



Executive Committee Meeting Agenda

Thursday, 14 March 2019

Time: Approximately 90 Minutes

Sweden - 12 pm; Uruguay - 8 am; South Korea - 8 pm

Toll Free Dial-In Numbers

Sweden: 200-12-5130; Access Code: 3342264; Host Password: 2035

Uruguay: 000-411-003-3585; Access Code: 3342264

South Korea: 0798-1-1-003-3585; Access Code: 3342264

EXCOM Members

Dr. Tuula Teeri (President)
Acad. Eng. Lucio Cáceres (Past-President)
Prof. Oh-Kyong KWON (President-Elect)
Dr. Ruth David (Secretary/Treasurer)

Additional Participants

Magnus Briedne, IVA
Adriana Gamboggi, ANIU
Narai Kim, NAEK
Inkyu Lee, NAEK

1. Welcome and approval of agenda
2. **ACTION:** Approval of EXCOM Minutes of 30 August 2018
3. Report of the Secretary/Treasurer
 - a. 2018 Financial Statements
 - b. 2019 Dues Status
 - c. 2020 Board Nominees
 - d. Rotation Schedule
 - e. Website Update
4. 2019 CAETS Annual Meeting: 24-28 June 2019, Stockholm, Sweden
 - a. Status Update: IVA
 - b. CAETS Statement: IVA
5. 2020 CAETS Annual Meeting: 22-25 June 2020, Seoul, South Korea
 - a. Status Update: NAEK
6. 2021 CAETS Annual Meeting: Argentina
 - a. Status Update: Secretary/Treasurer
7. New Zealand Membership Application—Received 19 December 2018
 - a. Application Summary
 - b. **ACTION:** Visiting Committee—23-24 May 2019
8. Nigeria Membership Application—Received 30 January 2019
 - a. Application Summary
 - b. **ACTION:** Visiting Committee—3-4 June 2019
9. Membership Inquiry from Serbia
 - a. Update: Secretary/Treasurer
10. New Business



Executive Committee Meeting Agenda

Adjourn



Executive Committee MINUTES

Thursday, 30 August 2018
3 pm Spain & Sweden; 10 am Uruguay; 8 am Texas

EXCOM Members

Acad. Eng. Lucio Cáceres (President)
Dr. Elías Fereres (Past-President)
Dr. Tuula Teeri (President-Elect)
Dr. Ruth David (Secretary/Treasurer)

Additional Participants

Magnus Breidne (IVA)

1. Welcome and approval of agenda

The agenda was approved as presented.

2. Approval of EXCOM Minutes of 12 April 2018

The minutes were approved as presented.

3. Report of the Secretary/Treasurer

a. 2018 Dues Status

All CAETS members have paid their dues for 2018.

b. Banking Relationships

The EXCOM concurred with the proposal to establish an interest-bearing CAETS reserve account as well as to establish a second signer on the CAETS accounts to provide operational continuity in the event of the unexpected death or incapacitation of the Secretary/Treasurer.

c. 2018 Board Nominees

EXCOM members noted the member nominations for President-Elect and Board positions.

d. CAETS Dues Schedule

EXCOM members agreed to maintain the current dues schedule, which includes 4 tiers (\$1030, \$2060, \$3090, \$6180 with the 3% increase effective in 2019).

4. 2018 CAETS Annual Meeting: 10-14 September 2018, Montevideo, Uruguay

a. Status Update: ANIU

Acad. Eng. Lucio Cáceres reported that CAETS 2018 has achieved the self-financing level, all speaker information has been received, and visa issues were resolved to enable participation by observers from both Pakistan and Nigeria. Simultaneous translation will be provided for 3 speakers who do not speak English.

5. 2019 CAETS Annual Meeting: 24-28 June 2019, Stockholm, Sweden
 - a. Status Update: IVA
Magnus Breidne reported that planning is progressing well; many key speakers have been contacted. He will make a presentation to the Council in Montevideo and hopes to have a final program established by October.
6. 2020 CAETS Annual Meeting: Korea (NAEK)
 - a. Status Update: Secretary/Treasurer
NAEK has adopted the theme “Engineering a better world—Smart Society” for the 2020 convocation. Their proposed schedule includes CAETS meetings and a Welcome Reception on Monday; a 1.5-day convocation Tuesday and Wednesday morning followed by the CAETS Council Meeting Wednesday afternoon; and a Technical Tour on Thursday. A presentation will be provided to the Council in Montevideo.
7. Pakistan Membership Application
 - a. Due Diligence – Trip Report
 - b. Addendum - Subsequent Actions by PAE
 - c. Recommendation to Council (Membership, Initial Dues)
Key elements of the trip report and subsequent actions were discussed. It was noted that although PAE membership has adopted the needed changes to their Bylaws, final concurrence by Pakistan government authorities will take considerable time. EXCOM members agreed that the election process should proceed and concurred that PAE dues should be established at the lowest tier.
8. New Zealand Membership Application
 - a. Status Update: Secretary/Treasurer
The EXCOM was informed that the Royal Society Te Aparangi is proceeding with the restructure needed for conformance to CAETS Bylaws regarding membership, but the pace may not support a 2019 application for membership. It is expected that a representative from ATSE will provide a more complete report during the Council meeting.
9. New Business
 - a. WFEO Communications
After discussion, it was agreed that no action would be taken pending CAETS discussions regarding member interest in the UN Sustainable Development Goals and formulation of a path forward for CAETS.
 - b. 2019 Operating Budget
The proposed 2019 CAETS Operating Budget, which will be presented to the Board, was previewed by EXCOM members. Items of discussion included the proposed path forward for the CAETS website as well as travel costs.
10. The telecon was adjourned.

Fiscal year 2018

1/1/2018 - 12/31/2018

OPERATIONS

	FY2016	FY2017	FY2018	FY2018 ¹	FY2019 ²
Receipts	actual	actual	actual	budget	budget
Dues	79,975.20	84,494.20	80,811.00	81,000.00	83,430.00
Expenses					
Communications	531.36	-	510.79	7,000.00	2,500.00
Equipment	1,230.78	-	-	500.00	200.00
Legal-Prof. Fees		1,113.00	162.00	100.00	500.00
Management Fee	44,000.00	44,000.00	44,000.00	44,000.00	50,000.00
Meetings		127.07	50.71	300.00	200.00
Postage, Delivery	21.24	33.30	183.12	300.00	300.00
Printing	600.00	-	-	500.00	500.00
Supplies	147.40	243.15	88.73	300.00	230.00
Travel	17,382.37	15,409.09	20,791.15	25,000.00	25,000.00
Strategy Implementation ³		-	2,887.70	3,000.00	4,000.00
Total Expenses	63,913.15	60,925.61	68,674.20	81,000.00	83,430.00

¹Approved By Board on 13 November 2017; dues based on 6 at \$1K; 3 at \$2K; 11 at \$3K; 6 at \$6K.

Note: \$7000 expense for CAETS website upgrade deferred pending further analysis and review.

²Approved by Board & Council September 2018; dues budget reflects previously approved 3% increase to tiers; Management Fee increase recommended by Board and approved by Council.

³2018 expense incurred for Visiting Committee trip to Pakistan (PAE Membership Application).

ACTIVITIES AND CHANGES IN RESERVE FUNDS

Balance From 12/31/2017	272,129.54
Revenue	
Dues Received	80,811.00
USAA Interest Income	3.49
Reserve Fund Contribution (PAE)	2,000.00
	<u>82,814.49</u>
Expenses	
Operating Expenses	68,674.20
Reserve Fund Expenses	-
	<u>68,674.20</u>
	14,140.29
Balance 12/31/2017	286,269.83

**Statement of Financial Position
12/31/2018**

ASSETS

USAA Account Balance 12/31/18 (closed)	-	
Bank of America Account Balance 12/31/18	312,008.41	
Total Assets		312,008.41

LIABILITIES

Deferred Revenue from Prepaid Dues	25,667.00	
Checks Issued but Not Cleared	-	
Due to Secretary/Treasurer ¹	71.58	
On Account for Members	-	
Total Liabilities		25,738.58

NET ASSETS **286,269.83**

Total Liabilities and Net Assets **312,008.41**

¹ 2017 Expense not reimbursed in 2018 (See 2017 Financial Statements)

CAETS Dues Receipts - 2019

Country	Academy		2018	2019*	Amount	Date	Method
Argentina	Academia Nacional de Ingeniería	ANI	1000	1030	1030	11/28/2018	Wire
Australia	Australian Academy of Technological Sciences and Engineering		6000	6180	6180	11/14/2018	Wire
Belgium	Royal Belgium Academy of Applied Sciences	BACAS	2000	2060	2032	12/18/2018	Wire
Canada	Canadian Academy of Engineering	CAE	3000	3090	3166	1/25/2019	Wire
China	Chinese Academy of Engineering	CAE	6000	6180			
Croatia	Croatian Academy of Engineering	HATZ	1000	1030	1030	1/23/2019	Wire
Czech Republic	Engineering Academy of the Czech Republic	EA CR	1000	1030			
Denmark	Danish Academy of Technical Sciences	ATV	3000	3090	3060	1/8/2019	Wire
Finland	Technology Academy Finland	TAF	3000	3090			
France	National Academy of Technologies of France	NATF	3000	3090	3090	2/4/2019	Wire
Germany	German Academy of Science and Engineering	acatech	3000	3090	3090	12/3/2018	Wire
Hungary	Hungarian Academy of Engineering	HAE	1000	1030			
India	Indian National Academy of Engineering	INAE	6000	6180			
Japan	The Engineering Academy of Japan	EAJ	6000	6180	6180	1/31/2019	Wire
Korea	The National Academy of Engineering of Korea	NAEK	3000	3090	3090	1/18/2019	Wire
Mexico	Academy of Engineering, Mexico	AI	3000	3090	3090	12/5/2018	Wire
Netherlands	Netherlands Academy of Technology and Innovation	AcT.nl	2000	2060			
Norway	Norwegian Academy of Technological Sciences	NTVA	3000	3090	3060	12/31/2018	Wire
Pakistan	Pakistan Academy of Engineering	PAE		1030	995	1/22/2019	Wire
Slovenia	Slovenian Academy of Engineering	IAS	1000	1030	1030	11/19/2018	Wire
South Africa	South African Academy of Engineering	SAAE	1000	1030	1030	1/22/2019	Wire
Spain	Royal Academy of Engineering, Spain	RAI	3000	3090			
Sweden	Royal Swedish Academy of Engineering Sciences	IVA	3000	3090	3082	2/4/2019	Wire
Switzerland	Swiss Academy of Engineering Sciences	SATW	3000	3090	3075	1/18/2019	Wire
United Kingdom	Royal Academy of Engineering, UK	RAEng	6000	6180	6155	12/21/2018	Wire
United States	National Academy of Engineering, US	NAE	6000	6180	6180	1/25/2019	Check
Uruguay	National Academy of Engineering of Uruguay	ANIU	2000	2060	2000	1/24/2019	Wire
			81000	84460	61645		

*Dues Increase CAETS Council agreed on 15 September 2016 that the dues for 2019 would be increase

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2020 Board Nominees

Board Nominees were solicited on 31 January 2019:

- Argentina (ANI): President-Elect
 - Nominated Ing. Manuel Solanet, who is currently a Vice President, but will be nominated to be President of ANI in April 2020.
- Czech Republic (EA CR): Board Member
 - No response to date
- Norway (NTVA): Board Member
 - No response to date
- Canada (CAE): Board Member
 - Nomination anticipated late April due to CAE Board Meeting Schedule.
- United Kingdom (RAEng): Board Member
 - No response to date

CAETS Rotation Schedule - 2019

Member Academy	Date Elected	Annual Meeting Host		Officer			Board			
				President Elect	President	Past President	Board	2019	2020	2021
Uruguay (ANIU)	2000	2018	C	2017	2018	2019	<i>2017</i>	Lucio Cáceres		
Sweden (IVA)	1978 (F)	2019	C	2018	2019	2020	<i>2018</i>	Tuula Teeri	Tuula Teeri	
Korea (NAEK)	2000	2020		2019	2020	2021	<i>2019</i>	Prof. Kwon Oh-Kyong	Prof. Kwon Oh-Kyong	Prof. Kwon Oh-Kyong
Argentina (ANI)	1999	2021		2020	2021	2022	<i>2020</i>		<i>NOM (Pres-Elect)</i>	<i>President</i>
France (NATF)	1989	2022		2021	2022	2023	<i>2021</i>			<i>NOM (Pres-Elect)</i>
Croatia (HATZ)	2000	2023		2022	2023	2024	2017			
Finland (TAF)	1989	2024		2023	2024	2025	2019	Dr. Panu Nykanen	Dr. Panu Nykanen	
Czech Republic (EA CR)	1999	2025		2024	2025	2026	<i>2015</i>		<i>NOM (2020-2021)</i>	<i>NOM (2020-2021)</i>
USA (NAE)	1978 (F)	2026		2025	2026	2027	2018	Roger McCarthy		
Norway (NTVA)	1990	<i>2004</i>					<i>2015</i>		<i>NOM(2020-2021)</i>	<i>NOM(2020-2021)</i>
Germany (acatech)	2005						2017			
Australia (ATSE)	1978 (F)	<i>2005</i>	C				2019	Prof. Hugh Bradlow	Prof. Hugh Bradlow	
Belgium (BACAS)	1990	<i>2006</i>					2016			<i>NOM(2021-2022)</i>
Japan (EAJ)	1990	<i>2007</i>	C				2016			<i>NOM(2021-2022)</i>
Netherlands (AcTI.nl)	1993	<i>2008</i>					2018	Lucas P. J. J. Noldus		
Slovenia (IAS)	2000						2018	Prof. Stane Pejovnik		
South Africa (SAAE)	2009						2017			
Canada (CAE)	1991	<i>2009</i>	C				<i>2015</i>		<i>NOM (2020-2021)</i>	<i>NOM (2020-2021)</i>
Denmark (ATV)	1987	<i>2010</i>					2016			<i>NOM (2021-2022)</i>
Mexico (AI)*	1978 (F)	<i>2011</i>	C				2016			<i>NOM (2021-2022)</i>
Switzerland (SATW)	1988	<i>2012</i>					2017			
Hungary (HAE)	1995	<i>2013</i>					2018	István Králik		
China (CAE)	1997	<i>2014</i>	C				2019	Prof. LI Xiaohong	Prof. LI Xiaohong	
India (INAE)	1999	<i>2015</i>	C				2019	Dr. Sanak Mishra	Dr. Sanak Mishra	
United Kingdom (RAEng)	1978 (F)	<i>2016</i>	C			2017	<i>2015</i>		<i>NOM (2020-2021)</i>	<i>NOM (2020-2021)</i>
Spain (RAI)	1999	2017	C	<i>2016</i>	2017	2018	<i>2018</i>			
Pakistan (PAE)	2018									
Secretary/Treasurer	2017							<i>Ruth David</i>	<i>Ruth David</i>	

F - Founding Member

C - Convocation

CAETS Membership Application Summary

Royal Society Te Aparangi

Background

During the 2016 CAETS Council Meeting in London, representatives from the Royal Society Te Aparangi, as New Zealand's Academy for "science, technology and the humanities" presented an outline case for acceptance of the Society for CAETS membership. The presentation noted that as a small nation it is more sustainable to have a multi-disciplinary academy that operates across a number of domains. The Society already participates in the global lead bodies in science and social science (International Science Council), and in humanities (Union Academique Internationale), but not in engineering (CAETS). The Royal Society Fellowship is organized into six domain-based colleges:

- Humanities
- Social and behavioral sciences
- Biological and environmental sciences
- Physical, earth and mathematical sciences
- Medical and health sciences
- Technology, applied sciences and engineering (TASE)

As of late 2018, of the total Fellowship of about 400, approximately 30 are engineers and 40 are technological or applied sciences; the TASE domain constitutes approximately 17% of the Fellowship.

Feedback from CAETS members in 2016 indicated that an application would be welcome, but that "there would be scrutiny to ensure that TASE was not subsumed under science" and that it had a distinct identity within the society. The Society addressed those concerns through changes to its governance structure as well as the Fellowship election process.

Key changes include:

Commencing on 1 July 2019, each of the six domains elects a "Convenor" for that domain, establishing a clear leadership position for TASE within the broader Academy. Each Domain Convenor sits on the Academy Executive Committee (AEC). The AEC manages the Fellowship and Medals and Awards processes independently of the Society governing Council; it takes responsibility for the election of new Fellows and Honorary Fellows (who are outside New Zealand).

Beginning in 2018, evaluation panels for Fellowship were altered to match the six domain-based colleges. In addition, selection criteria were modified to lower the barriers to nomination of non-academics by including "advancement of science, technology or the humanities demonstrated by impact without an underpinning research base" as a rationale for the nomination.

In late 2018 the Society President and Chief Executive visited a number of multi-disciplinary and engineering academies and as a result opted to make further changes for 2019. Specifically, the nomination statement will be written on a "make the case" basis; instead of describing research outputs for research cases, all nominators now provide six key pieces of evidence of any type. Within the TASE domain, there is effort underway to actively identify candidates who are employed in non-university contexts.

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Summary Evaluation re. CAETS Membership Criteria

Reference CAETS Bylaws: Section 3. Criteria for Membership

A member of CAETS shall:

- a) Be representative of the engineering and technological community of that country;
- b) Subscribe to the nonpolitical, non-governmental international character of the Council;
- c) Have a peer elected membership with criteria for election based on significant personal contributions to engineering, technological sciences, or related activities;
- d) Be governed by its elected membership;
- e) Be engaged in significant activities demonstrating that its objectives are compatible with the objectives of the CAETS; and
- f) Have sufficient financial support to pay the costs of CAETS membership and the costs of participation in CAETS activities.

Be representative of the engineering and technological community of that country.

The Royal Society Te Aparangi traces its roots to an Act of Parliament in 1867, which established the New Zealand Institute with a mandate encompassing science and the arts. In 1919 an Academy was established within the New Zealand Institute and it began electing Fellows; this remains the only Academy in New Zealand. Engineering and applied sciences were progressively recognized as being included as part of a broadening definition of science used beginning in the 1970s. In 1997 the Act was updated to explicitly encompass “science and technology” defined as including the applied, biological, earth, engineering, information, mathematical, medical, physical, social, and technological sciences, and in 2012 the Act was further widened to include the humanities. The TASE college in the current structure is well-aligned with this membership criterion.

Subscribe to the nonpolitical, non-governmental international character of the Council.

The Act of Parliament under which the Society operates is a private Act; i.e. it establishes the Society as a private body independent of Government. The 1997 Act (amended in 2012) sets out the object of the Society as “the advancement and promotion in New Zealand of science, technology, and the humanities.” It also defines the functions of the Society:

- a. to foster in the New Zealand community a culture that supports science, technology, and the humanities, including (without limitation)—
 - i. the promotion of public awareness, knowledge, and understanding of science, technology, and the humanities; and
 - ii. the advancement of science and technology education:
- b. to encourage, promote, and recognize excellence in science, technology, and the humanities:
- c. to provide infrastructure and other support for the professional needs and development of scientists, technologists, and humanities scholars:

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- d. to establish and administer for members a code of professional standards and ethics in science, technology, and the humanities:
- e. to provide expert advice on important public issues to the Government and the community:
- f. to do all other lawful things that the Council considers conducive to the advancement and promotion in New Zealand of science, technology, and the humanities.

The Act under which the Royal Society Te Aparangi operates is consistent with this membership criterion.

Have a peer elected membership with criteria for election based on significant personal contributions to engineering, technological sciences, or related activities.

By aligning evaluation panels for Fellowship with each of the six colleges within the Academy, the TASE college is charged with nomination of Fellows distinguished by research contributions and/or specific impact in technology, applied sciences and engineering.

The Academy Bylaws delineate the Fellowship Election process; the Academy Executive Committee governs implementation of the process; the Convenor for TASE is a member of the Academy Executive Committee. Key steps include:

- The Academy Executive Committee develops and maintains criteria against which nominations for election as a Fellow are judged. In setting the criteria the Academy Executive Committee shall take into account differences between disciplines in evaluating excellence as well as the need to ensure diversity amongst the Fellowship.
- The Academy Executive Committee decides the number and composition of Evaluation Panels; these are currently aligned with the six domain-based colleges, so TASE has its own Evaluation Panel.
- The Academy Executive Committee defines the composition and procedures of the Fellowship Selection Committee, which considers the recommendations of the Evaluation Panels and prepares a consolidated list of candidates to be recommended for election. The Fellowship Selection Committee consists of the Academy Executive Committee plus other panelists appointed by the Academy Executive Committee to ensure that there is appropriate coverage of the disciplines represented within the Fellowship.
- The Academy Executive Committee considers the list and makes elections to Fellowship.

Under this construct, TASE Fellows have a clear voice in the nominating process, but subsequent steps merge with the broader Academy, with the final election being performed by the Academy Executive Committee rather than the entire Fellowship. This falls short of the peer election process in some academies, but does include Fellowship-elected peers who make the final determination.

Be governed by its elected membership.

TASE is governed by the Academy Bylaws with oversight by the Academy Executive Committee (AEC). Within that construct, TASE elects its own Domain Convenor, who sits on the AEC and fulfills a leadership role for TASE. The two lead roles within the AEC (Chair and Deputy Chair)

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must be Fellows, and are elected by the AEC Fellows on behalf of the broader Fellowship; there is an expectation that the Chair and Deputy Chair will have previously been highly performing Domain Governors. The governance of TASE is directly and indirectly provided by the elected Fellowship of the Academy.

Be engaged in significant activities demonstrating that its objectives are compatible with the objectives of the CAETS.

The Society has approximately 35 staff undertaking roles aligned with its functions as delineated above. A recent publication, "Highlights 2017", describes an array of relevant activities, including:

- Connecting schools with science or technology-intensive businesses in their community to enable them to develop business-relevant curriculum;
- Hosting a symposium with representatives from 17 academies together with other professionals to discuss key concerns including issues of public engagement and public trust, how to improve global research practice, and how to improve diversity of fellowship and membership generally.
- Administered the Talented School Students Travel Awards program on behalf of the government, which enabled New Zealand students to participate in international science and technology events.
- Provided presentations to Members of Parliament on topical research areas including: Transport in growing cities; Understanding New Zealand's freshwater; Big data-Big value; Production, protection and adding value.

Further review of the Society's website indicates that it actively contributes in ways that are well aligned with the objectives of CAETS.

Have sufficient financial support to pay the costs of CAETS membership and the costs of participation in CAETS activities.

According to a self-review provided in the application process, the Society has assets exceeding \$10M (USD) and a turnover of about \$5M. Approximately 80% of its income derives from professional services provision, largely to government. Additionally, it has income of about \$1M per year that can be applied in a discretionary manner. Audited Financial Statements for the year ending 30 June 2017 were provided. Given that the Society is supportive of TASE engagement with CAETS, it is expected that financial support will be available.

CAETS Membership Application Summary

The Nigerian Academy of Engineering

Background

A delegation from The Nigerian Academy of Engineering has for several years (2015-2018) attended CAETS annual meetings in observer status; in 2018 the representatives indicated their readiness to submit an application for membership. The application was received on 30 January 2019.

The Nigerian Academy of Engineering was incorporated as a private company in 1997 for the purpose of promoting excellence in technological and engineering training and practice to ensure the technological growth and economic development of Nigeria. It is a non-profit and non-governmental organization.

Other related bodies in Nigeria include the Council for the Regulation of Engineering in Nigeria, which was established by law in 1970, and an umbrella learned society, the Nigeria Society of Engineers, which was founded in 1958 and looks after the professional needs of members through well-structured programs.

Establishment of the Nigerian Academy of Engineering was inspired by the need for a focused engineering body that would have the narrower objectives of advancement and pursuit of excellence in technology and engineering and the provision of a national platform for experts to pool their experience and insights and make input into public and private technical policy. The idea was encouraged by the existence of similar academies in most developed and developing countries including the United Kingdom, Canada, India, the United States of America, Russia, China, and Egypt.

Summary Evaluation re. CAETS Membership Criteria

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- c) Have a peer elected membership with criteria for election based on significant personal contributions to engineering, technological sciences, or related activities;
- d) Be governed by its elected membership;
- e) Be engaged in significant activities demonstrating that its objectives are compatible with the objectives of the CAETS; and
- f) Have sufficient financial support to pay the costs of CAETS membership and the costs of participation in CAETS activities.

Be representative of the engineering and technological community of that country.

Establishment of the Nigerian Academy of Engineering was motivated through interactions with similar bodies in other countries and the recognition that no other engineering body in Nigeria fulfilled the purpose of an Academy. Fellows are drawn from senior Nigerian and foreign engineering professionals who have distinguished themselves in business, academia, and government. Fellows represent a diverse array of engineering disciplines, occupations, and geographical locations. The Nigerian Academy of Engineering appears to satisfy this criterion.

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Subscribe to the nonpolitical, non-governmental international character of the Council.

The Nigerian Academy of Engineering is a non-profit and non-governmental organization. Its Memorandum of Association establishes the following objectives for the academy:

- To promote excellence in the advancement of engineering science, education, practice and technology and related disciplines.
- To Facilitate dissemination and exchange of ideas among members and other similar bodies and establishment, especially:
 - To anticipate and assess the changing needs of Nigeria and advise appropriate bodies on the technical resources that should be applied, and sponsor programs aimed at meeting those needs;
 - To provide independent and expert advice on matters of national importance pertinent to engineering and technology related disciplines;
 - To interact and cooperate with other engineering and scientific professional bodies, and other academies, locally and internationally;
 - To recognize engineering achievements, and outstanding contributions to society and country by Nigerian engineers (and engineering scientists);
 - To provide a forum for Nigerian engineers to report on research and development activities in engineering.
- To apply or petition for any legislation, parliamentary or otherwise that would further any of the objects of the Academy.

The incorporation documents indicate that The Nigerian Academy of Engineering is organized and operates in alignment with this criterion.

Have a peer elected membership with criteria for election based on significant personal contributions to engineering, technological sciences, or related activities.

The Guidelines for Election to the Nigerian Academy of Engineering state that to qualify for election, a person must:

- Have earned a minimum of a bachelor's degree in engineering from a recognized tertiary institution;
- Have professional registration of the Council for the Regulation of Engineering in Nigeria or a recognized foreign equivalent;
- Have been elected a Fellow of the Nigerian Society of Engineering, or other equivalent foreign engineering society;
- Have had a distinguished career in one or more areas of engineering education, research, practice, management, or policy development;
- Have attained a level of responsibility in his/her career with clear and demonstrably high levels of responsibility and accountability;
- Have earned the respect of his/her peers within and/or outside Nigeria;
- Be judged to have such creative and professional abilities and drive that can enrich the Academy;

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- Be willing to actively participate in the activities of the Academy.

Candidates must be nominated by a Proposer and two supporters, all of whom must be Fellows of the Academy. Five sub-committees, representing specific engineering disciplines, perform an initial review of all nominations and forward the results to a Screening Committee (these committees are appointed by the Council from among existing Fellows). The Screening Committee prepares a shortlist of candidates based on the recommendations of the sub-committees and taking into account other criteria for age, discipline, and industry spread. The shortlist is reviewed by the Executive Committee and the final list is forwarded to all Fellows for voting. As of June 2018, there were 148 Fellows in the Nigerian Academy of engineering. The process described for election of new Fellows is consistent with the CAETS criterion.

Be governed by its elected membership.

The governing body of the Academy is a 15-person Council which consists of the President, Vice President, three other officers, the two Past-Presidents, and eight other fellows elected at the Annual General Meeting. The Vice President automatically succeeds the President at the end of the latter's two-year tenure. The Nigerian Academy of Engineering satisfies this criterion.

Be engaged in significant activities demonstrating that its objectives are compatible with the objectives of the CAETS.

The Academy has in the recent past organized workshops and seminars, and provided public lectures. Recent examples include:

Public Lectures:

- June 2018 – “Current Developments in Nigeria’s Water Resources Sector”
- June 2018 – “Cracking the Code of Industry-Academia Partnership in Nigeria: Challenge to Knowledge Academies”
- April 2018 – “Engineering Innovation and Last-Mile Development: Towards a Synergy between Investors and Research”
- November 2017 – “Modular Refineries: Prospect and Challenges”
- July 2017 – “Training Engineers for the Global Century”

Fellows Forum:

- February 2018 – “Integrated Transport System for National Development”
- January 2017 – “Engineering Education, Research & Development in 21st Century Africa”

Academy Interventions:

- Africa Catalyst Project-Partnership with the Royal Academy of Engineering for the development of Nigerian Standards for Professional Engineering Competence.
- Nigerian Academy of Engineering—ARCO Group Industry Linkage to pursue mutual interest in promoting engineering research, application and commercialization of research findings in Nigeria.
- Strengthening Engineering Ecosystems in Sub-Saharan Africa with the International Development Research Centre.

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Additional examples demonstrating the alignment of the Academy's activities were provided.

Have sufficient financial support to pay the costs of CAETS membership and the costs of participation in CAETS activities.

Audited Financial Statements for the year ending 31 December 2017 were provided; the audit opinion identified no issues. The statements indicate an operating surplus for the year of 11,219,850 Nigerian Naira (approximately \$31,000 USD) and donations during the year of 16,960,000 (approximately \$47,000 USD). Their "Accumulated Fund" (Net Assets) at year end were 25,921,694 Nigerian Naira (approximately \$72,000 USD). From 2016 to 2017, the Academy's income increased by 45% while expenses increased by only 5%. The Accumulated Fund increased by 76% during this period. The Academy appears to have a robust donor base (largely industry). It appears that the Academy has sufficient financial support to satisfy the criterion.