

## Translation



The following document is the 2022 budget of the Chinese Academy of Engineering, a state-run body of professional Chinese engineers that provides technology policy advice to the Chinese government and runs laboratories focused on applied technology research.

### Title

Chinese Academy of Engineering 2022 Annual Budget  
中国工程院2022年度部门预算

### Author

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

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U.S. \$1 ≈ 6.7 Chinese Yuan Renminbi (RMB), as of July 14, 2022.

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## **I. Overview of the Chinese Academy of Engineering**

### **(i) Ministerial Responsibilities**

The Chinese Academy of Engineering (CAE) is the highest honorable and advisory academic institution in the field of engineering science and technology (S&T) 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 Chinese Communist Party (CCP) and major strategic deployments of the country, to organize research and discuss major, key issues in the field of engineering S&T, to integrate 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.

### **(ii) Institutional Configuration**

CAE is composed of academicians. The Conference of Academicians (院士大会) is the highest authority of the Chinese Academy of Engineering. 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 (Party Committee for Subordinate Organs [机关党委]), a first bureau, a second bureau, a third bureau, an international cooperation bureau (Office of Hong Kong, Macau, and Taiwan Affairs) and

other institutions. 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 ministerial budget of CAE is composed of the two second-level budgetary units of CAE itself (a public institution<sup>1</sup> managed with reference to the Civil Servant Law<sup>2</sup>) and the Strategic Consulting Center (a self-financed public institution).

## II. CAE 2022 Ministerial Budget

2022 is the year when the 20th Party Congress will be held, and it is also a critical year for the comprehensive rollout and in-depth advancement of the 14th Five-Year Plan. The CAE will hold high the great banner of Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era and will deeply study and implement the spirit of the 19th Party Congress and all of the plenums of the 19th CCP Central Committee. We will deeply understand the decisive significance of the "Two Establishes"<sup>3</sup> and fully implement CAE's 14th Five-Year Development Plan. We will deepen the reform of the academician system, actively expand third-party evaluation, build a high-end think tank that the country can rely on, and take practical actions to welcome the success of the 20th Party Congress.

The 2022 ministerial 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.

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<sup>1</sup> 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.

<sup>2</sup> 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 PRC 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 accordance with the PRC Civil Servant Law.

<sup>3</sup> Translator's note: The "two establishes" ("两个确立") are: (1) establish Xi Jinping's status as the core of the CCP Central Committee and the core of the entire Party, and (2) establish the guiding status of Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era.

### Summary of Ministerial Income and Expenditures

Units: Chinese yuan Renminbi (RMB) 10,000

Income		Expenditures	
Item	Budgeted amount	Item	Budgeted amount
1. General public budget allocation	63,592.14	1. Diplomacy expenditures	4.30
2. Government fund (政府性基金) budget allocation		2. S&T expenditures	84,515.25
3. State-owned capital operating budget appropriation income		3. Social security and employment expenditures	656.82
4. Business income (事业收入)	12,321.85	4. Sanitation and health expenditures	179.84
5. Public institution operating income		5. Housing expenditures	628.64
6. Other income	466.00		
Total current year income	76,379.99	Total current year expenditures	85,984.85
Use of non-fiscal appropriation balance		Balance carried over to following year	1,689.93
Balance carried forward from previous year	11,294.79		
Total income	87,674.78	Total expenditures	87,674.78

## Summary of Ministerial Income

Units: RMB 10,000

Item		Total	Balance carried forward from previous year	General public budget allocation	Government fund budget allocation	State-owned capital operating budget appropriation income	Business income		Public institution operating income	Subsidy income from higher levels	Income from payments by lower-level units	Other income	Use of non-fiscal appropriation balance
Item code	Item name						Amount	Of which: Education charges					
186	CAE	87,674.78	11,294.79	63,592.14			12,321.85					466.00	
202	Diplomatic expenditures	4.30		4.30									
20204	International organizations	4.30		4.30									
2020401	International organization dues	4.30		4.30									
206	S&T expenditures	86,205.18	11,240.53	63,022.48			11,476.17					466.00	
20601	S&T management	26,285.75	5,327.57	9,016.01			11,476.17					466.00	
2060199	Other S&T administrative affairs expenditures	26,285.75	5,327.57	9,016.01			11,476.17					466.00	
20603	Applied research	59,919.43	5,912.96	54,006.47									
2060302	Public welfare research	59,919.43	5,912.96	54,006.47									
208	Social security and employment expenditures	656.82		306.36			350.46						
20805	Pension expenditures of administrative units and public institutions	637.95		306.36			331.59						
2080502	Retirement from public institutions	3.00					3.00						
2080505	Expenditures on basic old age insurance contributions of government offices and public institutions	473.72		204.24			269.48						
2080506	Expenditures on occupational annuity contributions of government offices and public institutions	161.23		102.12			59.11						
20899	Other social security and employment expenditures	18.87					18.87						
2089999	Other social security and employment expenditures	18.87					18.87						
210	Sanitation and health expenditures	179.84					179.84						
21011	Administrative units and public institutions healthcare	179.84					179.84						
2101102	Healthcare of public institutions	179.84					179.84						
221	Housing assurance expenditures	628.64	54.26	259.00			315.38						
22102	Housing reform expenditures	628.64	54.26	259.00			315.38						
2210201	Housing provident fund	408.12	34.66	160.00			213.46						
2210202	Rent subsidies	23.71		16.00			7.71						
2210203	Home purchase subsidies	196.81	19.60	83.00			94.21						
	Total	87,674.78	11,294.79	63,592.14			12,321.85					466.00	

## Summary of Ministerial Expenditures

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
186	CAE	85,984.85	5,939.35	80,045.50			
202	Diplomatic expenditures	4.30		4.30			
20204	International organizations	4.30		4.30			
2020401	International organization dues	4.30		4.30			
206	S&T expenditures	84,515.25	4,474.05	80,041.20			
20601	S&T management	24,595.82	4,474.05	20,121.77			
2060199	Other S&T administrative affairs expenditures	24,595.82	4,474.05	20,121.77			
20603	Applied research	59,919.43		59,919.43			
2060302	Public welfare research	59,919.43		59,919.43			
208	Social security and employment expenditures	656.82	656.82				
20805	Pension expenditures of administrative organs and public institutions	637.95	637.95				
2080502	Retirement from public institutions	3.00	3.00				
2080505	Expenditures on basic old age insurance contributions of state organs and public institutions	473.72	473.72				
2080506	Expenditures on occupational annuity contributions of government offices and public institutions	161.23	161.23				
20899	Other social security and employment expenditures	18.87	18.87				
2089999	Other social security and employment expenditures	18.87	18.87				
210	Sanitation and health expenditures	179.84	179.84				
21011	Administrative units and public institutions healthcare	179.84	179.84				
2101102	Healthcare of public institutions	179.84	179.84				
221	Housing assurance expenditures	628.64	628.64				
22102	Housing reform expenditures	628.64	628.64				
2210201	Housing provident fund	408.12	408.12				
2210202	Rent subsidies	23.71	23.71				
2210203	Home purchase subsidies	196.81	196.81				
	Total	85,984.85	5,939.35	80,045.50			

### Summary of Government Fiscal Allocation Income and Expenditures

Units: RMB 10,000

Income		Expenditures	
Item	Budgeted amount	Item	Budgeted amount
1. Current year income	63,592.14	1. Current year expenditures	70,567.40
(a) General public budget allocations	63,592.14	(a) Diplomacy expenditures	4.30
(b) Government fund budget allocations		(b) S&T expenditures	69,963.08
(c) State-owned capital operating budget allocations		(c) Social security and employment expenditures	306.36
		(d) Housing expenditures	293.66
2. Balance carried forward from previous year	6,975.26		
(a) General public budget allocations	6,975.26		
(b) Government fund budget allocations			
(c) State-owned capital operating budget allocations			
		2. Balance carried over to following year	
Total income	70,567.40	Total expenditures	70,567.40



## General Public Budget Expenditures

Units: RMB 10,000

Functional categorization item		2021 actual amount		2022 budgeted amount				2022 to 2021 YoY Comparison		2022 budget to 2021 actual (less central infrastructure investments)	
Item code	Item name	Actual amount	Actual amount after deducting central infrastructure investments	Initial Annual Budget			Budgeted amount after deducting central infrastructure investments	Increase amount	Increase (%)	Increase amount	Increase (%)
				Subtotal	Basic expenditures	Project expenditures					
202	Diplomatic expenditures	4.30	4.30	4.30		4.30	4.30	0.00	0.00%	0.00	0.00%
20204	International organizations	4.30	4.30	4.30		4.30	4.30	0.00	0.00%	0.00	0.00%
2020401	International organization dues	4.30	4.30	4.30		4.30	4.30	0.00	0.00%	0.00	0.00%
206	S&T expenditures	62,985.17	62,985.17	63,022.48	1,724.72	61,297.76	63,022.48	37.31	0.06%	37.31	0.06%
20601	S&T management	8,341.31	8,341.31	9,016.01	1,724.72	7,291.29	9,016.01	674.70	8.09%	674.70	8.09%
2060199	Other S&T administrative affairs expenditures	8,341.31	8,341.31	9,016.01	1,724.72	7,291.29	9,016.01	674.70	8.09%	674.70	8.09%
20603	Applied research	54,643.86	54,643.86	54,006.47		54,006.47	54,006.47	-637.39	-1.17%	-637.39	-1.17%
2060302	Public welfare research	54,643.86	54,643.86	54,006.47		54,006.47	54,006.47	-637.39	-1.17%	-637.39	-1.17%
208	Social security and employment expenditures	296.75	296.75	306.36	306.36		306.36	9.61	3.24%	9.61	3.24%
20805	Pension expenditures of administrative units and public institutions	296.75	296.75	306.36	306.36		306.36	9.61	3.24%	9.61	3.24%
2080505	Expenditures on basic old age insurance contributions of government offices and public institutions	197.83	197.83	204.24	204.24		204.24	6.41	3.24%	6.41	3.24%
2080506	Expenditures on occupational annuity contributions of government offices and public institutions	98.92	98.92	102.12	102.12		102.12	3.20	3.23%	3.20	3.23%
221	Housing assurance expenditures	260.00	260.00	259.00	259.00		259.00	-1.00	-0.38%	-1.00	-0.38%
22102	Housing reform expenditures	260.00	260.00	259.00	259.00		259.00	-1.00	-0.38%	-1.00	-0.38%
2210201	Housing provident fund	169.00	169.00	160.00	160.00		160.00	-9.00	-5.33%	-9.00	-5.33%
2210202	Rent subsidies	8.00	8.00	16.00	16.00		16.00	8.00	100.00%	8.00	100.00%
2210203	Home purchase subsidies	83.00	83.00	83.00	83.00		83.00	0.00	0.00%	0.00	0.00%

Total	63,546.22	63,546.22	63,592.14	2,290.08	61,302.06	63,592.14	45.92	0.07%	45.92	0.07%
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## General Public Budget Basic Expenditures

Units: RMB 10,000

Ministerial budget expenditures – economic categorization items		2022 Basic expenditures		
Item code	Item name	Total	Personnel expenses	Public expenses
301	Salary and benefits expenditures	1,947.86	1,947.86	
30101	Basic salaries	542.50	542.50	
30102	Subsidies and allowances	879.00	879.00	
30103	Bonuses	40.00	40.00	
30108	Expenditures on basic old age insurance contributions of government offices and public institutions	306.36	306.36	
30112	Other social security contributions	20.00	20.00	
30113	Housing provident fund	160.00	160.00	
302	Goods and services expenditures	205.85		205.85
30201	Office expenses	38.00		38.00
30202	Printing expenses	11.55		11.55
30207	Postage and cable fees	56.00		56.00
30213	Repair and maintenance costs	3.00		3.00
30216	Training fees	3.00		3.00
30227	Contracted business fees	20.00		20.00
30239	Other transportation expenses	74.30		74.30
303	Assistance for individuals and families	45.00	45.00	
30302	Pensions (退休费)	42.00	42.00	
30309	Awards	1.00	1.00	
30399	Other assistance for individuals and families	2.00	2.00	
310	Capital expenditures	91.37		91.37
31002	Office equipment procurement	64.37		64.37
31022	Acquisition of intangible assets	27.00		27.00
	<b>Total</b>	<b>2,290.08</b>	<b>1,992.86</b>	<b>297.22</b>

**Government Fund Budget Expenditures**

Units: RMB 10,000

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

Note: CAE does not receive any funding through government fund budget appropriations and does not have any expenditures related to the use of government funds. Therefore, this table is empty.

**State-Owned Capital Operating Budget Expenditure Table**

Units: RMB 10,000

Item code	Item name	2021 State-Owned Capital Operating Budget Expenditures		
		Subtotal	Basic expenditures	Project expenditures
Total				

Note: CAE does not receive any funding through state-owned capital operating budget appropriations and does not have any expenditures related to the use of state-owned capital operating budgets. Therefore, this table is empty.

**General Public Budget Expenditures for the "Three Public" Expenses<sup>4</sup>**

Units: RMB 10,000

2021 budgeted amount						2022 budgeted amount					
Total	Expenses for official travel abroad	Government vehicle acquisition and operation costs			Official reception expenses	Total	Expenses for official travel abroad	Government vehicle acquisition and operation costs			Official reception expenses
		Subtotal	Government vehicle acquisition	Government vehicle operation costs				Subtotal	Government vehicle acquisition	Government vehicle operation costs	
105.14	92.94				12.20	179.44	92.94	74.30		74.30	12.20

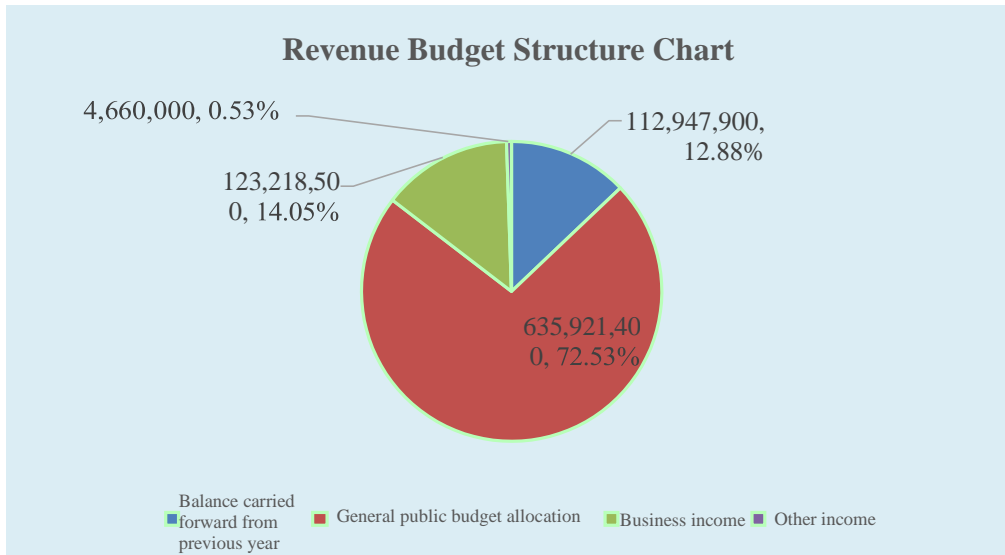
**III. Detailed Description of CAE's 2022 Ministerial Budget****(i) Explanations Regarding the Table of CAE's 2022 Ministerial Income and Expenditures**

Following comprehensive budgeting principles, all income and expenditures of CAE are managed in the ministerial budget. Income includes: General public budget allocations, business income (事业收入), other income, and funds carried forward from the prior year. Expenditures include: diplomatic expenditures, S&T expenditures, social security and employment expenditures, health expenditures, and housing assurance expenditures. CAE's total income and expenditures budget for 2022 amounts to RMB 876,747,800.

**(ii) Explanations Regarding the Table of CAE's 2022 Ministerial Income**

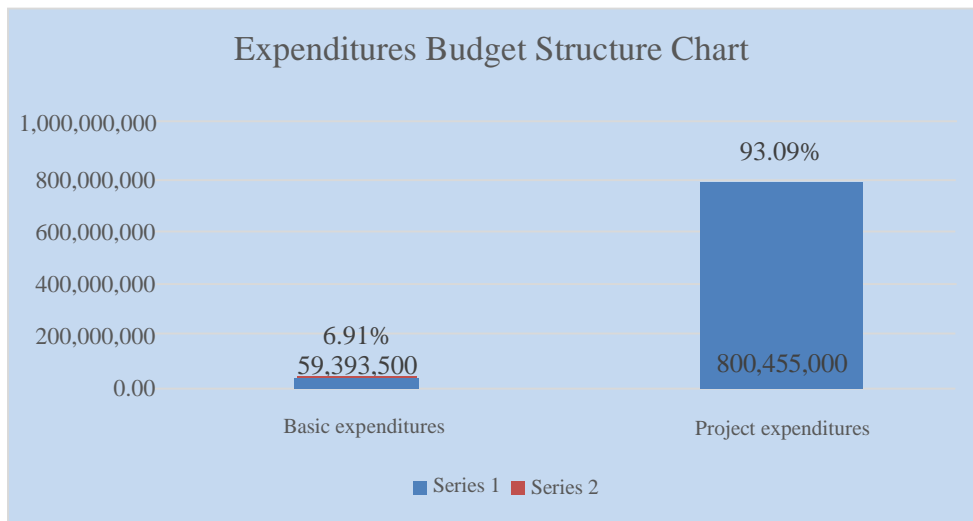
CAE's 2022 income budget is RMB 876,747,800, including: RMB 112,947,900 carried over from the previous year, accounting for 12.88%; RMB 635,921,400 in general public budget fiscal allocation income, accounting for 72.53%; RMB 123,218,500 in business income, accounting for 14.05%; and other income of RMB 4,660,000, accounting for 0.53%.

<sup>4</sup> 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. PRC central government and Party Central Committee agencies have been required to publicly disclose their annual spending on these categories—the most visible examples of corruption and waste of public funds, when abused—since 2011.



**(iii) Explanations Regarding the Table of CAE's 2022 Ministerial Expenditures**

In 2022, CAE's budgeted expenditures totaled RMB 859,848,500, with basic expenditures accounting for RMB 59,393,500, or 6.91%, and project expenditures accounting for RMB 800,455,000, or 93.09%.



**(iv) Explanations Regarding the Table of CAE's 2022 Fiscal Allocation Income and Expenditures**

The CAE's total government fiscal allocation income and expenditure budget for 2022 amounts to RMB 705,674,000. All income is general public budget allocation, with no government fund budget allocation or state-owned capital operating budget allocation, and includes: General public budget appropriation income for the current year of RMB 635,921,400, with RMB 69,752,600 carried forward from the prior year. Expenditures include: diplomatic expenditures of RMB 43,000, S&T expenditures of RMB 699,630,800, social security and employment expenditures of RMB 3,063,600,

and housing expenditures of RMB 2,936,600.

#### **(v) Explanations Regarding the Table of CAE's 2022 General Public Budget Expenditures**

CAE's 2022 general public budget government fiscal allocations for the current year are RMB 635,921,400, an increase of RMB 159,200, or 0.07%, from the amount executed in 2021 (there is no central infrastructure investments budget in 2021 and 2022). In accordance with the relevant requirements of the Party Central Committee and the State Council on belt-tightening (过紧日子), all undertakings should be carried out sparingly, and general expenditures should be vigorously reduced. At the same time, the expenditure needs of projects such as the construction of national engineering S&T think tanks must be reasonably guaranteed, as reflected in the relevant expenditure items. Specifically:

1. **The 2022 budget for diplomatic expenditures (category) international organizations (sub-category) international organizations membership fees (item)** is RMB 43,000, which is basically the same as the amount executed in 2021.

2. **S&T expenditures (category):** The early 2022 budgeted amount is RMB 630,224,800, an increase of RMB 373,000, or 0.06%, from the amount executed in 2021.

(1) **S&T administrative affairs (sub-category) other S&T administrative affairs expenditures (item)** amounts to RMB 90,160,100, an increase of RMB 6,747,000, or 8.09%, over the amount executed in 2021. This is mainly due to an increase in funding for academician activities.

(2) **Applied research (sub-category) social welfare (社会公益) research (item)** is RMB 540,064,700, a decrease of RMB 6,373,900, or 1.17%, from the amount executed in 2021. This is mainly based on performance evaluation results, for which the budget expenditure structure of the national engineering S&T think tank construction project was optimized and adjusted. According to the categorization of expenditure functions, the scale of expenditures on social welfare research is relatively large, accounting for 84.93% of the total department general public budget expenditures in 2022, and it is mainly used for work tasks in the construction of national engineering S&T think tanks.

3. **Social security and employment expenditures (category) elder care expenditures of administrative units and public institutions (sub-category):** The early budgeted amount for 2022 is RMB 3,063,600, an increase of RMB 96,100, or 3.24%, from the amount executed in 2021.

(1) **Basic elder care insurance contributions of government offices and public**



**institutions (item)** is RMB 2,042,400, an increase of RMB 64,100, or 3.24%, from the amount executed in 2021. This is mainly due to an increase in the budget for the payment of basic elder care insurance units.

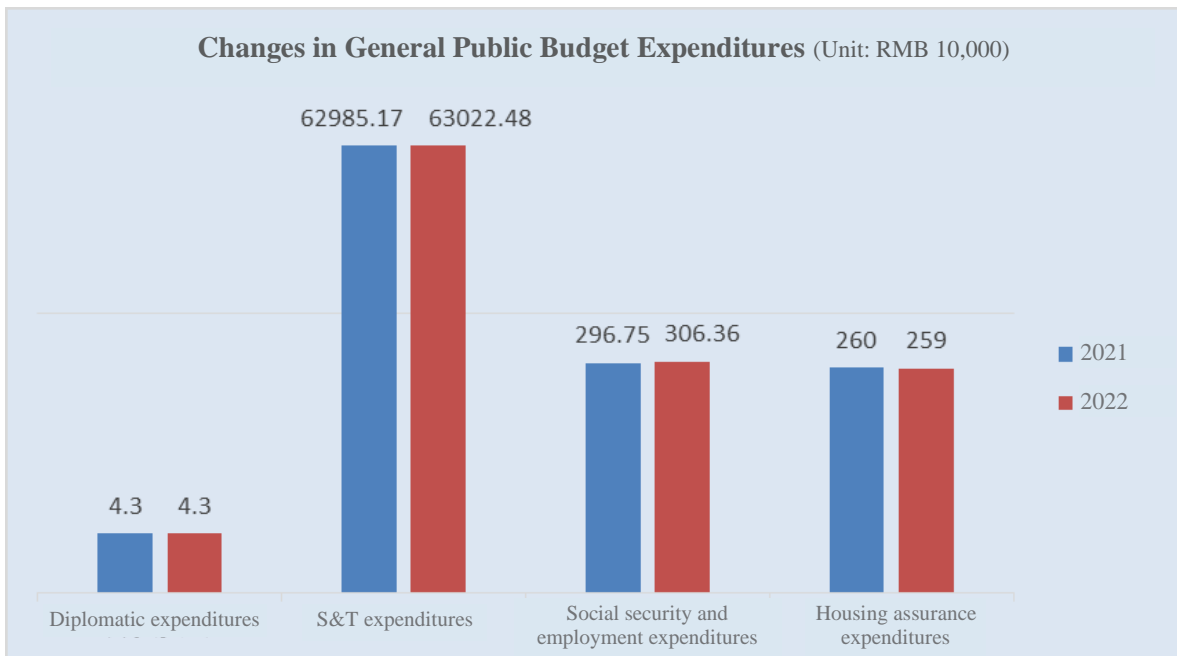
(2) **Expenditures for occupational annuity contributions for government offices and public institutions (item)** is RMB 1,021,200, an increase of RMB 32,000, or 3.23%. This is mainly due to an increase in the budget for occupational annuity contributions.

4. **Housing assurance expenditures (category) housing reform expenditures (sub-category):** The early budgeted amount for 2022 is RMB 2.59 million, a decrease of RMB 10,000, or 0.38%, from the amount executed in 2021.

(1) **The housing provident fund (item)** is RMB 1.6 million, a decrease of RMB 90,000, or 5.33%, from the amount executed in 2021.

(2) **Rent subsidies (item)** is RMB 160,000, an increase of RMB 80,000, or 100%, from the amount executed in 2021. This is mainly due to the overall use of 2021 surplus funds.

(3) **Home purchase subsidies (item)** is RMB 830,000, which is the same as the amount executed in 2021.



**(vi) Explanations of the Basic Expenditures Table of CAE's 2022 General Public Budget**

In CAE's 2022 general public budget, total basic expenditures amount to RMB 22,900,800. Specifically, the budget for personnel expenditures is RMB 19,928,600,

mainly including: basic wages, allowances and subsidies, bonuses, basic pension insurance contributions for government offices and public institutions, occupational annuity contributions, the housing provident fund, retirement expenses, and other subsidies for individuals and families; the budget for public funds is RMB 2,972,200, mainly including: office expenses, printing fees, consulting fees, handling fees, postal and telecommunications fees, travel expenses, maintenance and repair fees, rental fees, training fees, labor fees, outsourcing fees, trade union funds, welfare expenses, operation and maintenance expenses for official vehicles, other transportation expenses, expenses for other goods and services, purchase of office equipment, and purchase of intangible assets.

#### **(vii) Description of the "Three Public" Expenses in CAE's 2022 General Public Budget**

The CAE's 2022 "Three Public" expenses budget is RMB 1,794,400, of which: RMB 929,400 is overseas (extraterritorial) travel for official business, which is mainly used to protect the relevant funds for overseas (extraterritorial) travel of groups on official business; RMB 743,000 is for the purchase and operation costs of official vehicles, which is mainly used for daily maintenance and various taxes and service fees of official vehicles; RMB 122,000 is for official reception fees, which is mainly used for domestic official receptions and foreign affairs receptions.

The 2022 budget increased by RMB 743,000, or 70.67%, from 2021. Specifically, expenses for overseas (extraterritorial) travel for official business and expenses for official receptions are the same as those of the previous year; the purchase and operation costs of official vehicles increased by RMB 743,000 over the previous year (the budgeted amount was the same as the previous year), an increase of 100%. The main reason is that in accordance with the requirements of the Party Central Committee and the State Council on belt-tightening and persisting in practicing strict economy and opposing waste, the leftover purchase and operation expense budget for official vehicles of RMB 743,000 in 2021 will be carried forward, and in 2022, the budgetary arrangements for the fiscal appropriation of the current year will be resumed.

#### **(viii) 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 (两院) 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 (创新驱动发展战略) centered around strategic consultation for major Party and state 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 Centre 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 Centre 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 CCP 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 society 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 CAE as one of the pilot units in the first batch of building work.

On May 28, 2021, General Secretary Xi Jinping emphasized at the conference of academicians from CAS and CAE: "It is necessary to strengthen the national high-end think tank functions of the two academies, give play to the role of strategic scientists, actively carry out consultation and review, and serve national decision-making."

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 *Decision of the Central Committee of the Chinese Communist Party 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 the 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:

a) Decision-making institutions: The conference of academicians, meetings of the CAE Party Group, meetings of the Presidium, and CAE executive meetings are responsible for decision-making on major issues at different levels in construction and operations.

b) 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.

c) Research support institutions: This includes the CAE Strategic Consulting Center (中国工程院战略咨询中心) and various strategic research alliances.

d) Information service institutions: The China Knowledge Centre for Engineering Sciences and Technology is an important service organization supported by the strategic consulting information of CAE. It is composed of a leading group, an expert committee, a project management office, a technical expert working group, and consultation and construction units (协建单位).

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 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 partnerships (战略研究联盟) 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.

(4) Implementation scheme

a) 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 continuous development, CAE has formed a strategic consulting research field with distinctive characteristics and long-term continuous development, and the consulting work has reached a certain 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 CAE top 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, CAE sets up more than 200 consulting and research projects every year. Hundreds of academic activities are held every year, and more than 50 reports and academician recommendations are submitted to the central government each year. Nearly 500 academicians participate in the consulting work of CAE every year, and thousands of experts participate 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" ( “顶天立地” ) by carrying out strategic consulting for the country on the one hand and providing consulting services at the local level on the other. The CAE will take the conscientious study and implementation of the spirit of the 19th Party Congress and the spirit of the successive plenums of the 19th CCP Central Committee as the top priority in the next step. Taking this as an important starting point, guided by Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, it will continue to promote the construction of national high-end think tanks and strive to reach a new level of consulting work. CAE plans to focus on implementing the spirit of the central authorities (中央精神), 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.

b) Construction of the China Knowledge Centre for Engineering Sciences and Technology

The construction of the knowledge center mainly includes four aspects: First, operation services. The construction of the knowledge center will further promote overall operation and innovation practice, build the brand of China's engineering S&T knowledge center, and achieve win-win cooperation and sustainable development. It will continue to promote data aggregation and resource sharing to achieve scientific allocation and efficient communication and promote technological innovation and capability opening to achieve knowledge integration and ecological prosperity. It will promote knowledge value-added and characteristic services, realize intelligent guidance and value creation, and provide important information support for solving core technical problems such as "chokepoints" ( “卡脖子” ) in the field of engineering S&T. It will actively integrate into the global innovation network, link global innovation resources, form an open and integrated ecosystem for the exchange of engineering S&T information, and enhance international communication capabilities and influence. The second is the updating of knowledge resources. This includes continuous updates of self-built resources, alliance resources, purchased resources, and other knowledge resources. The third is to improve technical support capabilities. A knowledge resource processing system, a knowledge organization system, knowledge discovery technology, knowledge service tools, network information core technology, artificial intelligence (AI) technology, and other technologies will be used to improve technical support capabilities. The fourth is the construction of a knowledge service system. 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.

(5) Implementation cycle

These projects are multi-year ongoing projects.

(6) Annual budget arrangements

The 2022 planned general public budget appropriations for this project are RMB 540,064,700, of which:

a) The budget for funding for academician S&T consulting is RMB 440,000,000. 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, CAE-ministry cooperation consulting, academic leadership, strategic alliances, CAE-local government cooperation consulting, and for implementing the spirit of the 19th Party Congress.

b) The budget for construction of the China Knowledge Centre for Engineering Sciences and Technology is RMB 100,064,700. This is mainly used for operation promotions, think tank support services, continuous updating of resources, system optimization, infrastructure operations and maintenance (O&M), and project management.

## **2. Description of Institutional Operations Funding**

The institutional operating expenses in 2022 will be RMB 2,972,200, a decrease of RMB 1,325,100, or 30.84%, from the 2021 budgetary arrangement (2021 budget arranged for RMB 4,297,300, all using funds carried over from the previous year). This is mainly due to the implementation of “belt-tightening” requirements and a reduction in related expenditures.

## **3. Description of Government Procurement**

In 2022, the total budget for government procurement is RMB 114,631,400, of which, the budget for government procurement of goods is RMB 4,002,000 and the budget for government procurement of services is RMB 110,629,400.

## **4. Description of the Use of State-Owned Assets**

As of July 31, 2021, departments (units) had a total of 15 vehicles, of which, nine are for use by ministerial leaders and cadres, two are for confidential communications (机要通信用车), four are for emergency support (including one for self-funded institutions). There are 21 units (sets) of general-use equipment with a unit value of over RMB 500,000, and 0 units (sets) of special-use equipment with a unit value of over RMB one million.

In 2022, two new vehicles are planned to be added, all of which will be used by ministerial-level leaders. Newly purchased vehicles are directly allocated by the

National Government Offices Administration, and relevant taxes and operating expenses are included in the budget arrangements of CAE.

The 2022 departmental budget does not arrange for the purchase of general equipment with a unit value of more than RMB 500,000 and special equipment with a unit value of more than RMB 1 million.

## 5. Description of Budget Performance

In 2022, the project expenditures of CAE will be fully implemented under performance objective management, involving a general public budget allocation of RMB 676,084,100. Based on the results of previous annual performance evaluations, 2022 budget arrangements will be optimized for project expenditures such as optimization of the construction of national engineering S&T think tanks, and management and policies will be further improved.

In the 2022 annual ministerial budget, CAE reflects the performance objectives of two first-level projects, the construction of the national engineering S&T think tank, and dues for international organizations. See "V. Appendix."

## IV. Glossary

### a) Income items

1. **General public budget appropriations revenue:** Refers to funds allocated by the central government in the current year.

2. **Business income (事业收入):** The income earned by public institutions through professional business activities and auxiliary activities.

3. **Other income:** Income other than "general public budget allocation income," and "business income" as described above. This income is mainly derived from property sales and interest on deposits as per the relevant regulations.

4. **Balance carried forward from prior year:** Funds arranged in the previous year and carried forward to the current year and still used according to the original purpose.

### (ii) Expenditure Items

1. **Diplomatic expenditures (category) international organizations (sub-category) international organization dues (item):** This is mainly used for expenditures for international organization dues.

2. **S&T (type):** These expenditures are mainly used for consulting research, academic activities, and S&T administrative affairs.



**3. Social security and employment (type):** Reflects expenditures related to social security and employment. This includes one sub-type-level budget account: Retirement from administrative units and public institutions, which reflects expenditures on retirement from government offices.

**4. 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.) Among these, the housing provident fund is a long-term housing savings contribution paid by the employer and its employees in accordance with the provisions of the *Regulations on Management of the Housing Provident Fund*. This policy began in the mid-1990s and is generally implemented among employees in government agencies, enterprises, and public 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 government offices, 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 CCP 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.

5. **Basic expenditures:** Personnel expenditures and office expenditures incurred to ensure the normal operation of agencies and their completion of routine work tasks.

6. **Project expenditures:** Expenditures in addition to basic expenditures that are incurred to complete special administrative tasks and business development goals.

**(iii) 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.

**(iv) Institutional Operations 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 Servant 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.

**V. Appendix**

## National Engineering S&T Think Tank Construction Project Performance Targets (2022)

Project Name		Building CAE into a national engineering S&T think tank				
Main oversight department and code		[186] CAE	Implementing unit		CAE	
Project funds (unit: RMB 10,000)	Annual total funds				59,919.43	Execution rate score (10)
	Of which: Government budget appropriations				54,006.47	
	Balance carried forward from previous year				5,912.96	
	Other funds					
Overall Annual Targets	<p>In accordance with the spirit of General Secretary Xi Jinping's important instructions, we will further promote the construction of a high-quality national engineering S&amp;T think tank, continue to increase the ability to provide high-quality intellectual support for central scientific decision-making, serve the construction of CAE into a national high-end think tank, and provide an academic guidance and exchange platform for CAE consulting research.</p> <p>We will organize strategic, forward-looking, and comprehensive consulting research and put forward important consulting suggestions for the research on major issues in economic and social development such as information security, energy security development strategy, manufacturing power development, ecological civilization construction and marine power construction strategy, and medical system reform. The China Knowledge Centre for Engineering Sciences and Technology launched a pilot project for CAE to provide embedded services for strategic consulting research. The quality of resource construction, the level of data openness and sharing, and their vitality have improved significantly. The national engineering S&amp;T high-end think tank informatization support system has been basically formed, and we continue to promote international knowledge center building.</p>					
Performance metrics	Level 1 metrics	Level 2 metrics	Level 3 metrics		Indicator Value	Score weight (90)
	Cost Metrics	Economic cost metrics	China Engineering S&T Forum single session funding		≤ RMB 300,000	5
	Output metrics	Quantitative metrics	Total number of records collected from the Internet by China Knowledge Centre for Engineering Sciences and Technology		≥ RMB 800 million	3
			Total number of metadata resources of China Knowledge Centre for Engineering Sciences and Technology		≥ RMB 7.5 billion	3
			Number of sub-centers under construction of China Knowledge Centre for Engineering Sciences and Technology		≥34	3
			Number of academicians participating in consulting research		≥931 people	4
			Consulting research reports and surveys		≥160	5
			Number of consulting projects		≥327	5
		Qualitative metrics	Suggestions of Academicians and the number of reports submitted to the Party Central Committee and the State Council		≥45	8
			Opinions and suggestions provided to industry authorities		≥50	5
			Number of reports submitted to local governments		≥17	5
			China Knowledge Centre for Engineering Sciences and Technology provides information guarantee for national high-end think tanks and serves the strategic consulting projects of CAE		≥50	8
	Benefit metrics	Social benefit metrics	Proportion of international visits to China Knowledge Centre for Engineering Sciences and Technology International Knowledge Center		≥30%	2
			Number of viewers of the academic live broadcast of China Knowledge Centre for Engineering Sciences and Technology		≥2 million people	3
			Annual visits (person-visits; PV) of China Knowledge Centre for Engineering Sciences and Technology		≥40 million	3
	Benefit metrics	Social benefit metrics	Number of registered users of China Knowledge Centre for Engineering Sciences and Technology		≥100,000 people	3
			Number of local governments supported for economic and social development		≥19 [provincial-level] provinces, municipalities and autonomous regions	4
			Number of S&T planning and engineering deployment units supported by industry authorities		≥ 10 ministries	4
			China Knowledge Centre for Engineering Sciences and Technology leads the development of big data and creates field demonstrations		≥9	5
			China Knowledge Centre for Engineering Sciences and Technology provides informatization support to the national engineering S&T think tank		≥ 31 (operational systems)	7
Satisfaction metrics	Service recipient satisfaction metrics	Academicians' satisfaction with China Knowledge Centre for Engineering Sciences and Technology		≥90%	5	

**International organization dues project performance targets**  
(FY2022)

Project Name		International organization dues			
Main oversight department and code		[186] CAE	Implementing unit	CAE	
Project funds (unit: RMB 10,000)		Annual total funds		4.30	Execution rate score (10)
		Of which: Government budget appropriations		4.30	
		Balance carried forward from previous year			
		Other funds			
Overall Annual Targets	We will maintain regular contact with the International Council of Academies of Engineering and Technological Sciences (CAETS) and its member state engineering institutes, participate in the CAETS annual conference and other activities on time, and enhance exchanges and cooperation with relevant member states. We will gradually improve the status and voice (话语权) of our institute in the international engineering S&T field and promote the progress of China's engineering S&T.				
Performance metrics	Level 1 metrics	Level 2 metrics	Level 3 metrics	Indicator Value	Score weight (90)
	Cost Metrics	Economic cost metrics	Payment of membership fees	U.S. \$6,180	15
	Output metrics	Quantitative metrics	Number of annual meetings and academic events organized by CAETS or its member state engineering institutes	≥5	15
			Number of people participating in activities	≥16 people	15
		Qualitative metrics	Full payment rate of membership dues	≥100%	15
	Timeliness metrics	Timely payment of membership dues	≥100%	15	
	Benefit metrics	Social benefit metrics	Promotion of international exchanges and cooperation in the field of engineering S&T	Significantly improved	15