Item code	Item name					Amount	Incl.: Educational revenue	Operating revenue				
202	Diplomatic expenditures	4.30		4.30								
20204	International organizations	4.30		4.30								
2020401	International organization membership fees	4.30		4.30								
206	S&T expenditures	92,156.09	15,746.36	65,681.90		10,727.83						
20601	S&T management	92,156.09	15,746.36	65,681.90		10,727.83						
2060199	Other S&T administrative affairs expenditures	92,156.09	15,746.36	65,681.90		10,727.83						
208	Social security and employment expenditures	341.04		341.04								
20805	Administrative public institution pensions	341.04		341.04								
2080505	Expenditures on basic pension insurance contributions of state organ public institutions	256.03		256.03								
2080506	Expenditures on occupational annuity contributions of state organ public institutions	85.01		85.01								
211	Energy conservation and environmental protection expenditure	100.00		100.00								
21110	Energy conservation and use	100.00		100.00								
2111001	Energy conservation and use	100.00		100.00								
221	Housing expenditures	530.80	23.00	210.00		297.80						
22102	Housing reform expenditures	530.80	23.00	210.00		297.80						
2210201	Housing provident fund	319.76		140.00		179.76						
2210202	Rent subsidies	21.94	1.00	12.00		8.94						
2210203	Home purchase subsidies	189.10	22.00	58.00		109.10						
	Total	93,132.23	15,769.36	66,337.24		11,025.63						

(8) Departmental Expenditure Table

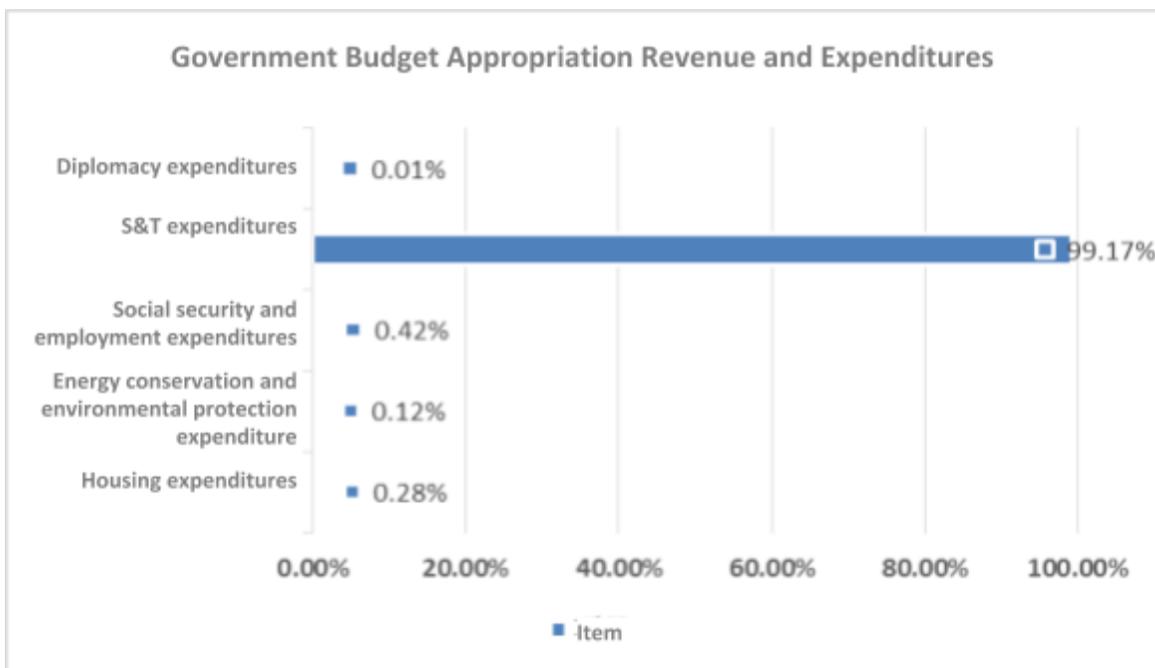
Units: RMB 10,000

Item code	Item name	Total	Basic expenditures	Project expenditures	Payments to higher authorities	Public institution operating expenses	Subsidies for lower-level units
202	Diplomatic expenditures	4.30		4.30			
20204	International organizations	4.30		4.30			
2020401	International organization membership fees	4.30		4.30			
206	S&T expenditures	92,156.09	4,352.82	87,803.27			
20601	S&T management	92,156.09	4,352.82	87,803.27			
2060199	Other S&T administrative affairs expenditures	92,156.09	4,352.82	87,803.27			
208	Social security and employment expenditures	341.04	341.04				
20805	Administrative public institution pensions	341.04	341.04				
2080505	Expenditures on basic pension insurance contributions of state organ public institutions	256.03	256.03				
2080506	Expenditures on occupational annuity contributions of state organ public institutions	85.01	85.01				
211	Energy conservation and environmental protection expenditure	100.00		100.00			
21110	Energy conservation and use	100.00		100.00			
2111001	Energy conservation and use	100.00		100.00			
221	Housing expenditures	530.80	530.80				
22102	Housing reform expenditures	530.80	530.80				
2210201	Housing provident fund	319.76	319.76				
2210202	Rent subsidies	21.94	21.94				
2210203	Home purchase subsidies	189.10	189.10				
	Total	93,132.23	5,224.66	87,907.57			

3. Detailed Description of CAE's 2019 Departmental Budgets

(1) Description of the Summary of CAE's Fiscal Appropriation Revenue and Expenditures

The CAE's total government fiscal appropriation revenue and expenditure budget for 2019 amounts to RMB 821,066,000. All revenue is general public budget appropriations, with no government fund budget appropriations, and includes: General public budget appropriation revenue for the year of RMB 663,372,400, with RMB 157,693,600 carried forward from the prior year. Expenditures includes: Diplomacy expenditures of RMB 43,000, S&T expenditures of RMB 813,282,600, social security and employment expenditures of RMB 3,410,400, energy conservation and environmental protection expenditures of RMB 1 million, and housing expenditures of RMB 2,330,000.



(2) Description of CAE's 2019 General Public Budget Expenditures

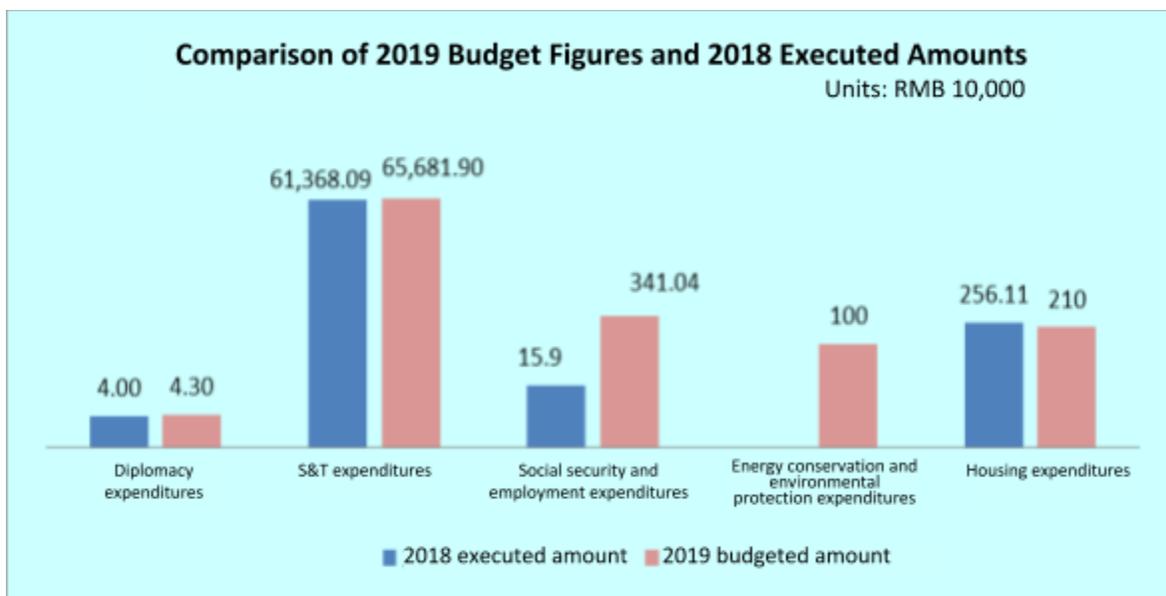
CAE's 2019 general public budget government fiscal appropriations for the current year are RMB 663,372,400, an increase of RMB 46,931,400, or 7.61%, from the amount executed in 2018. In accordance with the spirit of the CPC Central Committee and the State Council regarding belt-tightening, in 2019, expenditures on non-essential and non-key projects and other S&T administrative affairs will be reduced by no less than 5%, but expenditures on the building of CAE into a national engineering S&T think tank and other projects will be guaranteed. This is reflected in the relevant expenditure accounts.

Specifically:

1. Diplomacy expenditures: The early 2019 budgeted amount is RMB 43,000, an increase of RMB 3,000, or 7.50%, from the amount executed in 2018. The increase in funding is

mainly due to an increase in dues to international organizations.

2. S&T expenditures: The early 2019 budgeted amount is RMB 656,819,000, an increase of RMB 43,138,100, or 7.03%, from the amount executed in 2018. This is mainly used for the building of CAE into a national engineering S&T think tank, academician activities (academic activities,) and institutional administrative operation projects. The increase in funding is mainly due to an increase in expenditures on projects such as the building of CAE into a national engineering S&T think tank.
3. Social security and employment expenditures: The early 2019 budgeted amount is RMB 3,410,400, an increase of RMB 3,251,400, or 2,044.91%, from the amount executed in 2018. The increase in funding is mainly due to an increase in expenditures on pension insurance contributions and occupational annuity contributions of central units.
4. Energy conservation and environmental protection expenditures: The early 2019 budgeted amount is RMB 1 million, an increase of RMB 1 million from the amount executed in 2018. The increase in funding is mainly due to the addition of expenditures on energy-saving projects.
5. Housing expenditures: The early 2019 budgeted amount is RMB 2,100,000 for housing reform expenditures. Specifically: The housing provident fund amounts to RMB 1.4 million, a decrease of RMB 291,100, or 17.21%, from the amount executed in 2018; rent subsidies amount to RMB 120,000, a decrease of RMB 20,000, or 14.29%, from the amount executed in 2018; house purchase subsidies amount to RMB 580,000, a decrease of RMB 150,000, or 20.55%, from the amount executed in 2018. The reduction in funding for the current year is mainly due to the separate arrangement of budgeting for funds carried over of RMB 230,000.



(3) Description of Basic Expenditures in the CAE 2019 General Public Budget

In CAE's 2019 general public budget, total basic expenditures amount to RMB 21,100,900, of which:

Personnel expenditures account for RMB 15,212,200, which mainly include: Basic wages,

subsidies and allowances, bonuses, pension insurance and occupational annuity contributions of institutional public institutions, other social security expenditures, housing provident fund contributions, other salary and benefit expenditures, retirement expenses, and other individual and family subsidies.

Routine public expenditures account for RMB 5,888,700, which mainly include: Office expenses, printing expenses, consulting expenses, postage and telecom fees, travel expenses, maintenance and repair fees, rental expenses, training expenses, labor expenses, outsourcing expenses, union fees, benefit expenses, maintenance expenses of official vehicles, other transportation expenses, other product and service expenditures, and office equipment purchases and installation.

(4) Description of the "Three Public" Expenses in CAE's 2019 General Public Budget

CAE's 2019 budgeted amount for official receptions, vehicles, and travel abroad funding is RMB 2,624,000, including: RMB 1,550,000 for expenses for official travel abroad, RMB 870,000 for official vehicle purchase and operation costs, and RMB 204,000 for official reception expenses.

Compared with the adjusted budget of 2018, the 2019 budget is reduced by RMB 219,700, or 7.73%, of which: Funding for official travel abroad is reduced by 76,200, or 4.69%, from the prior year; funding for official vehicle operations is reduced by 95,500, or 9.89%, from the prior year; funding for official receptions is reduced by 48,000, or 19.05%, from the prior year. The reduction in funding is mainly due to a further reduction in expenditures for official travel abroad, official vehicles, and official receptions in accordance with the requirements of the CPC Central Committee and the State Council regarding belt-tightening and the insistence on cost savings and waste reduction.

(5) Description of CAE's 2019 Government Fund Budget Expenditures

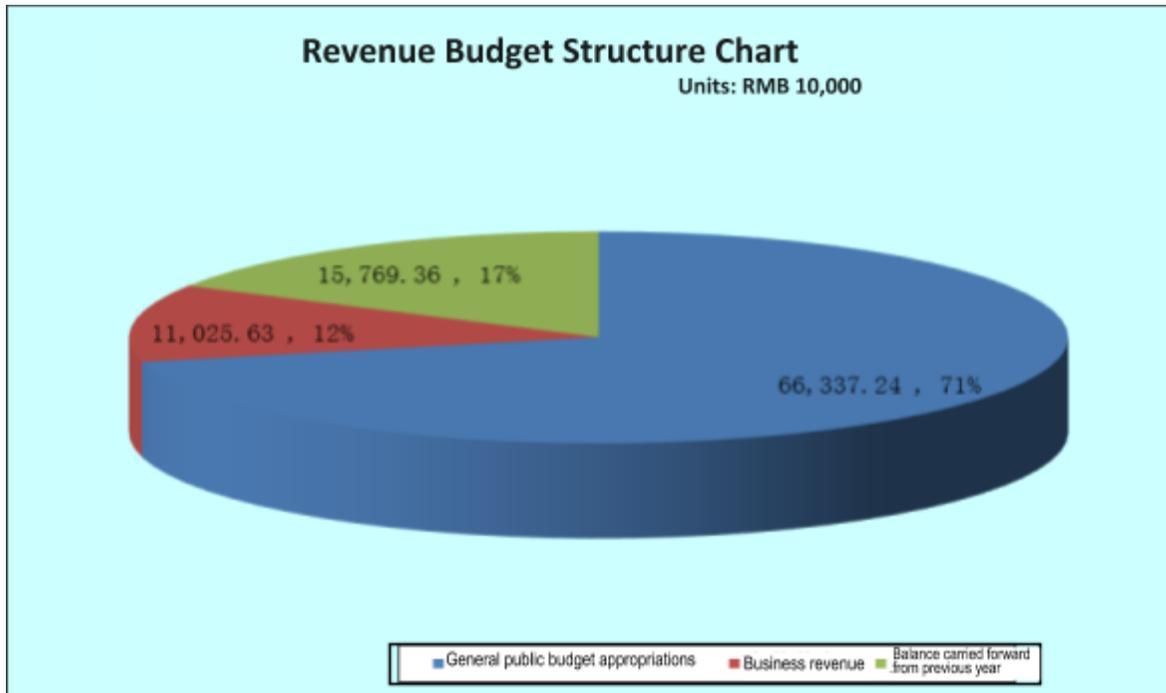
CAE does not use government fund budgeting for revenue and expenditures. Therefore, this table is empty.

(6) Description of the Summary of CAE's Departmental Revenue and Expenditures

Following comprehensive budgeting principles, all revenue and expenditures of CAE's academic institutions are managed in the departmental budgets. Revenue includes: General public budget appropriations, business revenue, and funds carried forward from prior year. Expenditures include: Diplomacy expenditures, S&T expenditures, social security and employment expenditures, energy conservation and environmental protection expenditures, and housing expenditures. CAE's total revenue and expenditures budget for 2019 amounts to RMB 931,322,300.

(7) Description of the Summary of CAE's Departmental Revenue and Expenditures

CAE's 2019 revenue budget is RMB 931,322,300, with revenue from general public budget fiscal appropriations for revenue accounting for RMB 663,372,400, or 71.23%; business revenue (事业收入) accounting for RMB 110,256,300, or 11.84%; and funds carried over from the prior year accounting for RMB 157,693,600, or 16.93%.



(8) Description of the Summary of CAE’s Departmental Expenditures

In 2019, CAE's budgeted expenditures totaled RMB 931,322,300, with basic expenditures accounting for RMB 52,246,600, or 5.61%, and project expenditures accounting for RMB 879,075,700, or 94.39%.

(9) Description of Other Important Matters

1. Building of CAE into a national engineering S&T think tank project

(1) Overview of project

In June 2014, General Secretary Xi Jinping noted at the Conference of Academicians of the Chinese Academy of Sciences (CAS) and CAE: “The Chinese Academy of Sciences and the Chinese Academy of Engineering are the highest academic institutions in China’s S&T and engineering technology sectors and are national S&T think tanks. The two academies should organize a large number of academicians to carry out strategic consulting research around overall issues related to economic, social, and technological development, support scientific decision-making with scientific consulting, and lead scientific development with scientific decision-making.”

The main task of building CAE into a national high-end S&T think tank is to closely focus on national strategic needs, with strategic consulting as the center. Work must include coordinating and taking into account all aspects of S&T services, academic leadership, and talent training, and a series of strategic, forward-looking, and comprehensive consulting studies must be organized and carried out. The building of CAE into an engineering S&T think tank should focus on building an innovation-oriented country and implementing the innovation-driven development strategy centered around strategic consultation for major Party

and national decisions. At the same time, this work should address localities and enterprises, face the future development trends of engineering S&T, and look to the growth of engineering S&T talents to carry out strategic consulting, scientific planning, overall planning, collaborative innovation, and coordinated development. Together these initiatives will form the task system of CAE strategic consulting.

As the first public welfare, open resource integration and knowledge service platform in the national engineering S&T field with the goal of cross-field professional data integration and deep knowledge mining, the China Knowledge Center for Engineering Sciences and Technology persists in being guided by its work directive to "be innovation-driven, improve quality, and serve development." The China Knowledge Center for Engineering Sciences and Technology provides information support and knowledge services for the building of CAE into a think tank centered around the construction of the engineering S&T knowledge service system platform, to create a national-level engineering S&T field information service infrastructure to meet the needs of national economic and S&T development.

(2) Basis for project establishment

As noted in the *Opinions on Strengthening the Construction of New Think Tanks with Chinese Characteristics* issued by the General Office of the CPC Central Committee and the General Office of the State Council, "by leveraging the advantages of the Chinese Academy of Sciences, Chinese Academy of Engineering, Chinese Association of Science and Technology (CAST), etc. in promoting technological innovation and playing a supporting role in national S&T strategies, planning, layouts, and policies, they shall become internationally renowned, high-end S&T think tanks led by innovation that the nation relies upon and the community trusts." On November 9, 2015, the 18th meeting of the Central Leading Group for Comprehensively Deepening Reform (中央全面深化改革领导小组) reviewed and approved the *Pilot Work Plan for the Building of National High-End Think Tanks* and identified the CAE as one of the pilot units in the first batch of building work.

At the National Science and Technology Innovation Conference (全国科技创新大会), the Conferences of Academicians of CAS and CAE, and the Ninth Congress of CAST, held concurrently on May 30, 2016, General Secretary Xi Jinping emphasized that "the Chinese Academy of Sciences and the Chinese Academy of Engineering are places where China's masters of S&T gather. We must give full play to the function of national high-end S&T think tanks, organizing the majority of academicians to focus on the overall and long-term issues in the development of S&T innovation, and we must excel at grasping the general global trend of S&T development. They must study and determine the new direction of the global S&T revolution and provide accurate, forward-looking, and timely suggestions for national S&T decisions."

The building of CAE into a national engineering S&T think tank is necessary to fulfill the duties stipulated in the *Chinese Academy of Engineering Charter*, implement the relevant requirements of the *Decisions of the Central Committee of the Communist Party of China on Several Major Issues in Comprehensively Deepening Reform* and the *Opinions on Strengthening the Construction of New Think Tanks with Chinese Characteristics*, implement the spirit of the important instructions of central leadership, and implement the central tasks pushed forward by the *Chinese Academy of Engineering Work Outline for 2018-2022*.

(3) Implementing entities

The project's implementing entity is CAE. The system of organization that the CAE uses to build itself into a national high-end think tank is composed of decision-making institutions, working institutions, research support institutions, and information service institutions. Specifically:

- 1 Decision-making institutions: This includes the Conference of Academicians, presidium meetings, and the academy's executive meetings, and these institutions are responsible for decision-making on major issues at different levels during establishment and operation.
- 2 Work institutions: This includes the Advisory Working Committee, the Science and Technology Cooperation Committee, the Academic and Publishing Committee, the Education Committee, and nine academic departments.
- 3 Research support institutions: This includes the CAE Strategic Consulting Center and various strategic research alliances.
- 4 Information service institutions: The Knowledge Center is an important service institution supported by CAE strategic consulting information.
- 5 CAE's consulting work is organized and carried out in the form of projects, and a project leader system is implemented. Project research teams are organized in accordance with the principles of "strong core, large-scale collaboration, and openness." This work occurs in two main ways: For long-term continuous and stable consulting research fields, especially major consulting projects and key consulting projects of the CAE, the core members of the project mainly rely on full-time researchers and part-time experts from the Strategic Consulting Center and Strategic Research Alliance to ensure the stability of the research team; at the same time, relevant academicians and outstanding experts in the fields of technology, economy, society, and management are extensively recruited to participate in project research. For other newly established consulting research projects, researchers from research support institutions and the academicians' units may be relied on and experts from various fields may be attracted. A multidisciplinary and open research team that combines senior, mid-level, and young talents is then organized to carry out strategic research.
- 6 The organizational structure of the Knowledge Center consists of a leading group, an expert committee, a project management office, a technical expert working group, and various co-construction units.

(4) Implementation scheme

1 Funding for academician S&T consulting

CAE always regards strategic consulting as its central task and takes serving the Party and the country's overall work as its foothold and focus. CAE has properly fulfilled its responsibilities and mission as the country's highest advisory academic institution and plays a role in serving and supporting national scientific decision-making. It is an important national high-end technology think tank that the Party and government can rely on. After more than 20 years of sustained development in strategic consulting work, CAE has formed a strategic consulting

research domain with distinctive characteristics and long-term sustained development, and its consulting work has reached a definite scale. Gaining a foothold in engineering S&T and promoting the innovation-driven development strategy is the main direction of CAE strategic consulting. CAE gives full play to multi-disciplinary, inter-departmental, and inter-industry advantages. At the academy level, it has concentrated and formed long-term continuous research in several research fields around the comprehensive and overall issues of the country's economic and social development. In addition, its nine academic departments have strengthened top-level design and overall planning in accordance with the requirements of building CAE into a think tank in the field of engineering S&T and have formed initial strategic consulting research directions in various fields. At present, the number of consulting research projects established by CAE each year has reached 100, and hundreds of academic activities are held each year; academician S&T consulting funds provide a solid guarantee for the development of consulting work. More than 50 reports and academician recommendations are submitted to the central government each year, nearly 500 academicians have participated in CAE consulting work, and thousands of experts have participated in project research.

For CAE to build itself into a national high-end think tank with strategic consulting as its core task, it must be "able to support both heaven and earth" by carrying out strategic consulting for the country on the one hand and providing consulting services at the local level on the other. Especially in the great historical period of decisive victory in forming a well-off society in an all-round way, CAE will continue to study and implement the spirit of the 19th Party Congress as the top priority of its work. Guided by Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, CAE will continue to promote the construction of itself into a high-end national think tank and will strive to reach a new level of consulting work. CAE plans to focus on implementing the spirit of the central authorities, carefully planning a number of major consulting and research projects, meticulously organizing a number of major activities, and integrating project research outcomes to firmly promote the building of CAE into a national high-end think tank.

2 Construction of the China Knowledge Center for Engineering Sciences and Technology

The content of the building of the Knowledge Center mainly has three aspects: First is the building of knowledge resources. This includes internal resource building, alliance resource building, purchased resource building, and other aspects of knowledge resource building. The second is technical support capacity building. This includes knowledge resource processing systems, knowledge organization systems, knowledge discovery technology, knowledge service tools, and network information core technology and tools. The third is knowledge service system building. We must construct an information resource building and service system, a knowledge socialization organization model, and a service model and management mechanism and develop multiple levels and types of knowledge services.

The focus of Knowledge Center building in 2019 will focus on four aspects: The first is a focus on the building of high-quality and sustainable scientific data and other characteristic resources in professional fields and to create high-quality knowledge applications; the second is to deepen the integrated building of the general platform and its sub-platforms; the third is to further enhance the application effects of intelligentized tools on the general platform and its sub-platforms; the fourth is to further play the role of a knowledge center and provide

informatization (信息化) support for the building of CAE into a national engineering S&T high-end think tank.

(5) Implementation cycle

These projects are multi-year ongoing projects.

(6) Annual budget arrangements

The 2019 planned general public budget appropriation for this project is RMB 561,300,000, of which:

1 The budget for funding for academician S&T consulting is RMB 390 million. This budget is mainly used to assign research funding for projects such as consulting and research, national high-end think tank consulting, major engineering technology consulting, academy-ministry cooperation consulting, academic leadership, strategic alliances, academy-local cooperation consulting, and for implementing the spirit of the 19th Party Congress.

2 The budget for construction of the China Knowledge Center for Engineering Sciences and Technology is RMB 171,300,000. This budget is mainly used for the building of the general platform of the Knowledge Center, the building of sub-centers and professional knowledge service systems, technology research and development, proprietary cloud construction, cloud services, resource building, project management, and international knowledge center building.

(7) Performance Objectives and Metrics

Level 1 Expenditures Performance Objectives

(2019)

Project Name		Building CAE into a national engineering S&T think tank		
Competent authority and code		[186] CAE	Implementing unit	CAE
Project funds (RMB 10,000)	Intermediate term total funds		Annual total funds	70,159.86
	Of which: Government budget appropriations		Of which: Government budget appropriations	56,130.00
	Other funds		Other funds	14,029.86
O v e r a l l o b j e c t i v e s	Interim objectives (2019-2021)		Annual objectives	
	<p>1. To formulate more than 350 consulting research reports and surveys; to submit more than 60 consulting research reports and recommendations for more than 100 academicians to the State Council or relevant ministries and commissions; to hold more than 100 high-level academic activities such as the International Engineering Technology Strategy Forum and the China Engineering Technology Forum.</p> <p>2. To reach a proportion of consulting research reports submitted to the State Council or relevant ministries and commissions of over 30%; to reach a proportion of public publications or presentations of over 30%; to promote the building of CAE into a high-end think tank in accordance with central deployments to provide high-quality intellectual support for central scientific decision-making.</p> <p>3. To have up to 35-40 Knowledge Center branch centers, of which more than 35 branch centers are operating normally and are providing services to the public; to achieve resource building coverage for over 80% of CAE second-level disciplines (二级学科); to support major engineering scientific research and strategic consulting projects undertaken by academicians.</p> <p>4. To reach 1,000 Knowledge Center key service users (including academicians and academician teams) with active registration from up to 100,000 engineering science and education workers, and an annual visit volume of up to 30 million.</p>		<p>1. To formulate over 100 consulting research reports and surveys; to formulate over 20 consulting research reports and recommendations for over 30 academicians to the State Council or relevant ministries and commissions; to hold over 30 high-level academic events such as the International Engineering Technology Strategy Forum and the China Engineering Technology Forum; to provide important advice and suggestions for the study of major issues in China's economic and social development such as information security, energy security development strategy, manufacturing superpower (制造强国) development, ecological civilization building and maritime power-building strategies, and health care structural reform.</p> <p>2. To reach a proportion of consulting research reports submitted to the State Council or relevant ministries and commissions of over 30%; to reach a proportion of public publications or presentations of over 30%; to further promote the building of CAE into a high-quality national engineering S&T think tank and to continuously enhance the capacity to provide high-quality intellectual support for scientific decision-making by the central government in accordance with the important instructions of General Secretary Xi Jinping.</p> <p>3. 25 branch centers of the Knowledge Center are able to carry out online services, and the Knowledge Center's coverage of second-level disciplines has reached 80%.</p> <p>4. The Knowledge Center serves more than 30 national strategic subjects (projects), actively pushes more than 100 academicians into service, and initially establishes a national high-end think tank information support platform; total annual visits to the platform have reached more than 20 million, and the number of registered users reached 35,000 as its popularity continues to grow.</p> <p>5. To continue to promote the building of the International Knowledge Center (国际知识中心).</p>	

P e r f o r m a n c e m e t r i c s	Level 1 metrics	Level 2 metrics	Level 3 metrics	Metric Value	Level 2 metrics	Level 3 metrics	Metric Value
	O u t p u t m e t r i c s	Q u a n t i t a t i v e m e t r i c s		Consulting research reports and surveys	≥350	Q u a n t i t a t i v e m e t r i c s	Consulting research reports and surveys
Number of consulting research reports submitted to the State Council or relevant ministries				≥60	Number of consulting research reports submitted to the State Council or relevant ministries		≥20
Number of consulting research reports published or presented				≥80	Number of consulting research reports published or presented		≥25
Scope of CAE second-level disciplines covered by Knowledge Center resource building				≥80%	Scope of CAE second-level disciplines covered by Knowledge Center resource building		≥80%
Number of academicians participating in project research				≥1,000 people	Number of academicians participating in project research		≥300 people
International Engineering Technology Strategy High-End Forum, China Engineering Technology Forum, and other academic activities				≥100	International Engineering Technology Strategy High-End Forum, China Engineering Technology Forum, and other academic activities		≥30
Academician recommendations				≥100	Academician recommendations		≥30
Number of Knowledge Center branch centers constructed				35-40	Number of Knowledge Center sub-centers constructed		33
Number of Knowledge Center branch centers under operation				≥35	Number of branch centers providing online services		≥25
					Number of branch centers where the Knowledge Center conducts customized service pilots		≥15
			Number of Knowledge Center system platforms (domestic, international) constructed	2			
Q u a l i t a t i v e m e t r i c s			Expected research objectives specified in project mission statement	≥80%	Q u a l i t a t i v e m e t r i c s	Expected research objectives specified in consulting project mission statement	≥80%
			Publication ratio of research reports on major consulting projects and key consulting projects	≥30%		Publication ratio of research reports on major consulting projects and key consulting projects	≥30%
			Reference value of consulting project research outcomes to decision-making	Improvement		Reference value of consulting project research outcomes to decision-making	Improvement
B e n e f i t m e t r i c s		S u s t a i n a b l e i m p a c t m e t r i c s	Role in industrial transformation and upgrading, sustainable development, and national security	Steady improvement	S u s t a i n a b l e i m p a c t m e t r i c s	Role of strategic consulting in the implementation of the innovation-driven development strategy (supporting and leading role of technological innovation in the economy and society)	Improvement
			Seizing development opportunities in the era of big data and leading the development of big data through the building of the Knowledge Center	Plays an active role		Seizing development opportunities in the era of big data and leading the development of big data through the building of the Knowledge Center	Plays an active role
			Enhancing the international influence of China's engineering technology through the building of the Knowledge Center	Gradual improvement		Enhancing the international influence of China's engineering technology through the building of the Knowledge Center	Gradual improvement
		S o c i a l b e n e f i t m e t r i c s		Knowledge Center as China's engineering technology data resource and engineering technology development environment	Environment optimized through resource integration	S o c i a l b e n e f i t m e t r i c s	Knowledge Center as China's engineering technology data resource and engineering technology development environment
	Average annual visits to Knowledge Center (PV)			≥30 million	Annual visits to Knowledge Center (PV)		≥20 million
	Consulting research recommendations adopted by local governments and relevant industries, and their impact on the scientific level of national decision-making			Steady improvement	Role of strategic consulting on local economic and social development (regional economic transformation and upgrading and sustainable development)		Improvement
	Consulting research recommendations adopted by the central government and relevant ministries and commissions, and their impact on the scientific level of national decision-making			Steady improvement	Role of strategic consulting in industrial transformation and upgrades ("internet +" action plan)		Improvement
					Role of strategic consulting on national security (network information security, public security, etc.)		Improvement
					Role of strategic consulting on ecological civilization building and sustainable development (water issues)		Improvement

2. Description of Institutional Operation Funding

In 2019, the fiscal government appropriations budget for institutional operation funding is RMB 5,888,700, which is the same as the 2018 budget.

3. Description of Government Procurement

In 2019, the total budget for government procurement is RMB 115,463,400. Specifically, the budget for government procurement of goods is RMB 8,634,400, the budget for government procurement for projects is RMB 8,100,000, and the budget for government procurement of services is RMB 98,729,000.

4. Description of the Use of State-Owned Assets

As of July 31, 2018, CAE has a total of 18 vehicles, of which 13 are vehicles used by department-level leading cadres, two are vehicles for confidential communications, two are vehicles for emergency support, and one vehicle is general for other uses. There are 9 units (sets) of general-use equipment with a unit value of over RMB 500,000, and there are no units (sets) of special-use equipment with a unit value of over RMB 1 million.

In 2019, departmental budgets have not arranged for the purchase of vehicles. The purchase of two units (sets) of general-purpose equipment with a unit price of more than RMB 500,000 is planned, and there are no plans for the purchase of special-purpose equipment with a unit price of more than RMB 1 million.

5. Description of Budget Performance

In 2018, CAE implemented three level-1 projects and 14 level-2 projects with departmental budget performance objective management, involving general public budget fiscal appropriations of RMB 593,317,000. One level-1 project is included under the departmental budget performance evaluation pilot program, involving general public budget fiscal appropriations of RMB 519,000,000. In 2019, the CAE will implement four level-1 projects and 15 level-2 projects with departmental budget performance objective management, involving general public budget fiscal appropriations of RMB 642,271,500. One level-1 project is included under the departmental budget performance evaluation pilot program, involving general public budget fiscal appropriations of RMB 561,300,000.

4. Glossary

(1) Revenue items

1. Government fiscal appropriations (财政拨款收入): Refers to funds allocated by the central government in the current year.
2. Business revenue (事业收入): The revenue earned by public institutions through professional business activities and auxiliary activities.
3. Other revenue: Revenue other than the above-mentioned "government fiscal appropriations," "business revenue," and "public institution operating revenue." This revenue is mainly derived from property sales and interest on deposits as per the relevant regulations.
4. Business funds (事业基金) used to make up shortfall: When the fiscal appropriation revenue, business revenue, public institution operating revenue, and other revenue is not expected to cover the expenditures of a public institution for the current year, business funds accumulated in the previous year can be drawn on to make up the shortfall in the current year. Specifically, after the revenue and expenditures of a public institution break even for a given year, additional funds are withdrawn according to national regulations and used to make up differences between revenue and expenditures in subsequent years.

5. Balance carried forward from prior year: Refers to the funds that were not used up in prior years and are carried over to the current year but continue to be used for their original intended purposes.

(2) Expenditure Accounts

1. Diplomacy (type): These expenditures are mainly used for the expenses of international organization dues and international exchange activities.
2. S&T (type): These expenditures are mainly used for consulting research, academic activities, and S&T administrative affairs.
3. Social security and employment (社会保障和就业) (type): Reflects expenditures related to social security and employment. This includes one sub-type-level budget account: Retirement from administrative public institutions, which reflects institutional retirement expenditures.
4. Energy conservation and environmental protection (type): Reflects expenditures related to energy conservation and environmental protection. This includes one sub-type-level budget account: Energy conservation and use, which includes expenditures for energy conservation and usage.
5. Housing (type): Reflects expenditures related to housing. This type includes one sub-type-level account: Housing reform expenditures. Housing reform expenditures include three items: Housing provident fund, rent subsidies, and house purchase subsidies (subsidies for personnel with no housing or non-compliant housing.) Of which: The housing provident fund is a long-term housing savings fund contributed to by work units and their active employees in accordance with the *Regulations on the Management of the Housing Provident Fund*. This policy began in the mid-1990s and is generally implemented among employees in government agencies, enterprises, and institutions across the country. The minimum contribution ratio is 5% and the maximum contribution ratio is 12% of the employee's salary from the previous year. This program has been implemented for approximately 20 years. The bases for contributions by administrative units include the salaries for the posts and grades of civil servants, salaries for posts and technical grades (positions) of workers in institutions, one-time year-end bonuses, special post allowances, and allowances for hardship and remote areas, as uniformly stipulated by the State, and work-related subsidies and living allowances issued after the regulation; the bases for contributions by public institutions include the salaries for posts, pay scale salaries, allowances for hardship and remote areas, and special post allowances, as uniformly stipulated by the State. The rent subsidy was approved by the State Council and subsidies for the increase in the rent standard for public housing of central units in Beijing began in 2000. Central units in Beijing determine the rent subsidy according to the number of active employees and retirees and the corresponding subsidy standard. The monthly subsidy per capita is RMB 90. House purchase subsidies are paid in accordance with the provisions of the *Circular of the State Council on Further Deepening the Urban Housing System Reform and Accelerating Housing Construction* ([1998] No. 23). Since the discontinuation of housing appropriation in kind in the second half of 1998, subsidy funds for the monetization reform of housing distribution are disbursed to employees without housing or with non-compliant housing in areas with a housing price-to-revenue ratio of more than four. Central government administrative units began issuing home purchase subsidies in 2000, while local administrative units began issuing them in 1999. Enterprises determine them based

on their own circumstances. Implementation on the part of central government units in Beijing is in accordance with the standards stipulated in *Notice of the General Office of the CPC and the General Office of the State Council on Forwarding the "Opinions on Improving the Housing System for Central and State Organs in Beijing"* ([2005] No. 8), while implementation on the part of central government units outside of Beijing is in accordance with the standards stipulated in the policies of local people's governments on the monetary reform of housing appropriation.

6. Basic expenditures: Personnel expenditures and office expenditures incurred to ensure the normal operation of agencies and their completion of routine work tasks.
7. Project expenditures: Expenditures in addition to basic expenditures that are incurred to complete special administrative tasks and business development goals.

(3) The "three public" expenses

Funding for the "three public" expenses is managed in the central fiscal budget. This refers to the use of fiscal appropriations from central departments to cover the expenses of official international travel, official vehicle purchases and operation, and official receptions. Official international travel expenses are the international travel expenses, inter-city travel expenses once abroad, accommodation expenses, dining expenses, training fees, and miscellaneous expenses of staff on official business during official international travel. Official vehicle purchase and operating expenses include vehicle purchase expenses (including tax), rental expenses, fuel expenses, repair expenses, tolls, insurance expenses, and safety award expenses. Official reception expenses include the various expenditures on official receptions (including for foreign guests) as per relevant regulations.

(4) Institutional Operation Funding (机关运行经费)

This refers to funds used to purchase goods and services in order to ensure the operation of administrative units (including public institutions managed with reference to the Civil Service Law,) including office and printing fees, postage and telecommunications fees, business travel expenses, conference fees, benefit expenses, daily maintenance fees, special materials and general equipment purchase fees, office space utilities fees, office space heating fees, office space property management fees, official vehicle operation and maintenance fees, and other expenses.